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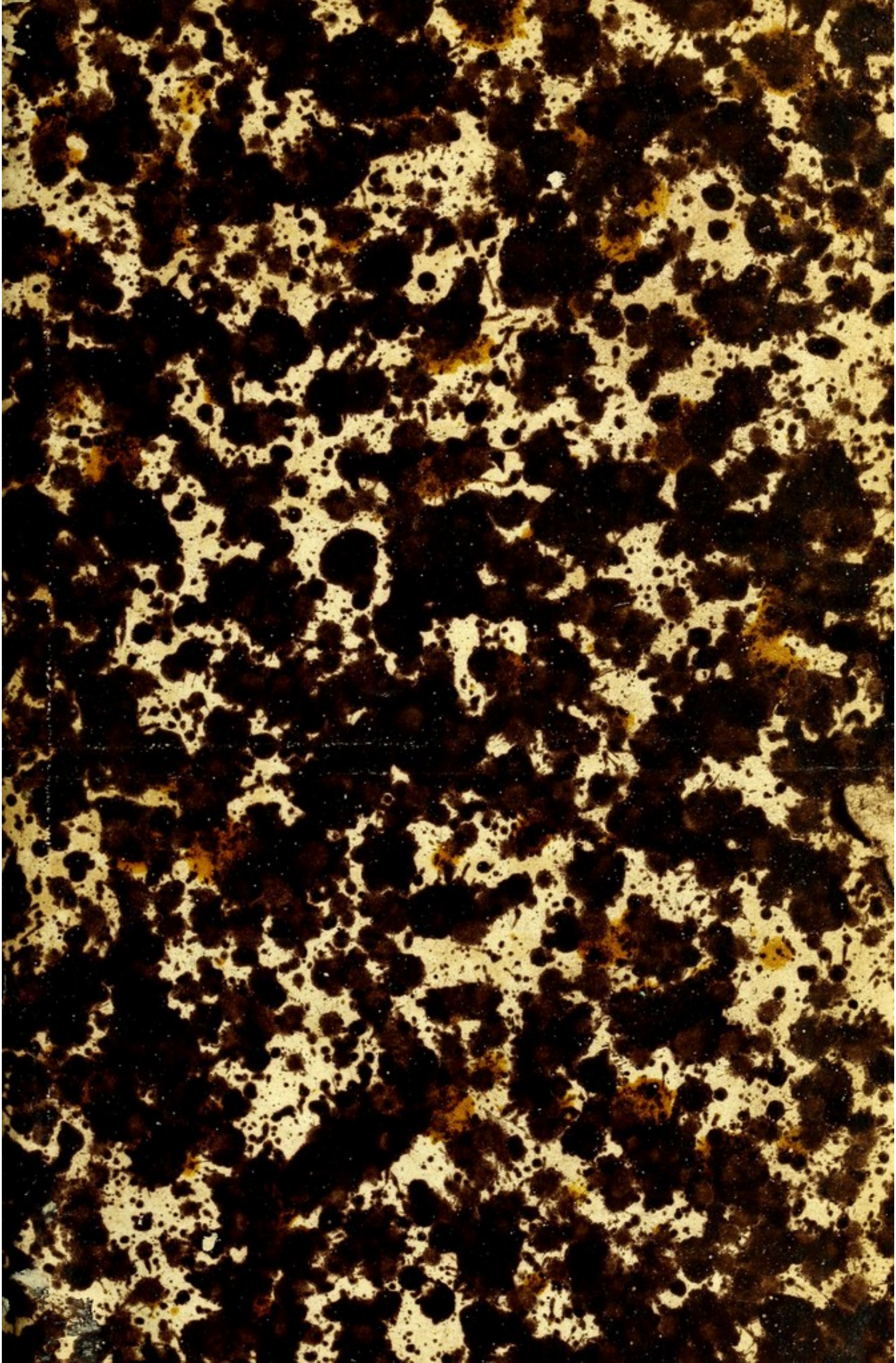

OUR SOCIAL BEES.

OUR SOCIAL BEES;

OR,

PICTURES OF TOWN & COUNTRY LIFE,

AND OTHER PAPERS.

BY

ANDREW WYNTER, M. D.

AUTHOR OF "CURIOSITIES OF CIVILIZATION," ETC.

"Not in vain the distance beckons.
Forward, forward let us range;
Let the great world spin for ever
Down the ringing groove of change."

TENNYSON.

LONDON:

ROBERT HARDWICKE, 192, PICCADILLY.

1861.

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TO THE READER.

The public favour which attended the issue of "Curiosities of Civilization" has induced me to collect another series of my papers, and to publish them in an uniform volume. Some of the articles have already appeared in two little volumes long since out of print. The major portion, however, have been published from time to time in the pages of *Once a Week*, and others in *Fraser's Magazine*, the *London Review*, the *Times*, and other channels. The article on "Human Hair" originally appeared in the *Quarterly*, and the one on "Brain Difficulties," in the *Edinburgh Review*.

Coleherne Court, Old Brompton.

June 1*st*, 1861.

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THE POST-OFFICE.

READER, if you be not entirely "used up," and can still relish a minor excitement, take a stroll through the General Post-office some Saturday evening, just as the clock is upon the strike of six.

The scene is much more exciting than half the *émeutes* which take place on the continent; considerably cheaper, and much more safe. Stand aside amid the treble bank of spectators on the right hand, and watch the general attack upon the letter-takers. A stream of four or five hundred people, who run as Doyle's pencil only can make them run, dash desperately towards the open windows of the receivers. Against this torrent a couple of hundred who have posted, dodge and finally disappear. Wave after wave of people advances and retreats, gorging with billets the capacious swallow of the post. Meanwhile, a still more active and vigorous attack is going on in the direction where newspapers are received. A sashless window-frame, with tremendous gape, is assaulted with showers of papers, which fly faster and thicker than the driven snow. Now and then large sackfuls, direct from the different newsvenders and publishing offices, are bundled in and bolted whole. As the moments pass, the flight of papers

grows thicker; those who cannot struggle "to the fore" whiz their missiles of intelligence over the heads of the others, now and then sweeping hats with the force of round shot. Letters struggle with more desperate energy, which is increased to frantic desperation as the clock slowly strikes, one—two—three—four—five—*six*; when, with a nigh miss of guillotining a score of hands, with one loud snap all the windows simultaneously descend. The post, like a huge monster, has received its full supply for the night, and, gorged, begins, imperceptibly to the spectators, in quiet to digest.

If we enter behind the scenes, and traverse what might be considered the vast stomach of the office, we shall perceive an organization almost as perfect as that which exists in the animal economy, and not very dissimilar to it. The huge piles of letters, and the huger mountains of newspapers, lie in heaps—the newly-swallowed food. To separate their different atoms, arrange and circulate them, requires a multiplicity of organs, and a variety of agents, almost as numerous as those engaged in the animal economy—no one interfering with the others, no one but is absolutely necessary to the well-being of the whole.

So perfect is the drill, so clearly defined the duty of each member of the army of seven or eight hundred men the stranger looks down upon from one of the galleries, that he can only compare its noiseless and unerring movements to the action of some chemical agency.

Towards the vast table upon which the correspondence of two millions of people for two days is heaped and tossed, a certain number, performing the functions of the gastric juices, proceed to arrange, eliminate, and prepare it

for future and more elaborate operations; certain others take away these eliminated atoms, and, by means of a subterranean railway, transport them to their proper office on the opposite side of the building; others, again, like busy ants, carry the letters for the general delivery to the tables of the sorters, when in a moment the important operation of classing into roads and towns, sets all hands to work as busily, as silently, and as purposefully as the restless things we peep at through the hive-glass, building up their winter sweets.

In an hour the process is complete; and the thoughts of lawyers, lovers, merchants, bankers, swindlers, masters, and servants, the private wishes of the whole town, lie side by side, enjoying inviolable secrecy; and, bagged, stringed, and sealed, are ready, after their brief meeting, for their final dispersion over the length and breadth of the land.

All the broad features of this well-contrived organization, its economy and power, the spectator sees before him; but much as he is struck thereby, it is only when he begins to examine details, and to study the statistics of the Post-office, that he sees the true vastness of its operations, and estimates properly the magnitude and variety of its functions, as the great metropolitan heart of communication with the whole world.

As we pass the noble Post-office at St. Martin's-le-Grand, with its ranges of Ionic columns, its triple porticos, and its spacious and elegant quadrangle—a worthy outward manifestation of the order, ingenuity, and intelligence that reign within—we cannot help contrasting its present condition with the postal operations of two or three centuries

ago,—the noble oak of the present, with the little acorn of the past.

No truer estimate of the national advance can be obtained than by running down the stream of history in relation to any of our great institutions which deal with the needs and wishes of the masses of the people; and in no one of them is our advance more clearly and correctly shown than in the annals of the Post-office. They form, in fact, a most delicate thermometer, marking the gradual increase of our national vitality, and indicating, with microscopic minuteness, the progress of our civilization.

In early times, the post was a pure convenience of the king, instituted for the purpose of forwarding his despatches, and having no dealings with the public whatsoever. Instead of St. Martin's-le-Grand being the point of departure, "the court," wherever it might happen to be, "made up the mails." How these mails were forwarded may be imagined from the following exculpatory letter written by one Brian Tuke, "Master of the Postes," in Henry the Eighth's time. It would appear that Cromwell had been pulling him up rather sharply for remissness in the forwarding of despatches. The worthy functionary states that:—

"The Kinges Grace hath no moo ordinary postes, ne of many days hathe had, but betwene London and Calais. . . For, sir, ye knowe well, that, except the hackney horses betwene Gravesende and Dovour, there is no suche usual conveyance in post for men in this realme as in the accustomed places of France and other parties; ne men can keepe horses in redynes withoute som way to bere the charges; but when placardes be sent for suche cause (to

order the immediate forwarding of some State packet,) *the constables many tymes be fayne to take horses oute of plowes and cartes, wherein can be no extreme diligence.*"

We should think not, Master Tuke. The worthy postmaster further shows how simple and rude were the arrangements of that day, by detailing the manner in which the royal letters were conveyed in what we should have considered to be one of their most important stages:—

"As to postes betwene London and the courte, there be nowe but 2; wherof the on is a good robust felowe, and was wont to be diligent, evil intreated many tymes, he and other postes, by the herbigeours, for lack of horse rome or horsemete, withoute which diligence cannot be. The other hath been the most payneful felowe, in nyght and daye, that I have knowen amongst the messengers. If he nowe slak he shalbe changed, as reason is."

This was in the year 1533. In the time of Elizabeth and James I., horse-posts were established on all the great routes for the conveying of the king's letters. This postal system was, of course, a source of expense to the Government—in the latter reign of about £3,400 annually. All this time subjects' letters were conveyed by foot-posts, and carriers, whose expedition may be judged of by the following extracts from a project for "accelerating" letters by means of a public post first started in 1635:—

"If (say the projectors) anie of his Ma^{ts} subjects shall write to Madrill in Spain, hee shall receive answer sooner and surer than hee shall out of Scotland or Ireland. The letters being now carried by carriers or footposts 16 or 18 miles a-day, it is full two monthes before any answer from Scotland or Ireland to London."

This project seems to have been acted upon, for three years later we find a vast reform effected in the post. In fact, it was put upon a foundation which lasted up to the introduction of mail-coaches; as it was settled to have a "running post or two to run night and day between Edinburgh in Scotland, and the city of London, to go thither and come back again in six days;" carrying, of course, all the letters of the intermediate towns: the like posts were established in the following year on all the great routes.

The principle of posts for the people once established, the deficit was soon changed to a revenue. Cromwell farmed the Post-office for £10,000 a year, he being the first to establish the general office in London. It might not be out of place to give an insight as to the scale of charges for letters, then settled. A single letter could be posted within eighty miles of London for 2*d.*; above that distance for 3*d.*; to Scotland for 4*d.*; and to Ireland for 6*d.*; double letters being charged double price: not such high charges these, considering the expenditure of horse-flesh and post-boys' breath; for every rider was obliged to ride "seven miles an hour in summer and five in winter, according as the ways might be," and to blow his horn whenever he met a company, and four times besides in every hour. Charles II. leased the profits of the Post-office for £21,500 a year. The country, it was evident, was rapidly advancing in commercial greatness and activity, for in 1694 the profits of the Post-office were £59,972. 14*s.* 9*d.* In the next century the introduction of mail-coaches gave an immense impulse to the transactions of the Post-office, which augmented gradually until the end of the year 1839, when the number of letters

passing through all the offices in the kingdom amounted to 75,907,572, and the net profit upon their carriage was £1,659,509. 17*s.* 2¾*d.*

With the beginning of the year 1840 commenced that vast revolution in the system so long projected by Sir Rowland Hill—the Penny Postage.

The effect of that system upon the number of letters passing through the post, and upon the manner of payment, was almost instantaneous. During the last month of the old high rates of postage, the total number of letters passing through the general office was a little more than two millions and a half; of these 1,159,224 were unpaid, and only 484,309 paid. In the same time—a short twelvemonth after the introduction of the cheap postage—the proportion of paid to unpaid letters was entirely changed; the latter had shrunk to the number of 473,821, whilst the former had run up to the enormous number of 5,451,022. Since 1841 the flow of letters has been continually on the increase. The return made to Parliament in 1847 gave the following results:—Unpaid, 644,642; paid, 10,957,033: the term "paid" includes, of course, all those letters on which the penny was prepaid, and those impressed with her Majesty's gracious countenance. The prepayment of the penny was a vast benefit to the post, and, together with the general introduction of letter-boxes in private houses, saved the whole time lost to the letter-carriers whilst old ladies were fumbling for the postage; but the introduction of the stamp was of still greater importance, as on its ultimate exclusive adoption a vast saving was effected in the labour of receiving letters.

When stamps were first introduced by Sir Rowland Hill,

he did not appear to anticipate the use that would be made of them as a medium of exchange; but every one is aware how extensively they are used in the smaller monetary transactions of the country. Bankers, dealing in magnificent sums, do not deign to take notice of vulgar pence: the Government has, however, taken up the neglected coin, and represented its value by a paper currency, which, if not legally negotiable, yet passes from hand to hand unquestioned. The Post-office now allows, and even recommends, the use of postage-stamps as a medium of currency, in order to discourage the sending of coins by post. With this view, provision has been made in the London office for exchanging postage-stamps for money, a small deduction being made as commission on the transaction. It would be impossible, of course, to ascertain the amount of penny stamps that pass from town to town, and from man to man, in payment of small debts; but without doubt it must be very considerable—very much beyond the demand for letters: as long, therefore, as this sum is floating, until it comes to the post (its bank) for payment in shape of letter-carriage, it is a clear public advance to the Exchequer.

The only good reason yet assigned against introducing these penny stamps, and those representing a higher value, such as the colonial shilling stamp, as a regular currency, is the fear of forgery. At the present time great precautions are used to prevent such an evil; the die itself, hideous and contemptible as it undoubtedly is as a work of art, in intricacy of execution is considered a masterpiece at the Stamp-office. If you take one from your pocket-book, good reader, and inspect it, you will doubtless pronounce it to be a gross libel upon her Majesty's

countenance, muddled in line, and dirty in printing; but those who know the trick, see in that confusion and jumble certain significant lines, certain combinations of letters in the corners, which render forgery no such easy matter.

The great security against fraud, however, is that letter-stamps are placed upon the same footing as receipt or bill stamps. Venders can buy them at first hand only of the Government; and the consequent difficulty forgers would have in putting sufficient spurious stamps in circulation to pay them for their risk and trouble, seems to obviate all risk of their being turned to improper account.

It is our intention to confine ourselves mainly, in this article, to the operations of the General Post-office; but in order to give our readers an idea of the vast amount of correspondence which annually takes place in the United Kingdom, it may be as well, perhaps, to take a glance at the general postal transactions of the country. Make a round guess at the number of letters which traverse the broad lands of Britain, which circulate in the streets and alleys of our great towns, and which fly on the wings of steam, and under bellying sail, to the uttermost parts of the earth. You cannot? Well, then, what say you to 544,000,000? To that enormous amount had they arrived in the year ending 31st December, 1859.

The number of letters posted in the metropolis and in the country is subject at stated times to a very great augmentation. In London, for instance, on Saturday night and Monday morning, an increase in letters of from thirty to forty per cent. takes place, owing to the Sunday closing of the Post-office. Valentine's Day, again, has an immense effect in gorging the general as well as local posts

with love epistles. Those who move in the higher circles might imagine the valentine to be "a dead letter;" but the experience of the Post-office shows that the warm old saint still keeps up an active agitation among tender hearts. According to the evidence given by Sir Rowland Hill, the increase of letters on the 14th of February is not less than half a million throughout the United Kingdom.

We have spoken hitherto only of the conveyance of letters, but they form an inferior portion of the weight carried by the Post-office. The number of newspapers and book packets posted in London throughout the week is something enormous. Several vanfuls of the *Times*, for instance, are despatched by every morning and evening mail; other morning papers contribute their sackfuls of broad-sheets; and on Saturday evening not a paper of any circulation in the metropolis, but contributes more or less largely to swell that enormous avalanche of packets which descend upon the Post-office. In the long room lately added to the establishment of St. Martin's-le-Grand, which swings so ingeniously from its suspending rods, a vast platform attracts the eye of the visitor; he sees upon it half a dozen men struggling amid a chaos of newspapers, which seem countless as the heaped-up bricks of ruined Babylon. As they are carried to the different tables to be sorted, great baskets with fresh supplies are wound up by the endless chain which passes from top to bottom of the building. The number of books and papers passing through all the post-offices in the kingdom is not less than 81,000,000 per annum. Of late years the broad-sheet has materially increased in size and weight, each paper now averaging five ounces; so that tens of thousands

of tons weight of papers annually are posted, full half of which pass through St. Martin's-le-Grand, and thence to the uttermost ends of the earth—to India, China, or Australia—for one penny ; whilst if they were charged by the letter scale, tenpence would be the postage ; so that, if weight were considered in the accounts of the Post-office, there would be a loss in their carriage of ninepence on every newspaper. Of course this loss is mostly nominal, as the railways take the mails without calculating their weight ; and to the packets, tons or hundredweights make no earthly difference. Even if this cost were real, the speedy transmission of news to all parts of the kingdom and its colonies is a matter of so much importance, that it would not by any means be purchased dearly.

We are continually seeing letters from subscribers in the *Times*, complaining that their papers do not reach them, and hinting that the clerks must keep them back purposely to read them. If one of these writers were to catch a glance of the bustle of the office at the time of making up of the mails, he would smile indeed at his own absurdity. We should like to see one of the sorting clerks quietly reading in the midst of the general despatch ; the sight would be refreshing. The real cause of delays and errors of all kinds in the transmission of newspapers, is the flimsy manner in which their envelopes and addresses are frequently placed upon them. Two or three clerks are employed exclusively in endeavouring to restore wrappers that have been broken off. We asked one of these officials once what he did with those papers that had entirely escaped from their addresses ? "We do, sir," said he, very significantly, "the best that we can," at the same time packing up the

loose papers with great speed in the first broken wrappers that came to hand. The result of this chance medley upon the readers must be funny enough; a rabid Tory sometimes getting a copy perhaps of the *Daily News*, a Manchester Rad a *Morning Post*, or an old dowager down at Bath, a copy of the *Mark Lane Express*.

The carriage of magazines and other books is an entirely new feature in post-office transactions, introduced by Sir Rowland Hill. At the end of every month the sorting tables at the Post-office are like publishers' counters, from the number of quarterlies, monthlies, magazines, and serials, posted for transmission to country subscribers. The lighter ones must all be stamped at the Stamp-office, like newspapers; and any magazine under two ounces with this talisman pressed upon it, passes without further question to any part of the United Kingdom free, whilst books under sixteen ounces can be forwarded for fourpence. This arrangement is a wise and liberal one, recognizing as it does the advantage of circulating as widely as possible the current literature of the country. Many a dull village, where the current literature of the day penetrated not a few years ago, by this means is now kept up level in its reading with the metropolis.

The miscellaneous articles that pass through the post under the new regulations are sometimes of the most extraordinary nature. Among the *live stock*, canary birds, lizards, and dormice, passed not long ago, and sometimes travelled hundreds of miles under the tender protection of rough mail-guards. Leeches are also very commonly sent, sometimes to the very serious inconvenience of the postmen. Ladies' shoes go through the general office into the

country by dozens every week; shawls, gloves, wigs, and all imaginable articles of a light weight, crowd the Post-office; limbs for dissection have even been discovered (by the smell), and detained. In short, the public have so little conscience with respect to what is proper to be forwarded, *that they would move a house through the post* if they could do it at any reasonable charge. Considerable restrictions have, however, lately been placed on this promiscuous use of the post.

The manner in which a letter will sometimes track a person, like a bloodhound, appears marvellous enough, and is calculated to impress the public with a deep sense of the patience and sagacity of the Post-office officials. An immense number of letters reach the post in the course of the week, with directions perfectly unreadable to ordinary persons; others—sometimes circulars by the thousand—with only the name of some out-of-the-way villages upon them; others, again, without a single word of direction. Of these latter, about eight a day are received on an average, affording a singular example of the regularity with which irregularities and oversights are committed by the public. All these letters, with the exception of the latter, which might be called stone blind, and are immediately opened by the secretary, are taken to the Blind Letter-office, where a set of clerks decipher hieroglyphics without any other assistance than the Rosetta stone of experience, and make shrewd guesses at enigmas which would have puzzled even the Sphinx. How often in directing a letter we throw aside an envelope because the direction does not seem distinct—useless precaution! the difficulty seems to be to write so that these cunning folks cannot understand.

Who would imagine the destination of such a letter as this, for instance?—

L. Moses,

Ratlivhivai.

Some Russian or Polish town immediately occurs to one from the look of the word, and from its sound; but a blind-letter clerk at once clears up the difficulty, by passing his pen through it and substituting—Ratcliffe Highway.

Letters of this class, in which two or three directions run all into one, and garnished with ludicrous spelling, are of constant occurrence, but they invariably find out their owners. Cases sometimes happen, however, in which even the sharp wits of the Blind Letter-office are nonplussed. The following, for instance, is a veritable address:—

Mrs. Smith,

At the Back of the Church,

England.

Much was this letter paused over before it was given up. "It would have been such a triumph of our skill," said one of the clerks to us, "to have delivered it safely; but we

could not do it. Consider, sir," said he, deprecatingly, "how many Smiths there are in England, and what a number of churches!" In all cases like this, in which it is found impossible to forward them, they are passed to what is called the Dead Letter-office, there opened and sent to their writers if possible. So that out of the many millions of letters passing through the Post-office in the course of the year, a very few only form a residuum, and are ultimately destroyed.

The workings of the Dead Letter-office form not the least interesting feature of this gigantic establishment. According to a return moved for by Mr. T. Duncombe in 1847, there were in the July of that year 4,658 letters containing property consigned to this department, representing perhaps a two months' accumulation. In these were found coin, principally in small sums, of the value of £310. 9*s.* 7*d.*; money-orders for £407. 12*s.*; and bank-notes representing £1,010. We might then estimate the whole amount of money which rests for any time without owners in the Dead Letter-office, to be £11,000 in the year. Of this sum the greater portion is ultimately restored to the owners—only a very small amount, say one-and-an-eighth per cent., finding its way into the public exchequer. A vast number of bank post-bills and bills of exchange are found in these dead letters, amounting in the whole to between two or three millions a year; as in nearly all cases, however, they are duplicates, and of only nominal value, they are destroyed with the permission of the owners. According to Mr. Greer's return of 1858, 30,000 letters containing property reached the Dead Letter-office.

Of the miscellaneous articles found in these letters, there

is a very curious assortment. The ladies appear to find the Post-office a vast convenience, by the number of fancy articles of female gear found in them. Lace, ribands, handkerchiefs, cuffs, muffettees, gloves, fringe—a range of articles, in short, is discovered in them sufficient to set up a dozen pedlars' boxes for Autolycus. Little presents of jewellery are also very commonly to be found ; rings, brooches, gold pins, and the like. These articles are sold to some jeweller, whilst the gloves and handkerchiefs, and other articles fitted for the young bucks of the office, are put up to auction and bought among themselves. These dead letters are the residuum, if we may so term it, of all the offices in England, as, after remaining in the local posts for a given time, they are transferred to the central office. The establishments of Dublin and Edinburgh, in like manner, collect all the same class of letters in Ireland and Scotland.

In looking over the list of articles remaining in these two letter-offices, one cannot help being struck with the manner in which they illustrate the feelings and habits of the two peoples. The Scotch dead letters rarely contain coin ; and of articles of jewellery, such as form presents sent as tokens of affection, there is a lamentable deficiency ; whilst the Irish ones are full of little cadeaux and small sums of money, illustrating at once the careless yet affectionate nature of the people. One item constantly meets the eye in Irish dead letters—"A free passage to New York." Relations, who have gone to America and done well, purchase an emigration ticket, and forward it to some relative in the "ould country" whom they wish to come over to join them in their prosperity. Badly written and

worse spelled, many of them have little chance of ever reaching their destination, and as little of being returned to those who sent them: they lie silent in the office for a time, and are then destroyed, whilst hearts, endeared to each other by absence enforced by the sundering ocean, mourn in sorrow an imaginary neglect.

When one considers it, the duties of the Post-office are multifarious indeed. Independently of its original function as an establishment for the conveyance of letters, of late it has become a parcel-delivery company and banking-house. In the sale of postage-stamps it makes itself clearly a bank of issue, and in the circulation of money-orders it still more seriously invades the avocations of the Lombard-street fraternity.

The money-order system has sprung up almost with the rapidity of Jack the Giant-killer's bean-stalk. In the year ending April, 1839, there were only 28,838 orders issued, representing £49,496. 5s. 8d.; whilst in the year ending December, 1859, there were sold 6,969,108, value £13,250,930, or nearly one order to every four persons of the entire population of the kingdom. The next ten years will in all probability greatly enhance this amount, as the increase up to the present time has been quite gradual. It cannot be doubted that the issuing of money-orders must have seriously infringed upon the bank-draft system, and every day it will do so more, as persons no longer confine themselves to transmitting small amounts, it being frequently the case that sums of £50 and upwards are forwarded in this manner by means of a multiplication of orders. The rationale of money-orders is so simple, and so easily understood by all persons, that they must rapidly

increase, and we do not doubt that Sir Rowland Hill's suggestion of making them for larger amounts will before long be carried into execution, as it is found that the public cannot be deterred, by limiting the amount of the order, from sending what sums they like, and the making one order supply the place of two or three would naturally diminish the very expensive labour of this department. The thirteen millions of money in round numbers represented by these orders, of course includes the transactions of the whole country, but they are properly considered under the head of the General Office, as all the accounts are kept there, and there every money-order is ultimately checked. About 18,000 money-orders are issued daily in England and Wales, and a duplicate advice of every order is sent to the Chief Office in London for the purpose of recording the transaction and checking the Postmaster's accounts. These advices are examined and entered by upwards of 100 clerks. Formerly 200 were employed. Thus, while the work has increased, the establishment of clerks has been considerably reduced, a most commendable fact in a Government office. On the sale of money-orders the Government gains £4. 10s. per thousand (in number) issued, and this more than covers the whole expense of the greatest monetary convenience for the body of the people ever established.

There is one room in the Post-office which visitors should not fail to inquire for—the late Secret Office. When Smirke designed the building he must have known the particular use to which this room would be put; a more low-browed, villanous-looking apartment could not well be conceived. It looks the room of a sneak, and it

was one—an official sneak, it is true, but none the less a sneak. As we progress in civilization, force gives place to ingenious fraud. When Wolsey wished to gain possession of the letters of the ambassador to Charles V. he did so openly and dauntlessly, having ordered, as he says,

"A privye watche shoulde be made in London, and by a certain circute and space aboutes it; in the whiche watche, after mydnyght, was taken passing between London and Brayneford, be certain of the watche appointed to that quarter, one riding towards the said Brayneford; who, examyned by the watche, answered so closely, that upon suspicion thereof, they searched hym, and founde secretly hyd aboutes hym a little pacquet of letters superscribed in Frenche."

More modern ministers of state liked not this rough manner, but turning up their cuffs, and by the aid of a light finger, obtained what they wanted, without the sufferer being in the least aware of the activity of their digits. In this room the official letter-picker was appropriately housed. Unchallenged, and in fact unknown to any of the army of a thousand persons that garrisoned the Post-office, he passed by a secret staircase every morning to his odious duties; every night he went out again unseen. He was, in short, the man in the iron mask of the Post-office.

Behold him, in the latter day of his pride, in 1842, when the Chartists kept the north in commotion, and Sir James Graham issued more warrants authorizing the breaking open letters than any previous Secretary of State on record,—behold him in the full exercise of his stealthy art!

Some poor physical-force wretch at Manchester or Birmingham has been writing some trashy letters about pikes and fire-balls to his London confederates. See the springes a powerful government set to catch such miserable game! Immediately upon the arrival of the mails from the north the bags from the above-mentioned places, together with one or two others to serve as a blind to the Post-office people, are immediately taken, sealed as they are, to the den of this secret inquisitor. He selects from them the letters he intends to operate upon. Before him lie the implements of his craft—a range of seals bearing upon them the ordinary mottoes, and a piece of tobacco-pipe. If none of the seals will fit the impressions upon the letters, he carefully takes copies in bread; and now the more serious operation commences. The tobacco-pipe red-hot pours a burning blast upon the yielding wax; the letter is opened, copied, resealed, and returned to the bag, and reaches the person to whom it is directed, apparently unviolated.

In the case of Mazzini's letters, however (the opening of which blew up the whole system), the dirty work was not even done by deputy; his letters were forwarded unopened to the Foreign-office, and there read by the minister himself. The abuses to which the practice was carried during the last century were of the most flagrant kind. Walpole used to issue warrants for the purpose of opening letters in almost unlimited numbers, and the use to which they were sometimes put might be judged by the following:—

"In 1741, at the request of A., a warrant issued to permit A.'s eldest son to open and inspect any letters which A.'s youngest son might write to two females,

one of whom that youngest son had imprudently married."

The foregoing is from the Report of the Secret Committee appointed to investigate the practice in 1844, and which contains some very curious matter. Whole mails, it appears, were sometimes detained for several days during the late war, and all the letters individually examined. French, Dutch, and Flemish enclosures were rudely rifled, and kept or sent forward at pleasure. There can be no doubt that in some cases, such as frauds upon banks or the revenue, forgeries, or murder, the power of opening letters was used, impartially to individuals and beneficially to the State; but the discoveries made thereby were so few that it did not in any way counterbalance the great public crime of violating public confidence and perpetuating an official immorality.

Thus far we have walked with our reader, and explained to him the curious machinery which acts upon the vast correspondence of the metropolis with the country, and of the country generally with foreign parts, within the establishment at St. Martin's-le-Grand. The machinery for its conveyance is still more vast, if not so intricate. The foreign mails have at their command a fleet of steamers such as the united navies of the world can scarcely match, threading the coral reefs of the "lone Antilles," skirting the western coast of South America, touching weekly at the ports of the United States, and bi-monthly traversing the Indian Ocean—tracking, in fact, the face of the deep wherever England has great interests or her sons have many friends. Even the vast Pacific, which a hundred years ago was rarely penetrated even by the adventurous

circumnavigator, has become a highway for the passage of her Majesty's mails; and letters pass to Australia and New Zealand, our very antipodes, as soon as the epistles of old reached the Highlands of Scotland or the western counties of Ireland. This vast system of water-posts, if so they might be called, is kept up at an annual expense of over £1,000,000 sterling.

The conveyance of inland letters by means of the railways is comparatively inexpensive, as many of the companies are liberal enough to take the bags at rates usually charged to the public for parcels; the total cost for their carriage in 1854 being only £446,000. Every night and morning, like so much life-blood issuing from a great heart, the mails leave the metropolis, radiating on their fire-chariots to the extremities of the land. As they rush along, the work of digestion goes on as in the flying bird. The travelling post-office is not the least of those curious contrivances for saving time consequent upon the introduction of railroads. At the metropolitan stations from which they issue, a letter-box is open until the last moment of their departure. The last letters into it are, of course, unsorted, and have to go through that process as the train proceeds. Whilst the clerks are busy in their itinerant office, by an ingenious, self-acting process, a delivery and reception of mail-bags is going on over their heads. At the smaller stations, where the trains do not stop, the letter-bags are lightly hung upon rods, which are swept by the passing mail-carriage, and the letters drop into a net suspended on one side of it to receive them. The bags for delivery are, at the same moment, transferred from the other side to the platform. The sorting of the

newly-received bags immediately commences, and by this arrangement letters are caught *in transitu*, sorted, arranged in districts, ready to be transferred to the district offices in the metropolis, without the trouble and loss of time attendant upon the old mail-coach system, which necessitated the carriage of the major part of such letters to St. Martin's-le-Grand previous to their final despatch.

There have been a great number of pillar and wall letter-boxes erected since they were first introduced about four years ago, and the plan is found to be so convenient and economical that their erection continues at the rate of about 500 a year. In most cases, the public prefer these pillar-boxes to receiving houses, as their letters are safe from the scrutiny of curious post-mistresses and their gossips.

The success of Sir Rowland Hill's system, with its double delivery, its rapid transmissions, and its great cheapness, which brings it within the range of the very poorest, is fast becoming apparent. Year by year it is increasing the amount of revenue it returns to the State, its profits for 1859 being £1,135,960, a falling off, it is true, of some £500,000 a year from the revenue derived under the old rates, but every day it is catching up this income, and another ten years of but average prosperity will, in all probability, place it far beyond its old receipts, with a tenfold amount of accommodation and cheapness to the public. As it is, the gross earnings have already done so by nearly £250,000 a year; but the cost of distribution has, of course, vastly augmented with the great increase of letters which pass through the post under the penny rate.

LONDON SMOKE.

ALL those who have experienced the depressing effects of a November day, and have seen the atmosphere without a moment's warning put on the changeable complexion of a very bad bruise, and then resolve itself into a dull, leaden, hopeless hue, for the rest of the day, can readily understand the fixed belief of the Parisian that in that month Cockneys give themselves up to suicide, and leap in a constant stream from London-bridge. Indeed, a countryman from the breezy South Downs, or from any country village where the air "recommends itself nimbly to the senses," may well feel his heart sink within him as he looks up in vain for the blue sky, and sees nothing but that solemn gray canopy of vapour which sits like an incubus on the whole town.

It may be said that it is unfair to take a November fog as offering any specimen of the atmospheric impurities in the midst of which we live. It may be so, but we look upon fogs as providential inflictions, which at certain times in the year seize for our special edification, as it were, the offending elements, and exhibit them under our eyes and noses, in order to show us what filth we are con-

tinually throwing into the air, and which as continually returns, although in not quite so demonstrative a manner.

Smoke we have always with us. If we look out on a fine summer's day from the top of the Crystal Palace for a view of the great metropolis, we naturally exclaim, "I see it; there is the smoke;" indeed, any picture of London without its dim canopy of soot would be as unrecognizable as would a portrait of Pope, Hogarth, or Cowper, without their well-known headgear.

This black and heavy cloud is supported by the 500,000 or 600,000 columns of smoke that arise from the 400,000 houses of London. In it we behold the great aërial coal-field, which contains annually no less than 200,000 tons of fuel that escapes from us up our chimneys. Escapes, did we say? Oh that it did, and that we never heard or saw more of it; but smoke, like a chicken, still returns to roost.

We do not allude to "those horrid blacks" that dance and waltz before our very eyes, and then maliciously plump down upon the ample page of some fine edition, or "squat" deliberately upon the most delicate distance of a sketch by Copley Fielding or Cox, but to those finer blacklets that invisibly permeate the air. If we look at any fracture through which a draught penetrates, a cracked window or a shrunken skirtingboard, we shall find that the edges are ragged, with a fine fringe of soot pointing towards the fireplace; this fact alone is enough to demonstrate that the air is charged both inside and outside our houses with a vast amount of infinitely divided carbon. If it is deposited in this manner by the mere friction of passing any object, we may imagine what irritation it must occasion to

the human lungs, into which it is sucked 30 times in the minute, converting them, as it were, into a temporary coalscuttle, out of which we are perpetually compelled to shovel the obnoxious intruder with a cough.

The effect upon vegetable life is still more striking; the plane, which annually throws off its greatcoat of soot, is the only tree which will flourish in London. Young wives fresh from the country in the summertime beguile themselves with the idea that they will snatch a recollection of home every morning by a view of the blooming geraniums and rosetrees in the balcony. Alas! in a month's time you shall see the *débris* of smutty stalks and melancholy flowerpots in the back court, and she never tries the experiment again. If vegetation grows black, our children grow white, and perish in far greater numbers than they would do in purer air. Life suffering thus, under the dominion of smoke, what shall we say of fabrics of all kinds, furniture, &c., which have not the capacity to throw it off? Families who have a town and country experience have only to compare their washing bills to perceive how enormously a residence in the former augments them. The loss to Londoners from this source alone must amount to millions sterling in the course of the year. But every article that is capable of being spoilt by the most tenacious of all floating pigments suffers alike, and in an incredibly short time tones down to the prevailing leaden hue.

Five centuries ago the very condition to which the smoke nuisance has brought us was foretold, and attempts were made to avert it. Until the time of Edward II. London used only wood for fuel, drawn from the neighbour-

ing forests. In this reign, however, coal began to be imported from Newcastle, and, the effects of the smoke speedily showing themselves, Parliament in 1316 petitioned the King to prohibit its use in London, on the ground of its being a public nuisance; whereupon he ordered all who burnt seaborne coal to be mulcted, and on a second offence, to have their furnaces demolished. Like most unnecessarily severe orders, however, it speedily fell into abeyance, and the evil from that time has been going on apace. At the Restoration, there were only 200,000 chaldrons imported; in 1775, 500,000 arrived; a quantity which had increased to 900,000 at the beginning of the present century, and now upwards of 6,000,000 tons are received in the metropolis by land and sea.

"Things when they are at their worst generally mend," says the old proverb. It required, however, a great deal of apparently hopeless agitation of the smoke question in Parliament to make that slowly-moved body entertain the idea of removing the nuisance by a public act, and it was not until 1854 that the measure now under review came into operation. According to this act, no furnaces employed in the metropolis, with certain exceptions to be mentioned presently, are to be used without being so constructed as to burn their own smoke, under a penalty of not less than 40s., and not more than £5., while for a second offence King Edward's punishment of "demolition" is almost equalled by the fine of £10, "and for each succeeding conviction a sum double the amount of the penalty imposed for the last succeeding conviction." As a considerable portion of the penalty inflicted goes to the informer, it may be readily imagined how narrowly the

6,500 furnace chimneys which come under the act are watched.

The smoke-producing districts lie almost entirely over the water, in the parishes of Lambeth, Bermondsey, Rotherhithe, and the Borough of Southwark. Here lie the greater portion of the factories — such as those of tanners, bone-boilers, brewers, saw-mills, flour-mills, distillers, and engineers, whose wealthy proprietors, before the passing of this act, were in the habit of deluging the town with the densest smoke, while they retired themselves every evening, with the most philosophic indifference, to their country villas, far away from its baleful influence.

Nothing can be more satisfactory than the working of the act to abate the smoke nuisance. You may steam it many times up and down between Westminster and London-bridge and see the tall chimneys on the Southwark bank standing idle in the air. Upon its first passing, its utter and early failure was predicted; but the Home Secretary is not the man to let a measure fail in his hands; and, people having found this out, are gradually complying with its provisions.

One would have imagined that the proved gain to the manufacturer of 12 per cent. on the amount of coals consumed by either Jukes's, Hazeldine's, or Hall's smoke-consuming furnace would have been sufficient to induce their adoption without the interference and coercion of the law; but such has not yet proved to be the case in any considerable degree. The advanced and more enlightened manufacturers—such as Truman, Hanbury, Buxton, & Co., the great brewers, and Price & Co., the patent candle-makers, indeed, adopted smoke-consuming furnaces long

before the passing of the act, and the latter company have introduced them into their great factory on the banks of the Mersey, near Liverpool. It is not our purpose here to enter into any account of the different smoke-consuming furnaces which have lately beeen patented, and it will be sufficient to state that the principle of all those in general use is the same. By the action of movable furnace-bars a thin stratum of coal is continually pushed *under* the fire, and, of course, all the smoke has to ascend through the incandescent mass, and is consumed in its passage. Although this plan entirely meets the requirements of the act, yet it cannot be concealed that it does not consume the carburetted hydrogen, the carbonic oxide, and the various hydro-carbons—all of which escape in the form of thin unindictable vapour, of a highly obnoxious character. We ought to be able to adjust the quantity of oxygen to the quantity of disengaged gases requiring its presence to produce combustion in the furnace as easily as we do in a moderator lamp, where the slightest motion of a screw converts the angry and lampblack-giving flame into a pure white light. Attempts have been made, we believe, to produce such furnaces, but we know not with what success.

The second clause of the act provides that all steamboats plying above London-bridge shall have their furnaces so constructed as to consume their own smoke. At first sight one certainly cannot see why the unfortunate people on the banks of the river below bridge should be condemned to wear out a sooty existence by reason of this arbitrary demarcation of the stream; indeed we feel strongly inclined to think that the framers of the act

must have plagiarized this idea from the announcement generally posted upon the paddlebox, of "No smoking allowed abaft the funnel," west-enders, like cabin passengers, being supposed to demand an exemption which is not accorded to less fastidious people. The reason urged for this distincton is that ocean-going steamers never pass London-bridge; but why these leviathans of passage, which unfurl such long pennants of smoke, should be allowed to escape free, while the penny boats are pounced upon, we are at a loss to know. The Bridegroom and the Bride are forced to burn anthracite coal or to alter their furnaces, but the magnificent Dundee or Ostend steamers may do as they like; and, still more absurdly, Waterman No. 3, that plies between Hungerford and Woolwich, may fume away as merrily as it pleases until it passes under London-bridge, but then it must cease to smoke as suddenly as any young gentleman in a train, when the suspecting guard pops his inquiring nose in at the window. Perhaps Lord Palmerston has given the west-enders the best of it by water, as a compensation for their sufferings by land, for the pedestrian passing by the Penitentiary is surprised to see the chimneys on the Lambeth side, between Westminster and Vauxhall bridges, staining the air with smoke as they did of old. These belong to glassworks and potteries, which are especially exempted from the operations of this act! How long such obnoxious exceptions are to remain and abuse the patience of the public is a question which, perhaps, the Home Secretary can best answer.

Since the six thousand and odd chimney shafts of the metropolis have been put under the surveillance of in-

formers and policemen, who watch their tops as a terrier would a rathole, the air has become sensibly purer on the south side of the river. It cannot be supposed, however, that the total suppression of smoke in all manufacturers' chimneys will have more than a partial effect in freeing the town from floating carbon. We have still left the reeking chimneys of the 390,000 and odd houses of the metropolis to keep up the dismal cloud for ever hanging over us. The question naturally arises, — Can we put out the smoke of the domestic hearth? Dr. Arnott has attempted to solve this question by the introduction of his improvement upon Cutler's smoke-consuming fire-grate. We have seen this burning on the premises of Mr. Edwards, the manufacturer, in Poland-street, and we can safely say that if it will work as well under domestic supervision as it does there, nothing more is required. The grate is the ordinary fireplace, having underneath it, in lieu of the under bars, a square iron coal-box, which has a movable bottom. In the morning this box is filled with coal, and the fire is then built and lit in the ordinary manner. As it consumes, instead of replenishing it with coals placed upon the top, by means of a bent poker, which acts as a leveller, you press up the bottom of the coal-box, and thus supply as much fuel as you require *below* the fire; of course, there is no smoke, and it is warranted to burn for fourteen hours with 20 lb. of coal. An ordinary fire is generally allowed a medium-sized scuttle a-day, which must weigh from 28 lb. to 30 lb. The saving of fuel, according to this calculation, is very great. Of course, if there is no smoke, there is no soot produced, and therefore no fear of chimneys catching

fire, with their inevitable results—horrid fire-engines and officious policemen, who mulct you at the rate of about 5s. per spark.

We do not see why in the course of time the smoke nuisance in London should not be entirely abated; and, when that period shall come, what shall we have gained? The crisp, bright atmosphere of Paris, for the suicidal peasoup air of London, during a portion of the year, at least. Does our reader doubt it? Has he never experienced a perfect sensation, strolling home in the small hours some spring morning, at being able to see from the top to the bottom of Bond-street, and to distinguish the slightest detail of architecture at a hundred yards' distance? Every fine summer morning of our existence this smoky, dirty town is born afresh, bright and clear, like Venus rising from the sea, only to descend upon the wheel of night black and grim as Pluto himself.

Let us conquer this smoke nuisance, scare away this nightmare of our own producing, and who shall say that the richest capital in the world shall continue one of the ugliest? It lies within our power to perpetuate throughout the day to a certain extent the morning's pellucid atmosphere by act of Parliament, and by private economy as effectually as we are now purifying our water. When we shall have done this, Decimus Burton will no longer labour in vain, and we shall cease to be guilty of the folly of introducing Greek or Italian architecture, with a certainty of seeing all details incrusted and lost in a few years beneath a covering of soot. Passing on the north side of St. Mary-le-Strand Church the other day we perceived with astonishment some exquisite carvings of cherubim,

flowers, and fruit over the heads of the windows, which had just been disinterred by workmen from their grave of soot, where for years they had been as completely hidden from human view as the Nineveh marbles were by the sandheaps of Mossul.

If a still more glaring example were wanting of injury done to our architecture by the fugitive fuel of our fires, there stands St. Paul's. For generations the full tide of London life has passed around it, without learning the lesson it teaches. The picture-cleaner places a portrait in his window, one half restored to its original freshness, the other clogged with dirt. Wind and rain, the cleaners of nature, have swept the south side of the metropolitan cathedral in its upper half, and kept the Portland stone as bright as it came from the quarry, while the lower half, which is protected by the surrounding houses, is coated with dismal carbon. Nay, as if to teach the passer-by more distinctly the evil smoke is doing it, we have one side of a pillar white and the other black ; and St. Paul himself, crowning the southern pediment, smiles benignly with a pure and spotless right cheek and side, while the drapery hanging over his left arm is thickly lined with soot ! Never did any building cry out in a more dramatic manner to be purified and protected from pollution.

While the smoke nuisance continues, of course decorations in colour of any semi-exposed building are absurd. Mr. Sang's polychromic embellishments of the arcade of the Royal Exchange have to be repainted every ten years ; the cobalt tympanum of the British Museum is becoming a good fog colour ; the pictures in the National Gallery

are deteriorating; Owen Jones is in despair; and all because we will send our coal up the chimneys at an average cost of 26*s.* a-ton, in order that it may distribute itself broadcast upon ourselves, our goods, and our public works of art!

MOCK AUCTIONS.

PASSING along one of the most crowded thoroughfares of the city the other day, I was attracted by the arrangements made for the sale of a "respectable tradesman's stock." Large placards pasted on the shop-windows announced that Mr. Ichabod had the honour to announce to the nobility and public in general, that he was about to dispose of a valuable stock by order of the proprietors; and long slips of paper shooting diagonally across the whole shop-front, like a flight of rockets, inscribed with "This Day," in large letters, testified to the vehement desire of the proprietor to realise without more delay. The dishevelled state of the goods in the window well seconded these outward appearances. A plated coffee-pot, of rather florid design, with a deep smear of tarnish across its bulging sides; a candlestick, with resplendent glass pendules, ornamented with doubtful ormolu work; and a lady's work-table of papier mâché, varnished to within an inch of its life, and so deposited as to show the full glare of the flagrant rose wreath that ornamented its top; spoke of the rather mixed nature of the stock now in the agonies of dissolution within.

As I entered the shop the bidding was not very active,

nor the company large. Indeed, the group of bidders looked almost as lifeless as the figures in a stereoscope, and the lots passed with pantomimic silence. No one looked round, but it was evident my footstep over the threshold gave a gentle electric shock of pleasure to the assembled company. The auctioneer seemed suddenly to find his voice, the bidding grew brisker, and the splendid china tea-service, as if by magic, seemed to become the object of keen contention; the whole company leapt at once into life, as though I were the fairy prince who had suddenly broken into the enchanted palace.

I ventured to ask a tall gentleman, who volunteered to assist me in my biddings, for a catalogue. They were not selling by catalogue that day, he said, as the trade were not there; and I should therefore embrace the opportunity to get bargains. Taking a quiet but comprehensive glance around me, I certainly could neither see any signs, nor smell the proximity, of that lively race which is indigenous to ordinary sale-rooms. There was a tall man, dressed in a brown coat, that hung down to his feet, with a face long and lean, and of a most simple expression. His modest white neckcloth, neatly folded beneath his old-fashioned waistcoat, and his rather large hands encased in black woollen gloves, gave me the idea that he was the respected deacon of some provincial Zion. As a contrast to this unsophisticated individual, there was a rough man in top boots and corduroys, with a huge comforter tied in a great bunch under his chin; whilst in his hand he held a cudgel, greatly exaggerated about the knots. He might have been a drover. The rest of the company were remarkably nosey and breast-pinny.

"Come, show the gentleman the matchless Dresden service," said the auctioneer.

Whereat the company instantly seemed to part down the middle, and I found myself raked by the piercing eye of the presiding functionary.

My friend the deacon appeared all of a sudden to take an amazing fancy to that splendid service, for he stretched out a nervous hand to examine a cup, when it slipped through his fingers, and broke upon the floor. My friend apologized for his awkwardness, and begged to be allowed to pay for his mishap; but the auctioneer would not hear of it—it was quite an accident—he was among gentlemen, who would treat him as such.

My heart began to soften; possibly it was a genuine concern, after all: I actually made a bid. It had been a bad day, I suppose, in consequence of the "absence of the trade." Be that as it may, the sight of a naked foot-mark did not more astonish Crusoe than did apparently the sound of my voice the assembled company. "One pound ten," I cried.

"Why, you're a making game," said my tall friend. "Why, it's a hundred-guinea set.—Two pounds ten."

"It's only Stafford ware," I retorted.

"Only Stafford, is it?" he remarked, with a faint laugh: "I should say they was Sayvres."

But the auctioneer held me with his "glittering eye."

"Let the gentleman come forward," he said: "they was made for the Grand Dook of Saxe Coburg, only they wasn't finished in time."

"Indeed," said I: "that was a pity."

I suppose there must have been some peculiarity in the

tone of my voice, for I instantly perceived that I had incurred the displeasure of the gentlemen around me, and my position was beginning to grow rather unpleasant, as all the noses and breast-pins converged upon me in rather a threatening attitude. The deacon alone looked mildly on.

At that moment I was aware of a fresh footstep on the floor, the same gentle electric shock as before seemed to pervade the bidders, and the rather bloated gentleman in the rostrum gave a slightly perceptible start, just as a spider does when a bluebottle blunders into his web. And now I discovered how it was that the company could see so well what was going on behind them; for on the opposite wall hung a looking-glass, and in it I could see an unmistakable country clergyman timidly looking at a "genuine Raphael."

"Jim," said the auctioneer, *sotto voce*, "tip us the old master."

In a moment the "Grand Dook" tea-service was knocked down to a sulky-looking bidder in a blue bird's-eye cravat, and Jim staggered beneath the weight of a remarkably brown Virgin, encased in a resplendent frame.

"The pictures I have the honour to submit to your bidding this morning, gentlemen," commenced the auctioneer, in the most impressive voice, "have been brought to the hammer under the most peculiar—I may say unprecedented—circumstances. The late proprietor—a nobleman—ransacked the stores of foreign collectors, and purchased, regardless of cost, the few, but priceless gems I now have the honour of submitting to your notice. Unfortunately, circumstances have compelled his representa-

tives to realise, without a moment's delay,—in short, they must be sold for what they will fetch. The first lot, gentlemen, is a genuine Raphael, originally in the collection of Cardinal Ritz. It is a genuine engraved picture," remarked the official, examining some apocryphal memorandum through his gold eye-glass, "termed the Virgin and Twilight, which accounts for the dark and solemn nature of the subject."

The noses and the pins now became violently agitated.

"Ah! that ain't for such as we," said one.

"No," said another; "it's a pity it should be put up when the trade ain't here."

"Come, gentlemen, make your bidding," said the voice from the rostrum, "you must have it at your own price."

"Well, then, just to give it a start," said the gentleman in the blue bird's eye neckerchief, "I'll say £5."

"What! for this untouched picture," almost shrieked the horror-stricken auctioneer. "More likely £500."

The noses began to grow excited. They actually seemed bidding "five pun ten," "six pun," "seven pun;" but the clergyman made no sign.

"Gentlemen," said the auctioneer, wiping the sweat of agony from his brow, "I cannot rob my employers in this way. What! only seven pounds for this untouched gem of Italian art! Jim, run round to the executor's, in Doctors' Commons, and ask him if I must throw the pictures away into the dirt in this manner."

Jim obeyed the order; and, calculating the time it would take to go and return, in pipes and goes, quietly stepped into an adjoining tap.

In about five minutes he rushed back. "Mr. ——

says they must go at any price—they must be closed at once."

"Very well. You hear what he says, gentlemen; it's not my fault—go it shall;" and with a look of horror he held the hammer aloft,—"Going at seven pounds."

"Let me look," gently interposed the clergyman. He looked, wiped the Virgin's face with a wetted handkerchief, and scrutinised the worm-eaten panel, enriched with the seal of the art-loving cardinal.

"Here's the buyer for the National Gallery coming," remarked the tall man by his side.

"Ah! I thought he wouldn't be far off to-day," said the auctioneer, exultingly.

"Eight pounds!" cried the clergyman.

"Wait a minute," said the auctioneer; "here's a gentleman coming that knows what a good picture is.

"Nine pounds!" shouted the deacon.

"Fifteen pounds!" cried the new comer, scarcely deigning to look at the gem.

"Twenty pounds!" faintly but hastily rejoined the clergyman.

The purchaser for the National Gallery, for some unaccountable reason which Mr. Conyngham should inquire into, would not go further, and the clergyman gained what the nation should have possessed—so said the auctioneer.

"You've been and made your fortune, sir," said the deacon; and so the worthy purchaser seemed to think.

I fancy I can see that dear old black-gaitered pastor, in his snug vicarage, standing, some fine morning, before his priceless gem, his finger and thumb between the fresh-cut

leaves of this week's *Guardian*, pointing out its beauties to a brother of the cloth.

"Snapped it up, sir, for a bagatelle, under the nose of the National Gallery purchaser—a gem from the Petti Palace—sold under a distress for rent."

What other ancient masters were given away on that day I know not; for, happening to hazard some mild doubt as to the genuineness of the Raphael, the deacon, to my amazement and horror, addressed a few words to my private ear that I never dreamed could have fallen from his simple evangelical lips. I shall not repeat them, but merely content myself by saying, that with Doric strength he intimated that I had better depart, or it would be the worse for me; and, taking the hint, I retired.

Since that occasion, I have passed the establishment several times, and, I regret to say, Mr. Ichabod has not yet accomplished the sale of the whole of the stock, nor has the deacon yet returned to the duties of his local Zion. He still bids with charming simplicity for the china tea-service; nay, it would appear that he is not yet cured of that nervous bashfulness which led him to break the tea-cup, for I saw him repeat his misfortune, with many apologies, only yesterday; and, if I am not greatly mistaken, I also perceived a pile of tea-cups behind the rostrum, which the benevolent proprietor, to all appearances, has provided against his unfortunate casualties. Strange to say, the cattle-dealer has not yet been able to tear himself away from the excitement of the bidding.

At the same time that we must admire the skill with which some figures in these little dramas play their parts, I cannot help thinking that, on one or two points, there

is room for improvement, and if Mr. Ichabod is not proud, I will venture to make a suggestion or two. In the first place, why does he not introduce one or two lady bidders—representatives of those stout females, all false-front and catalogues, who cheapen pots and pans at genuine sales? Then, to make it look more like the real thing, there should be a little more chaffing going on—quarrelling with the auctioneer—anything to break up the ghost-like silence of the bidders. I miss, too, our old friend the porter—one of those grimy individuals into whose soul dirty carpet has entered. Surely the genius that dressed the deacon and manages his department is equal to improvising so necessary a functionary. There is another point which strikes me as entirely neglected. There should be more bustle among the company, more in-coming, and out-going. Why could they not pass out by a back-door and in again at the mart-entrance, thus economising their numbers as they do in grand processions at the theatres? Some arrangement of this sort would give to the scene an out-of-door life which at present is altogether wanting, and the absence of which tends to excite the public suspicion, which might, with great advantage (to the proprietors), be avoided by a little ingenuity.

The next time I pass Mr. Ichabold's establishment, I shall see if he is above taking the hints I thus freely throw out.

HYDE PARK.

I REMEMBER often in my student days to have watched with eager eyes the breathing lung of a frog—to have seen, focussed in the microscope, the apparatus at work which supports the ever-burning lamp of life. Distinctly within the narrow field of vision I could see the dark red blood globules, rushing in a tumultuous tide along the transparent veins, then pacing slowly as the veins broke up into a delicate net-work of little vessels, so narrow that they could only pass in Indian file; then again I beheld them debouching into the widening arteries, where they commenced once more their mad race, one over the other: no longer purple, but—under the influence of the air, which in their slow progress had permeated them—a brilliant scarlet.

With that curious spectacle fresh in my recollection, I will, in imagination at least, change "the field" of the microscope for that of air, and suspend myself in a balloon over this mighty city of millions. Slowly, as I rise, casting out sand in the ascent, the earth seems to recede from me, and at last all is gray mist, and a few fleecy clouds. A little adjustment of the sand-bags and the escape-valve, and I can focus London as the physiologist does the frog's lung in the microscope. Directly under-

neath me, hemmed in by a huddled mass of brick and stone, lies a large open space, traversed by wide white lines, along which crowd and jostle a flood of small dark spots, no bigger than the heads of pins—out of these wide lines branch an infinite net-work of small lines across the open space, sprinkled with many dots, which fall in crowds once more into the wide white lines. The small dots which enter the open space look pale and worn ; as they circulate about, their colour changes ; they move quicker and lighter ; and at last roll out of the great space, florid and bright.

Surely, I have only been looking at the frog's lung again, magnified a little more !

No, I have been peering at Hyde Park, watching Rotten Row, and the drive, and the different pathways crowded with holiday people. I have been looking at a lung, too ; for what are all these dark points, but people representing blood globules, which, in the aggregate compose the great tide of life ? And what is this park but an aërator to the race, as the one I before looked at was to the individual !

Let me descend to a more minute anatomy of this great pulmonic space : dropping myself just inside the beautiful screen of Hyde Park-corner. Five o'clock, and Rotten Row alive with equestrians ! Far away between majestic elms, now gently dipping into the hollow, now slightly ascending the uneven ground, made as soft and as full as tan can make it, runs, in the very eye of the setting sun, this superb horse promenade. And here comes a goodly company, seven abreast, sweeping along with slackened rein ; the young athletes on the Elgin marbles yonder upon the frieze of the screen do not seem more a portion of their horses than those gay young fellows, whispering cour-

tesies to the ladies so bright-eyed and supple of waist, who gently govern with delicate small hands their fiery-eyed steeds. Single riders trot steadily past, as though they were doing it for a wager. Dandies drawl along, superbly indifferent to everything about them, with riding-sticks "based on hip." And when I reach the Albert Gate, all Belgravia seems pouring out through the narrow streets on prancing, dancing, arch-necked steeds. Where all the horses come from is the wonder to me. As far as the eye can see, out far into Kensington, where the perspective of the road is lost in feathery birch trees, I see nothing but prancing, dancing horses, tossing their heads, caracolling, humbly obeying the directions of delicate wrists, or chafing at the curb of powerful bridle-hands. Nor do they end here; over the bridge and round the drive, the contingents from Tyburnia pour along in troops; and now, as I come to the corner of Kensington Gardens, there is a perfect congestion of equestrians, listening to the band of the Life Guards playing a waltz. There they are, ranged round the great trees, English men and maidens, and English horses, all thorough-bred—as noble a group as the wide world can show, whilst over head, the thick fan-like green leaves of the chesnut-trees cast a pleasant shade.

Meanwhile, the drive is gorged with carriages moving along at a foot-pace. Let me constitute myself (for the nonce) a young man about town, and comfortably resting my arms over the railings, take a good stare at the passing beauty. I need not feel bashful. As far as I can see, for hundreds of feet on each side of me, there is nothing but young men leaning over the railing, tapping their teeth with their dandy little sticks, and making the most

powerful use of their eyes. Here I watch moving before me the great portrait gallery of living British beauties. Every instant a fresh profile passes in review, framed and glazed by the carriage window. Onward rolls the tide of vehicles—of dashing cabs with pendant tigers—of chariots with highly-groomed horses—of open phaëtons, the reins of faultless white, guided by lady whips—of family coaches, ancient and respectable. Now and then some countryman and his "missus," in a home-made chaise-cart, seem to have got accidentally entangled among the gay throng, and move along sheepishly enough. On they go all to where Kensington Gardens leans, like a sister, beside her bolder brother, Hyde Park ; and here all alight and pour in a bright flood of moving colour upon the emerald turf.

Country people pity us poor town people, and wonder how we can exist ! Did anybody ever see such a public park as this in the country ? *I* never did. Indeed, I question if there be a prettier promenade in Europe than the north bank of the Serpentine, with its mimic beach of broken shells, washed by its fresh-water lake. Here, where I stand, might be called the port ; underneath tall sycamore trees, which cast a pleasant shade on the edge of the water, are grouped the various boats which hail from this place. There is a cutter, with flapping sails, just come off a cruise ; another is beating up in the wind's eye a quarter of a mile off ; a third comes sweeping in with her gunwale under water. There is some respectable sailing to be picked up on the Serpentine, I suppose. Near the picturesque little boat-house, which, with its weather-beaten carved gables and moss-grown roof, looks as though it had

been an old inhabitant of some Swiss valley, lie grouped a dozen light skiffs, dancing on the water, and reflecting on their sides the twisting snakes of gold cast from the sun-lit little waves.

But what are all those mimic skiffs I see, coasting from shore to shore—cutters, sloops, and schooners, now on their beam-ends, now sliding in between the swans, which scarcely deign to turn aside their feathery breasts? These, at least, are playthings. Not at all. One of the boatmen, with a straw in his mouth, and his hands in his pockets, informs me that they form the squadron of the London Model Yacht Club, and that they are testing their powers for the next sailing match. I am not quite sure that those grave-looking men with long poles, watching the performances of the different craft, are not the members of the Club. That big man there may be, for anything I know, the commodore—for they have a commodore, and rules, and a clubroom, and they sail matches for silver cups! Look into *Bell's Life in London*, a week or two since, and there you will find full particulars of the next match of the Yacht Club, "established in 1845," which is to come off in next June, for a handsome twelve-guinea cup, and which informs us that the measurements must be as follows:—"The length, multiplied by the beam, not to exceed five hundred inches over all; the keel, for cutters, or yawls, not more than two feet six inches; and for two-masted vessels, two feet ten inches, on the level of the rabbet, with not less than four inches counter." It is a very serious sporting matter. The vice-commodore of the sister Club at Birkenhead having proposed, by advertisement, to change the flags of the Club, "the white ensign to be

without the cross," &c., the editor of our sporting contemporary gravely objects, "that the alteration of our national ensign cannot be legally made without the written sanction of the Admiralty." Fast young boats these!

For the cup, some years ago, fifteen yachts started, and the different heats lasted the whole day; the *America*, modelled on the lines of the famous Yankee boat, coming off victorious. It is a pretty sight to see these little cutters driving along under full sail; and many an old gentleman, standing amid his boys, I have noticed enjoying it to his heart's content. After watching them for some little time, one's ideas of proportion get confused; they look veritable ships sailing upon a veritable great lake; the trees, the men, the sheep on the shore, swell into immense proportions, and it seems as if one were contemplating the fleet of Lilliput from the shores of Brobdignag.

A little farther on stands the boat-house belonging to the Royal Humane Society; and in it are seen the awful-looking "drags" with which the drowning are snatched from Death's black fingers. Across the road is the establishment for recovering those who have been rescued from the water. Over the door is the bas-relief of a child attempting to kindle with his breath an apparently extinguished torch, and around it is the motto: "Lateat forsan scintilla,"—Perhaps a spark still lingers. Baths, hot-water beds, electrifying machines, and mechanism by which artificial breathing can be maintained, are ranged around the rooms.

The majority of poor creatures carried beneath these portals are persons who have sought their own destruction. The bridge across the Serpentine is the Westminster

"Bridge of Sighs." Who would think this bright and sunny spot could be the haunt of suicides? They are mostly women of the better order, who have been brought to shame and abandoned—at least five women to one man being the proportion. The servants of the Society, who form a kind of detective water-police, and are always on the look-out, scarcely ever fail to mark and to watch the women who contemplate self-destruction. They know them by their usually sitting all day long without food, grieving; towards evening they move. When they find they are watched, they sometimes contrive by hiding behind the trees to elude observation, and to find the solitude they desire. The men, less demonstrative and more determined, escape detection, and but too often succeed in accomplishing their purpose. Those who have been restored to life, after hours of attention in the receiving-house, frequently repay the attendants with, "Why should I live against my will?" Nevertheless, it very rarely happens, here, at least, that a second attempt at suicide is made.

While I have been dwelling upon this melancholy subject, the shades of evening have been coming on. The last carriage has driven off, and the last young man about town has tapped his teeth with his cane for the last time, and departed to his club. The water's edge is only thinly dotted with people, and the old gentlemen who have been sitting reading on the seats have gone in to escape the night-air.

Gradually, however, I perceive a gathering of boys upon the opposite shore; they thicken apace, and soon the hum of hundreds of small voices is wafted over towards me; they line the whole shore for a mile, like little black

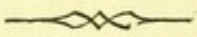
dots. As I look, the black dots gradually become party-coloured.

What are they doing here in the boat-house? Getting ready a flag to hoist on the pole; three boats are also putting off. What is it that excites and moves to and fro the living multitude on the other side? The whole mass is turning white with frantic rapidity; up runs the red bunting, and five thousand youngsters dash simultaneously into the water, driving it in a huge wave before them. As far as can be seen along the bank, the water is studded with heads, like pins in a pincushion; some of the heads move out into the middle; the great majority remain timidly near the shore, splashing and dashing with hands and feet. The boats have taken up their different stations, and here they will remain, ready to go to the rescue so long as the bathing continues. At nine o'clock the flag drops, and "All out!" roared from stentorian lungs, booms over the water: "All out!" is echoed by many silvery young voices. The opposite bank is again a moving mass of white specks: these deepen to gray, soon become black, and then move off across the green, and all is quiet. Morning and evening, during the summer months, the Serpentine is thus made a huge bath for the children of the labouring classes. The better classes also make use of it early in the morning. One party of gentlemen, who have formed themselves into a club, bathe here all the year round; and when the frost is very hard and the ice is very thick, a space is cut for them with hatchets, to enable them to take their diurnal dip.

The twilight deepens. A few children, feeding the swans upon the margin of the water, is all the human life

to be seen of the vast tide rolling along so incessantly a short time ago. Across the glass-like lake the waterfowl, here and there, are gently sailing, leaving long trails of silver as they go. Over the bridge the foliage seems to float in a bath of purple haze, and across the deep amber of the sky a flight of wildfowl go, in swiftly moving line. Danby should be here to paint from it one of his delicious pictures of evening.

THE SUCTION POST.



One great invention draws others in its train. The locomotive necessitated the telegraph, and with the telegraph we have grown dissatisfied with our whole postal system. We can converse with each other at opposite ends of the kingdom, yet a letter will sometimes take half a day journeying from one extremity of the metropolis to the other. Our great nerves and arteries (the telegraphic and railway systems) put the four corners of the earth in speedy communication with each other, considering the hundreds of millions of square miles they serve; but the central heart, London, is a blank in the general system, and the utmost speed with which its distances can be travelled is measured by the pace of a Hansom cab. Three millions of people are naturally dissatisfied with this state of things, and busy brains are hard at work attempting to remedy it. At the present moment, in fact, there is a race to lay down a metropolitan nervous system. If the reader happens to go into the City, he sees above the house-tops and across the river science weaving a vast spider's web from point to point. The sky is gradually becoming laced with telegraph wires, along which messages

of love, of greed, of commerce, speed unseen. These wires belong to the District Telegraphic Company, and perform the office of putting public offices in communication with each other, of supplying the nervous system between the Docks and the Exchange, carrying the news of the moment and the price of stocks from the counting-house of the merchant to his snuggery far down in the country, hard beside some railway. But the spider's web is also extending beneath our feet; if we take up the flags, there too we find the fine filaments traversing in their iron sheaths, linking railway station to railway station, and speeding the message under the feet of millions from one telegraphic line to another. With all these facilities for forwarding urgent messages between given points, however, the town still wants some rapid augmentation of its ordinary carrying system. We are going to shoot passengers from point to point by means of a subterraneous railway. Shall letters and parcels still toilfully pursue their way, urged by sorry screws and weary postmen? Or shall we not harness another power of Nature to relieve our toil?

When a lounger on a very hot day sits down under an awning, and goes to work upon his sherry-cobbler, he notes with satisfaction how immediately and how smoothly the liquor glides up the straw upon the application of his lips to it. But the odds are that he never associated with this movement the Post Office or the London Parcels Delivery Company in any manner whatever. Yet, if we are not greatly mistaken, the power at work in that straw is destined to revolutionize the machinery of those very important metropolitan associa-

tions. There are some people perverse enough to turn the dislikes of others to their own special profit. Now a company has been formed, and is in actual working, to take advantage of a special dislike of Nature. We all know that our great mother abhors a vacuum; but the Pneumatic Despatch Company, on the contrary, very much admires it, inasmuch as they see in it their way to a vast public benefit and profit to themselves.

For some years the International Telegraph Company have employed this new power to expedite their own business. Thus their chief office at Lothbury has been for some time put in communication with the Stock Exchange and their stations at Cornhill and Mincing Lane, and written messages are sucked through tubes, thus avoiding the necessity of repeating each message. We witnessed the apparatus doing its ordinary work only the other day in the large telegraphic apartment of the company in Telegraph Street, Moorgate Street. Five metal tubes, of from two to three inches in diameter, are seen trained against the wall, and coming to an abrupt termination opposite the seat of the attendant who ministers to them. In connection with their butt-ends other smaller pipes are soldered on at right angles; these lead down to an air-pump below, worked by a small steam-engine. There is another air-pump and engine, of course, at the other end of the pipe, and thus suction is established to and fro through its whole length. Whilst we are looking at the largest pipe we hear a whistle; this is to give notice that a despatch is about to be put into the tube at Mincing Lane, two-thirds of a mile distant. It will be necessary therefore to exhaust the air between the end we

are watching and that point. A little trap-door—the mouth of the apparatus—is instantly shut, a cock is turned, the air-pump below begins to suck, and in a few seconds you hear a soft thud against the end of the tube —the little door is opened, and a cylinder of gutta-percha encased in flannel, about four inches long, which fits the tube, but loosely, is immediately ejected upon the counter; the cylinder is opened at one end, and there we find the despatch.

Now it is quite clear that it is only necessary to enlarge the tubes and to employ more powerful engines and air-pumps in order to convey a thousand letters and despatches, book parcels, &c., in the same manner. And this the company are forthwith about to do. They propose in their prospectus to unite all the district post-offices in the metropolis with the central office in St. Martin's-le-Grand. We particularly beg the attention of the indignant suburban gentleman who is always writing to the *Times* respecting the delays which take place in the delivery of district letters, to this scheme. At present a letter is longer going from one of the outer circles of the post-office delivery to one of the inner ones than from London to Brighton; but with the working of the Pneumatic Despatch Company a totally different state of things will obtain. An obvious reason of the present delay is the crowded state of the London thoroughfares, which obstructs the mail-carts in their passage to the central office, or from district to district; another reason is that, from the very nature of things, letters are by the present system only despatched at intervals of two or three hours. But when we have Æolus to do our work the letters will flow towards head-quarters for sorting and further distribution incessantly.

Indeed, the different tubes will practically bring the ten district post-offices of London under one roof.

At the present moment the contract rate at which the mail-carts go is eight miles per hour. The Pneumatic Company can convey messages at the rate of thirty miles an hour, and this speed can be doubled if necessary. The same system will be ultimately adopted for bringing the mail-bags to and from the railway-stations, and instead of seeing the red mail-carts careering through the streets, we shall know that all our love-letters, lawyers' letters, and despatches of importance, are flying beneath our feet as smoothly and imperceptibly as the fluid flows outwards and inwards from that great pumping machine—the human heart. The spider's web that is being hung over our head has indeed a formidable rival in this web of air-tubes under ground, inasmuch as by the latter we can send our thoughts *at length*, and with perfect *secrecy*, and quite as quickly for all practicable purposes, as by the telegraph. The post-office authorities, if they adopt the scheme, of which we have no doubt, will be able to forward letters with a very great increase of despatch at a much smaller cost to itself than even at present. A pipe between the Charing Cross post-office and Saint Martin's-le-Grand is about to be laid, so that the public service will very speedily test its capabilities, if further testing indeed be needed.

If we can suck letters in this manner, between point and point of the City, it will naturally be asked, why not lay down pipes along the railroads, and convey your mails by pneumatic power? But it must be remembered that the exhaustive process cannot be put in operation for any long

distance without great loss of power, and that it would be difficult to send letters great distances, even with relays of air pumps, much faster than by ordinary mail trains. However, it is impossible to say what may not be eventually done in this direction, but we are certain, from actual experiment carried on for years, that the system is perfectly adapted for this vast metropolis, as regards the postal service, and there is as little doubt that it is quite capable of taking upon itself a parcel-delivery service,—indeed, the size of the articles to be conveyed is only limited by the power of the pumping-engine, and the size of the conducting tube.

The company are now about to lay down a pipe between the Docks and the Exchange, for the conveyance of samples of merchandise, thus practically bringing the Isle of Dogs into Cornhill; and for all we know, this invention may hereafter be destined to relieve the gorged streets of the metropolis of some of its heavy traffic.

The projector of the railway system could scarcely have foreseen the extent to which the locomotive would supersede other means of progression, and the principle of suction certainly starts on its career with as much certainty of succeeding as did that scheme. Some time towards the end of the century, we may perchance hear the householder giving directions to have his furniture sucked up to Highgate—for hills form but little impediment to the new system of traction,—or the coal merchant ordering a waggon load of coals to be shot into the pipe for delivery a dozen miles distant. And this new power, like the trunk of the elephant, is capable of being employed on the most trivial as well as upon the weightiest matters.

At the station of the International Telegraph Company, in Telegraph Street, it acts the part of messenger between the different parts of the establishment. The pipes wind about from room to room, sufficient curve being maintained in them for the passage of the little travelling cylinder which contains the message, and small packages, and written communications traverse almost as quickly in all directions as does the human voice in the guttapercha tubing, to which, in fact, it is the appropriate addendum.

In all large establishments, such as hotels and public offices, the application of the invention will be invaluable; and from its fetching and carrying capabilities, it may well be nick-named the tubular "Page."

That we have been recording the birth of an invention destined to play a great part in the world, we have, as guarantees, the names of the well-known engineers, Messrs. Rammell and Latimer Clarke, and among the directors that of Mr. W. H. Smith, whose establishment in the Strand supplements the Post-office in the distribution of newspapers throughout the country. In making our lowest bow to this new slave of the lamp that has been enlisted in our service, we may observe that, unlike steam, it cannot at any time become our master, or bring disaster where it was only intended to serve.

SAINT GEORGE AND THE DRAGON.

At the most active corner of the most active lung of the great metropolis stands a large building, more remarkable for its size than its classic beauty. Its vast monotonous white flank, exposed to the full roar of Picadilly, gives no sign of life or animation; and if it were not for the inscription on its frieze,—"Supported by Voluntary Contributions,"—it might be taken for a workhouse, or for one of Nash's palaces. Will the reader be conducted through the labyrinths of Saint George's Hospital, and see something of the eternal fight that every day beholds between the good Saint George and the undying Dragon of Disease?

But let him not enter with the idea that there is anything repulsive in the contemplation of this congregation of human sufferers; but rather with a sense of the beneficence of an institution which snatches poor helpless creatures from the depressing influences of noisome alleys, or the fever-jungles of pestilential courts, and opens to them here—in the free air, where a palace might be proud to plant itself—a home, with Benevolence and Charity as their friends and servitors. Neither must he look with a half-averted glance upon the scenes we have to show him;

for their aim is to render the anguish of one sufferer subservient to the future ease of some succeeding sufferer; to make great Death himself pay tribute to the living.

As we enter and proceed into the fine vestibule, a crowd of students are seen hanging about the board-room door. It is one o'clock, and "High Change" at the hospital. Dotted about, among the living mass, are some who carry little wooden trays filled with lint and surgical instruments. These are "dressers," waiting for the surgeons to make their daily round of the wards. Others have long green books tucked under their arms: these are the clerks of the physicians, whose duty it is to post up, day by day, the progress of the patients, until "dead" or "recovered" closes the account. They are all looking into the board-room, and expecting the advent of the big medicine-men. The younger men regard this room with awe; for to them it is a sealed book; and they wonder if the time will ever come when they will lounge carelessly in and out of it, or have their portraits hung upon the walls, or their busts placed upon brackets.

Now, the board-room door opens: a surgeon comes out, wheels to the right, strides down the passage, and off goes one of the trays and a broil of students. A physician follows, and turns to the left: with him flies a green book and another ring of satellites. Surgeons and physicians follow, one after another, each taking up his little crowd of followers, green books, and trays; and the noisy vestibule is at once deserted. Let us follow the last batch up the stairs.

This is a physician's ward. At this hour all the patients are in bed to await their doctor's visit. The cluster of

students follow the physician, and settle for a few minutes here and there upon particular beds, as they proceed down the long vista of sufferers. The patients are quiet enough whilst the physicians are present; but we will just look in half-an-hour hence, and see what a change there will be. At the end of each ward is a room for the nurse. See how she has contrived to make it look like home;—the bit of carpet, the canary, the pictures round the walls, all express an individuality strongly in contrast with the bare monotonous aspect of the open ward. Meanwhile the swarm of black bees is pitching upon a distant bed. Before we can reach it, however, a little bell rings, and all the patients' eyes turn towards a particular part of the wall. There we see a large dial, like that of a barometer, with a hand in the centre. Round it are the names of the medical officers, nurses, and the words accident, operation, chapel, &c. There is one of these dials in every ward, and all are worked by a series of iron rods which communicate with each other, the impulse being given by the porter below in the hall. By this means, anything that is going on in the hospital is known simultaneously at every part of it. The bell that has just rung is part of the apparatus, and draws attention to the movements of the hand. It stops at "operation;" and in a minute afterwards a long line of students are seen winding up the stairs, the surgeon at their head. He looks calm; but, depend upon it, he bears an anxious mind; for life and reputation wait upon his skill. Let us follow the crowd: a new spirit has come over the students; the jolliest and most careless walk up steadily and silently. It is to be a tremendous operation,—one of the great arteries, deep

down in the pelvis, has to be tied, and no one knows how it may terminate.

Steadily and quietly the Operating Theatre is overflowed from the top benches, and the spectator looks down upon a hollow cone of human heads. The focus of this living mass is the operating table, on which, covered with a sheet, lies the anxious patient; and every now and then he sweeps with an anxious glance the sea of heads which surrounds him. Close to him is the surgeon, his white cuffs lightly turned up, examining carelessly a gleaming knife, and talking in whispers to his colleagues and his assistants.

Slowly the bewildered countenance of the patient relaxes; his eyes close; he breathes peacefully; he sleeps under the beneficent influence of chloroform like a two years' old child. The sheet is removed; and there lies a motionless, helpless, nerve-numbed life: an assistant pushes back the eyelid, and the fixed eye stares vacantly at the roof.

The student below us clutches the bars in front of him. It is his first operation; and he wishes he were far away, and wonders how the porters can stand so calmly by, waiting with the sponges.

There is a sudden movement forward of every head, and then a dead silence. The surgeon has broken into the bloody house of life, and every eye converges towards his hands;—those hands that manipulate so calmly; those fingers that *see*, as it were, where vision cannot penetrate, and which single out unerringly, amid the tangled network of the frame, the life-duct that they want. For a moment there is a painful pause; an instrument has to be changed, and the operator whispers to his assistant.

"Something is going wrong," flashes in a moment through every mind. No! the fingers proceed with a precision that reassures; the artery is tied; and the life that trembled upon the verge of eternity is called back, and secured by a loop of whipcord!

There is a buzz, and a general movement in the theatre; the huge hollow cone of heads turns round, and becomes a cloud of white faces, no longer anxious. Some students vault over the backs of the seats; others swing up by the force of their arms: the whole human cone boils over the top benches, and pours out at the doors. Brown pulls Jones's hair playfully; whereupon Jones "bonnets" Robinson; and there is a universal "scrimmage" on the stairs. Can these be the same silent, grave-looking students we saw half-an-hour since? Certainly! Who expects medical students to keep grave more than half-an-hour?

As we pass down-stairs towards the basement, we see the wards opening out on either hand. These are the surgeons' wards; and you look upon long vistas of "fractures," and of convalescent operation cases. The "dressers" are at work, and trays now come into full play.

A stranger's preconceived ideas of the suffering in an hospital are not at all borne out by the appearance of the patients generally. Many of them are quietly reading the better-class cheap literature of the day; others are conversing round the ample fire. The little child, with its leg in a splint, is as merry as possible, with its bed covered with playthings. Everything that humanity can dictate, or to which art can minister, is supplied. The most eminent medical men—whose attendance sometimes the rich cannot

purchase—watch the patient with all due art and skill; whilst carefully-trained nurses are at hand, day and night, to ease the tired limb, or to soothe his racking pain.

Below again is the floor devoted to medical cases; which we have already passed through: but it does not look like the same ward. See how that Rheumatism case has struck up an acquaintance with the Chronic Bronchitis; and how confidentially the Dropsy is whispering to the St. Vitus's Dance. The fair-haired girl, with the large lustrous eyes, is making up a bonnet for the coming spring—poor girl! before that time comes, the dark screen will, in all probability, be drawn round her bed, and then all the ward will know what has happened.

Anything to get rid of *ennui* in the hospital. As we pass the men's ward, that rough navigator washes up his own tea-things; that convalescent cabman smooths the little child's pillow; and farther on the poor shattered tailor helps his fellow in misfortune to walk with the inverted sweeping-brush as a crutch! The tenderness and sympathy you see rough fellows show in hospitals is very touching.

The basement floor is mostly given up to the purposes of the medical school and the students. The library is there; its windows look out upon a sickly garden (why should hospitals have sickly gardens, when covered glass conservatories, affording an equable temperature, might be so easily and cheaply constructed?). Where books do not prevail, the walls are covered with full-length plates of the human form, dressed in light suits of blue and red piping. In the corner sits a young anchorite mournfully contemplating a skull;—he is only a first-year's man having a

"grind at the bones." Two or three more are in close consultation with that "rough sketch of man," suspended by a cord from the ceiling; they are articulating his joints, and rubbing up their own brains for an examination. Another group by the fire-place is holding a black inquest upon some proceeding of the big medicine-men up-stairs: young students are so very critical. In a few years these seemingly thoughtless young fellows will be spread the wide world over; some, in the golden East; some, skirting the pestilential shores of Africa; some, in the new Australian world; some, in remote hamlets; some, in the fever-stricken depth of cities—all bent upon the mission of warring with the grim Dragon—disease.

But we must pass on, as we have yet much to see. This is the lecture-room. How well the students know that hideous cast over the glass-case, with the notch and swelling in its neck; their chief point of view in many a long lecture. Through the lecture-room is the Pathological Museum, surrounded by armies of cold shiny bottles. These contain contributions from the dead to the living—of disease to health. It seems wonderful how the poor human frame manages to rub on at all; subject, as we here see it is, to such innumerable maladies. But it does contrive; and many of these "specimens" are the triumphs of the surgeon's skill over the destroyer. Scores of men walk about well and hearty who could recognize their own peculiar property among these bottles, and who remember with gratitude the successful burglary committed upon their own bodies, when mortal pain was stolen from them as they sweetly slept.

There is the representation of a woman who seems to

have been devoted from her youth up to the nourishment of that huge, pale pumpkin growing from her neck; there are casts of hands sprouting with supernumerary fingers. Here are models of fearful faces in wax, which call to mind Madame Tussaud's Chamber of Horrors. Next comes a skeleton almost tied up into a knot by disease; above our head is a shelf devoted to a whole infant population, not constituted exactly according to pattern. "But what is all this boiled tripe for?" says the visitor. Boiled tripe, my visitor! These are the real valuables of the Museum, and each bottle has its separate and absorbing history posted on that great blood-red ledger.

The mere curiosities of the place are to be found in this glass-case. There you see the half-sovereign that stuck in Mr. Brunel's windpipe: a present from its late proprietor, who was doubtless as glad to get rid of it as we, the public, were to learn that he had done so. There is a long tube filled with the very best Japan ink (for so it seems), taken out of a tumour. Pence that have lain *perdu* for months in the stomach, and knives that have made the grand tour without inconvenience, lie side by side; and here is a packet of needles that came out simultaneously all over a young lady's body. Do you see that hide? Take off your hat, for you owe it some reverence; the pretty girl you love, but for the late occupant of that skin, might have been a loathsome fright. That is the hide of the sacred cow from which Jenner took the first vaccine matter.

But what are they doing in that little room beyond?—opening Goldner's canisters? No, no; there sit the curator and his assistant putting up "preparations." Why

is he interested so much about that bit of cartilage? Why does he so carefully put away that piece of fractured bone? What mystery lies in that little soft gray mass, that he should scrutinize it so narrowly with the microscope, adjusting and re-adjusting the screws with such nervous eagerness? These are the hieroglyphics which must be deciphered ere the great hidden language of disease can be discovered; these are the painstaking labours by which science creeps on from point to point.

The next door leads to the Bluebeard's chamber of the establishment, which we will not explore. Another step takes us into the Post Mortem Theatre. There, upon that cold slab underneath the sheet, you trace that dread mysterious outline, which appals more than the uncovered truth. It has been brought from the ward above to answer some enigma, which has baffled the questioning of the physician for months; and here, in the face of his class, his judgment and skill will speedily be tested, and the knife will show us what has brought to a stand-still the curious and delicate machinery of life. Think not, however, that nature yields up her secrets without, sometimes, exacting a terrible retribution upon those who would pry into them. The faintest puncture upon the surgeon's hand, the least abrasion of the cuticle with the knife that has drank the venom of the body, has been known to kill as surely as the most subtly-concocted poison ever administered by Italian revenge.

But let us return to the ground-floor wards. These wards, right and left, are consigned to the surgeons: you

see, as you pass, the long perspective of "accidents," to which the ground-floor is mainly devoted, on account of its proximity to the street.

But that room filled with such decent-looking persons—what are they doing there, ranged round the wall? These are the out-patients; the sickly troop that flocks day by day for relief. Do you wish to know how terrible the sufferings, how fearful the struggles, of "respectable poverty?" Go, then, and listen to the questions the physician puts to them one by one, and you will come out saddened and astonished. There is one disease which haunts that room to which he cannot minister, one quiver from which issue unseen the arrows of death, which he cannot avert. Listen whilst he questions that neatly-dressed young woman: "How have you been living?" She hangs her head, fences with the query, and is silent; pressed kindly, she confesses, a little tea and bread have been her only nourishment for months. Wait a few minutes until the men are called in, and you shall hear that wasted giant, in the adjoining room, make still the same reply; "tea and bread for months" have dragged his herculean frame to the ground. They do not complain: they take it as a matter of course.

As we leave the hospital the clock strikes three, the "seeing hour" of the poor patients in the wards; the crowd of visitors who have been waiting outside the doors press in, and throng up the vestibule. The burly porter, however, posts himself in front, and dodges about like a boy who heads a flock of bolting sheep. Now he pounces upon an old fishwoman who tries to rush past him. What

is he about? Flat pick-pocketing, by all that is sacred! Is he going to rob the woman of her seed-cake? Scarcely is she past, than he dives into the capacious pocket of the second, and comes up with half-a-dozen oranges; a third is eased of an eight-ounce bottle of gin; a fourth, in evident trepidation, gives up a pound of sugar; a fifth—to her he gives a low bow, and she passes on in "maiden meditation, fancy free." She, be sure, is one of the "Governors." This momentary suspension of his power, makes him a very tiger after "trash and messes;" a fresh onslaught is commenced, scarce a person but is mulcted of some article, and his eye rests upon the table covered with the spoils with the complacency of a man who has done his duty. This stern janitor is the percolator of the establishment, through whom the visitors are strained of the deleterious ingredients they would smuggle to their friends.

Let us take one more peep into the wards before we go. Who would think he was in an hospital, and that he was surrounded by disease? Each bed is a divan, and each patient gives audience to a host of friends. A thousand kind greetings are heard on every hand, and the lines that pain has long been graving in the countenance, joy and affection for a moment efface. Did we say each bed was thronged with friends? Ah, no! not at all! Here and there we see a gap in the chain of human sympathy—a poor sufferer, by whose lonely bed no friend waits.

Let us come forth once more into the air.

The fresh breeze of the park seems sweet after the close atmosphere of St. George's; yet sweeter seem the actions of the merciful. As we pass the corner of the hospital,

the eye catches an inscription upon a porcelain slab let into the wall. The words are simple:—

"In aid of those patients who leave this Hospital homeless and in need."

Below, is an opening for the reception of gifts, so that the poorest and most friendless go not uncared for. This little arrangement is "the corner-stone of faith" of one of the benevolent physicians. He imagined that a constantly open hand—for the wounded—held out at this thronged corner, might not be without its effect, and his confidence in the good side of human nature was not ill-placed. As much as twelve pounds have been taken from the box in one week—glittering gold and silver mixed with pence and farthings, attesting that human sympathy is not of class or degree. In the full light of day, whilst the tide of life has been swiftly flowing past, many a rough hand has dropped its contribution; and in the silent night, when the bright stars above have been the only witnesses, many a rich gift has been deposited, together with the good wishes of compassionate and sympathizing human hearts.

THE INDIA-RUBBER ARTIST.

We have all of us laughed at the grotesque appearance made by toy heads of vulcanized india-rubber. A little lateral pressure converts its physiognomy into a broad grin, whilst a perpendicular pull gives the countenance all the appearance that presents itself when we look into the bowl of a spoon held longways. The pressure removed, the face returns to its normal condition. Of the thousands of persons who have thus manipulated this plaything, it perhaps never struck one of them that in this perfect mobility lay the germ of a very useful invention, destined to be, we believe, of great practical value in the arts. If we take a piece of sheet vulcanised india-rubber and draw a face upon it, exactly the same result is obtained. This fact, it appears, struck an observant person, and out of his observation has sprung a patented process, worked by a company under the name of the "Electro-Printing Block Company," for enlarging and diminishing at pleasure, to any extent, all kinds of drawings and engravings. It must be evident that if a piece of this material can be enlarged equally in all directions, the different lines of the drawing that is made upon it in a quiescent condition must maintain the same relative

distance between each other in its extended state, and be a mathematically correct amplification of the original draft. The material used is a sheet of vulcanised india-rubber, prepared with a surface to take lithographic ink; this is attached to a moveable framework of steel, which expands by means of very fine screws. On this prepared surface, lines are drawn at right angles; these are for the purpose of measurement only. The picture to be enlarged is now printed upon its face in the usual way, and supposing it is to be amplified four-fold, the screw frame-work is stretched until one of the squares formed by the intersection of the lines, measures exactly four times the size it did whilst in a state of rest. It is now lifted on to a lithographic stone and printed, and from this impression copies are worked off in the usual manner. If the picture has to be worked with type, the large impression has, of course, to be made from block plates, the printing lines of which stand up like those of a woodcut. This is accomplished by printing the picture with prepared ink, upon a metal plate: the plate is then subjected to voltaic action, which eats away the metal excepting those parts protected by the ink. In examples of the amplification and reduction of a woodcut by this process, they are exact transcripts of the original, even to little defects. The human hand, with unlimited time, could never reproduce such a fac-simile as we have here performed in a few minutes, at a very trifling expense. Where it is required to make a reduced copy of a drawing, the process is inverted; that is, the vulcanised india-rubber sheet is stretched in the frame *before* the impression is made upon it. It must be evident, that on its being allowed to

contract to its original size, it will bear a reduced picture upon its surface from which the copies are printed.

The application of this art to map-work is very apparent. Let us instance the ordnance maps. Both enlargements and reductions of the original scale on which they were drawn have been made in the ordinary way at an enormous expense, the greater part of which might have been avoided had this process been known. As it is, we have gone to work in a most expensive manner. The survey for the whole of England was made on the very small scale of one inch to a mile for the country, and of six inches to the mile for towns, and now there is a cry for an enlarged scale of twenty-five inches to the mile. In other countries, comparatively speaking poor to England, this scale has been far exceeded. For instance, even poverty-stricken Spain is mapped on the enormous scale of as many as sixty-three inches to the mile. The Government maps of France and of Sweden are equally large; it does, therefore, seem strange that, when we are making a second edition of our Doomsday books, with the pencil rather than with the pen, our Legislature should shrink from undertaking a scale of only twenty-five inches to the mile for so rich a country as our own. But with this question we have nothing to do; our purpose is only to show that it would be a great saving if the twenty-five-inch scale had been originally carried out, as with this new process all the smaller scales could have been produced with perfect accuracy from this one at a very small cost. Indeed, the public could, if they wish, have pocket facsimile copies of that gigantic map of England and Scotland on the twenty-five-inch scale, which,

according to Sir M. Peto, would be larger than the London Docks, and would require the use of a ladder to examine even a county. The new art is applicable to engraving of every kind; and, moreover, it can very profitably reproduce types itself in an enlarged or reduced form. This is a fact of great importance to all Bible Societies, for enormous sums are spent in producing this work in all imaginable sizes. The clearness and beauty with which a page of type can be reduced is such as will surprise Mr. Bagster or Lord Shaftesbury.

But, it will be asked, what advantage does this method present over a resetting of the page in the usual manner! Two very important ones—speed and price. Let us suppose, for instance, that we wish to make a reduction of a royal octavo University Bible to a demy octavo. The price of resetting the type alone would be £800, and the "reading for corrections" another £300 at the least.

Now, an identical copy could be produced by the process employed by the Company for £120; there would be no charge for "reading," as the copy is a facsimile. Where there are many rules, marginal notes, and different kinds of types, as in Polyglot Bibles, the advantage of reproducing by the india-rubber process would be of course proportionately greater. Any society possessing one standard Bible have thus within their reach the means of bringing out as many different-sized editions as they like, from the large type fitted for the eyes of very old men, to the diamond editions that require a microscope to read them.

We may mention another power possessed by the new method, which will prove very valuable to publishers. It

sometimes happens that when a new edition of a work is called for, some of the original blocks, or stereotyped impressions, are found to be wanting. Heretofore new drawings and engravings would have to be made; but now all this difficulty is obviated, by simply taking the engraved page out of the old book, and reproducing the block required from it. This actually occurred with respect to the well-known work "Bell on the Hand," the missing blocks of which have been reproduced from some old printed pages. It is scarcely known yet how many centuries may elapse ere the ink of old books becomes so dry that it cannot be transferred by the new process; but it is quite certain that a couple of hundred years does not so far dry it as to render it incapable of giving an impression, so that we may have the earliest folio copies of Shakspeare's Plays reproduced with exactness, in more available sizes, through the medium of a few sheets of India-rubber. It seems only the other day since this extraordinary substance performed the solitary duty of rubbing out pencil-marks: now there is scarcely a manufacture in which its agencies are not employed, and it bids fair, as we have shown, to revolutionize one branch of the fine arts, and to add very largely to the sum of enjoyment among the refined and educated classes of society. When the first savage tapped the india-rubber tree, how little did he dream that the turgid stream that flowed from the bark was destined to work such changes in certain branches of trade, and to add a new and most important civilizing agent to the pale-faced nations!

OUR PECK OF DIRT.

"WHAT a fellow you are, Routitout; can't you let us enjoy our breakfast in peace?" good humouredly remarked handsome Fred, as he balanced on his fork the bright purple end of a polony, at a bachelor's breakfast-party.

Now old Routitout wasn't a bit of a curmudgeon, but when he took up any subject, nothing could induce him to let it go until, like a puppy with a new rug, he had tugged it to pieces. The report of the debate in the House of Commons on the adulteration of food had, unluckily, just caught his eye, and accordingly he went into the subject, with which he was really well acquainted, with as much gusto as Tom Sayers went in at the Benicia Boy.

"It's all very well to say, 'I don't care for adulteration,'" he authoritatively exclaimed, "but you must: this breakfast-table is built up of adulterations; take that polony you think so spicy, what will you say to finding your toes rotting off in a month or two, like an old post in damp ground?"

"Come, that won't do, old fellow; why should we take in the dry rot with German sausages?"

"My dear boy, that is precisely what you must take

your chance of, if you will eat these poison-bags without inquiring; why, in all probability, that sausage is made from putrid meat—you may always suspect bad meat, where there is high seasoning, and there are hundreds of instances on record, of people rotting away at their extremities, from eating these putrid German sausages."

We all looked up; Bob Saunders in his amazement spilt a spoonful of yoke down his handsome whiskers, and there was a general pause. There is nothing like opening a conversation with a startling fact, and this old Routitout knew full well, and proceeded to take instant advantage of the sensation he had created.

"Fact!" said he; "here is an account" (pulling an old German newspaper out of his pocket) "of three German students, who gradually rotted away, from eating putrid sausages at Heidelberg."

"Well, they may keep their polonies for me," said Bob, "I stick to eggs; what can you make of them, old fellow?"

"Why, in all probability, the one you are eating ought to have been by this time a grandfather. Laid in some remote village of France this time last year, it has lain ever since pickled in lime water. The antiquity of your London eggs is marvellous. They come over here by the million at a time, and you don't suppose the Continental hens hold monster meetings to suit the time of the exporter?"

"I wish you would turn the conversation," Bob replied. "I taste the lime quite strong, and must wash it down with a cup of coffee."

"Bean flour, you mean," replied his tormentor, "and

possibly something worse. Just turn it over in your mouth again, and see if there is a saw-dust smack in it. The fine dark Mocha you get in the New Cut, for instance, is adulterated with mahogany sawdust."

My friend, Ned Allen, a bit of a heavy swell, who affected to admire, now and then, a plebeian thing, struck in here in his lisping way :—

"Well, I musth declare the finesth cup of coffee I ever tasthed, was at four o'clock in the morning, at an itinerant coffee-stand after Lady Charlotte's ball — 'twas really delicious !"

I saw old Routitout's eye twinkle, as much as to say, "now thou art delivered into my hands." "Fine body in it, eh ! Such a 'horsey-doggy' man as you should have recognised the flavour of, &c., &c."

"Good God ! what can you mean ?" exclaimed Ned.

"Oh ! nothing, nothing ; no doubt you felt a sinking after that old skinflint's supper, and wanted some animal food."

"Animal food in coffee, prepostwous !"

"Ah ! my dear friend, I don't like to disturb your equanimity, but it is a noted fact that the strong coffees used by the itinerant coffee standkeepers get their flavour from the knackers' yards. There are manufactories over in the Borough, where they dry and pulverize horses' blood for the sake of adulterating cheap coffees ; and then the cream, how do you think they could give you such luscious cream in your coffee at a penny a cup ?—why, simply enough, they thicken it with calves' brains. If you don't believe me, read 'Rugg on London milk,' and see what he found in it with his microscope."

"Well, I'm safe, then," I interposed, "as I never touch anything but the best green."

"That's just the mistake you reading men always make," he replied. "I dare say you innocently believe that green tea is made of the young tender leaves of the plant; but the real truth is, it is black tea painted—painted and bloomed like a worn-out old hag."

Old Routitout dipped his huge fist into the caddy, and took out a handful of young Hyson, and held it side-ways to the light on his open hand: "Do you see that beautiful pearly green colour, that's called the glaze—a mixture of turmeric and Prussian blue. Think, my dear fellow, of the dose of poison you have been regularly taking every night and morning; perhaps you can now account for that dreadful nightmare you had last night. Old Sarah, the first and great Duchess of Marlborough, used to say that she was born before nerves came into fashion; and she never said a truer thing, for green tea came in about her time, and 'the cup that cheers, but not inebriates' began to do its deadly work upon us Britons."

"Do the Chinese drink green tea?" I inquired.

"Yes," he replied, "the real young sprouts of the shrub, but not the glazed abomination sent over here;—that is manufactured by them expressly to suit the barbarian."

"But is there no tea wholesome?" we all cried, in astonishment.

"Yes," retorted old Routitout, tartly, "your good strong Congou at 3*s.* 4*d.* is generally pure; black tea is mostly pure unless you happen to get some old tea-leaves re-dried. There are people who go about to club-houses

to collect old tea-leaves, not to brush carpets with, but to re-curl and dye, and sell again. If you happen to take a cup that tastes like hay, be sure that there has been a resurrection from the tea-pot. Hundreds of tons of it are made in London yearly."

"Have an anchovy, Bob?"

"They ain't anchovies," interposed our old friend. "Do you think they can afford to give you real anchovies at a shilling a bottle? I tell you what they are, though, Dutch fish coloured and flavoured to suit the market; that strong red paste in which they swim is bole armenian, a feruginous earth. You *must* eat your peck of dirt before you die, you know."

"My dear Mr. Routitout," interposed a quiet gentlemanly man of our party, "take a pinch of snuff to restore your equanimity."

Our quiet friend might just as well have trodden at that moment on the tail of a puff adder.

Old Routitout took a pinch with a mock serenity, and said, "Yes, if I wished to be poisoned. Do you ever feel a weakness in your wrists, my dear friend, eh?"

"Good gracious me! no, sir!"

"Well, then, if you will only persist long enough in taking this kind of snuff, you will gradually find your hands fall powerless at the wrist, like the fore-paws of a kangaroo."

Here was another sensation, and we all looked for some explanation.

"You think you are taking nothing but powdered tobacco," said our old friend, glaring at the snuffer, "but I tell you there is either chromate of potash, chromate of

lead, or red lead in it to give it a colour, and you get saturnine poisoning as a consequence."

"Come, take a pickle?" archly interposed that incorrigible Bob, determined to rile our tormentor, "the vinegar won't disagree with you."

"You are verdant enough to suppose that is the natural colour of the vegetable, I suppose?" retorted old Routitout, harpooning a gherkin with his fork.

"To be sure I am, my Diogenes," that youth replied; "come, get out of your tub and descant."

"Then give Diogenes a steel fork, a knitting-needle—anything of bright steel will do, to touch this verdant lie, and show you the ugly venomous thing it contains. Now, let that knife remain in the jar for an hour, and perhaps we shall learn the secret of these verdant pickles. The very vinegar is falsified."

"While you are about it, you may as well attack the whole cruet-stand!"

"Nothing easier in the world. That prime 'Durham Mustard,' for instance, is a delusion and a snare. There's scarcely a bit of mustard that *you can get* pure at any price. This stuff is nothing more than 95 per cent. of wheaten flour, just a dash of pure mustard, turmeric to paint it up to concert pitch, and black pepper to make it sting; and you have been labouring under the delusion all the while that you have been eating mustard, sir."

"'Pon my honour, I have," replied Bob; "but what about the vinegar?"

"When do you particularly like vinegar?"

"Well, to tell you the truth, I like a dash on a native,

taken standing at an oyster-stall, just to cool one's coppers after the—opera."

"Just so," said Mr. Routitout, gravely drawing from his pocket a notebook. "I'll let Dr. Hassall have a word with you—this is what he says for your especial comfort: 'We have found some samples of vinegar to consist of little else but sulphuric acid coloured with sugar: it is in low coffee-houses and oyster-stalls that such vinegar is not uncommonly met with.' So you see, my friend, you are in the habit of 'cooling your coppers' with vitriol, sir, vitriol!"

"Now, then," said Bob, not half liking it, "serve out the pepper, my boy."

"Well, pepper—what you call pepper—is mainly flour and linseed-meal, flavoured with D. P. D."

"What in the name of all that is sacred is D. P. D.?"

"Oh, D. P. D. is short for dust of pepper dust—the sweepings of the mills. The manufacturers supply it to the grocers in barrels, so that they can falsify at pleasure."

"Don't forget the soy while you are about it."

"Well, that's nothing more than treacle and salt, so says Hassall, and the fish-sauce nothing but vinegar, and catsup coloured—with what do you think?"

"Can't tell."

"Minute chips of charred deal!"

"Come," I interposed, "after all these disagreeables, allow me to recommend you one of these sweetmeats. What will you have?—a mutton chop, a rasher of bacon, or an oyster all done in sugar—or here's a cock coloured to the life."

"Charming bird, certainly; and so you recommend this cock for a delicate stomach?"

"Well, drop it in your pocket, and I dare say one of the little Routitouts will not make wry faces about it."

"Won't they! I think I know something about this amiable bird. Look at his bright yellow beak—well, that's only chromate of lead, and those blood-red wattles—there is nothing more injurious in their colour than vermilion. Those beautiful stripes of yellow on the wings are gamboge, and the verdant stand on which he is strutting is arseniate of copper, or Scheele's green—three deadly poisons and a drastic purge! Perhaps now you would like one of your younkers to have a suck at this game pullet?"

"Not so bad as that, old fellow!" I replied, furtively dropping out of my pocket a coloured bonbon, intended for the little one at home. "A slight indigestion, perhaps, that a dose of grey-powder would put to rights in a day?"

"I am very glad you mentioned grey-powder—mercury and chalk that should be; for let me tell you, you may find the remedy worse than the disease."

"Why, do you know, sir," he said, raising his voice, "that they sometimes make this infantile remedy out of the scrapings of looking-glasses?"

"And what are the scrapings of looking-glasses composed of?"

"Why, an amalgam of tin, antimony, and arsenic, as a foil for the mercury. They sell this abominable stuff at 8*d.* a-pound, and if you happen to buy grey powder in a low neighbourhood, you stand a very good chance of getting some of it. Not content with poisoning and loading our food with all sorts of indigestible rubbish, they next proceed to adulterate the drugs we depend upon to cure us."

"Well, upon my word," said Bob, "here we've been

jollifying at this elegant *déjeûner à la fourchette*, and eating all the delicacies of the season, when in comes this learned wretch and turns it all into gall and wormwood. Let us see what we've really taken. Why, there's a whole paint-box of paints to begin with—Prussian blue, turmeric, bole armenian—"

"Stop a bit," cried old Routitout, "those preserves look very red—there's cochineal in them; put down cochineal."

"Very well, cochineal,—blue, yellow, red and scarlet,—four coats of paint for delicate stomachs."

"Now, then, for the minerals; sulphur in the sulphuric acid, lead in my friend's rappee."

"Stop a minute," eagerly interposed Routitout again, "let me examine the knife," and rushing to the pickle-jar, he triumphantly returned, "Copper!" I told you so—look at the coating on the knife. Copper, by jingo!"

"Very well,—lead, copper."

"And if any of you had happened to have sweetened your tooth with that cock of magnificent plumage, there would have been an addition of mercury and arseniate of copper, a pretty metallic currency to put into your blood's circulation with your breakfast, and then for a gentle alterative to-morrow morning—antimony, mercury, and arsenic, alias grey powder, would be likely to set matters right with a vengeance," and old Routitout laughed a demoniac laugh; "and, stop a bit, you have not done yet—there's lime in the eggs, sand in the sugar, horse-blood in the coffee, and, perhaps, mahogany saw-dust; just throw these little items in to make it 'thick and slab.'"

"Bob," said I, turning very briskly upon our tormentor, "let's wash our mouths out with a glass of beer."

"Here's to you," he said, watching with his clear blue eye the 'beaded bubbles winking at the brim.'

"I dare say now, you think that fine head is a recommendation to your tipple. The author of a practical treatise on brewing, however, lets us into a secret; the heading, he tells us, is a mixture of half alum and half copperas, ground to a fine powder, and is so-called for giving to porter and ales *the beautiful head of froth* which constitutes one of its peculiar properties, and which landlords are so anxious to raise to gratify their customers. That fine flavour of malt is produced by mixing salts of steel with cocculus indicus, Spanish liquorice, treacle, tobacco, and salt."

"But there's nothing of the kind in pale ale," I replied.

"Well," said he in a half-disappointed tone, "they used to talk about strychnine, though I believe that's all bosh, but you can't deny the camomiles."

"But what's the use of disenchanting us in this way, if tradesmen are all robbers together?" I inquired. "What remedy have we?"

"That's just the thing the House of Commons have been trying to give you. Mr. Scholefield's bill on the adulteration of food, which was originally intended to hit the adulterator very hard, is emasculated enough, though, for fear of interfering with trade; but there will be some protection for the intelligent classes, it is true. Any article suspected of being adulterated, may be publicly analysed, and if found to be sophisticated, the guilty party will be liable to a fine: this will lead to the better class of tradesmen warranting their goods as pure, and the middle and upper classes will, in the end, reap the benefit

of Dr. Hassall's investigations, and Mr. Scholefield's bill—but as for the poor, God help them! They pay dear for what they have, and never, by any chance, have it pure; and as they can't afford to have suspected articles analysed, they must go to the wall as of old. We want a little touch of French despotism in these matters. Every drop of milk brought into Paris is tested at the barriers by the lactometer, to see if the 'Iron-tailed cow' has been guilty of diluting it—if so, the whole of it is remorselessly thrown into the gutter—the Paris milk is very pure in consequence. If a tradesman adulterates any article of food offered for sale, he is first fined, and then made publicly to confess his fault, by means of a large placard in his window, setting forth the exact nature of the trick he has played upon his customers. Imagine some of our leading tradesmen obliged to sit in sackcloth and ashes, and suffer this moral pillory! One or two rogues thus exposed would have a marvellous effect in keeping the sand out of the sugar, and the burnt beans out of the coffee, &c., &c."

"Now then, old fellow, as you have worked yourself round into a good humour again, take a weed?"

"Not the slightest objection in life, for it's the only thing to be got unsophisticated—there is plenty of bad tobacco, it is true—but we know it is tobacco. There are many tales going, about the fine qualities of British tobacco grown in the Camberwell cabbage beds — but it's all fudge."

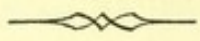
"Come," said I, "let's take a constitutional in the fresh air after this lecture?"

"Fresh air, indeed," all our friend's savageness was evidently reviving. "Fresh air with every gully hole sending

forth streams of sulphuretted hydrogen, and sulphuric acid, impregnating all the water—where on earth do you find your fresh air?"

Where he would have ended there is no telling, had not Bob slily tempted him with a thumping principe, on which his mouth closed with immense satisfaction to all parties concerned.

THE ARTIFICIAL MAN.



WHILE lounging, the other day, in a medical library, I chanced to take up a little volume, the odd title of which led me to dip into it—"Bigg on Artificial Limbs." I had heard of the skilful, anatomical mechanician of Leicester Square, whom the Queen delighted to honour with commissions for cunningly devised limbs for wounded soldiers during the Crimean war, but never realised to myself the art with which man can eke out the defects of nature until I glanced over this little volume! the contents of which so struck me, that I was determined to see for myself how far that cunning biped man can simulate the handiwork of our great mother. I was received courteously, and on explaining the nature of my errand, an assistant was sent through the different workshops to satisfy my curiosity.

A very few minutes' conversation with my conductor left the impression upon my mind that, instead of having any profound respect for Nature, he looked upon her as sometimes rather in the way than otherwise; for, happening to ask him playfully, as a kind of starting question, with how small a modicum of humanity he could manage to work, "Sir," said he, very seriously, "we only want

the vital principle; give us nervous centres and sound viscera, and we find all the rest."

"But," said I, not prepared for this liberal offer, "suppose a man had only three inches of stump!"

"Three inches of stump!" he replied, contemptuously, "with that allowance we could do anything. There is," said he, "somewhere in Ireland, a gentleman born without limbs, who goes out hunting in a clothes-basket strapped on his horse's back. If we could only get hold of him, his friends, in six weeks, would not know him."

An inspection of my friend's *ateliers*, certainly, went far to justify the confident spirit in which his assistant spoke. I soon found out that there are first, second, and third-class limbs, however, as of everything else.

"What!" said I, "do you make banisters as well as legs," pointing to a shelf-full neatly turned and painted.

"Banisters! my dear sir," he replied, a little hurt, "these are our Chelsea pensioners!"

And on a closer examination such they proved to be. Here was the hard third-class fact simple and unadorned.

"And these buckets?" I rejoined, pointing to some scores of hollow wooden cones placed one within the other.

"Bucket's the word!" said he, reaching one down, and screwing a banister into its lower end. "These are our Chelsea pensioners complete. But this is nothing to what they have in store at Chelsea Hospital. During the war we could not make them fast enough, and they were obliged to apply to the mop-makers. Fact," said he, seeing the surprise in our eyes—"and arms, too! You should see the rows and rows stored on the shelves:

—their hooks hanging out like so many hundred dozen of umbrellas. Government can only afford hooks for soldiers and sailors; but officers who are not able to pay can get new legs and arms of the very best construction at the expense of a grateful nation, by simply applying at the Horse Guards."

All the while this serio-comic conversation was going on, a workman in the coolest possible manner was working away at a most delicate little leg that would not have come off second best in the Judgment of Paris—a faultless Balmoral boot, and the daintiest silk stocking covered proportions that Madame Vestris might have envied.

"These," said my companion, "are some of our first-class goods. Would you like to see the mechanism?—Goodge, pull down the stocking." With that the workman bared the limb, whilst my companion put it through its paces. "This, you see, is our patent knee-cap and patella, and this the new vulcanised india-rubber tendon-Achilles; here, in the instep, you will observe a spiral spring elevating the toes, and if you will just observe (opening a little trap-door in the back of the calf), here is an ingenious contrivance by which the bending of the knee elevates the front part of the foot, thus allowing it full play to swing forward clear of the ground."

Certainly it was an admirable contrivance.

"And can a man or woman progress easily with that arrangement?" I said.

"Do you know Lady ——?" said he,

"Yes."

"Nothing the matter there?" he rejoined, interrogatively.

I was obliged to confess, not to my knowledge.

"That's her spare leg, nevertheless," he replied triumphantly.

"Spare leg! What do you mean?"

"Lord bless you! look into that cupboard. I have the spare members of half the town there duly labelled. Things will go wrong with the best conducted limbs; and to save difficulties we keep duplicates here which can be applied at the shortest notice. A gentleman, whom we will call Mr. Smith, once lost the pin out of his knee-joint, and sent here for his off-leg. A young lad up from the country sent him another Mr. Smith's box containing an arm—very awkward."

"Will you allow me?" said I, trying to read the names on the boxes.

"Certainly not," said he, shutting the door and turning the key: "this is our Blue Beard's cupboard, and I wouldn't allow even my wife to peep. But come and look at our hands."

There they were—some clenched, some spread out, some in the act of holding, some gloved, and displayed like Vandykes, as if to challenge attention.

"Now, what will they do?" said I, almost doubtful whether the clenched fist wouldn't strike.

"Do anything," said he: "by means of the hook inserted in the palm, it can lift, or hold the reins, almost as well as the natural member. Observe the beautiful operation of the spring thumb imitating the grand privilege of man and monkey, by means of which it can grasp a fork, or lightly finger a toothpick."

"Do you supply fingers and such small deer?" I inquired.

"Fingers, toes, noses, lips—we take them as they come. A gentleman with but one finger on his left-hand came to us the other day, and asked to have the complement made up. We fitted on the rest, and attached them by means of a signet ring to the remaining finger—movement perfect; you should see him pass his fingers through his hair natural as life. The hand is a wonderful thing—that beats me—legs are mere A B C, but the hand!—Here," said he, recovering from his momentary admiration of nature, —here is a drawing of a pretty thing. A Hudson's Bay trapper had his hand bitten off by a bear, and came to us to replace it."

"Do you want something really useful?" said I.

"'Yes," said he.

"So I made him this dagger, fitting into his arm-stump socket. He sleeps in his dagger, and finds it particularly handy when there are bears about. Look at the action of this spring and rachet-elbow: you have only to touch the little button in the elbow, and the fore-arm closes as natural as life. Who would wear an empty sleeve when a member like this can be obtained? We always recommend our arm and hand patients to wear a cloak neatly folded over it, as it prevents any attempt at hand-shaking. We don't warrant the shake—the touch isn't quite natural."

"But how about the more delicate operations—eyes and noses?" I inquired.

"Oh, we do any feature at a moment's notice. A nose, for instance: the best way is to bring a patient to the modeller, who first designs the missing member in clay after a portrait or instructions; from this an india-rubber cast is taken, to which we fit on a pair of spectacles, to

break the flesh line ; and when the superstructure is complete, an artist puts in the complexion."

"And eyes?" I added, deeply interested.

"Eyes we do not do so much in," he added apologetically. "There is M. Boisenou, from Paris, who travels with all the eyes of Europe—from the black of Andalusia to the blues of Scandinavia."

"But how are they applied?"

"Easily as possible," he added, pulling out a drawer and displaying the upturned gaze of winkless scores. "Let me see," said he, rapidly taking up eye after eye, and comparing them with my own. "Light grey—that's a good match. Now, with this little ivory jemmy we prize the eye into its socket; the muscle being left, we get good motion, and the deception is perfect. A lady once closed her good eye, and went up to the glass to see her false one. There is one little drawback, however: you can wipe away a cold tear perfectly, but as the eyeball itself is not sensitive, the flies sometimes walk about upon it, which looks odd."

"You must see a vast deal of maimed humanity?" said I.

"And vanity, too," he replied. "But I am afraid I must leave you, as I see there is a leg-below-knee, two toes, and an arm wanting to see me in the waiting-room, and there in the cab—we are near levée-day, I suppose—is the Honourable Augustus Witherdman calling for his calves."

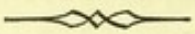
As I walked homeward, my head full of the subject I had been dwelling upon, it seemed to me that the artificial man met me in detail everywhere. There were his teeth grinning at me in glass cases outside the dentists' shops—

teeth in sets, with the new patent elastic india rubber gums, warranted equal to the living tissue, without the disadvantage of growing gum-boils. How many fair dames smile at us whose flashing ivories have lain for years on continental battle-grounds, or may be under the verdant churchyard sod at home! The hairdressers' windows, again, bloomed with deception. Here, indeed, art has made a stride. The old stereotyped form of wig, with its sprawling wavy curl of glossy black across the forehead, flanked with the frothy bosses of curls on either side, leaving the hard skin line to disclose the bungling hand of man —this is gradually giving place to higher efforts. Mark, for instance, that wig, so puritanical in its plainness, with a few gray hairs artfully cast in; see, again, what efforts have been made with the net parting, to simulate the thin rooting of the hair: and, again, how its setting-on gradually fines off towards the forehead. And what shall we say to those long coils of gold which hang in such pendulous richness: these are the contributions of the poor German peasant girls to London fashionable life. Does my Amelia eke out her natural tresses with these shining snakes of glossy hair? Does my maiden aunt Bridget hide the gradually widening parting of her once raven locks with that platted coronet? What member is there in this artful age that we can depend upon as genuine? what secret bodily defect that we particularly desire to keep to ourselves that wicked "Times" does not show up in its advertising sheet, and tell us how to tinker?

And if the individual can thus craftily be built up, imagine, good reader, the nightly dissolution. Picture

your valet taking off both your legs (such things are often done), carefully placing away your arm, disengaging your wig, easing you of your glass eye, washing and putting by your masticators, and, finally, helping the bare vital principle into bed, there to lie up in ordinary, like a dismantled hulk, for the rest of the night! In these latter days we are, indeed, sometimes, as the Psalmist said, fearfully and wonderfully made; and, like the author of Frankenstein, we may tremble at our creations.

BRITANNIA'S SMELLING BOTTLE.



Did the reader ever ask himself, as he passed a perfumer's shop,—How are these delicate odours that strike so sweetly upon the sense taken prisoners! What chains can we forge fine enough to enslave the delicious breath of the rose? what trap can we set sufficiently subtile to seize the odour of the violet? By what process do we manage to "bottle" the hawthorn-scented gale?

If the perfumer (guessing his thoughts) were to say "The most successful trap we set is a lump of fat," possibly our reader would open his eyes very wide, and exclaim incredulously, What possible affinity can there be between so gross an animal product, and so volatile an essence? Verily, good reader, there are more things in heaven and earth than are dreamt of in your philosophy; and this is one of them. Possibly, if we were to tell you that the perfumer salts down his rose-leaves in order to preserve their odour, just as the meat-curer salts down his pork, you would be still incredulous; yet, verily, we speak the words of truth and soberness, as we shall presently show you.

The cultivation of flowers for the manufacture of perfumes is chiefly carried on in the south of France, in the

plains watered by the river Var; and now that Louis Napoleon has acquired both banks of that river, he may be said to have taken possession of the scent-bottle of Europe. Those who have visited Cannes and its neighbourhood must have seen the flower-farms bright with a thousand brilliant dyes; and at Grasse, again, the plantations of orange-trees which perfume the air. To secure the odours of those flowers is the care of the proprietors, so that thousands in far-off capitals shall be able to enjoy the perfume that otherwise would waste its sweetness upon the desert air. There are various modes of accomplishing this; but the principal one, for the more delicate flowers, such as the jasmine, the violet, tube rose, and orange, is by what we will call the fat-trap.

Those who know anything of chemistry are well aware that carbon, in the shape of charcoal, possesses an astonishing affinity for all kinds of odours—a property which the physician avails himself of to absorb the foul smells of the hospital. The hydrocarbons, such as beef and mutton fat, highly purified, possess a similar absorptive power, which is taken advantage of by the flower farmer, to take and secure the fleeting breath of his flowers. Let us suppose, for instance, that it is the season for violets. The proprietor has already prepared thousands of square wooden frames, the rims of which are, say, three inches in depth; in the middle of this frame is inserted a sheet of glass, and the whole series of frames are constructed so as to fit one upon the other. Upon both sides of the glass a film of finely purified fat is spread, to the depth of a quarter of an inch, and upon this fat the violet flowers just picked are lightly spread. Thus it will be seen the flowers are

sandwiched between layers of fat, resting upon the lower layer, but not touching the upper layer. In a short period the fat will have absorbed the whole perfume of the flower, when a fresh supply is added, and this process of feeding with flowers is often repeated thirty times, until the fat is thoroughly saturated with its perfume. Thus imprisoned, the odour is safely transferred from one part of the globe to another.

The extent to which this process is carried in the south of France may be imagined when we say that 1,600,000 lbs. of orange flowers, 500,000 lbs. of rose blooms, 100,000 lbs. of jasmine blooms, 60,000 lbs. of violets, 65,000 lbs. of acacia buds, 30,000 lbs. of tube rose flowers, and 5,000 lbs. of jonquil flowers are consumed annually, the value of which cannot be less than £240,000. But, says the reader, what can all this scented fat be used for? The fat, good reader, is only the vehicle in which these odours travel. The next process, when it reaches the manufacturing perfumer, is to liberate the delicate Ariel from its bondage. In order to accomplish this, the fat is cut into small cubes and macerated in pure spirits of wine. The scent, like an inconstant mate, immediately deserts its more material partner, and combines with the spirit, just as wives now and then will desert their solid city husbands for some mercurial singing-master. The scent is now in the form of an extract, but is by no means fitted for the pocket-handkerchief. Here the artist steps in and combines in definite proportions different colours so as to produce bouquets, or he manufactures primary odours; for your fashionable perfumer will no more allow the public to enjoy the pure perfume of the flower than a *chef de cuisine*

will permit you to taste the natural quality of the meat. And, first, with respect to primary odours, it is astonishing how few art has yet managed to extract direct from the flower. Violets, geraniums, orange blossoms, and roses, are translated, it is true, by the absorptive process immediately into the perfumer's stores. But of the scores of scents which the European nose smells at, full two-thirds are but a delusion and a snare. Mr. Septimus Piesse, of the firm of Piesse & Lubin, has written a very interesting book on the art of perfumery, in which this secret is most frankly confessed. We must admit, however, that the manufacturing perfumer is in no wise to blame in this matter. It is not his business to provide the primary odours; his department is the higher duty of combining them: give him a fuller scale of notes, and he will afford the public more varied airs. Mr. Piesse indeed laments, that whilst cultivators of gardens spend thousands for the gratification of the eye, they altogether neglect the nose. Why should we not grow flowers for their odours as well as for their colours? There are scores of flowers in our gardens that would yield admirable extracts with a little pains. For instance, there is heliotrope, the lily of the valley, honeysuckle, myrtle, clove pink, and wall-flower. We have extracts of all these flowers in the perfumers' shops, but they are nothing but skilful combinations of other scents. They play tricks with our noses as they do with our palates. We know full well that certain flavourings, such as pine-apple drops, jargonelle pears, &c., are manufactured out of the refuse of gas tar and from rotten cheese. In the same way some of our sweetest, and, as we believe, natural flower-scents, have their base

in fœtid animal secretions, such as musk, civet, &c. Who will come to the rescue? There is a great cry for woman's work—here it is. Many a lady would willingly employ her time, which hangs heavy in country-houses, if she only knew how. We will tell her. "I want heliotrope pomade," says Mr. Piesse. "I would buy any amount that I could get;" and this is the way to get it. If there is such a thing as a glue-pot in the house, you have the only piece of machinery needed—it is, in fact, a water-bath.

As the details of the process are all-important, we will proceed in Mr. Piesse's own words :—

"At the season when the flowers are in bloom, obtain a pound of fine lard, melt the lard, and strain it through a close hair sieve, allow the liquid fat as it falls from the sieve to drop into the cold spring water; this operation granulates and washes the blood and membrane from it. In order to start with a perfectly inodorous grease, the melting and granulation process may be repeated three or four times, using a pinch of salt and a pinch of alum in each water; it is then to be washed five or six times in plain water; finally, re-melt the fat, and cast it into a pan, to free it from adhering water. Now put the clarified fat into the glue-pot, and place it in such a position near the fire of the greenhouse, or elsewhere, that will keep it warm enough to be liquid; into the fat throw as many flowers as you can, and there let them remain for twenty-four hours. At this time strain the fat from the spent flowers, and add fresh ones; repeat this operation for a week: we expect, at the last straining, the fat will have become very highly perfumed, and when cold, may be

justly termed *pommade à la héliotrope.*" To turn this pomade into an extract fit for the handkerchief, all that has to be done is to cut the perfumed fat into small pieces, drop it into a wide-mouthed bottle, and cover it with highly rectified spirit, in which it must remain for a week. When strained off the process will be completed.

In this manner every flower of the garden may be turned into a genuine extract, and the lady who takes the trouble to perform the operation may be sure that she possesses a perfume which money cannot buy from the best perfumer's in the metropolis. Moreover, she would then possess some individuality in her perfume. Why should we not know our fair friends by the delicate odours with which they are surrounded, as we know them afar off by the charm of voice? There is an appropriate odour, to our minds, to each particular character. The spirituelle should affect jasmine; the brilliant and witty, heliotrope; the robust, the more musky odours; and young girls just blooming into womanhood, the rose. The citron-like perfumes are more fitted for the melancholy temperament, and there is a sad minor note in vanille that the young widow should affect. When we study the æsthetics of odours, we shall match nice shades of character with delicate shades of odour. Why should human feeling be expressed better by colours than by perfumes? Meanwhile we must trust to the perfumer to set the fashion, and to impose upon us his bouquets at his own good will. We are, in fact, the slaves of his nose. All the fashionable world, like the Three Kings of Brentford, but a little while ago were smelling at one nosegay in the celebrated "Ess Perfume;" later still, we have had imposed upon us

"Kiss-me-Quick;" and now the latest novelty of the season is "Stolen Kisses," with its sequel, "Box his Ears." Why are the Messrs. Piesse & Lubin so amatory in their nomenclature?

Besides the processes of maceration and absorption, or *enfleurage* as the French term it, there are several other methods of obtaining the odours of flowers, the principal of which is distillation; by this means the essential principle, or the otto of the flower only, is extracted. It is an old saying that we can have too much of a good thing, and it will be verified by an inspection of a perfumer's laboratory. One is apt to think that a connoisseur's wine-bins contain the dearest liquids in the world—old port at two guineas a bottle looks extravagant enough; but let us enter the dark little room where the perfumer keeps his ottos and extracts. He draws you a drop of oil of jasmine, holds it to your nose, and tells you, with a complacent smile, that it is only worth nine guineas a wine-glass full—he shows you a little bottle of otto of roses from the far East. The principal rose farms of Europe are situated in the Balkan in Bulgaria, and the expense of the perfume may be estimated, when we state that it requires at least 2,000 blooms to yield a single drachm of the otto. Different districts have their own peculiar shades of difference, just as different vineyards produce different qualities of wine. The Provence roses of the south of France have a fragrance peculiarly their own, which is attributed to the fact that the bees carry the pollen of the orange blossoms into the rose buds, and it is to the delicate flavouring of the orange that this otto owes its value. The suggestion of the bridal flower is indeed very slight,

but herein the charm is constituted, as the eating-house connoisseur well knew when he ordered a slice of beef cut with a hammy knife. Some of these precious ottos and extracts, smelt at in the bulk, are positively disgusting; take civet, for instance—a pot suddenly opened is enough to knock you down. It is the infinite subdivision of the scent which gives it its true value as a perfume. Some astounding tales have been told of the persistence of scents, but we know that some of them have outlived the memory of great empires, and probably will yet exist when the New Zealander takes his seat on the broken arch of London Bridge: there is to be seen at Alnwick Castle a jar of perfume, at least three thousand years old, which still gives out a perfume. We know no better illustration of the infinite divisibility of matter than is afforded by the history of some of the more persistent perfumes. But it is not the animal perfumes alone that are disagreeable in a concentrated form—all flower odours are more or less changed; otto of roses is anything but nice, and otto of violets is for all the world like prussic acid. When they are diluted with an appropriate quantity of spirit, they regain all their delicacy, just as they do when subjected to the diluting influence of the gentle breeze in the summer evening.

The concoction of bouquets is the triumph of the perfumer's art. His nose must have the most delicate appreciation of the harmonies, so that no one odour shall outrage another. A writer in "Chambers's Journal" has very subtly remarked that scents, like sounds, affect the olfactory nerve in certain definite proportions. Thus there are octaves of odours, the different notes of which agree

with each other. Let us take heliotrope, vanille, almond and orange blossoms, for instance, and we find that they possess a cognate smell. There is another series of perfumes which constitute a higher octave, such as citron, lemon, orange-peel, and verbena. Again, we have half-notes, such as rose, and rose-geranium; and minor keys, such as patchouly, vilivart; and, lowest in the scale, musk and other animal odours strike a deep bass note.

The skilful perfumer with this full gamut before him can make a thousand different harmonies; indeed, the combinations are endless, but they must be made with a full knowledge of the art. He can no more jumble half-a-dozen perfumes together, and expect to be able to please the nose, than he could strike half-a-dozen notes at random, and expect to charm the ear with the harmonious effects of a chord. But an harmonious perfume is not all that is required; the British public are very exigent, they want a delicate yet strongly-marked odour, and a persistent one at the same time,—two totally incompatible qualities, for an odour that strikes powerfully upon the nose must be a very volatile one; and, if it is volatile, how can it be expected to remain in the handkerchief for any length of time?—it is like eating a cake and expecting to have it afterwards. The perfumer gets over the difficulty by making some persistent odour, such as musk or vanille, the base of his perfume. The effect of this, however, is to give the scent two different odours, the volatile perfume on its departure leaving behind it the base, which is often objected to as smelling "sickly." The moral of our story is, that we should not expect a delicate perfume to be two things at the same time—volatile and lasting.

England is famous for only two products used in perfumery—lavender and peppermint. We grow roses also in large quantities, but only for the purpose of making rose-water. Our flower-farms are situated at Mitcham and Hitchin. English lavender is worth four times as much in the market as any other, and it is a scent which partakes somewhat of the national character; it has, indeed, a sad and grave smell, and possesses a certain poetic grace, but is withal healthy and invigorating. We are informed that this and peppermint form the base of many kinds of cheap perfumery; but musk is the *pièce de resistance* of the manufacturers. People very commonly say, "I detest musk—I never have a perfume containing musk." The perfumer smiles, and gravely assures them the articles he sells do not contain it. All the while he is well aware that it forms a very essential part of all favourite perfumes: it is a principal ingredient in the renowned old Windsor soap; all sachets, or dry perfumery-bags, contain it; few essences or bouquets are without it; and yet this is a perfume that no one likes!

The scents of the ancients were, as far as we know, entirely dry perfumes, such as myrrh, spikenard, frankincense, all gum resins which are still in use by perfumers, and they were used rather to perfume the air than the person, although it was a very old custom to scent the beard. It is a question purely of taste as to whether scent is allowable to the male sex, but among Englishmen, at least, the feeling is against it; the fashion is certainly feminine, and long may it be confined to the ladies, for although it would be a superfluity to paint the lily, we may yet be permitted to perfume the living violet.

THE HUNTERIAN MUSEUM AT THE COLLEGE OF SURGEONS.

How many among the thousands who have viewed with artistic delight Sharp's engraving of Sir Joshua's picture of John Hunter have ever taken the trouble to inquire further respecting the glories of the great original? Yet Hunter was, without the slightest doubt, one of the most prominent representative men of the last century—a man whose advent the great Bacon must have foreseen, and whose traces will be discernible to physiologists of the latest posterity. A poor lad, without friends—for those valuable ones he had, he unhappily became estranged from—wends his way from an obscure town in the north, sets resolutely to work, and bone by bone, tissue by tissue, specimen by specimen, builds up a history of animated creation from the shapeless zoophite to imperial man himself. Before the time of Hunter a few detached groups of facts were all that we possessed of the great chain of terrestrial life. By painful every-day toil, by incessant thought, link by link, he connected these groups together, supplied entire lengths that were deficient, and made manifest the spirit of unity that pervaded the whole. He touched the full diapason of organised life, and left to posterity in his great museum the harmonious song he had elicited from the most hidden recesses of nature. He did all this, and

like many others in the ranks of pure philosophy, he died rich only in the gifts he had conferred upon mankind. When the exigencies of his widow demanded that his museum should be offered to the Government—which at that time meant William Pitt—the reply of the Minister was, characteristic of the warlike atmosphere in which he lived, "What, give £20,000 for bottles? We want the money to buy gunpowder!" The value of the truths enshrined in those bottles, however, would prevail, and after seven years' clamouring at the doors of Ministers, Science at length got a hearing in the House of Commons, and Parliament agreed to purchase the Hunterian Collection for the sum of £15,000, and it was then transferred to the custody of the Corporation of Surgeons, which became incorporated in the year 1800 as the Royal College of Surgeons. Other grants of money were afterwards made towards the collection by Government, and the college itself has since built the magnificent museum in which is enshrined what may truly be considered the apothesis of Hunter. Year by year this magnificent collection has been added to by purchase, and the additions made by the curator of the college have gone on to such an extent, that the preparations, physiological and pathological, the exclusive work of Hunter, which only numbered at his death 10,536, now reach to upwards of 30,000.

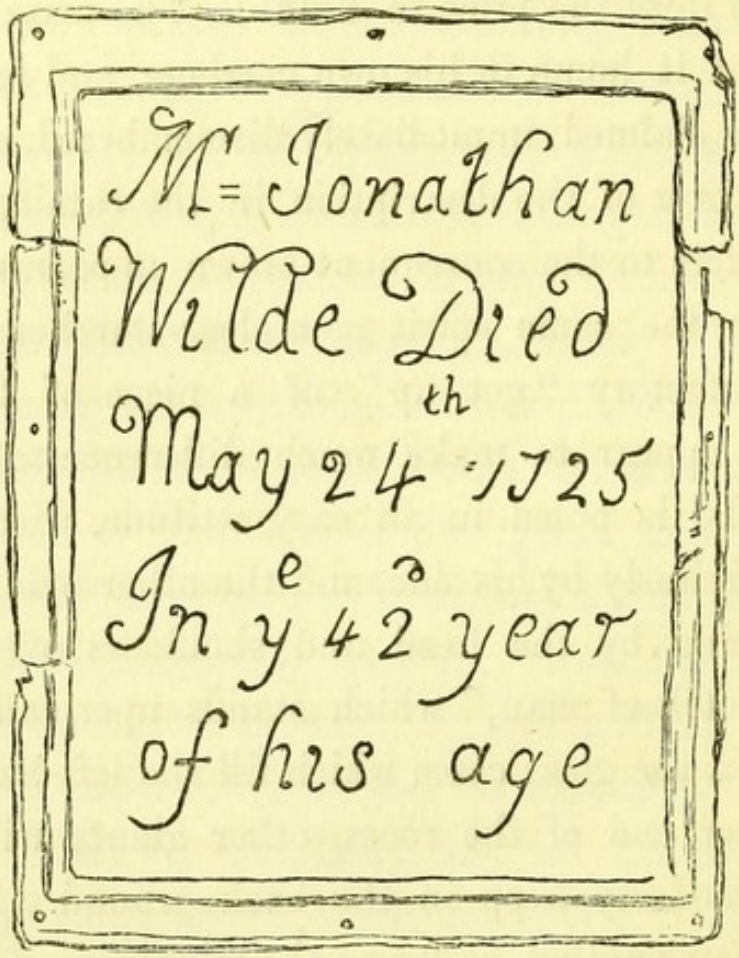
If the visitor happens to know an M.R.C.S., he readily obtains a passport to its lofty apartments, and as readily falls into a certain attitude of wonder at beholding such an infinity of natural objects in, to him, an unnatural dress. The floors groaning with the weight of gigantic skeletons of extinct animals; the side cases filled with the

grand procession of organised life, from the vegetable to the highest order of animal life; the upper galleries shining with a vast army of bottles, the depositories of Nature's more subtile secrets; the shelves full of monstrosities and malformations, and the glass cases rich in physical curiosities illustrative of the accidents to which life is subjected. Here a series of tadpoles, from the time the creature leaves the ovum to that period of adolescence when, contrary to the human example, it casts its tail; there a couple of gigantic American elk horns, fast locked in conflict,—the doe for which the animals had been fighting was found dead beside the entangled belligerents; a little further on the skeleton of poor Chunee—the hapless elephant who suffered death at Exeter Change for the crime of having the toothache—his skull riddled with balls, showing that the file of soldiers who did the murder were not possessed of the skill of the great hunter, Gordon Cumming, who dropped his elephant of a hundred summers with one ball judiciously planted. Turn which way he will, where in fact all is order, he sees nothing but confusion. Under these circumstances we cannot do better than take the visitor by the hand, and let his attention fall naturally upon the most prominent objects.

There is evidently a natural determination of giants towards the museum. The most striking object the eye meets on entering the first large room is the skeleton of the Irish giant, O'Bryan. His fate was a memorable example of how vain is the struggle men of such extravagant development wage against the anatomist. Poor O'Bryan, who drank himself to death, evidently had a presentiment of the manner in which his body would be

disposed of; and he tried to avert it by directing that his body should be sunk in the deep, and in order to provide for this disposition of it, two men were provided to watch it until the time for the burial came. But Hunter could not bring himself to let slip such an opportunity to acquire such a "specimen," and he attempted to bribe the wretches by offering them a hundred pounds for it. His eagerness was too apparent, however, and these trustworthy individuals managed to raise the price to £800! The prize obtained, Hunter sent it home in his own carriage, and fearing lest it should be claimed, immediately dismembered, and boiled it. The writer of the description in the catalogue apologetically refers to the consequent brown appearance of the skeleton, in the same spirit as a clear-starcher would of the unsatisfactory "get up" of a piece of fine linen. It does not appear to make much difference to O'Bryan, however, who is posed in an easy attitude, with one arm hanging carelessly by his side, and the other held elegantly aloft, towering by the head and shoulders over another "rough sketch of man," which stands upon an opposite pedestal. In the glass cases which fill the left-hand corner of the upper end of the room, other giants with a commendable modesty keep in the back ground. Freeman, the American pugilist, as far as the whiteness of his bones is concerned, cannot complain of his "getting up;" and in the other corner a gigantic tinker forms a becoming pendant. This man when in the flesh used to pass by the college, and do odd jobs, and in return he is conveniently housed in this comfortable glass case. At the bottom of the glass case we see the outstretched hands of other giants marked—the English giant, Bradley; the French giant,

Mons. Lewis, seven feet four inches; the Irish giant, Patrick Cotter, eight feet seven inches. They seem to hold up their hands in testimony of their stature ere they finally subside to the level of mother earth. But what is there particular about that rather short and powerful skeleton between the two larger ones? The attendant takes out his card, which lies against the wall in the shape of a coffin-plate thus inscribed:—



The card forgets to give his last address, doubtless from motives of delicacy. Tyburn was not such a fashionable neighbourhood then as it has since become. There is nothing about the present appearance of the great thief-catcher which at all reminds one of his bad pre-eminence in life. In all probability, many of the skeletons about him were those of thieves and murderers; for of old the

conservator of the museum was dissecter in ordinary to all malefactors executed in London. Nevertheless, Wilde seems no longer to scent his prey, and the hunter and hunted are at last at peace,—at least when they are not being dusted, which I am assured is done by one of the porters three times a year with the utmost impartiality. In an adjoining glass case there are specimens of Australian and African skeletons, which present certain differences from the European type which are highly interesting to the comparative anatomist. How clearly we see the countenance of the Bosjesman in the facial bones of the skull, and how feeble is the framework of the Australian savage when compared with that of the European, enervated, as some people choose to say, with an ultra civilisation. At the opposite end of this room there are some human mummies, which we must not omit to notice. For instance, there stands Mrs. Van Butchell, who has most certainly not been preserved for her beauty. We are apt to think that in this age we have arrived at the very perfection of advertising, direct and indirect; yet here is a specimen of the ability of the last century, which will bear comparison with our best efforts. Think of a charlatan utilising his defunct partner in this direction! Van Butchell, who would seem to have been a kind of St. John Long of his day, appears to have had his wife embalmed —on the same principle that Barnum stuffed his mermaid —to draw the public purse; and like that worthy he advertised his wares judiciously in the public press. On the breast of the lady, for instance, we find a card inscribed with the following notice from the *St. James's Chronicle* of October 21st, 1773:—

"Van Butchell (not wishing to be unfortunately circumstanced, and wishing to convince some good minds they have been misinformed) acquaints the curious no stranger can see his embalmed wife unless (by a friend personally) introduced to himself any day between nine and one, Sundays excepted."

What could induce persons to pay a visit to Mr. Van Butchell in order to see such a shocking spectacle we cannot conceive. In this collection the body is by no means out of place, flanked on either hand by an Egyptian mummy, and by the preserved remains of a woman who died in the Lock Hospital, whilst a dried specimen of the genus homo, sitting crouched up on his haunches, looks on apparently amazed at the change of scene he experiences from Guaco at Caxamana, in Peru. There is food for conjecture in another skeleton of a young lad close at hand. All his history is comprised in the fact that he was found erect in a vault, with the remnants of his clothes on, under St. Botolph's, Aldgate, old church, in the year 1742. The last time the vault had been opened was during the Great Plague in 1665, so that in all probability the poor little fellow was employed in some way in the interment, and must have been forgotten by the workmen when the vault was finally closed.

Next to the cases containing the human skeletons is a golgotha, or place of skulls. These domes of bone tell of the wide diversity of power that ranges through the human race. Here we have the full scale, from the head of the Caucasian type (a line from the forehead of which to the lower jaw is almost perpendicular) to that of the Carib (in which the line slants outwards towards the jaw with a most

animal-like slant). If the visitor will take the trouble to examine the skull of the gorilla, a gigantic chimpanzee, in the adjoining room, he will see that between the skull of the most debased tribe of mankind and that of the highest ape, the difference is immense. The gorilla's skull seems all taken up with the facial bones, the powerful lower jaw occupying the most prominent part; indeed, in this respect it contrasts ill with the skulls of several of the lower monkeys, which in general form seem to parody but too closely that of man. We may see at a glance in these skulls the prominent races of mankind. The small Tartar physiognomy is traced in those prominent high cheek bones, the delicate Hindoo in that small fine skull of most fragile construction. Again, we see the race of narrow foreheads in the Australian and New Guinea skulls. Here and there we find that the skull has been utilised as a water-vessel, a piece of twisted native grass passing through the orbits and the great foramen by way of handle.

The Scandinavians used, it is said, to drink mead out of the skulls of their ancestors; the natives of Western Australia use "the dome of thought" as a calabash in which to carry water. Here is a specimen in which the water has clearly been poured from the eye-holes, as the edges of the bones have been quite polished by the friction of the fluid. The Polynesians have a custom of ornamenting their skulls. Among the collection before us there is one with eyes of wood hideously projecting from the sockets, and with a kind of comical bowsprit running out from the nose. But how comes this high-browed Caucasian skull among those of the lowest type of savages? All the catalogue tells us is that it came from South Australia, the

natives of which were known at one time to have been cannibals. There are traces of fire still to be seen upon the temporal bones, and we may draw the dark inference that its owner must have been some European dispatched and eaten ages ago. Strange that, through the agencies of science, this grim relic should have made the circuit of the globe to testify to the fact!

The osteological collection, mainly the work of Hunter, from the human skeletons we have been looking at, descends in an unbroken chain down to the lowest insect life. It is curious to contrast the beautifully-dissected framework of the minute humming-bird with that of the gigantic dinornis of New Zealand, the imperfect skeleton of which towers above us from its appropriate pedestal. The history of these bones affords a proof of the marvellously prophetical powers of science. Some years ago a few very large bones, found in a New Zealand watercourse, were brought to this country and submitted to the inspection of Professor Owen, then the curator of the museum. After a careful study of their peculiarities, he pronounced them to belong to an extinct wingless bird of gigantic proportions. At the time his scientific friends merely smiled at the poetical flight of the Professor, and attempted to discourage what they considered to be his rashness in building such a superstructure upon a few disjointed bits of bone: he persisted, however, in his opinions, and has lived to find them verified, as whole skeletons of these extraordinary birds have since been found, proving that they belong to that class of which the apteryx in the Zoological Gardens is now the diminutive and sole living representative. There are in the museum some eggs of the

dinornis, and casts of those of a still larger species once living in the Island of Madagascar, a section of which would be big enough for a foot-bath.

The curiosities of the museum are the points which principally attract the non-professional visitors, and among these are some singular examples of the desperate injuries the human frame can sustain with comparative impunity. For instance, here is the shaft of a chaise; some fine day in the year 1812, we are informed, it transfixed the chest of a certain Mr. Tipple, entering under the left arm and coming out under the right arm; and, in confirmation of the story, we find in a large bottle close at hand a preparation of the chest bones, integument, and lungs, showing the cicatrices of the old wound and the manner in which the lungs had been injured. Nevertheless, the object of this unpleasant operation lived eleven years afterwards, and drove, for all we know, his tax-cart as jollily as before. In a recess close at hand is a drawing of another accident of a similar nature, in which, however, the chest was subjected to a still more severe trial in a contrary direction. John Toylor, a Prussian, "whilst guiding the pivot of the trysail mast into the main boom, the tackle gave way; the pivot passed obliquely through his body, apparently between the heart and the left lung." Notwithstanding this spitting process, the man got quite well, and has been several times to the museum with his shipmates to view the drawing, quite proud of his achievement; and, in order to further illustrate the case, he promises to dedicate his chest to the museum after his death!

If we traverse the pathological gallery we shall find

some astounding examples of the tolerance with which the stomach will bear the presence of very awkward foreign bodies. This one, for example, is full of pins, bent double in the form of fish-hooks. When we see a poor dyspeptic patient attribute his misery to "that bit of plum cake he took over night," we cannot help thinking of the secret this woman must have possessed to deliberately swallow crooked pins until she had accumulated a couple of lbs. in her stomach without any seeming inconvenience. Close at hand, in a bottle, we see a juggler's "failure," in the shape of a dagger swallowed not wisely "but too well." It was fast disappearing under the effects of the gastric juice, but, unfortunately, the patient could not wait for the completion of the digestive process. Very near there is another bottle full of the remains of clasp knives. The patient's stomach in this case had managed to dissolve all the handles, and nothing was left but the bare frameworks of iron and the blades. What would half the over-fed, under-worked class of valetudinarians give for such a splendid organ! If we descend to the floor of the museum once more, we shall find a few odd things to show the visitor. In this glass case, devoted to skin curiosities, we come suddenly upon a little bit of historical illustration. These little dry remnants of brown-looking leather take us back to the times of the Anglo-Saxons, and tell a tale of those lawless times. We read in romance of the daring sea-kings, but here is a plain and a very ugly bit of prose, in the shape of specimens of skins from flayed Northmen, caught plundering our churches. Our ancestors had a trick of nailing the hides of those they caught thus amusing themselves, upon the church doors "pour d'en-

courager les autres," and the specimens we see have been taken from the church-doors of Hedstock and Copford in Essex, and from the north door of Worcester. Seeing that these remnants of frail humanity must have been thus exposed for upwards of a thousand years, there seems to be some truth in the boast that there is "nothing like leather." There is a very stout piece of dermis near those Danish fragments, which looks remarkably like a piece of india-rubber, but the catalogue informs us that it is "from the shoulder of a remarkably stout man, and was tanning from April to September;" a very obdurate piece of skin, doubtless, but we do not see the scientific importance of the explanation. In the frame devoted to the concretions found in the human organs are some remarkable examples of human hair, matted and felted together so as to form a solid mass—in one instance pretty nearly the shape and size of that organ itself. Some girls have an inveterate habit of swallowing hairs, and in this instance the patient must have almost denuded her head. Cows are liable to these concretions, and there are some remarkable instances of them here, but they are collected accidentally in the act of licking. We particularly desire to draw the attention of Scotchmen to an ugly lump, which the label informs us is composed of oat-hairs and husks, found in the stomach of a man in the habit of taking oatmeal porridge!

Of surgical injuries these glass cases contain many extraordinary examples: there are some skulls penetrated at Inkermann with Minié balls, showing the terrible nature of the wounds inflicted by modern projectiles; and skulls, again, which prove what gashes may be made in solid

bone by sabre cuts, without doing any injury to the brain; possibly, as these skulls are Chinese, their extra thickness may have been a protection.

Glancing through the glass-cases devoted to the teeth of the various animals, we notice what appear to be some singular rings of bone. On referring to the catalogue we find they are the incisor teeth of rodents, or gnawing animals. We are apt to think that the rat and the beaver gnaw for mere mischief's sake, or, at least, to work their way through obstacles; but these specimens prove that the process is a necessity to keep their teeth down. The curved incisors are always growing, and unless they are worn away proportionably, they at last curve round so as to prevent the animal eating.

We must not omit to draw attention to some remarkable examples of diseased skulls, some of them, at least, an inch thick, others presenting extraordinary osseous growth from the facial bones. We beg to draw Tom Sayers' attention to one particular specimen, in which masses of diseased bone have grown from the orbits, forming projections of at least three inches; its late owner was a prize-fighter, and those frightful growths are attributed to the injuries he had received in pugilistic encounters. One more curiosity and we have done with the show specimens of the museum. Here is the lower jaw of an ancient Roman, with the stains on one of the molar teeth of the obolus, or small copper coin, placed in his mouth, as Charon's fare to carry him over the Styx: as the coin evidently remained in between his teeth, we must conclude he was too late for the ferry.

We have been trifling, however, with the mere toys of

this magnificent collection ; the real scientific gold of the museum is to be found in the little army of uninviting-looking bottles which line the walls from the ground-floor upwards. The Pathological museum, the first room we enter, contains a history of disease written upon the different organs and tissues of the human body itself. We do not stop to dwell upon mere curiosities here, but mark the methods by which this mortal frame is gradually sapped and destroyed ; or how nature wrestles with the destroyer, and sometimes repairs the ravages he has committed. Amid the immense mass of preparations, it is rather difficult to single out examples of the *vis medicatrix naturæ ;* but as we pass, we may notice the contrivances by which our great mother sets about her work. Here, for instance, is a preparation of a mortified foot. See how nature has set to work, and entrenched herself against the further spread of death. The living and the blackened portions of flesh seemed divided as if by a sharp knife, and across this gap death cannot leap. Or note again this diseased bone, and the delicate way in which the reparative process is to be seen building up a new framework of osseous matter within it. Again, be a witness of the manner in which it gets over the difficulty of a stoppage in a blood-vessel. Here is the example of the femoral artery, the great highway of blood in the thigh, having been tied by the surgeon. If, by this means, an impediment to the circulation in the lower limb had occurred, the limb would have died. But nature makes provisions for such accidents, and carries the blood, as we see in this specimen, through some small collateral channel, which gradually accommodates itself to the in-

creased work put upon it, and becomes a large vessel. When Fleet Street is stopped up by gas or water companies, the tide of human life is turned along some back street, until it finds the great thoroughfare clear again ; so it is with the main conduits which convey the sanguineous tide in the human body.

Unhappily, however, nature is not always successful in this fight with disease ; nay, in the majority of cases, her exertions are painfully feeble, and but too often the destroyer has proceeded from the first with unconquerable steps, and human life has appeared to form a passive framework on which it builds its monstrosities. Look, for instance, at that example of elephantiasis, or the leg and thigh of a woman, pretty nearly as large as the shaft of a Doric column ; or inspect that cabinet of wen-like tumours in which the whole nutritive process seems to have gone through life to support and inflate enormous growths, until at last the human fabric appears only to be a dwindled and accidental appendage to the dominant balloon-like tumour. If we would still continue our survey of the sad mischances to which poor humanity is subject, let us glance at the curious skeleton in which all the bones are anchylosed, or knotted together by osseous growth, so as to be tied into a perfectly immobile knot. Again, we may see bones so brittle that they fly to pieces on the least strain, like the glass toy known as a Prince Rupert's drop, or arteries so solidified that in life they must have clasped and stifled in their solid grip the labouring and heaving human heart. We might fill pages with details of morbid specimens of unutterable value to the scientific man, but which we fear would only impel the more

curious visitor to turn aside from these articles to more congenial topics.

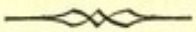
Now and then Hunter amused himself with trying grotesque experiments upon life. In this Museum are examples of animal graftings—a human tooth growing from a cock's comb, and a spur from the animal growing in the same way.

The physiological portion of the museum, which possesses by far the most interest to the general visitor, was the portion to which Hunter gave the main strength of his remarkable genius. Comparative anatomy was the delight of his life, and the practice of it seemed to have formed his relaxation from other studies. Let us take the first glass case and inspect the leaf dissected by the winter weather, and trace up the series to that of the highest mammal, man, whose exquisite nervous system is dissected into filaments, even finer than those of the leaf, and we shall be able to estimate the enormous amount of labour presented by this portion of the collection. Here, if we may so speak, nature seems to sit in undress: first we see a perfect Noah's ark of skeletons, or bony frameworks on which the softer parts are modelled and upheld. Then follow groups of dissections, preserved in spirit, by which the machinery of the different organs of animals are made patent to us. Every portion of the animal economy which is subservient to the preservation of the individual, or to the preservation of the race, lies here exposed to the view of the philosophical student. Motor organs, digestive organs, the absorbent, circulating, respiratory, nervous, and eliminative systems of the different orders of animal life, by the careful aid of the dissector's scalpel, give up the history of their

hidden functions to any one who enters this temple of science with a willing and inquiring mind.

When we reflect upon the enormous experience of the man who thus unveiled so large a portion of animal life to our scrutiny, we are tempted to ask, what literary records has he left of his life-long labours, the material evidence of which lies before us? It cannot be imagined that the observant mind of Hunter, after having laid bare, as it were, the constructive subtleties of Nature, had not obtained the key to many an enigma which still remains to puzzle natural philosophers: indeed, we know that he made careful notes of his observations in comparative anatomy, which extended to ten folio volumes of MS., besides many others on physiology and pathology. That Hunter placed great value on these volumes may be gathered from the fact that he introduced them himself into the grouping of his portrait by Sir Joshua Reynolds. Of these manuscripts, more valuable perhaps than the museum itself, that picture contains the only visible representative; the originals having been committed to the flames by his brother-in-law, Sir Everard Home, in order to conceal the theft he had made from them in his own numerous papers read to the Royal Society. A more astounding instance of literary incendiarism is not perhaps on record, and it affords us some clue to the degraded social character of the Georgian era in which the perpetrator of such an act lived, that it did not in any way appear to influence his position, much less to exclude him, as it should have done, from the society of all honest men.

A CHAPTER ON SHOP-WINDOWS.



Good reader, I am one of those poor unfortunate people you sometimes meet with in the streets—a perambulating board-man. I have dined at good men's tables, and seen better days; but what matter, I am now reduced to carry a board, and wander the streets from morning till night. Being always of an observing turn of mind, notwithstanding the sleepy, half vegetable kind of life I lead, I amuse myself with studying the physiognomies of shop-fronts, and much there is to be learned from them of human nature, without doubt. Of all shop-windows, tailors' afford me the most matter for speculation; they are such a fine, demonstrative race these tailors—so artful, get on so by slipping to the blind side of poor human nature. What can be more enchanting than an East-end "emporium of fashion?"—the smaller the shop the bigger name they give it—no angler knows better the right kind of bait to suit the water. I hate "splendacious" pantaloons, with checks big enough for the wearer to play draughts upon his knees; and that "superior vest," with a pattern that would require a Daniel Lambert to display it. What a thorough aggravator it is! Sometimes, as I rest my board

for a minute and look about me, I see the "gents" flock round such windows, and then pass on as though they had got some new idea, some vision of a future killing cut, such as a Cremorne or Vauxhall would

"Startle, waylay, and betray."

And then these city tailors, how artfully they play upon the feelings of affectionate mothers—what genteel-looking little boys with the bluest eyes—that stare so long, one feels annoyed that they do not wink—and the most golden-coloured hair and the most genteel features, all done in the best wax-work, are fixed to the side of the doorways, and show off their tight-fitting tunics. Pretty darlings, guiltless of tops and of soap-alleys, how many Billies and Bobbies, revelling in all the glorious ease of frockhood, have you not reduced to the cruel purgatory of breeches and button-dom; but, as I have said before, these tailors play upon the feelings of the human race with such remorseless vivacity. There is one feature, however, in the tailor's shop worthy of observation, and that is the facility with which it can throw off its character of a philanthropist anxious to clothe the whole brotherhood of mankind at the lowest possible figure, and assume an aristocratic reserve quite chilling to a common spirit. Sackville-street, for instance, is the head quarters of the West-end tailors, and yet not a vestige of shop-front is to be seen. A well built pair of trousers might sometimes be observed thrown carelessly over some window-blind,—of course, with no idea of show—and this is all the trace to be seen of the refined Schneider within. In the tailoring

trade, as in electricity, there are, as regards public favour, poles of attraction and repulsion. At the one end Moses, Doudney, &c., with their bands of poets, hold the sway; at the other, Buckmaster, and other West-enders of the craft, preside with a self-sustained dignity and a chilling *hauteur*.

What tailors' shops are to men, linendrapers' are to women. In all my experience—and I have trudged up and down the world a good bit—I never saw a woman pass a mercer's without taking a good long draught with her eyes at the silks, satins, and muslins within. They may be going for their half-ounce of tea, their pat of butter, or the tops-and-bottoms for the "babies," or for anything else farthest in the world from a "warranted fast colour," but just peep in they must, and in my belief 'tis the happiest five minutes in a woman's life; and for an idle half hour, what a mine of wealth is the mercer's window. How many ideal dresses do they not possess in the course of an afternoon's walk! How many shabby Leghorns revive with illusory ribbons! As the sculptor sees the statue in the block of marble, a woman perceives a full-trimmed body in the simple goods piece, and as she goes from window to window, a whole wardrobe passes through her mind like so many dissolving views, as she glances from the flaunting and profligate satins to the staid and sober-minded stuffs. But it is to "bankrupts' stocks" that women "most do congregate." The taste ladies have for "fifty per cent. under prime cost" is extraordinary. There is one shop in St. Paul's Churchyard that, with laudable gallantry, makes a "frightful sacrifice" of itself every autumn for their especial pleasure. For a few days pre-

viously it puts its shutters up, and retires into itself to contemplate the great act of devotion it is about to perform.

Then, at an appointed time, the shutters are withdrawn, and the mental agony the stock has endured, at the thought of its approaching dissolution, is observable. The ribbons lie dishevelled in every corner; the "5,000 dozen of muslins" precipitately pitch themselves into the window, as though in despair at not being able to get rid of themselves before the wet weather sets in; lace visites implore you by their emphatic tickets to save them from the wreck; and glossy satins coax to be removed from the vulgar neighbourhood of "warranted washing colours." There should be a bill brought by Lord Shaftesbury to put down the infamous manner in which mercers thus agitate the feelings of the softer sex.

And now for a word or two upon the chemist and druggist's shop, and I hope it is not offended at being, however inadvertently, placed after the linendraper's. The chemist establishment is such a rare dandy, that one scarcely likes to talk of it as a shop, and one feels quite ashamed to step in among so much looking-glass, polished mahogany, and gilding, for a pen'orth of salts; and then the gentlemen behind the counter, they don't seem quite to have made up their minds whether they are professionals, or only tradesmen. What have they got those queer conjuror's letters on the big bottles for? 'Tis only to "impose" upon poor ignorant people; and what's the meaning of the big bottles? Many times I've asked that question, as I have gone by and seen myself coolly walking upon my head round the great globes of blue—how disgusting 'tis at

night to see them glare out upon you like great goblin's eyes—glaring right out into the dark night, across the road, along the pavement, and up the wall, giving every passer-by, alternately, the scarlet-fever, or the last stage of cholera. One feels the chemist's shop is a great sham, the real stock in trade is the French polish, and the gilt, and the bottles, and the "bounce" of the proprietors—all the rest is "leather and prunella." Contrasted with the affected gentility of the druggist is the harness maker's, a good honest shop, where the master is a real working tradesman, who stitches away in his shirt-sleeves among his apprentices, without an atom of pride; look in when you will at the harness maker's, there is the master and his men cutting and sewing away, in that slow methodical manner so fitted to one of our great Saxon staples, as yet guiltless of any of the improvements of the "go-a-head" world. A saddler's shop appears chiefly furnished with the honest-looking craftsmen you see pursuing their labours through the loops of pendant bridles, the glistening steel bits, and the ranks of whips.

I scarcely like to begin about pawnbrokers, over the threshold of whose doors the footsteps of misfortune so furtively glide. What an odd museum the window of mine "uncle" presents! From the flat-iron of the drunken laundress to the wedding-ring of the starving widow, everything is ticketed and has its price. If each article could give its story, what despair, what misery, would be laid bare to the world! A little tray in the window is filled with articles of jewellery: there lies a locket containing hair—the hair of some dead lover—and many a summer evening has its owner sat in the twilight

kissing it with unavailing tears; she would not have parted with it for her life's blood, but the pinched face of that poor little sister, through which starvation gauntly glares, how can she resist its mute appeal? Can you not fancy the shame, the revolting pride of the poor creature, as she nears the dreaded door? Now she passes, as though she did not intend to enter, now she returns and looks about her, as though she were about to commit a dreadful crime, and now, at last, she plunges in, and gives up for ever a portion of her heart for a sister's meal. The next article in the tray is a gold pin, plucked by a street-walker from the breast of a drunken man. Then again we see a silver pencil-case—it bought the last meal for a ruined merchant, ere the fatal leap was taken from the bridge. A desperate history stares you in the face in each trinket of the group. The prison, the deep water, the mad house, and the midnight grave, hold possession of their late owners, and here they all lie huddled together, marked "Anything in this tray for 4*s.* 6*d.*" The pawnbroker's shop puts on a different complexion, according to the neighbourhood in which it is situated. At the West-end, the old battered plate, the choice cabinet picture, the signet ring of value, show the necessities that exist in the upper as well as the lower circles. In the meaner neighbourhoods, old clothes, counterpanes, sheets hung up at full length by the dozens, flat-irons, and workmen's tools, tell the straits to which the poor are driven sometimes for a meal. There is, at all times, a dignity in misfortune and suffering which we cannnot but respect; let us pass on then, from the pawnbroker's window without any ill-timed jest.

The book stalls are, perhaps, the only really picturesque shops, reminding one of the olden time, extant. There is a keeping about these stalls which is quite delightful; all the books seem to have acquired by companionship such a family likeness; such a dingy old-world appearance. It would be too great a stretch for the brain to imagine the time when they were wet from the press, and guiltless of those old mouldy stains, like maps of out-of-the-way countries, scattered over their pages. And then the stall-keepers—they say that foxes and other wild animals of the desert grow to the colour of the sand; so it is with the old stall-keeper, there he stands, his face the colour of a vellum MS., and his body bound in cloth the hue of that musty volume of "Hervey's Meditations among the Tombs."

The only thing out of keeping with the book-stalls is that sharp little face peering out of a peep-hole between the books, like a spider watching for a heedless fly. There is a cunningness about the book-stall boy unworthy of the old-fashioned, trustful, respectable dulness of the presiding spirit in ancient spectacles. And then the old pinched-up faces that daily poke over the books, withered men, in camlet cloaks up to their knees, with great bunching umbrellas under their arms, poking out to the infinite danger of passers-by. How they moon over the ragged, dirty surface of the book-range, "Anything new to-day, Mr. Maggot?" "Nothing particular, Mr. Wormy." The same question and the same answer have been exchanged every day these last twenty years. "Anything new to-day?" Lord love you; none of those camlet gentry would look at anything that was not drilled

through like a honeycomb, and as old as the parish steeple. But, alas! the genuine old book-stall is getting rarer and rarer; the gloomy hollow space, in the dim distance of which the old tomes were faintly discovered, have been parted off from us by glaring plate glass.

The very books in some of the new shops seem to have suffered a resurrection: old editions, published "at ye Sunne, over against ye Conduit, in Fleete Street," issue afresh from the press; the genuine originals, that have lain on dusty shelves for a couple of centuries, are aghast at seeing the very counterparts of themselves arise, in all the pristine beauty of youth, and push them from their stools. It is a wonder to me that Tonson and other ancient publishers don't bustle out of their graves at the sight of their old copyrights revived again, and kicking, in this low, degenerate age, when cabmen and others of the vulgar can command the books that, in their time, were soiled by no thumbs meaner than those of dukes and duchesses.

I have well nigh gone through my beat for the day, but I have a word or two to say about butchers, and an odd change that comes over them towards night-time on Saturdays. We all know what a jolly good-natured race they seem, as they smile at their well-to-do customers through the ranks of legs of mutton and the carcases of sheep. Good reader, you would never think that that bland breadth of beef-like cheek could do anything but laugh; if you think so, come along with me one Saturday night, and I will show you what a changed man he can make of himself. There he sits in his empty shop; the hooks all guiltless of sweltering legs and ruddy surloins; the great block

scraped up clean for the week; the gas flaring out in a stream from the open neck of the pipe, now only in a blue stream of light, now in a flaming sword of fire, as the wind plays with it, and alternately plunges the shop into intense light and deep shadow; the board before the window is spread about with a hundred miserable scraps of meat—it is the feast of the poor. A dozen wretched women, with their little baskets, hang about the board, and turn the scraps over, one by one, whilst the butcher sullenly looks on.

"What's the price of this, mister?" one of them demands.

"Sixpence," is the reply, without the moving of a muscle.

"What, for that bit?"

"There, if you don't like it, missis, you can move on;" and here the attempted barter ends.

Another and another eager pair of eyes scrutinize the miserable flaps of meat, but they never seem to buy, but pass on, whilst the butcher steadily keeps his seat.

And in the next and next street, the gas flares, and a butcher sits in plethoric insensibility, keeping guard over his scanty scraps, and the pale crowd of women wander from shop to shop, and covet the offal their means cannot obtain. Reader, if you wish to believe in the jollity of the butcher, don't go out on a Saturday night and watch his dealing with the poor.

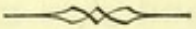
And now I will conclude with a word or two upon doomed shops.

The doomed shop is originally some respectable old concern that has outlived its neighbourhood. How often

in some bygone street do we see some such gloomy establishment, wearing the same aspect it did fifty years ago, when it was first opened by the firm. Fashion and the town have moved on long ago, but no change is to be seen in its dismal windows, filled with articles of a quality and nature which have reference to out-of-date times. It is looked up to with deep respect by the meaner class of shops, which have sprung up around it, to suit the fallen fortunes of the locality. The very stillness and absence of vulgar bustle which distinguishes it gives a certain dignity, and implies a certain wealth in the proprietors. At last the concern, which everybody looks upon as a fixture, as much as the parish church, becomes bankrupt, or the partners die, and it is closed. Shortly afterwards it re-opens with a dash, as a cheap tea mart, the whole place is transformed, and becomes the talk of all the old women of the courts round, who make a trial of its "good strong Congou, at 2*s.* 9*d.*" Its dazzle is of short continuance, however; the bailiff some fine morning walks in and makes a clear sweep of the whole stock for rent, and so it is closed again. The next time the shutters are taken down 'tis by some meek-minded individual from the country, who sets up a cigar-shop, and calls it a divan, upon the strength of a few bundles of home-made Havannahs, a dozen Dutch pipes, and two jars of "rag," the whole stock being kept guard over by a painted plaster-of-Paris brigand, with a cigar in his mouth, half as big as himself. One can always foretell what such concerns will come to; the proprietor some night putting the key under the door and decamping. At this stage of the doomed shop's disease its symptoms of change are very rapid, a

milliner is succeeded by a slang printseller; then comes a sweetmeat shop; the shifting of tenants taking place almost as quickly as in a pantomime. At last the place is closed for a long, long time; but, for dear existence, it makes one more struggle, divides itself up the middle, and opens as two different establishments, the original door serving for both concerns. A boot and shoe maker takes possession of one window, and a fancy baker and confectioner the other; the most opposite trades always thus falling cheek by jowl. One wonders how they manage to live, nobody ever goes in to buy anything, and what becomes of the stale pastry is a puzzle; the boots 'tis true, will keep themselves, but not their proprietor. The children of the respective establishments—dirty and squalid—fraternize upon the door-step. At last the two firms are reduced to a system of barter, a pair of children's shoes being considered an equivalent for a baked meat pie, but alas! two people can't go on living upon each other in this way, and the place is finally closed, the shutters, after a vain struggle, give themselves up to the bill-sticker, and an old apple woman, with her stall, takes possession of the doorway. It might open years hence, perhaps as a miserable broker's, when an old meat screen, two or three Windsor chairs, a few saucepans, some odd pieces of crockery, and a buggy-looking bedstead swathed like a mummy in its own sacking, will form the whole stock in trade, and to serve which, a woman in a dirty cap, and a gown freely opening, will rush out from some back slum at the sight of a customer. But this picture I must leave for another time to bring to perfection.

COMMERCIAL GRIEF.



"When business orders are received
From parties painfully bereaved,
Five minutes' time is all we ask,
To execute the mournful task."

Moses & Son.

When a man has more than his usual number of letters of a morning, and leisure to play with them, it is observable what flirtations he indulges himself in, ere he finally makes them unbosom themselves. Now he toys with them, scrutinizes one after another, and guesses whom they can be from. Sometimes a handwriting that he dreamily remembers calls to him, as it were, from the envelope. Such a letter, deeply bordered with black, at once attracted my attention among the heap that lay upon my table. Whom could it be from? It was evidently a messenger of affliction; but how could that affect an old bachelor, with neither chick nor child? I tore the white weeping willow upon a black background, that formed the device upon the seal, and read the contents. Nothing more than an intimation from a relative (perhaps once more intimate than now), of the sudden death of her brother-in-law, and a request that, under the circumstances of the sudden bereavement of the widow, I would

undertake certain sad commissions relative to the mourning and monument which she entrusted to my care.

It is noteworthy that, even in the deepest affliction, especially among women, in the matter of dress, how the very abandonment of grief is shot, as it were, with the more cheerful love of the becoming; and in this instance I found no departure from the general rule, as I was particularly enjoined, in the most decent terms that the writer could command under the circumstances, to do my sad spiriting at a certain *maison de deuil* mentioned. Of course, the term was not absolutely new to me; but I had never realized its exact meaning, or imagined with what exquisite delicacy and refinement those establishments had gone in partnership, as it were, with the emotions, and with what sympathy, beautifully adjusted to the occasion, trade had met the afflictions of humanity.

After breakfast, I set out upon my sad errand, and had no difficulty in finding the *maison de deuil* in question. It met me in the sad habiliments of mourning. No vulgar colours glared from the shop-windows, no gilt annoyed with its festive glare. The name of the firm scarcely presumed to make itself seen in letters of the saddest grey, on a black ground. Here and there beads of white set off the general gloom of the house-front, like the crape pipings of a widow's cap. The very metal window-frames and plates had gone into a decorous mourning, zinc taking the place of—what we feel, under the circumstances, would be quite indecent—brass. Our neighbours across the Channel, who know how to dress up affliction as appropriately as their *bonbonnière,* have long since seen the necessity of classifying the trappings of grief, and of withdrawing

them from the vulgar atmosphere of gayer costumes. In any of our smaller country towns, the ordinary mercer who has just been handling a flaunting silk thinks it no shame to measure off, with his last smirk still upon his features, a dress of paramatta. The rude Anglo-Saxon provincial element feels no shock at the incongruity. They manage these things better in France, and we are following their example in the great metropolis.

On my pushing the plate-glass door, it gave way with a hushed and muffled sound, and I was met by a gentleman of sad expression, who, in the most sympathetic voice, inquired the nature of my want: and, on my reply, directed me to the INCONSOLABLE GRIEF DEPARTMENT. The inside of the establishment I found to answer exactly to the appearance without. The long passage I traversed was panelled in white with black borderings, like so many mourning cards placed on end; and I was becoming impressed with the deep solemnity of the place, when I caught sight of a neat little figure rolling up some ribbon, and on inquiring if I had arrived at the Inconsolable Grief Department, she replied in a gentle voice, slightly shaded with gaiety, that that was the half-mourning counter, and that I must proceed until I had passed the repository for widows' silk. Following her directions, I at last reached my destination, a large room draped with black, with a hushed atmosphere about it, as though a body was invisibly lying there in state.

An attendant in sable habiliments picked out with the inevitable white tie, and with an undertakerish eye and manner, awaited my commands. I according produced my list. Scanning it critically, he said:

"Permit me to inquire, sir, if *it* is a deceased partner?"

I nodded assent.

"We take the liberty of asking this distressing question," he replied, "as we are extremely anxious to keep up the character of this establishment by matching at once the exact shade of affliction. Our paramattas and crapes in this department give satisfaction to the deepest woe. Permit me to show you a new texture, which we term the *Inconsolable.*" With that he placed a pasteboard box before me, full of mourning fabrics.

"Is this it?" I inquired, lifting a lugubrious piece of drapery.

"Oh no!" he replied: "the one you have in your hand was manufactured for last year's afflictions, and was termed 'the stunning blow shade;' it makes up well, however, with our *sudden bereavement* silk—a leading article—and our *distraction* trimmings."

"I am afraid," said I, "my commission says nothing about these novelties."

"Ladies in the country," he blandly replied, "are possibly not aware of the perfection to which the art of mourning genteelly is now brought. But I will see that your commission is attended to to the letter." Giving another glance over my list: "Oh! a widow's cap is mentioned, I see. I must trouble you, sir, to proceed to the Weeds Department for that article—the first turning to the left."

Proceeding as I was directed, I came to a recess fitted up with a solid phalanx of widows' caps. I perceived, at a glance, that they exhausted the whole gamut of grief,

from its deepest shade to that tone which is expressive of a pleasing melancholy. The foremost row confronted me with all the severity of crapen folds, in the midst of which my mind's eye could see the set features of many a Mrs. Clennam, whilst those behind gradually faded off into the most jaunty tarlatan; and one or two of the outsiders even breaking out into worldly feathers, and the most flaunty weepers.

Forgetting the proprieties for the moment, I inquired of the grave attendant, if one of the latter would be suitable?

"Oh no, sir," she replied, with a slight shade of severity in her voice; "you may gradually work up to it in a year or two; but any of these," pointing to the front row of weeds, "are indispensable for the first burst of grief."

Acquiescing in the propriety of this sliding-scale of sorrow, I selected some weeds expressive of the deepest dejection I could find; and having completed my commission, I inquired whether I could procure for myself some lavender gloves?

"Oh, sir, for those things," she said, in the voice of Tragedy speaking to Comedy, "you must turn to your right, and you will come to the Complimentary Mourning counter."

Turning to the right, accordingly, I was surprised and a little shocked to find myself once more among worldly colours; tender lavender I had expected, but violet, mauve, and even absolute red, stared me in the face. I was about retiring, thinking I had made a mistake, when a young lady, with a charming tinge of cheerfulness in

her voice, inquired if I wanted anything in her department?

"I was looking for the Complimentary Mourning counter," I replied, "for some gloves, but I fear I am wrong."

"You are quite right, sir," she said; "this is it."

She saw my eye glance at the cheerful silks, and, with the instinctive tact of woman, guessed my thoughts in a moment.

"*Mauve*, sir, is very appropriate for the lighter sorrows."

"But absolute red," I retorted, pointing to some velvet of that colour,—

"Is quite admissible when you mourn the departure of a distant relative; but may I show you some gloves?" and suiting the action to the word, she lifted the cover from the glove-box, and displayed a perfect picture of delicate half-tones, indicative of a struggle between the cheerful and the sad.

"There is a pleasing melancholy in the shade of grey," she said, indenting slightly each outer knuckle with the elastic kid, as she measured my hand.

"Can you find a lavender?"

"Oh yes; the sorrow-tint is very slight in that, and it wears admirably."

Thus, by degrees, growing beautifully less, the grief of the establishment died out in the tenderest lavender, and I left, profoundly impressed with the charming improvements which Parisian taste has made on the old aboriginal style of mourning.

But my task was not yet accomplished. A part of my

commission was to select a neat and appropriate monument, the selection of which was left entirely to my own discretion. Accordingly I wended my way towards the New Road, the emporium of "monumental marble." Here every house has its marketable cemetery, and you see grief in the rough, and ascending to the most delicately chiselled smoothness. Your marble mason is a very different stamp of man from the *maison de deuil* assistant, and my entrance into the establishment I sought, was greeted with a certain rough respect by the man in attendance, who was chiselling an angel's classic nose.

"Will you kindly allow me to see some designs for a monument?" I inquired.

"Certainly, sir. Is it for a brother or sister, father or mother, sir?"

"A gentleman," I replied, rather shortly.

"I hope no offence, sir—but the father of a *family?*" I nodded assent. "Then will you please to step this way," he replied; and leading the way through the house, he opened a door, and we entered a back yard filled with broken, but erect, marble columns, that would not have disgraced Palmyra.

"That," said he, "will be a very suitable article."

"But," said I, "do you really break these pillars purposely?"

"Why, that all depends, you see, sir. When the father of a family is called away on a sudden, we break the column off short with a rough fracture: if it has been a lingering case, we chisel it down a little dumpy. That, for instance," said he, pointing to a very thick pillar, fractured as sharp and ragged as a piece of granite, "is for

an awful and sudden affliction—a case of apoplexy—a wife and seven small children."

"But," I observed, "there are some tall and some short columns."

"Well, you see," said he, "that's all according to age. We break 'em off short for old 'uns, and it stands to reason, when it's a youngish one, we give him more shaft."

"The candle of life is blown out early in some cases; in others, it is burnt to the socket," I suggested.

"Exactly, sir," he said, "now you have hit it."

"Nevertheless," I replied, "I have not exactly made up my mind about the column. Can you show me any other designs?"

"Yes, certainly, sir." With that he led the way again to the office, and placed before me a large book of "patterns." "We do a great deal in that way," he said, displaying a design with which my reader is probably familiar. It was an urn, after the old tea-urn pattern, half enveloped in a tablecloth overshadowed by a weeping-willow and an exceedingly limp-looking lady, who leaned her forehead against the urn, evidently suffering from a sick-headache.

"No," I said, "I think I have seen that design before."

"Perhaps so," he replied; "but really there are so many persons die that we can't have something new every time."

"What is this?" I inquired. It was an hour-glass and a skull overgrown by a bramble.

"Oh, that is for the country trade," he said, hastily

turning over the leaf; "we don't do anything in that way among genteel people. This is the snapped lily-pattern, but that won't do for the father of a family; and here is the dove-design, a pretty thing enough. We do a good many of them among the Evangelicals of Clapham."

A rather plump-looking bird, making a book-marker of his beak, was directing attention to a passage in an open volume.

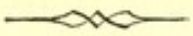
"But," said I, "have you no ornamental crosses?"

"No," said he; "you must go to Paddington for them sort of things. Lord bless your soul, we should ruin our trade if we was to deal with such Puseyite things."

"I never knew before," said I, "that sectarianism thus pursued us even to our tombstones."

The art of design, it is quite clear, had not yet penetrated to the workshop of the marble-mason, so I was content to select some simple little design, and leave my friend to a resumption of the elaboration of the angel's nose, in which occupation I had disturbed him.

ORCHARDS IN CHEAPSIDE.



And why not? We stall-feed milch cows in upper stories of London houses, bring deep-sea fishes and zoophytes under inspection in our drawing-rooms, and grow choice ferns in domestic glass-cases, and we contend it is quite as easy to pick our own fruit from our own trees in the centre of the city as from the south-peach wall of some snug country house. Our reader, of course, is incredulous, but we mean what we say, and hope, before we have done, to convince him that we speak the words of truth and soberness. The cultivation of fruit-trees in pots in hot-houses has long been practised by nurserymen in this country, in the same manner as grapes are cultivated; this process is necessarily expensive, and entails the necessity of employing highly-skilled gardeners. Mr. Rivers, of Sawbridgeworth, in Hertfordshire, was the first, however, we believe, who proposed to simplify the growing of rare fruits—such as the peach, nectarine, and apricot—so as to render their culture within the means and knowledge of persons of very moderate incomes. To grow peaches at the cost of two shillings a-piece has never been a difficulty; to grow them at one penny a-piece is a triumph, and that he has taught us all to do. In this

country the production of the rare stone-fruits out c doors has always been a lottery. We rejoice greatly a seeing our walls one sheet of blossom in early spring and then comes a day of wet and a nipping frost, as i this very year, and all our hopes are blighted. To affor protection during the few trying weeks of March an April, and to produce a temperature like the dry yet vary ing atmosphere of the East, the natural home of our fines wall-fruit, without delivering us into the hands of the pro fessed gardener—with his stoves, hot pits, boilers, an other horticultural luxuries, which the rich only ca afford—was the desideratum, and that Mr. Rivers ha accomplished with what he terms, his "orchard-houses."

These are not the elaborate pieces of carpentery work we meet with in great gardens, but glass-houses, con structed so simply that any person of an ingenious turn may construct them for himself; they are nothing more, in fact, than low wooden-sided houses, with a glass-roof As there is no window-framing, planing, mortising, o rebating required, the cost is very inconsiderable. A span-roofed orchard-house, thirty feet long by fourteen feet wide, with a height to the ridge in the middle of eight feet, sloping down to four feet on either side, can be constructed by any carpenter for £27. 10s.; smaller lean-to houses for very considerably less: estimates for which our more curious reader, who may feel inclined to make an experiment in home fruit-growing, will find carefully set forth in Mr. Rivers's original little work, "The Or chard-House," published by Longman. One of thes houses gives the fruit-grower an atmosphere as nearly a possible resembling the native one of the peach, nectarine

and apricot. The glass affords abundance of light through its ample panes, and its protection gives a dry atmosphere, in which the fruit is sure to set and come to maturity; whilst the vigour of the tree is insured by the wide openings or shutters in the opposite side walls, which admit a constant and *abundant* current of air through the house when it is thought desirable to do so. The atmosphere produced, beds are made, composed of loam and manure, on either side of the sunken central pathway, not for our orchard to grow in but *upon*. And here begins the singularity of this new method of culture. Any one who has grown fruit-trees must be aware that their roots are great travellers: they penetrate under the garden-wall, crop up in the gravel path, and penetrate into the old drains; they seek their food, in fact, as the cow does in the meadow, moving from place to place, and, like the cow, they, to a certain extent, exhaust themselves in so doing. Under such circumstances, artificial aid is of little avail, you cannot give nourishment to roots that have run you don't know where; but you can confine the roots and stall-feed them, as we do animals, with a certainty of producing the effect we desire, and this we accomplish by putting our orchards into pots.

But Pomona has still an infinity to learn. It clearly will not do to allow our fruit-trees to fling about their arms as they do in a wild state; in the orchard-house we have to economize room; there must not be an inch of useless wood. A little time since, small standard trees, about four feet high, were thought to be the best form for the orchard-house, but Mr. Rivers has come to the conclusion that most light and heat is gained by training his

trees perpendicularly—in the form of a small cypress—thus a stem, four feet high, supports a large number of short lateral branches, pinched back to five or six fruit-buds. This somewhat formal shape has the great advantage of allowing a large number to be congregated together, and of ripening their fruit better, inasmuch as they are not so much shaded with leaves, as those having straggling branches. And now for the manner of feeding them. The pots in which the roots are encased may be considered the mangers of the tree ; to these nutriment is given in the autumn of every year, in the shape of a top-dressing of manure, in addition to which, instead of one hole, three or four are made in the bottom of the pot, to allow the roots to emerge into the rich compost of two-thirds loam and one of manure, forming the border.

"But," says our reader, "this, after all, is but a round-about way of making the roots seek mother earth."

It may appear so, but in reality it is a very different thing. In the first place, the zone of baked clay placed round about the roots, in the shape of the pot, is a good conductor of heat, which highly stimulates the tree. In the second place, the roots, although allowed to strike into the border, are within call ; when the branches are pinched back in the spring, these roots also are pruned ; thus the vegetation, which otherwise would be apt to run riot and fill the house with useless leaves and wood, is checked at will. To provide still further nourishment to our nurslings, every two years the earth is picked out of each pot, two inches all round, and six inches deep, and fresh compost is rammed into its place.

Our reader will perhaps smile when he thinks of the

old grey and mossy orchards of the country, with their tumble-down trees leaning in every direction, and spreading over acres of ground, and hundreds of yards of wall trees being compressed into a little glass-house, and thus made so shockingly tame by the hand of man, that they are forced to depend upon him, like barn-door fowl, for their daily nourishment; but he would smile, and that with delight, to see the town of orchard-houses in Mr. Rivers's nursery, thus filled with obedient trees, and bearing educated crops, such as no open orchard or garden ever dreamed of doing.

Trees, once potted and placed in the orchard-house, the trouble attendant upon them is not very much, and does not require any special gardening qualifications. A lady might, with advantage, relieve the monotony of making holes upon cambric and sewing them up again, by this delightful occupation. In the winter and spring months protection should be given against frosts by closing the shutters; very little water should be allowed in winter, as the trees require to hibernate, and water acts as a stimulant. About March, pruning should commence, and should continue through the season until the final autumn pruning, when the orchard is once more put to sleep. All these are matters which afford infinite pleasure to all persons of healthy tastes. The trees are all brought microscopically, as it were, before us; we watch the buds perfected into the blossom, and an orchard-house of peaches in full bloom is one of the most beautiful sights in horticulture. We watch with still greater interest the gradually-ripening fruit. Some one has wittily said, "that the orchard-house is the ladies' billiard table," and certainly

a more pleasurable occupation for them, could not well be devised. Peaches, nectarines, or apricots, grown on these pyramidal trees, as they are somewhat incorrectly called, are charmingly ornamental, especially the apricot, the golden fruit of which contrasts beautifully with the green leaves, and what can be more quaint or delicious than to pluck your own fruit from the living tree ornamenting the dessert table? It will be impossible within the limits of this article to attempt any directions with regard to the management of the different fruit that may be grown in these domestic orchards, we would rather refer the reader to Mr. Rivers's little volume for these particulars.

It is essential to inform our reader, however, that failure, with even the most moderate care, is the exception rather than the rule. We all know how difficult it is to keep the peach and nectarine trees clear of the brown aphis blight which infests them. These and all other kinds of blight, including the red spider, the pest of hothouses, can now be most readily destroyed by the application of the new patent composition, termed Gishurst, a kind of sulphur soap, which readily dissolves in water. One or two applications of this compound clears the most shrivelled leaves of these parasites at once without injuring the points of the tender growing shoots, as the fumes of sulphur or the decoction of tobacco-water are sometimes apt to do. But it may be asked, what is the actual gain resulting from this domestic method of treatment? We reply, in point, size, quantity and quality, the fruit is greatly superior to that given by the old method of wall-training.

An orchard-house thirty feet long and fourteen feet wide will hold, say forty perpendicularly-trained peach-trees, or two rows on either side the centre pathway. These trees in the third year, and henceforth for many years (Mr. Rivers has them still luxuriantly bearing in the twelfth year), will produce two dozen fruit each, or eighty dozen altogether, and by the selection of various sorts and the retardation of the ripening, by the simple expedient of removing some of the trees to an out-of-door north aspect, a constant succession of this fine fruit may be maintained from August to November. The trees should be placed alternately, thus—. · . · . · . · . in the double row, so as to give them the utmost amount of light and air. By this arrangement the fruit is ripened all round, instead of simply on its outer surface, as it often happens with wall-fruit. Another important matter is to shift the trees now and then—let the pot in the north-east end of the house be taken to the south-west; a little visiting in fresh air is quite as beneficial to trees as to humans; and this locomotive quality is another advantage that orchard-house trees have over those planted against walls.

Apples, pears, grapes, figs, and oranges, are grown in this manner with the same facility, certainty, and cheapness, as the choicer stone-fruit; and, be it remembered, these orchard-houses are designed for small gardens and for small gardeners. All that is required is a slip of ground open to the sun, just large enough to find room for the orchard-house, which should, if possible, lie south-east by north-west, in order that the full summer sun may, in the course of the day, fall upon all sides of the trees.

There is scarcely a suburban road-side slip of garden which may not find room for its peach-orchard, and where room and expense is an object, a small lean-to house may be erected for a very few pounds, which will ripen its fruit as well as the larger ones. And where there are no gardens, we may make them on the roofs of our houses, as they do in the East. Where there are flat-leads the erection of glass orchard-houses is a simple matter enough. "But what about the blacks?" interposes my reader. Simply this: we must treat the orchard-houses in such situations as we do persons with delicate lungs; we must provide them with respirators; over all the openings left in the sides for the free circulation of air, woollen netting with three-quarter inch meshes must be stretched. The small fibres projecting from these meshes filter the air in the most surprising manner, as will be evidenced by the soot entangled within them by the time they have done their work for the season. Moderate frosts are intercepted in the same matter. A gentleman living at Bow, in the midst of the smokiest suburb of London, has in this way produced abundant crops of the rarest fruit for many years; and Mr. Rivers informs us, that he would engage to produce excellent fruit in City orchard-houses, if required to do so. Glass is now so cheap, that we see no reason why the roofs of the houses should not be glazed instead of tiled. By an arrangement of this kind, every citizen may, if he likes, possess his attic garden blooming with fruit, and after it is gathered, with autumn flowers, such as chrysanthemums. Such glass-roofed attics (only far more lofty and expensive ones) already meet the eye in

all directions, built for the use of photographers. We see no manner of reason why peaches, as well as pictures, may not be produced in such situations; and indeed there is nothing to prevent the construction of very fruitful "Orchards in Cheapside."

THE WEDDING BONNET.

I WAS the other day in the company of half-a-dozen young ladies—gentle cousins—all of them as merry as little larks, as busy as lamplighters, and as important as the preparation for the great event in female life—a wedding—could make them. The bride's bonnet had just come home, and I had the satisfaction of seeing a dozen lily-white hands all in one tumultuous group, arranging and shaping it to the face of the fair maid herself. It was pronounced on all hands quite the thing—a love of a bonnet, in fact; and after having deposited it in the centre of the table, and hunted under the sofa and in all quarters of the room to make sure that the cat was not there, they left me with an especial charge not to touch it for the world. I promised accordingly, as I sat dozing before the fire, and they left me alone to pursue their welcome task. Presently, a knock, knock, came to the door; it speedily opened, and a strange gentleman in respectable black entered with a magic-lantern under his arm. Somehow or other I was not a bit astonished at his entrance, but took it quite as a matter of course. "So you have a bride's bonnet there," said he, looking at me with his keen gray eyes; "all smiles and happiness, I suppose?"

"Yes," said I, as though he had been the oldest friend in the world, "little Anne——"

"Ah!" said he, interposing, "people must marry, I suppose; but I have a word or two to say to you about this gimcrack." And stepping up to the bonnet, he turned up his cuffs like an expert chemical lecturer, took it in his hands, blew upon it, and as quickly as a child's card-house rattles to the ground, the bonnet lay in pieces before him. Satin, blush-rose, feather, frame-work, and the very cotton with which it was sown, lay grouped under his hands. He then deliberately wiped the illuminated lens of his magic-lantern. "Let us begin," said he, "from the beginning," taking in his grizzly fingers the blush-rose, and stripping its stem until the iron wire of which it was composed was laid bare. Before even this thread of metal can be produced, men must dive into the bowels of the earth to procure the ore and the fuel with which to smelt it. "I will show you the true history of the making of this bonnet." With that he turned the focus of the lantern upon the wall, and I saw a picture of a deep pit into which men continually kept entering, and as continually emerging from, like so many emmets, black and filthy to the last degree; and further in the mine, toiling up steep ascents, women on their hands and knees, with chains round their bodies, dragged up the heavy corves of coal.*

"But this," said I, "surely is not fit employment for women?"

"Well," said he with a shrug, as if mimicing a

* Since this paper was written, this degrading kind of labour has been prohibited by the Legislature.

general expression, "what's to be done? Somebody must do it."

With that he changed the slides, and I saw a child, not more than five years old, sitting in a narrow low passage in the remotest darkness of the mine. I saw him pull something he held in his hand, a little door opened, and the woman harnessed to the corve passed onwards; the door shut to, and the child was again in the darkness, huddled up in the corner to protect himself from the cold and damp. Noticing my surprise, my strange visitor remarked, "This sort of thing soon uses them up, but there are plenty more in the 'labour market.' What so cheap as flesh and blood? But we have forged the tough iron and spun the fine wire. Now for the artist's touch."

As he spoke, a fresh slide rattled through the lantern; and in a mean room I saw a poor girl, winding delicate gauze round the iron wire, and with wan fingers, mocking nature in one of her most beautiful moods. As she added petal after petal of the rose she was making, she stole hour after hour from the night. "You see," said he, "she tints the flower from the colour of her own poor cheek. Alas! that the human rose should decay that this artificial thing might flourish!" He said this sadly, but immeately added, in his usual tone, "but there—what's to be done? The pay is slow starvation, I admit; but these women crowd the labour-market so, that they are glad enough to slave even at this work—if not, *a worse fate awaits them.*

"But we have only got as far as the flower in our lecture," he said, and held out the blush-rose he had taken

from the bonnet; he then put it aside with the triumphant air of one who has just made a successful demonstration.

"Here," said he, holding up a piece of the glazed calico lining, "I will show you something interesting about this," and immediately threw out upon the wall a picture which differed from all that had gone before it. Tall palms, and all the luxuriant vegetation of the East, shot up. Then a village was seen upon the banks of the Ganges. In the open air workmen sat at their looms weaving cloth, and singing as they wove.

"Have you noticed the scene enough?" said he. I nodded, the picture dissolved, and instead of the former scene of beauty and industry, I saw a village in ruins, through which the wild dog alone roamed, and the jungle grew up to its very foot.

"You see," said he, anticipating my eager query as to the cause of this change, "when the power-loom first began to revolve, and the tall chimneys of Manchester to rise, the poor rude looms on the banks of the Ganges, and their frugal, industrious workers perished at a blow. But you know competition is the order of the day—the weak in these times must go to the wall."

Perceiving that I did not exactly understand the Christian spirit of this doctrine, he added, with a more earnest tone, "Perhaps the time will come, when the transition from a slow to a more speedy method of production, through the agency of machinery, will be made with some mitigation of all this sudden and unlooked-for misery —but while I am moralizing my lamp is burning, and I have a score of slides yet to show you."

With that the lantern threw upon the wall another picture. It was an African desert, and an Arab on horseback was hunting down the swift ostrich, which with outspread wings sailed along the burning sand. At length, worn out by the greater power of endurance of his pursuer, he was taken and slain, and his captor rewarded himself for his trouble by plucking from the yet bleeding bird his waving plumage. In the distance, a caravan comes winding along towards some distant mart, to which the Arab attaches himself—the wells fail the moving multitude, and one by one, man and beast, fall and leave their whitened bones as a track-mark for future travellers across the wastes; but the merchandise is borne home, though human life is lost.

"You would not think, to see with what negligent elegance this feather falls," said the stranger, holding up its white sweep, "that man had given even life in the struggle to bring it to this perfection. But there, what's to be done?—we always thought more of matter than of man. We have not quite finished yet," said he, taking up the cane framework of the bonnet; "we must go to the New World for our next picture."

As he spoke, he adjusted a new slide, and showed a Brazilian plantation, in which the slaves laboured under fear of the cow-hide of the overseer. "The bees who make the honey," said he, with his cold sneer, "how grateful man is to them! I suppose you think *we* have no such slaves. I have two or three choice slides here," said he, holding up the transparent glasses—"a figure or so of an exhausted milliner, and a Spitalfields weaver in his little garret, weaving inch by inch glossy satin, whilst his own

poor family have only rags to cover them; but I have shown you enough of the misery that has gone towards making this little trifle. The pretty little miss, when she puts it on, and carries it so lightly on her head, will little think how it has been delved, and forged, and weaved, and built up into such a becoming fashion—but it is worth a thought about." With that he blew lightly on the scattered materials, and they rushed together again as speedily as they had before fallen to pieces.

"And now," said he, in the rising tone of one coming to his peroration, "I am not altogether such a bad sort of a spirit as you might have taken me to be. So I will give you a sentiment of much importance to the working bees in the busy human hive, and that is—

A HAPPIER PRODUCTION AND A BETTER DISTRIBUTION OF WEALTH."

And clapping his magic lantern under his arm, he wished me a good evening and disappeared.

"Why, Tom," said a sweet voice close to my ear, at the same time a soft little fist thumped me on the back—"why, Tom," said Anne, "you have been talking such strange things in your sleep this last half-hour. I told you how 'twould be, eating so many nuts." And truly I had gone fast asleep with my feet on the fender, and saw this vision.

And now, gentle reader, do not be angry with me if, imitating the tactics of the newspaper puffs, which begin with some alluring title and gradually lead on to the "Mart of Moses," or the as inevitable "Macassar," I have struck in your heart upon an universal sympathy,

and thus beguiled you into the less interesting channels of social economy. But for once the puff, like the foam of the tankard, is all on the top, and it will be seen, perhaps, that there is more substance in the matter below than the title warrants. Considering how important a portion of the community are the productive classes, it is no slight matter that we endeavour to rid their daily occupation as much as possible of the needless repulsiveness and danger that in too many cases at present attaches to them. As for the proposition of "A better distribution of wealth," it has occupied the attention of all the most enlightened economists, but they have looked upon it as a thing rather to be desired than capable of accomplishment. In the various joint-stock associations, however, and mutual benefit societies which have spread lately so widely among the middle and working classes, by which profits are diffused through the masses instead of centring in large capitalists, one of the methods by which the problem is to be worked is perhaps hit upon.

AËRATED BREAD.

It certainly is not pleasant, in biting a thick hunch of bread, to find that you have made a section of a cockroach; nevertheless, however unpleasant, the discovery is instructive. The geologist, from a much meaner fragment of pre-Adamite life, bisected in a railway cutting, will tell you the exact condition under which the globe existed in some very early stage of its formation, and that much-abused cockroach is equally capable of telling a tale respecting one condition under which the bread which formed its matrix was produced. Everybody knows, or should know, at least, in these days of physical science, what the globe is like at that particular slice which is filled with saurians like the plums in a cake. But how few know anything of that substratum of urban life, the whereabouts of which is discovered to us in frosty weather only by a patch of thaw upon the pavement. That the staff of life somehow or other emerges from these underground caverns we may possibly be cognisant of, but how many of us have ever troubled ourselves to have ocular demonstration of what daily and nightly goes on in these sunless dungeons? The evidence of the cockroach in the bread, like the presence of the saurians in the blue lias,

indicates, it is true, the presence of a very high temperature in those regions, but we feel satisfied that there is a charming ignorance abroad respecting a manufacture which comes home directly to our breakfast-tables. The arrangement of a metropolitan bakehouse, then, literally described, is pretty much as follows. The oven is in the cellar, under the roadway, the mixing-troughs and kneading boards are in the basement. The heat ranges from 80 to 110 degrees Fahrenheit. There is generally a privy under the stairs in some corner of the den, all the impure gases from which are sucked, as a matter of course, towards the furnace-mouth, ventilating the dough in the course of its progress over it. It is scarcely necessary to remark, that a temperature of the nature we have indicated cannot be without effect upon the skin of the workman ; nevertheless, the machinery of these establishments consists simply of the baker's hands and arms, and, in some cases, of their feet ! With these they knead the dough much as they did at the earliest times of which we have any knowledge. The result, with respect to the bread, we leave to our reader's imagination, but we wish particularly to draw attention to the condition of the workers. According to the report of Dr. Guy, the journeyman baker habitually works in the polluted atmosphere we have described from eighteen to twenty hours a day, and, towards the end of the week, nearly two entire days in succession ! Is it to be wondered at that, under these circumstances, the trade of the baker is one of the most unhealthy in the metropolis ? Compositors who work in a heated atmosphere, we are told by Dr. Guy, are peculiarly subject to chest diseases of a severe character ; they spit

blood (a very grave symptom) in the proportion of twelve and a half in a hundred; but journeymen bakers, we are informed by the same authority, spit blood in the proportion of thirty-one in the hundred. Amongst the journeymen of the under-priced bakers, we are further told, that no less than every other man spits blood! We do not wish to pursue this unpleasant subject further than is necessary to insure public attention to the sufferings of a class of workers who have hitherto borne their cross with almost culpable patience. We have said enough, however, to show that society is the ogre we read of in the nursery-tale, and like him may cry,—

"We grind their bones to make our bread!"

The Operative Bakers' Society endeavoured, some time since, to obtain a Committee of the House of Commons to inquire into their grievances, but they failed, and nothing seemed left to them but to interest public opinion in their favour. It is probable, however, that their grievances will gradually be redressed in a manner quite unexpected. The iron limbs of machinery are coming to the rescue of the over-tasked human muscle; another powerful drudge once thoroughly engaged in our service, not only will the evils complained of by the operative bakers disappear, but other advantages will flow to the public we have yet to mention.

Some little time since we witnessed the working of bread-making by machinery, at the steam bakery of Messrs. Peek, Frean, and Co., of Dockhead. It has long been well known in the medical profession, that the ordinary fermented bread is very apt to disagree with dyspeptic persons—a fermentation still going on in the stomach after

it is eaten. Impressed with this difficulty as regards ordinary bread, Dr. Dauglish has succeeded in making by machinery a very pure unfermented bread, the constituents of which are simply flour and salt, with the addition of what we shall term soda-water. In the production of this article, which is perhaps familiar to the reader under the term of aërated bread, the hand of the workman never touches the material during the whole process of manufacture. The mixing is performed in a hollow air-tight iron receptacle, by the rapid revolution of iron arms fixed upon a central spindle, very much in the same manner in which mortar is mixed in a pugmill.

In ordinary bread, the vesicular texture is given by the addition of yeast, which causes a fermentation in the dough mass, resulting in the production of carbonic acid gas, which fills the tenacious substance with air-bubbles, and thus lightens it. In the new process, however, the carbonic acid gas is supplied direct to the flour in conjunction with the water, and the lightening process is thus performed without any decomposition whatever. The aërated water is pumped into the mixing receptacle at a very high pressure, and when the kneading is finished—a process which is completed in as many minutes as it formerly took hours—a valve is opened in the bottom of the mixer, and the dough is forced out by the elasticity of its contained carbonic acid gas. A boy in attendance receives it as it flows, and cuts off, with marvellous exactness, just enough to fill a small 2 lb. 4 oz. tin. It is as much as he can do to keep time with the stream of dough as it issues from the machine, and cut off sufficient portions to fill up the little army of tins that are supplied to his hand. The loaves,

now ready for baking, are placed upon what is termed a traversing oven, the platform of which is composed of an endless chain working upon two rollers. By this contrivance the dough is taken in at one end, and after travelling, and baking meanwhile, for the space of one hour, is ejected at the other extremity as bread.

The lightness and purity of the aërated bread will, without doubt, command for it, ere long, universal demand. The rejection of the process of fermentation, whilst it does away with a certain cause of indigestion, is also valuable, inasmuch as it renders a certain kind of adulteration, to which all town-made bread is obnoxious, unnecessary. Londoners are particularly partial to very white bread. Now this quality can only be obtained by the admixture of alum with the flour, in order to overcome the partial discoloration which takes place during the fermenting process even in pure flour; damaged flour, which bakers use in the poorer districts, in consequence of its dark appearance even before fermentation, requires a much more liberal allowance of the bleaching alum. Dr. Hassall, in his work on the Adulteration of Food, devotes a special chapter to the falsification of bread in the metropolis. Out of twenty-four loaves, purchased indiscriminately from bakers residing in different parts of London, he found every one adulterated with alum, the degree of adulteration corresponding with the poverty of the neighbourhood in which it had been bought. Thus it is clear that the ordinary bread is contaminated with a pernicious drug. The quantity thus taken at one time is small, it is true, but its repetition from day to day cannot fail to exercise a considerable influence upon the digestive organs, espe-

cially in young children. The aërated machine-made bread does not require the addition of alum to whiten it, the energy of the kneading apparatus transferring even the darkest spurred flour into perfectly white loaves. The poor journeyman baker, no less than the public, will be the gainer by the application of machinery to the operation of mixing, inasmuch as it will at once lift a very clumsy handicraft, carried on by small masters, with insufficient means, into a manufacture of the first class, necessitating the employment of large capital. The steam-bakery of Messrs. Peek, Frean, & Co., for instance, where we saw Dr. Dauglish's bread machinery at work, contained workshops as spacious as those of a cotton-mill, contrasting most favourably with the miserable, fetid dens in which our metropolitan bread is at present made. The air is pure, the temperature moderate, and the time occupied in the manufacture of the loaf so short (an hour and a half), that the operatives are entirely exempt from the fearful amount of illness and mortality which exists among those employed by low-priced bakers. The introduction of steam machinery into the trade is, in fact, as great a boon to the poor mechanic, as the invention of the sewing machine is to the tailor and sempstress. Iron limbs worked by steam muscles, it is clear, will ere long lift the working man above the mere drudgery of his task in most handicrafts, and prepare the way, more than any other circumstance, for their ultimate elevation in our social system.

THE GERMAN FAIR.

If Paterfamilias wishes for a new sensation, let him provide himself with a big basket and follow me. It will try his dignity, perhaps, to be seen struggling amid a mob of children; but, after all, he will not get half as much put out as in the crush-room of the Opera, and I promise him more thorough delight, far brighter eyes, and more genuine laughter than he will meet with there. Say it is three o'clock in the afternoon and on a seasonable December day when our cab drives up to the German Fair in Regent Street. Was there ever such a crowd before of merry little feet all pattering and pushing along the entrance hall lined with Christmas-trees? Paterfamilias perhaps has not forgotten that cry of "Eureka!" the ten thousand gave when they first caught sight of the sea; but we question if it was half as hearty as the joyous "Oh!" that burst from the mouths of a hundred "terrible Turks," as they swarm into the glittering hall of the German Fair.

Twice in our lives toys make themselves known to us as great facts. In youth, when we play with them and smash them ourselves, and in middle age, when we do it by

deputy in the persons of our own children; and, possibly, if you ask Paterfamilias, he will tell you that he enjoys them the second time more than the first—for then there are more to smash, and more to laugh and enjoy. But, if a man has any heart in him, how must he delight to see five hundred urchins all boiling over with pleasure, whilst five hundred mammas and papas are enjoying their happiness.

In my young days,—when George IV. was king,—toys were toys, and youngsters were obliged to use them economically; but now there is no such necessity, for here we are in a room where it is impossible to spend more than a penny at a time. I can get anything for a penny—from a capital yard measure to a soup tureen—and as I am alive! there is Paterfamilias with his basket half-full already. He has a railroad that moves, a duck that swims, a trumpet that blows, a doll that cries, a perambulator that runs, and a monkey that jumps over a pole, and he has only got rid of sixpence! It becomes absolutely absurd to have so much for your money, and how he will manage to spend the sovereign he designs is to me a mystery. All around him urchins are busy. "I've had one of those, and two of those, and three of these, and four of those." Why, it reminds us of Punch's satiated schoolboy settling his reckoning in the cake-shop, only here the boy has his cakes and toys still to enjoy. But there is a sixpenny and a shilling counter not far off, and interspersed amid the meaner gew-gaws, toys that rise to the rank of real works of art.

Whilst Paterfamilias is picking out his two hundred and forty separate and distinct toys, let us pause for a moment,

and ask where they all come from. Reader, have you ever travelled for a livelong day through the dark and melancholy pine or fir forests of Germany? Ever listened to the soughing of the wind through the branches, or walked on the dumb carpet of pine tassels? If so, what has been the complexion of your thoughts? Possibly like mine, gloomy as the Halls of Dis. Yet, from these old inky forests, from the green valleys up which the pine-trees climb like black priests to the mountain summit, rush the torrents of toys which push on from year to year and penetrate into every nursery in Europe. In the recesses of the old Thuringian and other forests are glued, and turned, and painted, the legions of soldiers, the fleets of Noah's-arks, and the countless whips, rattles, and squeaking dolls, that go to their last account in the snug nurseries of Europe. Strange fact, that in these grim forests half the laughter and joy of childhood should find their birth!

The same principle that plants cotton-factories in Lancashire determines the production of toys—the presence of the raw material. If the pine logs from which they are manufactured were not immediately at hand, there would be no penny toys—and, possibly, no German Fair. Let us examine one of these penny articles. Here is a man wheeling a barrow of fruit. The prime cost of this article in the forest where it was made is only a kreuzer, or one-third of a penny! The rest represents its package and carriage to these shores, the duty, and profit of the proprietor. It seems inconceivable that for so small a sum such a result can be obtained, for the man is well enough proportioned, his barrow really will run, and the fruit is coloured after nature. A little inquiry, however, at the

same time that it clears up the mystery only increases our astonishment.

In the first place, the wood is obtained for a mere nothing. For instance, the Grand Duke of Saxe Meiningen, on whose estates the flourishing toy colony of Sonneberg is situated, allows his people to select any tree from his forest close at hand for 2½d. Thus the raw material may be said to be given to them. Again, the organisation and division of labour is carried on to an extent in the production of these trifles which we can only liken to that exhibited in this country by watchmakers or pin fabricators. Let us revert to the man with the barrow of fruit, for instance. Possibly a dozen hands have been employed in its production. The man who turned the body of the figure, had nothing to do with his arms. A third person was employed to put together the barrow; a fourth to turn the wheel; a fifth to put the spokes in; a sixth to put the linch-pin in; a seventh to turn the fruit; an eighth to turn the basket on which they are placed; a ninth to colour the fruit; a tenth to colour the barrow; an eleventh to glue the whole together; and a twelfth to supply the final varnish. The incredible rapidity with which this minute division of labour enables the men, women, and children to accomplish each detail, is the secret of the whole matter. Not only do the dozen individuals manage to make a living out of the third of a penny, or rather less, which is to be divided amongst them, but they contrive to live comfortably and respectably into the bargain. The toy, thus completed, has to be packed and conveyed hundreds of miles along Alpine roads and down rapid rivers, until it is finally transported by the Rotterdam steam-boat

to our shores, to be again unpacked and displayed by Mr. Cremer in the German Fair. The history of the fruit-barrow is the history of almost every wooden article on the penny counters of this extraordinary place. The process of manufacture is the same throughout Germany, but the localities from which the different toys come are widely different. The vast majority are made at Grünhainscher, in Saxony. The glass comes from Bohemia. The bottles and cups are so fragile, that the poor workman has to labour in a confined and vitiated atmosphere, which cuts him off at thirty-five years of age. All articles that contain any metal are the produce of Nuremberg and the surrounding district. This old city has always been one of the chief centres of German metal work. The workers in gold and silver of the place have long been famous, and their iron-work is unique. This speciality has now descended to toys. Here all toy printing-presses, with their types, are manufactured; magic-lanterns; magnetic toys, such as ducks and fish, that are attracted by the magnet; mechanical toys, such as running mice and conjuring tricks, also come from Nuremberg. The old city is pre-eminent in all kinds of toy diablerie. Here science puts on the conjuror's jacket, and we have a manifestation of the Germanesque spirit of which their Albert Durer was the embodiment. The more solid articles which attract boyhood, such as boxes of bricks, buildings, &c., of plain wood, come from Grünhainscher, in Saxony.

Very latterly a rapidly-increasing town named Furth has sprung up, six miles from Nuremberg, entirely devoted to the manufacture of Noah's arks, dissected puzzles, &c. The toys with motion, such as railroads, steam-vessels,

and moving cabs, are the speciality of the people of Biberach, in Würtemberg. And where should those splendid cuirasses, helmets, guns, and swords come from but Hesse Cassel, the centre of soldiering Germany? But the workmen of the principality are not entirely devoted to arms. The charming little shops, and parlours, and the dolls-houses—without which no nursery is complete—are made here. Neither must we forget the theatres, beloved of boys. Here and there some exquisite little interior of a café, with its fittings of marble tables, bottles, mirrors, and plate, attract the attention, and the inquirer learns with astonishment that they are made by felons in Prussian prisons. The taste and dexterity of hand displayed is amazing, and the result far preferable to the miserable hemp-beating or "grindings at nothing" at which some of our own prisoners are so fruitlessly employed.

But this counter is fitted up as a refreshment stall. Here we have rolls and sausages and ducks and bottles of champagne and a hundred other dainties; but the children are too cunning; they are only shams—paper. The Berliners who make them call them "surprises," for it is rather a surprise to find bonbons for the stuffing of fowls, and sugar-plums tumbling out of simulated pieces of embroidery. Now and then we find a greater surprise still, for there goes a rich plum-pudding floating up to the ceiling—an edible balloon.

But where do all the dolls come from? I hear my little flaxen ringlets say. Dolls are an universal vanity—almost as universal as vanity itself. They seem to be made everywhere, excepting the one country that has a repute for making them. The wooden-jointed specimens

known as Dutch dolls all over the world, really come from the Tyrol, where wood-carving is a very ancient art. The Dutch have the credit of their production simply from the fact, that they are generally shipped from Rotterdam, which is found to be the most convenient port for German goods coming from the interior. To the Dutch, however, we are indebted for the introduction of the crying doll, which, I am happy to inform my young friends, cries for a penny almost as natural as life. The pattern originally came from Japan (a nation very ingenious in toys), and has long been lying in the Museum at the Hague. The German toy-makers, however, are now constructing them upon the same model. Fine wax dolls, *with natural hair*, are made, we are informed, at Petersdorff, in Silesia. It will be flattering, however, to the national vanity to be informed, that the Londoners alone are capable of making the finest and most expressive dolls. The French, clever as they are, cannot touch us here. Some of the higher class English dolls are perfect models—the eyes are full of expression, and the hair is set on like nature itself. The faces are originally modelled in clay, and the wax is put on in successive layers. The highest class of workmen alone are capable of this kind of work. The beauty of Grecian sculpture is ascribed to the fine natural forms which their artists had to copy. Possibly we owe to the beauty of our women, in a like manner, our superiority in dolls, which now rank almost as works of art.

It must be evident that where wood is employed as the material for toy-making, it is impossible to hope for anything very artistic at a rate that can be paid by the great middle class. This fact has led to the employment of a

substance that can be cast in a mould, and yet be sufficiently tough to bear knocking about. Those who examined the Zollverein department in the Exhibition of 1851 will remember the beautiful toys exhibited by Adolphe Fleischmann.* These were composed of papier-mâché, mixed with a peculiar kind of earth. Since that time the art of toy-making in this new material has undergone a very great development all over Germany; but at Sonneberg, in Saxe Meiningen, a school of art has been established by the duke, for the cultivation of the workmen in the arts of design. In this school, models of all the best antique and modern sculpture are to be found, and collections of good prints. To this school all the young children are sent to model, under pain of a fine; and an art education is the result, which shows itself in the exquisite little models which come from the ateliers of Adolphe Fleischmann. There are now in the German Fair models of animals that a sculptor may copy. Bulls, lions, asses, &c., delineated with an anatomical nicety which is really wonderful. Many of the works of art produced by him are copied from well-known engravings, and are entitled *solid pictures*. There is one in the Fair now, representing Luther and his family around a Christmas tree in the room he once occupied. The modelling of this group originally cost nine guineas, but the moulds once produced, the subsequent copies are procurable at a very cheap rate. There

* The toys exhibited at the Great Exhibition were purchased by Mr. Cremer, of Bond Street, and formed the foundation of the present German Fair. The Great Exhibition has certainly borne no more welcome fruit to children than the establishment of this fountain of pleasure.

can be no doubt that to familiarize children with well-designed toys is a very important step towards educating the race in the love of art. We cannot help thinking, however, that what the future man will gain, the child will lose. If we make our toys too good, they will either be used as ornaments, or children will be stinted of their full enjoyment of them, for fear they may be injured—which God forbid. It may be very wrong, and possibly I am inculcating very destructive principles, but I cannot help thinking that a judicious smashing of toys now and then is a very healthy juvenile occupation.

There are some little monsters we know, that will keep their toys without speck or spot for years, but they are doomed to die old maids or bachelors. Besides, how could we better or earlier satisfy the analytic spirit that is within us, than by breaking open the drummer-boy to see what makes him drum? With this destructive view of the subject, we think Mr. Cremer, the proprietor of the Fair, is entitled to the thanks of every paterfamilias in the kingdom, for at a penny a-piece our children may break their toys to their heart's content. How many of these penny toys does my reader imagine are here sold day by day? Fifty pounds' worth! A little calculation shows that this sum represents 12,000 toys. Now, calculating each toy to produce only ten occasions of enjoyment, we have 120,000 bursts of merriment dispersed every day about Christmas time to the rising generation of London alone, to say nothing of the enjoyment produced by the higher-priced toys. How that joy is reflected by the fond mothers' eyes a hundredfold, I need not say; and as to going on with the calculation, that is quite out of the question.

The Saxon is the great consumer of the toys produced by the Saxon. England and America take more toys than any other nation. The value of the toys imported to England alone in the year 1846 was 1,500,000 florins; and the paper and packthread with which they were packed cost 25,000 florins, or £2,100!

Whilst Paterfamilias toils after me with his hand-basket, let me draw the attention of my young friends to the old monk near the doorway, who carries in one hand a Christmas tree, whilst he holds in the other a birch for naughty boys, but over his shoulder we see a bag of toys for the good ones. This is St. Nicholas, the patron of children. On Christmas Eve it is the fashion throughout France and Germany, to prepare the children of the household for his nocturnal visit. Refreshment is laid for himself, and hay and other provender for his ass. In the morning the eager children find the food and provender gone, but in their place all kinds of beautiful toys. Mr. Cremer is our St. Nicholas, and does the business of the old monk without any mystery, but in an equally satisfactory manner.

CLUB CHAMBERS FOR THE MARRIED.

Some remarks beneath this head have of late been going the round of the newspapers,—circulating from eye to eye not unlike some bright piece of money of a new coinage, the exact value of which none of us have yet ascertained. The paragraph sets forth the advisability of building under one roof a series of chambers for married people. The bachelor part of the community has long had its wants supplied in the Inns of Court, the Albany, the Adelphi, &c.; and it is now sought to render the associative principle applicable to the desires of families.

In London, it is well known that the chief expense of a family is the high price of rent. To young housekeepers, of moderate means (say about £200 per annum; and how vast is the number of respectable couples in the metropolis whose incomes do not exceed this), a good house in any decent neighbourhood in town is quite without their means, and they are driven either to let some of their apartments, by way of assisting them with their rent, or they are obliged to retire to some of those dismal rows of mean little stuccoed houses that we pass sometimes on the tops of omnibuses, and wonder what kind of people 'tis that live in them. Bitter alternative—

either to suffer the mortification of being considered lodging-house keepers, or to be driven, like outward barbarians, into those unknown wilds where friends venture not. This unpleasant feature in metropolitan life has so long existed, that we wonder some remedy has not been applied to it. We have only to cross the water to France, and we find how much better they manage things there. Even Auld Reekie can give us a valuable lesson. In their system of "flats," we see the germ of that new social arrangement which, for a certain class in society, is so much required.

Let us imagine, then, a handsome building, somewhat similar to our West-end club-houses, only larger in extent; the interior so arranged as to contain on each floor a certain number of suites of apartments fitted up for the accommodation of families. These suites, of course, might be of different sizes and rents, according to the eligibility of the floor on which they are situated. For £30 a year, well-ventilated apartments, of elegant proportions, perfectly suitable to small families, might be obtained, which would be as much insulated from each other as separate houses—the staircase only being common to the whole. In addition to these private apartments, a building of this kind would admit of a library, baths, and, above all, of some central assembly-room, in which those who like society might meet together for the purpose of conversation, or to make up little concerts among themselves. And this is a want which is so much felt, that we take the liberty of enlarging upon it. In English society, everybody feels that some such a neutral ground is required to bring young people more together. Under the present

system of perfectly distinct establishments, everybody is boxed off from everybody as effectually as if a vast sea ran between them. Or if they meet, it is at public or private balls, where young ladies are all smiles and affectation, and the gentlemen all blandness and deceit ;—they meet each other as completely masked, as far as their real dispositions go, as Fat Jack's tormentors about Herne's oak. Like the pretended fairies, they think they know each other, because the one has wit enough to cry "Budget" to the other's "Mum"—conventionalisms of sentiment being their present passwords ; and the consequence is, that she in green is mistaken for she in white, and the Master Slenders of society, when it is too late, find that instead of securing some "sweet Ann Page," that they are locked for life, if not to a "lubberly boy," as in the play, to some temper whose incompatibility with their own is a constant source of unhappiness and regret.

And those who have the wisdom not to set their happiness upon these hasty unions, or who perhaps want the opportunity to form them, even under present artificial circumstances, what do they too often come to ? We will paint a picture—one in which the lights and shadows appear strong, perhaps, but which every one will recognize as not outraging the truth of Nature. There are two houses built side by side. In the one dwells a widow and her daughter, fair, light-hearted, the sunshine of her mother's declining years, but, alas ! not rich. With all the affectionate instincts of a woman's heart, with all the capabilities to create happiness in a man's house, she remains unseen and unchosen. As time passes on,

she gradually deepens into old maidism. Where once she was heard singing about the home, like Una making a sunshine in the shady place, her voice is now heard shrill in complaint; parrots and cats accumulate, taking the place of a more human love, and her words are those of sharp reproof and spite against those very instincts of maternity which have been so long the master-spirit of her thoughts. Her affections, after in vain throwing themselves out to seek some sympathetic answer, turn in with bitterness upon her own heart, and she remains that most melancholy of all spectacles—a nature with aspirations unfulfilled. In the next house lives a bachelor—young, open-hearted, and generous. Busied in the struggle of life, he has perhaps no time for parties, he sees little of society, the female portion of it especially; a knowledge of his own brusqueness of manners at first prevents him from coming in contact with womankind, and this shyness in time becomes so strong as not to be overcome. It might seem strange, but we are convinced it is the fact, that some men are much more afraid of women than women are of men, and fearing "to break the ice" is a fruitful cause of old-bachelorism. Gradually age grows upon him, chalk stones gather in his knuckles, gout seizes hold of his toes; served by menials, he is a stranger to the soft and careful hand of affection; and he goes to the grave, his death not only unlamented, but absolutely rejoiced over by his heir-at-law. A wall of but six inches thick has all this time divided these two people: English society does not allow them even a chink through which, like Pyramus and Thisbe, they may whisper, although by

nature they might have been formed to make a happy couple, instead of two miserable units.

Eugéne Sue, in his "Wandering Jew," describes two people as approaching each other from the different continents of the Old and the New World. The woman wanders to the shores of north-western America, the man approaches from the north-easternmost part of Asia. Behrens' Straits alone seem to divide their destiny. Let us ask how many Behrens' Straits do we not interpose in our social relations between heart and heart? We are by far too exclusive and reserved in our habits. Not to speak of France, even stolid and primitive Germany looks with astonishment at the care with which Englishmen seem to hedge themselves in from intrusion, and to avoid that interchange of ideas which society alone can admit of. For the reasons we have given at such length, then, we wish to see the establishment of assembly-rooms in club chambers. They would admit of a society partaking of the change and freshness of the public *soiree* and the more open friendliness of the family circle. Let us not for a moment, however, be supposed to wish to supersede that privacy and retirement which many people, and those of the purest natures, can only enjoy in the retirement of their own families. In club chambers of the kind we are advocating, each individual would act according to the bent of his inclination. Those who like society will avail themselves of the place of general meeting; for those, on the contrary, who wish seclusion, their own chambers would be as private as so many distinct houses. It is by such a system as this we are convinced that the selfishness of the present club

life, from which females are excluded, can alone be corrected.

And now let us come to one other want, which by our plan would be supplied with great advantage. We admit that what we are about to propose is revolutionary in the highest degree of the existing order of things, but we must out with it—a good general kitchen. We are aware a proposition of this kind will rouse up a whole host of gentle enemies. We can see the dear young wife rebellious at the idea of being defrauded of the pleasure of preparing with her own hand "something nice" for her husband—at having a little world of household joys annihilated at a blow by our new-fangled system. Heaven forbid that we should do so—at least to a greater extent than she herself willingly submits to. Let us ask her, does she not entrust the getting up of her ball-suppers to the pastrycook round the corner? Is it not both better and cheaper to do so? We show her by her own acts that she admits the insidious advances of the very monster she would so loudly oppose. The respected matron, armed with her shining bunch of keys, and backed up with the whole army of pickles and preserves, will do us battle to the death. But let us ask her calmly, did a suspicion never cross her mind that in her own particular department there might not be a saving by buying of the Italian warehouses? Domestic duties are blessed things, but are they not dearly bought by the perpetually bad dinner? O awful shade of scrag of mutton, dread spectre of domestic life!—O bolder leg, with thy natural descent of cold, and hashed, and stewed!—come to our aid, and by the horrors your memories conjure up, strengthen us to bear the

assaults of the tyranny of domestic cookery, and save our fair wives from faces flushed from the basting! Who that has enjoyed the classic lamb-chop and mint-sauce which the genius of a Soyer provides him with at the Reform Club, would willingly return to the home manufacture? Yet even at the former magnificent establishment they can afford to serve you up this dainty, worthy of the gods, at quite as moderate a price as your own domestic, little, wretched smoked flap of meat costs you. And how is this done? let us ask. By association: by making two or three fires do the duty of fifty, and by making the culinary art an exact science, instead of a continual and often-failing experiment.

A public kitchen, then, with a first-rate cook at its head, should form the material genius of these club chambers, and each inmate should be able to order for his dinner just what he pleased, and when he pleased, as he now does at Verey's, or any other of the great restaurants, the prices being at a minimum instead of a maximum rate, which should be printed in a bill of fare. These club-houses might be built a little way out of town. Indeed, we do not see any reason why they should not be erected along the lines of railway, if companies would provide return tickets at a moderate rate. It might be even worth the while of companies themselves to build clubs of this kind. They erect hotels, and foster places of amusement along their lines, merely for the sake of the casual traffic they bring. The steady traffic to and fro, caused by a few such communities as this, would be no small item in their receipts. They should be built in good air, and in open ground, so that a public garden might be attached. What

a blessing! Good light and air! Think of this, ye people who from want of a proper combination of your means are forced to put up with confined apartments, whose utmost view is bounded by the chimney-pots of the next row of houses. And let it not be supposed that in proposing these club chambers, we have been consulting the "comfortable classes" only. To the poor they would be even more applicable. The necessities of the wretched, indeed, have forced them to adopt a system of this kind, but of a most vicious character. Every house in the poorer neighbourhoods of the metropolis is let off, floor by floor, to the families of the working classes; but three or four families, in most instances, can only afford the room and privacy which decency demands for each. To correct the evils attendant upon the crowding of the poor together, "The Society for the Improvement of the Condition of the Labouring Classes" have erected what might be considered as a series of model club chambers for poor families, between the Lower-road, Pentonville, and Gray's inn-road. These chambers contain the rude and half-developed germs of those we have been proposing for the middle classes. Buildings of this kind we should like to see erected in our manufacturing districts—and to these how peculiarly applicable would be a public kitchen, if it could be arranged. In the cotton-spinning districts—alas, that it should be so!—the women labour in the factory as well as the men, and the household duties are necessarily neglected. Dr. Cooke Taylor, in his tour in the manufacturing districts, has testified to the waste and want of knowledge of even the most simple rules of the culinary art, resultant upon this misapplication of female

labour. As long, then, as this labour is so perverted, what a blessing it would be to all parties—to the husband, to the children, to the poor women themselves—if the office of preparing the meals was to be performed in one general kitchen, attached to workmen's club chambers.

NEEDLE-MAKING.

It is often asked, Where do all the pins go? and it may be as pertinently inquired, Where do all the needles come from? The little machine that is put in action to make the greater part of the clothes of the world,* and to minister to the vanity of womenfolk, surely must have some birth-place worth noting, and a pilgrimage into Worcestershire the other day led us to its discovery. We are but too apt to associate with iron and steel workers, grimy and soot-clogged towns, blasted neighbouring country, and pale and stunted artisans. The manufacture of needles, however, entails no such disagreeables. Redditch, the grand armoury of the female weapon, is as pretty a little village as need be met with, and were it not for the presence of a tall red chimney, and the hiss of a grind-stone as you pass a water wheel, now and then, you may well imagine yourself in a Kentish village. Incited by curiosity, we asked permission to see the workshops of one of the largest manufacturers, which was most courteously granted, and an attendant ushered us into a little door, where a stalwart Vulcan presided over a fierce furnace, the walls of his apartment being hung round with coils of wire of all weights and sizes.

* The sewing-machine, since this paper was written, has rapidly encroached upon the province of the common sewing-machine.

"Here," said our cicerone, "the needle makes its first start into existence," and as he spoke, the workman reached down a huge coil of wire, measured about three inches, and snapped off with a pair of shears, at one jerk, sixty small wires, each one forming, of course, the segment of a large circle or coil. To straighten this raw material of the future needles is his next care, and this he does in a very ingenious manner. The bundles of wire as they are cut off, are put within two iron rings of about four inches diameter, and placed sufficiently apart to allow the whole length of the wires to rest between them; when the two rings are nearly full, the whole is placed in the furnace and heated to a dull red heat. And now the future needle receives its first instruction. The workman with an iron rod rapidly works the wires within the two rings, one upon another, and this process of mutual attrition rapidly straightens them out, just as little boys warped and bent from the mother's knee, get set up true again, by the bullying and hard knocks of a public school. The straightened wires are now handed over to the grinder to give them their points. We must take a little excursion out of the town to witness this process, inasmuch as it is performed by water-power. As we walked across the meadows, knee-deep in grass, and listened to the drip, drip, of the merry mill-wheel, and saw the stream meandering in silver at our feet, it was difficult to believe that we were seeking a factory, rather than the haunts of speckled trout. Still more difficult was it to believe that the little cottage, whose tallest rose peeped in the casement, was nothing more than a workshop, full of busy artisans; and more difficult than all to persuade ourselves that in this ap-

parent dwelling-place of health, a manufacture was being carried on which not long since was the most deadly in existence. We have all heard of the fork-grinders of Sheffield, whose average term of life is twenty-nine years. Well, the occupation of a needle-grinder, a few years since, was no less deadly. The grinding process is carried on with a dry stone, and of old, the artisan, as he leaned over his work, received into his lungs the jagged particles of steel, and the stone dust given off in the process, and as a consequence, they speedily became disorganised, and his early death ensued. The expedient of covering over their grind-stones and driving out the dust by means of a revolving fan, was adopted only a few years ago; so little are men inclined to move out of the old accustomed ways, even to save their lives; nay, their lives have to be saved even against their will; as, even now, if not closely watched, they would disconnect the fans, and thus deliberately renew the old danger: indeed some of them look upon the danger as so much capital with which they think that the masters have no right to interfere, exclaiming with the Sheffield fork grinders, that the trade is "so overfull already," that these fans will "prevent them getting a *living*." However, the higher intelligence of the masters, we trust, will prevent any relapse into former ways; and the deadly nature of needle-grinding is now only a thing of the past. The workmen we saw were certainly rosy, robust-looking men.

To return to our needle wires, however; it will be observed, that the workman grinds *both* ends to a sharp point, for a reason which the next process makes evident. They are now taken back to the factory, and enter the

stamping shop, where girls, with inconceivable rapidity, place each wire beneath a die, and stamp exactly in the middle thereof two eyes and two channels or gutters, as they are termed. It is clear that the wire is to produce Siamese-twin needles, for another batch of little girls are now seen actively punching out the eyes that were before only indicated by the stamping process. The eyes stamped, another batch of urchins catch them up and spit them, in other words, pass fine wires between the two rows of eyes, a manœuvre preparatory to separating the Siamese into separate needles; the bur is now filed off, and the rough form of the needle is complete. Having been licked into form, its temper has next to be hardened. Fire again is called on to do its part, and the needles, in traysful, are once more heated to a dull red, and then suddenly quenched in oil. This process makes them so brittle, that they fly at the slightest attempt to bend them. Like fiery little boys, they want taking down a little, which is done by placing them on a hot plate, and turning them about with two little tools, shaped like small hatchets. This is very nice work, indeed, and the change that is going on in the needle mass is marked by the change of colour, the deep blue gradually growing pale, and a straw colour, by faint shades, taking its place; at a particular moment the true temper is established, and then the heat is withdrawn. Having been thus tried by fire, earth (or stone), and water, some of the needles have perhaps got a little out of the straight line, and this is rectified by women, who take them up, one by one, and with wonderful delicacy of finger discover its faulty parts, and with one tap of a hammer on a small anvil, restore it

to its right shape. The education of the needle in all its essentials may now be said to be complete. It is fully formed, tempered, and trained, and is about to leave school to receive that further polish which is to make it serviceable in the world.

And just as in the world the awkward youth is subjected to severe antagonistic influences, which together mould him into the smooth and pleasant man, so the needle, in like manner, suffers a wholesome trituration. The process is droll enough. Fourteen pounds' weight of needles, amounting to many thousands, are placed side by side in a hempen cloth, to which are added a certain modicum of soft soap and sweet oil. So far this promises to be an "oily gammon" sort of process; but the addition of a due amount of emery powder soon dissipates any such anticipation. The mass is then wrapped up into a kind of roly-poly pudding; and when several puddings have been prepared, they are all slipped into a machine exactly like a mangle, the roly polies serving as the rollers thereof; and now the whole machine is set in motion by the water wheel. Backwards and forwards, to and fro, grind and sweat the roly-polies with their layers of needle jam, for eight hours of eight mortal days, at the end of which time they are released from their terrible mauling, evidently all the brighter, smoother, and pleasanter for the infliction. The oil of battle still clings to them however; and in order to get rid of it, the needles are thoroughly washed in soap suds in a copper pan, swinging upon a pivot, and then dried in sawdust.

They are now all at sixes and sevens, and have to be "evened," or placed in a parallel direction.

This is accomplished by shaking them in little trays. Heads and points still lie together, and in order to put them all in the same direction, the "ragger" is employed. The little girl who performs this office places a rag or dolly upon the forefinger of her right hand, and with the left presses the needles against it; the points stick into the soft cotton, and are thus easily withdrawn and laid in the contrary direction. Little children "rag" with inconceivable rapidity, and with equal speed the process of sorting, according to lengths, is performed, the human hand appreciating even the sixteenth of an inch in length, and separating the different sizes with a kind of instinct with which the reasoning power seems to have nothing to do. The needles are now separated into parcels, and such is their uniformity, that, like sovereigns, weighing takes the place of counting—one thousand needles in one scale exactly balancing one thousand in another. The needles being now placed in companies, are in future manœuvred together. That is, the heads of each company are simultaneously subjected to heat, in order to soften them, for the double purpose of giving a blue to the gutters, which is considered an ornament, and of counter-sinking the eyes in order that they may not cut the cotton. The final processes of grinding the heads and points, and polishing, is now performed by skilled workmen. The needles, in companies of seventy each, are subjected to a small grindstone, the workmen slowly revolving the whole number, so that they are ground in a mass, as it were, and the polishing being accomplished in a like manner, on a similar wheel smeared with crocus. The original batch of wire, of fourteen pounds weight, gives material for 48,100 needles;

and after having undergone every process, it is found that they number, on the average, 46,700—so that the loss by breakage has only been 1,400; even with this comparatively small waste, however, the accumulation of imperfect needles in course of time is immense. We saw heaps of many tons weight in the premises of one of the large manufacturers. It is roughly calculated that upwards of ten tons of wire are weekly employed in the manufacture of needles in Redditch and the adjoining villages. If we multiply this by 52 we get the enormous weight of 520 tons of needles turned out annually from this neighbourhood alone. This mass representing a number of needles which we feel unequal to calculate, goes to keep company, we suppose, with the pins, the mysterious manner of whose final disappearance has never yet been properly accounted for.

PRESERVED MEATS.

In the year 1799, at a place called Jacutsh, in Siberia, an enormous elephant was discovered embedded in a translucent block of ice, upwards of two hundred feet thick. The animal was as perfect in its entire fabric as on the day when it was submerged, and the wolves and foxes preyed upon its flesh for weeks. Upon an examination of its bones, the great Cuvier pronounced it to have belonged to an animal of the antediluvian world. We might fairly presume this to be the oldest specimen of preserved meat upon record, and Nature was therefore clearly the first discoverer of the process, although she took out no patent, nor made any secret of her method.

The exclusion of the external air in this natural process, combined with the effect of a low degree of temperature which prevented fermentation taking place in the tissues themselves, man has long imitated. In the markets of St. Petersburg vast quantities of frozen provisions are to be found the greater part of the year, and our own countrymen have taken advantage of the method to preserve Scotch and Irish salmon for the London market.

Our own illustrious Bacon was one of the first to recognize the vast importance of preserving animal food; and

the last experiment the great author of *Experimental Philosophy* performed, was that of "stuffing a fowl with snow to preserve it, which answered remarkably well," in the conduct of which he caught a cold, and presently died.

Indeed, modern luxury has brought this process, in a modified form, into our own homes, and every man who possesses a refrigerator has the power of arresting for a time the natural decay of animal and vegetable substances. This mode of preservation is too evanescent, and at the same time too expensive and cumbersome, especially where transit is concerned, ever to prove of any great importance in temperate or warm latitudes.

The more scientific and enduring method of excluding the air from the article to be preserved, has also long been practically known and roughly carried out. Good housewives of the old school would have stared, perhaps, if they could have been told, whilst boiling and corking down, hot and hot, their bottled gooseberries, that they were practising an art which, when performed a little more effectually, would prove one of the most valuable discoveries of modern times. But we do not exaggerate. The difference between the bottled gooseberries and the meats preserved *in vacuo* is only a question of degree, and the art of preserving a few vegetables from year to year, and of storing up whole herds of oxen and keeping them, if needs be, till doomsday, depends entirely upon the power of pumping out more or less atmospheric air from the vessels containing them.

The first successful attempt at preserving meat by this latter process was made by M. Appart, in France, in the year 1811 ; and for his discovery the emperor rewarded him with a gift of 12,000 francs. His process was essen-

tially the same as that of the old housewife—he boiled his provisions, thereby getting rid of the greater portion of the air entangled in their substance, but instead of the clumsy method of corking, he hermetically sealed his cases at the proper moment with a plug of solder. This method was brought soon after to England, and remained the only one in use until the year 1839, when M. Fastier sold to Mr. Goldner an improved process, by which a complete vacuum is formed in the canisters, thereby ensuring the preservation of their contents as long as the vacuum is maintained.

This process, which is patented, is carried on by the firm of Messrs. Ritchie and M'Call, in Houndsditch. There is so much that is curious in their Establishment, that if our reader will walk with us, we will take a rapid survey of the actual manufacture, instead of entering into dry details.

The room which we first enter is the larder—the people's larder. A lord mayor would faint at the bare contemplation of such an *embarrass des richesses*. What juicy rounds—what plump turkeys—what lively turtle—what delicious sweetbreads—what pendants of rare game—what tempting sucking pigs and succulent tomatas! Come next week and the whole *carte* will be changed; the week after, and you shall find a fresh remove. A plethora in the market of any article is sure to attract the attention of the manufacturer. His duty is to buy of superfluity and sell to scarcity; and by this judicious management he can afford to sell the preserved cooked meats cheaper than they can be procured in the raw state in open market. We shall see presently how infinitely this principle of buying

in the cheapest and selling in the dearest market, and of storing for the future, can be extended, and what a vastly important principle it is.

As we pass through the main court to the kitchen, we see a dozen fellows opening oysters, destined to be eaten perhaps by the next generation of opera-goers. Here is the room where the canisters are made—the armour of mail in which the provisions are dressed, to enable them to withstand the assaults of the enemy.

The kitchen itself is a spacious room, in which stand a series of vats. There is no fire visible, but look how simply those half-a-hundred canisters of green peas are being dressed. There they stand, up to their necks in a brown-looking mixture, very like chocolate; this is a solution of chloride of calcium, which does not boil under a temperature of 320 degrees. Steam-pipes ramify through this mixture, and warm it up to any degree that is required within its boiling-point. By this arrangement a great heat is obtained, without *steam*. The canisters containing the provisions were, previously to being placed in this bath, closed permanently down, with the exception of a smal hole through the cover, not much bigger than the prick of a cobbler's awl. And now observe, the cook stand watching, not with a basting spoon, but with a solderin tool and a sponge. Steam issues in a small white jet fro one of the covers; this drives all the enclosed air befor it; and at the moment when experience tells him that th viands are done to a turn, he squeezes from the sponge drop of water in the hole; the steam is instantly condense and as instantly he drops, with the other hand, a plug molten solder, which hermetically seals it. Canister aft

canister at the proper moment is closed in the same manner, until the whole are finished.

Rounds of beef, of 50 lbs. weight, can be preserved by this method, which the old process did not allow of. Poultry and game, which also require large canisters, have to be watched with minute attention; and here the skill of the French cook is brought into play; the process being, however, in all precisely the same. The canisters we have just seen closed down, for anything the manufacturer yet knows to the contrary, may be entire failures. All the air may not have been extracted, or it may have crept in after the sealing process. In either case the meat is spoiled, and it is as well that this fact be ascertained ere it be discovered to the dismay of the arctic explorer, or of the ship's crew straitened for provisions.

The testing-room gives the "warrant" to the provisions. Here all the canisters are brought, after they have been sealed, and submitted for several days, and sometimes for weeks, to a great heat. We see them piled in pyramids, the covers all facing us like a wall. As the light of the fire falls sideways upon the glittering metal, it discloses in an instant an unsound canister, as each cover is a perfect anaeroid barometer, marking with the greatest nicety the pressure upon it of the external air. They are all, we see, concave, and therefore good. In the next heap, however, there is a canister bulged, or convex; this is undoubtedly bad, and the attendant takes it out, and turns its contents into the manure heap.

And here let us say a few words upon the great scandal of the Goldner canisters. All the world has been shocked at the alleged fraudulent victualling of the Hungarian Jew;

and in the universal and hasty condemnation passed upon the man, his process has well nigh been overwhelmed with him. A more absurd or unfortunate judgment could not have been come to, and we heartily join the lament of Dr. Lindley, in his lecture at the Society of Arts, "That a highly ingenious chemical principle—one that was unimpeachable, and capable, when properly applied, of yielding the most satisfactory results—should stand a chance of being impugned, owing to its careless employment." In every word of this we fully agree, and it does seem suicidal folly on the part of the public to conceive a prejudice against a discovery which is of great public importance in a hygienic point of view, and which has been attested and proved by such scientific men as Daniell, Brande, and Graham.

But, says our reader, how can you get over the disgusting disclosures in our dockyards? How explain away the affecting picture of hardened commissioners fainting from the awful smell given forth by the putrid contents of the inspected canisters, and only kept up to their work by smelling at that benificent nosegay, Burnett's disinfecting fluid? How excuse or explain away the offal found in the canisters? We can only answer these questions by begging our reader to examine with us the true particulars of the case, unbiassed by mere penny-a-line statements, seasoned high with horror to astonish the public. The best refutation of the charge of failure brought against the preserved meats issued to the navy, and of the charge of fraud brought against the contractor, is to be found in the report called for by Mr. Miles, and which has been some time issued. By this document it appears that out o

2,741,988 lbs. issued since the first introduction of these meats, 2,613,069 lbs., or 95 per cent., proved good and very palatable to the sailors, their only complaint being that they had not any potatoes. Of the quantity condemned, only eighteen canisters were found to contain so-called offal, the vast majority being rejected on account of the putridity of their contents. Now, the question which immediately suggests itself is, How did this putrescence arise? We answer, from the carelessness, or, to say the least of it, from the want of knowledge, on the part of the Navy Board, of the delicate nature of the packages which they submitted to so much rough usage. If the canisters were received into store by the Victualling Office in an unsound condition, the blame rests with that department; for we have shown that unsound canisters declare themselves instantly by their convex appearance. Granted then, that the meat when delivered was sweet, what caused its subsequent putrescence? We will place one of these contract canisters on the table, and let it answer the question itself. We have before us, as we write, one of the same lot as those forming the contract of 1846. It has been kept in a dry place, and has not been handled since it was first received in this country from Moldavia. Yet it looks as though it had been in the wars: its sides are indented, we might say battered; its top and bottom plates are sunken in; and it looks as though it had been besieged on all sides. And so it has. An enemy, omnipresent, sleepless, subtle, and determined, has never ceased to assault it since the first moment of its manufacture. Its battered armour shows the force that has been levelled at it, and the gallant man-

ner in which it has resisted. This enemy is the universal *air*. If this canister has had so hard a fight to maintain itself, kept close in the even atmosphere of the storehouse, what must have befallen those wilfully exposed to damp, knocked about from depôt to depôt—now in the arctic circle, now in the tropics—now bundled together in the holds of ships, now landed with as much care as pig-iron —what but that they must in the long-run have succumbed to the ever-vigilant enemy ?

An inspection of one of the putrid canisters shows us the exact manner in which the enemy obtained entrance. At one portion of the case where the tin has been cut, in fitting in the top, the iron is exposed ; on this unguarded point, moisture, acting as a nimble ally of the air, has seized, and, singularly enough, has spread like an erysipelatous disease under the tin, until it has eaten its way through at some weak point. The admission of the air of course immediately caused the putrefaction of its contents. Here clearly moisture was the cause of all the mischief—the saline moisture of the sea to which it had been carelessly exposed.

The proof of this was seen in the return of the condition of the meats issued to Capt. Austin's expedition in search of Sir John Franklin. To his ships, the *Assistance* and *Resolute*, 86,614 lbs. of a superior quality of corned beef, manufactured by Messrs. Gamble, of London, were issued. Of this quantity, 35,150 lbs. were consumed on the voyage, and only 18 lbs. were discovered to be bad. On the return of the ships, however, a further quantity of 726 lbs. was found to be putrid, and since the remainder has been returned into the store, 1,226 lbs. have been condemned,

and the rest is understood to be in a very unsatisfactory condition.

Now, from this it is clear that the meat was perfectly sound when shipped, and that it was not until the full effect of the sea air was felt by the canisters, that the meats began to perish.

The weak point of the metal envelope having been discovered, a great many remedies suggest themselves, the best of which will be adopted by the manufacturer; and there is reason to believe that even the most wilful negligence will not in future render these canisters liable to corrosion; of course, we speak within certain limits, as we could no more expect meat to keep that it was determined to spoil, than we could steel goods to retain their polish after having been dipped in the sea. The ordinary carelessness of sailors, however, must be provided against. The importance of accomplishing this, to a nation of islanders, must be evident. England, with regard to her dependencies and foreign countries, is like a city situated in the midst of a desert; vast foodless tracts have to be traversed by her ships, the camels of the ocean; and if these provisions are not entirely to be depended on, the position of the mariners might be likened to the people of a caravan whose water-bags are liable at any moment, without previous warning, to burst, and to discharge the means of preserving life into the thirsting sands.

Properly secured, however, this method of preserving food must prove of infinite advantage in annihilating the last vestige of that terrible disease, the sea scurvy. The discovery of the anti-scorbutic effects of lime-juice has in a great measure banished this disease from our

navy, and the terrible ravages it once committed are now almost matters of history. It is worth while to recall a few instances, however, to show its effects upon large bodies of men, because it still lingers in a subdued form in the merchant service.

The expedition of Admiral Anson, undertaken in the middle of the last century, in order to intercept the treasure galleons of the Spaniards, consisted of three ships, the *Gloucester*, the *Centurion*, and the *Tryal* (a provision ship). The number of men on board when he left England was 961, and out of these he had lost, by the time he reached the island of Juan Fernandez, 626, all of scurvy. At this island, where fresh provisions were procurable, the malady stopped, as if by magic, and for the reason which we shall set forth by-and-by. Again, the Channel fleet, in 1799, under Sir C. Hardy, had 3,500 sick of this fatal disease, and within four months of a subsequent year, 6,064 were sent to Haslar similarly afflicted.

All this suffering, all this death, was entirely owing to the improper nature of the food eaten by the sailors; salt junk, and an absence of fresh vegetables, starved the blood of its most valuable constituents; a general degradation of the tissues ensued, and the very life-blood oozed out in consequence at every pore. Salt junk is still for six days a week the main food of the navy—on the seventh the preserved provisions are served out. It seems difficult to conceive why the Admiralty should persist in supplying this unwholesome food whilst the preserved meats are much less expensive. The last contract for salt junk was made at 3*l.* 9*s.* 6*d.* per barrel of 208 lbs., or at about $6\frac{3}{4}d$

per lb. This stuff, all chemical analysis has proved to be utterly unable to maintain the muscular power of man. The method in which it is prepared takes from it all its valuable qualities. Liebig, in his "Researches on Chemistry," says, "It is obvious that if flesh employed as food is again to become flesh in the body, if it is to retain the power of reproducing itself in its original condition, none of the constituents of raw flesh ought to be withdrawn from it during its preparation for food. If its composition be altered in any way; if one of its constituents which belong essentially to its constitution be removed, a corresponding variation must take place in the power of that piece of flesh to reassume in the living body the original form and quality on which its properties in the living organization depend. It follows from this that boiled flesh, when eaten without the soup formed in boiling it, is so much the less adapted for nutrition the greater the quantity of the water in which it has been boiled and the longer the duration of the boiling." Can anything be more clear than that the navy is mainly victualled with a food which has the tendency of lowering the blood-making powers of the body, and consequently of laying the constitution open to the attacks of disease, as well as of keeping the muscular force below its natural standard?

The persistence in this kind of food is the more extraordinary when we find that the yearly saving to the Admiralty by the adoption of the preserved meats, for only one day in the week, has been 10,000*l.*; or the difference between junk at $6\frac{3}{4}d.$ per lb., and good cooked corned beef, freed of bone, at $5d.$ per lb. And even to keep up the semblance of health in the sailors, to keep at arm's length the

dread scurvy, the utmost watchfulness is required to make the men take the necessary dose of lime-juice which supplies to the blood the amount of potass not to be found in the food, and which is absolutely essential to health. This corrective sailors look upon as a medicine ; and indeed, when persisted in from day to day, it really becomes very disagreeable—a fact long discovered in the captain's cabin, where cranberries and preserved apples are used instead. Is it surprising, therefore, that Jack, whenever he can, shirks the infliction, and suffers now and then the attacks of his enemy in consequence ?

In the merchant service, where no such sanitary surveillance is exercised over the men, scurvy is still rife, and the *Dreadnought* hospital-ship is at all times full of it. It is clear, then, that the prevalent sea-dietary is a degrading dietary ; it is deficient in the albumen, the soluble phosphates, in the kreatine, and in the kreatinine, necessary to sustain vigorous life, and where lime-juice is deficient, a want of that potass which forms so active a principle of the blood. Now, all these desiderata are supplied in the preserved meats, with the sailor's instinctive addition of "a few potatoes." The canister beef parts with none of its blood-making properties in cooking, and the potatoes, which could be prepared with them, would supply the due amount of acid or potass necessary. We make this little recipe a present to the Admiralty, with the full certainty that it would be the saving of thousands a-year to the country, and that it would afford a far more palatable food than Jack has hitherto obtained.

But a vastly more important question than even that of victualling the navy with cheap and wholesome food is

that of victualling the masses at home. What gives rise to the vast majority of disease in our hospitals? What is at this moment deteriorating the lower stratum of the population? — the want of a sufficient supply of nitrogenized food. Those who live by the wear and tear of their muscles are condemned by the present high price of meat to subsist upon food that cannot restore the power that is expended. In the income and expenditure of the human body, in short, they are living upon their capital, and of course sooner or later they must use themselves up. Bread is cheap, because free-trade pours the full sheaves of bountiful foreign lands into our eagerly-spread lap. Why should we not have meat too?

The much-abused Goldner, now a ruined man, has pioneered the way by which we may obtain supplies that seem almost boundless. When he first entered into contracts with the navy, finding beef in this country so dear, he looked about him for a cheaper market. A Hungarian by birth, he naturally bethought him of the vast plains of Moldavia, where immense herds of the finest cattle in the world are pastured. Here he found that meat cost him absolutely nothing, the hide, hoofs, and horns, sent to Constantinople for exportation, paying the entire price of the beast. Consequently, he set up his manufactory at Galatz, on the Danube, in the immediate vicinity of his supplies, and from this establishment he issued to the navy, as we have said before, two and a half millions pounds of meat, 95 per cent. of which proved good and palatable to the sailors. This same meat an eminent London house would be glad to supply in any quantities at 3*d.* per lb. And this, be it remembered, is solid dressed meat, or equal

to a pound and a half of raw beef; so that, in fact, excellent animal food, such as we ourselves have been partaking for some time, *is obtainable according to the rate of* 2*d. per lb.* We say this is as good news to the poor labourer as the quartern loaf at 4*d.*; and if capital would only turn its attention to the supplies of animal food which by means of this preserving process might be poured into this country, every man might have a slice of good beef sandwiched between his free-trade bread.

Why should not this principle, found to answer commercially in Moldavia, be extended to every country where nature has supplied animal life in abundance? Why should countless turtle lie squandered about on the sands in Honduras, whilst there are other people besides aldermen and millionares in this country who love good living? Why should we not hear the cry, "Turtle soup, hot, a penny a basin?" The notion at first may seem absurd; but who would have believed, ten years ago, in "Prime pineapples, a halfpenny a slice?"

At Varna, upon the Black Sea, fowls are only 1¼*d.* each. (That is, they were before the war.) Hear this with secret satisfaction, ye plump but costly Dorkings, that fatten only for well-kept tables; your occupation might well-nigh be gone, and the day for England not far distant when the wish of Francis the First for Frenchmen might be fulfilled, that "every poor man might have a fowl in his pot." The sea, too, might yield its treasures for the great bulk of the people. Why should not the surplus salmon of Sweden and Nova Scotia be preserved?—or Norway, prodigal in lobsters, pour its contributions into the Haymarket, and make supplies at Scott's a little mor

moderate? What is there, in short, to prevent all the world from pouring its abundance into the lap of England, and her children from becoming the best-fed population on the earth?

And you, poor bachelors, for whom cookery books were never invented—you, who have striven so long to maintain a miserable existence, oscillating between the wretched alternative of a chop or a steak—you, to whom dressing a joint is a deliberate act entailing upon yourselves the regular descent into cold and hash—you, to whom a leg of mutton is but an evanescent joy of the hour, followed by the too lasting leaden, cold, uncomfortable reality—how great is your emancipation!

According to Mr. William Farr's statistical table just published, only one woman in four has the luck of a husband; what the average will be when every man can get a good dinner and variety, we fear, for their sakes, to contemplate. If men marry—as a young friend of ours stoutly maintains—only to get the buttons sewn on their shirts, to have the cold mutton quickly eaten up, and to be rejoiced now and then with a pickle—if, we say, this is the truth, why, good luck to the poor women. Household joys will stand little chance, we fear, against the new "household provisions," and the canister meats will prove powerful allies of Malthus.

And we have not yet exhausted the wonders of this discovery. We all know how in story books the magician has but to stamp his foot, and immediately a gorgeous feast rises out of the ground before his guest. Really, it seems the province of the people of this wonderful century to make all those old fairy stories—at which the eye of

childhood used to stare with astonishment—plain every-day matters of fact. Feasts hidden for years leap up at a moment's notice, and the plenty of the past is ever ready to subserve to the wants of the present.

We were the other day at a house not a hundred miles from Burlington-gardens, where wits are wont to congregate, the host himself the keenest-thoughted of them all. The feast of reason and the flow of soul, vulgar as the truth may appear, has a wonderful tendency to promote the flow of the gastric secretions ; at least, on this occasion there was a general call for anything but ethereal viands, and so the banquet spread before us as we spoke. Fish, flesh, and game ; and fruit delicious sent a fragrant odour through the room. Now fell we to.

"This pheasant is delicious."

"I am delighted to hear it," said the host ; "he gave up the ghost just ten years ago."

"Nonsense : but this wild duck ?"

"Tumbled over with a broken wing, I see by the fracture, in the same year."

"I suppose," said a doubting guest, "you will say next this milk is not foaming fresh from the cow ?"

"Milked," replied our imperturbable host, "when my little godson was born, that now struts about in breeches."

"Come, now, what is the most juvenile dish on the table ?" was demanded, with a general voice.

"These apples ; taste them."

"I could swear they swung on the branch this morning," said a sceptic, tasting a slice critically.

"Well, I will give you my word that a flourishing

neighbourhood up Paddington way now stands over the field where they were grown."

"Let us have a look at the water-mark," said a doubting lawyer, inspecting a canister as he would a forged bill. There was the date upon it of—what for provisions seemed—a far remote age.

"I shall expect next a fresh olive grown by Horace, to draw on his Sabine wine," chimed in a poet.

"What a pity we can't bottle up all the surplus brats," said the father of a family.

"Yes, the day may come when one might order up his grandfather, like a fine old bottle of the vintage of 1790."

"God forbid!" shuddered the inheritor of an entailed estate.

And so the badinage went on. But we have given enough sterling proof of the value of the intention to excuse a joke or two, and conclude, ere we leave our reader like one of the canisters—an exhausted receiver.

LONDON STOUT.

One of the earliest things to strike the attention of our country-cousins is the universal appearance of the names of certain firms, painted in the largest letters upon the most florid backgrounds of the numerous public-house signs of the metropolis. "What *does* 'Reid's Entire' mean?" asked a fair friend of ours the other day, looking up with her brown eyes, as though she had asked something very foolish, and pointing to the puzzling inscription upon a neighbouring signboard. And, no doubt, a similar question arises in the minds of more worldly-wise people, and passes out again unanswered. Henceforth then, good people all, know that the word "entire" arose in the following manner:—Prior to the year 1730, publicans were in the habit of selling ale, beer, and twopenny, and the "thirsty souls" of that day were accustomed to combine either of these in a drink called half-and-half. From this they proceeded to spin "three threads" as they called it, or to have their glasses filled from each of the three taps. In the year 1730, however, a certain publican named Horwood, to save himself the trouble of making this triune mixture, brewed a liquor intended to imitate

the taste of the "three threads," and to this he applied the term "entire." This concoction was approved, and being puffed as good porters' drink, it speedily came to be called porter itself. The universal diffusion of this mild stimulant is indicated by other means, however, than the signs; you cannot go along a quiet street but you either see the potman, with his little rack of quart mugs brimmed with the frothy liquid, or rattling the shiny pots against the rails by their suspending strap; you cannot pass in between the ever-opening doors of the public without seeing the dilated eyes of some "thirsty soul" as he drinks, peering over the rim of the nigh-exhausted pewter. Great is the demand thereof; whence comes the supply? From what porterian springs issue these dark and foam-crowned floods?

To find one of these, our attention was the other day directed into that neighbourhood of the metropolis where, through the large glazed attic-windows, we see the glowing silks and satins just issuing new-born from the loom. In the very midst of Spitalfields stands the enormous brewery of the Messrs. Truman, Hanbury, Buxton, and Co., which covers nearly six acres of ground, and which, looked at from above, has more the appearance of a town itself than of a private manufacturing establishment.

Let us then enter this great establishment, and witness the Brobdignagian brew which is perpetually going on there. The first thing that strikes the spectator's attention is, the total revolution which takes place in his own mind as regards his own proper dimensions, and of those of his kind who are moving about. A stalwart six-foot drayman, with a pair of shoulders worthy of Atlas, shrinks down in the

great brewhouse to the size of a pigmy. All familiar ideas of the relative proportion of things give way at once to a confused sort of thought that the kingdom of Brobdignag is come again, and that the little mites we see about are so many Gullivers. What other feeling can a man entertain who travels round the beer barrels of the establishment, by means of iron staircases, and, after an exhausting climb, peeps fearfully into the interior with the same sort of giddy sensation with which he looks down the shaft of the Thames Tunnel? The largest of these vessels are termed the mash-tuns; of these there are two, each containing 800 barrels of the ordinary dimensions. In these the malt and hops are boiled, after being mashed up with hot water, the process of mashing being performed by a revolving spindle, with huge arms, exactly like a chocolate mill. Steam is, of course, the great arm which works incessantly the Titanic implements. Steam, in fact, does everything; it lifts the malt up from the waggons into the lofts by means of a Jacob's ladder, or collection of little boxes working upon an endless gutta percha chain; it removes it from one granary to another by means of an Archimedian screw, working in a long cylinder; it lifts the barrels up an inclined plane; it cleans the dirty ones in a very singular manner, as we shall show by-and-by; it attends to the fires, and thus keeps up its own constitution; it stirs with a great spoon the malt and the hops; and pumps, day and night, floods of liquor from one brewhouse to another.

After the process of mashing, the wort is pumped u into a large copper, of which there are five, containin from 300 to 400 barrels each, where the wort is boile

with the hops, of which often two tons are used in a day. We may observe that, many years ago, one of the brewers' men had the misfortune to fall into one of these tuns, and was, of course, instantly destroyed. On this occasion, the whole contents of the vessel, to the amount of 800 barrels, was immediately allowed to flow into the gutters, at a loss to the firm of 1,000*l.* at least, a fact which does the greatest credit to the good feeling of this princely house. The boiling beer is now pumped up to the coolers. To get a sight of these, the visitor has to perform a climbing process similar to that required to get at the upper gallery of St. Paul's, and, when he has reached the highest point ladders are capable of taking him, he finds his nose on a level with a black sea, whose area presents a surface of 32,000 square feet. This large surface is partly open to the air, and to the soot, of which, of course, it would receive a large deposit under the ordinary circumstances of factory chimneys pouring out volumes of smoke; but we shall have to explain, by-and-by, how it is that in this brewery at least smoke is not. From the coolers the beer runs down into four enormous vats, each of which contains no less that 50,000 gallons. These four vats are ranged side by side, and towards the upper half an iron gallery runs so as to give the brewers' men access to the apertures by which their interiors are viewed. These apertures are square, and about the size of the port of a man-of-war, having sliding-shutters so adjusted that the vat can be filled without leaking. As you walk along this gallery, and look into these ports, it seems as though you were looking into the hold of a hundred and twenty gun-ship, except that about half-way down the black porter is seen,

with huge floating islands of barm, which revolve round and round, like the foam in some deep, dark pool at the foot of a cataract. The fermenting process is allowed to go on here for two nights and a day, and consequently an immense quantity of carbonic acid gas is developed, which, however, on account of its density, always keeps as close as possible to the surface of the liquid ; the men can detect the height to which it has risen to within an inch or two with the bare hand, which immediately becomes sensible of the thick warm feel of this poisonous vapour. When the fermentation has proceeded a sufficient length of time, the beer is drained into what may be termed yeast-traps, or into a long double row of smaller vats, called Rounds, the partially-opened lids of which communicate with a wooden trough running down the middle of the row.

As the beer rises to the top of these receptacles it lifts up the yeast, which no sooner reaches the level of the side-shoots running into the central trough than off it goes, and in this manner immense quantities of yeast are speedily cleared away by the force of its own gravity. It has always been a matter of wonder to us how the brewers can keep the yeast under, considering the extraordinary manner in which the parasite multiplies itself under favourable circumstances. However, the world is not deluged with yeast, so, we suppose, our fears are groundless ; the distillers, we are given to understand, take all the surplus produced by the brewing process. The beer is now thoroughly concocted, and it only requires storing in order that it may ripen before it is distributed. The time that it is necessary to store it depends on its destination ;

that which has to go into the country or abroad requiring a longer period of rest than that which is to be consumed immediately.

But the storing vats!—these are sights indeed. The spectator sees vista after vista opening upon him, long-drawn aisles of porter vats, a pillared shade of stout. Of these vats, supported upon iron columns, there are no less than 134, and when full they hold the enormous quantity of 3,500,000 gallons of porter. The Messrs. Hanbury and Co. brewed one year no less than 400,000 barrels of ale and porter, or twenty-five million tumblers, more than enough to float a seventy-four gun-ship. It is generally supposed that the great brewers get their supplies of water from the Thames, and that the very impurities of the king of rivers gives that "body" to the liquor, to which its filling properties are attributed. This is a vulgar error; not even the brewers who live upon the stream use its polluted waters, but obtain their supplies from Artesian wells sunk to a very considerable depth; the well at Messrs. Hanbury's is 520 feet deep, and those of other brewers, according to their size, are of a proportionate depth. It might be imagined that the immense supplies drawn from these wells—in the brewery under notice it is more than half a million barrels a year—must have a very great effect upon the shallower wells of houses and smaller factories. The water beneath London has, within the last twenty-five years, sunk as many feet; and it is stated among the trade that the Artesian streams of the great breweries, situated upon opposite sides of the Thames, and more than half a mile apart, at one time so affected each other, that they were obliged to obtain their supplies on

alternate days. If the fall of water underneath London has been so great, however, it is gratifying to know that it has been serviceably used on the surface, in nourishing the bodies and cleansing the skins of such a vast population as we find living in the metropolis.

The Messrs. Hanbury are both porter and ale brewers; some houses, such as Meux and Co., and Reid and Co., brew porter alone. The popular idea seems to be that there is some considerable difference in the method of manufacturing the two liquids, but this is not the case; the dark colour of the porter is entirely owing to the malt being charred in the kiln, instead of simply dried.

By Act of Parliament beer and porter can only be made of malt and hops, the great council of the nation having omitted all mention of the water; but the brewers, we suppose, may be pardoned for the illegal addition of so necessary an ingredient.

Malt and hops, as might be imagined, constitute an enormous item in the manufacture of the beer of the metropolis. The house of Hanbury and Co. alone pay upwards of half a million annually for the malt and hops they consume. To procure this ingredient in its best condition, great care is taken by all the large brewers. Agents are located in the three eastern counties, which are the principal home of John Barleycorn: these attend the markets, carefully select the best samples, and malt it for their employers, charging a commission for their trouble. The malt is sent up to London as it is required, and stored in the bins of the establishment. These bins are in due proportion to the enormous size of the establishment, each one measuring twenty feet across, and about thirty-five

feet deep. The hops employed by the brewers are obtained directly from the hop-merchants. As they cannot be adulterated, not so much care is necessary in the agency by which they are obtained.

Having taken a hasty glance of the manner in which ale and porter are produced, let us examine the means by which they are distributed. As soon as the liquid is sufficiently ripe, it is racked off from the enormous store-vats, which we have before described, into casks such as ordinary mortals are accustomed to behold. Of these, of course, there is always an enormous number on the establishment of the Messrs. Hanbury; there were no less than 80,000 belonging to the establishment when we visited it; each of these casks, when new, is worth a guinea, so that here alone we have 84,000*l.* worth of property employed. Few of these casks are manufactured on the premises, but they are all repaired and cleaned here, after they have been returned from the publicans. It is a curious sight to see the enormous number of barrels piled in the yard, and the active detachment of coopers, of whom there are sixty-six, hammering and fitting, and walking round and round at their work. Some of the barrels smell so horribly that they are obliged to be broken up; the most charitable idea is, that they must have been used by the publicans as wash-tubs or dog-kennels. The manner in which the insides of the casks are made sweet is one of the most observable things in the brewery. You see in the distance a multitude of casks, in a double row, waltzing, and tumbling, and performing a number of gymnastic feats, as though they were practising for the profession of the acrobat. All this goes on under a clinking of chains such as

a score of Macheaths would make dancing in fetters. On a stricter examination, you perceive that steam machinery is here brought into play to supersede human labour. The casks are placed in iron frames, which rotate in every conceivable manner; and whilst these gyrations are going on, you hear a rumbling in the interior of each barrel, which testifies to an internal agony of no ordinary kind. On inquiring what caused these dismal moans, the gentleman who kindly showed us round the establishment mildly drew forth from a bunghole about a couple of yards of chain, studded with sharp cones, and explained how religiously these cones went into the corners, and worked about every inch of the interior of the devoted cask. We think it a pity that the ingenious engineer who devised this apparatus had not lived in the dark ages, to have exerted his skill in constructing refined torturing instruments for the benefit of the poor enduring mortals of that period. He is throwing himself away upon barrels, that is clear.

To convey these barrels, when filled, to the publicans, we have the splendid stud of horses fitted to draw such noble liquor, and the army of draymen worthy to drive them :—

"He who drives fat oxen
Should himself be fat."

The stables of these horses are the most interesting show-places of the establishment, especially to the ladies. There are two of these, containing stallage for 130 horses, the number employed by the firm. Over the rack of each stall, the name of the horse is painted, and here you see

Heroes, Dukes, Wellingtons, Milkmaids, Alexanders, Smilers, &c., eating away in profound ignorance of the honourable and pleasant names they bear. These are, however, only show names; each horse, it is true, always goes, when at home, under his label, but the drayman has generally a pet name of his own, to which they affectionately answer. These fine animals come principally from Lincolnshire, and are, we imagine, of Flemish origin; they cost, on an average, 70*l.* each, and last seven years. People imagine that they get so fat on the grains of the brewery, but this is an error; they are fed on the best oats, and work accordingly. The intelligence of these animals must have often been remarked by the reader as he has passed along and observed them pulling the empty barrels out of the publicans' cellars,—which is, by the bye, tougher work than it looks, and there have been many instances of horses having been dragged into the vaults by the weight of some of the heavier casks. These beasts are by nature good-tempered, but many of them become completely soured by little boys, who steal horse hairs from their long tails, to make fishing lines, while the draymen are down in the publicans' cellars.

The draymen of this establishment are eighty in number. Perhaps these brewers' labourers are the most powerful body of men in existence. They are taller than the guardsmen, and heavier by a couple of stone. The dress of the drayman is peculiar: he wears a large loose smock frock extending to the knees, and over this a thick leathern kind of tippet, which covers the shoulders, and comes down in front like an apron. The simple line of the costume makes the man appear still taller than he is.

The size of these men is not owing to the *unlimited beer* which it is popularly supposed they have at command. They are all picked on account of their inches, and are limited to a certain amount of free stout every day. The extensive stock of horses kept here necessitates a number of stable attendants; of these and farriers there are twenty-one, so that the Messrs. Hanbury and Co. could, if they pleased, furnish a troop of the very *heaviest cavalry* at a moment's notice.

Let us, by way of contrast, pass from the dray-horses and the draymen—which "are of the earth, earthy"—into the painter's shop of the establishment, or rather into the artist's studio, for here it is not only a mere matter of letter-painting we have to contemplate, but the fine arts! The mere painter's shop, it is true, is full of nothing but "Truman, Hanbury, and Buxton's Entire," "Truman, Hanbury, and Buxton's Ale," &c., painted on the brightest of backgrounds; but there is a little sanctum, wherein the fancy-work is done. When we entered this, we beheld the artist pleasantly contemplating the picture of a camel-leopard cropping the branches of an overhanging tree, and very well it was done, too; and so we told our friend, who, with palette in hand, informed us it was for the sign of the tavern in the immediate vicinity of the Surrey Zoological Gardens. The artist, no doubt, dwelt over the work with the more care, in order that no disparaging remarks might be made by persons who might have had an opportunity of seeing the spotted and tawny original so close at hand. The line taken by Messrs. Hanbury's painter does not appear to be very clearly defined. We were afraid to ask him how many Red Lions he had painted in his time, or

how finished he had become in portraits of the Marquis of Granby. We can answer, however, for his proficiency in the subject of White Harts, and he was putting the last touch of gilt upon a gigantic carved bunch of grapes, with all the artistic sensitiveness of a Lance.

The large brewers of the metropolis always furnish the signs to the publicans who sell their beer and porter. We were informed at Messrs. Hanbury's that they had sent out that year 400 new ones, and repaired 350, at a cost of 1,300*l.*; these sign-boards remain the property of the brewers supplying them. Many people have an idea that the great brewers take and entirely furnish taverns for those who will become agents for the sale of their beer; this is another popular error. The brewers, however, are in the habit of advancing a sum of money on the publican's lease, but no bargain is entered into, we have been given to understand, by which the publican is compelled, in return, to sell their goods; if, however, the brewer holds the lease, that follows as a matter of course. It is obviously to the advantage of the brewers to obtain trustworthy venders for their ale and porter, as their names stand as guarantees of the goodness of the article sold within, and a dishonest man has it in his power to damage a brewer in the public estimation by adulterating his beer. This may be done in many ways; firstly, by simply sugaring and watering it, the commonest method of all; secondly, by dosing it with salt and tobacco, in order that the toper's "appetite may grow with that it feeds on;" and thirdly, by embittering it with quassia, in order to give it a hoppy flavour. The idea that ale is sometimes adulterated with strychnine, a little time ago very prevalent, was quite a

mistaken one, as that drug is by far too expensive to be used for such a purpose.

To return, however, to our subject. From what we have said, it will be seen that the Messrs. Hanbury are, in fact, to a very great extent, their own tradesmen. Thus there is a cooperage, a farrier's shop, a millwright's shop, a carpenter's shop, a wheelwright's shop, and a painter's shop, and a little artist's studio. The different buildings in which all these trades are carried on surround the central yard, or beer-barrel depôt, and they make up, in short, a very respectable village. Here is a list of this little industrial army:—

Brewers' men and stokers	35
Mill-loft men	7
Draymen	80
Storehousemen	39
Coopers	66
Stablemen and farriers	21
Millwrights and engine-drivers	17
Carpenters and brickmakers	32
Wheelwrights	4
Painters	18
Bricklayers	40
	359

This number is exclusive of the higher class of skilled labour employed in the direction of the establishment and in the counter. The heads of the different departments are filled by the partners in the house, of which, we have been given to understand, there are eight, and that six of these take an active part in the business. A general council decides all matters of importance, but each partner is responsible for some particular department. Thus one

manages the publican department. The different houses under his management might be looked upon as his colonies ; from them flows in, the main part of the revenue of the firm, and in return he assists them in their need. In this office he is assisted by one of the younger partners. The head of this department has also the important duty of purchasing the supplies of hops required by the house—a duty which requires, for its proper fulfilment, great judgment and experience. Another of the partners presides over the malt department ; he looks over all the samples of barley and malt, and to him the different maltsters employed by the firm always appeal. The storehouse, also, is under his eye, and his is the important duty of seeing that the ale and porter manufactured is sent in good condition to the customers. One of the younger partners acts as his lieutenant in this arduous and responsible post. To the principal partner is entrusted the financial department. Through his hands pass the enormous sums of moneys paid and received, the total amount of which may be guessed from the sum already mentioned as having been expended in the purchase of malt and hops alone. Another partner presides over the export trade—a very large and growing department, now that so many English mouths accustomed to wholesome English ale and porter are to be found in America and Australia. Another manages the cooperage, and has control over the eighty thousand barrels subject to the firm, which, if placed together end to end, would extend forty-five miles in length ; in addition to which he manages the country trade, which is very large in the manufacturing towns, where the signs of the firm are almost as well known as in

London. After the ministers, or *council of six*, come the clerks; of these there are forty employed. Their stations are various. The most important is a gentleman who looks after the publicans; one is engineer, architect, and surveyor; others are spread among the storehouses, the brewery, and the cooperage; and some collect the moneys of the firm, whilst the remainder act as clerks in the counting-house.

Steam-power, as we have shown, is extensively used throughout the brewery. There is one feature, however, connected with the product of the steam, to which we wish to call special attention, as it is a matter of the utmost importance to the public in whatever light we look at it.

There are sixteen large furnace-chimneys in connection with the brewery, which of old used to pour forth a cloud of smoke from morning to night. The blacks arising therefrom would have been nuisance enough in any neighbourhood, but in the centre of Spitalfields, the seat of the hand-loom weaver, it was destructive in the highest degree; the fine satins and expensive silks manufactured here were always more or less damaged whilst issuing from the loom itself. It became a matter of importance, therefore, to put a stop, as far as possible, to so serious an evil; and as early as the year 1848, long before the Smoke Consuming Act was passed, the Messrs. Hanbury and Co. made an experiment upon one of the furnaces with Jucke's smoke-consuming apparatus, which entirely succeeded, and they have since successively applied it to all the furnaces. The apparatus is exceedingly simple, and never gets out of order. The principle of action is to supply the fuel to the bottom of the furnace; by so doing all the smoke has to

pass through the fire instead of over and away from it, as in the ordinary manner. The way this is accomplished is very simple. An endless-jointed and rather open blanket-chain, the width of the furnace, is made to revolve over two rollers placed at either end of the fire. This chain consequently forms the base or platform upon which the coal rests. One end of this revolving platform extends a couple of feet or so beyond the furnace-door, and on this portion a quantity of screened or dust coal is always kept. When a fresh supply of fuel is required, the engineer has only to turn a handle, the chain works on a couple of feet, and whilst the coal is insinuated under the clinkers at one end, the refuse is worked out of the furnace at the other. In order to test the power of this invention to consume the smoke, we were taken up to the roof of the brewery, which commands a view of the fourteen tall chimneys belonging to it. Not a particle of opaque vapour could be seen emerging from any one of them ; in fact, they looked as idle as the "silly buckets on the deck," in the *Ancient Mariner*. These smokeless shafts, however, were a fine prospect, and as we gazed upon them, the atmosphere in the future, like a dissolving process in the views at the Polytechnic, became exquisitely clear, the newly-built columns came out sharp against the sky, the clouds of soot from St. Paul's dropped down like a black veil, and all the city, in our mind's eye, stood before us at mid-day, as clear, bright, and crisp, as Paris appears from the Arc de Triomphe. Sooner or later this vision must be a reality ; the great factories within the limits of the city must consume their own smoke according to law ; and now that Dr. Arnott has applied the same apparatus to the domestic

hearth, we may reasonably hope to see every grate consume its own smoke. The best incentive to manufacturers to apply the new apparatus is the fact that the saving in the consumption and prime cost of the fuel used is thereby considerable.

A still more interesting question to us, however, is that of the "moral smoke," in connection with the people employed in this brewery, and of the measures taken by the firm to consume it. We are glad to find that in this great brewery the partners have been also mindful of the condition of their work-people. A library containing nearly 2,000 volumes has been provided. These books are lent out to read, and however little of the look of the student the burly drayman might have about him, we can assure the reader that very extensive use has been made of this lending-library. A short time since a reading-room was added, but this has not turned out so successful. The only time that the persons employed in the brewery could attend would of course be after the hours of labour, and it is found that, either from the men being too tired to return to the brewery, or from a disinclination to do so, the place is but little used.

The proprietors have had more success with what appears to us the most important institution of the brewery—the savings bank. We are informed that the labouring men have already deposited a considerable sum in it; and this sum is exclusive of the subscriptions to the benefit club, and of the sum laid by in the same institution by the clerks, which reaches a much larger amount.

The school—a very large one—built for the use of the children of the workmen, some years ago, is not in the im-

mediate vicinity of the brewery, as the firm could not obtain a convenient site. It contains a thousand children. It is not exclusively nor even chiefly used by them, but by the children of the neighbourhood in which it is situated. The firm is, however, about to establish a school for the elder boys of the men, which is to be of a first-rate character. This mental training-ground is to be made subsidiary to the interests of the firm, as well as of the children themselves ; that is, the lads who show most talent and industry are to have the first offer of employment in the concern. By this means merit will find its due reward, and the brewery will be fed with that invaluable commodity—intelligent and assiduous labour.

PALACE LIGHTS, CLUB CARDS, AND BANK PENS.

A CAPITAL article might be written on "Things one can't make out." How many enigmas stare one in the face every day in the ordinary routine matters of life? Among other things that I can't make out, is her Majesty's dreadful extravagance in the matter of wax-candles. Not a chandler's can one pass in London without seeing piles of spermaceties ticketed "Palace Candles;" their wicks just singed to give them a second-handish look. One naturally asks, what can be the meaning of this? Is Prince Albert practising Herr Dobler's trick of blowing out a couple of hundred lights at a time with a percussion-cap; or has the Master of the Household the perquisite of the grease-pot? The number of ships her Majesty has at sea, doubtless, justifies a pretty liberal illumination at the palace; but how comes it that so many of them find their way to Mr. Sperm's and others in the chandlery line?

Another thing that I can't make out is, where all the Club Cards come from? Order as many hundred dozen as you like, and the supply never appears to get lower

t is insinuated that they are the rejected packs of club gamblers, never having been used but once for fear of fraud ; but all the hells in London, if they were to try for t, could not supply as many as you could obtain in the next street. The cardmakers, I suspect, must have a workshop for their manufacture in some concealed den, where the artizans, dressed as gentlemen of fashion, play furiously away for enormous imaginary stakes, until they sit up to their knees in rejected packs, which are then taken away, after having undergone the due ordeal previous to sale. I have heard people of imaginative turns of minds, sometimes when they have been gently gliding out the deals, with one of these packs, paint a picture of the estate that has been lost, perhaps, by its very pips, and of the ruined man rushing from the hell with frenzy to Waterloo-bridge, and a great deal more of the like fancy-work, that the maker would have smiled to have heard.

Bank Pens, again, are called upon to explain themselves. Where do they come from in such quantities? Are we to believe, as the stationers would have us, that they are the discarded quills of Threadneedle or Lombard Street? It certainly gives us a vast idea of the profuseness of Bank stationery. Merciful clerks, no doubt, like not to exhaust the willing pen, by "carrying forward" such heavy sums from page to page, and so have many relays for the work. Be that as it may, Bank Pens always seem to have been oppressed with too much calculating, for they manage to split right up in the head by themselves, after the slightest exertion. Inspecting a bundle of them that now lies before me, I find that they are all dipped into the ink exactly the same depth, so that the

clerk who last used them must, in some momentary frenzy, have gone to work with the whole quarter of a hundred.

These three things are a puzzle to me as great as the Chinese nest of balls. I have turned them over and over in my mind without even hitting upon their *rationale*, and so I shall go on perplexed, I fear, to my grave.

THE GREAT MILITARY-CLOTHING ESTABLISHMENT AT PIMLICO.

In that dreary part of Pimlico which abuts upon the iver Thames, close to Messrs. Cubitt's great building stablishment, the government have lately dropped a ittle acorn, which, in time to come, will, without doubt, levelop, as government acorns so well know how to do, nto a gigantic oak. We allude to the new Military-Clothing Establishment which seems to have sprung up here in a night, vice Weedon, retired. A great quadrangle s already completed, and we suspect that, ere long, a large portion of Messrs. Cubitt's dominions will be annexed.

We hear so much about England's *little* army, that the reader may wonder why the country requires these acres of buildings to contain its very moderate wardrobe; but if we have few fighting-men at home, we forget the growing boys we have to provide for all over the world, and especially in India.

Taking the royal troops, the militia, and our Indian armies, our entire force does not fall far short of 400,000 fighting men, the clothing and necessaries for the whole

of whom have to be issued from this establishment. We were prepared, therefore, to meet with a wholesale display within these walls; but the reality far exceeded our expectations. For instance, in the fine room we first entered, —100 feet long by 40 broad,—our eye fell upon a solid wall running down its entire length, some 14 feet high and 12 feet thick, substantial enough to withstand a heavy battery. This black-brown-looking mass, on a narrower inspection, we found to be built up in a very workman-like manner of Bluchers and shoes. Some people tell you that a million is a number of which we have no conception from merely looking at the figures or signs expressive of that quantity; but here we have more than a third of that impossible "sum-tottle" before our very eyes. There are 380,000 boots and shoes, of all sizes, built into the brown-looking bastion, that first greeted our eyes in this Brobdignagian establishment, and these were not all. At regular intervals, all down this long room, rose what we may perhaps be allowed to call haycocks of boots—Wellingtons for the cavalry, so disposed with their feet in the centre, and their long upper-leathers hung outward, as to form huge cones of leather.

"But," said we to the commissariat-officer who obligingly conducted us round the establishment, "how are soldiers fitted?"

"Oh," he replied, "we make half a dozen sizes, and they are sure some of them to fit."

It was a simple question, we confess, but it never struck us at the moment that soldiers' feet never dare to be so far out of regulation as to require fitting. And where, thought we, a twelvemonth hence may all these shoes be? Pos-

sibly, the mass either doing goose-step, or the ordinary work of the soldier; possibly, splashing through fields of gore, or trampling down the dead in some European battle-field.

Leaving the boots to the future, however, we enter another room in the basement, built up with long avenues of bales, the light at the end of each vista looking like a mere speck. Each bale, if we examine it, is as hard as a brick, and bound with iron hoops. How many hundred thousand soldiers' jackets there were in this apartment we forget. Leading out of this are other apartments devoted to artillery, and hussar cloth, great-coats, &c., and an odd room or two filled with hussars' jackets; and then, again, other long galleries full of soldiers' trousers. Then there is the store of soldiers' necessaries. As this peripatetic individual has to carry his house upon his back, his kit, of course, forms a curious collection; but the number of brushes he carries is something absurd. A horse-soldier has no less than eight brushes in his kit: he ought to be the best brushed individual in Christendom. The infantry-soldier has five, even in these days when pipe-clay is reduced to the minimum. Then there are an infinity of other articles, such as blacking, sponge, button-sticks, &c., which he has to account for at any moment, which is rather hard, seeing that when a man is campaigning, with the enemy, perhaps, upon him in a night-attack, he can't always pack his knapsack as leisurely as a traveller leaving an inn. The store of necessaries may be likened to a general-shop on a large scale. Everything is packed away with the utmost regularity, and placarded with the exact number of articles in each department; so that, if our

entire army had to be supplied, it could be done almost as quickly as a company.

Not far from the store of soldiers' necessaries is the button-room. It is quite clear that the Horse-Guards haven't souls above buttons, otherwise they would simplify this department of the soldier's dress. Every regiment in British pay has its own distinctive button, with its own special device; possibly this arrangement is made for the benefit of the Birmingham button-trade, as it is difficult to conceive what useful purpose such diversity can serve. "They manage these things better in France," and in Germany also; but possibly, like those countries, we shall come to a simple button for each arm of the service some fine day next century. It was the fashion, during the "good old time," for every regiment to dress its hair differently; and there was a regulation curl or pigtail in the possession of the regimental barber by which he fashioned the heads of his companies. A little of the same spirit still lingers at the Horse-Guards.

But estimate for us, good reader, the number of buttons in this room, 100 feet long by 40 wide, and stuffed with buttons as full as it can hold. Here are the silvered ones for the militia; big-sized page-buttons for the hussars; rich gilt for the Guards; and second-best for the line. If, like the Covenanters of old, they were to fire these buttons for shot, there would be ammunition enough here, we should fancy, for another Crimean war. Each class of button, of course, has its separate debtor and creditor account; so we may imagine what the book-keeping of this department is like.

Up stairs there are the various rooms for the overlookers

and inspectors. Under the present system, every bit of cloth received into store is examined by an inspector, who passes the contents of every bale between himself and the light, and in this manner is capable of instantly detecting the least weak place in it. After this inspection, it is measured and weighed, and then refolded by machinery, and passed into store. In like manner the articles, when made up, and all accoutrements, are closely examined and tested by the sealed pattern. One room of the establishment is devoted to these sealed patterns, which contain complete suits of each regiment in British pay.

Why so, says the reader, seeing that all infantry regiments are dressed alike? The Horse-Guards, good readers, have no notion of such simple arrangement. The dress of the infantry is exactly the same, it is true; but what of the facings and trimmings—these are as diversified as the buttons. There are no less than sixteen different shades of green alone used as facings in the British army, besides an infinity of buffs, browns, yellows, blues, and all the other colours of the rainbow. What end all this paltry tailoring serves, we are at a loss to know; for the buttons alone serve to distinguish the number of each regiment, and the service to which each uniform belongs. The manner in which the soldier is fitted is as follows:—

The regimental tailor makes out certain size rolls, as they are termed, in which the different sizes required for the men are set forth. Garments answering to these sizes are forwarded from the Government store, and served out once a year, on the 1st of April. If they fit, well and good; if not, the regimental tailor is called upon to

alter them, a charge of one shilling being allowed for the service, of which the soldier is expected to pay sixpence.

It certainly is a little hard upon the poor soldier, first to make, *upon system*, a misfit, and then to charge him with correcting the error. "But it's the way we have in the army," according to their professional song. If a soldier joins a regiment in the middle of the year, he gets half-worn clothing; if towards the end of the year, clothes nearly worn out. There must be some little difficulty in hitting the exact amount of shabbiness of the regiment, and supplying the new comer with an equable dilapidation. Regiments on foreign service are beginning to receive clothes according to climate, instead of, as of old, according to an inexorable pattern. Thus, soldiers serving in Canada, in winter, have fur caps and flannel under-clothing, together with high Canada boots. The black troops, again, serving in the West Indies and on the Gold Coast, are clothed in the Zouave dress—Turkish trousers, sandals, and leather leggings, with the red fez and turban cloth. We wish European regiments serving in the West Indies were as sensibly dressed, as they are certainly less capable of bearing the heat than their coloured comrades. The stifling red cloth coat has been abandoned for the summer wear of troops in the East, and a light red serge blouse, fitting into the waist with the belt, has been substituted in its place. Why red should be selected as the colour is, however, unaccountable. The reason given is, that it is the national colour; we are not governed at home, however, by any such notions as these. Volunteer riflemen are certainly national troops, but the Government is satisfied with grey here. This is a

question of health, and should be settled by the doctors rather than by the Horse-Guards. The irregular horse of India use grey, for the reason that it is so much cooler. A German savant, Dr. Couleor, has carefully investigated the qualities of different coloured materials as clothing for troops. Of all materials, he found white cotton to be the coolest. This material, placed over a cloth dress, produced a fall of seven degrees per cent. in heat. When the tube of the thermometer was covered with cotton sheeting and placed in the sun, it marked thirty-five degrees; with cotton lining, 35° 5′. Unbleached linen raised the temperature to 39° 6′, and dark blue and red cloth marked 42 degrees. As the variations of temperature in India, however, are very great, a neutral grey cloth or serge would be, we should fancy, the happy medium. Mr. Jeffrey, a military medical officer, who has lived long in the East, recommends garments with metallic reflecting surfaces as by far the best adapted for tropical climates. These would throw off the rays of the sun. The flashing helmets of Eastern nations are far more scientifically applied than we give them credit for, as they are much cooler in the hottest day than a black felt shako, or the ostrich-plumed bonnet of the Highlander. With these matters, however, the Horse-Guards alone have the power of interfering.

Hitherto, Government has contented itself with procuring all its clothing, &c., from contractors; but there are symptoms of its determination to become its own tailor. In one apartment we see women sewing soldiers' jackets with the new sewing-machines, and doing the work ten times quicker, stronger, and better than it was done of old by manual labour. The cutting-out is also done by

machinery, so that, if necessary, an immense amount of clothing could be turned out at a very short notice. The colour and quality of the material has also been vastly improved since the days when the colonel of the regiment clothed his soldiers and kept the cabbage. The cloth of the private's coat is as good and bright a scarlet as the sergeant's, and the sergeant's is equal to that of the officer's four or five years ago. The Crimean war came just in time to test and prove the utter worthlessness of the old system of clothing the troops; and a walk through this establishment is sufficient to prove that we have at last a Government department that is working well. The credit of organizing this immense establishment is due to Mr. Ramsay, the deputy storekeeper general, who has undoubtedly proved that Government officials are capable of carrying on a vast establishment of this kind as successfully as private enterprise, and, we believe, far more soundly; so that we predict we shall hear no more in any future war of shoes that come to pieces in a week's wear, or of great coats made of devil's dust, calculated, like sponge, to let in and retain the water.

THOUGHTS ABOUT LONDON BEGGARS.

QUIET streets are great godsends to beggars. Your great thoroughfares are heard-hearted things. People in the bustle and crowd won't unbutton their pockets; but your quiet streets, *cul de sacs* especially, seem made for beggars and late-in-the-morning ash-boxes. The beggar has such a claim upon the very last house in the street; he has come all the way to beg your charity, with a mournful whine over the rails; one feels he has had faith in the charity of the last house (at least a person of fine susceptibility, would feel so), and dependence on the kindness of human nature, we fancy, does not always go unrewarded. We have lived in a quiet street now for some time, and are up to all their doubles, and, as in most other things, we have our favourites among them, however sneaking our regard might be for the whole family. Beggars divide themselves in several classes:—the humorous, the poetical, the sentimental, the dodgey, and the sneaking. The humorous beggar is for our money; we cannot get a sight of him often, however, for, like a pair of skates, he is only of use in a hard frost, aided perhaps by a driving sleet. On such a day, whilst a man is making himself a peculiarly warm triangle before

the fire, in the way in which Englishmen are so accustomed to, and in the true spirit of Christian feeling, pitying the poor devils their red noses as they pass—on such a day we may be pretty sure of our prime favourites. There is no mistaking them; we hear their stentorian lungs in the far-off streets louder and louder, until they burst upon our sight, with bare feet, naked chests, white ducks, and navy-cut jackets—shipwrecked seamen, just cast ashore from St. Giles's. Bravely against the cutting sleet and splitting frost do they struggle up the road. 'Tis worth a penny, sitting by one's fire, to see the self-torture of the rascals, their feet well nigh sticking to the freezing flags. Let them pass on, to make soft the hearts of mothers who have sons at sea. They are jolly dogs, and worth their money to those who laugh before they give.

Again, that old grumbling song rambling up and down, gusty as the wind round a church corner! The day is fine, and we may have an out-of-door peep at the picturesque singer—the ship upon his head, the cubby-house upon his back—it seems all cast in one—as if they had been out in a great heat, and had gradually fused together. Numberless suggestions arise at his sight—is the little girl in the cage his daughter? If so, he is not quite friendless; but he can never see her but once a day, when he puts her in, and he is obliged to talk round the corner to her. Does he go to sleep with that nautical sort of nightcap on? He is decidedly a suggestive beggar, and therefore a poetical one. To find the sentimental class, we must trudge off to the Strand, or some larger thoroughfare, as they are a passive race—sought rather than seeking, and are to be found showing their wares off

upon some snug door-step. The finest specimen of this class is the woman with twins, a little suckling on each side: this is a sure card; few can stand twins, especially young married people. If such a couple happens to come by, the wife pities the "poor little dears," and the husband, poor fellow, thinks his turn may come next, so it's a ready penny for her. We have even known a single child, well displayed, and of an interesting age—say three years old—draw well. There used to be a woman in the Strand who had a beautiful child, that she would set to sleep, to show its profile. A gentleman of our acquaintance could never pass her without dropping a sixpence into her lap, and when rallied for his extravagance, his answer was irresistible, at least to a father, "'Twas so much like his little Mary." The large hauls, we fancy, fall to the share of the sentimental beggar, but the dodgey class pick up a few pence. In this category we place all those who have been driven by the harsh rigour of the mendicity officers into petty subterfuges, which have utterly spoiled their characters as bold beggars. The peppermint-dropper is, perhaps, the best type of the class we could pick out. Her chief haunt is in front of the National Gallery, and the day must be wet and dirty. The *artiste*, generally a little girl (to get up a cry easily), and the mode of procedure very simple. She carries a little packet of peppermint lozenges, which she pretends to vend at so many a penny; she unfortunately manages, however, to run up against people, and get pushed down, with her lily-white peppermints all in the mud. They make such a show when against the black ground, all speckled over. "That gentleman shoved me down," she cries, pointing to the

person she run against. The gentleman gives her a fourpenny-bit to set her up in business again, and passes on. Ah! what are you doing up in that corner there, little girl?—licking them white again, as I am alive, and preparing for a new upset! It will be observed, however, that a butcher's boy swaggering along may send her spinning in the road, and she will only clutch her merchandize the more firmly; but let a decent black coat come near her, or a kind-looking old lady in pattens, and the difference will soon be seen. A great example is this child of the evils of mendicity societies. They will not let her beg boldly, so she must turn a dodger, and a very clever one she is in the long run. The sneaking beggar—ah, there he is, half naked, without anything on his head, rubbing his hands along the railings as he goes, to look as if he was after nothing. A fine eye he has for fiddle-handle teaspoon, or an area door ajar; he is essentially a quiet-street young gentleman—he loves retirement—training in this way by degrees, we suppose, for the seclusion of the penitentiary. "Kind gentleman, give a poor boy a penny." No almsman could say it with a more genuine tone; even such as he reap a rich harvest from good-meaning, unsuspecting old ladies. There is another class of beggars worthy of notice,—the "Poor Jacks," the crossing-sweepers; and a polite race they are. "Thank you, sir!" seems to come as readily from their lips, whether you give or not, if you only speak kindly. Some men think they have a right to march across a cleanly-swept path, and never pay. According to the first principles of the political economists, they are wrong. "If a man," Bentham would say, "picks a wild apple from a tree, it is more his than another's,—

he has imparted some of his labour, and therefore has a prior claim to it." The crossing-sweeper surely imparts some of his labour, and deserves a return for the benefit you reap from it. People should not fancy their pennies are so difficult to get at; to unbutton a coat is easy, but to go without a pennyworth of bread, as your poor almsman may, is very hard. And do not throw it down on the ground when you have got it out, but give it into the man's hand like a Christian; they are only fools and *parvenues* that treat poverty with contempt. As the wet days get fine, it is high fun to see what shifts they are put to to show something for their money; brush, brush, brush, till the stones are polished. The man who can longest hold out against a dry week is the sweeper of Lansdowne-passage, beside Lansdowne-house. We remember watching him one fine day, as we were passing, sweeping, in a grave and business-like manner, a little heap of dust from one end of the lane to the other. The next day we happened to be passing the same passage, but in an opposite direction; when we came to the end there was our old friend the sweeper, leaning his hand upon his brush, and contemplating the self-same little heap of dust, tastefully brushed up all round into a little cone, not bigger than the sand in a good-sized hour-glass. The sight was almost melancholy. We believe he gave it up soon afterwards, shouldered his brush, and hied to "fresh fields and pastures new;" but how that little heap must have journeyed backwards and forwards before it was allowed to rest in peace! The sweepers have their regular crossings, and if an interloper should happen to step in, he will soon find out he is on leasehold property, and

must budge. They are not very lucrative posts, although there is a tradition about the holder of the richest (the Bank crossing) keeping his country house and his cab. The highest sum ever got by any of them at one time, that we could hear upon inquiry, was a sixpence, and a "Dialogue between Richard and Harry," a religious tract, given by a good lady of the Mrs. Fry class. A man should put halfpence in his pocket in bad weather; it is well to purchase a "God bless you!" even if you know that your eleemosynary copper goes the next moment to one of the gin-shops, which, like a moral scurvy, seem to have seized upon every joint and corner of the metropolitan anatomy. We know a gentleman who is so scrupulously honest on the point of rewarding the sweepers, that if, when he came home, he remembered that he had passed one of them without giving, he would issue out again, and, by way of punishment, give largess to every sweeper in the neighbourhood. A fine spirit moved him—a rare one, indeed, in these hard utilitarian times. Beggars are sadly gone down in this England of ours—they should all be Catholic, the true religion of mendicants. They might then, by chance, have their feet washed by the Pope on Holy Thursday, and be thus made aristocrats among their fellows for life. As a class, all the poetry is gone out of them. At the door of some almshouse, an old woman may still be seen with her clack-dish before her at certain seasons of the year—the last of her race—reminding one of times long past, when there were no such things as mendicity societies, and charity was considered a thing which

"Blesses him that gives, and him that takes."

WENHAM LAKE ICE.

If, in the mid summer, when everything was still with heat, and the cattle and the sheep crowded under the great trees for shade, and the house-dog lay panting, with his tongue hanging from his mouth, a little child were to come to us and beg for a cup of water, what would it think if we were to tell it this tale ?—

A very long way off, in the New World, there is a great cup, hundreds of feet deep, made in the mountains. This cup is always full of crystal water, which in the winter season gets so cold that great ships come and carry it all over the world, so that every person, when he is heated as you are, can, if he likes, have a draught of its delicious icy contents.

In all probability the child would think we were telling it some tale of Fairyland, and would not dream that we were speaking of an everyday working fact. Yet such is the case: the crystal cup is the Wenham Lake, held in a hollow of the mountains in New Hampshire, Massachusetts. This lake, which is of small extent, having only an area of 500 acres, is supplied by springs which issue from its rocky bottom ; its waters are so pure that analysis cannot detect any foreign elements held either in suspension or in combination.

This condition of purity is not alone, however, the cause of the celebrity which the ice formed from it has of late years attained throughout the world, and especially in England: there are many such lakes in America capable of producing equally good ice, and which are indeed used as the *ice farms*, if we may so term them, for home consumption: the real reason of the celebrity of the ice produced from the Wenham Lake lies in the fact of its being near the seaboard, which enables the company to which it belongs to ship it easily to all parts of the world. This lake is only eighteen miles north-east of Boston, and by means of the Eastern Railway, which receives a branch line from the lake itself, is within an hour's run of the wharf at that city; so that, for all practical purposes, the ice might be said to be formed at the ship's side. These unusual facilities have enabled the company to withstand competition, otherwise the market of England would soon have become keenly contested by the Yankee ice speculators, for this article is extensively used in America, and large sheets of water are utilized as much as mines; and here, when nature is everywhere else at rest, the ice farmer watches with anxiety the product of his watery acres, ripening through the *absence* of the sun.

If it were not for the difficulties of conveyance, Barnum would have been long ere this looking upon the Mer de Glace as a speculative lot, and making bids for all the mountain peaks of Europe above the snow line. Owing to this drawback, however, it is found more practicable to bring even this perishing commodity a distance of three thousand miles.

The ice trade in America has long reached a magnitude

of which we in the old country have no conception. What we consider a luxury brother Jonathan has long looked upon as a common necessary of life. He cannot live without a plentiful supply of ice. It might be urged that this is owing to the great heat of the American summers. Perhaps so; but that which at one season of the year is desirable and delicious, at another can only be indulged in through habit. The Americans consume pretty much the same quantity of ice in the winter as in the summer. With every meal it is placed upon the table, and it forms a constituent of all their drinks. In England, a publican will tell you that two-thirds of his spirit-drinking customers will call for *hot* brandy-and-water; in an American liquor-store, the constant demand is for a glass of sherry with a *knob of ice* in it, or cocktail, or mint julep, with the like accompaniment of liquefying crystal.

The aggregate consumption of this article throughout the States must be something enormous, for in Boston alone upwards of 50,000 tons are consumed annually—a much larger quantity than is used throughout England. The ice crop of America is consequently of great national importance; and as it is liable to perish by change of weather, even more quickly than grain, human ingenuity has been brought into play to cut and house it with a speed and regularity strongly contrasting with the rude manner of smashing it with poles and shovelling in the irregular lumps, such as we see practised upon our home-grown ice.

The scene at Wenham Lake after a hard frost is highly interesting. At first sight, the stranger is puzzled to make out the meaning of the process he sees going on upon the

level surface of the dark ice. If it were land, he would not wonder; but what can the horses be ploughing for? That he will presently see is part of the process of *reaping* the ice harvest. This season generally commences when the ice is about a foot thick, provided always no snow has fallen and melted on it. Operations are begun by ruling a line as it were across the slippery surface of a circumscribed space of about three or four acres; this line is made by a small and exceedingly sharp hand-plough, which cuts along the solid mass, throwing up as it progresses a glittering dust. This line, which is two or three inches in depth, serves as a guide to a machine drawn by horses, called the marker, which traversing beside it, cuts two parallel lines, about twenty-one inches apart. Similar lines are drawn, until the whole surface is thus marked. The grooves are now deepened to six inches by the action of a horse-plough. A similar process is carried on at right angles; so that when the whole is finished, the entire area is divided into squares of twenty-one inches each way. The next step is to detach these blocks from each other, and lift them out of the water. To accomplish this, the saw is brought into play, and a line of squares having been cut through, the remainder are easily detached and floated out by means of the ice spade, a wedge-like implement, which no sooner enters the groove, than the block splits off with the utmost ease—that is, provided the weather is frosty during the operation; otherwise the task is not quite so easy, the ice being much more tough when thawing. The floating squares have now to be secured and housed; for this purpose, a low platform is placed near the edge of the ice, having an inclined plane of iron, which dips down

nto the water. Up this plane the great blocks are jerked by the ice-man, who wields his ice-hook with great dexterity. When a load is secured, it is transferred to a sledge, and drawn to the ice stores which line one side of the lake. The process of lifting is performed by a horse, and is exceedingly ingenious. Each block is pushed from the sledge on to a platform of exactly the same height, in the centre of which is a square opening, fitted with a hoisting frame; on to this the block is slid, the horse immediately pulls, the platform ascends, and when it reaches an opening in the ice-house, it is made to tilt up and discharges its slippery burden into its interior.

These ice-houses are themselves worthy of attention; they are, in fact, gigantic refrigerators. Generally, they are built of pine-wood, with double walls, placed about two feet apart, the space being filled up with sawdust, a very perfect non-conducting medium. In these houses the loss by thawing is very inconsiderable compared to the mass in store—the greatest waste, as we shall see presently, occurring on the voyage of such as is exported.

To secure this perishing crop, numbers of men are employed in fine frosty weather. As many as a hundred men, and between thirty and forty horses, are often to be seen busily engaged upon the lake, and the scene is full of bustle and life. If, however, a fall of snow should come on, all further operations are put an end to, and the proprietors look with an anxious eye to the weather-glass: if it is high, and no thaw succeeds, there is not much harm done. When the snow-storm ceases, the surface of the ice is swept clean, and the process of cutting again proceeds. If, on the contrary, the snow should thaw,

snow-ice would be formed with the next frost; and this being quite worthless, must be removed before the sound portion can be gathered in. This process is performed by a plane drawn by horses, which, guided by a grooved line, smoothly cuts off to the depth of three inches all the rotten surface, and exposes the black-looking solid ice beneath. If by this skimming process it is rendered too thin to store, a night or two's frost will add below the required thickness.

When the ice is wanted either for home consumption or shipment, it is placed in air-tight trucks, which carry it at once along the line to Boston, and even to the ship's side. When taken on board, it is carefully packed in sawdust, and excluded as much as possible from the external *salt air*. But, notwithstanding every precaution that it is possible to take, waste of from a third to a half of its substance often occurs. A ship which left Boston, for instance, fifty-one days since, with 502 tons of ice, arrived in London with only 326 tons—thus there was a loss of 176 tons in that time. This loss was owing to two causes. Firstly, the great difficulty of procuring a good drainage in a ship, in consequence of which the sawdust becomes saturated, and is converted into a conductor of heat; and, secondly, the extraordinary solvent powers of the sea atmosphere, impregnated as it is with salt, which, housekeepers know, thaws ice instantly.

Arrived in this country, it is stored in the warehouses belonging to the company. These are situated in the dry arches supporting the Waterloo-road, which, towards the bridge, are at least forty feet high and seventy feet long. In these spacious dungeons, in silence and in darkness, old

King Frost is cooped a close prisoner through the long summer days.

The visitor who is curious enough to inspect these storehouses sees nothing but huge heaps of sawdust; but the frosty breath issuing from his mouth makes him aware of the low temperature of the atmosphere. In the season, as much as two thousand tons of ice are sometimes stored here without losing much in weight. These gigantic ice-houses, five in number, happen to run underneath some fish-shops, which, it will be remembered, lie on the left-hand side of the road, going over the bridge from the Strand; and there is a capital joke told by the ice-men thereanent. On one or two occasions they found, much to their astonishment, a number of lobster-shells among the ice, a circumstance which puzzled them as much as the presence of minnows in the milk-jug would a London housekeeper. The mystery was speedily cleared up, however, by finding that some of the bricks at the end of one of the vaults had (of course by accident) become loosened, and the vast refrigerator was conveniently bestowing its preservative powers upon the fresh fish stores of the superimposed warehouses.

We have spoken hitherto of the Wenham Lake ice exclusively, but it is not pretended that all the ice comes from thence that is imported by the company. Cargoes are often imported from Norway, of excellent ice, cut and carried on the same principle as in America. Indeed, it would be but reasonable to suppose that as the demand increased the ice-producing countries of the northern latitudes would be laid under contribution. Nevertheless, it will be a long time before they can come in competition

with the ice-trade of America, where every appliance for its preservation and conveyance has been so long in use.

Of course, it would be utterly impossible to tell the nationality of different blocks, as they all consist of pure spring water. Any block that is at all tainted in colour, or which holds any impurity in solution, however clear it might appear, is always put aside at once as rough ice for freezing purposes. Consequently, the ice sold as Wenham Lake ice by the company may be used with confidence in immediate contact with the articles of food required to be cooled.

Before the Wenham Lake Ice Company introduced the portable refrigerators it was only the rich, who possessed ice-houses, that could command a cooling medium in the sweltering summer months. Now every man, for eight pounds, can possess a more perfect ice-house than any nobleman did a few years ago. Indeed, the old ice-houses have become entirely obsolete now that any gentleman, for ten pounds a year, can keep his refrigerator constantly full in any part of the country, the company forwarding the ice in square hampers, carefully packed in sawdust.

The refrigerators are made on pretty nearly the same principle as the fire-safe, the object of both being the same—to keep their contents free from the action of the external temperature. To ensure this, the walls are filled with charcoal, the best non-conductor for the purpose.

Among the many comforts we moderns enjoy, we know of none comparable to the comfort—no ! comfort is not the word—the absolute luxury afforded us through this singular application of a scientific principle. Henceforth, no decent householder need tolerate swimming butter or

lukewarm drinking water in the dog-days. Neither should tough joints, warm from the slaughter-house, be suffered to pass as heretofore, on the plea that "there is no keeping meat this hot weather." We have invented a shield that the arrows of Apollo cannot penetrate, and the iced larder will, without doubt, soon become as much a universal comfort among us as the bright fireside.

To butchers and dealers in perishable provisions of all kinds this invention will prove invaluable, as its adoption will obviate all the inconveniences to which they have hitherto been put in warm weather.

It may be asked, however, why we need go so many thousand miles for ice, whilst we have it produced at home? "Protection to British pools!" Native ice for ever! The reason is very clear. Those who noticed the huge block of ice that used to be exposed in the window of the Wenham Lake Ice Company, in the Strand, a worthy throne for King Frost himself, will remember how long it remained there during the very hot weather, and how imperceptible was its thaw.

The same weight of snow, which is of course ice in infinitely small particles, would, if scattered on the ground, have melted in a few minutes, at even a temperate degree of heat. This difference between the two bodies in resisting the liquefying power of the atmosphere is entirely owing to the varying amount of surface exposed to its influence. The solid cube of ice of, say two hundred pounds weight, can only be attacked by the air acting on its six superficies, which, compared with its entire bulk, forms but a small portion of the whole; whereas, the millions of particles of ice forming the snow mass of equal

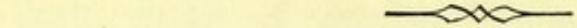
weight, present scarcely anything but surface to the surrounding atmosphere. Now, English ice might be considered little better than snow for durability, as it is generally taken in a very fragmentary condition from shallow pools, which are not always even pure to the eye. American ice would be superfluous if we could procure blocks from some of our spring-water lakes, but these being generally of great depth, require harder and more continuous frosts to freeze them to any thickness, than we are ever visited with.

As long, then, as Dame Nature continues the sole manufacturer, we must depend for our blocks of table ice upon countries whose latitudes or isothermal lines are colder than our own. The time is not, however, far distant when we shall be enabled to dispense with the aid of the winter season, and to imitate at all times of the year the process of nature in the formation of ice. The question has long been reduced to one of expense, chemistry having already shown us a dozen methods of producing degrees of cold far beyond anything that nature spontaneously exhibits. Thus, the liquid carbonic acid gas, whilst in the act of evaporating, stands at 165 degrees below zero, and the ice formed by it is so intensely cold that it instantly causes a slough upon the hand that holds it. This method of producing ice is, however, both expensive and dangerous, and we only mention it for the purpose of showing how powerful are the resources of the chemist.

The simple action of freezing water, however, can be effected with comparative economy, and in small quantities ice is formed by the mere evaporation of water from the surface of porous vessels. Within these last few years

patents have been taken out for forming it on a large scale, and the great demand into which it has grown will no doubt induce our chemists, sooner or later, to bring their knowledge practically to bear upon so important and profitable a subject.

CANDLE MAKING.



It must be a very young man who does not remember that most noisome invention—the mould candle, accompanied by its still more noisome companion—a pair of snuffers; and yet how should we stare, if on the table of the most modest household they should again appear. Indeed, they seem as much a thing of another age as the flaring flambeau and its rude extinguisher, which may yet be seen suspended from the scrolled iron-work about the doors of old family mansions. This light of other days sprang directly out of the domestic grease-pot: its manufacture was a rude, not to say disgusting handicraft, and if anyone had been bold enough to say that one day a new light would arise, that would materially affect the destinies of a whole people, Bedlam would have been thought his proper destination. Yet this seeming dream of delirium has come to pass; and the production by negro free labour of palm oil, now so largely used in the manufacture of soap and candles, has greatly assisted in giving a check to the slave trade.

Noticing the other day the extraordinary piles of casks incumbering the wharf of Messrs. Price and Co.'s Patent Candle Company at Battersea, we could not help looking upon them as so many dumb missionaries ever circulating

between England and the gold coast of Africa, spreading civilization and religion over the latter hitherto benighted region. And the introduction of a new commodity for the supply of a common want, has again re-acted favourably on the labour of the particular trade to which it refers. Instead of the chandler's shop, where the simple process of melting refuse animal fat alone engaged the intelligence of the workmen, we saw in this establishment a vast laboratory, and in place of mere mechanics directing the works, a practised chemist availing himself of the last word of science and the best products of mechanical skill. Instead of the grease-pot or the beeswax cake comprising the whole repertory of the trade, the museum of the establishment sets before our eyes the products of a hundred climes, which may be ranked among the raw materials of the manufacture.

The animal, vegetable, and mineral worlds are laid under contribution for the same end. The Shea Butter—butter of Abyssinia—a vegetable product first mentioned by Bruce; petroleum of Ava, a mineral; the beautiful insect wax of China; the cotton pod, which yields the last new light of America; the hundred-and-one nuts of tropical climes; and even the fat of the tiger, may here be seen, proving that the efficient production of even so insignificant a thing as a candle necessitates a knowledge of a large range of sciences, and includes within its grasp not only the contents of the grease-pot, but the analogous products of the whole world. The process of manufacturing candles, as carried on at the works of Price's Patent Candle Company, which we propose briefly to describe, is one of the most interesting sights in London. The two establish-

ments are known as Belmont, at Vauxhall, and Sherwood, at Battersea; and the huge corrugated iron roofs of each are doubtless well known to the reader who is in the habit of passing frequently up the river. The manufactory at Sherwood is by far the largest; indeed, at Belmont little more than the production of night-lights and the packing of the manufactured goods is proceeded with. At Sherwood the works cover twelve acres of ground, six of which are under cover; and to this establishment we wish to carry our reader. The raw materials principally used in this manufactory are palm oil, cocoa-nut oil, and petroleum; the first, however, is used in by far the largest quantities, and to its preparation for the manufacture of candles we shall first draw attention. Palm oil, as imported, is of a deep orange colour, of the consistency of butter at midsummer; hence it will not flow out of the cask like the more fluent oils; and to assist this costive tendency—the first care of the manufacturer — the following plan is pursued: the casks of oil, as they arrive from the docks, are transferred to a large shed, the floor of which is traversed from end to end with an opening about a foot wide, which is in communication with an underground tank. Over this opening the bung-hole of each successive cask is brought, and the persuasive action of a jet of steam thrown into the mass speedily liquefies and transfers it to the underground tank. Herefrom the oil is pumped by steam power to what may be called the high service of the establishment, gravitation being sufficient to make it carry itself to the distilling-rooms. Palm oil and all animal oils are made up of three elements—a very hard body, called stearic acid, a liquid termed oleic acid, and a white syrupy

body, which acts as a base to the other two. Now these three companions agree admirably in nature, but the moment art attempts to convert them to her own purposes in the formation of candles, a little difficulty arises—the glycerine turns out to be the slow man of the party; like many good men and true, its illuminating power is found to be greatly deficient to that of the company it is in, and hence its ejection is voted by the scientific candle maker. Not long since, this was performed by the process termed lime saponification. By this method cream of lime was intimately mixed with the fatty matter to be acted upon, and the principle of chemical affinities coming into play, the different ingredients, like the dancers in a certain coquettish waltz, forsook each other for new comers; thus the stearic and the oleic acids waltzed off with the lime, leaving the glycerine by itself, dissolved in tears—the resultant water. No sooner, however, was this arrangement completed, than it was broken up by the introduction of strong sulphuric acid, which in its turn waltzed away with the lime, leaving the fat acids free. This was an expensive process, however, inasmuch as, independently of the cost of the lime and sulphuric acid, the stearic acid obtained was comparatively small in quantity, and the whole of the glycerine was wasted. The next step in the process is known as the sulphuric acid saponification, the fat acids being exposed to sulphuric acid at a temperature of 350° Fahr. By this process the glycerine is decomposed, the fats are changed into a dark, hard, pitchy mass, the result of the charring of the glycerine and colouring matters—its final purification being effected in a still, from which the air is excluded by the pressure of super-heated steam. In 1854 this

process was brought to its present perfect state by passing this super-heated steam directly into the neutral fat, by which means it was resolved into glycerine and fat acids, the glycerine distilling over in company but no longer combined with them. This was an immense step gained, inasmuch as the glycerine thus for the first time obtained pure, and in large quantities, was raised from being a mere refuse product which the candle maker made every effort to destroy, into a most important body, of great use in medicine and the arts ; indeed, like gutta-percha or vulcanised India-rubber, it is no doubt destined to play a great part in the affairs of the world, and is far more valuable than its companion bodies, the stearic and oleic acids. In the chemical laboratory little episodes of this kind are continually occurring,—the rejected, despised, and unknown refuse, being often led forth at last as the Cinderella of science. We may here mention that it is the presence of this very glycerine in the old mould candle, and in the still existing "dip," which produces the insufferable smell of the candle-snuff. A candle when blown out exposes the smouldering wick to the action of the atmosphere, and the glycerine distills away in the smoke. Yet here we see as much as six tons distilling at one time in one room without the slightest smell, in consequence of the process taking place in a vacuum. Imagine, good reader, what would be your sensations sniffing at six tons of the concentrated essence of candle-snuff!

The two acids, the hard stearic and the fluent oleic, have still to be separated, as it is only the former which is, from its high melting point, calculated to form the true candle material. The cooled fats, forming a thick lard-like sub-

stance, having been cut in appropriate slices by means of a revolving cutter, are then by an ingenious labour-saving apparatus spread upon the surfaces of cocoa-nut mats, which are taken away in trucks to the press-room. As these pass in huge piles before you, the imagination may picture a tea-party of Brobdingnagians, and these are the countless rounds of brown bread and butter provided for the occasion. In the press-room these piles are subjected to hydraulic pressure, which slowly squeezes out the oleic acid, leaving the stearic acid behind, in the form of thin, hard, white cakes. These are re-melted in a huge apartment filled with deep wooden vats, appropriate cups for the monstrous bread and butter before mentioned. The arrangement by which the melting process is carried on is novel in the extreme. Into each vat a long coil of pipe depends, which admits into the fatty mass a hissing tongue of steam, which quickly liquefies it. The use of metal boilers is precluded by the fact that, on account of the acid oil to be acted upon, silver, as in the manufacture of pickles, would be the cheapest that could be employed.

The stearic oil, or candle-making material, of the cocoa-nut is extracted simply by pressure, no distillation or acidification being required. The well-known "Composite candles" of this form are made from a combination of this oil at low melting point and the hard stearic acid of the palm oil, their relative proportions varying according to the varying condition of the price of each in the market. We have yet to speak of the production of candle material from the novel substance Petroleum, a natural product of the kingdom of Burmah, where it wells up from the ground, like naphtha, to which it bears a very striking resemblance.

It is a mineral substance composed of a number of hydrocarbons, varying in specific gravity and boiling points. The preparation of this dark orange-coloured liquid is conducted simply by distillation: a number of very different products coming over at different temperatures, ranging from 160° to 620° Fahrenheit. The first product to distil is the extraordinary liquid termed sherwoodole, a detergent very similar to benzine collas, the well-known glove-cleaner, removing grease-stains like that liquid, but without leaving any smell behind. A very beautiful lamp-oil, termed Belmontine oil, is the next product. This oil burns with a brilliant light, and, as it contains no acidifying principle, it never corrodes, like other oils, the metal work of the lamps. The two next products are light and heavy lubricating oils, used for lubricating spindles at a much cheaper rate than the ordinary oils now in use. The last product to distil is termed Belmontine, a new solid substance of a most beautiful translucent white, somewhat resembling spermaceti, and forming a candle of a most elegant appearance, very similar to the paraffine lately distilled from Irish peat. In addition to the candle-making materials already mentioned, there are numerous others, which are worked when they can be procured cheaply.

The candle-making material being now fit for moulding, let us introduce the reader to this department of the manufactory. A room, 127 by 104 feet, is fitted up throughout its entire extent with parallel benches, running from one end of the department to the other. In these benches, ranged close together in a perpendicular direction, are the candle moulds. How many thousands of these may be counted we scarcely like to say; but, viewed from above,

their open mouths must present the appearance of a vast honeycomb, commensurate with the size of the room itself. Along the top of each bench, 104 feet in length, there runs a railway, and working on this railway is what may be termed a candle-locomotive—a large car running on wheels, containing hot candle material. The wicks having been adjusted truly, in the long axis of the mould, the locomotive now advances, and deposits in each line of moulds exactly enough material to fill them, proceeding regularly from one end of the bench to the other, setting down at different stations its complement of passengers. After a sufficient time has elapsed to allow them to cool, preparations are made to withdraw them from their moulds. This is done in the most ingenious manner: in an apartment close at hand an iron boiler of great thickness is filled with highly compressed air, by means of a pump worked by a steam-engine; pipes from this powerful machine communicate with every distinct candle-mould, and convey to it a pressure of air equal to 45lbs. to the square inch, about the surface of the diameter of a candle. These candle-moulds and the air-pump constitute an immense air-gun, containing thousands of barrels, each barrel loaded with a candle. The turning of a cock by boys in attendance lets off these guns, and ejects the candles with a slight hissing noise. This fusilade is going on all over the room throughout the entire day, and in the course of that time no less than 188,160 candle projectiles, weighing upwards of fourteen tons, have been shot forth. The intelligence and care with which the attendant boys catch these fatty missiles is accounted for by the fact that Price's Patent Candle Company rectify their labour as well as their raw

material ; the excellent schools established by the Managing Directors, Messrs. Wilson, enabling them to select the most careful lads for those departments requiring particular attention.

The visitor should notice particularly the wicks of these candles, as upon their method of preparation the abolition of the snuffers, that grand reform in the matter of domestic light, depends. These wicks, in the first place, are made very fine, the high illuminating power of the stearic acid enabling a fine wick to give far more light than the coarse wick of the common "dip." Again, the particular twist given to the wick when it is plaited, and the wire with which it is bound, causes it to project from the flame when burning. Palmer's candle-wicks, it will be remarked, are twisted upon each other, the relaxation of the twist as it burns answering the same end—the projection of the burning cotton through the flame and into the air, which immediately oxidises it, or causes it to crumble away, thus obviating the necessity of snuffing. Here we see an extraordinary example of the manner in which a very simple improvement will sometimes interfere with a very large trade,—the simple plaiting of a wick doing away with one of the most extensive branches of hardware in Birmingham and Sheffield.

The candles are sent forth into the market in pound packets, packed in highly ornamental boxes. The manufacture of these boxes is not the least interesting part of the manufactory. In consequence of the duty on paper, it was necessary to look about for some cheap substitute, and deal was finally adopted. A plank, one foot wide by four long, is planed into no less than 140 shavings of that size:

these are pasted on one side with a very thin straw paper, so as to form the hinges for the sides. They are cut out by a machine to the required sizes, and rapidly made up afterwards by hand, the cost being truly insignificant. For the manufacture of the night-light cases, the shavings are rolled into a cylinder, pasted, and then cut off to the required lengths in a hand-lathe.

WOMAN'S WORK.

PUBLIC attention has been deservedly drawn of late to the very important fact that the industry of this great country is practically closed to the educated element of Englishwomen. Beyond the mere servile occupations, to the English lady who has been tenderly nurtured, but who is reduced to distress by misfortune, there remains, indeed, a sorry choice of professions, descending in very rapid steps from the governess to the sempstress. The boys of a large family may, and do, push their fortunes in the world in a hundred directions. The girls, on the contrary, find every door shut against them. To them, as a class, delicacy of eye and hand are gifts with which the Almighty has endowed them, but which we Britishers steadily ignore. We allow our women to toil in the fields, and to do the work of brute beasts in coal mines; but when it comes to tasks for which the delicacy of their organization is particularly adapted, we find no place for them in our industrial economy. Nay, it is boldly asserted, that their employment would only result in displacing the labour of the other sex. If this were a valid objection, our argument would be at an end. But it must be evident to all, that nature herself has drawn the line between male

and female labour; it is a nice question of physical power. When we see half-a-dozen stalwart young men selling ribbons in a mercer's shop, there is a palpable waste of power, and we feel almost inclined to ask for only one hour of the old days of the press-gang. On the other hand, when we see women in the fields, bent double with hoeing in the mid-day sun, we feel that they are over-tasked. The Anglo-Saxon, it must be remembered, is not like a French tradesman, who is content to sit and smoke in his thrumb night-cap, whilst his wife does the work. He must be doing, and if not at home, he pushes out to the new empires he has conquered and built up by his energy. With the better class of educated women, however, it is far different. In the first place, it must be remembered, that there are many hundred thousands in excess of the young men, an excess which every year will probably increase as our male population swarms out in increasing numbers to our colonies. The females of the mere working-classes are amply provided for in our great manufactures and in domestic service; but the question is, what shall be done with the young daughters of our respectable households. The time inevitably comes when the bread-winner that has sustained them in comforts is called away; probably leaving but little provision behind him, and the happy little circle is broken up, and its members have to commence a fierce struggle face to face with the hard world. According to Mrs. Grundy, there are but two situations which young ladies so situated can possibly seek—that of governess, or nursery governess, according to the nature of the education they possess. Even here the "market" is fearfully overstocked. If

they answer an advertisement for a situation, the advertiser meets them with the chilling fact, that she has already received a hundred applications before luncheon-time. It is clear that the first thing to be done is to educate this tyrant society, this terrible Mrs. Grundy, who rides upon our shoulders as pitilessly as ever the Old Man of the Sea did upon those of Sinbad.

If it were not considered such a horrible thing for an educated woman to do for money what she may do for amusement with applause, the difficulty would be at an end, and it would speedily be discovered that in the field of intelligent labour the female organization would be enabled to work harmoniously beside that of the other sex, and, in many cases, to rival it. With regard to the higher class of occupations, there can be no doubt that the closed door is gradually giving way. We see light between the chinks, and before another half-century it will be open wide. Let us take the art of design, for example. Up to the present time, no woman ever dreamed of initiating even in needlework anything beyond punching holes in cambrick and then sewing them up again. Take the piece of embroidery out of your sister's work-box, good reader, and see what you can make of it—if there is head or tail, form of beauty, rectilinear or curvilinear, to be found in it, your sister must be a *rara avis*. Our mothers and grandmothers, as we know by those prized pieces of silk and worsted-work which still hang on the walls and fade gradually away in gloomy corners of upper bedrooms, were not an atom in advance of ourselves. How could it be otherwise? Art culture, as a matter of national education, is only just beginning to be recognised. In the Great

Exhibition of 1851, we suddenly discovered that we were utterly deficient in both form and colour; but since then we have gone to work with a will. In every important manufacturing town in England there is now a Government School of Design, spreading a love of art over the entire country, and educating the eye in the appreciation of all beautiful forms, and practising the hand in their reproductions. These schools are attended by fully as many ladies as gentlemen. The visitor need only visit one of these schools to be convinced that intelligent female labour in these admirable establishments is educating itself for scores of occupations entirely new to this country. As it is, we are indebted to the French for all our first-class designers. Most of the great manufacturers interested in the production of articles in which there is an Art-element, employ a French designer at a very high salary. We have no hesitation in saying, that in future the Schools of Design will supply native artists for these posts; and not only in designing for our textile fabrics, but in modelling for the goldsmith, and the statuary, female labour—through this door opened for them by the Government—will speedily flow in. We have heard many intelligent men doubt the female aptitude for the fine arts; and, certainly, as long as we could only point to the works of an Angelica Kauffman, it was difficult to gainsay them; but Rosa Bonheur has cleared away that difficulty, and has proved that the female brush can paint with the vigour of Snyders and the poetical grace of Landseer. The reason why they have not hitherto challenged the men in the field of art is plain enough.

They have never been trained. The young girls of the

upper ten thousand are indeed taught drawing at finishing schools by some wretched drawing-master; instructed in the production of sickly rose groups, or set pencil landscapes, in which the usual formula is half a dozen woolly trees, a church spire of course, and three crows to enliven the vast expanse of sky. Here we see the blind, indeed, leading the blind. The daughters who do not go to finishing schools have never been taught even how to make a straight line. Yet watch them working at the schools of design. Intelligent young girls, whose dress betokens the struggles of the homes from which they issue, after a year's study handle the crayon with a freedom and boldness that at once dissipates the notion that art is not for them. The secret of their success is, that they have adopted drawing as a profession. How many thousands of respectable young girls there are in this country predestined to labour for their bread, whose parents know that they must do so, yet we find them left utterly untrained for any really useful purpose in life. The curate, with his proverbially large family of girls, brings up his fair family to present poverty and to the prospect of bitter struggles to sustain life when he is gone. They may some of them marry, but the chances are against them; some of them will, in all probability, descend to the posts of nursery governesses, or of female companions. If that terrible Mrs. Grundy would cease to tyrannize as she does, why may not this fair family determine with woman's courage to prepare to do woman's work? The means, even of the curate, would suffice to give them admittance to the schools of design, and then Rose may take wood engraving as a profession. The abolition of the paper duty will give an immense impetus to literature,

and artistic labour such as hers will be in great demand ; and Mary, why should she not be a modeller for the jeweller ? and Kate, why should she not enter the field of art, as a painter ? We can imagine a family thus working at their different art tasks with somewhat more satisfaction than in reading insipid novels, or embroidering fierce brigands in worsted work, in which the coarseness of the canvass causes that delightful man's nose to ascend in a series of well defined steps. In the one case they would work with the feeling of real artists, and therefore their labour would be a labour of love, and we may add, of profit also.

Mr. Bennett, who has laboured so earnestly to open the manufacture of watches to women, told us an anecdote the other day, which illustrates at once the difficulties women have to contend with (from the other sex, we are sorry to say,) in making their way into a sphere of labour hitherto considered sacred to the men, and the success that attended their courageous efforts. Three young ladies, after a preliminary training at the Marlborough House School of Design, applied to him for occupation in engraving the backs of gold watches. Although perfect strangers to this kind of work, in six months, he tells us, they became as practised artists as a mere apprentice would have been in six years. At the end of this time, when they were making each three pounds a week by their labour, the men in the shop struck. These "foreigners," as they were termed, must go, or *they* would ; and Mr. Bennett was obliged, sadly against his will, to comply with their wishes. These brave girls, however, were not to be beaten ; they immediately turned their attention to engraving on glass, and are now employed at this delicate employment, and

earn as much thereat as they did before at watch engraving. What these young girls did, thousands of well-educated young ladies may do also. And yet, despite Mrs. Grundy, we dare maintain that to engrave a watch, or to embellish the crystal for our table, is quite as elevated an occupation as to see that Master Tommy's nose is properly wiped, or that his linen is duly cared for.

We have instanced the decoration of watches and of glass as mere instances in point. The delicate female hand, the most beautiful and pliant instrument in the world, once thoroughly educated, the whole world of design is opened to her, and the field of her labour is almost boundless. There is scarcely an article of home manufacture in which we have advanced much beyond the rude old Saxon style. Every article of household use, as far as design is concerned, has to be reformed, and will be, as our tastes advance. Why, then, should not the trained female artist hasten to share the work with her brother-artist?

But why need we stop at the fine arts, when we look around for employment for *intelligent* female labour? We trust Clerkenwell will not demolish us, for alluding to watchmaking as an art that seems to demand the exercise of the female hand. "I cannot get on without the woman's hand," says John Bennett, in a letter to the *Times*, and he very justly points to the Swiss watch, which is now rapidly taking the place of the English second-class watch. He calculated that no less than 200,000 of these watches are imported or smuggled annually into England, whilst 187,000 is the whole produce of English watchmakers. In order to discover the reason of their very cheap and beautiful production of watches, he

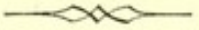
determined to go to Switzerland himself, and the reason was soon apparent. He found that no less than 20,000 women were employed in Neufchâtel alone in making the more delicate parts of the watch movement,—not cooped up in squalid courts as the men are in Clerkenwell, but in their own cottage homes on the slopes of the Jura, overlooking the beautiful Lake Leman.

The foundation of their art, it must be remembered, is their intellectual culture; every woman thus employed is well educated; if she were not, her fingers would lack that subtle intelligence so necessary to the calling of a watchmaker. The manner in which the labour is divided is also remarkable. Every workwoman and workman (for the labour of the former, instead of superseding that of the latter, only calls it into more active existence for the production of the heavier work,) selecting exactly that portion of the watch-movement which he and she can do best. They have also a decimal standard gauge for all the different portions of the wheel-works; in this manner all the parts are interchangeable, just as those of the Enfield rifles are with us. Our great London watchmakers are too high and mighty to descend to this levelling process; consequently, we hear of Frodsham's size, Dent's size, or Bennet's size, but of no standard size that all watchmakers can work to. Moreover, among these rural districts, where one would think that manufactures were carried on in the most primitive manner, we find, on the contrary, the greatest system possible prevailing in this particular trade. In consequence of every workman and every workwoman being registered, together with the exact nature of the work they do, any of the wholesale manufacturers, by

using the telegraph, can procure, within a few hours, the details of the watch-movement to any extent. The facilities in this metropolis, which is a kingdom within itself, for such an admirable division of labour and concentration at will of its products at the command of the watchmaker are very great; the labour also is but too plentiful, were it only trained.

Mrs. Grundy would doubtless turn up her nose at intelligent and educated Englishwomen directing their attention to a mechanical trade, forgetting that shirtmaking also is a mechanical trade, and that the needle and thimble are as much tools as the fine implements used in watchmaking; nay, and much coarser tools too. In Switzerland 20,000 women in this trade earn on an average fifteen shillings a week, which goes as far in their country as double that sum would in London. Here, then, is another occupation, that, to intelligent women, would prove a perfect mine of wealth, and most heartily we trust that Mr. Bennett will be successful in his attempts to open it to the intelligence of women. It is in vain that we sing the "Song of the the Shirt," and get up annual subscriptions for down-stricken sempstresses. It is in vain that we hold midnight tea-meetings to tempt Lorettes from their evil courses; as long as we shut young women out from honourable means of employment, so long will their labour be a drug in the market, and their degradation but too facile a matter to the tempter.

THE TURKISH BATH.



When my maiden aunt, the other morning, insisted upon my wrapping my neck up in a comforter, and putting on double coats, fleecy hosiery, thick woollen gloves and mits; and, moreover, warned me in the most solemn manner not to expose myself to sudden cold; I believed as firmly in her injunctions as I used to believe in the sacred sentences used as copy slips. Scuffling down towards my club, too stiffly wrapped to turn my body with ease, an animated mound of woollen, I happened to meet Tom Glasters—Merry Tom, they call him. "Why, old fellow," he said, giving me a dull pound through my woollen armour, "is that the way you try to keep out the cold? Come with me and have a Turkish bath at W—'s, and then sit in a draught for half-an-hour with only a thin sheet on,—that's the way to harden you to cold, my boy."

"Stand in a sheet this weather!" I stuttered, with chattering teeth, and goose-skin running down the centre of my back. "No, I thank you."

"Oh! but you must," he replied, in his quiet, determined way, coupling my arm in his, and marching me off in triumph. I knew I was about to deliberately commit an outrage on my aunt's feelings, and fly in the teeth of

her fleecy hosiery and comforters; but somehow I was under a fascination, and go with Tom I must.

"Stand in a sheet this weather!" I once more imploringly exclaimed.

"Stand in a sheet! Yes, and very jolly too."

In another minute we had reached W—'s mansion, and having dropped my mound of wrappers, Tom introduced me to five or six gentlemen about to undergo the penitential sheet in our company. I was somewhat consoled by the cheerful manner in which they seemed to contemplate the coming trial, and moved on with the company into a black apartment, the footman informing us, at the same time, that his master was already awaiting us in the Frigidarium. The sound certainly was not pleasant, with the thermometer below freezing-point. But I had little time for reflection, as we were all ushered into an apartment which looked out upon the back leads, one of those third back rooms on the ground floor which seem an institution in London. The locality was too familiar for any horrid torture, and following the example of the company, I speedily found myself habited in a light terpsychorean costume, or kilt (cummerbund is, I believe, the correct designation). Thus habited, we followed our leader through a double door, and found ourselves in the Calidarium, or sweating chamber. Imagine a small hot-house surrounded with hot-air flues, and in place of exotics, placed above them on the wooden stages, see the company seated. The thermometer marked 135 degrees, yet I did not feel particularly warm; strange to say, my face, which is always exposed, felt the heat most. My companions, who were habitués of more or less standing,

watched me apparently with some interest, and on my remarking that my face felt hot, one of them passed his hand down my arm.

"Do you call that skin?" he exclaimed, in a tone so deprecating, that I mentally felt the deepest shame at its possession.

"No," I said, "what is it?"

It's horn, sir, it's horn. You are only a shade less horny-hided than an armadillo." This was a rather startling proposition. Had my careful aunt only trained me, with all her care, to arrive at this condition? "We must have this off, sir," he went on, in a tone as indifferent as though he were some wretched old woman about to skin a live cat.

"Have it off, sir," I said, getting half-angry; "I should like to see the man that will lay a hand upon my skin."

"We will see about that," he replied, in a most provokingly cool manner.

"Goodness gracious!" I inwardly exclaimed, "to be frozen, dried up to a mummy, and then skinned,—and for Tom to call it so very jolly!"

I must own, however, that, after all, I began to feel particularly light and happy, Had I a hundred pound acceptance coming due that very day, and nothing to meet it at the bankers, I should not have cared a snap of the fingers. "Is it only necessary to get hot to get happy?" I inwardly inquired.

Happening to rise for a moment, however, from the bench, and to take a fresh seat, I gave a sudden jump up again, as though I had been shot. Had I inadvertently seated myself on the bars of the furnace?

"Not at all; the wood is hotter than you calculated," remarked one of the habitués; "you must keep your seat."

Some one has quaintly said that if an ordinary-sized man were placed in a press, between a sufficient number of sheets of blotting-paper, before the screw had reduced his anatomy to the flattened condition of a dried botanical specimen, that blotting-paper would have extracted from him no less than eight gallons of water.

I never could credit this mendacious assertion as I believed, until I had been in the Calidarium about half-an-hour; then it became clearly apparent that there may be some truth in the statement. The skin did not perspire so much as it streamed with water.

"Before you have done," said one of my tormentors, you will have lost three pounds."

A remarkably fine man, seated aloft in a still hotter atmosphere, every now and then took a copious draught of water, as a kind of compensatory process, and the effect was indeed remarkable,—it was like pouring a bucket of water into a watering-pot and then witnessing it stream out of the rose. His whole body became in a few minutes one rose, from which the water previously imbibed transuded. The animated watering-pot, whilst in full activity, stepped down from his reclining couch and went out into the Frigidarium (oh! shade of my aunt!). I followed: the windows were open, and there we stood in a thorough draught, two columns of steam rising straight up to the ceiling testifying to the activity with which the cooling process was going on. This alternation of temperature, I was informed, was only another method of accelerating the perspiratory process, for on returning into

the Calidarium we were river gods once more, every pore an urn to supply a rivulet.

"Now, sir," said my friend in the bath, "your skin is nearly ready to come off," and with one sweep of the palm of his hand he denuded me of a long pipe of macaroni.

I shall not inflict a long description upon the reader of the art of shampooing, but I own I was astonished to see the amount of debris among which I stood after the completion of the process.

"There goes your armadillo hide," remarked one of my companions. "Now your skin is a living structure, instead of a half-paralysed surface, with little more life in it than your nail."

The measure of the frequency with which the different bathers present had taken the bath was at once evident to the observer by the condition of his skin: my own on first entering was rough and sallow, whilst the systematic bathers' epidermis was as soft and glossy as satin. I carried with me the accumulated coats of a year's epidermis, which no mere washing could ever get off. The process of shampooing was somewhat like the cleaning of an old master. The flesh tints came out bright and lustrous where all before was brown and lead coloured. And this refuse, it must be remembered, was not upon the surface. No ordinary washing would have removed that; it represented the accumulated refuse of the body. The hot-air bath, it must be explained, acts in the very opposite direction of the vapour or warm water bath, which checks instead of aids the unloading of the different ducts which have their outlets through the skin. The hot-air bath flushes the external sewers of the body, and the waters of

exudation carry with them all effete particles lodged within them. We never seem to remember that we can no more exclude the skin from the action of the light and air than we can exclude a living vegetable, or allow its pores to be blocked up. The very neglect of our attention to the skin is the cause of more than half the ailments to which humanity is subjected. When we remember that the skin is one of the great scavengers of the body, and that it is also a vast external lung, we see the necessity of keeping it in an active condition. We may liken the epidermis to a double night-cap thrust in upon itself; the skin, from the lips inwards and downwards, is a mucous surface, lining the lungs and the alimentary canal, and the functions of both of these internal organs are more or less supplemented by the outward skin or external fold of the night-cap. As long as the epidermis of the body is in lively action, there can be no congestion of the internal eliminative organs, such as the liver, intestines, and kidneys. We therefore see of what immense importance it is as a medical region.

A clergyman who was present with us in the bath stated that, since he had habitually taken the Turkish bath, he had entirely got rid of the professional sore throat with which he had before been afflicted. The number of diseases for which the Turkish bath is recommended, even by medical men, is so large, that it would seem to be a general specific. There can be no doubt that its virtues are very great in all cases where there is a vitiated condition of the blood, arising from a languid condition of the skin and circulation, or any specific poison lurking within it. We have heard such miraculous tales told respecting its powers

in curing rheumatism, that we cannot doubt its value. Mr. Erasmus Wilson also states that it is wonderfully efficacious in many skin diseases. It has been objected that in all cases of disease of the heart, the Turkish bath would prove injurious; but Mr. Wilson, in a lecture lately delivered upon the use of the bath, energetically denies this statement. "I believe," he says, "just the contrary, that many diseases of the heart may be cured by a judicious use of the Thermæ; and in the very worst cases it would prove to be the very best remedy that could be employed." In some cases, indeed, the heart's action is accelerated by the use of the bath, but a moment's sojourn in the Frigidarium, with its plentiful supply of pure oxygen, instantly calms any perturbation. Those who have not accustomed themselves to the bath, sometimes complain of feeling a fulness in the head, but this objection can be met by simply wrapping a towel round the head. That the Turkish bath will before long be esteemed a necessary part of every gentleman's house, is exceedingly probable. Indeed, its curative effects can scarcely be realised without it. When we are overcome with influenza, sore throat, or rheumatism, we are generally too ill to visit a public bath; in these cases the Calidarium will prove the true medicine chest.

Whilst we speak thus unreservedly respecting the value of the Turkish bath, we by no means believe it to be the specific for all diseases the bath proprietors would make the public believe. There is quackery in this matter, as in all others. Only lately one of these proprietors favoured us with an inspection of what he termed his "Case Book," in which the maladies of his patients were set forth with great gravity. Of course, he met with nothing but cures.

One of these days, a patient will drop down dead in the Tepidarium, and then a coroner's jury will duly descant upon the necessity of consulting a medical man previously to employing such a powerful remedial agent as the Turkish bath.

Our sporting friends, also, are beginning to perceive the value of the bath for training purposes. At present a fighting man, or running man, is obliged to conform to weight. He must reduce himself to a certain point before he can even enter the lists, to say nothing of the disqualification superfluous flesh and fat entail upon him. Of old, the sweating process was brought about by encasing the pet of the fancy in half a dozen top-coats, and, thus clothed, placing him under violent exercise, with peculiar diet, and a very moderate amount of drink. This barbarous method of getting a man into condition will, if our sporting contemporary, the "Field," speaks truly, be superseded, and we may expect to meet our athletes and public gladiators in the public sweating baths, as they did in the antique times. Even our race-horses are now given a hot-air bath in place of a gallop-sweating in the training ground, and cattle suffering under pleuro-pneumonia are said to feel great benefit from its medical virtues.

But whilst I have thus been descanting upon the physiological action of the hot-air bath, I have forgotten that the final process of cooling is not yet completed. Leaving the Calidarium for good, we now returned to the Frigidarium. Here, clothed in long sheets, like a party of ghosts, we gradually cooled before the open window, with the biting air marking below freezing-point. How was it that I, who shivered beneath my mound of wrappers, felt

the frozen air quite exhilarating, and the draught quite delicious? It often used to be a puzzle to me to understand how it was that the stoker of the penny steamer could one moment stand before his furnace door, exposed to a temperature of 200 degrees, whilst the next moment he would be seen airing himself at the top of his stoke-hole ladder, apparently in comfort. Again, how could it be consistent with my respected aunt's theory of the necessity of avoiding sudden changes of temperature to see the glass-blowers and iron-pudlers one moment roasting before the white heat of a furnace, and the next cooling their reeking bodies in the open air. Here was the true secret—the body once exalted into energetic action by the combined effect of a high temperature and a thorough action of its pores, is able to withstand with impunity any change of temperature, however sudden. It is a matter of common observation that a thorough warm at the fire is the best preparation for a long walk in the cold. Nevertheless, there are some persons who condemn this proceeding as a pampering of the body; people who will actually sit at the other end of the room lest they should get any adventitious heat from the fire. Do not believe, good reader, in such ascetic nonsense any longer—in this instance, the pleasant is the true thing to do.

We have given our experience above of a private bath, improvised in the third room back of a private mansion. In the public establishments which are now spreading throughout the three kingdoms, but especially in Ireland, the plan of the old Roman bath is more strictly followed. There is the Tepidarium, the Suditarium (heated to a temperature of 120), and the Calidarium, in which the

heat is exalted to 160 degrees. Next to this is the Lavitarium, in which the washing and shampooing process is carried on. There are such institutions already established in the Edgware Road; in Charlotte Street, Pimlico; in Golden Square, and other parts of town; and such is the growing rage for these baths, that a company has been started, with a capital of £100,000, for the erection of a series of public Roman baths worthy of this great metropolis. There is nothing new under the sun. The Turkish bath, which Mr. Urquhart has introduced to the West, is a reminiscence of the old Roman bath of the lower empire.

The barbarian Turk has been the medium of keeping alive one of the most healthful practices of the ancients. There is scarcely a spot throughout the United Kingdom in which the remains of these very baths have not been disinterred and gazed at by the curious during the last half-century. We turn up the flues, still blackened with the soot of fourteen centuries ago; we find, as at Uriconium, the very furnaces, with the coal fuel close at hand; and we know that the hot bath was not only used by the legionaries who held Britain, but by the civilized Britons themselves; yet we must go all the way to the barbarian Turk for instruction upon one of the simplest and most effective methods of maintaining the public health. What medicine we might have extracted from these old classic ruins, if we had chosen to view them in their right light! What feeble sudorifics are Dover's powders, or antimony, or ipecacuanha, compared with the action of the hot-air bath!

Thus moralizing I reached home. My first impulse was

to pitch my comforter to the end of the room; my next to astonish my respected aunt.

"Well, my dear boy, what have you been about to-day?"

"Standing before the open window with only a sheet on me."

"Now, James, don't make fun of an old woman."

"True, upon my honour; and intend to do so twice a week, and to leave off all this toggery," kicking my wrappers.

"Why, what's come to the poor boy?" (I am fifty-five next month!)

"First I was baked for an hour in an oven, and when at the hottest, I cooled myself in a thorough draught," I malignantly remarked.

"You've been drinking, James," was the only response I could get to this monstrous statement. That I was either drunk or mad my venerable relative did not doubt. Indeed, how often do we find that the madness of to-day is the prime wisdom of to-morrow, that our presumed afflictions are our most serviceable friends!

THE NERVOUS SYSTEM OF THE METROPOLIS.

A GREAT gap has just been filled up in our system of telegraphic communication. Cities can converse with cities, countries with countries, and even continents with continents; but house cannot communicate with house. We have the district telegraph, it is true, and by walking half a mile in town you may find a station which will send a message to within half a mile of its destination: but what is wanted is a system of telegraphy which shall dip its wires down into the library or warehouse—an elongation, if we may so term it, of our own nervous system, so simple in its construction that anyone can work it, so speedy that we may telegraph as quickly as we could write. We want, in short, in all large towns to abolish the messenger and district post, and Professor Wheatstone has provided us with the means of doing so.

All existing telegraphs require a staff of trained clerks to work them. The language of the common needle instrument employed throughout the country is as difficult of acquirement as short-hand; consequently, it presents an insuperable bar to its private use by untrained persons. The invention by Professor Wheatstone of what he terms the Universal Private Telegraph has obviated this difficulty, and the Company formed to work his patents are now prepared to lay on telegraphic communication betwee

factory and warehouse, public office and public office, police station and police station or between private dwellings, with as much ease and more speed than we now lay on the gas.

The method of working the new telegraph can be understood by the child that knows his letters. If we enter Messrs. Spottiswoode's establishment for the sale of state papers at the House of Commons, we may see two elegant-looking instruments. The communicator or machine which sends the message is very similar in size to a ship's chronometer. Round the outer edge of its face, running from right to left, are printed the twenty-six letters of the alphabet, three stops and a cross. Inside the letters are numerals, from one to ten. Outside the edge of the disc are ranged a series of keys, similar to those of an accordion, opposite to the different letters. By touching a key a pulse of electricity is passed through the Indicator, and as the operator spells the word upon its face, he knows that his correspondent at the end of his wire is reading off his message on an exactly similar watch face, it may be twenty miles away. At each terminus of the wire of course there is both a Communicator and an Indicator. But, asks the reader, how are the wires conveyed which complete the electric circuit? The earth circuit-line is simply attached to any water-pipe which may be under the house, whilst the other is carried high over head, out of the way of the busy hive of men whose slave it is. In all probability, the aërial traveller of ten years hence passing over London, or any other large town, in a balloon, will view all the treasures of the earth guarded, like a jeweller's window, with a wire-guard.

The telegraphic cables will be carried over the tops of the houses in nearly equilateral triangles, each angle having a base of a mile in length. The term telegraphic cable, however, may possibly puzzle the reader without some further explanation. The electric wires will not run as those we see beside the railways, stretched for the sake of isolation like bars of music, but will be contained in numbers from thirty to a hundred in a single cable (or more, if necessary), thoroughly isolated from one another by an Indian-rubber process patented by the Messrs. Silver, of Silvertown. Gutta-percha, the ordinary isolator, would not be able to bear the exposure to the heat of a summer sun, but Indian-rubber will not melt at any heat under the boiling point. The bundle of copper wires thus isolated in the Indian-rubber cable are No. 22 gauge, or not thicker than ordinary pack-thread; Professor Wheatstone has discovered that he is enabled, with conductors of this thickness, to convey a message twenty miles with perfect ease. This is a great discovery, inasmuch as it greatly reduces the expense, and allows of the combination of a large number of wires in a cable not thicker than the little finger. As it is desirable that no strain should be put upon the cable, it is not allowed to bear its own weight for any distance. Thus suspending posts will be erected on the tops of the houses at every two hundred yards; from them stout iron wires will stretch, from which the cable will be at moderate intervals lightly slung. At the intersection of every angle a mile apart, stout straining posts will be erected in order to taughten the wires when required. At these posts, what is

termed a connecting-box will be placed, for the purpose of combining the various lines and wires together in any required order, and also for bringing off the return wires to such renters as may reside in the vicinity.

The wires all being bound together in one rope, it will naturally be asked, What provision is there for discovering a fault in any particular wire, at any particular point? So necessary a provision as this has not been overlooked. At every suspending post, two hundred yards apart, the wires of the cables are separated, and are passed through what is termed a connecting disc. This disc is fitted with a series of small tubes, those which contain wires running in one direction, being coloured red, and those which proceed in an opposite direction being coloured black. Each of these pipes, as well as each wire, is numbered. It will only be necessary, therefore, to test from post to post, in order to find where the interruption to the passage of the electric current has taken place. The fault thus narrowed to a distance of two hundred yards, can instantly be rectified. If our nerves could only be numbered, and isolated, and repaired in this manner, what a blessing it would be! It is anticipated that for a considerable time the new telegraph will be principally confined to the use of public offices and places of business. Thus the principal public offices are already connected by its wires, and, if we might be permitted the ugly comparison, the Chief Commissioner of Police at Scotland Yard, spider-like, sits in the centre of a web co-extensive with the metropolis, and is made instantly sensible of any disturbance that may take place at any point.

The Queen's Printer, again, has for years sent his mes-

sages by one of these telegraphs between the House of Commons and his printing-office near Fleet Street. The different docks are put *en rapport* with each other, and it will be especially applicable to all large manufacturing establishments requiring central offices in the City. Thus, the Isle of Dogs and Bow Common, the grand centres of manufacturing energy, are practically brought next door to offices in the centre of the City. The merchant residing at his country residence, through his private wire may know all that is going on at the docks without leaving his library—when his ships have arrived, when they have sailed, and, possibly, when they have been wrecked. It must not be supposed that any of these wires are nsed in common by several persons. Each person will possess his own particular wire, as he possesses his gas or water-pipes, for the use and maintenance of which he will pay an annual rent. Thus the wire will be let to him at the rate of 4*l.* per mile, and he may either purchase the communicator and indicator, the working instruments of the telegraph, or he may hire them at the rate of 12*l.* per annum. Thus a man may talk over the distance of a mile for the sum of 16*l.* annually, and for any distance farther for an additional 4*l.* per mile. The use of this singular instrument has even penetrated into the country, and Lord Kinnaird has already laid it down between his mansion of Rossie Castle and the neighbouring county town, eight miles distance, and if anything is wanted from his tradesmen there, the order is given in his own library.

The great peculiarity of the Universal Telegraph Company is that it puts the means of communication in the hands of the public without making any public appearance

itself. It has no clerks, no offices, no stations; it simply provides the machinery, and puts the clue into the hands of its customers, and leaves them to do their own work.

As long as these renters employ the wires simply for commercial purposes, and confine themselves to using a given portion of the public electric way, the business of the company can be carried on in this inexpensive manner; but it cannot, we think, be doubted that, in time to come, the telegraph will become a necessary of domestic life, and that it will, year by year, encroach upon the province of the Post-Office. When this day arrives, which it has already done in America, a necessity will immediately arise for district stations, in which the wire of one friend may be placed in communication with that of another, or in fact with any person who rents a wire. It may be that the friend may dwell in another part of the kingdom, in which case, before sending a message, it would be necessary to have his wire placed in connection with a public railway telegraph, and this again at its terminus with the friend's wire.

By combining beforehand different lines in this manner, two different persons may converse together across the island, sitting in their own drawing-rooms; nay, by only extending the connection of these lines with the submarine cables across the sea, a person may converse with his friend travelling day by day at the other end of the globe, provided only that he keeps on some telegraphic line that is continuous with the main electric trunk-lines of the world. This may appear to be an idle dream, but that it will certainly come to pass we have no manner of doubt whatever.

Mr. Holmes, the able engineer to the company, has already planned a telegraphic system of communication for the city of Manchester, by which all the principal warehouses and factories will be placed in communication with each other. All the great cities of the empire are awaiting the construction of the new system, and, ere long, the mechanical commissionnaire will be doing the errand work of all the great centres of industry in the community.

We may view the vast net-work of wire about to be erected over our heads as a plexus of nerves answering to the ramification of nerves which makes the skin so sensitive. The air will hold in suspension, as it were, the intricate highways of thought. Between us and the bright blue sky, unseen messengers of good and evil will be perpetually flowing to and fro.

Who shall say that this old earth is near its decadence? Why, it has only just been endowed with its nervous system; its muscles, if we may so term the steam-engine, have only been just set in motion; and its locomotive powers, the railway and steam-ship, have only just found out the full use of their legs. In brain, nerve, and limb, it is but just emerging from its helpless infancy. At what pace we shall go in the next generation we scarcely dare to anticipate.

The Universal Private Electric Telegraph Company is limited to providing private electric ways to customers, who wish to possess an instantaneous communication between given points. For this purpose no public offices are necessary as the individuals send and receive their own messages. This company therefore can be of no use to the communit at large. In a metropolis like London—which is in itse

a province, extending in some directions for ten miles—it must be clear that a speedy method of communication is of the last importance. This want is in course of being provided for by the London District Telegraph Company, whose chief office is in Cannon Street, with a central West End office at Charing Cross. This Company is steadily and silently extending its operation so as to cover the whole area of London with its wires. Whilst the Universal Private Telegraph Company have chosen the air as the pathway for their lines, the District Company, as far as the West End traffic is concerned, have chosen the ground. Their wires, all separate, and coated with gutta-percha, are enclosed in iron pipes and buried beneath the curb stone of the pavement. Many of our readers must have witnessed the laying of these bundles of chocolate-coloured pipes, and wondered what could have been their purpose. They are the main collection of nerves, the spinal chord, in fact, between commercial London, and its sister city of Westminster. At stated distances iron posts are erected for the purposes of affording testing points for the wires. If any of these cease to work, the workmen have only to test from post to post, to find out where the break in the current has taken place. The value of this Company to the public must evidently be in proportion to the number of offices they can manage to dot over the face of the metropolis. As long as the stations for receiving messages were a mile apart, their operations were necessarily confined, as the time taken up by messengers in forwarding messages, and also the expense, greatly detracted from the practical application of electricity, as a means of superseding the old methods of communication; but

the multiplication of electric stations has lately brought the metropolitan electric way-wire prominently before the public. Within a radius of two miles of Charing Cross, which covers all the chief resorts of business in London, there are now offices for the reception and transmission of messages at every quarter of a mile: thus any one terminus within this radius is practically within five minutes of another, and of any part of its neighbourhood. The central business office of the Company is at Cannon Street: there also is the centre of the telegraphic system of the Company. From this point the different lines of wire radiate to every part of London. Upwards of eighty wires are here gathered up, and ascending a long shoot in the interior of the building, are then spread out and distributed to the different telegraphic machines in the telegraph room. This is the sensorium of the nervous system. Three large counters stretch along the whole length of the room, and rows of young ladies sit before their instruments, either watching or working them. The principal work of these machines is to transmit the messages sent to them from out stations. Thus, supposing a message has to be transmitted from Kensington to Camberwell, the electric current is not switched right through the central office, but is received and transcribed there and re-transmitted through the Camberwell line.

Of course, from the central position of this office, it has also a considerable amount of messages to send to the outskirts and suburbs; but this part of its business is secondary to the other. The telegraph-room is nothing more than a workshop, but the workmanship performed requires delicacy and intelligence,—it is brain-work rather

than muscle-work, and the experiment has been successfully tried of employing upon it female labour. It is extraordinary the number of occupations that are gradually opening to respectable young females, now that attention has been publicly drawn to the vast supply of this power there is at present in this country unoccupied. Almost all the manipulators at the different telegraph companies are young ladies. There are upwards of two hundred at the old Electric Telegraph Company at Lothbury, and they are found to do their work excellently well. At the telegraphic room of this Company, the number of manipulators is comparatively small; but we could not help being struck with the intelligence of their appearance. They evidently belonged to the class whose only resource, a few years ago, was to supply the more affluent with nursery-governesses. The labour is light, and gives them the interesting privilege, to ladies, of being the repositories of other people's secrets. The instruments are not at all times at work, but their attendants must be always near them, in order that they may hear the click of the needle calling their attention to the coming of a message. Whilst waiting for the summons they are allowed to read or sew, and this mixture of work and amusement looks singular enough. The young ladies have to go through an examination before they are received into the service of the Company. They matriculate with writing and spelling; they are then taught the use of the needle instrument, a matter of some little trouble, as it necessitates a familiarity with certain signs, representing letters; and when they are sufficiently expert to be able to telegraph eight words per minute, they are placed upon the staff and paid 8*s.* per

week, a sum which is augmented to 15*s.*, as they grow more expert, and are able to telegraph with greater speed.

It is worthy of notice that a certain amount of refinement and consideration is shown to these young ladies by their employers. As their hours are between nine in the morning and seven in the afternoon, between which periods they are not allowed to leave the establishment, some arrangement is necessitated for the supply of their meals. The Company provides an excellent cook, who prepares the food they bring for dinner and tea, which is partaken of in a very comfortable dining-room. There is also a lavatory, embellished by a fountain, and all the arrangements indicate a very gallant appreciation, on the part of the Company, of the class of people it employs. We cannot help thinking that other employers of female labour of the better class might follow the example of the telegraphic companies, in this particular, with advantage. The young ladies are found to be admirable manipulators of the instruments, and they are said to possess this advantage over the other sex, that they are more manageable, and have less inducements to change their employment. But it is not only in the telegraphic department that female labour is employed: the clerks rustle about in silks, and manage to place a pen behind their ears with the best commercial air. The clearing-room is wholly worked by young ladies. In this part of the establishment all papers belonging to each message are docketted together, and placed in pigeon-holes, numbered with the sign of the office from which the message has been received. These papers contain the whole history of the message, through its entire progress.

The porterage of the establishment is carried on by a staff of boys. Formerly they were paid weekly wages, but latterly the system has been changed to piece-work. The boys are given one penny per message—it is astonishing to see how admirably the plan of giving the boy an interest in his own exertions answers for both employer and employed. Formerly the boys endeavoured to obtain a minimum of work with a maximum of play: now, the rush is for work. Boys that were before only earning 4s. per week, now very often get between two and three shillings a-day.

At the out-stations, the distances to be gone over are greater, consequently the porterage is more expensive; but the Company are quite alive to the importance of reducing the cost of transmitting messages to the lowest possible point. In the suburban districts, the office of the Company is generally located in some shop, and in many cases the proprietor himself performs the work of telegraphic clerk. Generally the post-office is selected. An analysis of the messages sent prove that communications of a domestic character are steadily on the increase. When we remember that commercial London lives out of town, we can understand that the heads of households would have many occasions to communicate with their homes. Thus, a very common message is for forgotten keys, or some "worse half," mindful of the black looks that await a husband who brings home a friend to "pot luck," sends word of the coming of company. It is very common to order places at the opera, or at theatres, by telegraph; and doctors, now and then, when taken suddenly ill, send round to their patients to know if they will be wanted, franking the return message.

It is now becoming very common for tradesmen in the suburbs dealing in perishable articles of food to telegraph to Leadenhall, or Billingsgate, for poultry or fish, and town travellers, also, forward their orders by the same agency. Sometimes notice of a cheque being dishonoured is thus sent, and it is common now to order coals by telegraph, the tradesman advertising to pay the cost. Into public life the District Telegraph also enters. Thus it connects the different courts of law, and Sergeant Hardup, engaged at the Old Bailey and at the Westminster Sessions at the same time, is enabled to learn the minute that his services will be required at either place. The saving of time and of labour which the District Telegraph will bring about when it is fully developed will be incalculable. The cost of transmitting a message, porterage included, within the two miles' radius of Charing Cross, is only sixpence, a sum that brings the new messenger within the means of most people; and we may now consider that we no longer labour under the reproach of putting the most distant parts of the country in connection with each other, whilst we leave the capital without any of the facilities which modern science has given to us.

WHO IS MR. REUTER?

ALL the world is asking this question. Is the mysterious individual who tells us through the public press what battles have been won or lost—what kings have decamped, or what words emperors have spoken an hour since in far-off countries, which will shake the political world to its foundation — is this Mr. Reuter an institution or a myth? Must we count his name like one of those which have an existence in the heathen mythology only, or is he a man like ourselves, having "feelings, organs, dimensions," &c.? If he be, by what extraordinary organization does he manage to gather up over night a summary of events over the entire continent, and to place it before us as a startling interlude between coffee and toast at the breakfast-table? Nay, how is it that through his mouth—if we may so term it—we hear for the first time of a successful battle in China, or of the madness of the Southern slave states in America? To answer all these questions is the purpose of the present paper, and we may claim the privilege of being the first to satisfy the public inquiries relative to this very interesting subject. Mr. Reuter's history is like that of all

courageous and energetic men, who, seizing upon a new idea, work it persistently and silently, until one fine morning, from comparative obscurity they suddenly find their names famous.

The practical success of the first working telegraph on the continent—that between Berlin and Aix-la-Chapelle in 1849—convinced Mr. Reuter, in common with every thinking man on the continent, that a new era in correspondence had arisen, and he determined to avail himself of its facilities for the public advantage. The first office for the furtherance of telegraphic communication was opened at Aix-la-Chapelle, an admirable spot lying so conveniently between the east and west of Europe. This office formed the first centre of that organization which has since gathered up into the hands of one man for all general and public purposes the scattered electric wires of the world. In order to correct breaks in the most direct line of transmitting news, he had to supplement the wire with contrivances of his own, so as to insure priority of information. Thus, the better to gain time in the journey between Aix-la-Chapelle and Brussels, he employed a service of carrier-pigeons. By this means on this distance alone he was enabled to anticipate the mail train between the two places by six or eight hours. In order to ensure regularity and safeness in transmission, each message was despatched by three different pigeons, which made the passage from Brussels to Aix-la-Chapelle in an average period of one hour. When the telegraphic line was extended from Aix-la-Chapelle to Quievrain, on the Belgio-French frontier, and the French Government extended their line from Paris to Valenciennes, there remained a gap of only five miles in

the line of telegraph between the French and Prussian capitals, but insignificant as this space was, the delay thereby occasioned was enormous. To obviate this, relays of saddled horses were always kept in readiness to forward despatches between the two points.

As line after line was opened in succession, each was made subservient to his system, and when the cable between Calais and Dover was successfully laid in 1851, Mr. Reuter, who had become a naturalized subject of Her Majesty, transferred his office to London, which thenceforth was put in connection with the principal continental cities. Up to this time Mr. Reuter confined his attention to the conveyance of commercial despatches, but it now struck him that the time was arrived for making the telegraph the handmaid of the press. One of the distinguishing characteristics of the British press is the vast expense to which it goes for obtaining exclusive intelligence. The principal morning papers were in the habit, at that time, of running expresses at an enormous cost. The *Times*, for instance, possessed a fast steamer, which conveyed to England news from Calais the moment it arrived from Paris. M. Reuter offered to supply the obvious want; but without success. The obstacles presented by the existing system were not yet to be overcome; and besides, a certain prejudice had been excited against political telegrams in consequence of the errors they so often contained. Sometimes they had to be translated into three or four languages before they reached the British public, and errors were but too likely to creep in under such circumstances. A second time, too, he was equally unsuccessful.

Mr. Reuter did not lose heart, however, as he foresaw

that the days of daily political telegrams were near at hand. "All good things are three," says the German proverb, and for a third time, in 1858, Mr. Reuter made his offer to the press. This time, however, he sent his telegrams for one whole month to all the editors in London, leaving it to their option whether they used them or not. The quickness with which Mr. Reuter received his telegrams, and the accuracy of the information they contained, were soon appreciated, and one newspaper after another became subscribers. His telegrams did not attract particular notice, simply because no great public event gave him an opportunity of showing the value of his system. So matters went on until the 9th of February, 1859. On that day the Emperor made his famous speech, in which he threatened Austria through her ambassador. His ominous words were uttered at 1 P.M. in the Tuileries, and at 2 P.M. the speech was published in a third edition of the *Times*, and had shaken the Stock Exchange to its foundation. This was a dramatic hit, and thenceforward every one looked out for Mr. Reuter's telegrams. The war in Italy followed, and in order to receive authentic accounts from all quarters, Mr. Reuter sent special correspondents to the French, Austrian, and Sardinian camps; and on one occasion it happened that he published three different telegrams of the same battle from his correspondents in the different armies. Many of these telegrams were, from their very nature, short; but on occasions, important speeches, parliamentary debates, and other political intelligence of especially English interest were telegraphed *in extenso*. The adoption by the English press of the few short but decisive facts communicated by

the telegraph did not, however, do away with the "exclusive special correspondents" of the chief morning papers; on the contrary, it allowed them more time to elaborate their information, and to go into detail. A dozen lines gave us the fact of the victory at Solferino; but the battle itself a week afterwards stood before the British public with all the photographic strength and completeness of the *Times'* special correspondent's pen.

The impartiality and accuracy by which Mr. Reuter's telegrams were characterized succeeded in procuring him the confidence of the press. The newspapers of the chief provincial towns were not long in availing themselves of his system, which ended in depriving the metropolis of the monopoly of early intelligence. The daily papers of the great towns of the north of England and of Ireland possess exactly the same early telegrams as the London daily papers, by means of Mr. Reuter's system, which posts England as well up in the news of the world, at her furthest extremities, as she is in the metropolis itself.

News from England is in the like manner conveyed by Mr. Reuter to all the chief continental cities. Thus the people of St. Petersburg may read every morning abstracts of the previous night's debate in the British Houses of Parliament.

What Mr. Reuter has already done for Europe, he is about to do for the other quarters of the globe. It will have been observed that all our earliest information from America, India, and China, the Cape, and even Australia, is derived from this gentleman's telegrams. In all these countries he has located agents, who transmit him news in anticipation of the mails. There being no direct telegraphic

communication between England and those countries, Mr. Reuter avails himself of every telegraphic line *en route*. Messages from America, for instance, are telegraphed up to the latest moment to the last port in the Atlantic where the steamer touches; they are then landed either at Queenstown, Londonderry, Galway, Liverpool, or Southampton, whence they are telegraphed to London. News from the East is received in an accelerated manner, by a similar method. All the telegrams first come into the hands of Mr. Reuter, whose day offices are near the Exchange, and whose night offices are in Finsbury Square —thus this gentleman is without doubt, as regards the affairs of the world, the best-informed man in it. He gives his political telegrams to the press alone, and never allows them on any account to be communicated beforehand to merchants and bankers for the purpose of speculation.

In order to make the separation between the political and commercial departments of his establishment the more complete, he has removed the former to Waterloo Place at the West End, whilst the latter remains at the city offices. These offices are open day and night; the day staff of clerks working from 10 A.M. till 6 P.M., and the night staff, a far more numerous one, in consequence of the far longer hours of work, being engaged, in relays, from 6 P.M. one evening till 10 A.M. next day. All the offices are connected together by the electric wire, and to still further facilitate the transmission of telegrams to the different newpapers, the wires are being continued from the West End Office right into the editor's room of each journal, who, by means of Wheatstone's universal telegraphic

apparatus, is enabled to read off his own messages instead of receiving them as heretofore, by messenger. The pedestrian, as he walks along Fleet Street and the Strand, will perceive high over head what might be termed the political spinal cord of the metropolis; every here and there it gives off right and left fine filaments; these are going to the *Globe*, the *Sun*, the *Morning Post*, the *Herald*, the *Standard*, the *Telegraph*, and all the other daily papers which line this great thoroughfare. These are the lines by which Mr. Reuter puts the whole British public in possession of the thoughts, and records the actions of the rest of the world; and as we watch the wires ruling their sharp outlines against the sky, for all we know they are conveying words which may affect the destinies of millions yet unborn.

OUR MODERN MERCURY.

It is often the case that the history of a single firm, is the history of a great social revolution in a country of rapid development, such as Great Britain. What ages seem to separate us from the time, little more than a quarter of a century ago, when it took two days to convey any important item of intelligence between London and Liverpool. Then the *Times* in the north was fresh two days after date! In those days, say thirty-five years ago, all newspapers sent into the country passed through the Post-office. The clerks at country post-offices received subscriptions for them, and transmitted their orders to the heads of the divisions at St. Martin-le-Grand, with whom they corresponded; these again employed a Mr. Newcombe to procure the papers for them. This process interposed an unnatural delay, inasmuch as the papers never left but by the night mail, and matters of the utmost importance to the mercantile community often were delayed a full day later than were passengers themselves. Just before the establishment of railways, it will be remembered, the speed of coaches was greatly augmented. The journey to Birmingham of 110 miles was regularly accomplished in ten hours, and the coach that left the Saracen's Head at eight a.m., stood before the doors of the Hen and Chickens, in

the great toy-shop, with reeking horses, at six in the afternoon. It struck Mr. Smith, the father of the present head of the extensive firm near St. Clement's Danes Church, that instead of waiting for the night mail, the morning papers might be despatched by the quick morning coaches, thus enabling the community at Birmingham to read the London morning news, and the great cities of Liverpool, Manchester, and other neighbouring towns, to get the papers on the first instead of the second morning after publication. This was a simple idea, and destined to be of immense importance to the community, and one would have thought that its advantages would speedily have been taken advantage of. The experiment, however, was only another example of the length of time it takes to make the public leave their old ruts, but of the ultimate triumph of all good ideas if sufficiently persevered in. Mr. Smith laboured long and earnestly in this new direction before it began to tell. As the morning papers in those days made no editions expressly for early trains, it often happened that the coaches started before they were out—this was Mr. Smith's first difficulty, which he overcame by establishing express carts to overtake them. On great occasions, these express carts went the whole journey at a very heavy expense ; but the prize was commensurate —the conveyance of important news before any other medium of communication. Thus Smith's express carried the news to Dublin of the death of George IV., before the government messenger arrived. Again, during the excitement of the Reform Bill, the craving for early intelligence made Smith's expresses famous throughout the north. Even at the latest period of the coaching time, however

one man, who is still in the establishment, was able to carry all the papers to the coaches under his arm, and now six tons of the *Times* newspaper alone, are despatched every day by the early trains; and the preparation of packing and folding, carried on in the great room in the Strand, is one of the most remarkable sights in London. The best day to witness this operation is on Saturday morning, between 4 and 6 A.M. The packing-room of the establishment is a large square hall open to the roof, and surrounded by two galleries, rising one above the other. A single cluster of gas-lights in the centre of the domed skylight is sufficient to make this immense apartment during the dark evenings of winter as light as day.

As soon as the steam-presses of the morning papers have thrown off the first copies, the red express carts of the establishment are at their doors ready to convey them to the office, and the clock has scarcely struck half-past four before the porters are seen staggering under huge piles of quires of broadsheets still wet from the press. These early copies do not go to the Post Office at all, but are sent direct to agents in the great provincial cities. It is a race with time to get them off—a race, however, which is always won. One of the farthest stations from Messrs. Smiths' office is the Great Western, which cannot be less than three and a quarter miles away. Nevertheless, the light express carts tear along the vacant streets at the rate of fifteen miles an hour, and rarely take more than fifteen minutes in performing the journey. The early copies despatched, the process of folding and directing the single copies to be transmitted through the post commences. The galleries, and the tables in the centre of the hall, are alive

with young lads folding and putting on the address covers for their very lives. The urgency is too great to permit of running up and down stairs, and therefore the strong arm comes into play. "Look alive there, and get these *Times* done," and a quire of papers pitches just like a shell in the midst of a group of boys. In a minute they are folded, wrapped, pasted, and have descended through a trap into a sack ready for transference to the cart. The superintendent, like nature, hates a vacuum, and no sooner is another group of lads idle, than a fresh shower of *Telegraphs* fly at their heads, with injunctions to get them off in three minutes. Sometimes there is a regular bombardment of the galleries with solid quires, which is returned by a descending musketry of folded papers.

The human hand folds well enough for ordinary papers where extreme nicety is not required; but the *Illustrated News*, which must be folded with the regularity of book-work, and with the speed of lightning, has a special machine constructed to accomplish this purpose. Those who remember De La Rue's envelope-folding apparatus in the Great Exhibition will have a tolerably good idea of the neatness, speed, and exactness with which iron fingers fold this favourite paper for the British breakfast-table. The penny morning papers are beginning to monopolize the public market; and the thousands which daily leave Messrs. Smiths' for the country is a proof that hundreds of thousands in the provinces now see a daily paper who never enjoyed that luxury before. As the *Telegraph*, *Star*, and *Standard* have thus spread themselves over the country, all the high-priced daily papers, with the exception of the *Times* only, have lost a considerable part of

their circulation, and must eventually come down to the standard penny, if they would avoid destruction. Whilst we note this revolution among the daily papers, it is equally clear that the old slovenly scissors and paste weekly journal is going to the wall. People, as soon as they grow accustomed to see a cheap morning paper, will not tolerate a mere stale jumble of the week's news patched together without method or originality. Hence many of the old sixpenny weeklies are rapidly passing into a moribund condition, and a higher class of journals, such as the *Saturday Review*, and the *London Review*, which aim at giving a selection of original essays, and at passing in review the events of the week, rather than of giving old news, is coming into favour. The old high-priced provincial papers are also rapidly becoming extinct, and in the great cities of the north are being displaced by penny morning papers, written with a vigour certainly not inferior to that which distinguishes the metropolitan cheap press. And we cannot but pause here to pay our tribute of admiration to the spirit and ability with which the cheap press throughout the country is conducted. The sneer heretofore urged against the "cheap and nasty press" now falls harmless, and there can be no reasonable doubt that they will assume and exercise a very considerable influence, as an educational power, among the middle and lower orders of the population.

It is impossible to calculate the fruits which spring indirectly from any new discovery. Who would have imagined that the introduction of railways would be a powerful and direct means of increasing a thousand-fold the influence of the Belles Lettres, and of scattering

throughout the country the literary treasures that find their birth as a natural consequence in great capitals? The institution of railway libraries by Messrs. Smith is, we think, one of the most remarkable features of the present day. On the first establishment of railways, the porters were allowed to keep book-stalls for their own emolument. Low-class intellects, of course, could only appreciate low-class literature, consequently these stalls at last became mere disseminators of literary trash and rubbish, and were quite a nuisance. It was evident that the note of public taste had been struck a whole octave too low. At this juncture, the stalls of nearly all the railway stations fell into the hands of Mr. W. H. Smith; and a book for the journey speedily became as great a necessity as a railway rug or cap. Our readers must have observed that a certain class of literature was called into existence to fill that new want. The shilling series of Routledge were the true offspring of the railway libraries. Even their highly-embellished covers were of the rapid school of design, calculated to ensnare the eye of the passing traveller. It cannot be denied that this new style of literature had its evil as well as its good side, and had a tendency to deteriorate our current literature with a certain slang and fast element which boded anything but good for the future. It was speedily discovered that higher priced books, such as are published by Messrs. Murray and Longman, seldom found a sale at these stalls, and the circulating population would feed on no literary food but that which was of an exciting, stimulating character. In this country, however, things have a tendency to work straight, and it occurred to Mr. W. H. Smith that

every book-stall could be turned into a circulating library, fed by the central depôt in London. Listen to this, young ladies in remote villages, eaten out by *ennui*, and pining to read the last new novel! Imagine one of the largest booksellers in the metropolis proposing to pour without stint all the resources of his establishment into your remote Stoke Pogis, and you will find this unheard-of proposition is now an actual and accomplished fact. At the present moment almost every railway in Great Britain and Ireland, with the exception of the Great Western, is in literary possession of Mr. W. H. Smith. At two hundred stations, metropolitan, suburban, and provincial, a great circulating library is opened, which can command the whole resources of an unlimited supply of the first-class books: and to appreciate this fact we must remember the state of things it displaces. In the country village the circulating library is generally an appendage to the general shop. A couple of hundred thumbed volumes, mostly of the Edgeworth, Hannah More, or Sir Charles Grandison class, form the chief stock-in-trade. If by any chance a new novel loses its way down into one of these villages, in a couple of months' time a resident may have a chance of reading it. But all this is now changed. In Mr. W. H. Smith's circulating library the reader may have any book he may choose to order down by the next morning train, regardless of its value. Imagine Southey living in this age, and whilst he enjoyed his lovely Cumberland Lake, having a stream of new books down from London fresh and fresh, at an annual cost a little more than one volume would have cost him in his day! The subscriber to the railway library has simply to present his ticket to the book-stall

keeper, wherever he may be, to get the book he wants, if it be in stock ; if not, a requisition is forwarded to the house in the Strand, and he gets it by the next day. He can get the book he wants with a great deal more certainty, and almost as quickly even in the North of England, than he could by sending to the next country town. If he is travelling, he may exchange his books at any station where he may happen to be.

The works purchased at the bookstall itself is not a bad barometer of the popular taste, as regards the sale of current books of the day. As we have said, there is but little demand for the more expensive works of the leading publishers, Messrs. Murray, Longman, &c., but a very large call for Parlour and Railway Libraries, shilling novels, and works under half a guinea. The demand for mere book-makers' productions has, however, quite passed away. Cheap editions of standard authors are in constant requisition. Dickens, Thackeray, Kingsley, and Tennyson, are very popular, and Anthony Trollope is coming up fast behind them. The publications of Charlotte Bronte and the authoress of "Adam Bede" have had an enormous run upon the railway. One of the most popular cheap books of the day—but only of the day—has been the "Detective Police Officer," reprinted from "Chambers's Journal." Of this work, at least 10,000 copies have been sold in a few months at the railway-bookstalls alone.

Perhaps the most cheering features in the demand for cheap editions of books, is the call for works of the character of "Self Help" and "Stephenson's Life." The success of these works has called forth a host of imitations, called "Men who have Risen," "Men in Earnest," "Men

who have made themselves," "Farmer's Boys," and others, all testifying to the love of energetic action among the population so different to that which obtains in centralized continental countries. For second-class poetry there is no demand whatever. Byron and Cowper remain popular, but Tennyson, Longfellow, and Hood, have the run. Cheap hand-books on farming and the farm-yard are bought largely. "Our Farm of Four Acres," for instance, was a grand success. We have tried to ascertain if any particular class of works is in demand in particular localities, but the only instance of this nature has reference to the county of Leicester, and other sporting counties, in which books about the horse, and about hunting and fishing, are constantly inquired after; and, singularly enough, the general demand increases on the publication of any particular book of merit upon these subjects. The didactic class of books stands no chance, and works of a theological character are seldom sold on the railway bookstalls; but of late, a very large demand has sprung up for a cheap Bible. The Bible Society some time since determined to offer for sale, at a loss, at their stalls, a well got-up neatly-bound Bible for one shilling. The success of this step was immediate. The sale has been going on at the rate of 2,000 copies a year, and is still increasing. It is no uncommon thing, we are informed, for employers of labour to take a large pocketful down into the country for the purpose of giving away to their work-people.

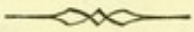
As we have shown, the railway-bookstalls find but few purchasers for first-class, high-priced books; but, singularly enough, it is now found that there is an almost

exclusive demand for them in the circulating library department of these stalls; the public are anxious enough to read them, but it cannot afford to pay such high prices for them; but those who may be anxious to buy at a reduced price have the opportunity of doing so after the books have been "well read," standing on the stalls as "second-hand" library books. Thus the institution of the circulating library has tapped—if we may make use of the expression—a class in the community which before made but little sign.

Amid the hum of the mighty Babylon, we easily overlook the noiseless and unostentatious growth of such an establishment as that of Messrs. W. H. Smith & Co. Within thirty-five years, by the exercise of intelligence, perseverance, and industry, this house has grown from a mere stationer's shop and newspaper agency, employing half-a-dozen persons, to a mighty establishment, employing two hundred clerks and five hundred men and boys; and whilst Mr. Smith has thus toiled to place himself in the position of a greater employer of labour, his efforts tend most powerfully to civilize and elevate the intelligence of the nation.

Along every line of rail which traverses the country in every direction, these libraries are posted, and become wells of English undefiled. They have established a propaganda of culture in the remotest as well as in the most cultivated spots on the island; and their proprietor, in building up his own fortune, is doing no small service towards the educational movement in this country.

THE SEWING-MACHINE.

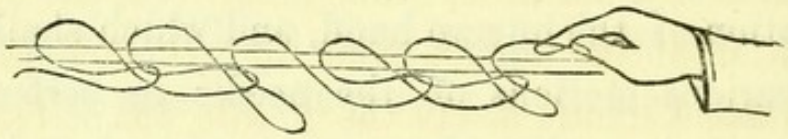


It is the privilege of an advancing civilization that its constant tendency is to obliterate the evils its footsteps are constantly inflicting upon classes of the community. Hood's "Song of the Shirt" gave utterance to such a cry of agony on the part of the poor sempstress, that we almost felt that progress was purchased at the price of too much individual suffering to be accepted as an unmitigated good. Whilst that song, however, was yet ringing in the ears of the public, a human agency was at work, toiling and moiling in obscurity, to obliterate the drudgery of the needle, and to lift the poor sempstress out of the slough of despond in which she had been so long prostrated. In the year 1846 Elias Howe, a mechanic of New York, working for his daily bread, took out a patent for the first successful Sewing-machine, and thus accomplished the last link of that chain of inventions which has emancipated the human hand from the direct fabrication of clothing of a textile character. The spinning-jenny and the stocking-machine have long since rendered obsolete the spinning-wheel and the knitting-needle, and now the sewing machine is in the fair way to render the common needle a curiosity. The idea of a Sewing-machine had long floated in men's minds. As

early as the beginning of this century, a machine for executing tambour-work was patented, and the elder Brunel made a machine early in his career for embroidering patterns on light muslins. Contrivances of different kinds continued to be patented for executing ornamental work, in some of which essential parts of the present sewing-machine, such as the shuttle, were used; indeed, mechanicians played about, and almost touched the final invention.

It was left, however, for American ingenuity to embody the floating idea in men's minds into a working every-day fact. Howe's machine of 1846 contains the leading features of the principal Sewing-machines of the present day. It does, indeed, seem a hard problem to solve, the construction of a machine, which shall rival the delicacy of manipulation of the human hand, and which shall perform all the various motions of the needle in perfecting the different stitches the clever sempstress has invented; but all these conditions have been fulfilled, and hemming, stitching, felling, and seaming, are now performed by the iron hand, that never grows tired, with marvellous speed and accuracy. There have been scores of patents taken out in America and England during the last fifteen years, but the leading features of all Sewing-machines are the same, namely, an iron arm to hold and give motion to the needle, which has an up and down thrusting motion, and which carries a continuous thread round off a reel or spool. The peculiarity of the needle is that its eye is near its point, the object being to thrust a loop of thread through the material to be sown; in order to secure this loop, and thus to make a firm

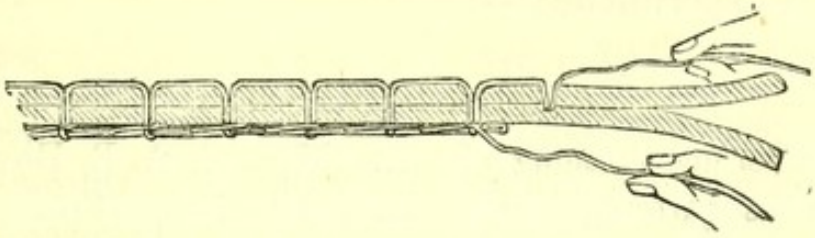
stitch, another apparatus, generally a shuttle, is made to pass through the loop on the under side of the cloth, which is supported in an horizontal position on a small metal table. The length of the stitch is regulated by the rapidity with which the "feed" apparatus is worked, or the contrivance which pushes the work forward after each stitch. The most intricate patterns can be sewn with the greatest ease by simply twisting the work with the hand in the required direction, and it can do everything that the needle is capable of doing, excepting making button-holes and sewing on buttons. But will the work wear? says the lady reader. That depends upon the machine selected; there are some cheap machines, which make what is called a single stitch like this—



Clearly you have only to pull at the end of this thread to unravel the whole stitch; therefore, for ordinary sewing, the single-stitch machine is worthless. There are very few of these machines made now, however, the double or "lock" stitch having almost entirely superseded it. The advantage of the "lock" stitch is that the lock, as will

be seen by the above diagram, takes place in the substance of the material sewn,—a matter of the utmost importance, inasmuch as the thread is protected from all wear and tear of washing, ironing, &c. In some of the single-thread machines the loops are passed through each other and form

a raised seam on the under side of the cloth, as we see in this woodcut:—



A very objectionable method, as the cotton is sure to speedily wear out. In purchasing a sewing-machine, particular attention should be paid to these points, as on them depend the good or bad nature of the work performed. It should be remembered also that particular machines are required for particular work. Thus for sewing leather the powerful action of Messrs. Singer's patent is most applicable. For all kinds of heavy cloth work, again, this machine, and those of Messrs. Grover and Baker, and Thomas and Co., are particularly adapted. They are all shuttle machines, and the noise and clatter they make render them more suitable for the workshop than for private use. The machine that is destined to find its way into families is, without doubt, Wheeler and Wilson's patent. It is both delicate and simple in design, so much so, that it would form no unsightly ornament to the drawing-room. While it is strong enough to sew cloth, its touch is sufficiently light for the finest muslin, and it is by far the most rapid in its action of any Sewing-machine. Whilst five and thirty stitches per minute is good work for the sempstress, this machine can be driven at the rate of 2,000 per minute, making all the time the strongest and most regular work. This is, of course, far above the average work done, but the relative speed per minute of

hand and machine sewing may be fairly judged by the following table, the particulars of which were arrived at by actual experiment:—

	By Hand.	By Machine.	Name of Machine.
Patent leather fine stitching	7	175	A. B. Howe.
Fitting ladies' garters	28	510	Ditto.
Binding hats	33	374	Grover & Baker, Howe Patent.
Stitching vamps of shoes	10	210	A. B. Howe.
Seaming fine cloth	38	594	Ditto.
Stitching fine linen	23	640	Wheeler & Wilson.
Ditto satin	24	520	A. B. Howe.
Ditto silk	30	550	Ditto.

It is calculated that one machine, with a good operator, is capable of doing as much work as a dozen hands; hence the saving of labour is enormous. Its value to the United States, where wages are high, is greater than to this country, and its amount, according to recent calculations, is really startling. The annual saving to the city of New York alone, on men and boys' clothing, is not less than £1,500,000; on hats and caps, £92,500; on shirt fronts, £168,750. On boots and shoes in Massachusetts alone, £1,500,000, and throughout the States an aggregate saving of £70,000,000 annually is said to be the result of the Sewing-machine. There is scarcely a manufacture in which the needle was formerly used which does not now employ these machines; and there is scarcely a houshold in which it does not drudge for the family welfare; they are counted in the States, in fact, by hundreds of thousands. Their invention has revolutionized thirty-seven distinct departments of manufacture, and created numerous new ones. Moreover, they have in several trades set capital

free to a very large extent. Thus, in the clothing trade, when garments had to be made by hand, to meet the fashion of a season, as many months were consumed in their construction as days now are. In the making of bags again, an article of very sudden demand, the ability to manufacture in the quickest time and in any quantities has set free hundreds of thousands of pounds that otherwise would have been locked up for months.

In this country the Sewing-machine is, as yet, in its infancy. Nevertheless, our manufacturers are fast taking them into their service; they do the major part of the boot sewing in Northampton, and they are mainly employed by the shirt-makers, glovers, and the great clothiers. They have not been extensively introduced into domestic use, however, in consequence of the existence of Mr. Thomas's patent-right, which has hitherto precluded the introduction of the chief American machines. That patent has now expired, and the consequence is, that several of the American Joint-stock Companies for their manufacture on a large scale have opened agencies for the sale of the different patents in this metropolis.

But the saving of capital and time brought about by the introduction of this ingenious machine are, in our eyes, but secondary matters to the effect it will have in improving the health of large classes of our operatives, and of raising them in the social scale. At the present moment, among the most deadly occupations of large civilized communities, are those of the tailor, the dressmaker, and the shoemaker. That fatal instrument, the needle, has probably killed greater numbers among the two former occupations throughout the world, than the sword

has ever done, and those it does not kill by inducing consumption, it crooks and disfigures; witness the tailors' bandy legs, and the milliner's contracted chest. The very large per-centage of deaths arising in these classes from the present method of sewing will be entirely eliminated by the introduction of sewing-machines, and what is very singular, wages in all cases where they have been employed have risen instead of fallen. We were informed by a manufacturer largely employed in shirt-making, that the old slop-shirt sewer, instead of her four shillings weekly, is now earning ten or twelve shillings, and that even young girls are earning eight shillings. The wretched creature, whose miseries inspired the "Song of the Shirt," will shortly become an extinct animal, and a much more intelligent worker will be found ministering with the sewing-machine to the public wants.

And will not the sewing-machine bring joy into the family circle? We know it will. It would be difficult to imagine a greater contrast than the drudgery the old hand-sewing presents to that performed by the machine. The toil, the uninteresting toil of drawing the needle through the hundreds of yards of plain sewing, required to keep the clothes of a large family decent, must have an effect upon the spirits of the workers. A wife who has been employed for a month making a set of shirts is always at a discount as regards cheerfulness when her husband comes home, and hopes to see her bright and happy; her fore-finger gets ragged and rough, and is in keeping with her temper. Now we shall have none of these disagreeables when the sewing-machine is commoner in every house than the piano. There is something positively fascinating in

the click, click of the merry machine needle; and the sense of progress, as yard after yard of sewing streams out of the apparatus, absolutely excites rather than depresses the spirits, as the common needle-sewing does. Then again the manner in which the manipulator can wisk the work about, making curves, ovals, acute angles, or any evolutions, as neatly as the skater cuts figures upon the ice, absolutely giving a sense of power and liberty which the sewer never felt before. Some of the movements of the machine are absolutely marvellous; for instance, the hemming apparatus is the prettiest contrivance imaginable. You see a raw edge of linen placed upon an edge of metal curved in a slightly spiral manner, and the next thing you see is the raw edge tucked under and hemmed with the rapidly-advancing needle. Handkerchiefs are thus hemmed before you can look round.

In America every household possesses its machine; not a black clumsy article, fit only for the workshop, but a brightly arabesqued or silver-plated little instrument, mounted in an elegant, polished, fancy-wood case,—quite an ornament to any room, in fact. Independently of the pleasure felt in working it, we must consider for a moment what its advent means. It means emancipation from the most abject domestic drudgery; it means increased time for all occupations requiring the exercise of mind. The Sewing-machine ought to give us time in our homes for more and better music; the arts of design should now flourish; and all the elegances which are evidences of a time of ease and refinement, should abound in dwellings before debarred from such luxuries by the toil entailed upon our women by that barbarous machine the needle.

If we would consider how much the well-being of all classes of civilized men are bound together, and act and react upon each other, we should not forget the story of Elias Howe, the New York mechanic, who, in "poverty, hunger, and dirt," laboured successfully not only to lift poor women from the slow starvation entailed upon them by the needle, but also sent a gleam of sunshine into every household, and incidentally lent powerful aid to the progress of social happiness and refinement.

THE "TIMES" ADVERTISING SHEET.

If Dr. Jedlor lived in these days, and I wished to combat his facetious idea that "Life was a capital joke, nothing serious in it," I should put into the goodnatured old gentleman's hand a copy of the *Times* Newspaper. If there is anything terribly in earnest in the world it is the advertising sheet of this paper. Was anything ever more fearfully alive? Every advertisement seems to fight with its neighbour for pre-eminence and distinction, and each page seems to writhe and wrestle all over like a dish full of maggots. What fleets of vessels are just ready to start for the lands of gold, each one possessing the best accommodation, and boasting the ablest captain. What stalls of horses fill up another column, each one a greater bargain than the other. What galleries of old masters just ready to fall under the hammer, each picture the most genuine of the lot. What ranks of servants out of place, all ticketed with their respective "wants." What groups of poor young gentlewomen "seeking a comfortable home" in the nurseries of the fortunate. If the spectator for a moment stops to dwell upon such advertisements, the iron enters into his soul, and he must seek relief by a philosophic contemplation of the mass. At the top of the column Love now and then stands making signs with

finger upon lip—"Florence" gives "a thousand kisses" to her distant and secret lover. A mother implores her darling boy to "return home and all will be forgiven;" or an injured wife, with vehement words, leaps to the first reconciling words of her lord. Above the shouting of chapmen, the puffing of quacks, and the thousand voices of trade we hear these fervid outbursts of the human heart, and solitary cries of anguish, with a strange and startling distinctness.

Sometimes, like Garrick's face, the pages will appear half in tragedy half in farce. Mark that long list of hospitals, crying out for aid for the maimed and sick—and then beside it the sprightly row of theatres, smilingly displaying its tinsel attractions. Here an economic undertaker calculates for bereaved relatives what he can "do" a gentleman's funeral for, with "hearse and plumes and two coaches and pairs," or for what he can afford to put a defunct artisan underground, by means of the Shillibeer 'bus. In the very next advertisement an enterprising stationer boasts the largest assortment of wedding cards, and finds everything (but happiness) for the bride. Then, again, "The original Maison Deuil" draws attention to its "poignant grief mantles and inconsolable trimmings." Every ingredient of life seems mixed in this ever-open book: we laugh, we cry, we pardon, pity, or condemn, as morning after morning it brings before us the swiftly-shifting scenes of this mortal life.

In the ancient Greek theatres, where the actors had to give their recitations in the open air, they made use of a brazen mask which projected the voice to a sufficient distance to be heard by a vast multitude of people.

The brazen mask of the present age is this advertising

sheet, behind which all conditions of people, day by day, plead their wants to the entire nation. What a strange crowd, in one continual stream, passes through the doors of the little room in Printing-house Square, where this mask is erected! The poor shrinking girl, who, for the first time, is obliged to come in contact with the hard world, brings her advertisement, offering herself as a governess for the sake of "a comfortable home,"— the clever schemer, who makes a living of the postage-stamps, he exacts from those to whom he offers some extraordinary advantages,— the enthusiast who brings his five shillings to have the end of the world proclaimed by a certain day,—the poor widow who has come to plead "to the benevolent" for her destitute children,—and the agent of the millionaire advertising for a loan of millions,—all shoulder each other in this room. What passages of life might not the attendant clerk read, to whom this continual throng as it were exposes the secret necessities of the heart.

How anxiously next day each individual searches the wet page for the all-important advertisement. How the glossy curls of the young girl ripple over the sheet as she reads her own wants proclaimed aloud. It almost takes her breath away — she, the timid little thing, thus to speak out as boldly as the best of them! The thought arises in her mind, that some good lady who has a daughter like herself, is reading it, and will have pity on her: it might be, that some abandoned wretch has the paragraph at the moment under his eye, and is plotting an answer which will bring her under his clutches. The schemer, ere the boy has come round for the borrowed paper, has succeeded: piles of letters from people eager

to partake of the wealth he offers them, have found him in postage-stamps enough for the wants of the week. The proclamation of the coming end of the world has raised a laugh or two from the casual reader, and cast a thousand Muggletonians into sackcloth and ashes, and into the hourly expectation of hearing the last trump. The millionaire has sent the funds down a quarter per cent., and so it moves. All these people have cried aloud, yet with closed lips, through this "ever-open book" of the press.

To the general reader how much is there to amuse; how many, many pictures of the little weaknesses of human nature, of pride and affectation, to be found in these daily announcements! Let us take, for instance, the ample columns apportioned to those who advertise—"Apartments to Let." One is struck with the singular fact, that nearly every other person who desires an inmate, only does so in consequence of "having a house larger than is required." One would think, that if this were the case, they would get into smaller ones; no, their sweetness of temper leads them to turn their misfortune to the general good of humanity. Then, amiable ladies, overflowing with the milk of human kindness, "wish for two or three ladies and gentlemen, or a newly-married couple, *for the sake of society!*"

Poverty, "disguise thyself as thou wilt, thou art still a bitter portion;" let us not too rudely tear aside the curtain, thin and transparent though it be, with which thou shieldest thyself from the world's contumely.

Thank goodness, however, every corner of the human heart is not entirely mercenary: there is one individual

for whom the whole female tribe, from the lady who speaks to you as though you were so much dirt, whilst you are *negotiating* for her drawing-room floor, to the grubby lodginghouse-keeper in her mangy fur tippet, greasy curl papers, and "three-and-sixpence a week for the kitchen fire," determinedly playing round the corners of her mouth —possesses a most deep-seated affection. He is the ideal of a lodger, the individual they sigh for—

"A quiet gentleman who dines out."

In the many hunts I have myself had for rooms, how often have I come across this petted specimen of man. Did I ever get a peep of a particularly nice room, 'twas always the apartment of the "Quiet Gentleman." Did I express a wish for a strikingly clean bedroom, I was told with a slight shudder of indignation at the outrageousness of the request, that it belonged to the "Quiet Gentleman." "He has been with me," said one landlady, "sixteen years last Lady Day, and a quieter gentleman never trod the ground."

Bachelor, a word with you: —Avoid the house that contains a "quiet gentleman." You might not, any more than myself, be a "fast" or a riotous gentleman—but, "comparisons are odious,"—you cannot, try how you will, give satisfaction to any woman when there is such an immaculate as he in the front parlour.

Ah, I can see him now, as he steps on to the flagged pathway of the long slip of garden, out Pentonville way, where he lives: I can see him as he looks up to the sky, and gives a satisfied "Ah!" as though the wind had changed to his favourite quarter, though he knows as much of the North, South, East, and West, as the steeple on

which the vane creaks. What a quiet black he wears; down to the gaiters it seems cut in one piece by the shears of a forgotten generation! The 'bus takes him up at the corner, and he has the talk he has had any time the last ten years with the driver (for he rides outside in the summer on principle) about the wonderful times, what with the steamers and the railroads, &c., and the slow coaches they were when he was a boy. He knows where the best chop is to be got in the city (these quiet people do get hold of this sort of information somehow), and the waiter always keeps one place for him most religiously. He always goes straight home after business is over: with a latch-key he is never trusted; if by any chance he were to be, he would doubtless think the bonds of society breaking up, and would go and do something dreadful. His occupation in the evening is not of a more intoxicating nature than the arrangement for the hundredth time of a few botanical specimens which he had gathered in his youth, far, far away from the dingy, sooty London, and the waterings of the flourishing little stand of geraniums, a present from his married sister in the country, which by some process of carefulness he has preserved through five winters. At ten o'clock precisely, the tic-tic of his watch might be heard as he deliberately winds it up, and the next minute his list slippers carefully ascend the stairs towards his bedroom. And such a prim, spruce room it is, you could eat your dinner off any part of it. See how he has wafered a country newspaper against the wall, at the back of his washstand to preserve in all his integrity the blue and yellow mandarin, who, with his fellows, is eternally marching up the wall in all the pomp

and glory of stencil work. He is, indeed, an invaluable jewel; once secured, his landlady never lets him depart, except in his coffin, or to be married: it is the same to her which; in either case he is to her for ever lost. But another, and another, still succeeds. If, good reader, you take up the *Times* to-morrow morning, you will find "the quiet gentleman, who dines out," still lured by the seductive voices of ladies who have "genteel apartments to let."

The top of the second column of the first page of the *Times* is the place where the printers "pile the agony." Here we find the different letters of the alphabet addressing each other in terms of the most frantic grief or gentle reproach. A. B. is implored to return to his sorrowing T. T. X. X. wishes to meet L. M., not at Philippi, but at 5 P.M. In a brief paragraph we catch a misfortune so profound as to check at once the laugh with which we greet the more vulgar and curious advertisements that surround it. I remember once reading a line to this effect:—"The assistance came too late—she died in the night." Who was it that thus passed out of life the moment aid was at hand? who is it that remains to reproach himself with his tardiness? The reader pauses for a moment, and wonders what tragedy lies hidden in this brief space, and then relapses into the contemplation of the fierce struggle for the world's goods which the vast mass of the advertisements represent.

Sometimes we see an announcement in this column which consists of only two or three letters. A correspondence in cipher is here being carried on. It is reported that the struggle in Portugal, which resulted in the expul-

sion of Don Miguel and the establishment of Isabella on the throne, was conducted from London through the *Times* by means of cipher advertisements. What a singular idea—the strings of a revolution pulled through the corner of a newspaper—the most secret and dangerous movements, plots and counter-plots, affecting a whole nation, openly carried on in a space less than Rowland takes to puff his Kalydor. A king pulled down in fewer letters than is required to announce the defeat of a common councilman! When Jones the cheesemonger, with spectacles on nose, read his account of the arrival of his prime ripe Stiltons, he little thought that a queen's wishes had been conveyed through the next advertisement; but misery does indeed make us acquainted with strange bedfellows. Immediately following these cipher announcements, there is another class of advertisements which to us are exceedingly suggestive and rich; such, for instance, as tell of the loss of little articles of jewellery. Many a dramatic sketch glances through one's mind when reading such a one as the following:—

"LOST—Getting out of a cab at the Haymarket Theatre, a serpent bracelet, with gold heart attached, containing hair."

"Well, and what can you make of that?" says my lady reader, opening wide her eyes with a pretty air of astonishment.

A moment, charming creature, whilst I indulge myself in painting a picture.

"All right—Opera!" says the footman, slamming the cab door.

"Shall I put the window up?"

"Do, this dreadful dust makes one look such a fright!"

"How beautifully your bouquet smells."

"Oh, yes, my violets! I am so fond of flowers!"

"Ah, I see there is a serpent under them!"

"My bracelet! isn't it pretty? Papa gave it me as a birthday present."

"But the hand is much prettier!" ('Tis so natural to transfer our admiration from dead to living beauties.)

"Nay, nay, you really must not do so."

"I will keep my little white prisoner here, were it only to hear you say 'nay' so prettily."

"Now, Mr. ——; now, Henry, do let go my hand. The man will open the door in a minute."

A pretty little struggle. How pretty it is to wrestle with a white arm—during which the serpent becomes unclasped, and, like the wily tempter of old, wriggles off and escapes. When the dazzle of the house and the grand crash of the overture has a little toned down, the lady discovers that her bracelet is gone. Oh, my dear little serpent—it is lost. I must have dropped it *getting out* of the cab.

How placidly those large blue eyes look at you as she speaks—how collectedly they meet yours. What a calm innocence, a holy truth dwells in their clear depths! A man must be a brute to gainsay her. Yes, it must have dropped off *getting out* of the cab.

The *Times* next morning has an advertisement to that effect, for which the gentleman is but too happy to pay, and Howell & James's furnishes a fresh serpent, which the lover is but too delighted to be allowed to clasp round the lady's delicate wrist.

I detect you, male reader, smiling in your sleeve! You, too, then have bought your experience—Well, I do not know that it could be purchased in a more delightful manner. And thus ends my little history of an advertisement..

OLD THINGS BY NEW NAMES.

THERE seems to be a rage just at the present moment for re-christening all articles of wearing apparel. Genuine old Saxon appellations appear to be on the point of being driven out by foreign invaders, just as our indigenous population fled before the banners of the White Horse. A French and Latin dictionary is become almost indispensable in elucidating one half of the advertisements to be found in the *Times*. It is quite bad enough in Scotch gardeners to astonish a clump of cowslips, or a bed of edging stock, by ticketing them with some outlandish name as long as my arm—(poor things! I often think how, in the early morning, they must try and repeat over to themselves their new names, and at last give it up in disgust)—but for honest, downright coats and hats and breeches to be so served, is quite intolerable.

I was making some purchases the other day, in one of the splendid outfitting establishments in the city, much given to this sort of absurdity, when a scene occurred which placed the ludicrousness of the practice in rather a strong light. A rough-looking farmer came in, and after gaping round the establishment a minute or two, wiping his brow and slapping his handkerchief into his hat with force enough to hit the crown out, he gave a bang on the counter with his crooked ash stick, and

shouted out to "Cash," as the lad is called who receives the sales-money from the different shopmen in his isolated pulpit.

"Young man, I do want doo or dree dthings."

(Undeniable "Down-along" Zummerset,* thought I to myself.)

"Cash" took not the least notice of this appeal, however, but went on apparently at a difficult calculation.

The farmer kept gazing up at him a minute or two longer, like the man in the illustrated spelling-book at the boy who won't come down out of the apple-tree.

At last he shouted out, "Co-am down and serve I, hool 'e?"

At this new and rather more energetic summons, "Cash" lifted his eyes, as a superior being might, who surveyed an inferior world, glared at the customer, and fell to his work again as though nothing had occurred.

Two or three assistants, however, who had heard the noise, now pressed forward to supply the new customer.

"I ben' calling up to dthick veller in pulpit, like mad. If I had'n in my vive acre at who-am, I'd make'n look a bit livelier, I reckon; I do want to zee a gurt co-at."

The shopman drew an invisible tape round the capacious chest of his customer with his eye, and took down a bundle from a shelf. "I think this *paletot*——" but ere he could complete the sentence the farmer was down upon him.

* That portion of Somersetshire which lies between Bristol and Bridgwater, is called by the inhabitants, "Down-along."

"Paletoe, what's a paletoe? what be thick vellar telling about?" he said, turning to me.

The shopman in astonishment, stood stock still, and stared with the string of the still unopened parcel in his mouth.

"I do want a gurt co-at—zummat like dthick," went on the farmer, buttoning his great sack of a top-coat, and turning round, "only, we' a little more cut like."

The little dapper assistant had by this time collected his senses, and, undoing the parcel, he handed out the paletot, this time prudently omitting its name.

"We do a great deal in this article," said he.

The farmer pinched up the material between his great thick finger and thumb, then held it up with both hands between him and the light.

"Why I should bust'n out in the zeems in vive minutes! uh be dthinner than our Mall's bumbazeen petticoat! Noa, noa! that on't do vor I."

After a great deal of rummaging, a "slop" great coat was fixed upon, which chiefly recommended itself because of a side pocket that would be "handy-like for a vlem."

"What's the next article I can do for you?" said the shopman.

"Well I do want doo or dree szhurts."

"*Carratzza's?*" said the salesman, interrogatively.

The farmer looked up and down as if he did not quite catch the question; then, as if he fancied his dog must have been addressed, he whistled and said, "Snap, tell the gentleman can you kill a rat, zur."

"You mistake me," said the shopman. "This is the carratzza shirt—buttons behind—cut to shape of body—small sleeves—article I can recommend."

The countryman gave a loud guffaw, but it sounded most ominously; he evidently did not know whether to laugh or swear. He didn't want, he said, such "vancy dthengs," but "zummat as ould stand harvest work, and not strike in cold wi' the zweet:" so he was duly served with long-cloth.

"Is there anything else to-day?" said the shopman.

"Well, let's ha' a look at a hat,—a cheap un and a good un, mind."

"Let me recommend you one of the *Hydrotobolics*."

"What de zay now?" said the farmer half savagely, growling out in the midst of the new purchase, the cuffs of which he was adjusting over his great beefy hands.

"An hydrotobolic," returned the salesman; "you will find this a great improvement on the old system."

"I want a hat, and none of your bolics," said the customer, with a suspicious look, as though he suspected the man was making fun of him.

A hat was now handed down, and the assistant took off the silver paper with a whirl. "This," said he, "is the patent ventilator."

"Thur, tak'n away, tak'n away; I wunt ha' none o' your new-vangled dthengs. Let's look at an old-vashioned beaver as ull look well when the wind ruffs'n up a bit."

At last he got a broad brim to his fancy, and as he surveyed himself in his new hat and coat in the cheval glass, he exclaimed—

"I be darn'd if my old missus ool know I in dthick new rig."

"You don't want anything in the boot line?" adroitly put in the shopman, glancing at the feet of his customer,

which looked more like battered flat irons than anything else.

"Well, they be main shabby," said the farmer, glancing at his well-worn tops; "let's look at some new uns. We wunt spile the zship for a ha'p'orth o' tar."

"Let me call your attention to a new article just out," said the shopman—"*Gutta percha* soles."

"Darn thee now, hear to un!" said the now thoroughly irritated clod, turning to me again. "He do think I a soft un; but I'm blowed if I stand his chaffing any longer!"

A tremendous whack of the crooked ash stick upon the counter made the announcement more emphatic. The shopman gave a start, and dropped the pair of gutta-percha soled boots he was holding out to his customer. "Gutta-percha——" he stammered.

"Don't gutta perch me any more, I zay. Make out thee bill, and let's ha' done we'e!" roared the farmer.

While the salesman was making out the bill, I amused myself with giving the old farmer a sketch of the quality of the gutta-percha soles, telling him how they got as hard as iron in cold weather, and the propensity they had to melt off your feet when innocently warming your toes at the fire.

"New vangled dthengs be brengen this country to ruination," he muttered in reply. At last he paid his bill and was about to trudge, when his tormentor, as though he could not help it, as a parting speech, called his attention to a pair of "*calcarapedes*," or self-adjusting goloshes. The countryman turned upon his heel, and as he banged his stick upon the floor, said, "I tell thee what,

my lad, if I had thee 'down along' for a few minutes, I'd beat some king's English out o' thee;" and, clutching his bundle, departed. His dog Snap, noting the anger of his master, thought he also must make a telling exit; so, rushing up to a wooden dummy, representing a little boy in a sky-blue tunic, he made a grab at one of his legs; finding, however, that his teeth met something harder than flesh, he worried it savagely for a moment, and then bolted with a piece of blue pantaloons in his mouth, waving like a flag.

A SUBURBAN FAIR.

Our neighbourhood is particularly genteel, —— Grove especially so; the semi-detached villas are as much alike as two peas, and the laburnums and lilac-trees in our front gardens interchange their branches over the dwarf party-wall as affectionately as young school-girls interlace their arms. Close to us there is a field, long since devoted to ground-rents if builders would only prove agreeable; possibly, however, the "carcass" of a most desirable residence, with its exposed rafters like bleaching ribs, hard by, warns them off the ground. Be that as it may, the proprietor, evidently hard up for some return, lately let it,—for what purpose the Grove speedily knew.

My back bedroom window commands a view of the corner of the ground over the cropped lime-trees of No. 6. We had been aware for some hours of a highly feverish condition of the neighbourhood by the constant passing of what ladies call "ugly-looking fellows:" but when I began to dress for dinner I was enabled to diagnose the complaint at once, for, between the aforesaid lime-trees, a painted canvass slowly rose between the slings, and by-and-by presented the bold proportions of a giant in a blue coat, gilt buttons, and knee breeches, with an admiring spectator by way of contrast, measuring on tip-

toe the proportions of his resplendent calves. "A fair, by all that's wonderful!" I exclaimed; at the same time groaning heavily, more, I must confess, however, for my neighbours' genteel feelings than for my own.

Before the dinner was over the thing was in full swing, —the big drum, the trombone, and the clarionet of the principal show had got into full discord; a dozen gongs were a-going, and there was a dwarf for certain, for I could hear his bell ringing out of the bedroom window of his doll's house as plainly as though I saw it. By eight o'clock our Grove was vocal, and every head was out of window watching the full swing of the fair. Of course, I could do no less than inspect the general nuisance that, toadstool-like, had sprung up so suddenly in our midst.

There is nothing more remarkable in a great city, than the facility with which any due attraction will gather together strange and unlooked-for elements of the population. Let but a few yards of ice appear, and straightway an army of "roughs" spring out of the earth, and here they were without any notice in full force at our fair,—"a perfect disgrace to the neighbourhood," as the whole Grove declared.

And why is it, I ask myself, standing in the midst of the hubbub, that we have so suddenly discovered that fairs are such sinks of iniquity and folly? Why should we scorn the classes below us for their love of dwarfs and giants, whilst Tom Thumb has been flourishing at the West End, and all May Fair has been running after the Talking Fish? It may be painful, no doubt, to contemplate that sea of unwashed faces just now gazing on that painted canvass, representing the murderer Good cutting

up his victim; but if I recollect rightly, fair ladies pitied him whilst in prison, made his toilet with white roses for the scaffold, and accepted locks of his Newgate crop: the tastes of the populace are no doubt strong, but they are not a whit more silly in the main than those of their betters. Just in the midst of this reflection, a sharp crack across the shins with a stick warned me that I had come across the path of that ducal pastime Aunt Sally, and that musing in a fair is a very unprofitable business. Custom is doubtless fast ebbing away from the great out-of-door amusements of the populace; and fairs among the number, gay with streamers, bright with inexhaustible life and character, which never seemed to tire the pencils of Ostade or Teniers, are now hunted about like so much "varmint." Nevertheless, in their present insignificant proportions they are picturesque and animated sights. As I watched, the blazing naphtha lamps swinging before every show, and streaming in sputtering tails of flame, light up the restless, moving crowd, in the midst of which like vast paddle-wheels, the round-abouts with roaring, living freights, emerge from and return into the dark air above. More tumultuous, and not less noisy, are the boat-swings, urged by half a dozen lusty fellows, who hurled, with evident enjoyment, shrieking cargoes of affrighted women higher and higher into the dusky air. As a back-ground to this lively movement rose the painted wall of canvass, spread by the different shows. Here, as in the larger outer world, outside appearances make up for the poverty within. There was a gigantic Bengal tiger depicted struggling frantically with a huge boa, which has taken as many coils round its victim's body as a hawser might round a capstan

—the modest truth inside dwindling down to a common snake, which the showman for warmth's sake kept inside his Jersey! Next door was the Theatre Royal, on the stage of which a haughty cavalier condescended to dance a measure with a charmer in spangled pink, who retired now and then out of public observation to suckle a baby. Neither must I forget the only touch of the "fancy" to be found in the fair—the sparring booth of the Finchley Bantam—the Bantam himself, a little man, with a diabolical squint and an ugly-looking pair of biceps, politely inviting the biggest man in the fair to come and have a round with him, an invitation which nobody seemed in a hurry to accept. Every caravan, even to the meanest, was carefully painted and got up, so as to resemble a little house; there was the street door with the panels picked out in different colours, and the inevitable bright brass knocker, whilst the windows boasted wire-blinds and curtains of the whitest dimity, with here and there a flower-pot on the window-ledge. Do these wandering Arabs of our population thus endeavour to deceive themselves into the belief that they are householders, like other people? What do they want of knockers, when they are but too happy to throw open their doors to all comers? I ventured to interrogate a gentleman in a velveteen shooting-coat on this head, who relieved a persistent attack upon a black pudding, by now and then mechanically giving a left-hander to his drum: but he crustily replied that perhaps I had better walk in and ax, and taking the hint, I soon found myself in an interior, carpeted with the natural turf.

The assembled company were intently inspecting the

contents of a corner cupboard full of the wax-work effigies of murderers, one or two of the more curious climbing up to inspect the clothes and the rope of one particular malefactor, warranted by his hangman (under his own hand and seal) to have formed his veritable execution dress.

Without any prefatory address, the showman entered, put back a sliding shutter, and winding up some moaning machinery with a bed-key, introduced us to "what has been pronounced to be the most splendid piece of mechanical wax-work in Europe." The subject, Daniel in the Lions' Den. The prophet mildly revolved his head and worked his eyes, and the lions as mildly opened their jaws, and when they were not so employed they lashed their tails: there was some trifling derangement of the machinery, for some of the tails went off with irregular jerks quite out of time. In the midst of the awful suspense created by this highly dramatic position, a kind of cock-loft door in the den suddenly opened, and the head of King Darius was projected through to see how matters were getting on; but finding that the prophet and the lions were on such exceedingly good terms, he gesticulated wildly for a moment, and then shut the door with a slam, which set the audience a-laughing. The other wax-work represented the Death of Nelson. The hero, according to the showman, is "represented falling into the arms of 'Ardy, having been shot in the 'eat of the fight." A fracture in the abdominal region of the waxwork, however, had unfortunately doubled the hero up upon himself. The audience, however, saw nothing ludicrous at all in the representation: he was the popular hero still, and many a rough fellow listened whilst an old sailor behind me recounted where he

lost his eye, and where his arm was smashed in the great sea-fight. The Death-bed of Napoleon followed, and there was more eye-rolling work ; and, as a final effort of mechanical genius, the imperial jaw dropped, which movement being a little too strong for me, I left.

All the while a continual fusillade was being maintained by the rifle-galleries and nut-hawkers. Of the former, there were no less than nine in full work. The process was safe and simple: at the end of a tube a foot in diameter, and thirty-five feet long, was the brilliantly-illuminated bulls-eye, which, on being struck, rang a bell ; the bell kept going all the evening, so I should advise the Emperor to keep civil. In front of each gallery there was a pictorial screen. The proprietor must have had very decided Whig tendencies, inasmuch as his pictures illustrated the life of Dutch William ; and one drawing particularly struck me—"William the Third consigning the Duke of Gloucester to the care of Bishop Burnet." I cannot say that the spectators took much advantage of this effort at inculcating history, inasmuch as I overheard a costermonger asking a "pal" if it didn't represent the Prince of Wales talking to Cardinal Wiseman ! By far the most familiar representation, however, referred to Indian massacres,—Sepoys throwing babies up in the air, and catching them on the points of their bayonets, as calmly as though they were playing cup and ball. The Cawnpore Massacre again figured largely, proving the interest the people take in contemporary events. In revenge, Nana Sahib, as the bulls-eye, suffered indescribable agony the whole night, and yielded in return abundant nuts and—nightmares.

I must not omit to mention the canvass avenue of toys and gingerbread nuts—that fairy land of our boyhood some quarter of a century ago. There was the same eager inquiry, in shrill falsetto, "Will you take a nut, sir?" that leads one back to the days of George IV., when fairs were fairs, and society recognized amusements on a level with the tastes of the working-classes, instead of destroying them all for the sake of third-rate Athenæums, with which the bulk of the people have nothing to do. During the hours I spent in our fair, I must candidly confess that I saw no impropriety or ill-behaviour whatever,—a statement which much surprised our churchwarden, who called upon me next morning with a memorial to enable the parish to get rid of what he was pleased to term "the scum of the earth," and that sink of iniquity—our Fair.

A FORTNIGHT IN NORTH WALES.

I SHALL never forget the night view, the only one I had, of our Shaksperian Shrewsbury. The lounge upon the English bridge, beneath which the shallowy Severn braided a flashing silver network, as it nimbly worked between the rush tufts and the rounded stones; the quarry-walk, with its splendid feathery lime-trees, casting such deep mysterious shadows; and the long galleys of the Shrewsbury boys resting so silently on the deep, smooth river, kissed ever and anon with Cynthia's sparkling kisses, as the eddies whirled from off their lightsome keels; each precious touch of light, every broad shadow of that night's quiet harvest moon has sunk with a softened grace into my memory.

The quaint old town, too, as I wandered through it, steeped in the warm mist of autumn, and cast into charming light and shade by the silent sailing orb above, reminded me of some past period in history. Not a change seems to have been made since Prince Hal marched up Wyle-cop on his way to cut the comb of furious Hotspur, and to lay low the hopes of "damned Glendower" on the bloody "Battle Field."

The old wooden houses, curiously picked out with black and white, making them look, as a lady fancifully observed,

as though they had been built of mourning cards,—Ireland's mansion, with its curiously carved gables, and the antique market-house, sleeping upon its shadow in the open place, made pictures at every turn.

Why do you linger so on the English border? says the reader, and not plunge at once into the mountain country? Indeed, I scarcely know myself, except it be that here is the last outwork of merry old England,—the last spot west with which Englishmen have old associations, or where the historical "cakes and ale" flourished. Every step across the Welsh bridge leads us gradually into a new country, among a different people, having a different language. We meet with no more inns, and we shut Shakespere's book. 'Tis true the mountains, woods, and streams await us, but the jolly face of the Englishman is seen no more, and the whole spirit of the people is about to change!

The railway from Shrewsbury to Llangollen Road Station is flat and unpicturesque enough, and the famous "Battle Field" is improved off the face of the earth by turnip and wheat fields, which, from their luxuriant appearance, would seem to imply that the old *bone* of contention has proved excellent manure.

Grind, grind, grind, go the breaks, and "Llangollen Road!" "Llangollen Road!" sounds faintly at first, and then more distinctly, as the guard walks from the further end of the platform, and unlocks each carriage door consecutively. And so, good reader, you find yourself all of a sudden upon the threshold of one of the sweetest valleys in the world.

By the time my travelling wallet fits well into the hollow of my back, I find myself on the great Holyhead road,

still kept smooth as a bowling-green. Beneath me, on the right, fringed by ash and nut trees, the Dee, with a thousand sinuous turns, rushes over its rock-strewn bed ; and against the blue misty gorge which hollows upwards from it, stretch the graceful arches of the Elsmere aqueduct and the railway viaduct. As I gaze, a long straight line of steam is dashed instantaneously across the latter, rests there for a moment, and then melts away; whilst on the former a small sail scarce moves along the air-suspended parapet. In the distance, peak after peak, purple as heathbells, stand against the sky, and towards their bases mingle in a thousand colours, that would drive the artist wild with delight. In front, forming a fine strong foreground, are rudely-built gigantic lime-kilns, throwing out wreaths of blue-white smoke, which drive to an interminable distance the air-built purple hills.

Hackneyed as this valley is, there is no mistake about its surpassing beauty, and being the true one by which to enter North Wales. It is the soft and beautiful gate to the deep and wooded valleys of Merioneth, which lead on so gracefully to the bare chaotic landscapes, the grassless hills, and the granite peaks of Carnarvonshire.

The only pleasant spot in the village of Llangollen is the fine old bridge which spans with many arches the wide rocky torrent of the Dee. Here the artist might stop for hours, noting the ever-changeful waters hurrying round the huge boulders, or smoothly shooting over the cold grey slate-beds.

The Cistercians, who must have been great artist monks, nestled for a long time in a charming little abbey, called Abbey Crucis, a short distance from the bridge. The

ruins of this building have been cleared out by Lord Dungannon, and the axe has laid low the fine old ash-trees that used to flourish in the ruined nave.

There is what is called a fine view from the mountain, Dinas Bran, of the Vale of Llangollen—that is, you have a birds-eye prospect of the landscape. All mountain views, however, in *confined* localities, are false ; they alter entirely the natural relative position of objects, and make a complete hodge-podge of the chiaro-scuro. Trees, for instance, seen from above, are mere bushes of green, without outline or expression ; and all the charms of light and shade, as seen in a sunny wood, are entirely lost. Ideas of height, again, are confounded by excessive fore-shortening, and nothing looks, in short, what it is. Mountain views are only truly fine where the features of the country are very large, and where objects are so distant that their natural relations to each other are not appreciably altered.

There is a most charming view from the shattered old wire suspension-bridge across the Dee, as the pedestrian returns to the Holyhead Road. This spot, in the season, must be the delight of anglers, the stream breaking in a thousand directions over a stone-strewn bed. "How like Creswick it is!" came continually to my lips, as I gazed ; and, indeed, the purplish grey of the rocks, and the myriad tones of the submerged pebbles, which look almost apocryphal on his canvasses in the Academy, have everywhere their originals in this land of mountain streams.

The Holywell Road, from this point to Corwen, runs beside the Berwen range of precipitous hills, leaving the

valley of the Dee still to the right and far beneath you. There is a sameness in this portion of the road, which the pedestrian might avoid by coaching it. Corwen itself is the very picture of ugliness.

I was glad enough to escape the dead level of the Holyhead road: so taking my way through the charming Vale of Edeirnion, pushed on to Bala, a good twelve-mile morning's walk, through the richly-wooded valley scenery which seems peculiar to Merioneth. The day was sweltering hot, and for eight miles no "David Jones" was to be found who retailed *cwrw da*.

Dusty, thirsty, and footsore, after toiling up hill-sides, and picking my way down torrent-tracks, how like balm to the spirits was the first view of Bala Lake! For five miles towards the south-west the water lay like a mirror, and reflecting as faithfully the trees on its margin and the hill-sides shelving into it, whilst far out in the distance the gigantic Arran Mountain ran its sharp peak 3,000 feet into the sky.

But was it mountain, or some towering mist, tinted like the pearl-shell, that seemed to float against the distant air? I sat down upon the shore, and thought how beautiful was this world of ours. I bethought me of sweet Coniston Water, so like the scene before me. I got up and walked, and, musing as I walked, thought of some one I had left behind me. How, in the beautiful places of the earth, pleasant memories, like good angels, flock to us unawares!

Thus musing and moralizing, I wandered on until I found myself suddenly brought up at the door of the "Blue Lion," in Bala Town.

There is a necessity to dine, as well as to feel tender-hearted, sometimes; and the manner in which that small leg of mutton, hanging up in the passage, moved my salivary apparatus, was something marvellous.

An hour afterwards I dined upon lake trout and this self-same little leg. A good-sized turkey might have sported a larger, but a sweeter one never came off the Berwen. Henceforth, in all my Welsh wanderings, this was my model dinner.

There is nothing in Bala Town to look at or speak of, except that it is a little dirtier than Corwen, and that every mother, and every mother's son, is to be seen knitting worsted from early morn to dewy eve. I saw one boy at work upon a stocking whilst he was herding cows, and I am not quite certain that the maids do not knit whilst they are milking. "Mem." as old Pepys would say—the Welsh wigs they make here are the best smoking caps in the world.

After dinner, I strolled out towards the lake. Now there was no mistake about Old Arran; the misty sun had disappeared behind his huge shoulder, and the blood-red light was keenly cut by the now dark-blue mass. Like copper shone the glass-smooth lake; a couple of boats, with flags trailing in the water, filled with a merry pic-nic party, were coming down by the shore, and gently floated the music from sweet female voices.

There are two roads leading from Bala to Dolgelly—one on either side of the lake. I heard there was a pass leading over Arran by the left-hand shore; and, like Rasselas, I longed to overleap the barrier which shut in this enchanted land from the setting sun. The morning

walk by the lake dwells in one's memory with delight. The dewy hedge was flushed with honeysuckle, the lake pure and limpid, the sky profoundly blue, the shadows sharp, as though cut with a knife. How distinctly and firmly drawn the boat with fishing-nets lay at the rude pier of stones—the boat's side black, a flood of lucid emerald buoying up the keel.

The road ascends as you pass the western end of the lake, gradually at first, but soon more rapidly, and your vision widens until it takes in a vast stretch of hill and vale: still higher and more vast the prospect; nut-trees and firs fringe the road-side, and you climb, as it were, through a plantation which hides the steep beneath. This ceases as you open a gate and see before you the naked road—a narrow ribband running midway round the mountain-side. The pebble that you kick, falls four hundred feet before it rests in the valley below; whilst the grey, desolate-looking hill-side towers high over head.

"By Jove!" I said to myself, whilst I crossed over the steep, "one's ten toes are better here than a restive horse!" and in all Wales there is not such another ghastly-looking, unprotected carriage-road. But there stood Arran right in front, and the deep valley was between us; I had missed the mountain-path which turns off on the right far below, and it cost me a weary trudge ere the day was done. The road which leads to Dinas Mowddy, before it descends, crosses a boggy moorland—a stretch of burnt sienna, dotted with peat-stacks, the rich harvest of the mountain-top. Here and there, furrows, or rather trenches, were clearly cut, showing what rich slices lay under foot, and it only required a little powdering

of snow to make me believe I was traversing some Brobdignagian bride-cake.

The pass which leads down into Dinas Mowddy is as savage a spot as there is in Merionethshire. The mountain-side on the left, bare, steep, and stained with iron oxides, which rushed down it in bloodlike furrowed streams, reminded one of some giant's back lacerated with the scourge.

It was getting dark as I neared Dinas, tired and hungry, after a twenty-miles' walk, scarcely seeing a house or a human creature. The loneliness of some parts of this country, beautiful and rich as it is, can scarcely be conceived; and the thoughts of country fare by the warm fireside gave vigour to my footsteps. There was just light enough left, however, as I entered the village, to dispel those fond hopes; Bala was wretched, but this, Caerciven itself. A pig was luxuriantly sleeping on the door-step of the best inn, and a donkey was rolling his mangy back in the road. I poked the pig vigorously—I always poke sleepy, dozy pigs, on principle, as I consider they have no right to be so comfortable—and walked in. There was nothing to be had but muddy *cwrw da;* and, oddly enough, the landlord did not seem to care about serving me. He had no cars, no anything: but there was a little inn, he said, two miles farther on, at Mallyd. When mine host smiles not, 'tis cold cheer indeed; so, shouldering my wallet, and giving a second savage dig to the pig, I walked on into the night. Up hill and down dale, kicking against stones—it's wonderful how you do kick against stones when you are weary—on I went, without meeting with a face or a fire, two cheerful things in a lonely country.

What is that gleaming through the trees! A house and lights! I came up to it. Lights in every room, but a closed door! Hope, buoyed up for a moment, fluttered plump again to earth.

As I dragged sorrowfully onwards, at a little distance I heard the prolonged hiss of an ostler, and the sharp, pleased pawing of a hoof. I made for the sound, and asked the officiating worthy whose house lay just below. He rose up from an affectionate inspection of a damaged frog, glared at me with a look of wonder, and said, "It is the Penniarth Arms, yes indeed." I never saw an inn look so like a private residence. A loud knock, and the dark door gave place to a flood of light and a troop of women, who met me with smiles of welcome. Now I come to think of it, they were all women in that establishment, down to the very "boots," who put on your slippers with a touch that was quite enchanting. From the landlady downwards, again, they were all pictures of pleasantness. As for the landlady, I shall never forget her benevolent, thoughtful countenance, framed in a creaseless cap, goffered round like a dahlia: that cap was a type of the rigid order that dwelt in the place.

The mountain trout and mutton again. But, voila! blanc-mange, jellies, unheard-of sweetmeats trembled in the hands of a triad of serving maids. "Where am I—in the wilds of Wales, or in the back saloon of Very's?"

"My mistress did tell me the jellies is not so good as she should have wished; yes, indeed, sir."

Pretty little voice, turned up at the end with such a sweet falsetto. Now I know that the house-door opens, not upon Regent Street, but straight upon the mountain sod.

I thank thee, grumbling host of Dinas, for turning me from thy door.

In the morning, I put aside the white window-curtains, and looked out. There was a charming little church, but no house within view. Across the meadows the river Dovey glistened and rushed between the breaks in the hazel copses.

As it was Sunday, I took a car on to Dolgelly, in honour of the day. I had to pass again through Dinas Mowddy, and there I found my old friend the donkey in exactly the same place where I had left him. The drive is not particularly attractive, and the walk must be still more wearisome, and the round from Bala is immense.

The "Golden Lion" at Dolgelly is an imposing hotel, with a rather dismal coffee-room, in which tourists congregate, glare haughtily at each other for the first hour, constitute themselves into distinct freezing-machines for the next, and then, may-be, fraternize in the most immoderate and unaccountable manner upon the mere interchange of newspapers, or the handing of a cigar-light. One must not charge upon the landlord, however, the discomforts arising from the eccentricities of British breeding: one might be quite happy at the "Golden Lion."

As a guide was going up the mountain next day with a party from the hotel, I determined to join it. The morning was glorious, but hazy with heat. The ascent for the first mile and a half is gradual enough, the precipitous ridge resting, as it were, upon an immense rustic basement of boggy hill-side, interspersed with enormous stones. From the platform

the view is wonderfully fine, as you see both the surrounding country and the precipitous cliffs of Cader himself, which you miss from the summit. Before ascending the mountain, I managed to scramble, with my leaping-pole, over an immense sea of stones, which extended for half a mile at least, to the shores of a small lake which lies immediately beneath the dark precipice, whose summit, crowned by the Ordnance Station, marks the highest point of Cader. This pool has been called the Devil's Punch-bowl, I believe, and one cannot conceive a spot more calculated to hold a hell-broth.

The basaltic rocks at this spot are at least 1,500 feet in perpendicular height, and they form a half circle round the lake. The sun lit up one slanting half of this vast natural amphitheatre, and left the other in awful blackness —a blackness which was enhanced by the sharp sparkles of light upon some projecting crags, which touched them with a Martinesque effect. A raven was hoarsely croaking on one of the peaks, doubtless saying to himself, that he would feel particularly obliged if I would tumble down the rocks, that he might make a nearer inspection of my bones.

I never saw water look so suicidal as did that lake, and I scrambled over the stones, out of the silence and awful terror of the place, with a lighter heart every step I took. The ascent of the mountain is not particularly difficult— indeed, after a sharp bit of collar work, the path is a smooth turf, bounded on either hand by rather awful-looking precipices. To this succeeds an ascent strewn with huge stones, which leads to Pen y Cader, the highest point of the mountain.

It is almost like looking at one of the newly-invented raised papier-maché maps—to compare great things to small, or copies to their originals—to look down upon the vast extent of country visible from this point. Mountain after mountain seems piled up, like playthings, all around you, and in the deep valleys no less than a dozen lakes looked up like earnest eyes into the sky; whilst to the west and north the sea girdled in the prospect with its cerulean blue.

The descent from Cader on its southern side, towards Tal y Llyn, is difficult and annoying. The gorse and grass hide huge stones, with which you constantly come in contact. There are, moreover, exceedingly precipitous places, with ugly pools at the bottom, which you might tumble into if left to descend by yourselves, as our party was. The two lakes, Llyn Cau and Tal y Llyn, the latter at the foot of a perpendicular precipice, were very fine, and well worthy of all the jerks and dangers incurred to get near them.

The next morning, I made an excursion in the north-east direction. By scaling a small hill-side planted with firs, you reach the Tan y Bwlch road, near to which are situated the Rhaiadr Du, or Black Cataract, and the Pistyll y Cayne, a still finer fall. The Rhaiadr Du tumbles down from platform to platform of a steepish hill-side, fringed with nut and ash trees. Waterfalls in dry weather are something like skates in summer, or favours after an election; but here, even in the blazing autumn sun, each step up the water-course was a charm. Everywhere the vast stone challices of rock held in their black depths the distilled crystal of the mountain-side. I sat down by one

of them, under the calm influence of an havannah, and surveyed its pellucid depths, and listened to the subdued rush of the water, as it made some clear-necked leap, or surged round some gigantic boulder. Down, down, in a series of vast steps, other pools, blue and motionless, mirrored the moving fleecy clouds, and the tender drooping ash-trees.

The Pistyll y Cayne fall, further along the road, is much less broken than the Black Cataract—one leap being no less than 150 feet.

About two miles from Dolgelly is the port, if we might so call it, of the river Mawddach. Here, on the glorious morning of a glorious and ever-to-be-remembered day, I took the bow-oar, and, together with a gruff, worthy old son of the sea, rowed down between the shores of paradise. Gentle inland lake, whose rocky gate gives passage to the sea, lapped in the folding mountains, and softly fringed with drooping ash, I can conceive no ten miles of mingled lake and shore more heavenly sweet!

Softly we row, and bow-oar often stops entranced.

"How like the Rhine, those abruptly-parted hills! How like fair Windermere this tree-encircled silver flood!—those fir-clad hills, so softly pencilled 'gainst the cerule sky! And there glorious Cader 'stands up and takes the morning,' each basaltic peak lit up with flames of gold—rare mural crown for the great mountain-king."

"Beg pardon, sir, but the boat is very cranky, yes, indeed; if you goes on so, she will be over."

David Owen, the owner of the "Jenny Jones," did not understand ecstasies, so I thought it best to pull on steadily a bit.

The estuary, for such it really is, although it puts on all the characteristics of a lake at high tide, grew wider and more extensive as we proceeded. A golden sand-bank here and there made little islands in the flood, which seemed set in light as the flood-laved margin caught the slanting rays of the sun. Still further down, the shores again contracted; and now fantastic rocks formed here and there deep little bays, marged with printless yellow sands. On one of those, whose foot was laved with the tide, some London architect has built a little Italian-looking cottage, with open balconies and trellised staircases, all in admirable keeping with the scenery. Danby might have come and studied here for fairyland.

Barmouth, a charming little watering-place, is situated upon a steep hill-side, and forms a pretty Gibraltar to this mimic Mediterranean.

On leaving Barmouth, the road for some distance is flat, and it is as well to do the stage to Tan y Bwlch by coach. The road gradually rises as you near Harlech, and when you reach that grey old castle, perched upon its precipitous rock, an enchanting view lies before you of Cardigan Bay, the Snowdon range of mountains, and the long stretch of Carnarvonshire coast, which runs down like an arm into the Irish Sea. I never have seen anything so Italian in character as this scenery, viewed as it was under an unclouded sky. The mass of purple hills ranged one above another—the sea a perfect level of cobalt, rimmed by the bright yellow sands—the blue over head, again, bright as the water. Our Jehu gave us time, whilst he changed horses, to scramble over the old castle—one of Edward I.'s strongholds, so plentiful in North

Wales. And the prospect framed by one of the grey old windows is a thing I shall never forget.

Harlech Castle itself is a very picturesque feature in the landscape. Massy and square in form, with round towers at the angles, it seems the very type of strength.

The coach passes through the village of Maentwrog; but those who will take good advice will go on to Tan y Bwlch, and put up at the Oakeley Arms,—a charming little inn, on the hill-side, built like a private house, and admirably conducted. Place Oakeley, the residence of Mrs. Oakeley, is only a stone's throw from it, and mine host gives you the *entrée* to its charming grounds and its noble terrace, which commands a dozen splendid views of this delightful valley.

The village of Festiniog is situated about three miles up the valley, upon a high and commanding ground—upon a windy hill-top, in fact. This place is much beloved of Oxford men, and here those pleasant impostures yclept "reading parties" are mostly located. I cannot see the beauty of the place myself, but the road to it is superb. There is scarcely a composition of hills in Wales which struck me so forcibly as that formed by the Moelwyn and Cnict—both vast rounded mountains, which rear their backs like huge elephants above the wooded uplands which surround them.

There are two very picturesque falls within half a mile of Festiniog, on the Cynvael, which finds its precipitous way down the thickly-wooded gorge to the south of the valley. Pistyll y Cynvael—the upper fall, is broken into three leaps, and the water falls into a black pool, which looks terrific enough viewed from the trees far above. The

lower fall is not so precipitous, but it is, perhaps, more picturesque.

In returning to Tan y Bwlch, I kept beside this hazel-shadowed ravine, and a most charming walk it is, although wanting in the grand panoramic view to be had from the high road which commands the river Dwyryd, on the north of Festiniog. It must be an exciting thing, by the bye, to take a run down to Tan y Bwlch by the tramway which leads from the slate-quarries, in the immediate vicinity of Festiniog to Port Madock. The descent for the whole fourteen miles is one in a hundred and twenty, and you see the long train of slates rattling along the sides of the mountain, darting in and out of tunnels, and diving under rocks, in the most exciting manner. The landlord of the Oakeley Arms has placed a carriage on the line for his guests; those, however, who like doing it in the rough, and do not mind sitting in the lap of a duchess (as the largest-sized slates are called) might ride in a loaded slate-carriage, as the country people do.

The nine-miles' walk to Beddgelert is flat if you take the coach-road, but the old road, which leads off from it just below the tramway, crosses the mountains, and affords capital distant views. As you pass the bridge at Pont Aber Glaslyn, you leave richly-wooded, wild Merionethshire, behind you, and enter the still wilder and more volcanic Carnarvonshire. The pass of Aber Glaslyn is wonderfully like some miniature Alpine defile—

> Up, up, the pine trees go,
> So like black priests—

and completely clothe the hill-side; the rock, tinged with copper ore, appearing here and there red and brown with

metallic richness. You can make yourself uncommonly comfortable at the "Goat" hotel here.

I scrambled to Capel Curig by a route peculiar to myself. Following the Carnarvon road for some four or five miles, I took the Arran at a pathway which leads to a copper-mine. The ascent is stiff, but the view glorious: the whole range of Snowdon towers above you, sending spurs gently down into the Vale of Waters, through which the highroad from the right winds only as the faintest streak of white. Set in deep hollows, Llyn y Dinas and Llyn Gwynant flashed back the light like silver shields. I met with one clump of moss here fit for the seat of an emperor, and such as I have never seen before. It was of the darkest olive-green, with shades of purple, and of a texture as fine as the finest velvet. The clump must have been at least six feet across, and I would have given anything to have brought it away with me; but as it was, I had quite enough to do to conduct myself safe to the level, which I managed to do close to the huge wooded rock which rises abruptly out of the smooth fields of the valley. This is the famous rock on which, tradition says, Merlin foretold to Vortigern, the British king, the result that would ensue from his invitation of the Saxons, who had already deprived him of the greater part of his kingdom. Selden, in his notes upon Drayton, tells us, that—

> Here prophetic Merlin sate, when to the British king
> The changes long to come conspicuously he told;
> And from the top of Brith, so high and wondrous steep,
> Where Dinas Emrys stood, show'd where the serpents fought—
> The white that tore the red, from whence the prophet wrought
> The Briton's sad decay, then shortly to ensue.

Verily it looks a place from which a soothsayer might deliver his prophetic words.

From the little inn of Pen y Gwyrd, not far from the head of Llanberis pass, to Capel Curig, it is as dull a four-miles' walk over a boggy moorland as can be found in all Wales: it improves a little towards the end, however, where the two small lakes are overshadowed by Moel Siebod, a bare black mountain of first-rate magnitude. The inn itself did not "smile upon me," as the Irish phrase it. Anything more dismal than the coffee-room, looking out upon a dead wall, cannot be conceived.

I hate gloomy rooms and sleepy waiters, so I swing my staff onwards towards Lanrwst and the ample Conway. Here the great Holyhead road turned up again, like a friend in need, and four miles an hour along its smooth surface was only pleasant walking.

The Llugwy runs beside the road, in a charmingly-wooded ravine, and has two falls—the Cataract, over a huge pile of rocks, just beneath the bridge, not far from Capel Curig; and the Rhaiadr y Wenniol, the waterfall of the Swallow; the latter is, beyond all dispute, *the* waterfall of North Wales, and the only one, in fact, which puts on undeniably good features in all seasons of the year. You reach it from the road through a little winding path-way which penetrates the beautiful wood by which it is surrounded; and its appearance, seen through the trees as you wind downwards, is exceedingly strange — one tossing mass of foam forming a moving background to the foliage, far above and below the eye.

Seated upon a stone at the bottom, you see this large river precipitating itself in three broad leaps down a

descent of at least 150 feet, into a wide gulf, in which huge islands of foam wander round and round on the black surface of the whirling waters, until they are at last hurried down the steep shelf of rocks which leads into the boiling river-bed. In the rainy season, this fall must be grand in the extreme, judging from the quantity falling after so dry a season as the one in which I saw it.

The Llugwy falls into the Conway, close to Bettys y Coed, a charming little village, nestled deep in woods. This little village forms the head-quarters of the artists. The rivers Llugwy, Conway, and Lleder, which run into Conway, a little to the south, are haunted every season by Cox and Creswick, who never seem tired of ransacking every nook and silver stream of the neighbourhood. The valley of the Lleder, with Mael Siebod towering in the distance, is one of the most charming pictures in all Wales; and the old mill at Pandy has engaged the pencil of every landscape-painter of note. The waters of these three rivers have each distinctive colours, which even extend themselves to the stones, so that a fortunate variety is afforded to the painter. But I must not linger on my way. At Llanrwst I "struck" the Conway, crossing it by the bridge designed by Inigo Jones, which, like everything from his hand, is remarkable for the beauty of its proportions. The whole structure shakes, by jumping against the middle stone of the parapet, and this weakness the townspeople consider one of the lions of Llanrwst, for you are charged sixpence to see the shaking performed. I wandered into the charming little church the morning after my arrival. The Gwyder chapel, in the south transept, designed by Inigo Jones, contains some brasses, engraved

by William Vaughan and Sylvanus Crew, two noted artists of the seventeenth century. They are chiefly portraits of the Wynns, of Gwyder; and there is one Catherine Lewis, of Festiniog, who died in 1667, aged sixteen, which from its extreme beauty rivets the attention: a more charming young Welsh face graver never portrayed. She was a niece of the Wynns. These brasses are so delicately engraved, that they would, I have no doubt, print admirably. They have been removed from the floor, and placed in glass cases against the walls, and they are well worthy of all the care taken of them. In this chapel is placed the coffin of the great Llewellen, which came from the abbey of Aber Conway; and hanging from the walls is the helmet of Sir John Wynn, the founder of the Gwyder branch of that family, and the builder of the adjoining mansion, Gwyder House. A still more remarkable trophy to be seen here, is the spur of the notorious David ap Jenkin, who of old was the Robin Hood of the neighbourhood. The delicately-carved oaken screen and gallery were brought from a neighbouring abbey.

Gwyder—one of the oldest houses in the principality—lies only a few fields off, under the brow of a thickly-wooded hill-side. This curious old place has come, by marriage, into the possession of Lord Willoughby D'Eresby. I spent an hour here with delight, wandering from room to room, and slipping about on ice-smooth oaken floors. The walls of the "withdrawing room" are tapestried, and the furniture is genuine antique. The dining-room is bedight with old Venetian stamped leather, with the paint and gilt of three centuries still bright upon

it. The brass fire-dogs beneath the spacious chimneys are worthy of Pugin's attention. Among other curiosities of the place, is the cradle of the Wynn family, bearing the date 1660. The house was built by Sir John Wynn, in 1555, but great additions, in admirable taste, have been made by the present possessor.

The "pleasaunce," as it was called of old, or flower-garden, is kept up as in antique times; and as I stood among its curiously-wrought flower-beds, surrounded by dark, jutting gables, it was hard to believe that the days of Queen Bess were passed into a remote historical period.

The grounds wind up the hill-side, in delicious walks between nut and fir trees. At the top are the ruins of an old chapel, and a trimly-kept bowling-green stands as it did when gay cavaliers, all tags and ribbons, played here many a match. A little steamer, not bigger than a jolly boat, plies between Trefew, a couple of miles below Llanrwst, and Conway. The ride in this Lilliputian conveyance, at high tide, down the Conway, is perfectly lovely.

Conway, approached either by land or water, looms upon you more like some picture in romance, than that sober and not generally very wholesome reality—a Welsh town. The pedestrian reaching it from the south is astonished to see before him a brown old wall, fortified at regular distances by round towers, running up the hill-side, and following its inequalities, like a miniature wall of China. He feels inclined to rub his eyes, and doubt his own senses—it seems more like one of Albert Durer's rude old woodcuts than anything of the living present: it only requires a fierce encounter between St. George and the Dragon in the foreground, to make the picture perfect.

Not a church tower, not a house is to be seen peering over the battlements; and the fields run up to the old brown walls, all the way round the land side of the town, as closely as though it were some pound on a common.

Approached from the Conway, the view is equally startling but still more picturesque. The suspension-bridge, which hangs delicately as a spider's web across the mouth of the estuary, and the tubular railway bridge beside it, both seem to, and indeed partially do, enter the keep of the fine old castle, and you fancy them to be gigantic drawbridges to that noble fortification. Telford, the engineer, has taken all the romance out of the pass of Pen Maen Mawr, and the coast road to Bangor might be passed by the most timid person.

I stopped in Bangor no longer than was sufficient to take a view of the Straights, and of white Beaumaris opposite. The Liverpool merchants are raising their palaces along the Anglesey shore, and fine-looking castellated mansions have the bold barons of the sugar hogshead and the lords of cotton.

It was a day of clouds as I entered the valley of the Ogwen, and if the gloomy aspect of the atmosphere had been "got up" at Drury Lane, it could not have been more effective, or have better suited the savage wildness of this pass. Near Bangor, and for some few miles, until you get to St. Ann's Chapel, in fact, the Ogwen runs through a richly-wooded ravine; but at Coe Braich y Cefu all that ends, and with the Penrhyn slate-quarries commence those ranges of slate mountains which characterize this, the most gloomy gate of Snowdon.

I came suddenly upon the quarries just as the warning

from the cow's horn, reverberating from rock to rock, denoted that the hourly blast was about to take place. There lay in a series of retiring steps or platforms the whole mountain-side carved out before me. From one obscure corner a puff of white smoke rose softly up, and was succeeded by a dull report and a great crash of falling stones. From fifty other places, one after another, fifty more white rounded clouds puffed out; and then came an angry roar, and the whole mountain-side belched forth an avalanche of slate. For full ten minutes this cannonade continued, and formed no bad representation of Gibraltar under siege. Two thousand men, looking no bigger from below than ants, here continually "moil," and have contrived literally to move the mountain, the refuse of which is now seen running in gigantic terraces along the neighbouring hill-side.

But onward from this busy hive to the dreary valley, where scarce a living thing is to be seen. Gradually the road ascends, until at length I gained a lofty terrace road, overshadowed by two giant mountains, which form the outposts to lordly Snowdon. These are Carnadd David and Carnadd Llewellin, the latter only fifty feet lower than the monarch himself.

Slate and cold gray shale strewed their rugged sides until they were lost in rolling clouds. On the opposite side of the valley, a range of mountains sloped their precipitatious flanks into the torrent waters of the Ogwen, which rushed through a level mossy carpet of treacherous-looking emerald green. This is Nant Francon, or "the Hollow of Beavers." Here, they say, of old, these sagacious animals used to throng, and it is gloomy and solitary enough to tempt them even now.

At the head of this savage Salvatorish valley, the road passes by a bridge over the Ogwen, which escaping from the lake of that name, that gives it birth, rushes down a precipice of at least a hundred feet into the hollow below; this is called the falls of Benclog. Near to this pass, which commands a magnificent view to the right and left, is the gloomy lake Idwell. A mountain walk of about a quarter of an hour takes you to its desolate shores. It certainly requires the pluck of a Mark Tapley to feel cheerful under its influence, especially as I saw it, when the clouds were hanging so low as almost to be within reach of one's hat. There was a solitary-looking fisherman on the shore, who volunteered to take me over to the Twll Du, or Devil's Kitchen, on the opposite side; and as he slowly ferried me across in his crazy boat, I had grave doubts whether I had not got into the company of Charon, which were not lightened when the keel struck the shore, and I looked up, as far as I could for clouds, at the vast river of stones which issue out of the chasm in the precipice where the old gentleman is said to have located his *cuisine*. However, if it was Charon, he spoke capital English, and had excellent common sense. He knew nothing of the soul of Prince Idwell, which is said to howl about here, and, according to Miss Costello, to frighten every living thing away from the spot. "No bird will dip its wing in those waters," she tells us; "and the fish, said to have had only one eye, have all disappeared." Now, unfortunately for that lady's bit of poetry, I saw a plump wild duck rise from the flag-reeds myself; another fisherman assured me the fish he caught "in plenty" had the right complement of eyes.

My Charon, finding I was bound for Llanberis, volun-

teered to show me a short cut by way of the Twll Du and the Glider Vawr mountain ; but I declined his suspicious invitation to get me up in the clouds, and chose rather to stump round twelve miles, by way of Capel Curig.

Leaving the "shepherd's hill of storms," or "the cold mountain waste," as it is called in the language of the country, I made for the pass. As I descended, I caught sight of one of those glorious atmospheric changes which mountain scenery only can afford you. The powerful sun had penetrated the thick curtain of clouds, and shot down his fervid beams upon the Lake Ogwen and its contiguous hills. Like snow the clouds seemed to melt where his burning shafts fell, and the irregular shadows of the hollows and hill-sides were outlined by vapour, which dared not advance in the face of Sol.

> The swimming vapour slopes athwart the glen,
> Puts forth an arm and creeps from pine to pine,
> And loiters slowly down.

The falls of Benclog must be magnificent in a rainy season, but a thin thread of water was all that fell down the declivity as I passed it and took my way beside Lake Ogwen, over which the two lofty mountains, Braich Du (Black Arm) and Y Tryfan, kept watch. The rolling clouds still retired before the sun ; and as I passed the giant peak of Tryfan, which runs up in an unbroken cone, a long wreath of vapour, caught as it were on its top, hung festooned on either side for a minute or so, and then suddenly taken by a gust, broke up and hurried in confused fragments in every direction, the sun from behind tinting them with varied colours, and casting the mountain itself into blackest shadow.

Capel Curig looked still less inviting under a cloudy atmosphere than on the former day, and I trudged on to Llanberis, and descended its sublime pass in the dark. The windows of the Victoria were all alight as I passed it, and the Welsh harp was in full swing, but I was tempted not: the old Dolbadern, with its comfortable little parlours, cheerful landlord, and hearty welcome, I remembered of old.

Llanberis is almost as well known to the travelling world as Regent-street, so I shall not tarry long here with my reader. I started out in the morning, and climbing to the old British Dolbadern Tower, smoked, and surveyed the two lakes which it commands; and as I was wondering whether old Snowdon intended to doff his nightcap or not, three children, seated among the ruins, struck up one of the wild and mournful airs of the country. They took their parts, and kept time like skilled musicians, and the effect was enchanting.

Some one has said that the plaintive character of Welsh airs denotes the music of a vanquished people; and indeed I thought so too, as I listened to these poor children warbling within the ruined stronghold of their vanquished sires.

The sun began to descend, but the clouds still hung thick upon the monarch's brow. Williams, the guide, botanist, and philosopher in his own small way, strolled with me as far as the little churchyard, and showed me the grave of poor Storr, who was lost upon Snowdon. He told me that after portions of the skeleton were found, and it was still a mystery and a reproach to the neighbourhood that his watch was not forthcoming, he spent a

week up the mountain-side searching. Noticing the point where the remains were found, he followed diligently all the small water-courses which led from it, turning over stone after stone. He had nearly given up the search, he said, when a small mass of what he thought at first old canvas, struck his eye. This, on examination, turned out to be a portion of a shirt-front and waistcoat, twisted and knotted together, and wound round by a silken *watch-guard.* This discovery inspired him to fresh exertions, and ultimately he found the watch under a stone in a water-course. The silk neckerchief he also found, tied in a bow, just as poor Storr must have done it with his own hands.

The next morning I bade good-bye to the glorious lakes, and made my way to Bangor, and from thence by rail to the Holywell station, and there I stopped to perform a little pilgrimage to St. Winifred's Well. From the station to this curious piece of Tudor workmanship it is about a mile, up a pretty steep road. I certainly was not prepared for the beautiful architectural effect which awaited me when I descended the steps which lead off immediately from the road-side. The well, of purest water, of which thirty tons are thrown up per minute, is situated in what might be called a crypt of the chapel dedicated to the virgin saint above. The pillared arches of the crypt spring up from the sides of the well, and spread overhead in beautiful fans of delicately-wrought open stone. The whole effect, seen in the twilight of the place, is quite enchanting, and the wonder is, that its praises have not been more generally sung; it is certainly the most beautiful specimen of Tudor architecture in

existence—more pure by far than the chapel at Westminster, founded by Henry the Seventh, as it was built in the early vigour of the style, by the Countess of Richmond, the mother of that monarch.

The open work of the vault is stuck as full as it can hold of—what does the reader think?—Crutches! Thick as sticks cross each other in a jackdaw's nest, crutches of all ages, sizes, and shapes, are thrust into the roof; and not only crutches, but hand-barrows and invalid sticks, whilst here and there, depending from their strings, eye-patches of the blind. They had been deposited, I was informed by the keeper of the well (an Irishman and a Catholic), by those who had considered themselves miraculously cured by the waters of this second pool of Bethesda. Others, again, had testified to their recovery less harmlessly by chiselling their names on the pillars. Thus, "T. M. Carew, Esq., was cured in 1835." There are plenty of other names, and one, Joseph Kendrick, is engraved with the date 1591. They are principally Irish, however; indeed, the believers in the powers of the well are mainly from the sister isle. A few ladies, it might be added, make pilgrimages to bathe in the well occasionally, with the due effect that faith in St. Winifred and the tonic effect of pure cold water is calculated to produce upon them. The Welsh never come!

From Holywell, the high road to Mold commands the estuary of the Dee, and a magnificent prospect. I bent my footsteps towards Mold, for "I had heard of pictures"—of Wilson's, the last touches of our English Claude, of which the world as yet knows nothing—to be seen at a mansion in its immediate neighbourhood.

After making a pilgrimage to his grave in Mold churchyard, I rode over to Colomendy (the Pigeon-house), the residence of Mrs. Garneron, where these precious relics of a great artist are to be found. They consist of a dozen views, some finished, some from which the hand of death had snatched away the pencil ere they were completed. Among these latter are two of "Morning" and "Evening," painted with the true sentiment of nature. The most finished and perfect is a small upright picture of a waterfall, which for power and fidelity I have never seen equalled by his pencil. The water absolutely flows as you gaze upon it. This piece is the more precious, as for once Wilson seems to have thrown aside his classical ideas, and to have gone directly to nature for his subject. A "Boar Hunt," in an unfinished state, reminded me very much of the "Niobe" in the National Gallery.

The history of these pictures is curious. Wilson, towards the end of his life, retired to a farm-house which once stood upon the site of the present mansion, and here he painted until he died. This house, Colonel Garneron, the late husband of the present proprietress, pulled down, and in doing so a parcel of old canvasses were found packed together in one of the lofts: these, upon examination, turned out to be Wilson's, the last efforts of his glorious pencil. These pictures, it appears, are bequeathed, upon the death of Mrs. Garneron, to the National Gallery, so that at some future time they will form a noble addition to the British school in the public collection.

Wilson was in the habit of smoking his pipe at a neighbouring roadside public-house, the sign of which, "The Loggerheads," he painted. Two figures, back to back, are

still visible on the sign, but it is quite evident that some meaner brush has long obliterated the work of the master-hand. Curiosity led me into the interior: there stood just the capacious fireplace I expected to find. Overhead gigantic beams formed a projecting canopy to receive the ample wreaths of smoke; whilst around a dark oaken settle, carved and panelled, shone as the wooden embers leaped and gleamed. The very seat of the illustrious painter was pointed out to me; and in the midst of this Rembrandtish effect, his air-drawn portrait rose in my mind. My day-dream was suddenly broken into, however, by a Welshman opposite me, who commenced a series of inquiries, which at first not a little amused me. After the usual questions as to where I came from and was going to, he politely inquired if I had been up to the "house," to which I replied in the affirmative.

To see the lady's maid?

I denied the soft impeachment, although wondering at his impertinence.

After a puff or two, he returned again to the charge.

Was I an artist? No.

Puff, puff.

I did a little in the graver line he supposed.

I ignored the burin also.

He took and filled a fresh pipe, and at last, in the agonies of an inquisitive spirit, came over and sat down by me. "You are not," said he, "in any warehouse, or shop, or factory, in England, are you, sir? because I should like a situation, if you could get me one; yes, truly."

No; I was neither of the mill, the shop, nor the counting-house. This eternal corkscrewing began to

annoy me, so I got up and went into the stable; still he followed. "He was strong, and did not care what he put his hand to." By this time I was mounted, and in a good temper again.

"Come here," said I.

He laid his hand upon the saddle-bow and inclined his ear.

"Do you really want a situation?" I whispered mysteriously. His little eyes glistened, and he snapped me short with a "Yes, indeed."

"Listen then," I replied. "If you will come with me, and don't exactly mind the kind of work——"

"Oh, not at all," he interposed.

"Well, then," I gaily rejoined, "you are my man, and I am Calcraft, the hangman!"

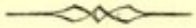
Like "the wedding guest," he dropped his hand, and staggered back a pace or two. I meanwhile had dug my heels into the ribs of my Rosinante, and, leaving the Welshman to his own reflections, in a few minutes was cantering upon the soft turf of Moel Vama.

From the Bwlch, flanked on either side by the dark-brown spurs of the mountain, I gazed upon the fair and ample Vale of Clewyd, which lay bathed in sunshine. It was my last mountain view in Wales.

In another hour I was loitering about the rows of Old Chester; once more within hearing of decent English, and rejoicing at the sight of the brown-haired, blue-eyed Saxon.

THE ARISTOCRATIC ROOKS.

A SKETCH FOR THE GREAT FAMILY OF THE SMITHS.



Was it spring—or summer? The question would have been difficult to answer, but that here and there, in the green lane, as you looked up in the great chestnut-trees, the tender fan-like leaves seemed crumpled and languid, like the wings of insects just unfurled from their winter sheaths. That it was not full summer you were again reminded by the blooms of the wild apple-trees standing in the hedges on either side, and scattering a semicircle of fresh white blossoms upon the ground below. Neither, in summer, does the note of the mavis seem so clear, as it bursts out without any warning from the hedgerow, reminding one of Chaucer, and the song he heard that fresh morning, in the medlar tree, near five centuries ago. How wonderfully Nature reproduces herself! Those notes are the same that that thorough English bird piped to Gurth, the swine-herd, as he drove his unsavoury flock to the mast forests in the days of the Normans. And the cuckoo, do you not hear him? Where is he—up in the elm tree? or in that alder-bush? You turn east, and west, and wonder where the soft mechanical note comes from. Never mind; there it is, and that is enough.

We think of "merry England," we suppose, when we

hear the sound of our English song-birds, and see the spring-flowers come up, because our early poets were so fond of them, and, indeed, talked of little else, so that they seem a part of the middle ages; and we are somewhat puzzled to think that they should have survived its brave customs—but here they are. A great religion has passed away; we hunt the branches of the yew-tree no longer for the trusty weapon; where once the villagers shot with the crossbow, now come Commissioners of Inclosure, and obliterate its sod, and the footpaths that generations have graven; the passage of swift, rushing steam seems to have put our great mother herself into irons. Amid all these changes nature works still by her eternal laws. You see that clump of cowslips, just beside the freshly-shrouded tree; those flowers are as old as time itself (to put aside the theory of the "Vestiges of the Creation"). We shall all die and be dust, we and all our friends; but those cowslips will spring up in pretty nearly the order they now stand in some fine day centuries hence, and they will hang their heads, and the soft shadows of the perfect day will lie upon them just the same; so many will have pearls in their eyes, and so many will be without them. Talk of ancestors, indeed: we should like to see the genealogy of one of these flowers—what a family tree it could show! ! ! Let us leave, however, the stile, over which in fancy we have been leaning, and turn again into our green lane.

Two labourers are approaching each other, homeward bound after the toils of the day. They meet, and stop some little apart, for labourers rarely come near, or shake hands, in their passing recognitions.

"Well, Tummas, how be you?"

"Purty well, Willum; how be missus, now?"

"She be getting on prime; please God the fine weather do last, she'll soon be about again. I be just come drew the five-acre—the young wheat do thrive amain."

"Ah! It do then. Why, what's to do up at the Hall? I hear tell the squire be going."

"Ah, sure enough; somebody from up Lunnon ways a' took it. Bob Wiltshire was a-saying, down at the 'Open Hand,' as how the new comer's name be Smith."

"Sure. Well, the old squire was a good friend to the poor, but a little hasty like; and Miss Emily, a good many folk will miss her hereabouts."

"Ah, they wool. Good-night, Tummas."

"Good-night, Willum."

And thus the two labourers parted. Their little conversation, however, especially the latter part of it, seemed of not a little interest to a third party.

On one side of the lane was a ploughed field; and close to the hedge, perched upon a fresh lump of loam, shining from the recent passage of the share, stood a very knowing-looking old file of a rook. A little red worm twisted and tied and untied knots in his beak; but the rook seemed lost in thought, as he caught the last words of the labourers' talk. He cocked his shining head on one side, and seemed to drink in every word with his little clear black eye. When the sound of the speakers' footsteps were heard widening apart, he seemed suddenly to remember the agile little worm, and making a sudden bolt of it, said to himself, as if he mused over some great fact—"The old family going—a Smith coming—here's a go!"—and flew

off rapidly to where the distant top of a rookery stood painted against an evening sky.

It was a pleasant scene, up in the windy crowns of those ancestral elms. Every available fork of their "marriageable arms" was filled with a black comfortable-looking nest. Here and there a callow beak was seen sunning itself, as it rested upon the edge of its cradle, and the level light of a declining sun shone upon a glossy poll. Other young rooks, more actively inclined, and "just going off,"—to use a maternal term—were hopping from branch to branch, and making balancing-poles of their fluttering wings to steady their unstable footing.

Below, just seen between the green branches, like a picture of Rysdale's, showed the fine rubicund* visage of the old hall, made more glorious than ever in colour by the red glow of the setting sun, which fell upon it sideways, and threw a deep shadow from every projection and bossy ornament, and at the same time stamped upon the back-ground of deep-green trees, the golden dragon on the clock tower; its burning stillness giving a wonderful re-pose to the picture. The trim garden at its front lay like a map rolled out before it, cut into a thousand quaint walks and flower-beds.

Who is that, dressed in the loose white robes of summer, who wanders so disconsolately along the old yew-tree walk?

* They have lost the art of building these old brick mansions now,—or rather the art of making the materials. Look at an old Elizabethan house: how time seems to have fused the bricks together into one kindly whole, and tinted it with a colour which fills the painter with delight at its repose, and the harmony it exhibits to the surrounding scenery. Our modern villas rejoice in a burning yellow, bright enough to scorch the eyes out of a salamander.

She turns into the summer-house, and sits down as if full of thought; she gazes upon the little windows, and bursts into tears as she sees some name scratched upon the pane —a brother's, perhaps, long dead and gone; the bees come stealing by, and their hum is drowned in the deep honey-cups; the butterflies in pairs come dancing through the air, and palpitate upon the swinging flowers at her feet; but she looks not, her heart is full—'tis the squire's fair young child, taking her last walk in the garden—the old family are about to leave their inheritance, and to-morrow comes the foot of the stranger.

The evening was fast gathering in, and the sky was dotted with the flight of rooks coming home from the distant woods. Upon the highest perch of the rookery, meanwhile, the old bird took his post. Presently the rooks, one by one, came dropping down, waving the light branches of the elms as they perched. They could all see that something was in the wind. What could it be?

There was a deep silence in the rookery.

Reader, have you never, when dreamily sauntering up some old avenue of elms, been suddenly brought to a state of consciousness by the sudden ceasing of that dignified "caw! caw!" which, unobserved, formed a pleasing running accompaniment to some vague regret that you had not ancestors also, and a wish that the fine coat of arms so elaborately graven upon your handsome seal ring was something more than a "delusion and a snare?" have you not, on such occasions, stood still, and, peering up between the green network of leaves, asked yourself, "What are the rooks so quiet about?" Depend upon it, there was much in their silence; who knows but that they might have

been breathlessly awaiting the discovery of a fact as important as the old rook is about to unfold.

It was provoking, even to rook nature, to observe the coolness with which the old bird stretched out his wing, with a kind of yawning expression, then looked up with a glance, as much as to say, "The honour of rookdom is in my hands," then turned his unimpassioned beak down again upon his languid wing, and set smooth some erring feather.

"I have lived here, rook and squab, this last ninety years," said he mournfully, as if soliloquizing: "and to come to this in one's old age!—I have watched three generations of the family pass away, and to see this day at last!"

"What, are they going to cut down Butleigh wood?" cawed out a beak from a distant branch.

"'Tis worse than that!" said the mournful bird.

"'Tis all along of the Corn Laws," said another. "They are going to turn the arable into pasture, so good-by to the red worms and the wheat-ears."

"Base worshippers of the belly-god," said the old rook, with rising indignation; "'tis no question of brandlings and sweet grubs, but of the old hereditary house. I overheard Will White say in the lane that the old people are going (which, by the stir below, I fear is true), and that a new man has bought the place. Now, the question is, shall we, the old Rashleigh rooks, submit tamely to the dynasty of the Smiths?"

"The SMITHS?" cawed the whole rookery, in one wild chorus of indignation.

"Did you say SMITH?" said a very respectable middle-

aged rook, putting his claw to his ear, as though he did not exactly catch the word.

"S : M : I : T : H — SMITH ! !" said the old bird, dwelling with a painful distinctness on each naked letter, and then summing the whole up into one crushing total.

"Smith ! what's a Smith ?" said a pert young chip, like Beau Brummel speaking of a pea.

His further impertinence, however, was put an end to by a dolk in the poll from a beak close by, which sent him purling into the branches below.

"If we stop," said the old bird, "we know what we have to expect. The whole crew will be down here by shooting time, in flash sporting coats, fresh from Moses's, with buttons as big as sunflowers, and Brummagem guns, and pop away at us—we who never gave in to anything meaner than a Manton or a Nock."

"And then," said another, "we know the smell of the old keeper's gun so well ; but with these low people we shall never be safe." Like the *Bourgeois Gentilhomme*, the speaker seemed to think the greatest fencing skill of little avail against the chance hits of the ignorant.

"As for you, young squabs," said a third, turning a particular eye on the pert young gentleman, who had by this time climbed into his place again, "you will be shot sitting—a Smith never gives law !"

The younkers trembled violently in their legs, and felt a very unpleasant sensation—something like a dose of No. 10 in their bellies.

"Oh, let us be off !" said they, in an agonizing tone.

"Yes, let us be off !" said the unanimous rookery.

"By worm-time to-morrow, then," said the old bird; "and towards Butleigh woods."

Before the morning had well broken, the tall trees of the rookery, once alive with the black city which they bore in their arms, were quite deserted. The last rook had sailed away to Butleigh, where a family, who had descended from the Danish sea-kings, had long been settled.

Did I say all? No, not quite all; for one solitary bird still lingered—it was the forward young coxcomb, who had met with such summary punishment. Sulky, and out of humour, he would not accompany the flock. Here he stopped watching, day by day, the mournful bustle which accompanied the departure of the squire's family. And it was not until long after the departure of the flock, that any sign of the coming of the parvenu purchaser was to be seen. One morning, however, there drove up to the back court of the house a jaunty dog-cart, driven by a groom, dressed in a very sober and correct manner. The groom descended, and pulled out of the latticed boot, not a couple of sporting dogs, but two deal boxes, and placing them on the ground, disappeared through a little side door, which was opened to him by the old woman set in charge of the house. This little occurrence had not escaped the keen eyes of the young malcontent rook, who had been watching events from a neighbouring tree. After waiting for some little time, to see if any one was coming, he thought he would just take a nearer inspection of affairs, so with outstretched wings he descended on the great flags of the courtyard; and by degrees, as if quite unintentionally, came close to the two boxes—a little hop, and then he was perched upon the top of one of them. Hop,

hop, and his claws sounded upon the hollow box. His little eye seems dazzled by the brass direction plate. But what can it be? He's found out something, that's certain, and there he goes as fast as light towards the Butleigh woods.

And now let us digress for a moment, and consider why all this stir about the Smiths. Would a Smith by any other name smell sweeter? See how all the race answer in the affirmative, by the efforts they make to escape from it. Observe the different arts they practise to "sink" it. Let us take "Sidney Smith" as an example (there are so many of the name that we cannot be considered personal). What a delicate alliteration; what an artful melting of one word into another. The seductive Sidney hanging before the hideous Smith—and looking so natural! like the accidental curl so carefully turned over the defective eyeball;—such a harmony, too, in the look of the letters, it seems like one name. The little green blights in the same manner try to escape detection by clinging to the tender verdant leaves. But the bolder move is to affix some curious or startling Christian name. Thus, for instance, Prometheus Smith fancies he has entirely swamped his proper name. It is the trick of the man with the shocking bad pair of boots, who tried to "carry them off" by wearing a bright Bengal tie. But none of these stratagems will do; no, "not all the perfumes of Arabia will sweeten this little *name*," and the 1,343 to be found in the "Post Office Directory" must bear their burden as they may. No—there is one way, and only one—but, while we have been digressing, the rookery has grown alive

again. The flock has returned, and every householder among them has again taken possession of his tenement. No visions of the coming Smiths now seem to disturb them ; their minds are evidently at ease.

What is the meaning of this sudden return ? Have the old birds sacrificed their aristocratic notions to the necessities of their position ? Does base expediency conquer their imperious pride ? Not at all—the rooks are still firm adherents to the divine rights of kings, the advantages of a territorial aristocracy, &c., and remain hearty despisers of mushroom millionaires. But they have been labouring under a little mistake, which the young rook has put right —very slight, indeed ; it was only about a letter. To you or to me such a matter would be nothing, but to them it was vital. Well, after all, says the reader, your rooks submit to the dynasty of the Smiths ? Yes, but they have found out that they spell their name with a Y !

THE ENGLISHMAN ABROAD.

Bacon, in one of his essays, sketches the manner in which youth should travel, in the days of the Tudors, and points out the ends they should have in view. They are to set forth on their journey "under some tutor or grave servant," and the objects of their attention are to be "the courts of princes, churches, fortifications, cities, gardens of state, &c." How strangely are matters altered since the grand tour was thus solemnly and pompously performed, and how greatly have the very motives for travel been modified and altered by the progress of time! If we were to interrogate Brown, Jones, and Robinson, or the party of athletes stamped with the unmistakable mint-mark of Oxford, as they leaped and rollocked down some verdant alpine mountain side, as to what they had seen and done in the course of their travel, they should naturally point to their alpenstocks, branded with the names of a dozen mountain passes, from Mount Pilatus to the Tête Noire,—these are their triumphs and boasts, and they would display them with as much pride as the young ensign enrolls his tattered banner inscribed with the names of a dozen glorious battle-fields.

Of courts or princes they know nothing, "of gardens of state, fortifications, armouries, shipping, navies, &c.,"

which the father of experimental philosophy imagined to be the only things worthy of a young man's attention, they are utterly careless. Love of the picturesque in nature, of which broad-browed Verulam makes no mention in his essay, is now the great principle which closes the shutters of fashionable London in the autumn months, and makes May-fair a desert.

Of "towns, cabinets, exchanges, and warehouses," the previous ten months have rendered the majority of Englishmen heartily sick, and they rush from the surfeit, and survey with boundless relief the verdant mountain valley and pellucid lake far removed from the wearisome civilization of great cities.

The consequence of this change in the public taste is, that Switzerland and certain other wild places of Europe, where nature has not yet subjected our dear mother to that gigantic roller which she has dragged over the rest of the Continent, have suddenly discovered their national wealth to be in sterile precipices and silent mountain tarns. A jagged range of rocks that erst would scarcely maintain a flock of goats, finds in a few years a busy population nestled at its feet; a great hotel blazing with lights by night at the bottom of every gorge, through which of old the eagle alone swept in solitude and security; and an active race of sons engaged all day in scouring its inmost recesses, and crowning its utmost points in convoy of that peripatetic nugget the Englishman having his "out." Fifty years ago the alpine ranges were guiltless of carriage-wheels, and a few dangerous mule-paths were the only means of passing from Switzerland into Italy, or of re-ascending from Italy into the Tyrol and Southern Ger-

many; now the best roads on the Continent scale the limits of perpetual snow, and the "Diligence" daily mounts almost perpendicular mountain sides by means of tourniquets, which the traveller sees with awe twisting and turning thousands of feet above him on the face of the precipice, so far distant, in fact, that they do not look bigger than the flourishes of Tristram Shandy's walking-stick. Incomparably the best road on the Continent of Europe, for instance, is the famous Stelvio, which, amid the wilderness through which it runs, and the squalid misery it penetrates, is kept clear and clean by the Austrians, a military weapon always ready, like a well-cleaned rifle, to launch destruction upon the kingdoms to which it leads. If both this and the celebrated Simplon were designed for military purposes, they equally serve the gentler uses of peace, and the Alps no longer form, as of old, a stumbling-block in the way of those who wish to catch a glimpse of Italy within a limited period of travel.

But even these stupendous works will in a few years, in all probability, be thrown in the shade by the railway which is now in course of construction in Savoy, and which will penetrate the Alps themselves, and bring the full stream of travellers direct from the north and south trunk line of France into Italy. The influence of these rapid methods of conveyance will be to direct still more exclusively the attention of Englishmen to continental scenery, rather than to its cities and peoples; for it will be hard indeed if the numberless representations of the ascent of Mont Blanc at the Egyptian Hall render that old mountain one whit less attractive; but the same cannot be said of the effect which familiarity with foreigners will

have upon the primitive inhabitants of countries heretofore difficult of access. The more the stream of travellers is directed upon Switzerland and the Tyrol for the sake of witnessing the picturesque costume of their peasantry, the more that picturesqueness disappears, and the common dress of Europe takes its place. Those who visited the Tyrol twenty years ago would notice in these days how much of the old picturesque costume has disappeared; on the main routes, the velveteen knee breeches, which used to set off their athletic legs, are now giving way to the less becoming trousers. In Switzerland, again, the different cantons are no longer distinctly marked by their appropriate dresses as of old, and, to speak broadly, the hunter after national costumes upon the continent of Europe must pursue them as he would the chamois, the wolf, or the wild boar, in the most remote valleys and spots far withdrawn from the general haunts of men. In the larger towns it has long since departed, even among the common people; and the traveller has only to watch the ouvrier at his work in France, North Italy, and Germany, to see how exactly they seem cast in the same mould. In architecture, the like dull uniformity is fast creeping over the continent. The old gables, gothic turrets, roofs, and oriel windows, are disappearing year by year even in country towns, and the meagre wall-fronts, pierced at regular intervals with windows of a uniform size turned up with the eternal lattice blinds, are everywhere taking their place. Nuremberg, the stronghold of architectural costume, if we may use such a term to house fronts, is fast becoming modernised; for whilst the old town is rotting at its centre, like an ancient oak, a ring of neat modern

houses has sprung up around it, and is fast extracting all its life and sap.

Steam, again, is the swift key which has opened the Continent to that great middle class which heretofore never travelled. In fact, we might date the commencement of the vast annual migration of Britons to the Continent, which every year widens and deepens, to the establishment of the Cologne Steam Ship Company in 1827. Henceforth the tradesman of the City, or the manufacturer in the Borough, who could spare a week from his dull round in the cheese line or the tan-yard, could manage to "do the Rhine" and come home, for his circle at least, a travelled man. A glance at the statistics of passengers who have passed up and down this main channel leading to the heart of Europe, shows how rapidly the great tide of humanity has set in along its banks.

In the year 1827 the first steamer puffed up the stream between those wooded heights and ruin-pointed crags, where heretofore nothing swifter than the lumbering barge, or the log-borne floating town, swept down its rapid waters, and against which no traveller dreamed of working his weary way. Upon the wings of steam, however, 18,000 persons were, within one year of the starting of the Company, carried to and fro between Cologne and dirty Mayence. In ten years' time the annual burthen of humanity had increased to 100,000. This great success called up the Dusseldorf Company, and created an opposition, which immediately reduced the fares, and vastly augmented the traffic; for two years afterwards the numbers had reached 480,000; in 1840, 636,000 natives and castle-gazers passed up and down the river; an army

which increased to 800,000 in 1851, and which now, doubtless, reaches 1,500,000! The vast majority being conveyed in the months of June, July, August, and September.

The Rhine without doubt is the great antechamber to the Continent, the corridor which leads to its most sublime scenery and to the sleepy mediæval states of Central Europe, whose old towns we inspect as we would look at a curiosity shop. We can, therefore, account for the mighty throng which circulates upon its waters, independently of its romantic banks, "wrapped in legions old," which read very well at home, but which the traveller in the steamer never can get up in Murray, and fit them as he passes to their proper sites, for ten to one while he is gazing at Rolondseck he passes Nonenwerth unobserved, or gets a vertigo by the suddenness with which he turns to catch a view of the Drachenfels. If the real truth were known, we believe the celebrated Rhine to be an universal disappointment to those who merely steam along it. People are apt to grow critical upon far-famed beauties, to discover that the features are anything but regular, and the mouth decidedly large. Most imaginative persons, and those indeed who are only a little sentimental, have dreamed such golden dreams about this stream, seen such knights in steel wending downwards from the donjohn on the crag, heard the wailings of such love-lorn maidens imprisoned by cruel parents on its bank, just dimly seen such syrens gliding beneath the *crystal* wave close by the Lurlie rock, and watched such bold robber chiefs pricking along the plain, that we must not think it strange, if in the broad week-day world, and passing by the twelve o'clock steamer,

they feel a little disappointed. How can any one of the row of fifty people, all deeply intent upon fifty copies of the inevitable Murray, and all simultaneously exclaiming "How beautiful!" enjoy anything like the true charm of the scene? The sense of your own position, so intensely prosaic, and that of the goodly company by the side of you, all of whose fore-fingers are running along the self-same line and the self-same paragraph, presents too painful a contrast with the picture you have fondly imagined of the fair scene before you. We say fondly imagined, for what person under the middle age ever set out without the firmest persuasion in his inmost soul that in such a romantic land some romance, some adventure, must befall? —fond dream too rudely dashed as the fifty pages of the fifty Murrays turn over, and the thrill of ecstasy shoots along the rank at the duly appointed place! We say boldly that the really most enjoyable moments of that rapid water journey, to the vast majority of summer tourists, arises from a totally different source—neither do we blush to write that *dinner* on board the Rhine boat is altogether a very agreeable thing. No one can have sat beneath the long awning-shadowed table, crowded for the most part with fair English faces, whose eyes sparkle with pleasure at beholding the first bloom of continental al-fresco life, without experiencing a sense of pleasure entirely apart from that produced by the scenery. On this holiday river the genius of travel for once relaxes his grim hold; the inexorable brown alpaca dress, or the faded black silk, which is thought "good enough" for the diligence, or the railway, is thrown aside, and bright bonnets, brighter muslins, and aggravating little jackets appear again, whilst the fair rejoice in

the exchange, as the butterfly rejoices when he bursts from the dingy state of crysalishood, and spreads in the sun his Iris-tinted wings. Here, also, the peculiarities of the bran new British voyager are brought prominently beneath the eye for the first time, and the cynic finds a wide field for quizzing. But we have forgotten the dinner: the long table, brilliant with amber glasses and many tinted "flasches," the sensation of companionship which arises among the partakers of an open-air entertainment, the running fire of the champagne corks, the panoramic nature of the banquet, both as regards viands and views, are all very striking to the untravelled mind, and long remain in the memory when even the mouldering castles, the vine-yards, the grey rocks, and the muddy river have grown dim within it. We do not by any means imply that the landscape in this gay scene is forgotten, but that somehow or other it forms only the background to the bright picture of life, just as the bowers and fountains do to the gay groups in a picture by Watteau. The very limited extent of good scenery to be found on this stream has also its effect in disappointing the traveller.

From Bonn to Bingen is certainly but a short allowance of beauty for so long a river, a very much smaller one than the Meuse, the Rhone, or the Danube can boast. The only way to understand the Rhine is to view its various points of interest from its banks; the traveller little dreams what lovely spots he has passed with indifference in the boat until he has examined the valley carefully by land. Yet, for the reasons we have mentioned, the Rhine must continue to be the great water-path into the heart of Europe. Here the cockney will find himself at home, and

enjoy the luxury of a waiter who understands English in every inn at which he puts up upon its banks,—come across none of the pie-dishes in which in vain he attempts to wash his huge hands as he forces his way deeper into Germany,—is within reach of grog, pale ale, stout, bifstek, and sandwiches, and generally finds the two magic words of Sir F. Head's traveller, "Mangez, Changez," sufficient to supply his wants and settle his accounts. It is really amusing, and at the same time a little humiliating, to observe how large is the majority of our countrymen who venture abroad upon the strength of a few miserable scraps of French, and it must be in no small degree mortifying to themselves to find such good English offered in exchange. Bacon tells us, "He that travelleth into a country before he hath some entrance into the language, goeth to school and not to travel;" and Murray, in more modern times, tells us that "no one should think of travelling before he has made some acquaintance with the language of the country he is about to visit." Excellent advice certainly, but what would become of the huge hotels frequented by the English summer tourists if it were acted upon? We remember most vividly once meeting with a family travelling abroad, to whom such advice would have appeared a violent attempt to interfere with the liberty of the subject. There was Mrs. Smith, a very large lady of that class, termed a "magnificent woman" in a popular farce, made more popular some time since by Keeley's acting, who went about arrayed in a vast sky-blue wrapper girdled at the waist, and who carried in her hand a leather money-bag; behind followed her nervous little lord, a retired manufacturer from Birmingham, to whom she con-

descended now and then to speak over her shoulder, when the little French of which he possessed, and which comprised the whole family stock, was called in need. In the rear of the respective heads of the family, as in an old Elizabethan monument, thirteen children followed all of a row; and, when travelling, the services of two carriages and one omnibus were called in to transport them with their servants and effects. Imagine such a family, met in the first wild ravings "to go abroad" by the Handbook's advice first to learn the languages of the countries they were about to visit! Such advice, however good, will rarely, we fear, meet with attention. Indeed, we question whether the very act of going abroad and finding the inconvenience of not knowing any language but your own will not prove the best stimulant to become a linguist. The vast shoals of English which annually leave our shores for the Continent return with some smattering of French at least; this Gallic lacquer deepens with every visit, and at last assumes without the aid of books a grammatical solidity.

Meanwhile, however, nothing is more ludicrous than to watch the predicaments which the noble Briton, who thinks he can command every thing and every body with money, continually gets into when he travels beyond his depth. To watch his miserable face when the Custom-house official in vain attempts to extort from him his keys, or to make him sensible that his passport, which he sticks to with desperate tenacity, will be forwarded to him at his hotel—the fearful eagerness with which he turns to the heading "Custom-house" in his conversation book, and tries in vain to find a sentence which will suit his situation. We wonder no farce-writer

has seized hold of these comical little books, and fertile source of still more comical situations, to raise a laugh out of the British public. Those who already possess some smattering of continental languages may find portions of them undoubtedly useful, but what possible aid can they give to those guiltless of even this smattering, beyond supplying them with a list of nouns, such as are most drawn upon in the course of foreign travel, and which in most cases he has to thrust under the nose of the person he addresses, from his utter inability to give utterance to them himself. The writers of these little books seem to have utterly forgotten that even if a Briton could give tongue to a sentence from their pages, he cannot ensure an answer in conformity with their text. But the most ludicrous effects produced by these short cuts to conversation with the foreigner, arise when they are resorted to, in anticipation of some accident or calamity. We remember once, while travelling in company with an Irish lady in Styria, to have observed a laughable example of this. Those who have been much abroad know the pleasant customs the southern Germans have of recording dismal mishaps by flood and field, in the shape of road-side pictures, surmounted with a figure of the Virgin horribly limned. On the occasion referred to, the carriage had passed a whole gallery of such pictures in the course of the day, depicting gashed travellers writhing under overturned carriages, hapless peasants precipitated into roaring floods, or horsemen suddenly buried beneath avalanches of snow. Our companion, naturally of a nervous temperament, was by these repeated pictorial blows wrought up to the last stage of excitement, when the German driver, to make up, we

suppose, for having slept along a previous dead level, thought proper to swing down a long and rapid descent, to her exceeding terror, which displayed itself in fidgetting among the leaves of a little book between intervals of convulsive clutching at the sides of the carriage, till at last she seemed considerably eased in her mind, and informed us that she had found the place on "carriage accidents." On examining the volume, which turned out to be the Countess de Genlis' "Manuel de Voyageur," we found the leaf turned down at the following cheerful colloquy:—

"Disengage the coachman from the horse.

"He has broken his leg.

"He has broken his arm.

"Let us take him into the carriage.

"His head is bruised.

"He has a large swelling on his head—should we not apply a piece of money to flatten it?

"By no means! What you propose is very dangerous, and cannot be complied with.

"He has a hole in his head!" &c.

The comic could scarcely be carried farther than we find it in such absurd dialogues as these, which are of course only of use at the moment the reader, in the generality of cases, is either physically incapacitated or too mentally prostrated to read them. The handbook of Travel-Talk is, we confess, a vast improvement upon these old-fashioned conversation books, but we think even this might be simplified with advantage. And here we are about to say something which will terribly offend the veritable, untrained, and untravelled cockney. Placed suddenly, face to face, with some native, in an Italian or German village, he

finds himself reduced to a few rude signs to make even his commonest wants understood. The practical genius of the Briton, however, generally serves him on such occasions; for, rushing into the huge kitchen, he seizes what he wants, eggs, bread, fish, or meat, to the astonishment of the handmaids who flit about amid the smoke sent forth by the central forge-like fire-place—a course of proceeding which, however effective, must seem to the natives a little summary, and which might be avoided by giving a few outline drawings of the kind of viands the traveller would be likely to require whilst the diligence was halting for a meal.

If steam has opened the heart of Europe to all degrees of travellers, it has certainly inflicted a large share of fascinating misery upon a certain class of Englishmen. For instance, one of the toiling million in London's crowded streets happens to turn over the leaves of Bradshaw's Foreign Handbook, and finds with astonishment that places which at school he thought were at the other end of Europe, are now within a distance which is contemptuously measured by hours. He sees, for instance, among the "Skeleton Routes," "London and Geneva, 664 miles, *viâ* Dijon, in about 34½ hours." "London to Vienna, *viâ* Cologne, Magdeburg, Leipsic, and Dresden, 1188 miles in 70 hours," or "London to Cologne" in the trifling time of 21½ hours. Overcome with astonishment at the idea that he can reach distant capitals of Europe, which his Pinnock taught him in old days to look upon as at a fabulous distance, he packs up his carpet-bag and is off. Illfated wretch! from that moment until he returns to the Tower Wharf, and fervently thanks God that he is

once more at home, he will not have one satisfactory meal, or one good hour's rest. Following his guide-book with a faithfulness worthy of a better cause, he is handed with all speed from steamboat to railway, from railway to diligence, and from diligence to eilwagen, without resting his foot upon solid ground. He is tossed, in fact, across Europe and back again as bricks are tossed from hand to hand by hodmen, and he finds his 70 hours' journey, which at setting out seemed so insignificant, the longest and most disagreeable pilgrimage of his life. One can well understand the irritable condition of such a person when he sojourns for a few hours at an hotel in the course of his Mazeppa-like flight; his impatience with the waiters, his determination not to be done, his outrageous demands, and his obstinacy in having them complied with. It is not at all difficult to account for the dislike with which Englishmen are regarded abroad, when we consider the process which many of them have to go through in getting there; and also when we remember that the stratum of society which furnishes the largest class of summer tourists is not remarkable even at home for polish or gentle bearing, however solid its worth. We never heard in the old time, when people travelled at their leisure, of these complaints of rudeness and overbearing conduct on the part of Englishmen, and for the reason that then the well-bred only thought of going abroad, and the well-bred are always able to adapt themselves to circumstances better than those who are not. The gentleman still retains his proud pre-eminence of being superior to vulgar grumbling, and the hotel-keeper has no difficulty in ascertaining the social position of his guests by their habit of giving, or

avoiding to cause, unnecessary trouble to his servants. We cannot help confessing that the great mass of the middle-class English are even inferior to Americans in amiability and contentedness when abroad. The travellers' book, in which the departing guest has it in his power, like the flying Scythian, to launch an arrow at his host, is but too often inscribed with the pettish complaints of the irritable Briton, but we scarcely ever remember to have seen an ill-natured remark from Brother Jonathan, whose great upright round hand stands out always so conspicuously in the page.

From these heavy charges against certain classes of our countrymen, however, we beg as a general rule to exempt the fair sex, as we have generally found them to be less put out by trifles than men. Indeed, we feel inclined to think that the ladies—the young ones most certainly—are the best of all travellers, and throw off all petty causes of annoyance as a duck throws water off her back. The very departure from the dull routine of home life, which seems so much to put out the other sex, is the cause, it seems to us, of their cheerfulness and self-reliance abroad. If this is not the case, what can be the nature of that occult influence which produces such a complete revolution in their minds immediately they set foot on a foreign strand? Why does the shy young lady of Tyburnia, who scarcely moves to a gentleman of her acquaintance whom she happens to meet on Westbourne-terrace, so suddenly lose her reserve when she has put the waters of the Channel between herself and home? Why is she so fond of *tables d'hôte*, of living such an al-fresco life, in the crowded hotel gardens of Lake Leman or Como? How is it that the

conversation grows so easy with the stranger gentleman her brother has fallen in with in ascending the narrow mule-path, and how, by the strict rules of the very best society, can she allow him to place that long drooping fern in her sun-hat? We have seen scores of ladies who at home decidedly belong to the "stuck-up class," uncongeal at once on touching the French shore, and become "fast" ere they have "done" the first Swiss lake. We have seen dozens of both young men and middle-aged ladies who would not play a polka at home on the Sunday on any consideration, go to the Opera in Paris most complacently on that day. The manners of English ladies certainly change marvellously with the latitude, but perhaps, after all, we must ascribe their conduct to that gipsying disposition which dwells in every daughter of Eve. How again can we account for the sudden accession of physical strength which seems to befall them when abroad? We have seen many a languid fair, who could scarcely promenade a quarter of an hour at a flower-show, o'ertop a mountain pass light-footed as the morning. These are phases of the female muscle and mind which we cannot entirely explain, but they are pleasant and amusing ones; and there can be no doubt that the easy bearing and simple grace of the better class of our own countrywomen abroad add in no small degree to the charm of travelling, to say nothing of the bright contrast they present in the item of beauty to all foreigners, not excepting the fair daughters of Seville themselves. Few travellers have glanced down the long line of heads at any foreign *table d'hôte*, variegated with broad-faced, coarse-skinned Germans, hard and sharp-visaged French women, and brown and prematurely old

Italians, without dwelling with pride for a moment on some fair sweet face, framed in abundant chesnut hair, and saying to himself "Here, at least, in the great exposition of beauty, our native rose stands unapproached."

Our purpose, however, is not so much to criticise our fellow-countrymen as to make one or two suggestions with respect to the manner in which they may spend their short holidays comfortably, without losing all their time in hurrying from place to place. There are two countries lying at our very door, and from whose most picturesque cities we are not twelve hours distant,—Belgium and Holland; and where also, strangely enough, things appear more foreign to us than countries far more distant in the heart of Europe. The moment, for instance, the traveller sets his foot in Rotterdam, he finds himself in a new world —in a city of the sea, fringed and set off by the vegetable kingdom. He walks under shadowy trees, which line the canals with the stiffness and regularity of a piece of sampler work, and looks from under their branches upon umber-coloured galliots, with huge shining poops and rudders, brilliant with green and gold; he sees every vessel inhabited, and permanently, it is clear, by the flowers in the pots ranged along the stern. The hair strained back from the faces, and the high cheek-bones of the numbers of women that he sees leaning upon the tillers, or framed like pictures, as they look out of the mimic cabin windows, might almost lead the spectator to believe that he was beholding the floating population of Canton; and, indeed, we question, if we take the size of the two cities into account, whether the number of the amphibious inhabitants be not greater in the Dutch than in the Celestial city.

The architecture of the houses presents a picture unlike anything in Europe. Huge dormers adorned with scroll-work fill up and hide the roofs, which, added to the many stories, quaintly decorated with plasters, carvings, and rich iron work, give the houses a stately and imposing appearance; the odd look of the children, dressed like little men and women, in the fashion of two hundred years ago, all conspire to give the towns of Holland a character which astonishes the English traveller, and which he can scarcely believe exists only a few hours' sail from his own shore. Holland has decidedly retained its own peculiar traits better than any other kingdom in Europe; and there is no appearance of decay or change anywhere to be observed. The extraordinary cleanliness of the people in their houses and streets,* and their hatred of anything which indicates neglect, have no doubt prevented any outward sign appearing of the social and commercial petrifaction which overtook the Dutch about the time their Stadtholder became our king, and which has preserved to us the cities of the low countries as perfectly as flies are kept in amber. A week in Holland enables the visitor to make the tour of the entire kingdom; to thread its principal cities, from Rotterdam in the south to the Friesland

* We cannot say so much with respect to their persons. The lower classes of Dutchmen are perhaps the dirtiest people in Europe, indeed they never seem to have taken their clothes off, and as to cleanliness, the less said about it the better. The Dutch housewife washes but once for the year; indeed it would be thought a sign of poverty to do so oftener. The accumulation of the household is therefore stowed away for that time in the cockloft, whose huge door and protruding "cathead," often elaborately ornamented, forms a prominent feature in all houses in Holland.

towns in the north, where, perhaps, the most primitive people in the world are to be found; to visit the Hague, in which old Time himself seems to have gone to sleep, and the trees to be *ennuied* to death at looking so long in the stagnant canals; to see Leiden, Haarlem, Amsterdam, and the show village of Brock, where they tie up the cows' tails in the stalls, in order that they may not besmear their dainty sides, and where, according to Albert Smith, they polish every individual stone with a tooth-brush. A few journeys into the interior comfortably made along the canals by the trekschuiten, or drag-boats, some of which are luxuriously fitted up, afford a competent view of the country.

As the tourist lolls at his ease on the soft cushions, he sees through the cabin windows a moving panorama, which reminds him constantly of the most beautiful counties of rural England; for, singularly enough, although Dutch towns present such a contrast to English ones, there is a greater similarity in the appearance of the country to that of our own than is to be found anywhere else; always excepting, of course, the canals. Smoking at his ease, he sees flit by him, athwart him, and around him, great vessels, whose breamed sides seem to brush the kingcups in the meadows, and whose sails work their way down village lanes, flap against the ploughman as he drives his team in the field, or catch in the golden horn of the peasant girl, whose auriferous head-dress is worth an English hind's whole worldy goods. The universal presence of these canals perpetually reminds him that he is in a water-logged land, or, to use the verse of Hudibras, in

A country that draws fifty feet of water,
In which men live as in the hold of nature
And when the sea does in upon them break,
And drowns a province, does but spring a leak.

If the tourist desires to prolong his journey as far as the Rhine, he will find this advantage in having previously spent a week in Holland.

No doubt the prevalence of these canals, together with the humidity of the atmosphere generally, is the cause of the wonderful verdure of the meadows, and of the English look of the very grass. The hedges may be those of any of our southern counties, and the pollards, under which Paul Potterish bulls are seen standing, might be growing in Hertfordshire or any of the eastern counties.

A still more accessible route to those pressed for time, and one of which few persons, comparatively speaking, know the beauty, is the valley of the Meuse in Belgium, which may be reached from London comfortably in a couple of days by way of Ostend, Brussels, and Namur. The passage by steamer from the latter picturesque town to Givet is a thing never to be forgotten. Those who have seen our St. Vincent's rocks at Clifton rising in such picturesque lines and so full of colour, will understand the beauty of this portion of the valley watered by the Meuse, when we say that for twenty-seven and a half English miles the tourist scarcely ever loses sight of perpendicular cliffs, rising from two to four hundred feet high, sometimes standing out in isolated blocks, sometimes coming flush down into the water. The windings of the river arrange and re-arrange these bold escarped precipices so as to form a constant series of pictures. Hanging woods, hop-grounds, and rock fortresses, both new and ruined, every

now and then break the view. Among these stupendous military works, perched on inaccessible pinnacles which he passes, are Huy and Dinant, both of which were built under the direction of the Duke of Wellington after Waterloo, in order to secure the passage of the river, which at Givet flows through French territory and is dominated by a stronghold built by Vauban; neither are there wanted storied ruins to give a dash of romance to scenery which, in our opinion, far exceeds the famed beauties of the Rhine. In this lovely valley, flowing with milk and honey, and, what is more to the Englishman's purpose, with good beer, he may board and lodge by the month for three pounds. We know no cheaper or more beautiful place in which to spend a few weeks than the banks of this lovely river. We wonder that so small a portion of the great flood of our countrymen which annually visits Brussels finds its way no further up this channel than Liege. The only manner in which we can account for this seeming neglect of so favoured a spot, is that the inns are very inferior—as bad, in fact, as the village albergos of Italy, and further in condemnation of them we cannot go.

The Meuse is the natural portal to the great forest of Ardennes—the Ardenne of Shakspeare, which for ever remains haunted with the presence of Rosalind and the silvan court of the good duke. This great forest, stretching for forty miles, is one of few upon the continent of Europe, where the wolf and the wild boar are yet to be found—a fact which adds to the excitement in a journey through it by night. Those who do not like to return the same way by which they came, by crossing the forest may reach Luxemburg, whose picturesquely-placed citadel is famed as a

second Gibraltar, and in close proximity to which stands Treves, the oldest city in Germany, and full of Roman ruins. From this point the tourist's path homeward, if he prefers the steamer to the railway, is down the Moselle, which will afford him an entirely new kind of beauty to that he has enjoyed on the Meuse. On either hand for 150 miles the low swelling hills are vine-clad from foot to summit, and present a soft and gentle appearance, as the valley winds along in folding curves, and at Coblentz he enters upon the best portion of the Rhine. This beautiful route, which explores the richest portions of three great fluvial valleys, in addition to a wild woodland country, might well be accomplished in a fortnight.

We have said nothing of the old towns of Flanders, because all the world has been imbued with their quaint beauty. Here, as in Holland, the spirit of the past has withstood the flood of French windows and green blinds, and the architecture is so rich and varied that the houses seem in masquerade. Here we mark huge structures like the piled poops of half a dozen ancient men-of-war, as in the market-places of Antwerp and Brussels; there the mouldering remnants of old conventual buildings yet rich with clustered pillars and decorated arch-work, or hanging like swallows' nests to the huge rock-like abutments of grey cathedrals, quaint dwellings wedged and clustered in by the slow accretion of time. Every age has here expressed itself in brick and stone, and over all the lace-built belfries pour forth night and day the silver music of their chimes. Thus, within the compass of the scantiest holiday, how much may leisurely and pleasurably be seen!

Those who can find time to wander further afield we

would recommend—having done Switzerland, as we all have nowadays—the exploration of a region which the English have not yet penetrated in great numbers, although Americans are very partial to it; the Salzkammergut or Country of the Salt-mines, which forms the south-west angle of the province of Upper Austria, being wedged in between the frontiers of Salzburg and Styria, and drained by the river Traun.

The ride from Linz on the Danube to Ischl, a journey of sixty miles, is one of the most enchanting things perhaps in Europe, and it contains within itself beauties which in other districts are found widely separated. The most uninteresting portion of the route to the lake of Gmunden is done by tramroad, through a rich but rather flat valley watered by the Traun. This level ride, however, only tends to make the traveller more appreciate the extraordinary beauty of the Traunsee, or lake of Gmunden, surrounded by its rugged mountains and intervals of pasture, green as the greenest emerald. As he passed in the steamer down its bright gem of the mountains, every class of landscape in turn meets his eye; on the left the gigantic Traunstein, 4,000 feet high, and cleft from top to bottom of its wall of rock, falls sheer down into the lake, which mirrors its rugged grandeur afresh. Beyond this again the snow-crowned Styrian Alps in countless peaks stand out bright against the vivid blue of the sky; whilst on the right, verdant slopes, soft and bright as emerald velvet, fall gently down into the water, or form island-like rounded promontories on which the white villa or the simple church spire seems to rest as on a cushion. Higher up, dense masses of the dark pine clothe and warm the picture, and

still higher again, like black priests, they seemed to toil in twos and threes, until the bare rock refuses to find them further footing. Whilst the traveller is regretting that he is coming to the end of this enchanting scene, a turn of the boat brings him as by a *coup de théâtre* into a new lake more beautiful than the first. A projecting cape on which Traunkirchen stands causes this delightful illusion, from which you are rudely awakened by the Scotch captain's "Vera grand, sir," for here also "Sandy" has taken root and flourishes.

Arrived at Ebensee, its southern extremity, a different kind of beauty comes in view: the Traun, upon which the lake is strung like a magnificent beryl upon a sparkling crystal thread, here rushes down the valley from its birthplace in the distant lake. Confined within its rocky bed, it tumbles and rolls in a most exciting manner beside the carriage-road. When we explain that it is one of the main channels by which the immense forests which crown the adjacent mountains are moved from their sites and hurried across the country—that innumerable mountain torrents and artificial water-shoots of miles in length are perpetually shooting down into it with a velocity almost equal to a bullet from a gun, huge pine logs from mountain-tops hidden in the clouds—it will be seen what we mean by the word movement on this river. Over the rapids in quick succession, like a shoal of porpoises, we watch these logs leaping along; now motionless in the eddies, now caught again by the current and racing towards their final end—the fires under the huge salt pans. The bright pure colour of its waters adds another charm to the landscape, and one not often to be met with in snow-fed rivers; the

Inn, the Rhine, and the Upper Rhone, for instance, in some degree mar the lovely valleys through which they run by the chalky opacity of their waters. The intervention of a deep lake, in the course of a stream issuing from glaciers, causes it to exchange its dirty character for one of crystal brightness, by the simple act of depositing in the still water its granite particles and other impurities. We have yet to learn, however, what is the cause of the different shades of colour to be met with in lakes contiguous to each other, nay, in different parts of the same lake; for those who have watched the broad bosom of water either from Vevey or Lausanne, know well that at particular times it appears variegated with different tints—a deep line of almost indigo blue being often noticed running amid beryl-coloured water, shot with delicate pink. The Rhone, as it escapes underneath the bridges of Geneva, is notorious for the difference of colour exhibited by its two branches. The deep blue is ascribed by Sir Humphry Davy to the presence of iodine, for which suggestion there seems, however, to be no foundation; and it is left for some further philosopher to discover the cause of a phenomenon which adds so many varying charms to mountain scenery.

But we have yet to pursue the Traun, fringed with beech and the tender green feathers of the larch—to watch it now roaring in rapids over some ledge of rocks, or sweeping around some island, above whose graceful foliage the vast gilt crucifix glitters in the sun—to see it driving beneath us as the road winds upwards, or floating like silver amid the black sides of the pine forest through which it glides, until it mingles with its sister stream the Ischl, in the

heart of one of the most delightful watering-places in the world. Here, indeed, the tourist finds himself in the very lap of everything that is graceful and wild in nature. A little spot of civilization fed with all the fascinating wickedness of Vienna, nestled in scenery which deepens in grandeur at every step from the door of the spacious and admirably-conducted hotel Kaiserinn Elizabeth. The traveller who for days has run the gauntlet of dirty German village inns, rests here with a special sense of luxury. On every side deep gorges open into the mountain-cup on which it is situated, and invite the visitor to numberless lakes set in the recesses of the mountains, and to glittering glaciers still haunted by the chamois ; whilst in the immediate vicinity of the town the hanging woods are threaded with paths leading to open spots, where from Theresa's Bower, Marianne's Joy, or Countess Sophy's Repose—for so the public summer-houses are poetically called after fair ladies of rank who have visited them—the most enchanting views are obtained of the Austrian emperor's favourite retreat, so sweetly set upon its two crystal streams. From Ischl to Salzburg the road is scarcely, if at all, inferior to that we have already described, although of a more gentle character,—now winding round the shoulder of some hill which juts out like a promontory into a lake, now gaining a higher level, and giving the tourist broad and verdant views of an undulating country shut in by mountains in the distance. Salzburg lies at the foot of hills having a perfectly level plain of great extent before it, from all parts of which it is plainly visible, as the old castle now used as a barrack is perched high above the town. The view from the bridge crossing

the Salza has a charm of its own, after traversing so many mountain scenes in which a low horizon is never met with. The near vicinity of the Tyrol is apt to make the traveller neglect the lovely neighbourhood of which it forms the centre. We remember well the indifference with which we ourselves treated the hotel-keeper's lament, that tourists hurried away from the district, but they will never see the like again, the truth of which on retrospection we acknowledge. When the traveller has turned his back upon the Salzkammergut, he has left behind him, without doubt, the most beautiful scenery in Europe.

The journey into the Tyrol, the Stein Pass, the Pass Strub, and the many deep mountain-gorges which the road threads on its way to Innsbruck, give a foretaste of the picturesque wonders of that country, and a hint as to the best means of traversing it. The tourist soon sees that he is in a far different country to Switzerland, and that he must depend upon his own stout limbs if he wishes to bring home any true idea of the nature of its scenery.

The Tyrol is the true paradise of the pedestrian. Together with all the charms of Helvetian scenery, it possesses an unsophisticated peasantry, and, what is more to his purpose, patriarchal landlords, who have not yet learned to look upon Englishmen as so many "placers," out of whom it is his duty to wash as much gold as possible. He will not find here, it is true, as in Switzerland, a fine hotel in every pretty valley, and all the tolerable, good-looking mountains in the possession of scores of hungry guides, who guarded its approaches as strictly as were the garden of Hesperides of old; but he will meet that which is infinitely more to his taste, a homely welcome at the village

gasthaus, a clean bed, mountain food fit for the gods, and a country which he may pace untaxed. We know no more pleasant sight than the mountain-inn in the Tyrol, after a long day's walk. Like the Swiss cottage, it boasts the same huge overhanging roof and picturesque wooden gallery ; but it rejoices in pictorial embellishments which are rarely to be found on the latter. Its ample front smiles with huge frescoes of saints and other holy persons, often painted with considerable skill. Most generally we find a gigantic St. Cristopher, the patron of the labouring man, on the one side ; whilst on the other St. George is seen vigorously slaying the dragon ; and in the middle the Virgin serenely smiles upon her holy Child, or Christ toils beneath his heavy cross. We have often seen well-executed copies of celebrated pictures by the old masters thus adorning common hostels in remote valleys of the Tyrol. Those who have a love of art can well understand the delightful sensation experienced at suddenly beholding these wall-pictures when a turn in the road discloses the night's resting-place, after a weary day's march. The interior of those inns is equally picturesque. Like German houses of entertainment, the basement is vaulted, and the guest finds himself introduced to apartments which remind him more of the ground-floor of some old castle than of that belonging to a wooden house. But here we shall soon forget the heaviness of the architecture in the lightness of the cheer. A gourmand might indite an essay upon the delicious mountain trout which always form the first dish. Not the limp, insipid things known by that name at home, but firm, sprightly, blue-coated fish, whose undulating forms, fixed by the sudden hand of death, seem to imply

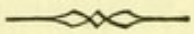
their hilarity at their high destination. These finny delicacies, never more than a half a pound in size, acquire their exquisite flavour by their habits of cheerful industry high up in mountain tarns, where they work away at fly-catching in the summer to support their precarious existence. Scarcely less delicate is the dish of chamois, always to be met with in the Tyrolean inn. Such a meal, together with bread and wine, or beer, is rarely charged more than half a florin; and as bougies and those other items which so torment a traveller are here unknown, he can calculate upon going through the country under four shillings a day. The simple, kind treatment he meets with in the inn, is only a sample of that which he universally meets with from the peasantry. It is impossible not to admire the frank, manly bearing of these hardy mountaineers, who form, perhaps, the largest-boned and most athletic race to be found on the Continent. It is a noble sight to see two or three of these peasants trudging along on some Saint's day, in their holiday dress, a velveteen jacket and knee-breeches, confined at the waist with an ornamented belt, and golden-tasselled hat, in the band of which a bunch of bright red pinks forms a vivid spot of colour against the fir-clad hill-side. It must be confessed, however, that the brightest and most national side of the Tyrol is turned towards Germany; its Italian extremity often presents a much less pleasing appearance.

The ride from Salzburg to Innsbruck affords perhaps as good a view of the country as can be obtained out of the mountain fastnesses where the people remain in the same condition as they were centuries ago. In the neighbourhood of the capital, the visitor has an opportunity of seeing

almost every Sunday those quaint plays performed by tne peasantry which seem the very counterpart of the religious mystery plays enacted by the monks of old in Catholic England. In these performances the women's parts are performed by boys, as was the case in our own country before the time of Charles II. Here also he will have an opportunity of seeing what kind of shots are made by the Tyrolean riflemen, as prize-matches are continually taking place, from which the victor bears away the target, so many of which the traveller sometimes notices suspended as trophies over the cottage doors. It might be asked how is it that so small a country, situated amidst the most ancient and thickly-peopled states of Europe has managed to retain so much of its primal simplicity of manners. A glance at the map will show at once that it has been guarded from the more evil influences of civilization by the mountains which embrace and convert it, as Mr. Murray well says, into "a great natural rock-fortress," which, as yet, no railway has penetrated—nothing, in fact, more advanced in locomotion than the Stellwagen, which even along the splendid Stelvio road does not hurry itself at a greater pace than five miles an hour. This road, which of old kept along the left bank of the Inn, as it traversed the famous Finstermunz pass between Ried and Finstermunz, has this year been transferred to the right bank. It no longer keeps near the level of the river, but runs high up the mountain, along the side of which it forms a vast terrace cut out of the hard rock and often tunnelled through it. The view from the magnificent road, hung, as it were, in mid-air, up the delicious valley, is one of the finest things in Europe, and forms a worthy passage out of this lovely

country. It is needless to say that the track out and home from this district we have dwelt so long upon, is full of interest both of a scenic and a civic character, and a couple or three months spent in pursuing it will never be regretted by even those who are wedded to, and swear by, Switzerland.

A GOSSIP ABOUT THE LAKES.



After the noise and bustle of a ten hours' railway journey from town, there is something strange and outlandish in the sensation experienced as the coach-wheels leave the firm ground of Hest Bank, and suddenly commence their dumb run upon the Lancaster Sands.

The traveller sees before him a miniature desert, in which he boldly plunges without a track to guide him ; for the pathway which for ages man has day by day graven upon its surface, each succeeding tide has effaced, as though jealous of the encroachment ; in place of labourers at work in the fields, he sees the "cocklers" busy among the briny pools, and the sea-gull on his white-curved wings sweeps under the very noses of the leaders.

"Well," said I to the coachman, "this is as strange a road as ever I travelled."

"A werry good road when one knows it," said he, at the same time taking a wide sweep in his course. "Look'e there," pointing to the spot he had avoided, "that's the tail of a quicksand ; a bit furder, and my whip wouldn't stand up in it, more than a spoon in a mustard-pot."

To my unpractised eye there was no sign of the dangerous vicinage; the whole space as far as Kent's Bank, some seven or eight miles' distance, seemed ridged with infinite small wavelets of sand—the rude writing of the receded tide.

On we rattled with the steadiness of the rail, nothing daunted by the formidable appearance of the Kent river, which flows through the sands.

A ford! What a picturesque thing it is! Market-carts piled with country produce, horsemen and buxom wenches—all waiting for the rough old jack-booted guide to lead them across. All, did I say? Not all. One country girl, with a noble simplicity, gathered up a huge handful of petticoat, and triumphantly waded over. As for our Jehu, he disdained the guide's help, and dashed his team through with all the confidence of Neptune.

There was a strange mixture of the stable and sea in the man that made him quite a study. His broad brim seemed striving behind to develop itself into a "sou'-wester;" he was wrapped in a compromise between a pilot and a driving-coat; he talked as knowingly of a craft as of a "drag," and boasted that he handled the ropes as often as the ribands. Morecomb Bay was his exercising ground, and he could explain every ruffle on the sand as though he had been born and bred there—a flat-fish.

"There, now," said he, after we had rattled over the Cartmel peninsula, and were nearing the Furness shore, "that's a sight you don't see every day!" pointing with his whip to a long furrow in the sand as he spoke. "What do you figure that out to be?"

I gave it up.

"D'e see," said he, leaning back, "where our wheel-marks have just cut across? Well, that was where the *Bardsea* steamer dragged her keel last tide, and now we comes and makes our mark right athert-like. 'Taint every day as a five-hundred-ton ship cuts across the high-road in that style."

As the strange compound beside me rattled on after this fashion, I felt certain misgivings as to his genus. From his waist upwards he was of the Jarvey class, undoubtedly; but what was there beneath the leathern apron? A mer-man's flabby tail had just suggested itself, when a huge boot-heel descended upon my toe, dissipating all doubt, as the wheelers were suddenly drawn up upon their haunches at the Sun Hotel, Ulverstone.

"But what have you dragged us over the Lancaster Sands for?" says the reader; "and whither are you leading us?"

Because, good friend, I am for a day or two in the Lake country, and have a theory about the best way to it. Let those who love the rail go on to Bowness, and enter Windermere by its drawing-room window; I prefer its natural porch, the sparkling Leven—the gladdest, brightest river in all the world. Besides, there is an æsthetic reason for taking the route by the sands, which should not be overlooked. A gourmand in scenery adopts a system of contrasts in his landscapes, just as the wine-taster does with his palate: a rough cheese prepares the way for a delicate appreciation of the fruity port: a morning's journey on a landscape as flat as your hand gives the eye a relish for mountain scenery and a sparkling lake.

We will not linger on the way between Ulverstone and

Newby Bridge—not even to dwell upon its rich scenery, nor to delight in the bright river, which, ere it is lost in the sandy gorge of the sea, is seen through its verdant fringe of trees, leaping beside the road up which the traveller slowly toils.

If there is a model inn in the world for the tired and dusty pedestrian, it is the Swan at Newby bridge. Thirsty and foot-sore, he crosses the old gray arch, and mine host, napkin in hand, smiles upon him from the capacious doorway of the hostel. Throwing aside his knapsack, he strolls down a few yards to the grassy margin of the river whilst dinner is preparing. Around, on every side, a graceful verdure walls in a scene of perfect peace. Swiftly, and with the sparkle of innumerable brilliants, the stream flows over its shallow bed, scarce deep enough to float the light skiff, in whose shadow the great trout, with ceaseless fin, poises himself against the crystal flood. As you watch him with the eye of an angler, dinner is announced, and you pass at once to the contemplation of his fellow in a napkin, with the appreciation of a gastronome.

A trout and a cutlet in the quiet, domestic little coffee-room, with the window draped with emerald leaves, give no bad foretaste of the way things are done in the Lake country—at least in that portion of it which is not made the head-quarters of the upstart rich, who are fast vulgarizing all before them; white-"chokered" waiters, and all their concomitants, taking the place of the wholesome simplicity that reigned of yore.

My regret at leaving this perfect little inn was not lessened by the glimpse I caught of a bright-haired young beauty alighting from her mountain pony at the moment

of departure, and what spell there is in the very neighbourhood of gentle womanhood we leave to our reader's own heart: but to go I was obliged. The last bell of the steamer was ringing; the white smoke was giving its final blow; and the little *Lady of the Lake*, a hundred yards up the stream, was ready to take her pathway up the enchanted lake.

Light as she is, there is scarcely water enough to float her—scarcely breadth enough to clear the water-lilies that pave the crystal floor on either side. Not a glimpse of the Queen of the Lakes is to be seen—not a mountain rears its blue summit in the distance. We pick our way down a mere brooklet running between hill sides, the graceful little steamer turning and twisting like an eel. The tourist is all anticipation—a turn, and we sweep into the lake.

Nay, good tourist, get rid of that depreciating look; say not that your ideal is destroyed, and that Windermere is "a mistake," as some fast young gentlemen declare on their first introduction. When you have lived upon it fifty years, as Christopher North said, you might have something to say about it. Wait until the swift paddles have run you up the narrow reach of the lake—until you thread your way between the mimic isles—until Bowness is passed, and then ask yourself if a more lovely corner of the world is to be found than the nook where stands the bold brotherhood of mountains upon its northern shore. How gently the sweeping hills fold across each other, like the kerchief on a maternal breast; and how the soft lake repeats the image in her own liquid bosom!

I hope I am not writing in the spirit of a guide-book,

but the last few lines smack of it most forcibly, I must confess. There is nothing I detest more than fatiguing a reader with effete descriptions of scenery, and of such scenery as this, above all things; for how vain are words to attempt a realization to the mind, of the blue atmosphere of the mountain gorge, the tender gradations of its light, or of the weird-like forms of the cloud shadows, as with strange contortions they chase each other up the craggy steeps!

Yawn no more, good reader; I promise, though in the very midst of mountains, never to say as many words about them again throughout the paper.

Whilst Belle Isle and its stately mansion still hides from us the northern sky-line, jagged with towering peaks, I land upon a green promontory, such as Undine might have sported upon with the old fisherman, leaving the steamer to pursue her way through the wooded isles on her upward passage.

A charming little nest is the Ferry Inn, and no jollier landlord is there than Arnold—no kinder, more motherly creature, than my landlady. The inn looks directly upon the glassy lake through a fringe of noble trees, just as a beauty peers at herself in the mirror through her luxuriant tresses. The pleasure skiffs grind and fret their cutwaters against the pebbles, within biscuit-toss of the breakfast-parlour windows, and those who are romantically inclined can drip silver from their oars in the moonlit lake, ere the warm glow of the coffee-room has departed from their cheek. This is as it should be, but it is quite an exception to the general rule, which is to plant the inns at a mile's distance from the water. Such is the case at

Ambleside, at Patterdale, and Keswick — a most unnatural divorce, and worthy of all condemnation. The delight is to take the water like a duck, at any moment, and in any dress, and not to pay it a formal visit as you would a frigid acquaintance.

The moon was slowly rising over Orrest Head, and her reflection, like a silver shallop, was noiselessly ferrying from shore to shore of the unruffled mere, as I rose from the substantial viands of my worthy host. To ship a pair of sculls and pull out into the lake was an instinctive act.

It was as natural to be attracted by the soft swells of music, which came over from Bowness—Bowness, the pleasure village of the Lake Country, where yachtsmen flourish, and fair maids flirt, where, in the summer evenings, lights quiver so long in the dark water, winking ever and anon as the gauze-clad angels swim by in the dreamy waltz. "On such a night as this" I found myself amid a crowd of promenaders, which the band had congregated in the grounds of the Royal Hotel. Every window was open and full of life. Silks rustled upon the balconies, and young bright faces came in and out of the deep shadows made by the clustering clematis. The scene realized one's preconceived idea of the gaiety reigning upon the river lake. I still bear in my memory the form of one gentle fair leaning alone from one of the upper casements, her graceful outline distinctly traced against the brilliant light of the room. Her hair had fallen loosely about her shoulders (I am not romancing an inch), and she was gazing fixedly upon the lake—thinking, perchance, of some far-distant Romeo.

The moon was hidden by a dark band of cloud as I

sought for my boat amid those grouped at the landing-place. Some one in my absence had drawn its nose upon the pier. I thought this strange at the moment, but pushed off in the dark. The graceful silhouette of the unknown Juliet was still visible from the window of the hotel as I pulled right out into the lake, now black and still as death. Far away on the opposite shore, the lights of the Ferry Inn glistened like glow-worms set upon the water's edge. I might have been midway in the passage, when my eye caught a small white object moving to and fro in the bottom of the boat. I put my hand down, and found the bottom full of water!

"What a disgusting fellow that Arnold must be to give me a boat that makes water like this," I remarked, not at all alarmed; and was only quickening my stroke, when I heard a slight gushing sound at the head of the skiff. I darted forward, and placed my hand on the side—it was leaking in streams through a gaping seam!

Good God! the lake at that spot was two hundred and forty feet deep. I was in a sinking boat, and could not swim!

For a moment I sat paralyzed—then I started up and shouted, but all was still except the jug-jug of a nightingale singing from the distant shore, and the sound of the spouting water, that seemed to me at that moment louder than the loudest cataract. I sat down in desperation, and pulled for very life—the water, inch by inch, coming up to my knees.

Suddenly a rustling sound made my heart leap with horror—on every hand tall and shadowy forms bent over the boat side: I thought the spirits of the lake were about

to clutch and bear me down into the gloomy depths below. In the midst of my terror the moon burst forth, and, to my great relief, my ghostly assailants transformed themselves into harmless flag-reeds.

I was ashore on Belle Isle, a deeply thankful man. Had it been uninhabited I might have played Robinson Crusoe for the night; but assistance came, and then the cause of my disaster was apparent at once. I had taken the wrong boat—one that had met with damage, and had been drawn up on the landing-place for safety. Such was my first adventure upon Windermere.

The glorious fire in the Ferry kitchen was not the least pleasant place after my cold foot-bath. Reader, if you be of the silver-fork school, you will wonder perhaps at my low habits. Nevertheless, there are occasions on which a capacious kitchen is not to be sneered at. I had looked in at the coffee-room, and the very sight of the place chilled me to the bone. Each table, inhabited by its own separate group, seemed as much isolated from the other as the isle of the lake. Here a clergyman sat with his two daughters, surrounded by a moral *chevaux de frise*, that would fain repel the assault of the slightest glance—there two Oxford men from different tables threw out their invisible antennæ, and minutely examined and watched each other from the very depths of their all-absorbing newspapers. The only real group was the one most shunned by the others—a party of "cheap trippers," as the innkeepers contemptuously designate those who "do" the lakes by excursion trains.

What a contrast to all this genteel frost-work and silly constraint was the Homeric breadth and general simplicity of the bright and cheerful kitchen. Behold on one side of

the ample room, a large oaken dresser extending from floor to ceiling, black with age, and bright with labour, carved and twisted enough to excite the envy of Wardour-street. Mugs and tankards of bright pewter stand out against the dark back-ground clearly as in a Dutch picture, and flash and grow dull again as the wood-fire leaped and glowed on the merry hearth. Huge hams depend from the rafters, flanked by crisp and sad-coloured herbs, and ropes of onions shining jollily like gigantic strings of beads. Three or four lassies in snow white jackets and linsey-woolsey petticoats, wooden-soled shoes, and worsted stockings, clumped about their different vocations, reminding you of Landseer's peasant girl, in his "Bolton Abbey;" a weather-beaten guide, alternately plaguing the girls about their sweethearts and drinking with the landlord; a fisherman from the lake; and a yachtsman from Bowness, a little fresh: such were the company and the scene in the Ferry Inn kitchen as I entered, and such might be found in twenty other hostels of the lake district, not yet utterly spoiled by dainty company. I confess I love such places, and would rather smoke a cigar in one of their warm ingles, than bury my feet in the richest Persian rug, or loll upon a sofa of the best tabouret, in the correct saloon or gilded coffee-room.

In such snuggeries you hear all the history of the country side; the old shepherd, as he warms with the nutty ale, grows loquacious, and tells of his lonely watchings among the fells; the guide drops his tone professional, and gives the pedestrian hints worth knowing. The manner in which the mistress chats and works among her maids smacks of the age patriarchal—on every side the traveller

sees about him, character rough and direct, from the great quarry of nature.

A loud laugh, with rapid contagion, was circling round the company as I entered, above which arose the broad, rich cachinnations of the landlord. Mine host is a Dorsetshire man ; and, with a pardonable clannishness, has imported a little colony from his county, who fill all the more responsible posts of the hostelry. In the midst of the hard singing accents of the North, you are surprised to find Boots answering you in the rich west-country dialect, or to hear the ferryman trolling out some doggrel ballad of the south as he gives way with his brawny arms. To a traveller coming, like myself, from those parts, the old familiar sound was as startlingly pleasant as for the Scotchmen to hear the bagpipes in the streets of London, or for the Swiss to see a pine-tree or a snowy peak at the torrid zone.

The cause of the laughter I speedily learned. Mine host, in his own peculiar way, was beginning a little episode in his life that he was very fond of relating. The yachtsman had been asking him if he knew anything of Wordsworth.

"Knaw'd'n," said he, with a merry twinkle of his eye, "I should think I did ;" and rising from his seat, he reached and took down a tin horn from beside the beam that ran along the ceiling. "That," said he, eyeing the instrument with a look of affection, "was when I blow'd the harn." So saying, he gave it a blast that smacked of the coaching days of old.

What blowing the horn had to do with his knowledge of the poet was a puzzle to those of his company who had

never heard his story before, which included myself and the yachtsman.

"Blowed the harn!" said the latter, in a half-tipsy tone; "what do you mean by that?"

"Why, you see this wuz the way I comed to knaw Wadswuth" (the Lakers thus pronounce the late Laureate's name) "so as I shan't forget'n agen in a hurry. When I wuz guard of the Whitehaven mail" (here he refreshed himself with a blast), "five years agone and more, as we wuz a slappin' along, and just coming to a sharpish turn—you knows the carner nigh the bridge, two miles this side Keswick—what should we see" (here he put the horn to his mouth again for another flourish; but his wife, with screwed up eyes, snatched it out)—"what should we see, but sumthin' uncommon tall and grand, tooling along a little pony shay, as cool as murder.

"I give you my word and honour, gentlemen," said he, turning round to us quite impressively, "I never had occasion but this once to tune up this blessed harn as a warning, and hang me if I didn't miss it.

"'Oh, Lord, here's a smash,' said I; and afore the words wuz out of my mouth, crash went the shay all to smitherins right through a dry wall, and slap went the driver over into a plantation—arms out, and great-coat a-flying. We thought for sure 'twas all over with'n; but presently he picked hisself up uncommon tall again: and, says he,—'I'll have this matter thoroughly investigated.'

"With that he walked off towards the public.

"'Bill,' says coachee to I, very down like, for 'twas a bad bit of business, 'who de think that is?'

"'Well, who be't, Jem?' says I.

"'Why, who but the powit, Wadswuth.'

"And now, gentlemen," said he, turning round, "when you next goes to Keswick, just by the bridge, about two miles out, you'll see two yards of the wall down to this day, *and that's where we spilt the powit!*"

A prolonged blast on the horn, and a loud laugh, marked the landlord's sense of the excellence of the joke.

"Ay, and often and often," continued he, returning the horn to its place, "since that, when I've seen the grand fowks draw up to the Mount, I've a said, sly-like to myself, —'Ah, gentlemen, you be going to see the powit, but you never had'n call upon you, unexpected like, on a flying visit over a wall.'"

A general gossip now ensued with respect to Wordsworth and Hartley Coleridge. Poor Hartley was evidently the favourite of the Lakers. His genial nature and simple kind-heartedness won upon them wonderfully. The women doated on him. He was never, they said, without a ha'penny in his pocket for the children; and "Ay, he was a good-hearted gentleman," was an exclamation all joined in.

With all his familiarity, however, he managed to impress them with a most exalted idea of his abilities; and I was much amused, and not a little astonished, to hear the general assent given to an idea thrown out by one speaker, that "he used to write all Wadsworth's best pieces for him." (!)

The severe nature of the Laureate sorted not so well with them as that of poor Hartley, who would romp with the children, and write love-letters for the lasses.

As I went up-stairs to bed, I could not help taking a peep in at the coffee-room; it was as cold and silent as ever: the clergyman still kept watch and ward over his daughters, the Oxford men had not done silently perusing each other. "To-night, at all events," said I, shutting the door, "kitchen has had the best of it."

I remember now, and I might as well confess it, that no small element to the general satisfaction I felt at the Ferry Inn, was the fact that the coffee-room was guiltless of any of those white-neckerchiefed gentry, with napkin under arm, and soft, cat-like footsteps, whose every action seems immediately posted up in their own minds in readiness for the bill.

Jane, our neat-handed Phyllis, with her mild, dove-like eyes, and bright brown hair, did her spiriting differently. There was something so modest in her speech, and so innocent in her bearing, that you instinctively put down the soft pedal in your voice when addressing her. As for myself, I honestly confess that I loved to see her touch at my solitary table, as she cruised between the different parties in the breakfast-room; and many a journey after needless muffins her beauty cost her.

The morning I left I had the coffee-room all to myself, I remember; and, rascal that I was, I determined to take advantage of it.

"Jane, I want to speak to you," I called to her, with a tone more tender that a man usually calls for toast or chops in.

She came, and stopped about a pace from me.

"What is it you want, sir?" she said. "Is it anything about the waiting?"

Such a mild serenity, such a guiltless air attended her, that I was routed in a moment, and coward-like took refuge in a demand for salt.

But here I am, talking nonsense, and dawdling on the very threshold of the lake. A boat, and hey for Ambleside.

A sweet little skiff lay with her nose leaning over the greensward that dipped into the lake.

I was right, after all.

As I took my place and shouted after the boatman, who should come labouring down, like an ant with a stalk of corn, but Jane, volunteering with the sculls.

"Good day," she sweetly said as I pushed off.

I like always thus to end with the smile of beauty.

Windermere, on a sunny day, is a scene that dwells in a man's mind long after he has seen it, as one of those bright visions that redeem the common-places and hard day-by-day realities of the earth. "Adam could scarce have possessed a fairer lake in Eden," I involuntarily exclaimed, as resting on my oars, and turning round in my seat, the mountains at the head of the lake met my view. The "Old Man" out to the north-west keeping guard over Coniston Water, that, like a gentle sister, lies beside the Queen of the Lakes. The Pikes, raising their huge camel-like humps against the light, and more directly ahead Nab-Scar, Fairfield, and Loughrigg, rose like solid walls of gay and gladsome green, against which the blue smoke of Ambleside and Rydal gently stole up the sky. Two days ago, I mused to myself, I toiled amid the gloom and soot of London; and now here I am rocking upon a crystal lake, into which the green promontories run like

brilliant tongues of emerald, and mimic islands float on dreamy echoes of themselves. A boat or two, with softly-swelling music, and flags trailing languidly in the water, and Martin might have sketched it for the Enchanted Lake, or Thomson claimed it as the realization of his delicious Land of Drowsihead :—

> "Of dreams that wave before the half-shut eye,
> And of gay castles in the clouds that pass,
> For ever flushing round a summer sky;
> There eke the soft delights that witchingly
> Instil a wanton sweetness through the breast,
> And the calm Pleasures always hover'd nigh;
> But whate'er smack'd of noyance or unrest
> Was far, far off, expelled from this delicious nest."

Thus drawn on to quotation, I might have proceeded to the full tether of my memory, but that my eye was attracted by a gentle ripple on the lake, as though propelled by some moving body; and a slight blotting movement against the bright light that shone between the tree-stems fringing a neighbouring tongue of land. My imagination might have been pardoned for conjuring up some lady sailing in a shallop at least.

"Shove her off, Bill; that's your sorts!" uttered in a strong Lancashire accent, at once brought poor fancy to the ground, and plunged me chin-deep into the work-day world.

A large boat, crowded with women in staring Paisley shawls, and men who continually handed about a four-gallon jar and smoked *German pipes*, pushed out into the lake, close beside me. By way of salutation they made certain kind inquiries after my mother, which not being answered, they fell to splashing me with their huge oars;

and then hallooing and rocking the boat, proceeded across to the other side of the water.

"Cheap-trippers—third-class—Manchester. Oh, that Wordsworth could have launched at you something harder than sonnets, or that railway lines would sink before high-sounding verse!"

Thus, in the bitterness of the moment, I poured forth my wrath.

And yet, on second consideration, I cannot help thinking that Wordsworth, for a great poet, showed some littleness of spirit in turning such a rabid Lake protectionist. He should have seen with prophetic eye how such scenes of nature would tend *in time* to elevate the coarsest minds. As for those like myself, however, who can only afford time to judge of the present, the process of refinement is rather unpleasant. Elevate the masses as much as you like, only don't make the lakes their washpot. It is too late, however, to protest, we fear, as twopenny Tivolis and tea-gardens are already located on the banks of Windermere. The privacy of the lake, in short, is gone.

From Waterhead, the port of Ambleside, the village is a good mile of pleasant walking. Robert the Ready, the inimitable waiter at the Salutation, welcomed me kindly; and having satisfied the inner man, I strolled down towards Rydal. The little road leading up to the "Mount" is more like a carriage-stand than anything else. A dozen vehicles were drawn up there at least, as I passed up, their occupants having preceded me to get a good stare at the waterfall and the poet,* if possible, both being set

* It is almost needless to say that this article was written during the lifetime of the late lamented Laureate.

down as sights to be "done" by the growing multitudes that annually swarm to the lakes.

Wordsworth was, much to my satisfaction, just setting forth upon one of his daily rambles as I walked up the hill, for there is something repulsive to me in the idea of intruding upon the privacy of such a man for the mere motives of curiosity. Yet the temptation was strong, as I had in my pocket an introduction from a personal friend. To see him, however, was enough; so I kept my letter in my pocket, and observed him as he passed. Dressed in a frock-coat, and with a little oil-skin cap covering his noble brow, he wore very much the air of a military man enjoying a calm old age. His carriage, so upright of old, was broken, however, by a slight stoop, and there was that in his face which denoted a gradual decay. His step, however, seemed as firm as when he wandered unattended among the fells, a priest of Nature.

If time begins to press upon the Laureate's brow, his home still continues the same delicious nest it was of old. His charming cottage seems to grow deeper-cushioned upon its verdant clumps of moss; and between the hazel-boughs that fringe its natural terraces, the silver waters of three lakes flash back their dazzling light. Nature for once has lain at the feet of one of her rarest spirits, and opened her great book continually before him.

Poor Hartley Coleridge's humble little cottage lies close at hand, on the road which skirts Rydal Water. After the cheerfulness of the "Mount," the place looks lonely and desolate. Immediately behind it, the bare wall-like side of Nab Scar rises to a tremendous height; and the Little Lake in front, still and dark, was rendered

yet more solitary by the presence of a single heron, which, balanced upon one leg on a rock in the centre, seemed sentinel of that camp of silence. The good, kind-hearted creature with whom he lodged, showed me his whole room with brimming eyes; and then taking me up stairs into her best apartment, pointed out a place in the wall where the paper was torn. It was done, she said, by his coffin, and thus it should remain until her dying day. It was the same story I had heard before. Everybody loved him.

As the shadows of the mountains were beginning to lie long upon the plain, and the blue sky to deepen, I pressed my way musingly as far as Grasmere. The lake looked peaceful and calm, and the cows on its green island, after the heat of the day, were standing up to their dewlaps in the clear water, slowly chewing the cud, whilst great rings of crystal spread outward from their knees. Every shadow slept upon the water.

If there is a place in the world in which one might grow in love with death, it is the little churchyard of Grasmere. The latch beneath the ancient lych-gate clanked sharply against the stillness as I entered to wander among its green hillocks. In one corner, beneath the shadow of a yew-tree,

"A few graves
Lie sheltered sleeping in eternal calm."

Upon one were the faded remnants of many flowers, and some that the hand of affection had lately placed there. A headstone told me it was the last resting-place of Wordsworth's much-beloved daughter, cut off in the first bloom of her youth. I looked in vain for another tomb which I sought after; but a peasant coming along the path-

way at length pointed out the place where Hartley Coleridge lies. The grass grows over it very rank and long, and you can scarcely tell that it covers a corpse.

For the many flowers of poesy that he gathered for the world, I placed a rose in return upon his forgotten grave.

SENSATIONS OF A SUMMER NIGHT AND MORNING ON THE THAMES.

It was the influence of the weather, I suppose: nibbing my pen would do no good. I had gazed at a well-known spot on the ceiling without drawing any inspiration from it; and, at last—sure sign of an unfruitful brain—I had fallen to all sorts of odd pen-and-ink drawings, and forged the names of all my friends upon the paper; when a sunbeam shot suddenly down upon me, as though Phœbus himself had directed a golden shaft to remind me of his worship.

This dramatic little touch decided me. I shut up my writing-case and went to the window. The fineness of the afternoon had evidently affected the people with a sudden love of the country, for they poured in a perpetual stream down the street, which was one of those in the neighbourhood of a steam-packet wharf. Here came some favoured dog with a lady on each arm, in a bewilderment of happiness between the broadsides of small talk which they threw into him on either side. There shuffled some old fogie from the counting-house, who had given himself a half-holiday that he might enjoy the sight of his little boys making hay upon the lawn with the little toy-rakes he had just given them,—strange what simple touches dwell in the

bosoms of crusty old men of the world! Then, again, came a pair of happy people: a fine, fair youth, under the rim of whose hat the crisp, golden curls shone in the sun, was whispering something to a little drawn-silk bonnet,—all the painters in the world could not have painted the intensity with which that little bonnet seemed to listen. "Why should I not enjoy God's sunshine," I said, "as well as the rest of his creatures?"

I put on my hat, and was proceeding down my dull, drab-coloured, anti-domestic-looking chambers stairs.

"But, stop!" said I, suddenly pausing. "Alas, I have no dear little drawn-bonnet to talk to!"

My laundress, who was coming up the stairs at the moment, drew flatly back to the wall to let me pass, and seemed as fixed there with astonishment at my words as though she were some ornithological specimen suddenly impaled. When I got down to the street, I had as many directions distracting my head as a post at a cross-road. I was relieved from my difficulty, however, by one of the Great Western cabs driving past—those cockboats to the great leviathans of passage which lie at the outer anchorage of the City. I jumped into it, and threw down all the windows. The heat was intense: the sun, I am sure, that day would have shone right down into the bottom of a quart pot.

"I'll have a day upon the Thames," said I; "and lounge upon the pure crystal!" The thought itself was cooler than one of Gunter's ices.

The station was soon gained, for the cabby, to use his own words, "had a werry good hos." I was only just in time, however; the clerk thrust my ticket into the mark-

ing-machine, which gave a sharp, spiteful nab at it, as though it had been dreadfully worried, and with its black teeth imprinted my destination—Maidenhead.

In another minute I was in my carriage, and everybody studying with intense interest every button and seam of my coat: one man began rather to annoy me by the length of his survey, but I silenced him at once by making a deep scrutiny into a patch upon his boot; he drew his foot into the shadow, and transferred his attention to the landscape. Our engine was the "Great Western," the monster that eats up seventy miles in an hour with ease; the pace was accordingly first-rate. As we got into the open country the trees seemed engaged in a perpetual waltz, those in the middle distance and those afar off continually changing places; then the furrows of the fields appeared to revolve like the spokes of an enormous wheel; bridges were passed with a rush like the sound of a pump-ball; then the express train met us, and disappeared,—

> "Like the lightning, which is gone
> Ere we can say, 'It lightens!'"

quite taking away the breath of one poor little girl, who was making her first journey by rail, and who looked immediately to see if her ticket was all safe inside her glove. In half an hour we were at Maidenhead, and I alighted.

From the station to the bridge it is a good ten minutes' walk, dusty to the feet and hot to the back. But what a delicious scene when I got there! Beneath one of the gray arches the silver stream leaves a little pathway. Here,

in the cool shadow, I splashed about the water for pure joy. Three or four light wherries were moored near, and from their bright breamed sides the reflection danced like golden snakes upon the water; whilst from the sparkling water little waves of light were continually playing upon the curved skiffs' sides.

I balanced with my eye the sculls in one of them, felt satisfied with their make, and in another moment the sharp nose of the boat made a deep dip into the clear tide, as I leaped in, took my seat, and peeled to my work. Splash, splash fell the blades on either side, and, like a trout, her nose turned upwards to the stream. There is nothing to me more exhilarating than a sharp pull against a gently running stream,—to feel the ash blades quiver under your nervous grasp, the footboard to give, and your whole frame to be in harmonious, energetic action; and the tide testifying to your prowess, as, divided by the keen cutwater, it rumbles against the boat's sides.

When I got as far as the picturesque old mill I stopped for a moment, for one never sees such places now but Tennyson's *Miller's Daughter* comes to one's mind; however, no Alice stooped from the lattice to

> "Set
> Upon the narrow casement-ledge
> A long green box of mignionette.

But I will wager my life that it was only my usual ill-luck, and that beauty dwells beneath that roof. A little further on, and I came to the hanging woods of Clifden, famous for Cockney pic-nics. As I rowed leisurely along,

the shadow of the wood fell upon half of the river, whilst the other lay bathed in burning light. I lay upon my oars for a moment to enjoy the scene. The water here deepens, and calmly as a mirror it reflected the burning hue of the sky. The boat, as she floated, seemed like a bird with outstretched wings poised in mid air ; the water from the oars dripped like molten gold upon the glassy surface, and then spread in widening rings which floated down the stream. A number of birds were calling to each other in the woods, and made the calm beauty of the picture appear more impressive.

A short, quick pull brought me to quite a different scene. The navigable channel of the Thames passes through a canal parallel with the running stream, up which I kept until I found myself struggling with my little boat amid the tumbling water of a picturesque weir. As I found the current too strong for me, I ran the boat into shore to enjoy the scene. Cuyp would have gone on his knees for the chance of sketching it. The sun, which was getting low, shot his beams in level lines along the meadows, and lit up every blade of grass with precious light. Three or four cows, the very picture of quiet enjoyment, were chewing the cud, and the row of pollards that fringed the canal sent long shadows along the land. Over the dam the water fell with one clear neck, then flashed and boiled until it gradually moderated into a swift rapid, in which, with naked legs, a man stood throwing the fly. 'Twas a picture for a summer evening, so I lay down on the grass to admire it, whilst my boat impatiently kept grinding its keel against the pebbles of the shore. This spot is a great place for fine trout. My friend with the naked legs told

me that one had been caught the evening before weighing seven pounds.

Maidenhead Bridge soon lay before me ; its heavy circular arches reflected in the water, except where the image lay broken for a moment into a dreamy indistinctness, as the glossy stream shuddered with a passing gust. Six horses, with bells at their heads, were just visible over its parapet, labouring up its slight ascent with a ponderous waggon ; the waggoner, with his red worsted cap, making just the spot of colour the landscape desired. "There's old England for you," said I, "and a picture for Moreland!" A little below, the railroad bridge sprang, with one elliptic arch, from shore to shore ; and, as I passed beneath, a heavy train shot by with the speed of light, leaving the reflection of its dark, straight line of smoke upon the amber-bright water. "And this is 'Young England!'" I exclaimed with enthusiasm, and

> "Not in vain the distance beckons.
> Forward, forward let us range;
> Let the great world spin for ever
> Down the ringing groove of change."

Still as the great creature went screeching past, the question arose in my mind whether, with all our advance in science, we have not lost much of the trustfulness which distinguished our ancestors. We seem to get further from nature every day. When the gallant ship moves past under full bellying sail, we feel that she is in direct communication with the elements. There is a faith in her which humbles, yet elevates the heart. The steam-ship puts forth in the teeth of the storm with a confidence which almost seems presumptuous. Even in the old modes

of travelling on land, the mutual dependence between man and the animal creation is evidenced. The necessity which made him look out of himself for help, was beneficial to his heart; but now he has imprisoned the subtle giant Steam, and, lord of this tremendous power, he rides like a whirlwind through the land!

"That was a nigh miss!" said a gruff voice, as, with a sharp back-water, I just avoided a ferry-boat crowded with people.

During my soliloquy I had run down the river a mile and more; and now I found myself opposite the village of Bray, made famous by its politic vicar throughout the land. In the distance I saw the old gray tower of the church, around which the rooks were continually circling. A little inn, the Red Lion, stood upon the edge of the river; its bright red brick walls, and scrupulously white painting, gave it quite a Dutch neatness. There had been a wake, or something of the kind, in the village, for several groups of labourers, dressed in their best, some holding, with unsteady grip, club-staves headed with gleaming brass, were seated at the rustic tables, placed upon the little green. I liked the look of the house, so I sent the skiff back to the bridge, and took up my quarters here for the night. The company was growing rather uproarious as I looked out of the window, and watched upon the water the dull leaden reflection of the sky ending in the west, with that peculiar glare of light which always follows the setting sun. My pull had tired me. Fresh eggs, fresh brown bread, broiled ham, and good sound ale—how I despised all the knick-knackeries of Verrey's—white sheets, really

white counterpane and bed-curtains: how I wallowed in the enjoyment of their blanched beauty!

I was awakened in the morning by the singing of the birds. I have a fine ear for birds in the morning: they never seem to me to sing so sweetly. But all the sensations of early day to a townsman in the country are delightful. I got up, threw open the window, and the white curtains flapped to and fro in the fresh breeze. The swift and shallowy Thames lay before me, sparkling and glistening all over with silver. To the opposite bank a flock of sheep had come down to drink; further in the landscape the mowers swayed their bodies to their work with a pleasing motion, and every now and then the musical sound of the whetting of the scythe came to my ear. Just below, the ferry-boat jingled its chain as it bumped against the landing-place with the gentle motion of the stream.

"And to think," said I to myself, "that I should be obliged to put up, every morning, when shaving, with Mrs. Brown's back-yard, Betty hanging out the clothes to dry, and three mangy-looking geraniums straggling their arms out between me and the light, when Nature provides such a scene as this! 'Tis enough to make one, with Professor Porson, 'confound the nature of things.'"

I found my breakfast-room the picture of cleanliness. The floor was of bright red bricks, the lattice opened upon the garden, and the bright river lay beyond. Before I was well entered upon the meal, a fine old fox-hound belonging to the house, that had been sunning himself outside on the grass, placed his fore-paws upon the window-sill and contemplated the feast with all the serene dignity of a judge.

Up above me, in a wicker cage, a blackbird sang his hymn to the morning. Between these two pets I sat like Robinson Crusoe; and, I must say, that they interfered in no slight degree with my breakfast; for the blackbird, whose love of water seemed almost as intense as my own, in the ecstasy of his enjoyment of his *sitzs-bad* sprinkled me all over; and the deep-set eyes of the noble old hound appealed to me so irresistibly, that I chucked half my bread away to him in little pellets, which he caught every time with the unerring precision of a piece of machinery.

Breakfast done, I reminded me of the vicar, and, curious to see the gray old church, I started up the road which led to it, followed by the hound, who seemed quite to brighten up at the excitement of a new face. The doors of all the cottages were open, and their inmates at the morning meal made many a picture worthy of Hunt. The church is a perfect specimen of its kind. Without any pretence to architecture, it is imposing by its massive proportions. The tower, painted by age with yellow lichen and crumbled and softened by time, has attained that perfect tone which seems peculiar to our English atmosphere. I found the sextoness sweeping out the church as I entered. Upon my asking her for the tomb of the vicar, she pointed out to me a small square brass let into a tombstone close under the pulpit. Upon this brass the effigies of the vicar and a *lady* are engraven; from which, I suppose, that upon his being relieved from his vows of celibacy he took to himself a wife. There is a half Popish-priest, half Church-of-England-clergyman, look about the design, as if even the effigy did not know which view of the religious question and habit to assume. With the exception of one very

curious brass, there was nothing else worthy of note in the church, so I wandered out again among the old crumbling grave-stones.

"And who," thought I, "is now the Vicar of Bray?"

As my brain employed itself in drawing an odd jumble of a shaven crown and a most clerical-looking white tie, emblems of the past and present, my eye fell upon a large, fine old red brick house, which obtruded upon the churchyard. A low murmur of music proceeded from the drawing-room window; and as I looked up, the blind suddenly blew out, and with it came the sound of the piano, very tenderly touched, and in the midst, like a clear spiral of crystal, a female voice sweetly ascended. The music ceased, and the voice full of laughter was heard in answer to some low question. I could see nothing; but I drew a picture at once of a beautiful white throat suddenly bent back, and a fair face, like some morning flower, turning towards its sun—a happy lover. There was an escape from the music-stool, and the next moment I saw a blushing young beauty holding up her finger playfully to her companion.

"How dare you, sir? Before breakfast, too! Look! dear old Boss teaches you a lesson in steadiness." With that she leaned out of the window and called to the dog.

"Poor Bossy there! Poor doggy!"

The old hound, as he looked up, showed all the depth of his splendid dew-lap, and howled a deep note of recognition. The young lady, at this moment, discovered that she was

"The cynosure of neighbouring eyes."

She drew back, and the breakfast-bell just then ringing, I heard the laughter of the young people gradually die

away as they descended the stairs towards the breakfast-parlour. And there, thought I, sits a reverend-looking old gentleman, cutting open the wet leaves of *The British Churchman*, and an old lady doing the decencies of dry toast and coffee. It must be the parsonage, and the old gentleman the modern vicar of Bray. "Ah," thought I, "they might have been jolly priests under the old religion —fat, lazy, and pious enough; and celibacy might have been a very holy condition of life: but how the incumbents of the ancient time, lying buried about here with their beads, and the sacred wafer on their tongues, must envy our modern vicar, and such a domestic picture as this!"

My speculation ended, I strolled down again towards the river. A man was leisurely punting himself up against the stream. I hailed him, and found he was going cray-fishing; so as I had nothing better to do for an hour, until the next up-train passed, I jumped in. The Thames just above Bray is very shallow, but as clear as glass; and the long grasses, the beard of the venerable father of the stream, wave with a beautiful undulating motion. Every here and there we could see great jack lying as still as stones. By-and-by we came to a part of the river where the bank, overhung by bushes, appeared completely honey-combed with rat-holes. Here the fisherman rolled up the sleeves of his blue shirt, and leaning over the boat's side thrust his hand into one of the holes below the water-level, and pulled out one of the most diabolical-looking objects, in the shape of the genus *Crustacea*, that a timid man would wish to look at. I involuntarily pulled away my foot from him as he lay sprawling and snapping at everything that fell in the way of his ugly-looking nippers, with a tem-

per evidently not improved by his late change of residence.

"There's one lies under yonder stone," said the man, pointing with his dripping hand. "Catch'n behind the ears and he can't bite 'e."

With a "who's afraid?" sort of air, but with some such sensation as Schiller's diver must have experienced when he sprang into the whirlpool the *second* time, I advanced my hand cautiously into the water, but the cunning fellow managed, before I could pounce upon him, to change his position; so instead of catching him "behind the ears," I grasped him right by one of his belligerent claws. 'Twas a Tartar, without doubt, that I seized, for I pulled back my hand with a terrible yell, and a jerk which pretty nearly upset the boat.

In a short time my more dexterous fisherman had covered the bottom of the boat with these infantine lobsters, and then we punted over to Monkey Island, of pic-nic notoriety, to get something to quench our thirst. We landed at a flight of half-ruined steps, which, still in their decay, reminded one of many a scene of the past—of many a clocked silk stocking exposed as the stiff brocade was for a moment lifted by some fair-handed "quality" debarking from her gilded barge (with black page and poodle in attendance), beneath the gigantic poplar-trees which still throw their long shadows over the water. Upon this island one of the dukes of Marlborough—the third, I think—had a summer-house and a pleasure-ground. The summer-house is now occupied by a fisherman: one of the rooms (an octagon), very prettily proportioned, and fitted up in the substantial manner of the times, is painted all

over with monkeys, some fishing, some shooting, some walking about with swords and cocked hats, like fine gentlemen. What a queer taste they had for these brutes in the last century! And from this room the place has since been called Monkey Island. And here, where once the Lady Bettys and the Lady Sallys, in their powder and patches, sipped maraschino and ate peaches with the sun's warm kiss upon them, my fisherman and I quaffed the sprightly ginger-beer, for mine host's cellar could afford no more generous liquor. Yet, thought I, what would the old possessor, carefully lapped in lead in the family vault at Blenheim, give to hear the cork pop of even such an ignoble beverage?

The garden had gone to decay long ago; the fishpond was a dismal swamp; whilst what was once a fine lawn was now overgrown with couch-grass. The little children of the house, who followed us about with their fingers in their mouths and great staring eyes, pointed out to us the pavilion, a little building of wood, a kind of miniature of the larger building. The boatman, who had been following lazily with a flower in his mouth and his hands in his pockets, seemed suddenly to rouse himself to action at the sight of a straw hanging out of a hole in the building. Putting his foot upon a little projection he lifted himself up to it, and put in his hand.

I could see the eyes of one of the little girls following his motions with intense interest, and when she saw what he was about, she clasped her hands in an agony of tears,—

"Oh, 'tis my nest! 'tis my nest! Don't take my little birds;" she said, all the time pulling at the man's coat, and appealing to me with her beseeching blue eyes.

"Hold your tongue, little silly!" said the man, jumping to the ground with a nest full of speckled eggs. "What's the good of breeding such varmint to eat the cherries?" And before I could interfere, with one dash he smashed them all upon the ground.

All the children at this set up a dreadful cry, and one little boy, as bold as a lion, came up to the man, and with his heavy boot gave him a good kick for touching "Mary's nest;" and I applauded the little hero, for the act was a cruel one.

"Ah, my fine fellow," I said to myself, "you are the worse for this brutality, by a bright sixpence which I have in my pocket."

The bevy of weeping children followed us up to the landing-place, with dismal lamentations.

"Hold your noise!" said the man to the little girl; "there was no bird there—'twas an old nest."

"You story! you story!" she cried, stamping her little feet with passion. "There is the bird crying up in the poplar now."

And it was true enough; the poor mother, with her breast yet bearing the impress of the eggs she had been sitting upon, sat twittering most wofully in the tree. We pushed off the boat to cross to the other side, the children still crying upon the brink of the water; and the mournful note of the poor bereaved little bird was heard above them all, even to the other side of the water. A footpath through two or three corn-fields leads to the station. I was but barely in time for the up-train from Exeter. We had to make up for stoppages, so the speed was such as the Great Western only can go. In less than

half an hour the beautiful spire of the church at Paddington came to view — the station was gained — and then, like a rocket which has reached its greatest altitude, and bursts into a thousand stars of fire, the doors were thrown open, and the multitude of travellers (I among the number) was in a moment dispersed in every direction.

PHYSICAL ANTIPATHIES.

EVERY person reckons among his acquaintances individuals who are peculiarly "touchy" upon certain points. In an ordinary way it is plain-sailing enough with them; but just venture upon certain topics and they are "nowhere" in a moment. Pressure upon some hidden mental spring makes all sorts of secret drawers of the mind shoot out suddenly, to the amazement of the unconscious operator, and he will go away with a firm conviction that there is some screw loose in that particular quarter at least. Familiar as we are with mental peculiarities of this kind, there is a parallel range of physical ones, which are generally very little known. The physician who sounds the depths of our bodies, and knows how oddly the mucous membrane of one individual behaves, and what eccentricities are shown by the epidermis of another, is aware that this "too, too solid flesh" can have fads and fancies, tastes and dislikes, and show them, too, in a manner as decided and demonstrative as though the mental instead of the grosser organs were implicated. These physical idiosyncrasies sometimes put on such extraordinary features, that we fear, in relating some of them, the reader will think we are romancing. For instance, he will readily assent to the old saying, that "what is one man's meat is

another man's poison;" nevertheless, he will doubt our good faith when we tell him of a man being poisoned by a mutton-chop. Dr. Prout, in his valuable work on the Stomach, however, relates just such a case. This individual, with a contumacious stomach, could not touch mutton in any form. It was at first supposed that this dislike arose from caprice; the meat was therefore disguised, and given to him in some unknown form, but with the invariable result of producing violent vomiting and diarrhœa: and from the severity of the effects, which were those of a virulent poison, there can be little doubt that if the use of mutton had been persisted in, his life would soon have been destroyed. Strange and irrational as this behaviour may appear to be, yet it is only a rather exaggerated example of stomachic capriciousness. Some persons cannot touch veal, others are prostrated by a few grains of rice. We happen to know an individual who is immediately seized with all the symptoms of English cholera if he takes as much as a single grain of rice. Such is his susceptibility to the presence of this article of food, that the most infinitesimal portions are instantly detected. Thus, for instance, having been seized with illness immediately after drinking beer, it was discovered that a grain or two had been introduced into the bottle for the purpose of giving it a head. Eggs are equally obnoxious to some individuals. Mr. Erasmus Wilson relates the case of a patient who was seized with a violent bowel complaint suddenly, without any apparent cause. Knowing, however, his proclivity to violent gastric irritation from touching eggs, he at once declared that he must have partaken of the obnoxious food. It could not be traced, however, until the cook

acknowledged that she had glazed a pasty, of which he had partaken, with the white of an egg.

Shell-fish is well known to disarrange the digestive organs of some people. We happen to be acquainted with a lady who unfortunately partook of a lobster-salad for supper at a ball, with the inconvenient result of almost immediately breaking-out into a rash over the face, neck, and arms. For this reason mussels, shrimps, and cockles cannot be touched by many individuals. In order to understand the immediate and extraordinary effect thus produced upon the skin in consequence of partaking of food irritating to the stomach, we must inform our reader that the lining of the whole digestive apparatus is only a continuation of the epidermis. Let us imagine a double night-cap, one end of which is thrust into the other, and we have at once the true idea of the relation the epidermis, or outside skin, has to the mucous membrane, or inside skin, which lines the stomach and intestines. With this explanation, it is easy to understand how it is that an irritating poison, coming in contact with the stomach immediately tells its tale on the fair shoulders of the ball-room belle.

Results equally distressing, if not so unsightly, are produced in some individuals without the introduction to the stomach of articles of food or medicine. Floating particles in the air are sometimes sufficient to produce all the symptoms of spasmodic asthma. We once knew a dispenser who could not stop in the room with an unstoppered bottle of ipecacuanha. Even if it were opened thirty or forty feet away out of his sight, he was instantly aware of the fact, in consequence of the sudden seizures to which he was liable. We have heard of an old lady, residing in Holborn,

who at times was subjected to sickness and vomiting in the most sudden and unaccountable manner. At last, her physician, suspecting some atmospheric influence, made inquiries, and found out that a room on the ground-floor, at the back of the house, was used as a dispensary, whence the emanations from the ipecacuanha penetrated to her apartments on the second floor front.

There is a very distressing complaint, popularly known as the hay-asthma, which affects a certain small proportion of the population. At the season of hay-making, these individuals are suddenly seized with what appears to be a very bad influenza—running at the nose, sneezing, coughing, and in some cases a most violent irritation of all the mucous surfaces, the eyelids, and the air-passages, and the nose swelling in the most extraordinary manner. We have seen individuals quite blind for a time from this cause. Persons so affected can only find relief by immediately retreating from the vicinity of the hay-fields. The late Duke of Richmond, for instance, who was particularly susceptible to the influence of hay-asthma, retreated every hay-making season to Brighton, to avoid his well-known enemy. Floating vegetable particles of the seed of the grass are the cause of this extraordinary affection. That these travel a long distance is clear, inasmuch as persons susceptible to their influence feel uneasy even within a mile or two of hay-fields. We know a gentleman, living in the Bloomsbury district, who is rendered very uneasy in the hay-season when the wind is from the north or north-east, but is quite well when it shifts to the west. The explanation of this circumstance lies in the fact, that the open fields where hay is made lie so much nearer to him in

the former direction, than in the latter, the intervening mass of houses towards the west acting as a kind of disinfectant, as far as his own peculiar susceptibility to hay emanations are concerned. There are animal emanations, however, which appear to affect some persons almost as energetically as these vegetable ones. The atmosphere of cats, for instance, is intolerable to them. We have heard of a military gentleman who would sometimes become suddenly and violently agitated during dinner, so much so, that his speech left him, and he seemed on the verge of an apoplectic seizure. His friends, however, knew what this meant, and immediately began searching for the cat, which was sure to be found in some part of the room, although before unobserved. To other individuals the presence of rabbits is equally obnoxious: they seem to catch cold merely from going near them, and all their symptoms are greatly augmented if they happen to stroke them down. We have lately heard of two individuals of the same family, who are affected in the same manner from the same cause: some people we know cannot sit in the same room with a cheese; others are obliged to retire before the presence of cooked hare.

Mr. Nunn, one of the surgeons of the Middlesex Hospital, who has given some very curious instances of idiosyncrasies with respect to food and medicine, in the "British Medical Journal," states that he has found that honey-comb has produced in a patient swelling of the tongue, frothing of the mouth, and blueness of the fingers; that figs produced formication of the palate and fauces, and that the dust of split peas have the effect, upon some persons, of hay-fever. A very singular example related

by him of the effect of touch, is that of a gentleman, who could not endure the sensation produced by the handling of a russet apple. We have been informed of another singular instance of the excitability of the epidermis. For instance, a lady who immediately cries involuntarily on the addition of any mineral acid to the water in which she is bathing her feet; and of a gentleman in whom a severe attack of spasmodic asthma is immediately induced by the application of cold water to his instep.

We have hitherto dwelt merely upon certain idiosyncratic susceptibilities to certain articles of medicine, food, and animal emanations. The disease, spasmodic asthma, in the capricious manner of its seizure, is so nearly allied to many of those related, that there can be no doubt they arise from a common cause, irritating particles floating in the air, or atmospheric influences. A man goes to bed perfectly well, and awakens in the night with a difficulty of breathing, which threatens to suffocate him; after a while it goes off, but if he remains in the same place he is always liable to a recurrence of the fit. Dr. Hyde Salter, who has devoted much attention to this capricious disease, gives it as his experience that change of air, as in hay-asthma, is the only cure for this distressing complaint. As a general rule, those persons who are affected in pure country air, invariably find relief, or rather complete immunity from attack, in the moist air of dense cities, whilst city asthmatics will become instantly well in the dry pure air of the country. Dr. Salter relates a most singular couple of cases illustrative of this extraordinary capriciousness. One patient could only breathe in Norwood, the other only in London. If the one who could live at Norwood attempted

to go to London, he was invariably stopped by a seizure of asthma at Camberwell Green. If, on the other hand, the patient who was exempt in London, attempted to go to Norwood, he found Camberwell Green the limit of his journeying: if he passed this, his enemy immediately attacked him. Camberwell Green was their joint difficulty, and will remain so to the end.

Many persons who come up from the country for the "best advice" for this complaint, find that in town they suddenly lose their asthma, and are somewhat disappointed that they cannot show their doctor the effect of a fit upon them. In many cases, however, they learn that the true doctor is city air—the worst city air, moreover, is generally the best for them. Thames Street atmosphere is particularly efficacious, and some even pick out the foggiest, densest, foulest lanes of Lambeth or Bermondsey as to them the balmiest, most life-giving of neighbourhoods. There are more extraordinary instances of idiosyncratic susceptibilities on the part of the air-tubes of some persons than even those examples would imply. For instance, some asthmatics can live at the top of a street in perfect health, whilst at the bottom of the same street they seem to be at the last gasp. We happened to know of a patient who is more dead than alive at the top of Park Lane, but recovers immediately at the bottom of the same street; and Dr. Watson tells us, that he had an asthmatic patient, who could sleep very well in the "Red Lion," at Cambridge, but could never rest for a minute, on account of his asthma, in the "Eagle," in the same town.

Some asthmatics, with air-tubes more capricious and difficult to please than ordinary, make it the business of

their lives to travel about in search of the air best suited to them. Thus, in their wanderings, they experience every conceivable degree of exasperation of, or exemption from, their disease; possibly in some lovely spot where the patient would willingly abide as in an earthly Eden, the asthma suddenly and rudely grips him by the throat, and bids him depart or die. Journeying onward he may happen to come upon some barren ridge, or possibly upon that Plutonic region, known as the "Black Country." Here the patient would hurry onward with horror and affright, but suddenly his tyrant interposes. This air suits him, it imperiously cries, and here the slave of irritable mucous membrane is but too glad to end his pilgrimage, compounding with dreary scenery and a savage people, for the perfect freedom of drawing the breath of life.

THE PHILOSOPHY OF BABYDOM.

WHAT a revolution takes place in the habits and feelings of people when little children begin to congregate around the family hearth! Then it is, and not until then, that they begin to take a great part in the great scheme; and that they feel they are not merely individuals "unattached" in this moving, breathing universe, but that they have done something towards maintaining that stream of life on which themselves are borne along.

What a crowd of new sympathies seem born also with a new birth. Never shall I forget how suddenly I found myself noticing the little children as they passed me in the streets, and taking an interest in chubby faces with large fixed eyes, such as in bachelorhood had been my aversion. It seemed as though the little human dormouse at home had lit up with a touch all the babies in the world.

If such feelings mingle with the harder and more worldly projects of men, in women they are all-pervading. They live entirely in a baby world. The multitudes of promising infants they contrive to see and hear of, is quite astonishing. And when the infant proper is for a minute out of their hands, their concomitants immediately start up. Reader, if you be a family man, just try your wife by a walk through town, and see if every ten minutes she does not make a dead stop before a baby-linen shop.

The love for babies in general is only ancillary, of course, to the love of babies in particular. I remember once seeing my wife kissing and "dear"-ing one of her friends' little children; and, very innocently, I afterwards dwelt upon the child's beauty, wishing our own Watty was just such another! Well, no matter what took place, but I *never* will make any invidious comparisons again! Mothers are always set on hair-triggers with respect to their children; and persons should be careful what they say about them—taking especial care of those who wish to know "your candid opinion."

A young mother with whom I was on very friendly terms, once asked me what I really thought, without flattery, of her little first-born. Taken in by her air of sincerity, I ventured to say, very diplomatically as I thought, that a *leetle* less red in his hair (it was dead sandy) would make it her own charming auburn. She smiled blandly enough; but I afterwards overheard her complain to her husband that I was a very disagreeable person, and that *I always came with dirty feet into her drawing-room.* My good friends, depend upon it, your only chance with mothers is in what is vulgarly termed "going the whole hog." Qualify your compliments indeed! play with the string of a shower-bath in December.

I have often thought that it would be well, by way of dispelling the mighty prejudice that mothers entertain with regard to their own children, that on certain occasions there should be a grand feast of babies—expositions at which it would be made plain to the commonest understanding that all babies run pretty much upon the same pattern. And

yet I fear that the most convincing proofs would be lost upon maternal breasts. As it is, when two or three young mothers happen to know each other, they generally rush together at the first opportunity, babies in arms, and "darlings," "little sweets," and "preciouses," fly about in showers—all the time that they are secretly taking notes; and who ever heard of any one of them coming out of such a competition, in their hearts, other than victorious?

The most singular effect of children, however, is upon prim people. A young acquaintance of mine, who in his days of bachelorhood would brush a crumb off his knees with scrupulous carefulness, and guard his shirt-front as he would his honour, suddenly got married; and, as I watched him narrowly, it was quite curious to notice the change which took place in his habits. At first, he did battle stoutly against the invasion of tiny fingers; bit by bit, however, his defences were carried, and the enemy advanced, until at last his knees were unreservedly rendered up, and his very shirt-studs recognized as legitimate points of attack for the baby.

"The baby,"—what a grinding domestic tyranny is exercised under that watchword! what a sword and buckler it is towards maintaining a mother's supremacy! Fathers, bend your foreheads to the dust at that dread name. Meekly submit to a despotism which is supported by the universal voice of womankind, and to infringe the slightest prerogative of which is to proclaim yourself "a brute."

It is singular the facility with which "the baby" can be made available for the purposes of either offence or defence. In the former capacity the darling is an overpower-

ing weapon. Do you happen to come in rather late from a friend's house, how convenient is mamma's complaint against "disturbing the little pet at *that* time of night." Do you object to the expense of a brougham that your wife may go a gossiping among her friends, you are asked, how you, as a parent, can bear to see "the baby" pining for the want of a little fresh air? The baby is, in fact, to the mother what the cat is to the housemaid—the universal scape-goat. If a man in a state of utter buttonlessness, with his sleeves flying, makes an irresistible appeal to his wife, he is always expected to be satisfied with the reply, that "it's all owing to 'the baby.'" "The baby" it is that utterly dislocates your breakfast, makes your wife put on her cap the hind part before, and accounts for the neck of mutton not being jointed. In fact, such is the disturbing force of this small body, that there is no possible act of omission or commission that it will not account for. As long as "the baby" is about, a man had better make up his mind at once to give up all chance of comfort, and to buy that excellent little apparatus, "a bachelor's companion," or kettle, egg-boiler, tea-pot, and toast-rack, all in one; for to be brought in contact with "the baby" is as good as being cast on an uninhabited island, and to be obliged, like Robinson Crusoe, to depend upon his own resources. I am not certain that, during the same period, it would not be as well for him to provide himself with a hare-skin, as the only bosom friend he is likely to have; for I am afraid there is some little truth in that line of Tennyson's—

"Baby fingers—waxen touches—press me from the mother's breast;"

at least, we married men have a shrewd suspicion that in the division of the affections of the maternal heart "the baby" has much the best of it: every earthly consideration, in short, goes down before the full ripe bloom of babyhood, which so strongly moves a mother's heart. When this is wiped off—when strings give place to buttons, and corduroys commence—when spoon-meat is changed for grass-green apples, and the "darling baby" has shot up into "that tiresome John," then the husband begins perhaps to get his own again. Happy he, if "the baby" does not start up afresh when he least expects it—for the innocent, like the king, in some families, never dies—and assume all its ancient power. In such a case, the club is his only resource. I don't know, in fact, whether "the baby" was not the primal cause of those institutions, so railed at by the sex, and so loved of men—if so (pray, ladies, do not think me ungallant), it affords a singular instance of the certainty with which one tyranny begets another.

BRAIN DIFFICULTIES.

THERE is one, and but one, organ of the human body, the symptoms of disorganization and the disturbed functions of which we read of with avidity, and ponder over with wonder. The disorders which affect the material instrument of the mind result in consequences so momentous, follow paths so extraordinary, and present enigmas so countless, that the general reader may be excused for the curiosity with which he follows the physician in his details of morbid psychological curiosities, and hangs over the surgeon's scalpel as it searches out the pathological appearances from which they are presumed to spring.

The volume under notice * is not by any means a mere collection of such facts; it claims the higher and more original duty of tracing out the various paths of departure from healthy conditions of brain, and of unmasking hidden phases of insanity. Here lies a whole realm of unbeaten ground, the value of which Dr. Winslow has been the first to draw public attention to, with a gravity the occasion requires. It is the opinion of many eminent physicians, that the present century has witnessed a very large increase of brain disorders, and that this increase has taken place in an accelerated ratio as the strain upon the commercial and public life of the people has become greater. The

* "Obscure Diseases of the Brain and Mind," by Forbes Winslow, M.D., D.C.L., Oxon.

intense competition which at present exists among all the liberal professions, the excitement accompanying the large monetary transactions which distinguish the trading of the present day, the gambling nature of many of its operations, and the extreme tension to which all classes of the community are subjected in the unceasing struggle for position and even life, has resulted in a cerebral excitement, under which the finely-organized brain but too often gives way.

Dr. Brigham, of Boston, in the United States, gives a most deplorable account of the increase of cerebral disorders in his own country, in which he asserts that insanity and other brain diseases are three times as prevalent as in England. This statement would seem to confirm the notion that go-aheadism—if we may be allowed the term—is straining the mental fabric to its breaking-point. And we must remember that the mischief must not be gauged merely by the number of those who fall by the wayside; there must be an enormous amount of latent mental exhaustion going on, which medicine takes no count of. It is a matter of general observation that the children of men of intellectual eminence often possess feeble, if not diseased brains, for the simple reason that the parents have unduly exercised that organ. What applies to individuals, in a certain modified degree applies to the race. A generation that overtasks its brains is but too likely to be succeeded by a second still more enfeebled in its mental organization, and this exhaustive process must go on increasing if the social causes producing it continue in operation.

We have some means of measuring the magnitude of the evil where absolute lunacy is concerned, inasmuch as

we possess official returns to deal with, which gauge its rate of increase or decrease with pretty tolerable accuracy; but we have no such means of ascertaining the nature of the increase of those no less grave disorders of the brain which do not bring the patient under the cognizance of the law. If we could take count of the number of able men who, at the very height of their efficiency, and in the very plenitude of their power, are struck with insidious cerebral disease, such as softening of the brain, and drop out of life as gradually and as noiselessly as the leaf slowly tinges, withers, and then flutters to the ground; if medicine had any system of statistics which could present us with a measure of the amount of paralysis that comes under its observation, or of the apoplectic seizures which so suddenly blot out life,—we should doubtless be astonished at the very large increase which has of late years taken place in affections of the brain. It is just possible that the tendency lately observable in the community to take a little more breath in the race of life, to prolong the annual holiday, and to favour the habit of physical exercise, of which the volunteer movement is a noble example, will do something to check the degenerating process at present undoubtedly going on: meanwhile we must see what we can do to remedy the existing evil. It is, we believe, within the province of art to arrest in its early stages many disorders of the brain, if notice were only given in time; but the golden opportunity is allowed to slip, and disordered function slowly but surely merges into disordered organization. We know full well that at least eighty per cent. of cases of insanity are curable if treated early; and we also know that of those received into the great county

asylums scarcely ten per cent. ever recover. The difference between the two drop through into the condition of driveling idiots, or of raving maniacs, simply because the curative influences of medicine have been sought too late. In some of the more obscure and fatal brain diseases, such as cerebral softening, general paralysis, epilepsy, &c., the neglect of early treatment is equally deplorable. The insidious approaches of mischief are often foreshadowed by symptoms so trivial that they pass unobserved by relatives and friends. The person so affected will frequently drop his stick or umbrella in his walk; he will in the slightest possible manner drag one leg, a finger will feel numb, or there will be some slight disorder of the sight.

"In the incipient stages (says Dr. Winslow) of cerebral softenings, as well as in organic disintegrations of the delicate nerve vesicle, observed in what is termed progressive, general, and cerebral paralysis, the patient often exhibits a debility of memory, long before the disease of the brain is suspected, in regard to the most ordinary and most trifling matters connected with the every-day occurrences of life; he forgets his appointments, is oblivious of names of his particular friends, mislays his books, loses his papers, and is unable to maintain in his mental grip for many consecutive minutes the name of the month or the day of the week. He sits down to write a letter on some matter of business, and his attention being for a second directed from what he is engaged in, he immediately loses all recollection of his correspondence, and leaves the letter unfinished. In this condition of mind he will be heard constantly inquiring for articles that he had carefully put aside but a few minutes previously."

The memory may be considered one of the most delicate tests of the presence of injury, or the progress of natural decay, in the brain. From the hidden storehouse of impressions which we know to be seated in the cerebrum or greater brain, whilst in a state of vigorous health, by the act of recollection we possess the marvellous power of

reproducing the countless tableaux of scenes that have occurred during a long and busy life. Some persons never forget a face they have once seen, others will acquire with extreme rapidity a dozen languages containing hundreds of thousands of words, and store them for immediate use; the musician catches the floating notes of song, and they remain for a lifetime deeply graven on his memory. The artist packs away within his brain the image of the faintest flush of sunset, or the thousand shades of sky, and reproduces them years after on his easel. It may be imagined that a tablet so sensitive to receive and so strong to retain an incredible number of images in a state of health is not unlikely to speedily make a "sign" of its impaired condition. A flaw in an Egyptian slab covered with hieroglyphics is pretty sure to obliterate some of them, and experience proves that brain injury is speedily shadowed forth by defects, more or less grave, of the memory. In the whole range of psychological inquiry, there is nothing more remarkable perhaps than the "vagaries," if we may be allowed the term, played by the deteriorating agent in the storehouse of memory: sometimes it enters and for years annihilates the vast collection in an instant, only to restore them again as perfect as before; at other times it obliterates group after group of associated ideas in succession, according to the order in which the brain has acquired them. Again a single letter in a word is all that the destroying power lays its hands upon among the immense magazine at its mercy. The chapter on the Diseases of Memory, in Dr. Winslow's compendious and very interesting volume, is full of cases illustrative of the eccentricities presented to us by impaired and morbid memory;

among the most remarkable of which is a case related by Dr. Graves, of Dublin. A farmer in the county of Wicklow, in consequence of a paralytic fit, suffered the following extraordinary impairment of memory. He could readily call to mind all parts of speech except nouns substantive and proper names. This defect was accompanied by the following singular peculiarity: he perfectly recollected the initial letter of every substantive or proper name for which he had occasion in conversation, though he could not recall to his memory the word itself. Experience had taught him the utility of having written in manuscript the things he was in the habit of calling for, or speaking about, including the proper names of his children, servants, and acquaintances; all these he arranged alphabetically in a little pocket-dictionary, which he used as follows:—if he wished to ask for anything about a cow, before he commenced the sentence he turned to the letter C and looked at the word cow, and kept his finger and eye fixed upon the word until he had finished the sentence. He could pronounce the word cow in its proper place so long as he had his eye fixed upon the written letters; but the moment he shut the book it passed out of his memory, although he recollected its initial, and could refer to it when necessary. Sometimes cerebral mischief is indicated by the mere transposition of letters. A gentleman on recovering from an attack of paralysis, for example, always said puc instead of cup, and gum instead of mug. It is very common for a person in ordinary speaking to use the wrong initial letter to a word; but the mind takes cognizance of the error as quick as thought, and instantly reproduces the right letter, but in the wrong place: thus, in attempting to say a fat pig, if

the tongue were to trip and say instead of fat, pat, the next word would inevitably be fig. The control of the healthy brain over minutiæ of this nature, and the automatic manner in which it is exercised, are thus clearly exemplified; but in disease such slips escape notice altogether. The records of psychological medicine are full of instances of defects of memory equally trivial consequent upon lesions of the cerebrum. Thus, an old soldier, after suffering a loss of brain matter from an operation, was found to have forgotten the numbers five and seven; and a schoolmaster, consequent upon a brain-fever, lost all knowledge of the letter F. Whilst disease sometimes touches the memory in this delicate manner, in its more active phases it seizes the organ with a rude and stifling grasp, and removes at once whole masses of carefully acquired knowledge. An Italian gentleman, master of three languages, struck with the yellow fever, exhibited in the course of it remarkable phenomena. At the beginning of his attack he spoke English, the language he had acquired last, in the middle of it French, and on the day before his death his native tongue. The total abolition of an acquired language is not at all an uncommon thing in brain disease, and as a rule the memory in such cases may be said to recede to those ideas engraven upon the memory in childhood. Those persons who have talked a foreign language all their lives, will be found to pray before death in their native tongue. There have been some remarkable exceptions to this rule, however, and Dr. Johnson, when dying, is said to have forgotten the Lord's Prayer in English, but to have attempted its repetition in Latin. Possibly the explanation of this exception may be found

in the fact, that he thought habitually in Latin. There are not wanting instances, however, to prove that the memory under disease oscillates between the past and the present. For instance, Dr. Winslow records a case in which a gentleman, after a serious attack of illness, lost all recollection of recent events—his memory presented the tablet engraven with the images and ideas of his youth only; as he gained strength, however, the old and forgotten ones revived. A still more remarkable instance of loss of memory and its sudden resuscitation we quote from Dr. Winslow's volume:—

"Reverend J. E., a clergyman of rare talent and energy, of sound education, while riding through his mountainous parish, was thrown violently from his carriage, and received a violent concussion of the brain. For several days he remained utterly unconscious; and at length when restored, his intellect was observed to be in a state like that of a naturally intelligent child, or like that of Casper Hauser after his long sequestration. He now in middle life commenced his English and classical studies under tutors, and was progressing very satisfactorily; when, after several months' successful study, the rich storehouses of his memory were gradually unlocked, so that in a few weeks his mind resumed all its wonted vigour, and its former wealth and polish of culture. . . . . The first evidence of the restoration of this gentleman's memory was experienced while attempting the mastery of an abstruse author, an intellectual effort well adapted to test the penetrability of that veil that so long had excluded from the mind the light and riches of its former hard-earned possessions."

It would seem as though ideas were registered on the brain in successive layers, the last lying uppermost; and that as the nervous energy retreated, either as a consequence of disease or of gradual decay, so those ideas lost life *downwards*. The condition of the circulation of the blood through the brain in all probability has much to do

with these changes in the vividness of the memory, as it is a known fact that some people recollect better by holding the head downwards ; and Sir Henry Holland tells us that, after enduring great fatigue in descending one of the deep mines of the Hartz Mountains, he entirely lost his memory, which returned speedily again after he had taken rest and food. It is observable again that in morbidly active conditions of the cerebral circulation, such as occur in fever and on the approach of apoplexy, the memory is exalted in an extraordinary manner, and events are remembered with a vividness that is almost painful. In the rapid rush of the blood through the brain, that occurs in some excited stages of insanity, it has been remarked that patients have given signs of faculties which they had never evinced in a state of sanity; prosaic persons have suddenly become poetical, and those who normally had no head for figures, have in these conditions shown no ordinary aptitude for them. It would seem as though the blood, when at this high pressure, had penetrated portions of the brain hitherto but feebly supplied, and brought into cultivation cerebral wastes that were before barren. Dr. Winslow, in alluding to these exaltations of memory, draws the practical conclusion that in old persons these sudden lightings-up of the memory should excite grave attention, as indicative of approaching fatal apoplexy.

We have yet to refer to a very extraordinary condition of brain which exists, in consequence of accidents producing concussion, in which memory, consciousness, and volition suffer for a time a complete annihilation, to be revived again at the exact stage at which they left off. A British captain, whilst giving orders at the battle of the

Nile, was struck on the head and rendered senseless, in which condition he was taken home and remained at Greenwich Hospital for fifteen months, when the operation of trephining was performed, and the portion of the skull which pressed upon the brain was raised. Immediately consciousness returned, and he rose in his bed, and, without recognizing where he was, finished giving the orders he had commenced issuing amid the din of battle fifteen months before. Extraordinary as this case may appear, it is far from being an isolated one. Prichard relates an instance in which the mind stood still for years instead of months, and yet took up the train of thought exactly at the point at which it had been dropped. A New England farmer, whilst labouring undersome dissatisfaction at having disposed of his farm at a rate he believed below its worth, was engaged by a neighbour to enclose a piece of land with a fence. In order to split the timber he was obliged to use a beetle and wedges. These, on finishing the labours of the day, he put into the hollow of a tree, intending to direct his son to bring them home. That night he was seized with delirium ; in this condition he remained for several years, when his mental power was suddenly restored. The first question he asked was whether his sons had brought in the beetle. Apprehensive of bringing on a return of the disease by entering into explanations, they replied that they could not find them ; whereupon the old man rose from his bed, went straight to the hollow tree, and found the wedges and the ring of the beetle, the beetle itself having mouldered away. Thus the delicate unused nerve vesicle, which retained the recollection where the tools had been placed, remained intact whilst the solid

wood had perished. Sometimes the memory, not only of the idea upon which the mind was last occupied, but the very action of the muscles arising out of it, has been retained in the mind like a fly in amber. Thus a young girl of six, whilst catching playthings thrown by a companion seated on the pavement, fell and received a cerebral concussion, which rendered her insensible for ten hours. When she opened her eyes she jumped to the head of the bed, and asking "Where did you throw it?" immediately commenced throwing little articles of her dress from the bed, exclaiming, "Catch these!" and from that moment was perfectly restored. The exactitude with which the fractured ends of the severed idea fit,—severed as we have seen sometimes for years,—is very remarkable, and goes to prove that there must be in such cases an instantaneous arrest of the action of the nerve vesicles, without morbid change however, otherwise they could not at a moment's notice resume their operation at the exact point at which they left off. We can only liken this extraordinary phenomenon of arrest of mind to some accident which has suddenly stopped a machine—the driving band has perhaps suddenly slipped off—and in this instance the driving band in all probability was the circulation of the blood through the brain—the motive power restored, the machine went on as before. That mechanical pressure upon the surface of the brain, which means an exercise of control over its circulation, according to the degree in which it is exercised, will produce different mental conditions from perfect coma to perfect sensibility—is well known. A man in Paris once made a living by allowing curious physiologists to make experiments of this nature upon him. He had

suffered the operation of trephining, and his brain was covered by a thin membrane only, by applying graduated pressure upon which the man's relations with the whole external world could be cut off and restored by the mere action of the finger. At the will of the operator he lived alternately the life of the highest order of animal, or that of a mere vegetable. There is a very remarkable condition of brain, in which the mind of the individual is possessed with a double consciousness. Alternate states arise as distinct in themselves as though they belonged to two individuals. Dr. Mitchell relates a case of this kind which is so extraordinary that we must be pardoned for quoting it entire:—

"Miss R——, possessing naturally a very good constitution, arrived at adult age without having it impaired by disease. She possessed an excellent capacity, and enjoyed fair opportunities of acquiring knowledge. Besides the domestic arts and social attainments, she had improved her mind by reading and conversation, and was well versed in penmanship. Her memory was capacious, and stored with a copious stock of ideas. Unexpectedly and without any forewarning she fell into a profound sleep, which continued several hours beyond the ordinary time. On waking she was discovered to have lost every trace of acquired knowledge. Her memory was a *tabula rasa;* all vestiges, both of words and things, were obliterated and gone. It was found necessary for her to learn everything again. She even acquired, by new efforts, the art of spelling, reading, writing, and calculating, and gradually became acquainted with the persons and objects around, like a being for the first time brought into the world. In these exercises she made considerable progress. But after a few months another fit of somnolency invaded her. On rousing from it she found herself restored to the state she was in before the first paroxysm; but she was totally ignorant of every event and occurrence that had befallen her afterwards. The former condition of her existence she called the old state, and the latter the new state; and she was as unconscious of her double character as

two distinct persons are of their respective natures. For example, in her old state she possessed all her original knowledge; in her new state only what she acquired since. If a gentleman or lady were introduced to her in the old state, and *vice versâ* (and so of all other matters), to know them satisfactorily she tried to learn them in both states. In the old state she possessed fine powers of penmanship, while in the new state she wrote a poor awkward hand, having not time or means to become expert. During four years and upwards she underwent periodical transitions from one of these states to the other. The alternations were always consequent upon a sound sleep. Both the lady and her family were capable of conducting the affair without embarrassment. By simply knowing whether she was in the old or new state, they regulated the intercourse and governed themselves accordingly."

If there is any truth in our hypothesis of the memory of impressions lying in layers, superimposed one upon another on the surface of the brain, the alternation of the child-like and the adult state of intelligence would be accounted for by supposing that the level of the power that vivified the nerve vesicles stamped with the mental impression, stood at different periods at different heights, retreating in the child-like state to the lowest ebb, and again remounting to its full intellectual height in the adult period.

There is no circumstance with regard to the human economy more remarkable than the tolerance sometimes exhibited by the brain, of grave lesions and disorders within its substance. The popular idea that to touch the sensorium is tantamount to annihilating the life, is a monstrous fallacy. Soldiers have been known to carry bullets in their brains without any serious inconvenience, and operations are often performed upon the cerebral mass without injury to the patient. A surgeon lately informed us that he had a young stable-boy lately under his

care, whose skull had been fractured by the kick of a horse and forced in upon the cerebral mass, so crushing it that a portion had to be removed; nevertheless, the patient recovered, and it was remarkable that whereas, before the accident he had been subject to fits, and was rather a dull boy, after the accident he became much brighter, and continues so to this day. In all probability these fits were of an epileptiform character, owing to the pressure of a specula of bone upon the surface of the brain, and when this was removed by the operation, the cause that led to his dulness no longer existed. The kick of the horse was in fact the most fortunate thing that could have happened to him.

Dr. Ferrior relates the case of a man who retained all his faculties entire until the moment of his death, yet one half of whose brain was on examination discovered to have been destroyed by suppuration. Dr. Heberden tells us of a man who performed the ordinary duties of life with half a pound of water resting on his brain; and a still more remarkable case is mentioned by Dr. O'Halloran, in which a man suffered an injury upon the head which caused the suppuration of the skull, through which nearly one half of the brain was discharged, mixed with matter, yet this man preserved his intellectual faculties until the moment of his death. Nevertheless, we are inclined to agree with Dr. Winslow that even in these anomalous cases there must have been some disturbance of the mental powers observable, had the attention of a competent observer been directed to them, and that as a rule it will be found logically true, that wherever there has been found the trace of organic cerebral change, there also must have been mani-

festations of mental disturbance. It is not often that fracturing the skull proves a curative operation, but there can be little doubt that mere accidental shocks to the sick brain have proved far more effective than even the skill of the physician. "I have been informed," says Dr. Prichard, "on good authority, that there was, some time since, a family consisting of three boys, who were all considered as idiots. One of them received a severe injury on the head; from that time his faculties began to brighten, and he is now a man of good talents, and practises as a barrister; his brothers are still idiotic and imbecile." We have it on the authority of Petrarch, that a slight concussion of the brain wonderfully strengthened the memory of Pope Clement VI. It is equally certain that tumours have gone on slowly increasing within the substance of the brain itself without for a long time disturbing the mental power of the individual. The case of Dr. Wollaston is remarkably illustrative of this. His death was occasioned by a cerebral growth of this nature, which, in all probability, existed there from early youth, without perceptibly to ordinary observers affecting his intellect. At last it attained to such a large size that it encroached upon the cavities of the brain, and produced paralysis of one side of the body. Notwithstanding this, his brain remained quite clear, and the last moments of his life were engaged in writing some figures in arithmetic progression, in order to convince his friends that, although his tongue was mute for ever, his brain was clear.

In the great majority of cases, however, *post-mortem* examinations present but faint signs of any lesion of substance, even where the mind during life has been thoroughly

disordered. The physician but too often seeks in vain in the lunatic's brain for any trace of disorganization. He knows, nevertheless, that alterations of some kind must exist, and attributes his failure to the coarseness of the methods of examination at present employed. The scalpel alone will never find it out, and even the microscope as yet fails to detect departures from normal structure of so delicate a kind as those which are sufficient to overturn noble minds; and we entirely agree with Dr. Winslow in believing that, in order to detect the more subtle lesions of the brain, we must call in the labours of the Chemico-Cerebral pathologist. Sir B. Brodie has shown that the nervous substance of the brain is distinguished from all other tissues (the bones excepted) by the very large proportion of phosphorus which it contains, amounting to no less than 1·5 per cent.; and if we speak of the solid matter alone, the important position held by this chemical agent in the brain is still more apparent, no less than one-tenth of the whole being composed of phosphorus. It is a well-known fact, that any laborious mental exercise, indeed any protracted exertion of the nervous system, results in a discharge of large quantities of the phosphatic salts by means of the kidneys. This circumstance, taken together with the remarkable fact that in the brain of the adult idiot there is a very small amount of phosphorus—not more than in that of a child—points to the conclusion that it plays a very important part in the substance of the mental powers. That in the large majority of cases of insanity the blood is mainly in fault, there can be little doubt; but when we remember how slight an alteration in the constitution of the vital fluid will produce cerebral symptoms of

a very marked character, we no longer wonder at the pertinacity with which these changes have eluded our observation. There are certain moments before dinner when most men suffer what the late Dr. Marshall Hall called the temper disease, the amiable become suddenly unamiable, and the best of us snappish ; the *morale* of the individual is entirely altered. Want of rest, again, will so exhaust the mind, that people positively are subject at such times to delusions, imagining their best friends are slighting them, and exhibiting in various ways quasi symptoms of insanity. We very much question, however, if chemists yet possess skill enough to detect the temporary errors of the blood, which we know must have given rise to this condition of things. Let us ask again, In what particular does the blood differ during sleep from that which it presents in the waking state? It contains, we know, a trifle more carbonic acid; but surely this addition will not account for the act of dreaming, in which we rehearse, as it were, in the inner world of the brain, the wildest thoughts of the insane.

If the pathologist is so often baffled in detecting actual disorganization of the instrument through which mind is manifested, the alienist physician is rarely at a loss to read the symptoms that during life are sure to present themselves. Dr. Winslow has cultivated a new field of research in those chapters of his work in which he treats of the incipient stages of brain disease. The public are apt to date the amount of mental disturbances from some overt act, which has startled and compelled the attention of friends. Alas! the first overt act, in too many cases, has also been the last, and the verdict of suicide committed in a fit of

temporary insanity is considered sufficient to exonerate all parties from any blame; but in every case the first overt act has been preceded by signs and portents of the patient's state of mind, which the experienced eye cannot fail to detect. Only last summer the Church had to deplore the suicide of a very able chancellor of a western diocese. On the inquest it was stated that he had been troubled in his mind for several days previous to the catastrophe by an error of 2*s.* 7*d.* which he had made in his diocesan accounts. This symptom of a departure from the well-known ordinary masculine tone of his mind would have suggested to any skilful physician the necessity for having him placed under surveillance; had such a step been taken, his friends probably would not have had to lament his loss. It may be urged, we know, that if we refine too much in this direction, the merest effects of temper and exhibitions of eccentricity, which constitute character, will at last be looked upon and watched with suspicion, as indicating a tendency to mental disease, and that those only will be considered to be sane, who possess ordinary level minds without sufficient originality to go out of the beaten track. Such an error in reasoning no well-educated physician would be guilty of; but he would note with extreme suspicion any sudden change of a man's settled habits or revolution in his modes of thought. As Dr. Andrew Combe remarks:—

"It is the prolonged departure, without any adequate external cause, from the state of feeling and mode of thinking usual to the individual when in health, that is the true feature of disorder in mind; and the degree in which this disorder ought to be held as constituting insanity, is a question of another kind, and which we can scarcely hope for unanimity of sentiment upon."

There are very many cases, however, in which insanity shows itself by a simple exaggeration of usually healthy conditions. In these cases the physician finds the greatest difficulty in saying where the line shall be drawn which shall bring the patient under the eye of the law. The naturally passionate man becomes outrageous, the religious person becomes fanatical, the vain exceedingly boastful, the liberal extravagant ; the only departure from the ordinary mental condition in these cases, is an extraordinary exaltation of the passions and emotions. It is cases such as these which produce so much misery in the domestic circles, inasmuch as the present state of the lunacy law does not justify their being placed under control. A person thus affected may with impunity squander his whole substance and bring his family to ruin ; he may render them miserable for years by the most unfounded suspicions ; he may bring disgrace upon his name by exercising that excess of the secretive power which finds its climax in meaningless petty thefts. The conditions of sanity and insanity in such cases graduate so imperceptibly into each other, that the physician scarcely dares to give a certificate of insanity ; and many families are forced to stand idly by whilst they see themselves irretrievably devoted to ruin, merely because the rigid rules of the lunacy law cannot be made flexible enough to meet the ever-varying phenomena of diseased mind.

The difficulty of discovering the physical cause of many forms of insanity is easily accounted for, if Dr. Winslow is right in his hypothesis that there is such a thing as a co-ordinating mental power, the disease of which is liable to produce the strongest psychological eccentricities. The

later physiologists hold that the physical actions are governed, as it were, by a special power which is believed to reside in the cerebellum, or lesser brain ; and the disease popularly known as St. Vitus's Dance is supposed, on very good grounds, to arise in consequence of a derangement of that power. The patient cannot conduct the food to his mouth ; his legs go every way but the right one when he attempts to walk ; he makes the oddest grimaces when asked to look you in the face ; and, in short, is so incapable of performing one act of volition as he should do, that the disease is aptly called "the insanity of the muscles." The extraordinary physical exertion performed by persons so affected is almost beyond belief. Dr. Abercrombie relates the case of a lady who would sometimes throw her whole body into a kind of convulsive spring, by which she would leap, as a fish may do, from the floor on to the top of a wardrobe full five feet high ; at other times she would rotate her head for several weeks together. Others have been known to rapidly rotate the whole body for a month continuously ; one extraordinary case is on record, in which a young girl became possessed with the idea of standing upon her head, with her feet perpendicularly upwards ; as soon as she had accomplished this position she fell as if paralyzed, and then commenced the same action again, continuing it fifteen times in a minute for fifteen hours in the day ! Insanity of the muscles is indeed an appropriate name to give to such an affection. Having contemplated the frightful effect of disease of the co-ordinating power, let us for a moment consider the exquisite nicety with which that power, when in health, adjusts the muscles to perform any specific act. Let us

take, for example, the muscles of the arm of Paganini, in drawing forth the exquisite tones of his violin. It is almost impossible to conceive the precision and *aplomb* with which different groups of muscles must have been directed to produce the delicate shades of music he called forth by a simple act of volition ; yet this accuracy, however often repeated, never failed him. Let us grant that there is some co-ordinating power—some executive presiding over the just association of our ideas—and there is no incoherence for which its disease may not be held responsible.

"There is no fixed or even transient delusion," says Dr. Winslow, in the case of physical chorea. "In these cases the insanity appears to depend upon a disordered state of the co-ordinating power (eliminated, in all probability, in the cerebrum), and paralysis of what may be designated the executive, or, to adopt the phraseology of Sir William Hamilton, regulative, or legislative faculties of the mind. The patient so affected deals in the most inexplicable absurd combinations of ideas. Filthy ejaculations, terrible oaths, blasphemous expressions, wild denunciations of hatred, revenge, and contempt, allusions the most obscene, are often singularly mingled with the most exalted sentiments of love, affection, virtue, purity, and religion . . . I have often known patients whilst suffering from the choreic type of insanity alternately to spit, bite, caress, kiss, vilify, and praise those near them, and to utter one moment sentiments that would do honour to the most orthodox divines, and immediately afterwards to use language only expected to proceed from the mouths of the most depraved of human beings. This phase of mental aberration is often seen unassociated with any form of delusion, hallucination, or illusion."

What the nature of this mental regulative force may be we know no more than we do of the muscular co-ordinating power. Physical methods of inquiry tell us nothing, and cannot be expected to do so.

It has been said by Cicero, that if it had been so ordered

by nature, that we should do in sleep all we dream of doing, every man would have to be bound down before going to bed. It does seem remarkable that during one-third of our lives we should be liable to a derangement of the mental power (for such is dreaming), which in our waking state would render us liable to be placed in a lunatic asylum. The very intimate connection undoubtedly existing between dreaming and insanity has in all times attracted the attention of psychologists, and, of late, physiologists have directed their attention to the physical conditions which give rise to the former very remarkable state. Dr. Marshall Hall believed that sleep is produced, either by some constriction of the great vessels of the neck, or by a sluggishness of the respiratory organs, either cause leading to a venous condition of the blood calculated to produce somnolency. We know that every degree of insensibility, up to complete coma, can be produced by simply allowing the neck to rest with the weight of the trunk against a tightened cord. Nature has, therefore, only to contract the great vessels periodically, to bring about the state of things we so readily do artificially ; but sleeping is not dreaming, says the reader. Certainly not ; but it is the dark background on which the pattern of our dreams is woven, and in all probability the condition of the circulation through the brain which produces it, is also answerable for the diversified pattern itself. The absence of volition, says Dr. Darwin, distinguishes the state of sleep from the waking state. This proposition is, however, rather too sweeping ; for in all probability there is no such thing as perfect sleep, or absence of volition, any more than there is any position in which every muscle of the body is

totally at rest ; at all events, in dreaming there are many reasons which lead us to conclude that the different portions of the brain sleep unequally, and this inequality possibly arises from the position of the head, directing a fuller flow of blood to one part of the brain than to others, or from its detention in given portions. If we examine a dream narrowly, we find that volition may or may not be excited, according to the nature of the excitement created in the mind by the illusion passing before it. For instance, it often happens that we dream we are pursued by a mad bull or by an assassin, and the greatest distress is occasioned by finding that we can neither call out or run away. It again often happens to us that we dream we are suddenly falling down a precipice ; but here volition is, as it were, suddenly wakened out of its sleep, for we find that in the endeavour to save ourselves from falling, we jump *up* in the bed. We have here a proof that volition does not rest so soundly, but that it can be roughly and suddenly shaken into life. In somnambulism it is actively awake, although consciousness is perfectly dormant. There is also such a thing as day-mare—a condition of the brain which exists just as we are waking from sleep, when we are perfectly conscious, but unable either to move or to call out; volition, in fact has slept longer than the other faculties of the brain. It is noteworthy, that sleeping on the back is generally assigned as a cause of nightmare, or that condition in which action seems most obstinately bent upon not answering the appeals made to it. This fact certainly seems favourable to a belief that position has something to do with the unequal manner in which the different faculties of the brain rest during sleep. The seat of the muscular

co-ordinating power, the cerebellum in the recumbent position, may possibly suffer congestion in consequence of its lying partially under the cerebrum. The state of reverie or of day-dreaming presents many features which are very analogous to that of mental aberration. Except that we are conscious of our abandoning the fancy to its own will, this condition differs but little from that of dreaming. An indulgence in this habit tends to emasculate the mind. When long continued it is often precursory of softening of the brain, and of the incipient stages of some types of mental disorders. Disraeli, in his "Contarini Flemming," has with intuitive genius seen this truth :—

"I have sometimes," he says, "half believed, although the suspicion is mortifying, that there is only a step between his state who deeply indulges in imaginative meditation, and insanity; for I well remember when I indulged in meditation to an extreme degree, that my senses appeared sometimes to be wandering. I cannot describe the peculiar feelings I then experienced . . . . but I think it was that I was not always assured of my identity, or even existence; for I found it necessary to shout aloud to be sure that I lived; and I was in the habit very often at night of taking down a volume and looking into it for my name, to be convinced that I had not been dreaming of myself."

We may allude to one faculty of the brain which appears always to remain dormant during dreams: we allude to the faculty of wonder. The most incongruous images, the oddest combination of circumstances, the strangest persons, present themselves before us at such times unchallenged. We converse with friends and relations long since dead, without feeling the least surprised at their resurrection. And why is this? Because the sense of the fitness of things is also wanting. How can we wonder

when the standard of judgment is absent? And herein we find the extraordinary likeness between dreaming and certain forms of insanity. The co-ordinating psychical power in both cases is in abeyance. Sir Walter Scott has shrewdly said, that the only difference between the two states is, that in dreams the horses have run away with the coach whilst the coachman is asleep; in lunacy the run-away takes place whilst the coachman is drunk. This distinction is a nice one, but the effect upon the coach in the two cases is so remarkably alike, with the single exception of the absence of volition in the former, that we think the psychologist is justified in considering them associated phenomena of mind.

There have not been wanting cases indeed in which the first outbreak of insanity commenced in a dream.

"A gentleman (says Dr. Winslow) who had previously manifested no appreciable symptoms of mental disorder, or even of disturbed and anxious thought, retired to bed apparently in a sane state of mind; upon rising in the morning, to the intense horror of his wife, he was found to have lost his senses! He exhibited his insanity by asserting that he was going to be tried for an offence which he could not clearly define, and of the nature of which he had no right conception. He declared that the officers of justice were in hot pursuit of him; in fact, he maintained that they were actually in the house. He begged and implored his wife to protect him. He walked about the bedroom in a state of great apprehension and alarm, stamping his feet and wringing his hands in the wildest agony of despair. Upon inquiring into the history of the case, his wife said that she had not observed any symptom that excited her suspicion as to the state of her husband's mind; but upon being questioned very closely, she admitted that during the previous night he appeared to have been under the influence of what she considered to be the nightmare or a frightful dream. Whilst apparently asleep, he cried out several times, evidently in great distress of mind—'Don't come near me!' 'Take them away!' 'Oh save me, they are pursuing me!' It

is singular that in this case the insanity which was clearly manifested in the morning appeared like *a continuation of the same character and train of perturbed thought that existed during his troubled sleep*, when, according to his wife's account, he was evidently dreaming."

Sir Benjamin Brodie has referred, in his Psychological Inquiry, to a very remarkable quality in the brain, a quality Dr. Carpenter terms unconscious cerebration. It often happens that, after accumulating a number of facts in an inquiry, the mind becomes so confused in contemplating them, that it is incapable of proceeding with its labours of arrangement and elaboration; dismayed at the chaotic heap, it backs as it were upon itself, and we feel certain that it is of no use cudgelling our dull brains any longer. After a little while, however, without having once consciously recurred to the subject, we find to our surprise that the confusion which involved the question has entirely subsided, and every fact has fallen into its right place. Is it possible that the brain can, without our knowledge, select and eliminate, aggregate, and segregate facts as subtilely as the digestive organs act upon the food introduced to the stomach? Sir Henry Holland is inclined to dissent from such a conclusion, and leans rather to the explanation of the phenomenon which Sir B. Brodie has himself suggested; viz., that the seeming ordering process may be accounted for by supposing that all the unnecessary facts fade from the memory, whilst those which are essential for the ultimate arrangement and classification of the subject under consideration, are left clear of the weeds that before encumbered them. But does not this explanation involve a confession of an eliminative process going on unconsciously in the brain, which appears to be little less wonderful

than a hidden cogitation? Why should the unessential facts alone fade? Why should we refuse to recognize masked operations of mind? Surely we see every day examples of cerebral acts being performed of which the individual is afterwards totally oblivious. Let us instance, for example, the mental impressions engraved with a searing-iron, as it were, upon the brain in the moments of delirium. Under chloroform, again, the mind is often in a state of great exaltation, and goes through mental labour of a kind calculated, one would imagine, to leave lasting traces behind it on the memory; nevertheless water does not more readily give up impressions made upon it than does the tablet of the brain under this influence. Even in dreams, of which we take no note, but which are patent to bystanders by our speech and actions, there must be plenty of "unconscious cerebration." Indeed, Sir Henry Holland, in referring to a vague feeling that all of us at times have experienced when engaged in any particular act, that "we have gone through it all before," endeavours to explain it by supposing that the faint shadow of a dream has suddenly and for the first time come to our recollection in a form so unusual that it seems as though we had acted the part before in another world. That we go through brain-work unconsciously we have therefore no doubt; and we see no reason why we should deny the existence of a power seated in the brain, whose duty it is silently to sift the grain from the husk in the immense mass of mental pabulum supplied to it by the senses.

There can be found no more curious chapter in the history of the human body and mind than that which

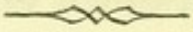
relates to the phenomenon of morbid attention directed to its different organs. The power of influencing any particular portion of the animal economy by the concentration of our attention upon it, is so marvellous, that we wonder the method of its action has not been more thoroughly investigated than it appears to have been. It would seem as though the mind possessed the power of modifying the functions of distant parts of the body, and of exciting sensations quite independently of any act of volition. The mere act of attention to any particular organ over which we possess no muscular control, is sufficient to produce some alteration of its functions. Thus we may will that a spot in the skin shall itch, and it will itch, if we can only localize our attention upon the point sufficiently; by directing our thoughts to the heart, it rapidly beats; by soliciting the lower intestine, it is quickly brought into action. There is scarcely an organ of the body which is not liable to be interfered with by simply concentrating the attention upon it. Whole regions of superficial nerves, such as those of the skin in the neck, may be exalted in their action to the highest degree by the mere expectation of being tickled there. This nervous attention may become so persistent as to cause actual disease. We have a familiar instance in dyspepsia, where the patient is for ever thinking of his stomach, and at last diseased function degenerates into diseased organization, and he falls into the condition of a helpless hypochondriac. But if an attitude of concentrated attention upon his mere animal functions is thus capable of producing disease in them, what effect has it upon the mind itself? Sir Henry Holland has very subtly remarked, that it appears to be a condition of our

wonderful existence, that while we can safely use our faculties in exploring every part of outward nature, we cannot sustain those powers when directed inward to the source and centre of their operations—in other words, the mind, when it persists for any length of time in analyzing itself, scorpion-like, stings and destroys its own action. That we can as readily injure our brains as our stomachs by pertinaciously directing our attention to fancied diseases in them, cannot be doubted, and that mere perversion of ordinary modes of thought, such as may exist in minds only functionally disordered, may be fixed by the action of morbid attention, so as to constitute permanent aberration, is equally certain. Hence, as Dr. Winslow says, "the extreme danger of not exercising, like trustworthy sentinels, a watchful supervision and active controlling influence over every thought, and the evil that arises from not keeping in a state of strict subordination the mental emotions. The fearful mischief from neglecting by resolute mental efforts to battle with the erratic suggestions of an unduly excited and flighty imagination, to keep in abeyance and even to strangle in their birth unhealthy impressions struggling to fix and engraft themselves upon the easily moulded, plastic and yielding fancy, cannot be over-estimated or exaggerated." And let it not be supposed that this is needless advice, or that it is a rare thing to find reason struggling manfully with the promptings of insanity. Bishop Butler tells us that he was all his life struggling against devilish suggestions, and nothing but the sternest watchfulness enabled him to beat down thoughts that otherwise would have maddened him. His case was but an example of that of thousands of persons with whom we come in contact every

day, who, under a calm exterior, conceal conflicts between the reason and the first promptings of insanity of the most terrible kind.

It is not within the province of this article to enter into the professional treatment necessary to combat the various forms of cerebral mischief so graphically detailed in Dr. Winslow's volume, which to the general reader is as interesting as a romance, whilst to the psychologist it is fraught with the deepest interest, not only as a storehouse of fact bearing upon brain disorganization, but also as a philosophical exposition of the fine and graduated links which connect healthy and disordered minds. But it will be at least consolatory to those who view with alarm the symptoms of increased cerebral disorders in the community, that the means of grappling with the evil are not wanting. "I am satisfied," says the author, "that it is in our power to arrest the progress of the fatal cerebral disorganization that so often follows, after the lapse of years, injuries to the head, if we do not sleep at our posts, and are on the look-out for the first scintillations of brain disorders; for, as Dr. Grieves has sagaciously said, 'It is not enough to treat them when they come,—THEY MUST BE SEEN AND MET COMING.'"

HUMAN HAIR.



SINCE the world began, hair has been a universal vanity. Our young reader will doubtless confess that, as his name is tossed up from landing to landing by imposing flunkies, he passes his hands carefully through his curls, to give them the last flowing touch ere he enters the ball-room; while Mr. Layard, from out the royal palace, buried by the sand-storms of thousands of years, has shown us what thorough "prigs" were the remote Assyrians in the arrangement of their locks and beards. What applies to the male sex does so with double force to the women; and we have not the slightest doubt that Alcibiades fumed at the waste of many a half-hour whilst his mistress was "putting her hair tidy," or arranging the *golden grasshopper*. Not only as a means of ornament has the hair been seized upon by all classes and generations of our kind, but it has been converted into an index, as it were, of their religious, political, and social opinions. The difference between the freeman and the slave was of old indicated by the length of the hair. In later times we all know how the Puritan rejoiced in a "polled" head, whilst the Cavalier flaunted about in exuberant curls; so at the present moment no tub-thumper would venture to address his "dearly beloved brethren" without having previously plastered his hair

into pendent candle-ends. The fact of its being the only part of the body a man can shape and carve according to his fancy, is sufficient to account for the constancy with which he has adopted it as his ensign of party and doctrine, and also for the multitudinous modes in which he has worn it. Leaving this part of the subject for a time, however, we will briefly consider those characteristics of hair which, taken broadly, art cannot modify nor fashion hide. Briefly, we say, and very imperfectly ; for hair, in an ethnological point of view, is itself a very wide subject, and its adequate treatment would require a far longer paper than we at present contemplate.

Dr. Prichard, in his laborious work on the different races of mankind, apportions to the melanic, or dark-haired, the greater portion of the habitable globe. Europe is the chief seat of the xantho-comic or light-haired races ; indeed they seem to be almost confined to its limits, and within those limits to be cooped up in certain degrees of north latitude.

From Norway and Sweden, following their sea-kings, the hardy fair-haired races poured their piratical hordes down the great overhanging peninsula, and as if from some yard-arm thronged and dropped, boarding the great European ship, whose more immediate defenders fled in consternation before them. In this manner nearly the whole of North Germany received its prevailing population, and Britain in her turn saw the majority of her primitive black-haired Celts and Cymri driven into the mountains of Scotland and Wales. The subsequent seizures and settlements made by the Danes on our eastern coast did not in any way interfere with the flood of fair-haired people in possession, as

they were of the same blond type; and the Norman invasion—in whatever proportion actually dark—would, in point of aggregate numbers, have been far too limited to affect it. The indigenous tribes, on the whole, seem to have been about as completely eaten out by the fierce fair-haired men of the North, whenever they came in contact, as were the small black rats, once common to our island and some portions of the continent, by the more powerful gray rodent of Norway.

The chief features of the ethnological map of Europe were settled before the tenth century, and especially as regards the disposition of the dark and light-haired races, it remains in the mass pretty much the same as then. Nevertheless, certain intermixtures have been at work shading off the original differences. At the present moment the fairest-haired inhabitants of the earth are to be found north of the parallel 48°; this line cuts off England, Belgium, the whole of Northern Germany, and a great portion of Russia. Between the parallels 48° and 45°, there seems to be a debatable land of dark-brown hair, which includes Northern France, Switzerland, and part of Piedmont, passes through Bohemia and Austria Proper, and touches the Georgian and Circassian provinces of the Czar's empire. Below this line again, Spain, Naples, and Turkey, forming the southern extremity of the map, exhibit the genuine dark-haired races. So that, in fact, taking Europe broadly from north to south, its peoples present in the colour of their hair a perfect gradation—the light flaxen of the colder latitudes deepening by imperceptible degrees into the blue-black of the Mediterranean shores. To this regular gradation, however, there are

some obvious exceptions. We have already noticed the dark tribes lingering within our island: the same is true as to the Celtic majority of the Irish; and even the Normans, as we now see them, are decidedly ranked among the black-haired. On the other hand, Venice, which is almost southern in latitude, has always been famous for the golden beauty of its hair, beloved so of Titian and his school. These isolated cases, however, only prove the rule that race mainly determines, among other ethnological peculiarities, the colour and texture of the hair. If latitude or temperature affected it materially, Taffy, Paddy, and Donald, would by this time have been toned down pretty decently to the prevailing fair-haired type; if even there had been much mixture of the Celt with the Saxon, we should not see the former breed marked out by such a lump of darkness, amid the generally fair portion of the European map.

The effect of the admixture of races is evidenced very strongly, we think, by comparing the inhabitants of the great capitals with the populations of their respective countries. London, the centre of the world,* is neither fair nor dark-haired, but contains within itself all shades of colour. Even so the Parisian no more represents the black-haired Norman or swart Breton than our cockney does the pure Saxon of the southern and western counties. Vienna is another example. What went on rapidly in such cities as these, has been progressing more slowly in those countries which form the highways of nations. Thus the brown hair of middle Europe is the neutral tint, which

* According to Sir John Herschel, London is exactly the centre of the terrestrial globe.

has naturally resulted from the admixture of the flaxen-haired races of the north with the old southern population.

If we open a wider map, we only receive ampler proof that race alone determines the colour of the hair. Thus, taking the parallel of 51° north, and following it as it runs like a necklace round the world, we find a dozen nations threaded upon it like so many parti-coloured beads. The European portion of the necklace is light-haired—whereas the Tartars, northern Mongols, and aboriginal American Indians, have black straight hair—and Upper Canada breaks the chain once more with the blond tresses of the Saxon.

That climate and food have some effect in modifying race, and with it hair as one of its most prominent signs, we do not deny; but these disturbing causes must act through a very long period of time to produce any marked effect, and certainly within the historical period we have no proof of a dark-haired people having become light, or *vice versâ*, of flowing hair changing into woolly locks—Tom Moore's capital joke about the Irish niggers notwithstanding.

Having said that race determines the colour and quality of the hair, we have said nearly all that ethnology teaches upon the subject. An examination of its structure shows that the difference of colour is entirely owing to the tinct of the fluid which fills the hollow tube in each hair. This tinct or pigment shows through the cortical substance in the same manner that it does through the epidermis of a negro. Hair is in fact but a modification of the skin. The same might be said of feathers, horns, and scales. Not improbably the distinguished lady now honouring these

pages with her attention will be shocked at hearing that her satin-soft shoulder is almost chemically identical with the plated and roughened mail of the crocodile—and she will hardly perhaps believe us when we inform her that her bird, when he adjusts some feather with his beak, is acting with the same chemically composed instrument upon the same chemically composed material as mademoiselle does when she disentangles with a comb her charming mistress's softly-flowing tresses. The fond lover again, as he kisses some treasured lock, will doubtless be disgusted when we tell him that, apart from the sentiment, he might as well impress his fervent lips upon a pig's pettitoe, or even upon the famous Knob Kerry, made out of the horn of a rhinoceros, carried by the king of hunters, Mr. Roualleyn Gordon Cumming.

The hair, anatomically considered, is composed of three parts, the follicle, or tubular depression in the skin into which the hair is inserted; the bulb, or root of the hair; and the stalk, or cortical part filled with pigment. A single hair, with its follicle, might be roughly likened to a hyacinth growing from a glass—with this difference, that the hair is elongated exclusively from below. The bulb, which rests upon the reticuled bed of capillary vessels of the cutis and sub-cutaneous tissue, draws its pigment-cells or colouring matter directly from the blood; in like manner the horny sheet is secreted directly from the capillaries; so that, unlike the hyacinth plant, it grows at its root instead of at its free extremity. A hair is not, as it appears, a smooth cylindrical tube like a quill; on the contrary, it is made up of a vast number of little horny laminæ:—or our reader might realize its structure to

herself by placing a number of thimbles one within the other, and as she adds to this column by supplying fresh thimbles *below*, she will get a good notion of the manner in which each hair grows, and will see that its oldest portion must be its free extremity.

The pigment-cells have been scrutinized by Liebig, who finds a considerable difference in their constitution, according to their colour. His results may be thus tabularized:—

	Fair Hair.	Brown Hair.	Black Hair.
Carbon	49·345	50·622	49·935
Hydrogen...	6·576	6·613	6·631
Nitrogen	17·936	17·936	17·936
Oxygen and sulphur...	26·143	24·829	25·498

From this analysis it would appear that the beautiful golden hair owes its brightness to an excess of sulphur and oxygen, whilst black hair owes its jetty aspect to an excess of carbon and a deficiency of sulphur and oxygen. Vanquelin traces an oxide of iron in the latter, and also in red hair. The colouring matter, however, forms but one portion of the difference existing between the soft luxuriant tangles of the Saxon girl and the coarse blue-black locks of the North American squaw. The size and quality of each hair, and the manner in which it is planted, tell powerfully in determining the line between the two races.

Another eminent German has undergone the enormous labour of counting the number of hairs in heads of four different colours. In a blond one he found 140,400 hairs; in a brown, 109,440; in a black, 102,962; and in a red one, 88,740. What the red and black heads wanted in number of hairs, was made up, however, in the greater

bulk of the hairs individually ; and, in all probability, the scalps were pretty equal in weight. It is to the fineness and multiplicity of hairs that blond tresses owe the rich and silk-like character of their flow—a circumstance which artists have so loved to dwell upon.

Shakspeare especially seems to have delighted in golden hair. "Her sunny locks hang on her temples like the golden fleece"—so Bassanio describes Portia in *The Merchant of Venice.* Again, in the *Two Gentlemen of Verona*, Julia says of Silvia and herself—"Her hair is auburn—mine is perfect yellow." Twenty other passages will suggest themselves to every reader. Black hair he only mentions twice throughout his entire plays, clearly showing that he imagined light hair to be the peculiar attribute of soft and delicate woman. A similar partiality for this colour, touched with the sun, runs, however, through the great majority of the poets—old Homer himself for one ;—and the best painters have seized, with the same instinct, upon golden tresses. A walk through any gallery of old masters will instantly settle this point. There is not a single female head in the National Gallery—beginning with those glorious "Studies of Heads," the highest ideal of female beauty by such an idealist as Correggio, and ending with the full-blown blondes of the prodigal Rubens—there is not a single black-haired female head among them.

One is struck, in passing along the streets, by the curiosities one sees in those armories of Venus, the hair-dressers' windows. Whence come those magnificent head-dresses which the waxen dummies slowly display as they revolve? From what source issue those pendent tresses gleaming in the background, with which the blooming

belle, aptly entangling their snaky coil with her own, tempts our eligible Adams? Who are they that denude themselves of coal-black locks, that she who can afford a price may shore up her tottering beauty? Alas! free-trading England, even for her hair, has to depend upon the foreigner. Among the many curious occupations of the metropolis is that of the human-hair merchant. Of these there are many, and they import between them upwards of five tons annually. Black hair comes mainly from Brittany and the South of France, where it is collected principally by one adventurous virtuoso, who travels from fair to fair, and buys up and shears the crops of the neighbouring damsels. Mr. Francis Trollope, in his "Summer in Brittany," gives a lively description of the manner in which the young girls of the country bring this singular commodity to market, as regularly as peas or cabbages. Staring his fill at a fair in Collenée, he says—

"What surprised me more than all, by the singularity and novelty of the thing, were the operations of the dealers in hair. In various parts of the motley crowd there were three or four different purchasers of this commodity, who travel the country for the purpose of attending the fairs and buying the tresses of the peasant girls. They have particularly fine hair, and frequently in the greatest abundance. I should have thought that female vanity would have effectually prevented such a traffic as this being carried to any extent. But there seemed to be no difficulty in finding possessors of beautiful heads of hair perfectly willing to sell. We saw several girls sheared, one after the other, like sheep, and as many more standing ready for the shears, with their caps in their hands, and their long hair combed out, and hanging down to their waists. Some of the operators were men, and some women. By the side of the dealer was placed a large basket, into which every successive crop of hair, tied up into a wisp by itself, was thrown. No doubt the reason

of the indifference to their tresses, on the part of the fair Bretonnes, is to be found in the invariable 'mode' which covers every head, from childhood upwards, with close caps, which entirely prevents any part of the hair from being seen, and of course as totally conceals the want of it. The money given for the hair is about twenty sous, or else a gaudy cotton handkerchief —they net immense profits by their trip through the country."

This hair is the finest and most silken black hair that can be procured. Light hair all comes from Germany, where it is collected by a company of *Dutch Farmers*, who come over for orders once a year. It would appear that either the fashion or the necessity of England has, within a recent period, completely altered the relative demands from the two countries. Forty years ago, according to one of the first in the trade, the light German hair alone was called for, and he almost raved about a peculiar golden tint which was supremely prized, and which his father used to keep very close, only producing it to favourite customers, in the same manner that our august sherry-lord, or hock-herr, spares to particular friends—or now and then, it is said, to influential literary characters—a few magnums of some rare and renowned vintage. This treasured article he sold at 8*s*. an ounce—nearly double the price of silver. Now all this has passed away—and the dark shades of brown from France are chiefly called for. Our informant venturing boldly into a subject wherewith ethnologists fear to tackle, delivers as his opinion that the colour of the hair of English people has changed within the last half-century, and that the great intercourse since the war with southern nations has deepened by many tints the predominating Saxon blond of our forefathers. The same intelligent prompter assured us that any one accustomed to deal in

hair could tell by *smell* alone the difference between German and French hair—nay, that he himself, "when his nose was in," could discriminate between Irish, Scotch, Welsh, and English hair! The destination of the imported article is of course principally the boudoirs of our fashionable world, and the glossy ringlets which the poor peasant girl of Tours parted with for a few sous, as a nest-egg towards her dowry, have doubtless aided in procuring "a suitable helpmate" for some blue spinster or fast dowager of Mayfair. Wigs, of course, absorb some portion of the spoil—and a cruel suspicion rises in our mind, that the hair-artists of this our Babylon do not confine themselves to the treasured relics intrusted to their care, but that many a sorrowing relative kisses, without suspicion, mementoes eked out from hair that grew not upon the head of the beloved one.

The pure whiteness of the hair in Albinos is owing to the perfect absence of pigment—an absence which extends itself to the choroid coat of the eye and also to the iris. This condition of non-development, which amounts to a physical defect in man, seems to be the normal condition of many animals—such as white bears, white mice, white rabbits, and white weasels—in which the pink eye denotes a total lack of colouring matter; whilst white feathers and hairs are very common among birds and animals, and in many of them, indeed, this colour—or rather negative of colour—is constant.

The gray hair of age and debility in the human subject results, it is supposed, from a withdrawal of the pigment-cells. We feel that we are now touching upon a part of our subject that becomes personal to not a few of our most

respected readers. Many a *viveur* who has taken no note of time is suddenly startled by the discovery, as he shaves, of a few gray hairs—"pursuivants of Death"—and he eradicates the tell-tales with anything but an agreeable sensation. Our Parisian friends, who seem to be profoundly afflicted at the appearance of the first snows of age, have organized a diligent army of young girls to war against decay, and to wrest from Time the fatal ensigns he plants upon our brow. The *Salons Epilatoires*, where youth pays this little attention to age for an inconceivable small sum, usually hang out "Plus de Cheveux Gris"—and indeed of late we observe London advertisements beginning with "No more Gray Hairs." White hair, however, is not necessarily the slow work and certain mark of age. Some persons become gray very young; we believe that many in the prime vigour of life are suddenly blanched from the effect of terror, or some other great mental disturbance. Marie Antoinette's hair, it seems to be allowed, turned gray in the night preceding her execution. A case came lately under our own observation, in which a soldier, in order to escape the service, malingered in an hospital for three months, feigning rheumatism, and such was his anxiety to keep up the deception (which was, however, completely penetrated by his medical attendant), that he turned perfectly gray, although quite a young man. In these cases of emotion, it is supposed that the blood sends some fluid among the pigment of the hair, which at once discharges its colour. In some, though very rare, instances, persons have been born with patches of white hair, and there is at present in the Museum of Natural History at Paris, a portrait of a piebald negro, in which

the hair of the head presents very much the parti-coloured appearance of the wigs exposed in the windows, half black and half white, as specimens of the power of the various hair-dyes.

Women are quite as often gray as men; but from baldness they are almost entirely exempt. This is owing in a great measure to the larger deposit of fat in the female scalp, which allows of a freer circulation in the capillaries of the skin. Eunuchs, who possess much subcutaneous fat in this part, are never bald. The scalp of a bald man is singularly smooth and ivory-like in texture; a fact which Chaucer noticed in the Friar—"His crown it shon like any glass." This denseness of texture in the skin is owing to the destruction of the bulbs of the hair, and the closure of the follicles; any attempt to reproduce the natural covering of the head on such surfaces will prove quite hopeless. From some causes or other, baldness seems to befall much younger men now than it did thirty or forty years ago. A very observant hatter informed us, a short time since, that he imagined much of it was owing to the common use of silk hats, which, from their impermeability to the air, keep the head at a much higher temperature than the old beaver structures; which, he also informed us, went out principally because we had used up all the beavers in the Hudson's Bay Company's territorities. The adoption of silk hats has, however, given them time, it seems, to replenish the breed. This fact affords a singular instance of the influence of fashion upon the animals of a remote continent. It would be more singular still if the silk-hat theory of baldness has any truth in it, as it would then turn out that we were sacri-

ficing our own natural nap in order that the beaver might recover his. Without indorsing the speculative opinion of our hatter, we may, we believe, state it as a well-ascertained circumstance that soldiers in helmeted regiments are oftener bald than any other of our heroic defenders.

Hair, the universal vanity, has of course been seized upon universally by quacks—it has proved to them, indeed, the true Golden Fleece. Science, as though such a subject were beneath its attention, has left the care of the most beautiful ornament of the body in the hands of the grossest charlatans. M. Cazenave is the only scientific person who has ever treated at any length of the hair, or has shown, by the light of physiology, what art is capable of doing, and what it is powerless to do, in cases of disease and baldness. Those who understand how the hair is nourished can but smile at the monstrous gullibility of the public in putting such faith in the puffs and extracts of the hair-revivers. Really, the old joke of the power of a certain preparation to restore the bald places in hair-trunks and in worn-out boas has become a popular working belief. There is one fact which every one should know, and which would be sufficient to rout at once all the trash with which people load their heads. The blood is the only Macassar of the hair, the only oil which can with truth be said to "insinuate its balsamic properties into the pores of the head," &c. &c. Oils and pomades may for a time moisten and clog the hair, but over its growth or nourishment they are absolutely powerless. The fine network of vessels on which the bulbs of the hair rest is alone capable of maintaining its healthy existence. To a sluggishness in the capillary circulation baldness is mainly due; when

this sluggishness is the result of a general failure of the system, consequent upon age, as we have said before, no art will avail—the inevitable Delilah proceeds unchallenged with her noiseless shears. When, on the contrary, baldness proceeds from any temporary cause—when the bulb still remains intact—slight friction with a rough towel or a brush, aided by some gently irritating pomade, is the only course to be pursued. Dupuytren, who made baldness the subject of a chapter in his great work on "Skin Diseases," gives the following recipe, which seems to us calculated to produce the desired result—to promote capillary circulation, and a consequent secretion of the materials of hair-growth :—

℞ Purified beef-marrow - - - ʒviij.
Acetate of Lead - - - - ʒj.
Peruvian balsam - - - ℥iij.
Alcohol - - - - - ℥j.
Tinct. of cantharides, cloves, and canella - - - - - āā mxv.
Mix.

We do not see why internal application should not be tried, and we are not at all certain that gelatine soups and pills made of the ashes of burnt hair might not be effectual in baldness, as those ingredients would supply to the blood the materials necessary for the production of hirsute growths. Those who have bad taste enough to obliterate with hair-dye the silvery livery of age, should at least keep in mind the horrible position in which Mr. Tittlebat Titmouse found himself, whose carrots were turned into a lively green ; they should also be informed that nitrate of silver is the chief ingredient of all the preparations, which

in most cases act by entirely altering the cortical portion of the hair.

Once a month, at shortest, we of the male sex are, by the exigencies of fashion, obliged to submit our heads to the tender mercies of the executioner. Swathed in wrappers of calico, the head fixed by a neckful of tormenting short hairs, a man is planted like an unfortunate wicket, and bowled at by the abhorred barber with pomatum-pots, essences, tinctures, and small talk.

Touching upon the subject of applications for nourishing the hair, we must not omit the most important and imposing, though some people imagine, perfectly apocryphal contributors—bears. We know Bruin has of late been declared a humbug, and there is but too prevalent an opinion abroad that he does not let his genuine grease flow for the benefit of mankind as freely as barbers would have us believe from the announcement we so often see in back streets of "another bear to be killed." After full inquiry, however, we find that Bruin still bleeds without murmuring for an ungrateful public. During the winter months upwards of fifty bears yield up the ghost in this metropolis alone, and they are, we find, very regular passengers between the ports of St. Petersburg and London. The destiny of these creatures affords a singular instance of the manner in which extremes meet—the shaggy denizen of a Russian forest having at last the honour of yielding up his precious fat to make glossy and smooth the ringlets of an irresistible lady-killer. If Ursa Major could only know his distinguished future!

In order to combat the growing scepticism as to "hair-dressers' bears," a worthy son of the craft, in the neigh-

bourhood of St. Giles's Church, was long in the habit, when he slaughtered a Muscovite, of hanging him by chains out of the second floor window, with an inscription to the effect that customers bringing their own gallipots might cut the fat out for themselves.

The history of the coiffure commenced, we suppose, when Eve, first gazing on a brook (not far from *the* Tree), discovered the dishevelled conditions of her head-gear. As far back as we have any records of man, we find a more or less elaborate fashion of dressing the hair. As we have said before, the Nineveh statues and relievos show us how justly the old Hebrew prophets describe and rebuke the dandyism of Sennacherib's captains and counsellors. A modern Truefitt with all his skill must wonder as he gazes upon those exquisite plaitings, and bossings, and curlings, which extended over the beard as well as the head of the Assyrian. A glimpse at the wig found in the temple of Isis at Thebes, and now, as has also been mentioned, among the glories of the Museum, proves that the Egyptians, of even an earlier epoch probably, were most studious of their toilet. The Greeks, however, with their innate love of the beautiful, carried the arrangement of the hair to the highest point of artistic excellence. The marbles which have come down to us testify to this perfection, and after a lapse of eighteen hundred years all the nations of Christendom, discarding their own hideous devices, have returned, with more or less scrupulousness, to the models so bequeathed. The Roman dames speedily overlaid the simple beauty of the Greek mode, piled upon their heads imitations of castles and crowns, hoisted their hair in intricate wreaths, and knotted it with a tiresome

elaborateness. The men generally showed better taste, and continued to sport sharp crisp locks, after the manner of "the curled Antony," sometimes with the addition of the beard, sometimes without it. By-and-by, however, among other signs of decadence, the simple male coiffure was thrown aside for more luxurious fashions, and the emperor Commodus, for one, is said to have powdered his hair with gold.

Outside of Rome, long hair was generally prevalent among freemen. The slaves were invariably cropped, and Cæsar relates that he always ordered the populations of the provinces he had conquered to shave off their hair, as a sign of their subjection. In the decline of the empire, when any of these provinces revolted, the insurgent captains directed the masses to wear their hair long again, as a signal of recovered freedom. Thus the hair-crops of whole countries were alternately mown and allowed to grow, like so many fields at the command of the husbandman—the most important of facts political being indicated—(we despise the vile imputation of a pun)—by the state of the poll. Long hair, during the dark ages, was very much respected; and at the beginning of the French monarchy the people chose their kings by the length of their locks. In our own island it was equally esteemed; and so far from its being considered a mark of effeminacy to carefully tend it, we are told that the Danish officers who were quartered upon the English in the reign of Ethelred the Unready won the hearts of the ladies by the length and beauty of their hair, which they combed *at least once a day*. The clergy seem to have been the only class of men who wore the hair short, and this they did as a kind of mortification. Not

content with exercising this virtue themselves, however, they attempted to impose it upon the laity. Thus St. Anselm fulminated orders against long hair, both in England and France. There was a kind of hair which received the honour of a special canon denouncing it. This hair, crisped by art, was styled by them *the malice of the Devil.* The following represents—in modernized form, of course—the terms in which the French bishops anathematized it :—

"Prenant un soin paternal de punir, autant qu'il est à propos, ceux qui portent des cheveux frisées et bouclés par artifice, pour faire tombre dans le piége les personnes qui les voient, nous les exhortons et leurs enjoignons de vivre plus modestement, en sort qu'on ne remarque plus en eux *aucun restes de la malice du diable.* Si quelqu'un pèche contre ce canon, qu'il soit excommunié !"

Indeed, so many, and such complicated and contradictory ordinances were issued by like authority about the seventh and eighth centuries, that some wag suggested that the young fellows should continue to wear their hair long, until the Church had settled what short hair really was.

In England the clergy did not confine themselves merely to denouncing the flowing tresses of the nobility : impregnated with the practical turn of mind of the country, they acted as well as talked. Thus Serlo, a Norman prelate, preaching before Henry II. and his court, brought the whole party to such a state of repentance respecting the profligate length of their locks, that they consented to give them up, whereupon the crafty churchman pulled a pair of shears out of his sleeve, and secured his victory by clearing the royal head in a twinkling. Such occasional results

of pious impulse were, however, of little avail; on the whole, the abomination remained throughout the early reigns of both France and England quite triumphant. In Richard II.'s time the men, as well as the women, confined the hair over the brow with a fillet. What the clergy, with all their threats of excommunication and promises of paradise, could not effect in a series of ages, was at last brought about by an accident. Francis I., having been wounded in the head at a tournament, was obliged to have his hair cropped, whereupon the whole of fashionable France gave up their locks out of compliment to the sovereign.

In the "History of England," illustrated with woodcuts of the kings' heads, which we have all of us thumbed over so at school, the sudden and complete change in the method of wearing the hair between the installation of the Tudor dynasty and the meridian of bluff King Hal must be well remembered. The portraits of the latter period by Holbein are, however, the best of illustrations. The women, as well as the men, appear almost totally deprived of hair, and we cannot help thinking that much of the hard expression of features, which especially marks the female heads of Henry VIII.'s great painter, was owing to the withdrawal of the softening influence of the hair. The close cropping of the gentlemen on the other hand gave them a virile aspect which especially suited with the reforming spirit of the age. As the hair shortened, the beard was allowed to flow. Indeed, this compensatory process has always obtained; in no age, we think, have the hair and beard been allowed to grow long at the same time. Shakspeare was constantly

alluding to the beard. In his day, this term included the three more modern subdivisions of beard, moustache, and whisker—they were all then worn in one. "Did he not wear a great round beard like a glover's paring-knife?" asks one of his characters, clearly alluding to the extent of cheek it covered. In a word, the period *par excellence* of magnificent barbes comprised the end of the sixteenth and the beginning of the seventeenth century—and, as a matter of course, there was at the same time manifested the germ of that party which gave a politico-religious character to the hair of the revolutionary epoch. The Cavaliers began to restore long locks early in the reign of Charles I.; the Puritans, so far from adopting the fashion, polled even closer than before, and at last came to rejoice in the cognomen of Roundheads. Between these two grand extremes, however, there were innumerable other fashions of wearing the hair, the minor ensigns, we suppose, of trimming sectaries.

Dr. Hall, who published a little work in 1643, "On the loathsomenesse of Long Hair," exclaims—

"How strangely do men cut their hairs—some all before, some all behind, some long round about, their crownes, being cut short like cootes or popish priests and friars; some have long locks at their eares, as if they had foure eares, or were prickeared: some have a little long lock onely before, hanging downe to their noses, like the taile of a weasall; every man being made a foole at the barber's pleasure, or making a foole of the barber for having to make him such a foole."

The virulence with which the Puritans denounced long hair even exceeded that of the priests of old. Diseases of the hair were lugged in as evidences of the Divine dis-

pleasure: for example, the worthy divine we have just been quoting talks of plica polonica as unquestionably resulting from the wickedness of the times. There is a cat afflicted with this singular hair-disease in the Museum of the College of Surgeons, so we suppose that race at the present time are living profligate lives! What says Professor Owen?

With the renewed triumph of long hair the beard gradually shrank up; first assuming a forked appearance, then dwindling to a peak, and ultimately vanishing altogether. The female coiffure of the Stuart period was peculiarly pleasing: clustering glossy curls, which were sometimes made soft and semi-transparent by a peculiar friz, gave life and movement to the face; whilst a pretty arrangement of loops hung like a fringe across the forehead, and added a great air of quaintness to the whole expression.

But how shall we approach with sufficient awe the solemn epoch of perukes! It is true we have sufficient evidence that the Egypt of Pharaoh was not ignorant of the wig—the very *corpus delicti* is familiar to our eyes—and many busts and statues in the Vatican have actually marble wigs at this hour upon them—clearly indicating the same fact in the days of imperial Rome. But apart from these very ancient matters, which are comparatively new discoveries, hitherto our attention has been claimed by the simple manipulations of the barber; we now enter upon a period when the dressing of hair rises into a real science, and the perruquier, with a majestic bearing, takes the dignity of a professor. To France, of course, we owe the reinvention and complete adoption of a head-dress

which sacrificed the beauty of nature to the delicacies of art. The epidemic broke out in the reign of Louis XIII. This prince never from his childhood cropped his hair, and the peruke was invented to enable those to whom nature had not been so bountiful in the item of flowing locks to keep themselves in the mode brought in by their royal master.

In England the introduction of those portentous head-dresses is well marked in Pepys's Diary. Under date November 3, 1663, he says—

"Home, and by and bye comes Chapman, the perriwigg-maker, and upon my liking it (the wig), without more ado I went up, and then he cut off my haire, which went a little to my heart at present to part with it; but it being over, and my perriwigg on, I paid him £3, and away went he with my own haire to make up another of; and I by and bye went abroad, after I had caused all my maids to look upon it, and they concluded it do become me, though Jane was mightily troubled for my parting with my own haire, and so was Besse.

"November 8, 1663. Lord's Day.—To church, where I found that my coming in a perriwigg did not prove so strange as I was afraid it would, for I thought that all the church would presently have cast their eyes upon me, but I find no such things."

From this last extract it would appear, that in the beginning the peruke, made as it was from the natural hair, was not very different from the Cavalier mode. The imagination of France speedily improved, however, upon old Dame Nature. Under Louis XIV. the size to which perukes had grown was such, that the face appeared only as a small pimple in the midst of a vast sea of hair. The great architect of this triumphant age of perukes was one Binette, an artist of such note and consequence, that without him the king and all his courtiers were nothing.

His equipage and running footmen were seen at every door, and he might have adopted without much assumption the celebrated *mot* of his royal master—*L'état c'est moi.* The clergy, physicians, and lawyers, speedily adopted the peruke, as they imagined it gave an imposing air to the countenance, and so indeed it must be confessed it did. One can never look at the portraits of the old bishops and judges dressed in the full-bottomed flowing peruke without a sort of conviction that the originals must have been a deal more profound and learned than those of our own close-cropped age. So impressed was the Grand Monarque with the majestic character it lent to the face, that he never appeared without his peruke before his attendants, and it was the necessity, perhaps, of taking it off at the latest moment of the toilet, that caused him to say that no man was a hero to his valet-de-chambre. This mode grew so universal that children were made to submit to it, and all nature seemed bewigged. The multiplicity of sizes and forms became so numerous, that it was found necessary to frame a new technical vocabulary, now in parts obscure enough even for the most erudite. Thus there were "perruques grandes et petites—en folio, en quarto, en trente-deux—perruques rondes, carrées, pointues ; perruques à boudins, à papillons, à deux et trois marteaux," &c. &c.

For a long time after this invention the head-dress retained the natural colour of the hair, but in 1714 it became the fashion to have wigs bleached ; the process, however, was ineffectual, and they speedily turned an ashen gray ; to remedy which defect hair-powder was invoked—another wondrous device which speedily spread

from the source and centre of civilization over the rest of Europe.

The natural vanity of the fair sex struggled with more or less success against the loss of their own hair, but they managed to friz and build this up with such piles of lace and ribbons, that it at length excelled the male peruke. In 1760, when they had reached a truly monstrous altitude, one Legros had the extraordinary impudence to hint that the thing was getting beyond a joke, and proposed a return to the "coiffure à la Grecque." For a moment the fair mob of fashion listened, and the hairdressers trembled, for well they knew that, if the women hesitated, the mode, like their virtue, would be lost. Accordingly, they combined with immense force against Legros, instituted a law-suit, and speedily crushed him. This momentary blight removed, the female head-dress sprang up still more madly than before, and assumed an abstruseness of construction hitherto unexampled. The author of the "Secret Memoirs" relates that Queen Marie Antoinette herself invented a coiffure which represented all the refinements of landscape gardening—"des collines, des prairies émaillées, des ruisseaux argentins et des torrents écumeux, des jardins symétriques, et des parcs Anglais."

From the altitude of the head-dresses in 1778 it was found that they intercepted the view of spectators in the rear of them at the opera, and the director was obliged to refuse admittance to the amphitheatre to those persons who wore such immoderate coiffures—a proceeding which reminds us of the joke of Jack Reeve, who, whilst manager of the Adelphi, posted a notice that, in conse-

quence of the crowded state of the house, gentlemen frequenting the pit must shave off their whiskers! Such was the art expended on these tremendous head-dresses, and such the detail required in their different stages, that ladies of quality were often under the hands of the artiste the entire day. Thus, when they had to attend entertainments on succeeding evenings, they were forced to sleep in arm-chairs, for fear of endangering the finish of the coiffure!

The female head-dress, having now arrived at its most Alpine elevation, suddenly toppled over and fell, by the mere accident of the Queen's hair coming off during her accouchement. The court, out of compliment to her Majesty, wore the hair *à l'enfant;* others followed, and the fashion was at an end. And it was well it was so. It required all the skill of our own Sir Joshua to bring this strange mode within the sphere of pictorial art. And yet in real life the white powder was not without its merit. It brought out the colour of the cheeks, and added brilliancy to the eyes; in short, it was treating the face like a water-colour landscape, mounting it on an ocean of white, which brought out by contrast all its natural force and effect. Few can have forgotten how many of our beauties gained by figuring in powder at the court fancy balls of a few seasons back.

The male peruke, startled, it would appear, by the vehement growth of the female coiffure, stood still, grew gradually more calm and reasonable, and at last, spurning any further contest with its rival, resigned altogether; and the natural hair, powdered and gathered in a queue, at first long, then short, and tied with ribbon, became the

mode, to rout which it required a revolution; in '93 it fell, together with the monarchy of France. In the world of fashion here, the system stood out till somewhat later; but our Gallo-maniac Whigs were early deserters, and Pitt's tax on hair-powder in 1795 gave a grand advantage to the innovating party. Pig-tails continued, however, to be worn by the army, and those of a considerable length, until 1804, when they were by order reduced to seven inches; and at last, in 1808, another order commanded them to be cut off altogether. There had, however, been a keen qualm in the "parting spirit" of Protection. The very next day brought a counter-order; but, to the great joy of the rank and file at least, it was too late—already the pig-tails were all gone. The trouble given to the military by the old mode of powdering the hair and dressing the tail was immense, and it often led to the most ludicrous scenes. The author of the "Costume of the British Soldier" relates that on one occasion, in a glorious dependency of ours, a field-day was ordered, and there not being sufficient barbers in the garrison to attend all the officers in the morning, the juniors must needs have their heads dressed over night, and, to preserve their artistic arrangement, pomatumed, powdered, curled, and clubbed, these poor wretches were forced to *sleep* as well as they could *on their faces!* Such was the rigidity with which certain modes were enforced in the army about this period, that there was kept in the adjutant's office of each regiment a pattern of the correct curls, to which the barber could refer.

For many years every trace of powder and pig-tail has disappeared from the parade as well as the saloon, and

footmen are now the only persons who use a mode which once set off the aristocratic aspects of our Seymours and Hamiltons. The horse-hair court wigs of the judges seem to be recollections of the white perukes of the early Georgian era, but they are far more massive and precise than the old flowing head-dresses—their exact little curls and sternly cut brow-lines making them fit emblems of the unbending, uncompromising spirit of the modern bench.

Only forty years ago, it must be remembered, the sages of the law, even in ordinary society, sported a peculiar and marking head-gear; or rather there were two varieties in constant use, one brief and brown for the morning, the other white, pretty ample, and terminating in pig-tail, for the Lord Mayor's Feast or Bloomsbury Drum. The epoch of reform witnessed at once the abandonment of Bloomsbury and the final abolition of these judicial ensigns. The last adherent was, we believe, the excellent Mr. Justice James Alan Park, latterly distinguished accordingly as *Bushy Park*. The general disappearance of the episcopal peruke befell at the same era of change and alarm; being warned to set their house in order, they lost no time in dealing with their heads. At this day hardly one wig is ever visible even in the House of Lords; and we must say we doubt whether most of the right reverend fathers have gained in weight of aspect by this complete revolution. It has, of course, extended over all the inferior dignitaries of the clerical order. With the exception of one most venerable relic, which has often nodded in opposition to Dr. Parr's *μεγα θαυμα*, we do not suppose there remains one *Head* with a wig on the

banks of either Cam or Isis. Yet people question the capacity or resolution for internal reforms in our academical Caputs!

The natural hair, after its long imprisonment, seemed for a moment to have run wild. The portraits of the beginning of the century, and even down to the time of Lawrence's supremacy, show the hair falling thickly upon the brow, and flowing, especially in the young, over the shoulders. Who can ever forget that has once seen it, the portrait of Young Lindley in Dulwich Gallery, by Sir Thomas—that noble and sad-looking brow, so softly shaded with luxuriant curls? At the present moment almost every lady one meets has her hair arranged in "bands"—nothing but bands, the most severe and trying of all coiffures, and one only adapted to the most classic style of beauty. For the face with a downright good-natured pug-nose, or with one that is only pleasantly *retroussé*, to adopt it, is quite as absurd as for an architect to surmount an irregular Elizabethan building with a Doric frieze.

Every physiognomy requires its own peculiar arrangement of hair, and we only wonder that this great truth has ever been lost sight of. There is a kind of hair full of graceful waves, which in Ireland is called "good-natured hair." There is something quite charming in its rippling line across the forehead. Art has attempted to imitate it, but the eye immediately detects the imposture; it no more resembles the real thing than the set smile of the opera-dancer does the genuine play of the features from some pleasurable emotion of the mind. This buckled hair is, in short, the same as that denounced by the early churchmen under the name of *the malice of the*

devil, a term which it well deserves. There is another kind of hair which is inclined to hang in slender thread-like locks just on the sides of the face, allowing the light and shade to fall upon the white skin between with delightful effect. Painters particularly affect this picturesque falling of the hair, and it is wonderful how it softens the face, and gives archness to the eyes, which peep out as it were between their own natural trellis-work or *jalousies*. We own to a love of the soft glossy ringlets which dally and toy with the light on their airy curves, and dance with every motion of the body. There is something exceedingly feminine and gentle in them, we think, which makes them more fitted for general adoption than any other style. But most of all to be admired for a noble, generous countenance, is that compromise between the severe-looking "band" and the flowing ringlet, in which the hair, in twisting coils of flossy silk, is allowed to fall from the forehead in a delicate sweep round that part of the cheek where it melts into the neck, and is then gathered up into a single shell-like convolution behind. The Greeks were particularly fond of this arrangement in their sculpture, because it repeated the facial outline, and displayed the head to perfection. Some naturally pretty women, following the lead of the strong-minded, high-tempered sisterhood, are in the habit of sweeping their hair at a very ugly angle off the brow, so as to show a tower of forehead, and, as they suppose, produce an overawing impression. This is a sad mistake. Corinna, supreme in taste as in genius and beauty, knows better. The Greeks threw all the commanding dignity into the κόρυμβος, or bow-like ornament. We all admire this in

the Diana of the British Museum. It was, however, used indifferently for both sexes—the Apollo Belvedere is crowned in the same manner. The ancients were never guilty of thinking a vast display of forehead beautiful in woman, or that it was, in fact, at all imposing in appearance; they invariably set the hair on low, and would have stared with horror at the atrocious practice of shaving it at the parting, adopted by some people to give height to the brow. We do not mean to lay down any absolute rule, however, even in this particular; the individuality which exists in every person's hair, as much as in their faces, should be allowed to assert itself, and the dead level of bands should never be permitted to extinguish the natural difference between the tresses of brown Dolores—"blue-black, lustrous, thick as horse-hair"—and the Greek islanders' hair like sea-moss, that Alciphron speaks of. Least of all is such an abomination as "fixature" allowable for one moment; he must have been a bold bad man indeed who first calculated the means of solidifying the soft and yielding hair of woman.

There is much more individuality in the treatment of gentlemen's hair, simply because most of them leave it more alone, and allow Nature to take her course; nevertheless, the lords of the earth, like the ladies, have, to a certain extent, their prevailing formula, or rather the hairdressers have, of arranging the hair—to wit, one great sprawling wave across the forehead, with a cauliflower growth on either side. To this pattern the artists would, if they could, reduce all creation. Their opinion upon the graceful flow of the hair is to be found in that utmost

effort of their science—the wig—we mean the upstart sham so styled.

Was there ever such a hideous, artificial, gentish-looking thing as the George-the-Fourthian peruke — "half in storm, half in calm — patted down over the left temple, like a frothy cup one blows on to cool it?" Its painfully white net parting and its painfully tight little curls haunt us. We scarcely ever see that type now in its full original horror—but bad is the best. It seems, at first thought, very odd that they cannot make a decent imitation of a head of hair. People forge old letters, even to the imitation of the stains of time and the fading of the ink; they copy a flower until it will well nigh entice a bee; but who ever failed to discover a wig on the instant? Its nasty, hard scalp-line against the forehead gives a positive shock to any person possessing nervous susceptibility. Surely something might be done. Nothing can ever be expected, however, to come quite up to that beautiful setting on of the hair which nature shows us; for, as a writer in a number of the Quarterly Review says—and, we may be allowed to add, says beautifully—because the pen is now well known to have been held by feminine fingers—

"It is the exquisite line along the roots of the hair—the graceful undulations of the shores of the head, thus given to sight, with which we are fascinated. Here the skin is invariably found finer, and the colour tenderer, than in any other part of the human face—like the smooth, pure sands, where the tide has just retired."

Again, art can never match even the colour of the hair to the complexion and the temperament of the individual. Did any one ever see a man with a head of hair of his own growing that did not suit him? On the other hand, was

there ever seen a wig that seemed a part of the man? The infinite variety of Nature in managing the coiffure is unapproachable. One man's hair she tosses up in a sea of curls; another's she smoothes down to the meekness of a maid's; a third's she flames up, like a conflagration; a fourth's she seems to have crystallized, each hair thwarting and crossing its neighbour, like a mass of needles; to a fifth she imparts that sweet and graceful flow which F. Grant and all other feeling painters do their best to copy. In colour and texture, again, she is equally excellent; each flesh-tint has its agreeing shade and character of hair, which, if a man departs from, he disguises himself. What a standing protest is the sandy whisker to the glossy black peruke! Again, how contradictory and withered a worn old face looks, whose shaggy white eyebrows are crowned by chesnut curling locks! It reminds us of a style of drawing in vogue with ladies some years since, in which a bright-coloured haymaker is seen at work in a cold, blacklead-pencil landscape.

Of the modern beard and whisker we desire to write respectfully.* A mutton-chop seems to have suggested the form of the substantial British whisker. Out of this simple design countless varieties of forms have arisen. How have they arisen? Can any one give an account of his own whiskers from their birth upwards? To our mind there is nothing more mysterious than the growth of this manly appendage. Did any far-seeing youth deliberately design his own whisker? Was there ever known a hobbledehoy who saw "a great future" in his silken down,

* It will be sufficient to say this article was written before the present outrageous fashion in whiskers arose.

and determined to train it in the way it should go? We think not.

British whiskers, in truth, have grown up, like all the great institutions of the country, noiselessly and persistently — an outward expression, as the Germans would say, of the inner life of the people; the general idea allowing of infinite variety according to the individuality of the wearer. Let us take the next half-dozen men passing by the window as we write. The first has his whiskers tucked into the corners of his mouth, as though he were holding them up with his teeth. The second whisker that we descry has wandered into the middle of the cheek, and there stopped as though it did not know where to go to, like a youth who has ventured out into the middle of a ball-room with all eyes upon him. Yonder bunch of bristles (No. 3) twists the contrary way under the owner's ear: he could not for the life of him tell why it retrograded so. That fourth citizen with the vast Pacific of a face has little whiskers, which seem to have stopped short after two inches of voyage, as though aghast at the prospect of having to double such a Cape Horn of a chin. We perceive coming a tremendous pair, running over the shirt-collar in luxuriant profusion. Yet we see, as the colonel or general takes off his hat to that lady, that he is quite bald—those whiskers are, in fact, nothing but a tremendous landslip from the veteran's head.

Even in Europe, some skins seem to have no power of producing hair at all. Dark, thick-complexioned people are frequently quite destitute of either beard or whiskers, and Nature now and then, as if to restore the balance, produces a hairy woman. A charming example was ex-

hibiting some years since in town. The description she gave of herself in every particular we will not back, but here it is from the printed bill :—

"The public is most respectfully informed that Mad. Fortunne, one of the most curious phenomenons which ever appeared in Europe, has arrived in London, in the person of a young woman, 21 years of age, whose face, which is of an extraordinary whiteness, is surrounded by a beard as black as jet, about four inches in length. The beard is as thick and bushy as that of any man. The young lady is a native of Geneva, in Switzerland, and has received a most brilliant education. She speaks French fluently, and will answer all questions that may be addressed to her. Her beard, which reaches from one eye to the other, perfectly encircles the face, forming the most surprising contrast, but without impairing its beauty. Her bust is most finely formed, and leaves not the least doubt as to her sex. She will approach all the persons who may honour her with their presence, and give an account of her origin and birth, and explain the motives which induced her to quit her country. Everybody will also be allowed to touch her beard, so as to be convinced that it is perfectly natural."

The beard was certainly a most glorious specimen, and shamed any man's that we have ever seen.

Of the *expression* of hair—could we *press* for the nonce a quill from Esthonia—much might be well and edifyingly said. The Greeks, with their usual subtilty in reading Nature, and interpreting her in the works of art, have distinguished their gods by the variations of this excrescence. Thus the hair of the Phidian Jove in the Vatican, which rises in spouts, as it were, from the forehead, and then falls in wavy curls, is like the mane of the lion, most majestic and imperial in appearance. The crisp curls of Hercules again remind us of the short locks between the horns of the indomitable bull; whilst the hair of Neptune

falls down wet and dank like his own sea-weed. The beautiful flowing locks of Apollo, full and free, represent perpetual youth; and the gentle, vagrant, bewitching tresses of Venus denote most clearly her peculiar characteristics and claims as a divinity of Olympus. What gives the loose and wanton air to the portraits in Charles II.'s bedchamber at Hampton Court? Duchess and Countess sweep along the canvas with all the dignity that Lely could flatter them with; but on the disordered curls and the forehead fringed with love-locks Cyprian is plainly written. Even Nell Gwyn, retired into the deep shade of the alcove, beckons us with her sweet, soft redundance of ringlets. But too well woman knows the power Venus has endowed her with in this silken lasso:—

> "Fair tresses man's imperial race ensnare,
> And beauty draws us with a single hair."

In the rougher sex, the temper and disposition are more apparent from the set of the hair than in woman, because, as already observed, they allow it to follow more the arrangement of nature. Curly hair bespeaks the sanguine temperament, lank hair the phlegmatic. Poets for the most part, we believe, have had curly hair—though our own age has exhibited some notable exceptions to the rule. Physiology has not yet decided upon what the curl is dependent; but we feel satisfied it arises from a flattening of one side of the hair more than the other.

So well do people understand the character as expressed by the hair and its management, that it is used as a kind of index. Commercial ideas are very exact respecting it. What chance would a gentleman with a moustache have of

getting a situation in a bank? Even too much whisker is looked upon with suspicion. A clean shave is usually, as the world goes, expected in persons aspiring to any post of serious trust.

We confess that few monstrosities in this line affect us more dismally than the combination of dandy *favoris* with the, however reduced, peruke of Brother Briefless or Brother Hardup. It is needless to add that anything like hirsute luxuriance about a sacerdotal physiognomy is offensive to every orthodox admirer of the *via media*.

THE END.

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