The art of preserving the hair on philosophical principles / by the author of the art of improving the voice.

THE

ART OF PRESERVING

THE HAIR;

ON

PHILOSOPHICAL PRINCIPLES.

BY THE AUTHOR OF THE ART OF IMPROVING THE VOICE.

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CONTENTS.

THE

ART OF PRESERVING

THE HAIR.

The science of the hair has been hitherto much neglected. We have looked into several hundred books for information respecting it, but we have been greatly disappointed. The trustworthy philosophers and physicians candidly confess their ignorance; while the theorists, empirics, and perfumers, speak in mystery and contradiction: they promise much; but their promises turn out to be as empty as the dishes at the Barmecede's feast in the Arabian Tales. We have undertaken in this little Work to supply the deficiency so far as the present state of our knowledge extends; but we shall promise nothing, lest we disappoint; though we shall spare no expense nor pains to collect and arrange all that is known, or kept secret, on the subject.

In order to accomplish our task in the most plain and useful manner, we shall lead you to the foundation of the subject by commencing with the description of the skin in which the roots of the hair are fixed, as plants are rooted in the soil where they are nourished. From this we shall naturally proceed to describe the roots and stems of the hair itself, with its various uses, its chemical analysis, and the means of improving its growth, glossiness, and colour. The deficiencies and disorders to which the hair is liable will next be investigated, with the best remedies for these which have been discovered. The remainder of the work will be more miscellaneous, and perhaps more curious and interesting to many: it will contain all the particulars relative to the hair, which could not be properly arranged under the preceding divisions,—such as the method of improving and beautifying the eye-brows and eye-lashes; the beard, and the art of shaving; the history of the fashions with respect to the hair, and particularly that of false hair.

You perceive from this bird's-eye view of the subject, that it is more extensive and important than you might at first sight have imagined, and will require on your part some little smattering of philosophy to follow out all the details; but do not be alarmed,—we shall endeavour to make the more difficult and rugged parts of the

road as smooth and level as we can, and cause you to exclaim with Milton—

> How charming is divine philosophy!
> Not harsh and crabbed, as dull fools suppose;
> But musical as is Apollo's lute.
>
> COMUS.

I.—ANATOMY AND DESCRIPTION OF THE HAIR.

As it is impossible to understand the nature and properties of the hair, without a previous knowledge of the skin and its several membranes, we must first teach you the elements of this knowledge as minutely as the nature of the subject and the plan of our work will admit; following as closely as possible the steps of the best physiologists and anatomists. Our description of the skin, besides preparing you for a complete understanding of every thing connected with the hair, will furnish you with many useful and curious facts relating to the skin itself—a subject of much interest to many. We shall not, therefore, deem our labours misplaced, though we be somewhat minute upon this fundamental part of our subject.

I.—ANATOMY OF THE SKIN.

Every thing that has life, or which grows, is furnished with a covering, as a protection from the vicissitudes of the weather, as well as from external injury; while it also serves the important purpose of connecting the external parts together, and of giving them a smoothness and polish agreeable to the eye. In these respects the bark of a tree, or the peel of an orange, is precisely similar to the skin of animals, and furnishes us with analogies extremely useful in our investigations. Bark, for example, is composed of an outer layer, thin, elastic, and expansible: a middle layer, usually of a green colour; and an inner layer, thick, soft, and full of sap-vessels. We shall find that the human skin is composed of three similar layers, which we shall now proceed to describe.

THE SURFACE, OR SCARF-SKIN.

The outer covering of the body is called by anatomists the *cuticle* or *epidermis*, popularly the scarf-skin. It is in most instances as fine as India-paper, semi-transparent, adhering uniformly to the parts on which it is laid, and closely applied to all their inequalities. It does not possess any blood-vessels, or nerves, that can be detected: it exhibits no marks of sensibility, as it may be torn or cut without pain, and seems to have little connexion

with the vital powers of the system. It is frequently destroyed from various accidents, and is quickly reproduced without any material derangement, or any sensible change of the functions of the subjacent parts. The scarf-skin consists of a thin expansion, in which no specific texture of any kind can be perceived; for the laminated or scaly appearance, which was thought by Leeuwenhoek and some of the older writers to be natural to it, appears to be the effect either of disease or of mechanical violence. In some parts, indeed, where it is thicker than ordinary, it is capable of an imperfect division into layers; but these do not seem to possess any very distinct line of separation, and are irregular and not well defined. Some have considered it as a substance merely spread over the surface, like a crust or film, and supposed it to be formed by exudation from the vessels of the surface; while both Bichat and Cuvier seem inclined to regard it as without any regular arrangement of parts, and possessed of no visible organization.

As the cutaneous perspiration issues from the greatest part of the surface of the body, it follows that the scarf-skin must be furnished with pores or passages of some kind for its transmission; yet, with the exception of Bichat, anatomists have confessed themselves unable to detect these passages. Indeed, one of the most remarkable properties of

this part is its power of retaining fluids of all kinds, and preventing their escape from the surface. It is well known that it retains for some time the matter that is discharged from the true skin by a blister; and those who are conversant with dissections must have observed how much less rapidly the surface dries up when it is not deprived of its cuticle. Various explanations of this fact have been proposed. Winslow and Bonn suppose, that when the epidermis is detached from the cutis, a portion of the latter adheres to the former, which mechanically closes up the pores; Albinus and Meckell, that it transudes through the substance of the cuticle. Bichat conceives that the pores pass through in an oblique direction, and, consequently, that their sides are pressed together when the body is distended; while the observations of Cruickshank would lead us to conclude that the scarf-skin is possessed of a kind of elasticity which tends to close the pores, unless they are forcibly kept open by the passages of some fluid through them. Perhaps none of these suggestions entirely removes the difficulty; we may, however, go so far as to remark, that the matter of perspiration being discharged in the form of vapour, is enabled to pass through very minute pores; and that the scarf-skin, when removed from the part to which it is attached, will shrink, and thus close up any

openings which it possessed while in its natural situation.

Mr. Chevalier's recent publication contains an account of some observations which he has made upon this part, which give a new, and, as it appears, a more probable account of its functions than any which had been previously proposed. He conceived it to be composed of an infinite number of small lamina regularly arranged, so as to form "a bibulous and exquisitely hygrometrical covering." May it not be owing to the death of the scarf-skin that the pores were closed?

There has been as much difficulty respecting the vessels that manufacture or convey the matter of perspiration as the openings by which it is discharged. William Hunter conceived that he was able to detect them merely by separating the scarf-skin from the true skin, when they might be seen passing from one to the other like the fine threads of a spider's web; but this idea is not countenanced by the observations of subsequent inquiries. Bichat, indeed, speaks of the exhalent vessels that pass from the true skin to the scarf-skin, as being sufficiently visible; on this point, however, as well as respecting the pores of the scarf-skin, it is difficult to reconcile his descriptions with those of other observers of acknowledged accuracy.

We are, therefore, still left in doubt, both re-

specting the organization of the scarf-skin, and its connexion with the other parts of the system; yet, there are many facts which shew that this connexion exists. The facility with which it is reproduced when it has been destroyed, is alone sufficient proof of this point, for the reproduction can only take place in consequence of a regular disposition of matter from vessels appropriated to the purpose. Its own structure besides, when considered as a whole, exhibits evident marks of what may be termed organization; for, although it is difficult to see any thing of this kind, when we examine only small portions of it, yet we observe that there are particular parts of the body where the scarf-skin is always thick, and other parts where it is always thin, and this obviously connected with the use of these parts. It is also liable to a visible change in its structure from various morbid causes, so as necessarily to imply a connexion with the vessels of the body; from which we may infer, that this is the case at other times, although the minuteness of the parts prevents us from discovering it. The analogy of the inferior animals leads us to the same view of the subject; for the scales of fish, the thick folds with which the elephant is covered, and other similar substances, are properly productions of the scarf-skin, or are analogous to what we consider as the scarf-

skin in the human subject. As far as its chemical composition has been examined, it seems to consist almost entirely of albuminous matter.

THE MIDDLE LAYER, OR MEMBRANE OF COLOUR.

The nature of the next layer of the skin which lies under the scarf-skin, has been much controverted; but is of great importance in understanding the hair. Its existence was first announced by Malpighi, who described it as a bed of soft matter, disposed in form of threads, crossing each other in various directions, which was situated between the scarf-skin and the true skin. Some of the modern anatomists have conceived it to be merely a thin layer of pulpy matter, without any distinct net-like structure; while Bichat, whose acuteness always entitles his opinion to great attention, altogether doubts its existence as a proper membrane, and supposes, that what Malpighi saw and described is nothing more than a net-work of extremely delicate vessels, which, after having passed through the true skin, branch off on the surface in all directions.

There are, however, high authorities in favour of the original opinion of Malpighi, some, at least, of which appear to be derived from original observations, &c. Cruickshank, who has examined

the skin with great accuracy, speaks of the membrane of colour as a substance, of the existence of which he entertained no doubt, and which might be easily detected in all individuals, and even in some of the internal parts of the body. We have still a more recent account of it by Dr. Gordon, who, after controverting the opinion of Bichat, informs us that it was easy to demonstrate the existence of a distinct membrane, between the true skin and the scarf-skin in the Negro, but that it was not to be found in the European. It is difficult to decide between such high authorities: the evidence in favour of the existence of this body seems, however, so strong, as scarcely to allow us to doubt upon this point; but we may, at the same time, coincide so far with Bichat as to suppose that the net-like texture, which Malpighi described, consists rather of a net-work of vessels branching out of the surface of the true skin, than forming a part of the membrane of colour itself.

Malpighi announced this membrane as being the part from which the colour of the skin proceeds; and whatever opinions we may entertain respecting its structure or its nature, it seems to be generally admitted that neither the scarf-skin nor the true skin are the proper seat of colour, but that this depends upon something which is situated between them. In the Negro it is black, in the Chinese it

is yellow, in the aboriginal American, of a copper colour, while in the European it possesses different shades, red and olive, more or less approaching to whiteness. These different shades of the skin afford a presumption in favour of the existence of the membrane under consideration, or something corresponding to it; neither the scarf-skin nor the true skin of the Negro, when separately examined, are black; nor does it appear that there is any difference in the colour of the blood; so that their complexion would seem necessarily to depend upon something not contained in the vessels, and distinct from the parts of the skin.

Besides the general questions respecting the existence of this membrane, it has been asked, what is the exact nature of the colouring matter? Is it inherent in the membrane, or is it something superadded to it? It has been asserted that the colouring matter may be dissolved or suspended in water; and it has been compared to the black pigment of the eye, or, by others, to the oily matter which gives the peculiar colour to the hair; but it is premature to form conjectures about the nature of a substance, the existence of which is still doubtful.

The dark colour of the skins in the inhabitants of the torrid zone has been popularly ascribed to the influence of the sun upon the surface of the

body; but the tinge produced on the skin by exposure to a bright light, appears to have no connexion with the permanent colour of the Negro. The blackest complexions are not found in the hottest regions; and there are some considerable tribes, nearly under the equator, whose skin is whiter than that of many Europeans. Besides, the brownness produced by the sun is not transmitted from parents to their offspring; whereas the children of Negroes are equally black in whatever climate they are born, and their complexion is not altered by any number of generations; while we find, on the contrary, that after three or four successive stages, the original colour, whether white or black, is almost entirely obliterated by the union of parents from different varieties. It has not been ascertained upon what layer of the skin the sun acts; but it is probably upon the scarf-skin, because we are informed that the tan of skin may be removed by blisters.

Connected with this account of the membrane of colour, and of importance also in the history of the hair, it will be proper to notice a singular variety which occasionally occurs, where the skin is entirely without colour. In the complexion of the fairest European female, there is always a mixture of red or brown; but in those individuals, who have obtained from their appearance the name of

albinos, the skin is of a dead pearly whiteness. In almost all persons there is a correspondence between the shade of the skin and that of the hair and eyes, and this is found to be the case in the albino; for the hair is perfectly white, and the eye is without that substance which gives the various colours of blue, hazel, or black, to the iris. From the relations of travellers, it may be supposed that albinos are more frequent in some parts of the world than in others, and especially among the Africans and Indians, but they are not very uncommon in all the temperate climates in Europe. This peculiarity appears in both the sexes, and has a tendency to become hereditary, but its origin is entirely unknown.

Buffon, according to his usual speculative manner, attributes this peculiarity to an effort of the constitution to assume, what he calls, the primitive colour of nature, which he supposes was white, and which has been changed, by various circumstances, into the shades it now exhibits. Saussure has given us an accurate and interesting account of two albinos that were born at Chamouni, but it is to a conjecture of Blumenbach's that we are indebted for our knowledge of the cause. He conceived that the pink colour of the eye, and its delicate sensibility, depend upon the absence of the pigmentum nigrum, the black mu-

cous substance which is spread over the posterior part of the organ. The conjecture of Blumenbach was completely verified by Buzzi of Milan, who had an opportunity of dissecting the eye of an albino, and found it to be entirely without the pigmentum nigrum. He afterwards examined the skin, and he found that the membrane of colour was either entirely wanting, or at least that it was perfectly white, so as to escape his observations, and he naturally attributes the absence of colour in the surface to the state of this part. We may therefore conclude, that the same cause operates upon the eye, the skin, and the hair, that the redness of the one and the whiteness of the other depend upon the same physical defect in their organization, and that it is derived from the parent, although we are entirely ignorant of what it is in their constitution or habits which can give rise to this peculiar condition of their offspring. Albinos have been born in different climates and countries, and under circumstances that have no point of resemblance to which we can, with any probability, refer the phenomena.

THE TRUE SKIN, OR INNER LAYER.

Under the membrane of colour lies the true skin, a body of considerable thickness, tough, flexible, extensible, and elastic; of a dense texture, com-

posed of a number of small threads or plates, closely interwoven and firmly knit together. Its external surface is compact and smooth, while the internal is more loose and irregular; it is connected to the parts below it by a texture of cells, and it passes into this substance by almost insensible degrees. Besides this, which constitutes the proper basis of the true skin, there is attached to it a very extensive system of nerves, blood-vessels, and absorbent vessels, which are dispersed over every part of it with the greatest minuteness.

The sensibility of the skin differs very much in its different parts, but in its general extent it may be considered as possessing the most acute degree of feeling of any of the structures of which the body is composed; and it is accordingly observed in our surgical operations, that the most severe pain is experienced during the cutting through the skin. Its external surface, when examined by a microscope, is found to be rendered unequal by little eminences or projections. These, which have obtained the name of papillæ, are supposed to contain each of them the small branch of a nerve, of which they constitute the ultimate branchings, and seem to be the immediate seat of the organ of touch, as well as of all the other sensations which reside in the surface of the body. They are the most easily detected, and are supposed to be the

most numerous in those organs which have the most exquisite sensibility, whether it be that of touch generally, as in the points of the fingers, or in other organs where there exist some sensations of a more specific kind. The blood-vessels, with which the skin is so plentifully furnished, branch in all directions over its furface, forming innumerable interweavings and possibly producing that appearance which Malpighi mistook for the net-like membrane of colour. These vessels render the skin one of the most vital parts of the body, subject to a variety of diseases, and intimately connected with various functions, especially with the state of the hair, as we shall see anon.

With respect to the texture of the skin, Haller says it is composed of threads and plates which are short, interwoven, and closely adhering together, the external part being more thick, and the interior gradually passing into the cellular texture. The account which Bichat gives of it is essentially the same, except that he conceives it to be entirely composed of threads or fibres, which are interwoven in all directions, leaving spaces between them of various forms and sizes. The structure may be easily detected by steeping it in water, when the tissue of threads may be seen, with the interstices, through which the hairs, vessels, and nerves pass, and by which they are supported. None of

them, however, seem to pierce through the skin in a straight direction, but to pursue a winding course, so that it is very difficult to perceive the actual pores through which they have proceeded. The small cells or cavities under the skin, formed by the membranous plates or bands which connect it with the parts below, are generally filled with fat, and they are also connected with certain parts of the skin, a number of glands, which manufacture an oily fluid, that is probably of a nature different from the fat.

The properties of the true skin must be considered under two points of view: those which are attached to it are composed of a basis, which gives the skin its general form and consistence; and which belong to the system of nerves and vessels that are connected with that basis. The properties of this basis are probably the same with those of the other kinds of membranous matter, and are altogether of a mechanical nature; it possesses cohesion, flexibility, extensibility, and elasticity in an eminent degree.

We conclude partly from analogy and partly from observation, that the papillæ contain the ultimate termination of the nerves, and are the immediate seat of the sensations which reside in the skin. In all parts of the body it is found that the sensibility of the nerves resides principally, if not

entirely, in their extremities, where they are either divided into extremely minute threads, or spread out into a thin expansion. In what degree the microscopical observations that have been made upon the nerves of the skin, enable us to trace them into *papillæ* is perhaps a little doubtful; but, so far as they can be depended upon, they lead to the opinion that this is their ultimate destination. Besides the end of the nervous thread, the papillæ are supposed to contain, each of them, a minute branch of an artery and a corresponding vein, together with an exhalent and an absorbent vessel; but the existence of these latter vessels appears to be derived rather from conjecture than from actual observation. It is, however, certain, that the skin is the seat of an extensive system of exhalation and absorption, although it may be difficult to determine the actual termination of the vessels, or the exact apparatus by which these functions are performed.

Although the chemical composition of the cutis has been much attended to by the modern experimentalists, our knowledge concerning it is still imperfect. The best English systematic writers, as Aikin, Brande, Henry, Murray, Thomson, and Ure, describe it as consisting chiefly of jelly, and the same opinion appears to be generally adopted by the French chymists. Mr. Hatchett,

whose researches on these subjects are peculiarly valuable, also regards the skin as being principally composed of a jelly, although of a more dense consistence, and less soluble nature than ordinary. Seguin, who has paid particular attention to the chemical compositions of the skin, in connexion with the process of tanning, enters more minutely into the subject, and supposes that it consists of two parts, which differ in their chemical as well as in their physical properties; a texture of interlacing fibres, which form its basis; and a semifluid matter mechanically interposed between them. The fibrous part he considers to be nearly similar to the muscular fibre, and to be formed of an oxidated jelly, and the semifluid matter to be of a mucous or gelatinous nature. The idea of the fibre consisting of oxidated jelly, appears to be hypothetical, and, as far as we have any light thrown upon the subject by experiment, we should be led to the opposite conclusion, that the jelly is more oxidated than the fibrous part of the skin. Upon the whole, it is probable that the fibrous part of the skin, which constitutes its proper substance or basis, is composed of albumen, like the other membranous bodies; and that it has intermixed with it a quantity of matter, of a different chemical nature, which we may suppose to be composed of jelly and mucus.

2.—ANATOMY OF THE HAIR.

HAVING now laid a complete foundation for a thorough knowledge of the hair, by the preceding description of the skin from which it grows, we shall next proceed to the anatomical structure of the hair itself, whence its mode of growth, and the affections to which it is liable, can be best understood. As considerable diversity of opinion, however, prevails upon this subject among philosophers and medical men, who have made it the subject of investigation, we think it will be of advantage to the reader, even at the risk of some repetitions, to give the descriptions of a few of the best authors at length. We shall, by this means, save the trouble of reference to works which it may not be in every reader's power to procure or consult. We shall begin with

1.—M. BICHAT'S DESCRIPTION OF THE HAIR.

However much the hair may vary in respect to form, length, and position of every description, its organization is the same in all; and we will now proceed to examine it in a general light. Chirai, Malpighi, and all anatomists since their time, have described the structure of the hair with

a tolerable degree of accuracy in some respects, and very imperfectly in others. The following observations are the result of the most scrupulous dissections:

ORIGIN AND ROOTS OF THE HAIR.

Hair generally arises amidst the fat under the skin, or in the tissue of the parts that are deprived of fat. Every individual hair is enclosed at its origin in a kind of small membranous canal or bag, with the nature of which I am totally unacquainted, and through the transparent sides of which the hair is evidently seen, on being carefully cleared of the surrounding parts. This small cylindrical canal or bag is continued with the hair as far as the corresponding pores of the skin; it insinuates itself through that pore, and extends as far as the scarf-skin, where it stops, identifying itself with its texture.

The extent of this canal, and consequently that of the course of the hair, either under or in the skin, measure nearly five lines in the hair of the head. No adherence whatever exists between the hair of the internal surface of this canal, except in the swollen basis of the former, where it seems to receive its nutrition. Thus, by opening the canal in this part, and by destroying the adhesion, the hair is left free, and may be

drawn out with the utmost facility, by seizing with tweezers the swollen part. By this mode of operating, the tube is left free; and in this manner I have dissected and separated, in a surface of two inches, a considerable number of these tubes, which, when nothing else was left on the internal surface of the skin, appeared like so many small extensions.

Do vessels and nerves, it may be asked, reach this cylindrical bag containing the root of the hair? Prolongations are actually seen extending as far as the external surface, particularly towards the part farthest from the skin; but we do not learn from dissection what is the nature of these extensions. I never succeeded in following them down to a neighbouring nerve or vessel. Although Haller quotes several authors who have traced nerves up to the origin of the hair, he has not himself been more successful. I presume, however, that these prolongations are essentially composed of vessels.

Is there any kind of fluid, it may be asked again, contained between the root of the hair and its envelopement? None whatever flows when the latter is divided, although several authors have pretended to have seen the reverse. Besides, if this fluid is in form of a dew, as upon the surfaces of membranes moistened with a watery fluid, it

would not be perceived that the hair shoots from the small cylindrical bag which I have just mentioned. In the end, a small swelling, sometimes hardly perceptible, at other times more so, although less considerable than has been said, is observable. This swelling is of the same nature and colour as the hair itself; it adheres to the tube, probably by the vessels, and, perhaps, by the nerves it receives from it. The hair that shoots from it crosses the canal without adhering, as I have said before, to its sides, passes along with it through the oblique pores of the true skin, forsakes it in scarf-skin, and projects outwardly.

All authors have pretended that the scarf-skin was not perforated by the hair, but merely elevated and converted into a small sheath that attends it the whole of the length. This assertion is incorrect: for the hair is quite as thick within the canal whence it emerges, as it is without it: and this canal being open at the extremity opposed to the skin, the whole hair is easily withdrawn, as I have said before, and without experiencing the slightest resistance, which would otherwise be the case. In tearing the fold of the true skin, it appears that, beginning from its swollen end, the hair is completely free, both in the canal under the skin, through the skin, or even in crossing the scarf-skin. If the scarf-skin were actually raised

to invest the hair, the thickness of this would unavoidably be trebled, unless the scarf-skin was prodigiously thin. Nothing similar to this sheath is ever observed on drawing out the hair; a depression, on the contrary, is observed on the part. The scarf-skin, then, contributes nothing to the formation of the hair, and its structure should be considered entirely uniform from one end to the other.

Under, within, and out of the skin, the hair is composed of two distinct parts: the one external, which forms a tube from the smaller part of the true skin up to the end; the other internal, forming the marrow, as it were, the nature of which is unknown.

EXTERNAL SHEATH OF THE HAIR.

This appears to be of the same nature as the scarf-skin: and has, in fact, all the qualities of it. In burning, the hair actually resembles the scarf-skin; it then exhales a similar smell, leaving, after combustion, a residue similar to that of the latter. Now, these phenomena are principally derived from the external part. Hair is most easily impregnated with water; hence the possibility of using it to great advantage in the construction of hygrometers The scarf-skin admits of it also;

and the hair damped with foggy weather presents in this respect an appearance analogous to that of the scarf-skin,—softened, wrinkled, and whitened by the contact of a poultice. It is owing to this covering that the hair is not connected with life nor sensibility, and is never the seat of any kind of acute or chronic disease.

Whatever may be the colour of the hair, its sheath is invariably white; it is the internal pulp that is the cause of colour · thus it is there is but little difference between the scarf-skin of black and that of white persons; hence, whenever the internal substance of the hair has disappeared, the canal only being left, it is more or less white. In this state, although the interior of the hair is dead, the exterior sheath, which is independent of it, most commonly retains the power of growing again when cut: thus the scarf-skin does not actually interfere with all the diseases subjacent to the skin. I presume, that it is owing to this that the hair may be kept so long uninjured. Whenever hair is screened from the contact of air, centuries may revolve without its being decayed; for it does not possess within itself the principle of decomposition peculiar to all other animal substances. It never rots, either when exposed to air or immersed in water. In the same manner the scarf-skin is

found perfect long after the subjacent parts have become putrid.

It appears, however, that hair is more incorruptible than the scarf-skin itself; and even that there is a difference between their respective natures. Maceration and ebullition, indeed, by which the scarf-skin is rendered more liable to be torn, though it softens it but very indifferently, leave to the hair its usual degree of resistance, unless carried to such extent as I have not tried. This observation is obvious on comparing them when submitted to those processes. Acids and alkalies also have a less powerful action upon hair than upon the scarf-skin; but it is dissolved by alkalies with as much and even more facility. With due compensation for thickness, a shred of the scarf-skin is infinitely less resistant than a hair. The hair, as well as the scarf-skin, may be dyed of divers colours; but the colour is less durable, and the process requires to be often renewed.

Some modern authors have stated that a kind of exfoliation or slough, in the form of a ring, is separated from the exterior of the hair; but this is not correct. In the experiment, however, described by Fourcroy, and which consists in rubbing a hair between the fingers, some kinds of hair rise on the finger in the direction from bottom to top. This experiment seems to prove the existence of these

imperceptible extensions which contribute so much to attach the hairs together; so that when it has remained long uncombed, it cannot be dressed without great difficulty.

Sometimes the ends of the hair evidently split. The difference of its nature depends upon the thickness of its sheath; thick and dense under the arm-pits, on the chin, &c.; it is less susceptible of being penetrated with water, and is, therefore, more elastic and more curly. Thin and loose hair is smoother, and is more under the influence of the atmosphere. It is from the peculiar nature of its sheath that the hair of black persons derives its distinctive character.

From what has been stated, it follows that the external part of the hair is essentially inert, and quite unconnected with life: we shall find it quite different with the internal surface.

INTERNAL SUBSTANCE, OR PULP OF THE HAIR.

This substance acts a very important part; it is this which essentially characterizes the hair, which I would otherwise have included in the system of the scarf-skin, if, as when the hair becomes white, this substance formed no part of it. We are quite ignorant of the nature of this internal substance; it is, however, to be presumed, that

it is composed of the most minute vessels, inclosed by the common sheath, and containing the colouring substance which stagnates in these vessels, or at least only undergoes a slow process of nutrition. Amongst these vessels are there any, it may be asked, which, as is observed in the skin, open outwardly to expel fluids? Several physiologists have conceived that there are; and in this respect they have considered the hairs as actual emunctories, or instruments to throw off moisture. I do not believe such opinions are supported by any anatomical fact; but the Plica Polonica, a very singular disease, in which blood flows from the hair on being cut, clearly proves that these productions contained exhalent vessels in the natural state, and which being dilated by the disease, contain a fluid before foreign to them. It is, besides, beyond a question, that the exhalent vessels of this system, much less active than those of the skin, cannot so effectually serve as emunctories. What has been related respecting absorption from the vessels of the hair, I consider as wholly without foundation.

From this statement respecting the internal substance of the hair, it appears to be grounded upon analogy with the middle layer of the skin, and like this, it results from two different species of vessels, in some of which the colouring substance stagnates,

others giving exit to fluids, in particular cases, and consequently effecting a kind of circulation.

The colouring substance of the hair bears some analogy to that of the skin. Thus we remark, that both are in general darker in hot climates, and nearer to the Line; thus red hair often coincides with the yellow freckles observed in the skin of certain persons, in whom the scarf-skin has been raised either by erysipelas or by blistering. In blacks, the colour of the hair, however, is sooner changed by acids than that of the skin. The muriatic acid first whitens the hair, which turns yellow on drying: the nitric acid gives it a yellowish aspect; the sulphuric acid leaves it completely black.

LIFE OF THE HAIR.

What is most important, however, in the internal surface of the hair, is the actual vitality it enjoys, and by which it is made perfectly distinct from the external envelope. To this character the following appearances should be attributed.

The different passions have a remarkable influence over the internal substance of the hair. In a very short space of time grief will often alter its colour, and convert it into white, undoubtedly by causing the fluid of the small capillary vessels to be absorbed. Many authors who have quoted

these facts, amongst whom we may place Haller as first in point of rank, have questioned the truth of the fact. But I have myself seen, says Bichat, five or six cases in which the hair was deprived of its colour within a week. In the course of one night, the hair of an acquaintance of mine turned almost completely white on receiving some fatal intelligence. In these revolutions, the sheath remains unaltered, retaining its texture, nature, and properties; the internal substance only is vitiated. It is said, that fright will make the hair stand upright. Painters have even resorted to this in order to express terror. How far this opinion is correct we are not prepared to state, but it is too generally received to be only imaginary. Now, if fear has so powerful an effect upon the hair, if it actually produces motion, ought we to be surprised that pain and grief should suddenly change the fluids contained in these productions, and even deprive them of these fluids?

The Plica Polonica, the disease which has just been adverted to, in which the hairs on being cut, or even without this, emit a bloody fluid, and acquire a remarkable excess of sensibility, evidently exists within the internal substance, as the external part has nothing to do with it. Some authors have even asserted that this internal substance sometimes acquires a fleshy nature, as

it were: then the external part exfoliates and sloughs off.

The danger attendant upon cutting the hair after some acute diseases is sufficiently known. I have myself, says Bichat, witnessed a fatal instance of it, and many others have been quoted by several physicians, and by M. Louroix in particular. Now, from what do these accidents proceed? Certainly not from the contact of the air, from which the head is secured by these organs; for such accidents will occur, although the head be covered. It cannot proceed from the growth of the cropped hair attracting to these parts an exuberance of vital activity, in which the internal organs speedily sympathise: hence head-ache, diseases of the eyes, &c. noticed in such instances from cropping the hair. It is a kind of active sympathy of the hair upon the organs: now, every organ that sympathises is endowed with actual life, and most obviously enjoys very distinct living powers. The sheath never sympathises, because it is nearly inert, or without life; is hardly organized, is not on a par with the other organs, and consequently, cannot possibly correspond with them. The danger attending the cutting of the hair after serious diseases, affords us the opportunity of observing, that the cleaning of children's heads is not always in those diseases unattended

with danger. Several cases of dangerous consequences proceeding from this cause have been remarked.

Not only the other systems influence that of the hair, but are also influenced by it; this is often observed after acute diseases, in which the roots reject the fluids by which they are nourished, and being dried up, fall off. It may be remarked, that this fall of the hair very seldom coincides with the exfoliation of the scarf-skin, as in scarlet fever, for example; which most evidently proves that the opinion generally admitted respecting the origin of the external portion of the hair is quite incorrect, and that although perfectly analogous to the scarf-skin, this, as we have said, does not arise from it.

The hair of many animals falls off at certain seasons, and is afterwards regenerated: now the period of its reproduction is marked by numerous diseases, and almost invariably by a loss of power. We might be induced to suppose that the nutritive elaboration, which in this instance attracts an excess of life, lessens this power in other parts. Man is not like birds, a number of quadrupeds, reptiles, &c. liable to an annual renewal of these external productions: it is a cause nevertheless for disease. In fact, it cannot be doubted that in the social state a variety of causes would as often have

affected these reproductions as they give rise to periodical disorders, &c.

Cold and heat will also frequently affect the internal substance of the hair. We know, that in certain quadrupeds, as rabbits, hares, &c. the hair whitens in winter, and reassumes its primitive colour in summer.

Shortly after having dyed the hair black, a custom much more prevalent now than when powder was in fashion, headaches are frequently experienced; a swelling in the scalp is also a very common occurrence from the same cause, although the skin in this case is not at all concerned, and the hair alone is affected.

From all these facts, it naturally follows, that the hair, similar to the scarf-skin in its external covering, and so far inert, differs from it in its internal substance, which, as has been already stated, is very imperfectly known. A further proof of this assertion is, that the appearances which have just been stated, and to which many more might be added, are never observed when the hair, having turned white, retains nothing more than its external sheath, the internal substance having disappeared. This is proved by daily observation. It might happen, however, in this instance, that the part only of this internal substance which corresponds with the colour, might chance to disap-

pear, and that containing the seat of exhalation continue to live as usual; and in this respect white hairs might undergo the changes of living matter: of this, however, we think few instances could be produced. All this, besides, must be subordinate to further experiments, which will, undoubtedly, at some future period, cast more light upon this subject.

2.—M. RICHERAND'S DESCRIPTION OF THE HAIR.

In whatever part of the body hairs may grow, they are every where of the same structure, they all arise from a vesicular bulb in the tissue *under** the true skin. From this bulb, containing a gelatinous lymph, on which the hair seems to be nourished, the stem, at first divided into two or three filaments, which constitute a kind of root, comes out in a single trunk, passes through the true skin and scarf-skin, receiving from the latter a sheath that covers it to its extremity, which terminates in a point.

A hair may therefore be considered as a tube composed of scarf-skin, filled with a peculiar kind of marrow or pulp. This spungy stem, which

* Mr. Chevalier says that they arise from the outer surface of the true skin. See his description below.

forms the centre of the hair, is a more essential part of it, than the sheath supplied by the epidermis. Along this spongy and cellular pith of the hair, as it may be called, the animal oil and juices by which it is repaired, flow. Though we see in some animals vascular branches and very small nervous twigs, directed towards the root of certain kinds of hair, and lost in it as is the case with the long stiff whiskers of some quadrupeds, it is impossible to say whether in man, the hair itself or its bulb receives vessels and nerves. Is the human hair, it may be asked, nourished by imbibing the fluid contained in its bulb, or is it nourished on the fat in which the bulb is imbedded? Are vessels distributed along their axis from the root to the extremity? In favour of the affirmative of this opinion, it was usual in early authors to mention the bleeding from the hair when cut in the disease called *Plica Polonica.* But this disease, lately observed in Poland by the French physicians, appeared to them a mere entangling of hair, in consequence of the filth of the Poles, and of their habit of keeping their heads constantly covered with a woollen cap. The scalp remains perfectly sound beneath the entangled hair, and the only way to cure the complaint is to cut off the hair. Fourcroy thinks that each hair has several short branches that stand off from it, which, according

to the explanation given by M. Monge, favour the matting of the hairs that are to be converted into tissues, by the process called felting.

PROPERTIES OF THE HAIR.

Among the most remarkable properties of the hair, we may take notice of the manner in which it is affected by damp air, which, by relaxing its substance, increases its length. It is on that account, that hairs are used for the construction of the best hygrometers. Nor must we omit either the readiness with which they grow and are reproduced, even after being plucked out by the roots, as they may often be seen after the cure of scald-head, by a painful method: nor their insulating property with respect to electricity, of which they are very bad conductors; a remarkable property viewed with reference to the conjectured nature of the nervous principle. The hairs possess no power of spontaneous motion by which they can rise on the head, when the soul shudders with horror or fear; but they do bristle at those times by the contraction of the superficial muscle, which, from its intimate adherence to the scalp, carries it along in all its motions.

The hairs appear totally without sensibility; nevertheless, the passions have over them such

influence, that the heads of young people have turned white the night before execution. The French Revolution, which produced in abundance the extremes of human suffering, furnished many authentic instances of persons that grew hoary in the space of a few days. In this premature hoariness, is the hair, it may be asked, dried up as in old people, when it seems to die for want of moisture and its natural juices?

The following fact seems to shew, that they are the excretory organ of some principle, the retention of which might be of very injurious consequences. A Chartreux, who every month had his head shaved, according to the rule of his order, quitting his monastery at its destruction, went into the army, and let his hair grow. After a few months he was attacked with excruciating head-aches, which nothing relieved. At last, some one advised him to resume his old habit, and to have his head frequently shaved; the head-aches went off and never returned.

We know, says M. Grimand, that there are nervous head-aches, which give way to frequent cropping the hair:—When it is kept close cut, the more active growth that takes place, sets in motion the stagnating juices. A friend of Valsalva, as Morgagni relates, dispelled a maniacal affection, by having the head of the patient shaved.

The hairs partake of the inalterability, the almost indestructibility, we might say, of the scarf-skin. Like it they burn with a whizzing noise, and give out in abundance a fœtid volatile oil. The ashes that remain from burning them, contain much phosphate of lime. The horns of quadrupeds, and the feathers of birds, give out the same smell in burning, and yield the same products as the hair on the head and other parts, which has led to the saying that these last were a sort of horny substance, drawn out like wire. Acids, but especially alkalies, dissolve the hairs; accordingly, all nations that cut the beard, first soften it by rubbing it with alkaline and soapy solutions.

3.—PROFESSOR BLUMENBACH'S DESCRIPTION OF THE HAIR.

The hairs originate from the inner surface of the true skin, which abounds in fat. They adhere to it pretty firmly, by a curious bulb, consisting of a double involucrum, or sheath; the exterior portion being oval and full of vessels, the interior cylindrical, apparently continuous with the scarf-skin, and sheathing the elastic filaments, of which the hair is composed, and which are generally from five to ten in each. It may be justly

suspected that the bulb of the hair is intended for support rather than for nourishment, from this circumstance, that the locks of hairs sometimes found in collections of fat, and in tumours, &c. are usually destitute of bulbs, because they are not fixed, but lie naked in the honey-like fatty matter.

The hairs are almost incorruptible and always anointed by an oily exhalation. Of all parts of the body, they appear most truly electrical. They are very easily nourished and even reproduced, unless where the skin is diseased.

THE DIRECTION OF THE HAIRS.

The direction in which the hairs grow from the skin is peculiar to certain parts; for example, on the summit of the head, diverging upwards on other parts, and on the exterior of the arm, as is commonly seen in some anthropomorphous apes, running in two opposite directions towards the elbow, that is, downwards from the shoulder, and upwards from the wrist. The decided direction of the hair may also be seen most remarkably in the eye-brows and eye-lashes.

4.—MR. CHARLES BELL'S DESCRIPTION OF THE HAIR.

The hairs grow from a bulbous root, seated in the cellular membrane. This bulb is vascular, and has connexion by vessels with the cellular texture. It consists of a double membrane; the outer is a kind of encasement, which surrounds the other, stops at the pore in the skin, and does not form a part of the hair. Betwixt these envelopements there is a cellular tissue, and the space is commonly found filled with a bloody fluid. In the bottom of the inner bag is a small body which Duverney calls monticule, and from which the hair is seen to arise. If this is left when the bulb of the hair is pulled out, the hair will be regenerated.

The roots of the hairs, according to Winslow, are covered with a strong white membrane, which is connected with the skin and cellular membrane. Within the root there is a kind of glue, some fine filaments of which advance to form the stem which passes through the small extremity of the bulb of the skin. As the stem passes through the root, the outer membrane is elongated in form of a tube, which closely invests the stem, and is entirely united with it. Many authors agree, that the

hair does not perforate and pass through the scarf-skin, but takes from it merely a sheath which accompanies it through the whole of its length.

5.—DR. BOSTOCK'S DESCRIPTION OF THE HAIR.

Hairs proceed from a kind of bulb or root, which is situated *below* the true skin, through which they pass and project beyond its external surface. They consist essentially of an external tube, and an internal pulp. The tube is very delicate, and is entirely filled with pulp. Next to the bones, hair is said to be the most indestructible of the constituents of the body; and there are accounts of its having been found in old tombs, after all the soft parts had entirely disappeared. The hair of different individuals differs considerably in its thickness, being, as it is said, from 1-300th to 1-700th of an inch in diameter; and it is no less variable in its other physical properties; some kinds being much more dense and elastic than others, a circumstance which, according to Mr. Hatchett, depends upon the proportion of jelly which it contains.

IMBRICATIONS OF THE HAIR.

Although hair seems so smooth to the touch, yet

we are informed by Bichat that it actually possesses an imbricated or bristled texture, the projections all pointing in one direction, from the root to the tip, analogous to the feathered part of the quill; and it is upon this structure that the operation of felting depends, in which hairs are mechanically entangled together, and retained in this state by the inequalities on their surface. There is, however, reason to doubt the existence of these bristles, which, it appears, have never been detected by the most powerful microscope. The different opinions which microscopical observers have held on this point, which it might be supposed could have been so easily decided, afford a useful illustration of the degree of confidence which we ought to place in such observations.

6.—DR. FLEMING'S DESCRIPTION OF THE HAIR.

Hairs differ remarkably, not only in their structure, but likewise in their situation. In some cases they appear to be merely filamentous prolongations of the scarf-skin, and subject to all its changes. This is obviously the case with the hair which covers the bodies of many caterpillars, and which separates along with the scarf-skin, when the animal is said to cast its skin. Such cuticular hairs are likewise found on many shells.

In true hair, the root is in form of a bulb, taking its rise in the cellular tissue under the skin. Each bulb consists of two parts, an external, which is full of vessels, and from which the hair probably derives its nourishment, and an internal, which is membranous, and forms a tube or sheath to the hair, during its passage through the other layers of the skin. From this bulb, and enveloped by this membrane, the hair passes through the true skin, the membrane of colour, and the scarf-skin. It usually raises up small scales of the last, which soon become dry and fall off, *but do not form the external covering of the hair*, as some have supposed.

STRUCTURE OF THE HAIR.

The hair itself consists of an external horny covering, and a central vascular part, termed *medulla*, or pith. This horny covering consists of numerous filaments, placed laterally, to which different kinds of hair owe their striated appearance. These filaments appear to be of unequal lengths, those nearest the centre being longest; and, consequently, the hair assumes the form of an elongated cone, with its base seated in the skin. This form gives to the hair that peculiar property, on which the operation of felting depends.

When we take hold of a hair by the base with the fingers of one hand, and draw it between two of the fingers of the other, from the root towards the point, it feels smooth to the touch; but if we reverse its position, and draw it between the fingers from the point to the root, we feel its surface rough, and it offers a considerable resistance. The surface of the hair must, therefore, consist of eminences pointing to the distal extremity. In consequence of this structure of the surface, if a hair is seized at the middle between two fingers, and rubbed by them, the root will gradually recede, while the point of the hair will approach the fingers; in other words, the hair will exhibit a progressive motion in the direction of the root, the imbricated surface preventing all motion in the opposite direction.

It is owing to this state of the surface of hairs that woollen cloth, however soft and pliable, excites a disagreeable sensation in the skin in those not accustomed to wear it. It likewise irritates sores by these asperities, and excites inflammation. The surface of linen cloth, on the other hand, feels smooth, because the fibres of which it consists, possess none of those inequalities of surface by which hairs are characterized.

If a quantity of wool be spread upon a table, covered with a linen cloth, and pressed down in

different directions, it is obvious that each hair will begin to move in the direction of its root, as if it had been rubbed between the fingers. The different hairs, thus moving in every direction, become interwoven with each other, and unite into a continuous mass. This is the felt with which hats are made. Curled hairs entwine themselves with one another more closely than those which are straight, though flexible, as they do not, like these, recede from the point of pressure in a straight line; and hence hatters employ various methods to produce curl in the short fur of rabbits, hares, and moles, which they employ. This is accomplished chiefly by applying the solution of certain metallic salts to the fur, by a brush; so that, when the hairs dry, the surface, which was moistened, contracts more than the other, and produces the requisite curve.

Hair, which has been pulled from the skin, is not so fit for felting as that which has been cut by the shears. In the former case, the bulb at the base offers considerable resistance to the motion of the hair. This is the reason why even the short furs are cut off by sharp instruments.

Although straight hairs do not form so close and continuous a felt as curled hairs, from their tendency to proceed in a straight line, in the direction of the root, yet this property is of great advantage to the hatter. He spreads over the surface

of his coarser cloth a quantity of fine straight fur; and, by pressure, these fine hairs move inwards in the direction of their roots, and thus form a coating; the base of the hairs being inserted in the cloth, while the extremities are free.

It is owing to the asperities of the surface of hair, that the spinning of wool is so difficult. This is in a great measure removed, by besmearing it with oil, by which the inequalities are filled up; or, at least, the asperities become less sensible. When the wool is made into cloth, it is necessary to remove the oil, which is done by the process of fulling. The cloth is placed in a trough, with water and clay, and agitated for some time. The oil is removed by the clay and the water, while the agitation, acting like pressure, brings the hairs into closer union, and the cloth is taken out not only clean but felted. The hairs of every thread entwine themselves with those which are contiguous; so that the cloth may be cut without being subject to ravel. It is to this tendency to felt that woollen cloth and stockings increase in density, and contract in dimensions by being washed. In many places woollen stuffs are felted, on a small scale, by placing them in running water, and under cascades; and the Laplanders expose them to the motions of the tides, in narrow inlets of the sea.

COLOUR OF THE HAIR.

The colour of the external tube of the hair exhibits very remarkable differences. By some naturalists, the colour is considered as depending on the fluids contained in the pith; while, according to others, the seat of colour is in the horny covering itself. The truth of the latter opinion, in certain cases at least, is obvious, by the inspection of the largest hairs or spines of the porcupine, in which the pith is white, while the horny covering is partly coloured. The supporters of the former opinion contend, that the central part alone is vascular and endowed with life, as is demonstrated in the disease termed *Plica Polonica*, in which the hair bleeds when cut; that grief and anxiety have been known to change the colour of the hair, by influencing, as is supposed, the colouring secretions of the central vessels; and that the colour changes with age, and, in some animals, with the season, without any apparent change in the horny covering. These arguments we consider as conclusive in favour of the opinion which supposes the colour to depend chiefly on the fluids of the contained vessels, and would lead us to infer, that the structure of the central parts of slender hairs is different from that of the stronger kinds, termed spines. Indeed, it has been ascertained, that the pith of the bristles of the wild

boar, form two canals; and, in the whiskers of the seal, one canal may be distinctly perceived.

In general, there is a close connection between the colour of the hair, and that of the middle layer of the skin. This is shown in those animals which are spotted; in which the colour of the skin is usually variegated like the hair.

FORM OF THE HAIR.

Hairs differ remarkably in form. In general they are round. Frequently on the body, they are thickest in the middle. Sometimes they are flat, or two-edged; and, in the whiskers of seals, they are waved on the margins. In many animals they are long and straight; while, in others, they are crisped, and are then termed wool. When stiff, they are termed bristles; and, when inflexible, spines. They obtain particular names, according to their situation, as beard, whiskers, eye-lashes. In general, the motions of the hair depend on the movements of the skin. In some cases, however, small muscular fibres may be traced to the bulb of the root, by means of which particular movements may be executed. Of all the substances consisting of animal matter, hair is the most permanent, resisting putrefaction for a great length of time.

7.—ANATOMY OF THE HAIR, BY PROFESSOR BLAINVILLE OF PARIS.

A hair is composed of two parts, perfectly distinct, namely, the root, which is essential, living, productive, and internal; and the stem, which is accidental, without life, produced, and external.

The *roots* of the hair are always situated more or less deep, being sometimes fixed in the inner skin, and sometimes even below it. These roots are of a semi-oval or bulbous form, and may be considered as chiefly made up of three parts. 1. An outer membrane, or envelope of a fibrous texture, which gives form to the bulb, and is pierced at both extremities. By the internal orifice, the nerves and blood-vessels, which give it life and nourishment, enter in a variable proportion, according to the strength of the hair, and the age or vigour of the individual. 2. Within this exterior covering of the root of the hair, is a second envelope, or tissue, formed by the branching and interweaving of the vessels which have entered by the internal orifice. 3. The nerves, which enter the bulb, and traverse these two membranes, are sometimes interwoven into another membranous envelope.

The inner part of the root of the hair is filled by a matter more or less pulpy in consistence, and

manifestly produced by the vessels of the bulb. It appears that this pulpy matter is living and sensible, insomuch as it receives the vessels and nerves, and is consequently a continuation of the organization. It is this pulp which produces or gives off from its superficies the external and insensible part of the hair.

The *stem* of the hair is manifestly without life, or at least without sensibility, the moment it is produced; and as to its chemical composition, it is very different from the pulp, or the envelopes of the bulb, from one or other of which it originates. It is, in fact, composed of these two substances, whence it is produced; that which arises from the pulp being usually more tender, soft, and in greater quantity than the other. The particles of this part are generally arranged in a thread-like or fibrous manner, forming a sort of filament, which, being cemented together in the length by glutinous matter, produce a sort of cones, that are joined into one another. Of these joints, the oldest formed is always the smallest, and is situated at the point of the hair. The part of the stem, again, which originates from the vascular tissue of the envelope of the bulb, is more hard, of a denser structure, and is always exterior to that produced from the pulp, for which, indeed, it forms a sort of sheath. This part of the hair is so manifestly without life,

that it can always be reproduced, so long as the bulb or root, and particularly the pulp, exists, and receives vessels and nerves.

It appears, from this account of the hair, that it is very analogous in structure to the skin, the external layer of which is without life or sensibility; while the internal layer is softer, more tender, and in greater proportion. The colouring matter of the hair is also very similar to the colouring matter of the skin.

Professor Blainville, however, carries this analogy much farther than what we have just recorded; for, according to him, the whole of the skin is nothing more than a tissue of very short, closely set hairs, with bulbs and stems. The hair he considers, indeed, as the elements or rudiments of all the constituent parts of the skin, and even of all the organs of sense, how complex soever they may be. The little glands, for example, under the skin, which supply the delicate oil that keeps it soft and moist, he considers to be nothing more than a fibrous bag, analogous to the bulb of the hair, and differing from it only because the gland manufactures or filters from the blood an oily matter, and the bulb of the hair a horny substance. The scarf-skin, again, appears to the learned professor to be only an assemblage of analogous bulbs, arranged side by side, and allowing to rise through their external openings

the terminating branches of the nerves of touch, and of the exhalent and absorbent vessels of the skin.

We should consider this to be almost as far as speculative analogy could carry M. Blainville; but he stops not here. Every inquirer, previous to him, had remarked the similarity in structure and composition between the hair, and feathers, nails, hoofs, and horns; and it would not have procured him any praise for originality to expatiate upon this theme. He, therefore, carries the idea farther; and, keeping close to the principle, that the skin is the only organ of sense, and that all the senses must accordingly be referred to it, he hesitates not to affirm, that he looks upon the eye, and even the ear, as bulbs, precisely analogous to the roots of the hair, with the difference of being considerably modified, for the purpose of exercising their peculiar functions. The teeth also, it appears from this very strange and fanciful analogy, are nothing else than hairs, whose bulbs, instead of being placed in the skin of the mouth, as might have been expected on the analogies of the system, have accidentally been fixed in the bones of the jaw. Pursuing a similar fancy, M. Geoffroi St. Hilaire has discovered that the shells of crabs and lobsters are nothing else than the bones of the spine, which have been placed on

the outside of the animals, instead of the inside, as in men and quadrupeds ! ! !

8.—MR. CHEVALIER'S DESCRIPTION OF THE HAIR.

Both the longer hairs, and the pubescence, which consists of an infinite number of minute hairs, have this in common, that they grow from small bulbs, imbedded in the surface of the corium, where they are supplied by vessels from the reticulated plexuses, appropriated for their nourishment. From hence they pass through the interior and exterior epidermis, at very acute angles, closely embraced by both, especially by the latter, which sheaths their protrusion so firmly, as not to allow them easily to be detached, even after a length of maceration and putrefaction, which has been sufficient to destroy the interior epidermis, or, as it has been called, the rete mucosum; so that, in this respect, they resemble the nails. It is evident, from this arrangement, that the capillary perforations cannot be perspiratory; for the obliquity of their course, and their firm adhesions, would oppose a serious, if not an insurmountable obstacle, to the transmission of any thing through them, while they are in a natural state. It must constitute a perfectly valvular obstruction.

The hairs are inserted, or perhaps I should rather say rooted, on the exterior part of the corium, in such a manner as, together with this obliquity of their direction, to make them astonishingly secure in their allotted situations. In a great number of animals, they appear to be like slender horns, conical in their form, and, as it were, hermetically closed at the point, and are periodically shed off. In the sheep they continue to grow, that they may be sheared for the benefit of their purveyors and protectors. For wool is hair, adapted to particular circumstances; and we know that change of climate will, in some instances, cause a change from the one form of growth to the other, so as to fit the animal for its new residence. In man they are tubular; and the tubes are intersected by partitions, resembling, in some degree, the sap-vessels of plants; such, for instance, as are beautifully seen in slitting up the leaves and stalks of the Sparganium ramosum, and other aquatic plants, which are now beginning to shoot up their beautiful, but obtrusive and deceitful verdure, at the muddy sides of our ponds and shallow streams. Being intended for protection from violence, as well as for covering, they are thus formed on the same principle as the bones themselves; their hollowness preventing incumbrance from weight, with rather an increase

than a diminution of their powers of resistance, on account of the rounded form of their transverse sections.

Whether the hairs transmit any secretion, may be worth enquiry. That those of the head have a peculiar odour, which is often retained for many years after their separation from it, is well known; and we have cases on record in which the removal of them from the head, at an early period after acute diseases, has been followed by alarming symptoms, scarcely to be accounted for by the mere additional exposure to cold. But, at all events, when the extent of the whole capillary system is considered, (for to an attentive observer it will soon appear that Haller is right in asserting, "*Homo ex sua natura hirsutum est animal; et formosissima femina faciem totam hirsutam habet,*") it will be found to bear no inconsiderable or unimportant proportion in the animal economy; and it will necessarily follow that those diseases of the skin, which extend deep enough to destroy their originations, must on this very account, even were that all, expose the whole frame to some serious derangements. If the morbid state of one gland, as that of the breast, or an absorbent gland, shall affect the whole constitution with disease, these parts, so countless in number, and essential in function, may be natu-

rally expected to have an influence of large, though perhaps not so immediately perceptible amount, on the general health of the body; making up by their numbers for the smallness of their size, in the share they, and the pores into which they are inserted, take in the balance of the constitutional actions.

It must further be observed respecting the capilluli, that they pass from the corium to the surface of the body, in pairs, or triplets, perforating the reticular vessels, and both the epidermides, at very acute angles; so that by the form of their bulbous insertions, and the direction in which they proceed outward, they serve to connect together all the parts of the integument, like so many fine pins, or fastenings, adding to the integrity and security of the whole compages.

The structure of the bulbs or roots of the hairs, as developed in my son's drawing, seems to throw considerable light on the pathology, and something perhaps on the influence of the remedies, for Plica Polonica;—a disease which, from what I have learned of it, especially from Professor Herberski, of Wilna, and Professor Wagner, of Berlin, seems, both in its progress and its cure, to confirm the idea I have suggested, of the capillary system bearing a material proportion in the cutaneous functions.

9.—RECAPITULATORY SKETCH.

The skin, from which the hair grows, is composed of three different coats or layers: a thin one, like India paper, being outermost; next, a kind of glutinous, slimy pulp, or paint, in form of a membrane, which determines the colour; and within these two, a thick, strong, leathery coat, usually called the true skin. In a word, the human skin has a similar number of layers or coats to the bark of a tree.

Now, pull out a hair from any part of your skin, and look at its root with a magnifying glass, when you will find it to be of an oval form, and composed of a softish, glutinous, or pulpy matter, contained in a semi-transparent bag, open at the lower end, to receive nerves and blood-vessels, and at the upper, to receive the hair. This root is fixed in the inner or true skin, by which it is nourished with blood and other fluids. The roots of the hair are planted here in great profusion over the whole body; and, what is very remarkable, and little known, is, that in every individual, many more roots exist than hairs growing from them,—a fact further corroborated by hairs often appearing on the nose and ears in men, and on the arms and face in women, where they were before wanting. We therefore deem it

a vulgar error that the roots of the hair are destroyed or perish in cases of baldness, though they cease to grow above the skin. It is probable and possible, indeed, for the roots of the hair, as well as the skin in which they are planted, to be destroyed by accident, or by ulceration, and other disorders; but this, we maintain, does not occur in fevers, or in either the young or the old who become bald. In all such cases, the roots of the hair can, by dissection after death, be found equally numerous as in those who are not bald; and the cause of the baldness must be sought for elsewhere, as we shall see afterwards, when we come to investigate the nature of baldness and the remedies.

Another important fact, which requires attention, is, that the hairs do not rise perpendicularly from their roots, but pass very obliquely, and at an acute angle, through the two outer coats of the skin, serving to bind these down to the inner coat, as if nature had used the hairs for sewing thread. This fact explains the direction and flat position of the hairs on the eye-brows, &c., and shows the reason why the hairs stick so fast, and are pulled out with such difficulty. But what we consider of the greatest consequence, is, that it explains how the roots of the hair may exist healthy, vigorous, and perfect; and the outer coats of the skin may be so hard, dry, or thickened, as to pre-

vent them from penetrating it, as they may have formerly done.

Each hair is formed of ten or twelve smaller hairs, which unite at the root, and form a hollow tube, somewhat like a very fine stalk of grass, and also like some kinds of grass, jointed at the intervals. The joints seem to overlap one another, as if one small tube were inserted into another, and so on to the end of the hair. This structure, though invisible to the naked eye, or even, as it is said, to the microscope, may be made manifest, as we have seen, to the touch. Take a hair several inches long, and work it between your thumb and finger, and you will find that it will always work towards the top end, and never (turn it as you will) towards the root end; proving that the rough overlappings are all directed to the top.

Like the outer skin and the nails, the hollow tube of the hair is semi-transparent, and takes the colour of the matter which rises in this tube from the root. It follows, indeed, pretty uniformly, the colour of the skin, being very dark in the negro, and always white in the Albino; while it takes all intermediate shades in Europeans---flaxen, auburn, carotty, &c. The hair corresponds also with the colour of the eyes; light hair seldom or never accompanying dark eyes.

II. PHYSIOLOGY OF THE HAIR.

HAVING paved our way, by the foregoing very ample description of the structure and connections of the hair, we shall now proceed to other parts of our science, and inquire into its chemical properties, its various uses, and the varieties exhibited in its growth and luxuriance, subjects of much interest in laying the foundation of the practical principles, which we shall establish, with regard to improving and preserving the hair.

CHEMICAL ANALYSIS OF THE HAIR.

According to Mr. Hatchett, continued ebullition separates from the hair a little jelly or gelatine, and a residual substance, which, having lost a part of the elasticity and the tenacity of hair, has all the properties of coagulated albumen. M. Vauquelin made a much more elaborate analysis, from which we learn that it consists principally of animal matter united to a portion of oil, which seems to contribute to its flexibility and cohesion. Besides this, there is another substance, of an oily nature, from which the different colours of the hair seem to be derived; and there are also small portions of iron, manganese, sulphur, and the phosphate and carbonate of lime. The animal matter,

which constitutes nearly the whole bulk of the hair, is conceived by M. Vauquelin to be a species of mucus; but Mr. Hatchett was probably more correct in supposing it to be chiefly albumen united to a small quantity of jelly. Vauquelin also found that the colouring matter of the hair is destroyed by acids; and suggests, that when it has suddenly changed colour, and become white, it is owing to the production of an acid in the system.

Other chemists have stated the hair to consist of a substance similar to horn, covered by a white adipocire, and filled with an oily matter, which is either of a greenish black colour, red, yellow, or nearly colourless, according as the hair is black, red, yellow, or white. The ashes of human hair are composed of the muriate of soda; of the carbonate, sulphate, and phosphate of lime (and in that which is white, of the phosphate of magnesia); a considerable proportion of silica; oxyde of iron, in a very marked proportion in black hair, but scarcely to be traced in that which is white; and a very small quantity of the oxyde of manganese. The sulphur, which is undoubtedly combined in the organization of the corneous or horny substance, is found more abundantly in the red and light-coloured hair, than in the black.

USE OF THE HAIR.

It is not, perhaps, easy to discover what purpose the short hairs on the human body are designed to serve, if it be not to bind the layers of the skin more firmly together. In the lower animals, the hair is evidently intended to protect them from cold; as, in tropical countries, they have scarcely any, and in the polar regions are thickly clothed with a dense fur. The hair on the head is probably intended to protect it from cold; the hair of the eye-brows and eye-lashes, as was long ago observed by Socrates, to protect the eyes from sweat falling into them from the forehead; the tufts under the arm-pits, to prevent the chafing of the skin from friction.

But what is the use of the short hair which is found on almost every part of the human skin? It is itself, indeed, insensible: but may it not contribute in some way to the sense of touch? May it not assist in perspiration, or have some influence on the electrical state of the body? or, *if* there is any truth in animal magnetism, may it not act in some unknown way as to that power?

The epoch of puberty, says Richerand, and the termination of growth, is that in which it first springs in many parts of the body, which were before without it. The hairs are at the same time

the emunctory by which nature gets rid of the redundant phosphate of lime, which is the residue of the work of nutrition. The hairs of quadrupeds, accordingly, whose urine abounds less in phosphoric salts than that of man, seem especially to perform this office. The hairs have some analogy with the fat, which is not yet ascertained, as we find them often developed in the fatty tumours called by surgeons *steatomes*. Such, however, we look upon as mere conjectures, the truth or falsehood of which we may never be able to ascertain; yet, though the hair on the human body do not serve as a covering from cold, it is highly probable that it may have considerable influence, by its conducting powers, in the regulation of our animal heat.

In the inferior animals, as we have just observed, the hair is very remarkably modified by climate. In warm countries, wild animals have very little hair, compared with the close shaggy coatings of those in the polar regions. Even animals which are carried from one country to another are similarly affected. Dr. Jameson, of Cheltenham, says, that he observed a full-grown sheep, which in Jamaica was lank, and covered with hair, become in four months, on being removed to New York, fat, and copiously covered with wool. On arriving again in the West Indies, it assumed in less than three months

its hairy coat, though all the while it was on ship-board, and had very little change of food. Dogs taken from Europe to the West Indies are said to lose the greater part of their hair.

It is a very remarkable fact, that the temperature of the human body is nearly the same in the warmest and in the coldest countries. There must be some means in the body provided to effect this; we think it not unlikely that this means may be ascertained to reside in the hair. This would be more plausible, if it could be proved, as it has been asserted by Mr. Brodie and others, that the brain is the fountain, or at least a principal source, of animal heat.

VARIETIES IN THE GROWTH OF THE HAIR.

In almost all quadrupeds, the whole body is covered with hair; but only a small portion of the human body has much on it. Some men, however, have a very hairy skin; and M. Richerand says he has seen several, who, when naked, looked as if covered with the skin of an animal, so great was the quantity of hair over the whole body, of which no part was bare but a small portion of the face, the palms of the hands, and the soles of the feet.

The head is that part of the body on which the hair is always most abundant, providing it with a kind of pad, by which it is both protected from impression of mechanical injury, and from the inclemencies of the weather. It is worthy of remark, that its limits on the sides of the head never vary, for they always correspond above the ear; but it sometimes extends behind, over the upper part of the neck. On the forehead, however, the varieties are infinite, sometimes extending lower down or sloping higher up; sometimes tracing a curved line; at other times forming a complete triangle, the vertex of it corresponding with the middle of the forehead; but these limits are never traced with any degree of uniformity. The width or contraction of the forehead is exclusively determined by these irregularities, whilst the different degrees of inclination exclusively depend on the bones. In this respect, hair contributes, in some degree, to the expression of the face; we say in some degree, because it is much less to the width of the forehead, than to the direction approaching the perpendicular, that we refer the grand and majestic air which we ascribe to gods and heroes.

In similar surfaces, hair varies in an astonishing degree. In some we find the hairs numerous,

and in close contact; whilst in others, more sparingly disseminated, they suffer the skin to appear, —a circumstance depending either upon original formation, or upon diseases that may have caused their partial fall. Of the thickness of the hair, the colour is a pretty correct test, if we may trust M. Withof, who, with a truly German patience, was at the pains to count how many hairs were contained in the space of a square inch. He found, he says, that there are five hundred and seventy-two black hairs, six hundred and eight chesnut, and seven hundred and ninety light coloured. It is likewise observed that those who are of a bilious constitution, with dark hair, and inhabiting warm climates, have more hair on other parts of the body, and that it is coarser and more greasy.

Like the nails, the growth of the hair is limited; but of the exact limits we are not precisely informed. They sometimes reach to the waist, the thigh, or even to the legs; and Mr. Charles Bell mentions one woman who had hair six feet in length. It grows for the most part longest in the female, waving over the shoulders, breast, and trunk, and protecting, as it were, from injuries which might be sustained from air, light, &c. Its extent evidently proves that man was originally intended to walk upright. No animal indeed in

the creation experiences from his mane such inconvenience as man would do from the hair of his head, were he compelled to walk on all fours.

The difference in the nature of the hair considerably influences its length. Lank hair is generally the longest. The more it curls, the shorter it is, as is exemplified in black, and even in white subjects, that have it frizzled like the former; though the hair is comparatively very small, yet is it capable of very considerable resistance. No part whatever in the economy, not even the fibrous organs, can, in proportion to their volume, bear such considerable weights. Thus it is that ropes made of hair would be remarkably strong, if this were of sufficient length to be converted to different uses.

In man, the whole surface of the limbs is covered with numberless hairs: the proportion is nearly the same in all, but they vary considerably in length. In some they form a real down, in others they are rather longer, and in others again they are nearly an inch in length, lying over each other, and giving to the limbs a hairy aspect. In the hollow of the armpits, we find a mass of hair, rather longer than in other parts; but nothing similar to this is met with in the inferior extremities. In many individuals, no hair is met with in the internal part of the arm and fore-arm; the

sides and back of the arm being the only parts where it appears. In the inferior extremities, hair is more uniformly distributed. It is always met with on the back of the hand and foot, but never on the sole or palm; a circumstance of great advantage to the touch. On the trunk, as we have already remarked, it varies very much in quantity; but generally speaking, the fore-part of the body is more covered with it than the back part. In men, it is more particularly met with along the middle line, and upon the chest. Women have none on the chest, and but very few on the trunk.

GROWTH OF THE HAIR IN INFANCY.

Before birth, in the early months of conception, there is no hair upon the skin. The first appearance of it is in the form of light down, of a whitish appearance, and concealed under the greasy and unctuous substance, which at this early period covers the skin. Soon, however, this down, which seems to be nothing more than the external portion of the hair, and which is then remarkably thin, begins to assume a dark or light aspect, according to the colour that will subsequently prevail, and which is owing to the internal substance. The hue remains light till after birth. At this period, the hair of the head

is often more than half an inch in length; while upon the rest of the body, and particularly the face, nothing is observed but down, the precursor as it were of the hair. The hair of the head then appears a considerable time before that of the body.

Subsequent to birth, the growth of the hair is much more rapid than in the previous periods. In this respect, it is quite different from most other parts which are much more rapidly developed before birth. During infancy it is of a lighter colour than when the body has attained maturity. The light colour acquires more of the auburn cast; and the dark and the red sorts of hair become deeper in shade, until towards the twenty-sixth or thirtieth year. Frequently that which will subsequently prove light, bears a whitish appearance,—the colour arising, in this case, wholly from the nature of the internal substance, and not, as in old age, from a deficiency of the pulp.

III. SUPERFLUOUS AND REDUNDANT HAIR.

It may be said, in one sense, that Nature does nothing in vain, and of course can cause no superfluous hair to grow on the body; but fashion is always more imperative than nature, and we must

often, in preference, bow to her dictates. When we consider, indeed, that superfluous and redundant hairs are frequently injurious to elegance and beauty, as well as to cleanliness, we can be under no hesitation in devising the best and safest means for its removal.

HISTORY OF DEPILATION.

We can trace the history of depilation, or the art of removing superfluous hair, to very ancient times. In Greece and Rome it was employed by women to remove the hair which the heat of the climate rendered inconvenient, as is proved by all the antique statues, and the testimony of contemporary writers. The same practice is followed to the present day among the Turkish women, who employ it in common with the men, and for a similar reason. In ancient times also it was not confined to the women. Perseus, the satirist, addressing a young rake, asks why he takes such care of his beard, while he bestows so much pains on removing the hair from every other part of his body.

In ancient times, there were likewise men who practised another sort of depilation: they plucked up their beard by the roots; but this was much more rare, and must have appeared extremely

strange, particularly where it was almost the universal fashion to wear long beards. The philosophers accordingly declaimed vehemently against this fashion, which was introduced by some effeminate individuals, or rather those voluptuaries attempted to introduce it.

CAUSES OF SUPERFLUOUS HAIR.

In young people, and even in the prime of life, there are none of what we may call superfluous hairs. It is usually in middle age that they first begin to appear, and for the following reasons. It will be seen, from the chemical analysis of the hair above given, that one of its constituent parts is phosphate of lime, and another, albumen. Now these are two of the principal substances which form the bones; and accordingly, when the bones have completed their growth and firmness of structure, the albumen and phosphate of lime which is contained in the blood, and no longer wanted for the increase of the bones, must find an outlet somewhere; and it is evident, we think, from what is laid down above, page 63, by M. Richerand, that this outlet is to be found in the hair.

At the turn of life, therefore, in both sexes, hairs, for the most part, appear in places where there were formerly none, or what was previously

a light down, scarcely observable, becomes large and distinct hairs. This is more particularly the case in women—on the upper lip, the chin, the cheeks, and the arms; and in men, within the nostrils, on the tip and sides of the nose, the entrance of the ears, and the back of the hands and fingers, while the eyebrows also become coarse and shaggy. In women the appearance of these superfluous hairs most commonly depend on obstructions, suppressions, &c. and if these exist, the superfluous hair may appear long before the turn of life.

We cannot trace the causes, however, of the hair being from birth too low on the forehead, or growing so irregularly as to be detrimental to beauty. We are no less in the dark with regard to the natural union of the eyebrows which was esteemed a mark of beauty by the ancient Romans, but our taste in modern times is in this respect entirely changed.

METHODS EMPLOYED IN DEPILATION.

From what we have already laid down respecting the anatomy and chemistry of the hair, it may be readily inferred that it must be extremely difficult, if not impossible, to eradicate it from any part of the body in such a manner as to prevent its future growth. The roots lie so deep, that it

is hopeless to think of getting any external wash or application which will destroy them and leave the skin uninjured. Even if you pull the hair out by the roots, you may see by turning to page 57 above, that it will not avail you, as there are thousands of roots, which never shoot up a single hair, ready to start through the skin the moment you make room for them by pulling out their companions. Besides, this method is painful, inflames and irritates the skin, and may give rise to pimples, ulcers, &c. and the remedy would certainly prove in that case worse than the disease.

INNOCENT DEPILATORIES.

We find in books, and particularly in old works, and in Continental authors, a great number of substances recommended as depilatories, which we take the liberty to call innocent; because we have, in the first place, no faith in their efficacy, and because in the second, they may be safely employed; a circumstance which, we shall see, is by no means applicable to some others. The principal of these innocent methods consist in rubbing upon the part from which it is wished to remove superfluous hair, leaven, parsley water, juice of acacia, the gum of ivy, or of the cherry tree dissolved in spirits of wine, nut oil, the decoction of grey peas,

rags dipped in the second water of lime or in brine, the juice of the milk thistle mixed with oil, &c. &c.

The Jewish women, among whom a high forehead free from hair is considered as an indispensable mark of beauty, are said to use, as a depilatory, a bandage round the forehead of woollen cloth, which must be of a scarlet colour. The colour however cannot, we imagine, make the least difference; while the fretting of the stuff may sometimes cause an unpleasant eruption on the skin.

Among the innocent means we may also mention the juice or extract of hyoscyamus, which, though a powerful narcotic when taken into the stomach, cannot have any effect, we think, as a depilatory. We do not, however, dissuade our readers from trying any of these things; for, if they do no good, they cannot do any harm.

DANGEROUS DEPILATORIES.

Madame Elise Voïart, in her Encyclopédie des Dames, has taken care, she says, not to give receipts for any depilatory which might be dangerous, meaning such as are composed of orpiment, arsenic, &c. We, on the contrary, think it necessary to give the particulars of these, to shew our

readers more effectually the danger of employing them.

In some books we are told that the following is a successful method of making the hair fall off, namely, applying a few drops of dulcified spirit of salt (that is, muriatic acid distilled with rectified spirits of wine), with a camel-hair pencil, to the part from which you wish to remove superfluous hair, and afterwards rubbing the part with a linen cloth. The same preparation is also recommended for removing warts and other excrescences from the forehead. But it is plain, from the facts already demonstrated, that this must either be used so strong as to endanger the skin, or so weak as to be of no use. The following is said to be a very

STRONG DEPILATORY.

Take gum ivy one ounce, orpiment, ants' eggs, and gum-arabic of each a drachm. Reduce the whole to very fine powder, and make it up into a liniment, with a sufficient quantity of vinegar.

The author who gives this receipt adds: "In pounding them, be careful to secure yourself from the dust of the orpiment, which is one of the strongest known poisons. But since it is so, for orpiment contains arsenic, why employ so dangerous a remedy, to the great hazard of destroying the skin?

We must strongly protest against the use of this receipt also, from its containing formic acid, derived from the ants' eggs, and liable to the same objection as the spirit of salt. The following is

M. BAYLE'S DEPILATORY.

Take equal parts of *rusma* and quick lime, and, having reduced them to powder separately, let them dissolve for some time in pure soft water, till they form a strong thick paste.

This paste is to be applied upon the part which is covered with hair, and after it has remained a few minutes, it is to be rubbed off with a wetted cloth, which will at the same time remove all the hair to the very roots.

This is much celebrated in books, and has been said to be the true Turkish depilatory, which is sold in Constantinople, and all over the East, for its weight in gold. It is unfortunate so far, that we cannot procure this *rusma* in Europe, nor even discover what it is. M. Bayle, from whom we take the receipt, says, it is a species of vitriol; but he does not say what species, nor where it is to be procured.

M. Virey, one of the French savans, well known as a naturalist, and who is also senior apothecary in chief to the Military Hospital of Paris, has de-

scribed *rusma* as a chemical composition rather than a natural substance, and confirms the testimony of M. Bayle as to its depilatory powers. We do not vouch, however, either for the genuineness of Virey's *rusma*, nor for the following account of it by another French author, L'Ami. This person tells us that he prepared the *rusma* according to Virey's directions, but found it totally inefficacious as a depilatory. Distrusting his own manipulations, he had it prepared by an expert scientific chemist, but was equally disappointed in its powers of removing the hair. Unwilling that he should be altogether disappointed in a matter of such importance, M. L'Ami called upon M. Virey himself to discover, if possible, the cause of his repeated failures. The *ancien pharmacien*, however, could resolve his doubts no farther, than that the *rusma* itself was excellent, and not to be surpassed, but that it was very difficult to procure at Paris good quick-lime to mix with it. L'Ami, on the contrary, maintains, that the Parisian quick-lime is so good and powerful, that it will not only blister the skin, but will burn it to the bone—a circumstance which, he justly thinks, would be a little more disagreeable than a little superfluous hair. He thinks, therefore, that he has good reason to complain of M. Virey having given the sanction of his name to

a preparation which he had taken at second-hand from a common compiler.

IMMEDIATE DEPILATORY.

The speediest depilatory is composed of orpiment and quick-lime; but great caution is necessary in the use of the composition, for it is very dangerous, and, if it be left too long upon the skin, it is liable to leave behind it marks of its presence. The depilatory is made stronger or weaker, by putting a greater or smaller quantity of orpiment. The proportions in which each of the two ingredients composing it may be mixed, are as follow:— To eight ounces of lime, one ounce of orpiment, of the first degree of strength: to twelve ounces of lime, two ounces of orpiment, of the second degree: to fifteen ounces of lime, three ounces of orpiment will produce a very violent depilatory, the effects of which will be extremely speedy. These different degrees of strength must be adapted to the age and the constitution of the skin to which it is applied. After having reduced these two substances to a very fine powder, mix them thoroughly together and sift them, taking great care not to inhale the dust which rises from them. Put away this powder in a well-corked bottle.

We are directed to make use of this powder by

mixing with it a seventh or eighth part of barley meal or starch, to diminish its too great strength. Pour upon the whole a sufficient quantity of warm water to form a paste, and apply it to the place from which you design to remove the hair. Leave this paste upon it a few minutes, taking care to moisten it a little, that it may not dry too quickly, and try if the hair comes away easily and without resistance; if it does, wipe it off with warm water. The hair is removed along with the paste, and the operation is finished. But we repeat the warning, to be particularly careful not to let the paste remain longer than is absolutely necessary upon the skin; otherwise it is liable to be injured, burned, and cauterized.

As this is one of the most dangerous sorts of depilatories, we should dissuade all who are not extremely anxious to get rid of superfluous hairs, from attempting the use of it; for the arsenic contained in the orpiment is not a thing to be tampered with, except for some very urgent reason. It would be safer, though more painful, and not altogether free from danger, to employ a pitch plaster, which we are told has sometimes been used as a depilatory, putting it on as hot as it can be tolerated, allowing it to cool and harden, and then pulling it violently off, with the hairs adhering to

it, which it will pull up by the roots. We are far from advising any of those means, however; as, wherever the skin is injured by arsenic, orpiment, or by actually tearing and destroying it, the injury is more apt to leave an unsightly mark, than to improve the appearance by the removal of the hair.

To remove the superfluous hair which appears in the nostrils, in the ears, &c. at a certain age, we are advised in some of the books to take some very fine and clean ashes of new wood, and, having diluted them with a little water, to rub them with the finger on the parts where the hairs grow. It is said that this will remove the hair without causing the least pain. It is clear, however, that if it do remove the hair, it must be in consequence of the caustic quality of the ashes, which will act in the same way on the skin.

HAIRY MOLES.

We are in a great measure still ignorant of the nature of those brown and tawny marks on the skin, well known by the name of moles, which, though they often serve to set off the complexion by contrast, or by fixing the eye on a particular spot, and withdrawing it, in consequence, from the general view of the features, yet, when they happen, as is frequently the case, to be covered with hair, they are always unsightly and disagreeable;

but, in such circumstances, it requires the greatest caution in attempting to remove this hair that grows from moles, for it may lead to consequences full of danger. In more early life there is less perhaps to be feared; but after the age of thirty or thirty-five, at which period cancer is usually developed in the constitution, we should caution you most strongly not to touch a hairy mole with any sort of depilatory. The least fretting or irritation of a mole, indeed, is apt to develope bad sores, if not a confirmed cancer, and much more will this be likely to occur from the use of such depilatories as we have mentioned above. The reader will agree then with us, that it is better to have a mole, though it be unsightly and covered with hair, than to run the hazard of a foul and probably an incurable sore, or a dangerous and painful cancer. The very idea, we should think, of such an occurrence would prevent most people from venturing to tamper with depilatory preparations, and particularly those whose composition is kept secret, while their effects are puffed off as little short of miraculous.

SAFE DEPILATORIES.

Having thus pointed out these preparations, which are recommended as depilatories, without possessing any such properties, and guarded you also against another class, which, though effectual,

are yet extremely dangerous, we shall next point out what we consider to be the safest and most effectual means.

In the case of moles, which we have just been describing, it will be unsafe to use tweezers, as that might tend as much as arsenical depilatories to produce unmanageable sores, or to develope cancer. The only safe means in this case is the razor, which must, however, be used with great delicacy, and must have the finest edge which can be procured, because all irritation is dangerous. The greatest care also must be taken not to cut nor fret the skin over the mole. The hair of the mole should in this manner be carefully shaved as often as is necessary; and you need not be under any apprehension that this operation will increase the thickness of the hair, as it can only add to its length,—a thing which you have always the power to regulate according to your desire.

In other cases, where the skin is strong and healthy, perhaps the best depilatory is the actual removal of the hairs, one by one, with the tweezers. We cannot indeed say that it is not painful; but it cannot surely be a question, that it is better to endure a little pain, than to run the hazard of the consequences which we have just described as likely to ensue from the use of nostrum depilatories. It is rarely indeed that any unpleasant circumstance

has arisen from the use of the tweezers; and, when accidents have occurred, it has always been more from the unhealthy state of the part operated upon, than from any other circumstance.

If the tweezers, however, are objected to, as they may be by some individuals, the razor is always a safe and effectual means of removing superfluous hair in every part of the body. As we have already said, the popular notion, that shaving thickens the hair, and tends to promote the very evil against which we recommend it as a cure, is altogether a prejudice, and quite erroneous. Cutting the hair certainly lengthens it, and the more frequently it is cut the faster it will grow; but it does not tend to add a single hair to the number already in growth, but on the contrary, by increasing the demand of matter to supply the growth of those which have been cut, must rather prevent new hairs arising from the unproductive roots described in the first part of this work.

To ladies who are troubled with superfluous hairs on the upper lip at a certain period of life, or in consequence of suppressions, or similar constitutional affections, we should most strongly recommend the razor, as superior to all other means. It will seldom, in ordinary cases, be requisite to use it more than twice or thrice a week; but, even if it should be necessary every second day, it will take

but a few minutes; and it is surely preferable to undergo a little trouble of this kind, than to run the hazard of destroying the appearance of the skin by dangerous caustic applications. We know more than one lady who had tried all the advertised nostrums with no benefit, but the contrary, now adhere to the plan just recommended, and find it both comfortable and effectual. By a very little practice it may be performed by the lady herself, and kept altogether secret,—a circumstance which is sometimes important in such cases.

When gentlemen require to shave the inner part of their nostrils, in the event of their disliking to submit to the pain of using tweezers, the common razor of course cannot be used; but if they have not a very small razor, made on purpose, as some have, a very fine-edged penknife will answer all the purposes required. If used for the ears, however, it cannot be done by the person himself, but must be done by another.

If the tweezers are used, the skin should be softened previously by any sort of hair oil, such as the Palma Christi, and afterwards by hot water; and after the hairs are removed, the part ought again to be soothed by the same applications. We must tell you, however, that, though you do pull out all the hairs which you want to get rid of, you are not to consider that they will no longer trouble

you; for so long as the skin is healthy and vigorous, though you remove all the hairs that are grown, and even destroy their roots, there are thousands of other roots always ready to shoot out new hairs, from the supply of nourishment now furnished them, in consequence of the removal of the hairs which hitherto consumed it.

IV.—COLOUR OF THE HAIR.

In our anatomical sketches of the hair, we have already taken some notice of the natural varieties in the colour of the hair; but, in a work like the present, it will be expected that we should consider these a little more minutely. The colour of the hair varies considerably, according to the different countries, latitudes, climates, temperature, &c. This colour even, as well as that of the skin, forms one of the characteristic attributes of the different human races. In our climate, the principal colours of hair are black, light, and red: these are, as it were, three general types, to which are referred an infinitude of other shades. Around the black, the brown, auburn, &c. rally: the light include on the one part the fiery red, and every intermediate shade or the other, down to the light chesnut hair. The fiery red, linked with light-coloured hair by one of its shades, represents, in

the reverse one, the colour natural to peculiar plumes.

All authors have laid down the colour of hair as a characteristic mark of the temperament. Black hair is the emblem of strength and vigour. An athletic figure with light hair would appear an object of ridicule. This last shade is the attribute of weakness and indolence. Painters have given it to figures that are not expressive of strong passions, or of great and heroic actions. In voluptuous paintings of the graces, beauty, &c., by adorning the head of youth, this ornament, as it were, animates the canvass. The black and light varieties, including their respective shades, are met with in both sexes nearly in equal proportions. But let us only reflect a moment upon the impressions we receive from the sex, as far as relates to the shades allotted to the individual, abstractedly from every other consideration, and we shall find that the female, adorned with light hair, forcibly impresses upon us a sense of beauty, united to weakness,—an irresistible appeal for protection: the very word even by which this subject is described, is expressive of this double attribute. The phrase of *brune piquante*, black-eyed maid, on the contrary, forcibly conveys an idea of strength and beauty united. Beauty, then, is an attracting gift, which females enjoy in common, but which, being vari-

ously modified by exterior form, entice and attract either by interesting our feelings, or by exciting them, &c. Languid eyes are frequently associated with light hair; whilst the black is generally the appendage of a sparkling eye, and vivacity ready to break loose from its bounds.

Custom, which influences every thing, changes our taste for the colour of the hair as for that of dress. The black, the light, and their numerous shades, prevail in turn; and as organization cannot so very readily accommodate our fancy, artificial head-dresses have been resorted to; an ingenious invention undoubtedly, calculated to bend to our whim the invariable course of nature, and which, by altering at will that expression which physiognomy borrows from the hair, the wearer may, in the course of two minutes, appear in the height of fashion to-day, and perfectly ridiculous to-morrow.

Amidst all those changes, so rapid in respect to hair, the deep red variety, and its different shades, are seldom admitted. Though at one time it was fashionable at Rome, and also for a short time at Paris, a century or two ago, many people express an unequivocal aversion to this colour. We almost consider it a malformation. This opinion is too generally extended not to be supported on some solid ground. The most essential appears to us the common consent existing between this hair

and the constitution and consequently the nature of the temper resulting from it. Now the temper associated to this colour of hair, is not commonly the most eligible, in spite of the numerous exceptions recorded by proverbs. Another motive of objecting to this fiery colour, is, that the oily substances with which they are lubricated, often exhale an offensive smell, which the other colours do not possess. What connexion can possibly exist between the hair and dispositions of individuals? Is the latter ever influenced by the former? Never. It may be explained as follows:—Every individual is possessed of his own peculiar mode of organization and constitution. From this mode the temper results; but to each mode is attached, on the one part, such and such species of hair; on the other, the predominance of such and such internal viscera, which, though less striking, is still real. The predominance evidently establishes a particular tendency to certain passions, which form the essential attributes of the temper; then the colour of the hair and this are two different results, proceeding from the very same cause, namely, from the constitution; but the one is never influenced by the other.

NATIONAL VARIETIES OF COLOUR AND APPEARANCE IN THE HAIR.

Mankind have been divided by naturalists into several distinct races, which are thought to be well marked out by characteristic peculiarities, of which, as the hair is always a prominent distinction, it will be requisite that we should take some notice. The names which have been given to those several races of men, and even their number, are different in different authors; but we shall answer our purpose sufficiently by calling them European, Mongolian, Ethiopian, American, and Malay.

THE EUROPEAN RACE.

This division comprehends all Europeans, except the Laplanders and the rest of the Finnish tribes, and also the western Asiatics as far as the banks of the Obi, the Caspian, and the Ganges, and some of the people in the north of Africa. The hair is more variable than in any of the other races; but the prevailing colour is nut-brown, running on the one hand into yellow, and on the other into black, but in almost all it is soft, long, and waving, and seldom inclined to curl of its own accord, except in infancy, or after recovery from certain fevers.

M. Virey, in his Natural History of Man, subdivides this variety into two parts; the one having for the most part very light skin and hair, and great muscular strength, including most European nations, as the Cimbri and Scandinavians, Teutoni, Celts, properly so called, Goths, Saxons, Icelanders, Britons, Normans, Francs, Italians, Greeks, and Celtiberians, and even the Galatæ or Asiatic Gauls, who have spread themselves in Asia Minor, the Morea, Georgia, and Circassia. The other subdivision have the skin and hair considerably darker, such as the Vandals, Illyrians or Sclavonians, Getæ, Sarmatæ, Gepidæ, Thracians, Russians, Turks, Tartars of the Crimea, Scythians, Persians, Arabians, Moors, and even the Cisgangetic Hindoos.

Others have subdivided this race into the Syrian, Pelasgic, and Scythian: the first comprehending the Assyrians, Chaldeans, Arabs, Jews, Egyptians, and Abyssinians; the second, the Cisgangetic Hindoos, the Sclavonians, Greeks, and Germans, or Europeans, properly so called; and the third, the Scythians, Celts, and Tartars.

THE MONGOLIAN RACE.

The Mongolian race comprehends, with the exception of the Malays, all the Asiatics not included under the first division, and also all the Finnish

tribes of the north of Europe and America, as the Laplanders, Samoïeds, Greenlanders, and Esquimaux. The hair of this race is more uniform in colour, being black, stiff, straight, and scanty, both on the head and the beard. The colour of the hair is evidently influenced by the dark olive colour of the skin.

M. Virey, in the work just quoted, makes three subdivisions of the Mongolian race. In the first he includes all the tribes in the circumference of the North Pole, Spitzbergen, Petzora, and Greenland, the Esquimaux, Tschutches, Kamtschatkans, Koriaks, Astiaks, Gataks, Jukagres, Samoïeds, and Laplanders: in the second, the Eluths and Calmucks, Tunguses, Baskirks, true Cossacks, Kirghises, Tschonvachs, Burats, Soongarees, the Mantchoos people of the north of China, and the Tanjutic tribes of Thibet: in the third, the Chinese, Japanese, Coresians, Tanguinese, Cochin Chinese, the Siamese, Thibetians, and the people of Jesso.

THE ETHIOPIAN RACE.

This race is perhaps known better by the term Negro, and comprehends all the African nations, with the exceptions already made, the north of Africa being peopled by the European race. The

hair in this race is also very uniform, being deep black, crisp, woolly, and always curled.

M. Virey makes two subdivisions of the Ethiopians. In the first he includes the inhabitants of equatorial and central Africa, such as Nigritia and Guinea, the Mandingos, Jaloffs, Caffres, Galla, the people of Conjo, Angola, the coast of Zanguebar, Monoëmugi, the interior of Madagascar, and of New Guinea, and the Papoos. In the second he includes the Hottentots, the Namaquese, nearly the whole of New Holland, and the adjacent islands, such as New Caledonia and the island of the Quirds.

Some tribes, however, of the Ethiopian race have long hair, such as the Abyssinia Galla mentioned by Bruce, and the Bornanians described in the Reports of the African Institution. The hair of the New Hollanders, again, is, according to Dr. Pritchard, so perfectly intermediate between the crisp woolly hair of the Negro, and the curly hair of the Polynesian Islanders, that it has led to considerable difference of opinion among naturalists, to which of the two varieties they ought to be referred. As to the varieties of colour existing among nations whose hair is usually black, there is sufficient authority for asserting, that numerous instances of red hair occur in all the three last varieties. The Caffres and the people of Conjo have

hair not unlike that of Europeans. Even the Foulahs, one of the Negro tribes of Guinea, have, according to Mr. Park, soft silky hair; on the other hand, the inhabitants of many other countries resemble the Africans in their hair, as the savages of New Guinea, Van Dieman's Land, and Mallicollo. Even in the same islands, some of the people are found with crisp and woolly hair, and others with it straight, as in the New Hebrides. In New Holland there are tribes of each character, though resembling in other particulars.

THE AMERICAN RACE.

Under this head we may comprehend the whole original tribes of the New World, except the Esquimaux of Greenland and the shores of the Arctic Sea. The hair in this race has a strong resemblance to that of the Mongolians, being black, stiff, straight, lank, and scanty. This approximation in the characteristics of the hair has led some authors to class the Americans as a branch of the Mongolians; but their copper colour, their well-defined features, and prominent noses, seem to M. Cuvier to forbid this classification. It was at one period supposed that the Americans had no beards; but this is now found to be an erroneous opinion, though their beards are certainly very scanty, when compared with those of Europeans.

THE MALAY RACE.

This division, which is the least of all, comprehends the inhabitants of the Pacific Ocean, the Marian, Phillipine, Molucca, and Sanda isles, and the peninsula of Malacca. Their hair is black, soft, curled, thick, and luxuriant. M. Cuvier thinks it is a question whether they can be accurately distinguished from their neighbours on either side,—the Cisgangetic Hindoos on the one, and the Mongolian Chinese on the other.

ALBINOS.

In all the different races above enumerated, individuals are occasionally born, as we have mentioned page 12, who are in a great measure destitute of the colouring matter common to their kindred. The name of *Albino*, or white, was first applied by the Portuguese to such individuals whom they found on the coast of Africa, and resembling Negroes in every particular, except that of colour. Dampier found several of them among the Americans at the Isthmus of Darien, and they have also been found in some of the Oriental isles, as well as in Europe. In every country, however, where they are found, they agree with their kindred race in almost every particular, except the colour of their hair, eyes, and skin. The Negro-

Albino has white woolly hair, white skin, and red eyes; the European Albino, flaxen and silken hair, with red eyes, and the skin of a dead white. This evidently arises from a general deficiency throughout the body of the membrane of colour.

In the Albino, whether Negro, American, or European, these peculiarities of the hair, the eyes, and the skin, are universal. The whiteness of the skin is not the clear and glossy tint of the uncoloured parts of the European frame in a healthy state, but of a dead or pallid cast, something like that of leprous scales. The eyes, in consequence of the deficiency of their natural pigment, are so weak that the individuals can hardly see any object in the day, or bear the rays of the sun; though, under the milder light of the moon, they see with great accuracy, and run through the deepest shades of their forests with as much ease and activity as other persons do in the brightest day-light. They are also said to be less robust than other men, and to sleep through the day and go abroad at night: both which last facts are easily accounted for—from the weakness of their sight, and the discomfort of the sun-beams to their eyes.

It was at one time a subject of inquiry, whether these persons were a distinct variety of the human race, or merely instances of an occasional aberra-

tion from the ordinary laws that govern the human fabric: and the former opinion derived some support from its being found that male and female Albinos, who not unfrequently intermarried, being rejected by the rest of the world, produced an offspring with the same imperfections as their own.

The question, however, has long been sufficiently set at rest, since Albino children have been found produced in most parts of the world, and from parents of all tribes and colours, black and olive-hued, and red and tawny; and, since the object has been more closely attended to, from white parents, or inhabitants of Europe, as well as black or copper-coloured Indians.

In Europe the affection is rare; but we have had, at least, eleven examples described by different authorities to the present time:—two by De Saussure, four by Buzzi, one by Helvetius, one by Maupertuis, and three by Dr. Traill. It is singular that all these are males, and, still more so, that the female offspring of the same families were, without an exception, destitute of the Albino degeneracy. How far this disorder is in Europe capable of being produced hereditarily as abroad is not known; nor, indeed, does there appear yet to have been an opportunity of forming an

intermarriage between a male and a female of this kind, as not a single female has yet been discovered possessing the imperfective formation.

The same delicacy of constitution distinguishes the European Albino; of which we may form an estimate from Dr. Traill's account of one of the three we have already alluded to.

"The oldest of these Albinoes," says he, "is nine years of age, of a delicate constitution, slender but well formed, both in person and in features: his appetite has always been bad; he frequently complains of a dull pain in his forehead; his skin is exceedingly fair; his hair flaxen and soft; his cheeks have very little of the rose in them; the iris and pupil of his eyes are of a bright red colour, reflecting in some situations an opaline tinge. He cannot endure the strong light of the sun: when desired to look up, his eye-lids are in constant motion; and he is incapable of fixing his eyes steadily on any object, as is observed in those labouring under some kinds of slight ophthalmia, but in him is unaccompanied by tears. His mother says that his tears never flow, in the coldest weather; but when vexed they shed abundantly. He goes to school, but generally retires to the darkest part of the room to read his lesson. His disposition is very gentle; he is not deficient in intellect. His whole appearance is so remarkable, that some years

ago a person attempted to steal him; and would have succeeded in dragging him away, had not his cries brought him assistance."

The affection consists altogether in a defective secretion of the membrane of colour, which is not only without the colouring constituent principles that naturally belong to it, and particularly its powers of affording a black pigment, but seems to be untempered or imperfectly elaborated in other respects, judging from the dulness, or deadness, of the white hue it gives to the surface of the body, instead of the life and glossiness it diffuses in a state of health. That this cutaneous layer is not altogether wanting is clear, since, in such a case, the red vascularity of the skin would be conspicuous through the delicate transparent scarf-skin, in Albinoes peculiarly delicate, and tinge the surface with a red instead of a white colour.

It is to this imperfection in the secretion or elaboration of the membrane of colour that the delicacy or feebleness of the general frame is, in all probability, to be ascribed; though we may be at some loss in determining how such an effect is produced by such a cause. That the flaxen hue of the hair, and the whiteness of the iris, are derived from the same source, admit, however, of no doubt; and the opinion long ago expressed by Professor Blumenbach, that the red colour of the

pupils in the two adult Albinoes, whom he had examined at Chamouni, was equally owing to the want of the usual black pigment, has since been confirmed by M. Buzzi of Milan, who has had an opportunity of dissecting an Albino, and has proved that the pigmentum nigrum of the choroid coat, and also that part of it which lies behind the iris, and is called uvea, were totally wanting.

It may be observed that other animals are as richly supplied with a membrane of colour as mankind, and that they are indebted to it for their respective colours; and, as there can be no reason why they may not at times endure a like deficiency, we have reason to expect *à priori* that they may occasionally exhibit proofs of the same complaint. In accordance with this reasoning, M. Blumenbach has traced this affection in many tribes, and especially in white dogs, owls, and rabbits: and Dr. Traill has lately observed a case of the same disease in a young swallow which he accidentally shot. This seems to be a perfect Albino, with red eyes, pale reddish beak and neck, wing coverts, and back. The nest from which it issued contained another young swallow of the common colour; and when the Albino bird quitted the nest, which it was seen to do a few days before it was shot, it was instantly attacked by fifty or sixty common swallows, and obliged to take refuge in a tree.

CAUSES OF THE COLOUR OF THE HAIR.

There can be no doubt that the colouring matter of the hair is of the same nature, though it is doubtful whether it arises from the layer of the skin, which we have called the membrane of colour. Whatever causes, therefore, tend to affect this membrane, must produce a change on the colour of the hair. We have more than once particularly remarked that the colour of the hair corresponds in a remarkable manner with the colour of the eyes, and more particularly, as Mr. John Hunter observed, with the colour of the eye-lashes. In horses, however, though the colour be various, the eyes are always the same; but then the hair is always the same at birth; and the skin does not participate in its subsequent changes, being as dark in white as in black horses. In cream-coloured horses, indeed, there is an exception, the eyes agreeing in colour with the hair, but then the foals are originally cream-coloured, as well as the entire skin.

From this close connection of the colouring principle of the skin, the eyes, and the hair, we almost always find light hair accompanying a white and thin skin, and black hair accompanying a dark thick skin. If again the skin, as is sometimes the case, happens to be variegated, the hair partakes

of the same character. Blumenbach gives an example of an entire tribe of Tartars who were thus piebald, and it seems to be no uncommon occurrence among Negroes. When the skin is much marked by reddish freckles also, the hair is red; and, with the milk-white skin of the Albino, as we have just seen, the hair is found of a peculiar yellowish white tint. When the hair is light, the eyes are generally blue; when dark, they are brownish black; when the hair loses the light shade of infancy, the eyes likewise grow darker; and when the hair turns grey, in advanced life, the eyes lose much of their former colour. The Albino has no more colouring matter in his eyes than in his skin, and hence it is that the blood appears in them and tinges them red.

Animals have a well-known tendency to produce offspring like themselves, and this is remarkably exemplified in what has just been illustrated respecting the natural varieties of the hair. This tendency, however, may frequently be interrupted by accidental circumstances, and peculiarities, unknown to the parent, be produced. By selecting such examples, a breed, peculiar in colour and other circumstances, may be generated. Thus, by killing all the black individuals which appear among our domestic animals, and breeding only from the white, the former will soon be banished. It is thus that hornless cows have been propagated,

and a generation of white mice, and, if we may use the expression, of white blackbirds (*Turda merula*, LINNEUS) have been produced. Sheep are generally white, because white wool is most in demand; but in remote parts, where coloured wool is used for domestic manufacture, black and speckled sheep are not uncommon. A gentleman of Dr. Anderson's acquaintance once propagated a breed of rabbits with only one ear; and Professor Coventry of Edinburgh had a female cat, which, having lost its tail when young, always produced kittens which wanted the tail in whole or in part. Dr. Anderson once procured a tailless cock, which gave origin, on the same principle, to a curious breed of fowls, some of which had no tail, others only a single feather, or perhaps two or three. Another instance, no less singular, is mentioned in the Annals of Philosophy: a ram, accidentally produced on a farm in Connecticut, with elbow-shaped fore-legs, and a great shortness and weakness of the joints, was selected for propagation; and a breed, which is unable to climb over fences, has thus been established! Some breeds of horses are mentioned by authors which have horns like the roe-buck.

In a wild state, however, animals very rarely have any diversity of colour from their species, because no motive exists for propagating any peculiar breed. In America, the uniformity of colour is so steadfast among the wild bisons, that the

Indians look upon every deviation from the usual colour as of Divine origin. We are told in James's Expedition to the Rocky Mountains, that Mr. J. Doherty saw in an Indian hut the head of a bison with a white star on the front. The owner would not part with it at any price; called it his great medicine, and said the herds came annually to seek their companion. If this white-faced bison had been produced in a domestic state, and another been found to pair with it, the race might have been propagated to perpetuity.

From many of the facts already adduced, it is evident that many peculiarities of colour in the hair arise among all the various races of men, and even in the same family. We are told, for example, in the Philosophical Transactions, on credible authority, of a black family, which lived where Europeans had never approached, and yet from time to time produced a white child. In the same work it is related that two blacks, intermarrying, produced a white child; and the woman, fearing her husband's resentment, endeavoured to conceal it from him. The man, however, insisted upon seeing the infant; and finding it white, said, "I love it the better for that, because my own father was a white man, though my grandfather and grandmother were as black as you and myself; and although we come from a place

where no white people are ever seen, yet there was always a white child in every family that was related to us."

The intensity of light is undoubtedly one cause that affects the colour, and heat the texture and growth of the hair; but these changes are no more transmitted to the offspring than such as are induced by mechanical means. The child of the most sunburnt rustic is born equally fair with other children; even all the children among the Moors are born white, and acquire the brown cast of their fathers only if exposed to the sun. The ancients, indeed, believed that all dark-coloured nations are the inhabitants of hot climates; but modern discovery has made us acquainted with light-coloured nations inhabiting the warmest regions, with dark nations inhabiting the coldest countries, and with others of various shades of colour living together in the same climate. Do we not, in fact, behold, says M. Virey, the tawny Hungarian dwelling for ages under the same parallel, and in the same country, with the whitest nations of Europe, and the red Peruvian, the brown Malay, the nearly white Abyssinian, in the very zones which the blackest people in the universe inhabit? The natives of Van Diemen's Land are black, while the Europeans of the corresponding northern latitudes are white; and the Malabars,

in the most burning climate, are no browner than the Siberians in the coldest. The Dutch, who have resided more than two centuries at the Cape of Good Hope, have not acquired the sooty colour of the native Hottentots; and the Guebres and Persians, marrying only among themselves, remain white in the midst of the olive-coloured Hindoos.

The effects of civilization are more remarkable and decided than could well be conceived to influence the hair; but as the whole external appearance and system of the constitution is thus changed, it ceases to be a matter of wonder. Dr. Smith, in his work on the Causes of Variety in the Human Species, informs us that the field slaves in America are badly clothed, fed, and lodged, and live in small huts on the plantations, remote from the example and society of their superiors. They are ill-shaped, and preserve in a great degree the African nose, lips, and hair. The domestic Negroes, on the other hand, are treated with great lenity, are fed and clothed like their superiors, and adopt their habits and ideas of elegance and beauty. The particular consequences of this different mode of life are seen, not only in the improvement of their shapes and features, but also in their hair, which is extended in length from three and four to six or eight inches.

It has been remarked also of the numerous tribes inhabiting the great range of the South Sea Islands, that they appear to be all of one race, varying only according to their degree of civilization. The New Hollanders, who are in the lowest state of barbarism, are black, with short dark hair; the Friendly Islanders are more advanced, and not quite so dark; while the people of Otaheite and the Society Isles are still more refined: many of the higher orders among them have a light complexion, and flowing hair.

The change of colour in animals which are domesticated, from having been in a wild state, are always from the dark to the lighter tints, in certain species, as the Canary bird, very gradual, and requiring several generations to complete the change; in others it is more rapid, as in the crow, the mouse, &c., and is completed in one generation. A pair of brown mice kept in a dark place, accordingly, will generate, it is said, a white offspring. But this change, Mr. John Hunter remarks, is not always to white, though still approaching nearer to it in the young than in the parent; being sometimes to dun, at others to spotted, of all the various shades between the two extremes. This alteration in colour being always from dark to lighter, may we not reasonably infer, that, in all animals

subject to such variation, the darkest species should be reckoned nearest to the original, and that, where there are specimens of a particular kind entirely black, the whole have been originally black?

The Jews settled in the neighbourhood of Cochin are divided into classes, called the Jerusalem or white Jews, and the ancient or black Jews. The white Jews look upon the black Jews as an inferior race, and not as a pure cast: the white race appear to have resided there upwards of seventeen hundred years. A race of fair people are described by Mr. Shaw and Mr. Bruce, as residing in the neighbourhood of Mount Aurasius, in Africa. If not so fair as the English, says Bruce, they are a shade lighter than that of any people to the southward of Britain: their hair is red and their eyes blue. They are supposed to be descendants of the ancient Vandals.

The colours of many animals, says Dr. Darwin, seem adapted to their purposes of concealing themselves, either to avoid danger or spring upon their prey. Thus the snake, and wild-cat, and leopard, are so coloured as to resemble dark leaves and their lighter interstices. Birds, again, resemble the colour of the brown ground or green hedges which they frequent, and their bellies light coloured like the sky, and are hence less visible; moths and butterflies are coloured like the flowers

which they rob of their honey; caterpillars, which feed on leaves, are generally green; and earth-worms are the colour of the earth which they inhabit. Those birds which are much among flowers, as the goldfinch and the humming-bird, are furnished with vivid colours; while the lark, the partridge, and the hare, are the colour of dry vegetables, or the ground on which they rest. Frogs vary their colours with the mud of the streams which they frequent, and those which live on trees are green. Fish which are generally suspended in water, and swallows which are generally suspended in air, have their backs the colour of the distant ground, and their bellies the colour of the sky. These colours have, however, in some instances another use, as the black diverging area from the eyes of the swan; which, as his eyes are placed less prominent than those of other birds, for the convenience of putting down his head under water, prevents the rays of light from being reflected into his eye, and thus dazzling his sight both in air and beneath the water, which must have happened if that surface had been white. There is still a more wonderful thing concerning these colours adapted to the purpose of concealment, which is, that the eggs of birds are so coloured as to resemble the colour of the adjacent objects and their interstices. The eggs of hedge birds are greenish with dark

spots; those of crows and magpies, which are seen from beneath through wicker nests, are white with dark spots; and those of larks or partridges are russet or brown, like their nests or situation.

A circumstance more to our point, and still more astonishing, is, that in countries covered with snow, many animals, such as bears, hares, and partridges, become white in winter, and are said to change their colour again in the warmer months. The cause of all this would seem to be almost beyond conjecture; but Dr. Darwin was too indefatigable in such pursuits to be easily defeated. He accordingly imagines that the colours are derived in some degree from the eye, which is influenced by the colours most constantly painted on it. The choroid coat of the eye, he remarks, is different in different animals. In those which feed on grass, it is green, because the grass is the object most frequently looked at. When the ground, again, is covered, as it is in the polar regions, for a long period with snow, this coat of the eye will be similarly affected, and in this way may influence the colour of the skin. Thus, like the chameleon, all animals may possess a tendency to be coloured somewhat like the colours they most frequently inspect; and, in the same way, colours may be given to the egg-shell by the imagination of the female parent. This effect will not be considered surprising, when

it is recollected that a single imaginary idea may, in an instant, colour the whole surface of the body of a bright red, as in the blush of shame. These may be only conjectures; but it is certain there must be some efficient cause, since the uniform production of the same colours, in the instances enumerated, shews that they cannot arise from a fortuitous concurrence of circumstances.

As this theory of Dr. Darwin does appear to be very conjectural, we would rather be disposed to conclude that the causes of the great varieties in colour are but little known; but if we turn our attention to the animal and vegetable world around us, we shall observe it springing before us in a thousand different ways, and giving rise to an infinite diversity of the nicest and most elegant cutaneous tapestry. It is indeed, as Dr. Good has remarked, to the partial secretion or distribution of this natural pigment that we are indebted for all the variegated and beautiful hues evinced by different kinds of plants and animals. It is this which gives the fine red or violet that tinges the nose and hind-quarters of some baboons, and the exquisite silver that whitens the belly of the dolphin and other cetaceous fishes. In the toes and tarsal membrane of ravens and turkeys, it is frequently black; in common hens and peacocks, gray; blue, in the titmouse; green, in the water-hen; yellow,

in the eagle; orange, in the stork; and red, in the flamingo. It affords that sprightly intermixture of colours which besprinkle the skin of the frog and salamander. But it is for the gay and glittering scales of fishes, the splendid metallic shells of beetles, the gaudy eye-spots that bedrop the wings of the butterfly, and the infinitely diversified hues of the flower-garden, that Nature reserves the utmost force of this ever-varying pigment, and sports with it in her happiest caprices.

Having thus collected all that we could find upon this confessedly ill-understood subject of colour, we must now proceed to something more practical.

METHODS OF CHANGING THE COLOUR OF THE HAIR.

As much of the beauty of the hair is always attributed to its colour and gloss, it becomes an important point, with those who happen to have hair of a less fine colour, to change this artificially. The governing taste, as has been remarked above, manifests a particular predilection for certain colours, and a decided aversion to others; a kind of prejudice, as some may think, but sometimes of power sufficient to triumph even over love itself. At one time black hair is disliked, and at another light hair is detested. In Europe, at the present period, there is a strong dislike to red hair, and

hence it becomes those females, in particular, whose hair unfortunately displays this colour, proscribed by national taste, to employ all laudable means to disguise and change it.

The Germans held none but light hair in estimation: those to whom nature had denied this highly valued advantage, employed all the means which art could furnish to produce a resemblance to it. For this purpose they made use of a kind of soap, composed of goats' tallow and ashes of beech-wood: this soap, which was called Hessian soap, because it was made in the county of Hesse, was also made use of, as we are informed by Martial, to stain the German wigs, in order to give them a flame colour, according to the expression of that author.

The Roman ladies had the same predilection for this colour. Ovid says, that the peruke-makers of Rome bought up all the spoils of German heads, to gratify the caprice of the *petites-maîtres*, who were determined to conceal their fine black hair under a light wig. Among the Romans, the men themselves were not exempted from the payment of this tribute to the predominant taste for a light colour. It was the desire of giving this favourite colour to their hair, that induced them, as we have seen, to powder it with gold. Some carried this caprice to a still greater length. Julius Capito-

linus informs us that the Emperor Verus had such a fondness for light hair, that, in order to keep his own of that colour, he sprinkled it from time to time with distilled gold, that it might be of a more brilliant yellow.

While men of learning were descanting on this topic, the fathers of the church wrote and preached against this practice. Born enemies of the toilette, which does not exactly agree with the austere life which they sought to introduce, they proscribed every cosmetic falsehood. St. Cyprian, among others, gives twelve reasons to prove that women ought not to stain their hair. Out of these twelve reasons we select two, which appear worthy of notice. One would lead us to expect that the doctor's morality was rather loose. "The action of staining the hair, is worse than adultery." The other, equally singular with the former, is, that "to blacken the hair, argues a detestation of that whiteness which belongs to the head of the Lord." But, leaving the discussions of the literati, and the sermons of divines, let us proceed to the means which art affords for changing the colour of the hair.

INNOCENT METHODS.

As in the case of depilatories, the compilers of books have given many receipts for compositions

to stain the hair, which are altogether nugatory and inefficient. Among these we may mention the following:—

"Take," says Madame Voiart, "a quantity of burnt cork, and incorporate it with *pommade à l'Heliotrope*, and with infusions in river water of the bark of oak, willow, walnut, pomegranate, black mulberry, myrtle, arbutus, senna, raspberry, fig, artichoke, and in general all substances rich in tannin; wash the hair with this composition, and it will at length render it black."

This, however, can do nothing more than soil the hair, as it must be evident the burnt cork will have no sort of effect except spoiling the pommade. The receipt very cunningly adds that the hair will be *at length* blackened, but we pity the patience of those who trust to this promise. Subjoined to the same receipt there is another, said to be still more effectual, namely, gall-nuts, cypress cones, ivy berries, and seeds of red beet, boiled in wine. It is added, that the effects of all these will be rendered more speedy by making use, several times every day, of a lead comb. The lead comb, however, like the burnt cork, mixed with the *pommade à l'Heliotrope*, will only soil the hair and render it nasty, without staining it in the least.

The same authority says, that the hair is not only tinged black, but prevented from falling, by

juice of elder-berries, bramble leaves, or wild vine leaves, macerated in olive oil. Credulity, we should think, could not go farther. But there is a still more *innocent* method recommended in books, namely, to wash the head in rain water, dip a comb in oil of tartar, and comb the hair in the sun three times a day; which process will produce the dark shade required in about eight or ten days.

As the foregoing are all vouched to be efficacious, it might be supposed that the compilers would have been contented with them, without farther enumeration or research. This, however, is not the case; for we are told that, besides the preceding, there is another which, though complicated, is more satisfactory in its results. Of course, we ought to believe that these results have been tried and proved by those who assert that they have been satisfactory. Here is the receipt for this more satisfactory hair dye:—

Break and pound in an iron mortar a pound of gall-nuts, and boil them in olive oil till they grow soft; then dry them, and reduce them to a very fine powder, with which incorporate equal parts of powdered charcoal of willow, and common salt prepared and powdered; to this add a small quantity of lemon and orange peel, also dried and well pulverized; now boil the whole in twelve pints of soft water, till the sediment at the bottom of the

vessel assumes the consistence of a black syrup: with this syrup or pommade anoint the hair which you wish to stain, cover it with a cap till dry, and then comb it. This anointing is to be renewed once a week, lest it should cause the hair to turn red, which there is some chance of its doing. It should be observed also, say the authorities, that, as fast as the hair grows, it resumes its original colour in the part next the skin;—therefore, in whatever way the hair is stained, it is necessary to repeat the operation. It is also added, that it may be used without inconvenience, and it is excellent for strengthening the brain!

We think it proper to inform our readers, in opposition to the compilers, from M. Lecamus downwards, that this composition is very much akin to the preceding, as an *innocent* hair-dye, and is no less effectual for soiling and dirtying the hair—black mud, as a French author calls it,—which would not even serve for shoe-blacking, much less for staining the hair, independent of the expense, which he calculates, item by item, to amount to at least twenty-two francs, or about eighteen shillings sterling; which sum also he promises to refund to any individual who, after trial, finds it to answer the effects vouched for by the compilers.

Among other *innocent* receipts, we find in books

the following preparations for staining or dying the hair:—

Take an ounce of lead ore, and the same quantity of chips of ebony, and boil them together for an hour in a quart of clear rain water. With this tincture wash the hair, and always dip your comb into it when about to comb the hair. This will dye the hair of a fine black, which will be still farther deepened in the shade, and rendered more lively, glossy, and beautiful, by the addition of two drachms of camphor.

We are also directed, on the same authority, to boil over a slow fire, for half an hour, equal parts of lemon juice, vinegar, and pulverized litharge, and to wet the hair with this decoction, and in a short time it will become black: or, to dissolve steel filings in good vinegar, till the composition be made to resemble thick oil, with which the hair is to be washed from time to time, and it will become black, it is said, by a few applications.

Another method is recommended on similar authority, namely, to wash the head with a lye made of the ashes of plants, in which a small quantity of alum has been dissolved,—a wash which is reported to prepare the hair for whatever tint it is desired to give it, in the same way as mordaunts are used in dying. After washing it with this lye, it is to be combed with a leaden comb or a horn comb,

dipped in any matter that can impart a black colour, such as oil of cedar mixed with liquid pitch or myrtle oil, beaten up for a considerable time in a leaden mortar.

The following, which comprehends several of the preceding, is given, in a popular work, as a simple means of tinging the hair:—" The leaves of the wild vine change the hairs black, and prevent them from falling off. Burnt cork; roots of the holm oak and caper tree; barks of willow, walnut, and pomegranate; leaves of artichokes, the mulberry tree, fig-tree, and raspberry-bush; shells of beans; gall and cypress nuts; leaves of myrtle, and green shells of walnuts; ivyberries, cockle, and red beet seeds; poppy flowers, alum, and most preparations of lead. These ingredients may be boiled in rain water, wine, or vinegar, with the addition of some cephalic plant, as sage, marjoram, balm, betony, clove July flowers, laurel, &c."

In the same work we have the following receipt for changing the hair or beard black:—" Take oil of costus and myrtle, of each an ounce and a half, mix them well in a leaden mortar, add liquid pitch, expressed juice of walnut leaves and laudanum, of each half an ounce; gall-nuts, black lead, and frankincense, of each a drachm, and a sufficient

quantity of mucilage of gum-arabic, made with a decoction of gall-nuts."

It has been asserted, says an author, that the hair may be stained black, by impregnating it with lard mixed with minium and lime; but, in my opinion, he adds, this composition would only produce a chesnut colour. For our own part, we doubt very much whether it would have any effect at all, farther than soiling the hair.

We are assured by several writers on this subject, that in Egypt, China, and other distant countries, the hair is successfully tinged with the juice of several plants indigenous to the soil. Among others which are said to possess this property, the Ketmia rose is mentioned; but so small a quantity of the juice can be obtained, that it requires the pressure of at least five hundred petals to prepare enough for one operation on a single head. The author who makes this observation, besides, is extremely doubtful of their efficacy. A French traveller, after his return from Egypt, was reported to have brought with him to Europe a liquid, which was most effectual in dyeing the hair; and as this traveller was a medical man well known in Paris, the thing became talked of, and quite *recherchée*. The author above quoted, anxious to ascertain the truth of the reports which had

reached him, waited on the traveller, to ascertain their truth; but he was altogether disappointed, by being told that the whole store of the precious liquid had already been exhausted in presents to ladies of distinction, and that the plants from which it was made could only be procured from Egypt. Letters were despatched to Egypt to procure a fresh supply, but two years' anxious expectation brought no reply; so that it would appear that either the Egyptian liquid was a hoax, or could not be procured.

The following methods, equally *innocent*, we believe, with the preceding, are given in books, for the purpose of staining the hair of a flaxen or chesnut colour, when that is desirable,—a circumstance, we should suppose, which will seldom happen. Take, say the compilers, a quart of lye prepared from the ashes of vine-twigs; briony, celandine roots, and turmeric, of each half an ounce; saffron and lily roots, of each two drachms; flowers of mullein, yellow stechas, broom, and St. John's wort, of each a drachm. Boil these ingredients together, and strain off the liquor clear. Frequently wash the hair with this fluid, and in a little time it will change to a beautiful flaxen colour.

Again we are told that hair may be stained of a light chesnut colour, by first cleaning it with dry

bran, or warm water, in which alum has been dissolved. Then take two ounces of quick lime, kill it in the air, and reduce it, along with one ounce of gold, and half an ounce of lead ore, to a fine powder, and sift it thoroughly. Wet the powder with a small quantity of rose-water, rub the hair with it, let it dry again in the air, or dry it with cloths dipped in a little warm water. This composition, it is added, does not stain the skin.

We have already mentioned that this colour has at times been highly esteemed; and at this moment, in Spain, the word *rubia*, applied to persons with red hair, is said always to import an idea of perfection. Madame Voiart has committed a singular mistake with regard to the taste of the Orientals in this respect, however much the Romans may have admired hair of this tint, and called it by the celestial name of Apollo. She says, that when the young Shunamite in Solomon's Song speaks of her spouse, she compares his hair "*à des boucles d'hyacinthe.*" If Madame V. had looked into other parts of the same beautiful poem, she would have soon found that she had sadly misinterpreted this comparison; for, in another place, it is said, "his locks are bushy, and black as a raven," though, immediately before, it is said, "his head is as the most fine gold," meaning as precious, and not of the colour of gold. Hyacinths, besides, are not

all of a red colour. Virgil says, in his second pastoral—

> White lilies lie neglected on the plain,
> While *dusky* hyacinths for use remain. DRYDEN.

Or, as it is elsewhere rendered—

> O trust not thy complexion, beauteous boy,
> Too far: white with-bands fall, *black* hyacinths
> Are gather'd. TRAPP.

DANGEROUS METHODS.

We have formerly taken notice of what the celebrated M. Bichat says of the effects of some of the hair dyes used in France,—that they are productive of headaches and swelling of the scalp, even when the skin remains untouched by the dye. The facts, however, are but vaguely stated, and we are only left to conjecture, as to the nature of the hair dyes which were followed by the affections mentioned. The two preparations most popular in France, and which, indeed, have both the same basis, are *L'Eau d'Egypte*, and *L'Eau d'Chine;* and we may suppose that M. Bichat alludes to one or both of these. The basis of both of them, and also of our English nostrums, Grecian Water, and Essence of Tyre, so much puffed off in newspaper advertisements, is silver dissolved in nitric acid, or aquafortis, and well known under

the name of lunar caustic, and lapis infernalis, or infernal stone. It is the same nitrate of silver which also forms the basis of the permanent marking ink for linen. There is no doubt whatever that the nitrate of silver will immediately change the lightest hair to black; but, if the operation produce headaches and swellings, we should think our readers would pause before trying it. The nitrate of silver, also, has not the property of producing a permanent black; for the stained hair, on exposure to light, soon becomes purple, and even of a reddish tinge, like blood, which, instead of improving, will render it altogether a laughable caricature.

All these preparations of the nitrate of silver (which is a very cheap article, compared with the extortionable prices of the nostrums,) are made with gum-arabic water, and scented with essence of bergamot, or any other perfume that is most agreeable. All the hair dyes, falsely said to be vegetable, are exactly of the same description with what we have now described.

EFFECTUAL MEANS.

The chemists have not attended to this subject with any attention; and as it has hitherto been left wholly in the hands of perfumers and patentees, it has not been hitherto taken up scientifically.

M. Vauquelin, who minutely and carefully analysed the hair, as we have already seen in a former page, professes to be altogether ignorant of any good and effectual method of tinging it.

We think that the most useful hints on this subject may be derived from the scientific modes of dyeing woollens and silks of a black colour, as both of these are animal substances of similar chemical composition to the hair. We should recommend, therefore, to procure from the dyers a quantity of walnut water, which is prepared by steeping for a year in water the green shells of walnuts, and with this to wash the hair, as the first part of the process: then to make an aromatic tincture of galls, by scenting the common tincture with any agreeable perfume, and with this to wet the hair, which must next be moistened with a strong solution of sulphate of iron.

If this be properly done, we have no doubt that it will tinge the hair black or dark; but care must be taken not to let any of the substances touch the skin or the linen, as they will have a similar effect on these. It is most absurd, indeed, to pretend that any preparation will dye the hair and not tinge the skin, if applied to it; for the skin being of precisely the same chemical composition with the hair, it must be affected by the same chemical agents. The advertised nostrums, therefore, which

are said to dye the hair, and not to discolour the skin or soil the linen, must be a gross imposition on the public.

V.—GLOSS AND CURLING OF THE HAIR.

The fine silky gloss of the hair depends on the internal pulp of it being in a healthy and abundant state, and on the natural oil being freely produced and given out. When this is unhealthy, the oil is either too abundant, in which case its superfluity produces greasy hair; or too scanty, in which case the hair is dry and harsh, or thin and lank. We shall understand this better, as well as the cause and manner of curling the hair, after attending to the following passage from the celebrated Bichat, to whom we have already been much indebted for scientific information:—

On being exposed to heat, the hairs are but slightly contracted; they twist in divers ways; but this proceeds from quite a different cause of contraction in other organs. The moisture which the hair naturally contains is evaporated by heat, and the particles drawn nearer together: hence, when the hair is damped again by a fog, the bath, atmospheric air, &c., it uncurls, and becomes lank. The greasy substances these organs are embued

with on dressing the hair, provides them with a coating impermeable to water, maintains the head-dress, and prevents it imbibing this fluid; after it is washed the hair will sooner curl, as it has often been observed since it was the fashion to wear it short. This at first sight seems a paradox; it is not so, however. In fact, by carefully rubbing the hair, the unctuous fluid it was covered with is removed, or it combines with the soap suds used for that purpose: by this means it easily penetrates the hair when the pores are left free; and afterwards by evaporating, together with the fluid it already contained, an effect that was prevented by the unctuous substance, it is drier, and therefore more disposed to curl.

A farther proof that it is the external sheath of the hair that imbibes the humidity which it loses after being curled, and droops, is, that a detached portion of the scarf-skin will also curl, on being twisted with curling-tongs, and is restored again to its natural state if it be immersed in water. The extensibility and contractibility of the tissue are very obscure in hair; it is its resisting quality that prevents fracture; it hardly admits of extension.

The gloss and polish of all bodies depends, as must be obvious, on the smoothness and continuity of their surface. The nails are consequently more

polished and glossy than the skin, because they are more hard and compact, and also more smooth and uniform. The hair is in the same way more glossy than the skin, from being of a harder consistence; but as there are inequalities, as we have seen, these must either be filled up, or the gloss and polish will be very much impaired. Think for a moment what causes the polish of a rose-wood or mahogany table, and you will see that the gloss of the hair must follow the same law. If you use varnish for the table, it fills up and smooths the most minute inequality of the surface. If you use oil, it does the same, provided a sufficient quantity be left unrubbed off. Water will also produce a similar effect; but as it dries up almost instantaneously, it cannot be used with advantage.

In order, therefore, to preserve the hair glossy, a substance must be found which will not evaporate readily, like water, and which will fill up all the overlappings of the imbrications described above. If the hair, then, is wont to be dry, and without gloss or lustre, substances of an oily quality must be selected to preserve it in a due state of moisture; and for this purpose a countless variety of oils and pomatums have been at different periods fashionable. Many of these are so equal in properties, as to render it a matter of indifference which of them is employed. Others contain

ingredients which improve or deteriorate their qualities. These every individual can best prove by trial, as every different sort of hair will require different proportions to bring it to a gloss, and not to overdo it, and make it look greasy. The greater number of the hair oils are prepared by perfumers, from receipts, which are kept a secret, and are vended under specious names, each trying to outvie and outsell the rest by the advertising praises lavished on the article. With these we have little to do, and shall not even mention any of them individually. All of the articles so advertised, however, it may be remarked, are very expensive; and those who have tried them will agree with us, that their qualities are most extravagantly overrated, and the promises held out are seldom fulfilled. Instead of spending our time and space upon these advertised articles, we shall here give a few receipts for hair oils, which will be found more than a half cheaper, and no less efficient. One of the best is what has been called

IMPERIAL OIL.

Take a gallon of salad oil, and put it into a pipkin, with a bag containing four ounces of alkanet root, cut and bruised. Give the whole a good heat, but not a boiling one, until the oil is completely impregnated with the red colour; then

pour the whole into a jar, let it stand till cold, and then add four ounces of essence of bergamot, four ounces of oil of jasmine, and three ounces of eau des mille fleurs. When properly mixed, put the compound liquid into small bottles for use.

HUILES ANTIQUES.

These oils, which are sold in considerable quantity, are chiefly composed of oil of ben, or behn nuts. The oil, like that of almonds, is made first by beating, and then sifting the behn nuts through a coarse wire sieve, and expressing them by means of a press. The nuts are imported from Italy, and are of various quality; but the oil differs from that of almonds, in being adapted to keep more years than the latter will months. Its principal excellence consists in its having no smell of its own, and consequently being ready to imbibe the odour of any perfume with which it may be combined.

HUILE ANTIQUE AU MUSC.

Pound in a glass mortar a drachm of musk, with four grains of amber, adding gradually, by little and little during the process, eight ounces of oil of behn. When they are all well mixed, put the mixture into a small bottle; and, to take up every particle of musk and amber, put into the mortar

four ounces of fresh oil of behn, which is also to be put into the same bottle. Put the whole for twelve or fourteen days in a warm place, shaking it every day. Leave it then to rest for one day more: pour off the oil clear, and preserve it in small bottles, well corked, for use.

In the same manner you may make *huile antique à l'ambre*, by changing the proportions of the amber and the musk.

HUILE ANTIQUE A L'ORANGE.

With one pound of oil of behn, mix three ounces of essential oil of orange, and put it into small bottles, well corked, with wax over them, to preserve it from the air, and prevent the perfume of the orange oil from evaporating.

In the same manner you may make *Huiles Antiques* au Citron, à la Bergamotte, au Cédrat, au Girofle, au Thym, à la Lavande, au Rosmarin, &c. Take care, as a general rule, to proportion the quantity of the perfumed essence which you employ, to its strength.

HUILE ANTIQUE A LA ROSE.

Procure a tin or white-iron box, about a foot square, opening by a grating on one side, and divided in the middle by a portion of white iron, drilled full of small holes close to each other.

Fold in four a cotton towel, soak it in oil of behn, and place it on the grating so as exactly to fit the box. Upon this cloth place your rose leaves, fresh gathered; leave them for about twenty-four hours, and then replace them with fresh rose leaves. The cloth may then be removed, and the oil, now charged with the perfume, carefully expressed. This may be mixed with fresh oil of behn, and bottled for use.

In the same manner you may make *Huiles Antiques*, à la Fleur d'Orange, à la Violette, à la Jonquille, au Jasmin, &c., and, by means of various mixtures, à l'Heliotrope, aux Mille Fleurs, au Pot-pourri, &c.

HUILE ANTIQUE A LA TUBEROSE.

Mix the flowers with ground blanched bitter almonds, and then express the oil; or mix a pint of olive or almond oil with thirty drops of the essence of tuberose flowers. In this way, also, several of the above Huiles Antiques can be prepared. A red colour may be given to any of these oils by alkanet root, in the manner directed above for making the imperial oil.

HUILE ANTIQUE VERTE.

Add one drachm of gum-guaiac to one pound of olive oil; let it stand for some time, and then strain;

adding any part of the fragrant essences which you please.

MACASSAR OIL.

The following is given in some late works as the genuine receipt for this oil. Take a pound of olive oil, coloured with alkanet root, and add to it one drachm of the oil of origanum. It may be remarked, that olive oil is an excellent basis for hair oil, and it is also the most economical; for a thin, stale, olive oil, at ten shillings a gallon, will do equally well as a superior oil at fourteen shillings the gallon, because the powerful odour of the perfumes takes off or destroys any disagreeable smell peculiar to stale and thin olive oil. When you have mixed your perfume with it, you must shake the bottle in which it is contained, twice a day, for at least one week.

Another way of giving the hair a beautiful gloss is, by means of soap, which, in the case of hair that is apt to be greasy, is better than any sort of oil, as it moistens without matting it, as oil in those cases usually does; that is, if it is not put on in too great quantity. The best preparation of this kind is the

ESSENCE OF SOAP.

Put two pounds of good common soap, cut small,

into three pints of spirit of wine, with eight ounces of potash, and melt the whole in a hot-water bath, stirring it the while with a glass rod or wooden spatula. When it is thoroughly melted, leave it to settle, pour off the liquor clear, and perfume it with any fragrant essence you please.

Or you may mix together equal parts of essence of violets, jasmine, orange flowers, and ambrette, with half the quantity of vanilla and tuberose. Mix with these rose and orange-flower water, so as to form in all about three pints of liquid, in which dissolve, as in the first case, two pounds of good soap sliced, eight ounces of potash, and proceed as before. Add some drops of essence of amber, musk, vanilla, and neroli, to make it more agreeable.

WASHING THE HAIR.

When the hair becomes greasy and dirty, it ought to be washed with warm (not too warm) soft water and soap; an operation which is very requisite when pomatums and hair oils are much used, as they are apt to combine with the scales which are always coming off from the skin, and form a thick crust very detrimental to the gloss and beauty of the hair. Some authors, however, strongly disapprove of washing the hair at all, and muster up, we know not how many, evil conse-

quences as likely to follow the practice. One would imagine, from the tone of some of these philippics, that all the disorders incident to the head were more or less caused by washing the hair. That we do not exaggerate, the following strange passage will show:—

"There is another practice," says one of those authors, "which has of late years gained ground, and which the friends of humanity cannot too strongly exert themselves to counteract; I mean, that of washing the head with water warm or cold. This custom is but too often productive of head-ache, ear-ache, tooth-ache, and complaints of the eyes. Hear what a professional man says on this subject: 'Beneath the paternal roof, this operation is frequently performed by inexperienced youth, from time to time, in secret: in some boarding-schools, on the contrary, every head is subjected to it by the regulations of the house: it is found to be a method of cleaning them equally easy and expeditious. You afterwards hear complaints that the children are afflicted with tooth-ache, and that it is often necessary to draw their teeth. Instead of seeking elsewhere for the cause, nothing but this act of cleanliness is in most cases to blame. Look at those children whose heads are scarcely ever dry; their pallid faces will never be enlivened by the bright colours of adolescence, and the smiles

of infancy will speedily be succeeded by the wrinkles of age. It is vain to urge that the hair is well dried; the water that remains is always sufficient to obstruct the perspiration, to keep the roots continually wet, and the brain in a state of constant humidity. This expression is literally true: watery eyes, a running nose, suppurating ears, and frequent swellings of the gums, announce excessive humidity, of which obstructed perspiration furnishes an abundant source. Those assuredly possessed great experience who transmitted to us this precept:—'To wash the hands often, the feet seldom, and the head never.'"

We oppose to this anonymous, and, as we are convinced, erroneous opinion, the remarks of the celebrated Dr. Willich in his lectures: "Frequent cutting of the hair," says the doctor, "is of advantage to the eyes, the ears, and, indeed, to the whole body; in like manner, the daily washing of the head with cold water is an excellent remedy against periodical head-aches. In coryzas, or defluxions of the humours from the head, and in weak eyes, the shaving of the head often affords immediate relief, while, at the same time, it opens the pores and promotes perspiration. It is altogether a mistaken idea, that there is a danger of catching cold from the practice of washing the head, or leaving it exposed to the free air after

having been washed. The more frequently the surface is cleansed of scorbutic and scaly impurities, the more easy and comfortable we feel."

M. Arago, in his late voyage round the world, remarks that the South Sea Islanders, who have fine long hair with a silky gloss, promote its beauty by frequently washing it. We may add also, in favour of the practice of washing the hair, the testimony of the author of the *Hygiene des Dames*, who recommends this every time that a bath is taken. "Many ladies," says he, "will, perhaps, make the length of their hair an objection. I answer, that as the most beautiful hair is the most difficult to keep clean, it is precisely this sort which requires to be washed often and carefully, and the bath is the most convenient means of doing this. Besides, the finest gloss is imparted by water, provided the hair be quickly dried and immediately combed and brushed, in summer in the sun, and before the fire in winter. As to the inconveniences which might be supposed to result from leaving the head to dry, it is far from being improbable that the frequent megrim complained of by women, may be traced to a deficiency of moisture in the hair, which prevents the comb or the brush from completely detaching the scales that form there and shut up the pores of the skin through which the perspiration ought to pass." "This manage-

ment," says Madame Voiart, "is only proper for feeble and greasy hair; what is naturally dry and coarse requiring to be moistened with aromatic oils."

Should any of our readers, however, be prejudiced against washing the hair, we would recommend it to be cleaned by means of a brush moistened with hartshorn, or rather with hartshorn to which one half or two thirds of soft water has been added. This will combine at once with all greasy or oily substances, form a kind of soap, and cleanse the hair more completely than even water will do.

After washing the hair or cleansing it in the way just directed, it will be necessary to use some of the above oils, as, by being deprived altogether of its natural oil, it will without this be left feeble and lank; whereas the fresh oil will give it a body, and impart a gloss as fine as the particular sort of hair operated upon is capable of receiving. In this case, the soap is not so good as oil for imparting a fine gloss.

CURLING OF THE HAIR.

If you hold a piece of paper near the fire, you will see it bend and curl up as soon as it is brought under the influence of the heat. Why, it may be asked, does this happen? Because, the moisture

contained on the side nearest the fire is evaporated and passes off, leaving the parts destitute of support, and they will hence naturally approach nearer to each other, than when they were previously separated by the presence of moisture. That this is the true explanation, you may satisfy yourself by feeling the paper which has been heated, and you will always find it more compact, hard, and *dry*, than before it was exposed to the heat. In a word, it has lost moisture, though no moisture may have been previously perceptible in it.

In the very same way do the curling irons act on the hair, abstracting more moisture from one side of it than from the other, and consequently causing it to bend, as we have seen in the instance of the paper. Or, independent of moisture, if the hair be weakened on one side and strengthened on another, it will certainly bend and curl; and this inequality of strength is the usual cause of the natural curling of the hair.

The stronger hair is, the more easy it is to be brought into curl, and the longer also it will remain curled; because, when it is weak and lank, it appears to be more elastic than when it is stronger. Hair also which is weak and dry at the same time, which frequently happens to be the case, as well as hair which has a tendency to be greasy, will not take nor keep curling well. The processes of

cleaning the hair above directed, particularly that in which we have recommended the use of hartshorn, will be found to promote the tendency of the hair to curl, and also to retain the curls which have been formed.

CURLING FLUIDS.

The liquids which are sold for the professed purpose of assisting in the curling of the hair, are chiefly composed of either oily or alkaline substances; and perhaps you will find that the essence of soap, for which we have given the receipt above, is as good as any other. Any combination of potash or hartshorn with some of the aromatic oils, will answer every purpose of the most expensive curling fluid.

Oils, if not put on too copiously, for this will destroy the effect intended, are the best preparations for keeping in the curls during moist or damp weather, or in ball-rooms and theatres, where they are exposed to moisture from perspiration and from the breath; because oil, when spread over the hair, prevents it from imbibing moisture, which will infallibly cause it to lose curl.

CURLING IRONS.

The employment of hot irons to aid in curling the hair, is said to be very injurious to its growth,

and Madame Voiart says, she has seen the finest hair become thin and fall off from this destructive practice. "Whether it hinders the young hairs from growing," she continues, "or dwarfs the roots of the larger hairs, it is certain that nothing has a more speedy effect in thinning them." We cannot, however, see that the irons can have any effect beyond the part of the hair which they touch; and if care be taken that they are not applied too hot, so as actually to destroy the hair, we see no material objection to their occasional use. Their daily application, we confess, notwithstanding the greatest care, will in a short time prove injurious; but the evil can only extend to the hair, which may be destroyed, and cannot in any way prevent its future growth.

PAPILLOTES.

Madame Voiart is extremely hostile to the use of this most common means of curling the hair, as the imprisonment of the hair in papers is hurtful, she thinks, to the proper vegetation of the ringlets, which ought to decorate the forehead and temples. Nothing besides is so unseemly as the head of a young lady hedge-hogged—*hérissée*—(we must coin a word) over with papillotes. The greater number, however, of those to whom nature has given fine silky hair are condemned, particularly on gala

days, to wear this ridiculous coronal a great part of the day. When these paper shackles, which take away half of the natural ornament, are of a tint harmonizing with the shade of the hair, it is a little less ungraceful; but paper of this kind is not always at hand; and, even if it were, what disagreeable marks papillotes always leave on the forehead, by the pressure of the *fichu de nuit*. Our authoress prefers to papillotes a sort of black pins, which are now coming into fashion, for this purpose. Lead is sometimes used in the same way as papillotes, and is either bare or covered with paper. Papillotes, however, may be partly concealed by false hair well adapted to cover them, particularly when a morning head-dress is worn.

VI.—NATURAL GROWTH OF THE HAIR.

The luxuriance or thinness of the hair must, where there is no disease, depend on the supply of the materials which compose it, and the capability of the agents destined for their appropriation. It is plain also, from what was amply stated under the head of Anatomy of the Hair, that though many bulbs exist below the skin, which never shoot out any hairs, yet, in some individuals, owing to peculiarity of constitution, or he-

reditary affections, these roots may be occasionally less numerous or less productive. In the case of deficiency in the number of the roots, it is obvious that art can do nothing; and any pretensions or promises to make the hair thicker, when this is the cause, can only be made by designing and fraudulent empirics. It is in the power of art, however, to do much for developing and promoting the growth of these bulbs, and the hairs produced from them. When we come to speak of baldness and its causes, we shall enter fully into all the methods of increasing the thickness of the hair by means of what may either stimulate or relax; in the mean time, we shall advert more particularly to the effects of the common methods of dressing the hair, upon its growth and luxuriance.

INJURIOUS METHODS OF DRESSING THE HAIR.

Whatever deprives the hair of its free and natural flow, and of its natural moisture, must have a tendency to check its growth, and render it thin and short. Whatever also may draw or twist it from its natural direction, will also prove injurious. For these reasons we think we are fully justified, on the clearest principles, to say, that the usual methods of curling the hair, of twisting it or plaiting it, and also of loading it with hair-powder, are all extremely injurious to its natural growth.

EFFECTS OF CURLING, TWISTING, AND PLAITING THE HAIR.

"The hairs," says M. Bichat, "on emerging from the skin, assume such a direction, that those on the anterior part of the head, almost without variation, pass obliquely forward, and tend to drop over the forehead; those of the middle, and to some extent of the posterior part, follow a perpendicular direction; and, finally, those of the remainder of the posterior and inferior part, cross obliquely, so as to produce a natural fall along the posterior part of the neck. The same remark applies to the side of the head, in which, as much from direction as from its weight, they fall over and cover the ear." When a hair is drawn out accordingly, no pain is felt except that which proceeds from the skin, which it crosses; hence, by drawing a hair in a direction opposite to its natural one, pain is more severe than by drawing it in the direction of the pores. It is not pretended to be denied that the extension by which the roots of the hairs are fixed to the adjacent parts, may not be also partly the cause of this pain; but to the effects of this we request attention.

We have seen above, by Mr. Chevalier's description, that the hairs pass outwards in a very

oblique direction; of course it follows, that if violently pulled out of this direction, the current of the fluid which rises in their tubes, and on which their fine colour and gloss depend, will be obstructed or prevented. Now this is what we complain of in the case of curling, particularly when papillotes are used, and still more when the hair is twisted, as it often is, into a hard knot or bow on the top of the head, or plaited in a fanciful manner, or even when parted and bound with a ribbon or fillet. We do not mean, by these remarks, to say that the hair ought never to be so dressed. We have no wish to oppose our authority to that of taste or fashion; but we feel it to be our duty to mention the probable effects, that, when any thinning of the hair is observed to occur, it may be the better accounted for, and its progress checked. Where it is not drawn tight from the skin, but left rather loose and easy, no injury can follow: it is only when it is prevented from allowing a free current to the juices which nourish it, that we can blame the modes of dressing under review.

EFFECTS OF POWDERING THE HAIR.

When the hair is inclined to be greasy, the use of hair powder will naturally form with the natural oil from the head a sort of paste, which will

adhere very tenaciously, and prove extremely disagreeable. It will also injure the growth of the hair by preventing the natural perspiration which always goes on from it as well as from every part of the body. Still more injurious will be its effect on the growth of the hair, by its obstruction of the pores of the skin, and the consequent influence which this will have on the bulbs from which the hair grows. But it is scarcely necessary for us to enlarge upon this here, as the fashion of wearing hair powder is now almost gone, except in the instance of footmen and livery servants. Our work, however, would not have been complete, without some notice of a fashion once so universal. We shall again revert to the subject in our historical notices respecting the fashions of the hair.

ADVANTAGEOUS MODES OF DRESSING THE HAIR.

Having thus shown the principles which influence the growth of the hair, and the injurious methods that are frequently employed for the purposes of dress or decoration, we must next advert, as particularly as our space will allow, to the modes of dressing which are favourable to its growth, and which tend to promote its luxuriance. As in the former case, we shall limit our observations to a few of the more common and simple operations on the hair, such as combing, brushing, and cutting.

EFFECTS OF COMBING AND BRUSHING THE HAIR.

You will at once perceive the utility of combing and brushing the hair, if you reflect for a moment on its structure; for, as curling or twisting it prevents the nourishing fluids from getting a free passage from the bulb through the tube, so must every operation which makes the hair straight promote this passage. Unless, therefore, the hair is frequently combed or brushed, its growth, particularly if it is long, will be much retarded. When the hair is very long, and twisted up into a hard knot on the top of the head, as it is frequently the fashion to wear it, the current of the fluid along the tubes must be obstructed; and the obvious remedy for this, as it cannot, in opposition to fashion, be given up, is frequent combing and brushing it out in its whole length. Not only, indeed, is the fluid obstructed in its ascent from the bulb, by the twisting or curling, but, in consequence of its imbricated structure, it is apt to get entangled and matted, so as very much to increase this injurious effect, and frequent combing becomes indispensable. A little of any of the oils already recommended, used at the time of combing and brushing, will generally be useful.

The practice, says Madame Voïart, of dipping the comb in water in which a few drops of Eau de Cologne has been put, is very beneficial, particularly if care be taken not to moisten the roots of the hair, as this has been found not to agree with certain individuals.

The hair must be brushed, says the author of the *Hygiene des Dames*, with a rather hard brush, dipped by the surface only in a mixture of water and some mild spirit, such as Eau de Portugal. It is to be afterwards combed with a comb rather fine, but not so fine as to injure the skin of the head. The brush, again dipped in the Eau de Portugal, is to be used, if the hair be naturally greasy; but if dry, then some pommade will be preferable. We shall here give the receipt for this.

EAU DE PORTUGAL.

This water, when imported from Portugal, as it sometimes is, soon spoils, and becomes sour and muddy. In order to have it fresh and of fine quality, take a pint of orange-flower water, a pint of rose water, and half a pint of myrtle water. To these put a quarter of an ounce of distilled spirit of musk, and an ounce of spirit of ambergrise. Shake the whole well together, and the water will be ready for use. Only a small quantity should be made at a time,

as it does not keep long, except in moderate weather, being apt to spoil either with cold or heat.

EFFECTS OF CUTTING THE HAIR.

It must be obvious, from what we have already said, that if the hair is kept short, the fluid will not be so liable to be prevented from rising in the tubes, as in long hair, which cannot well be kept always straight. We at the same time confess, that we are no admirers of crops *à la Brutus*, which of late became partially, and but partially, fashionable among certain classes of ladies. Fine flowing tresses are the most attractive ornament of female beauty, and we cannot too strongly deprecate any fashion which would proscribe them.

In a little work, entitled, Advice to Young Mothers, by a Grandmother, we find the following remarks on cutting the hair, with which we entirely agree:—"The hair of children should be kept short till after eight or nine years old; as the cooler the head can be kept, the less danger there is of many maladies belonging to that part, especially water on the brain. When the production of the four double teeth is attended with much inflammation, (as sometimes happens,) it is not improbable that this may occasion the developement of that fatal disease; and whatever diminishes

the heat of the head is likely to be advantageous. Besides, there is reason to suppose that children who have a great quantity of hair, are those most liable to eruptions on the head, and certainly in them these eruptions are the most difficult to cure. The trouble, also, of keeping long hair sufficiently clean, and the length of time necessary for this purpose, is often a cause of much ill humour, and many cross words, which would be better avoided, between children and their attendants."

"Mothers, whose vanity may be alarmed, lest constantly cutting the hair for so many years should make that of their daughters coarse, may be assured they have no cause for this apprehension, if the hair be kept constantly brushed. I have never seen softer, finer hair, than on girls who have had it short (like that of school-boys) until they were in their tenth year. When there is any inclination to *break out* in the head, fine combs are very likely to promote it; and there is no doubt that the heads of children, which are never touched by them, are much cleaner than those which are scratched and scraped every day. If any dirt appear on a child's head, which a brush will not take away, that particular part should be rubbed with a towel, and soap and water; but in general the brush will be found quite sufficient to keep it perfectly clean. The more the head is combed,

the more it will require to be combed; as any one will find who tries the experiment. It must be allowed, however, that there are many exceptions to this, as to every other rule."

"It is an imprudent act of cleanliness to remove all at once the scurf which sometimes gathers on the head, and even spreads over the foreheads of very young infants; and this is, probably, one of the reasons why we often see the children of persons in easy circumstances tormented just after their birth with that troublesome stuffing in the head, which is, in some places, vulgarly called the snuffles. When the infant is somewhat inured to the external air, at two months old or later, (according to the season of the year,) whatever scurf adheres so firmly to the head as not to come off in washing, may be safely and effectually removed, by rubbing a little butter on a small part of the head one day, and cleaning it with a box comb the next, before it is washed; then a little more butter should be rubbed on another part of the head, which should be cleansed in the same manner the day after; and in thus removing the scurf by degrees, the head becomes clean in a very short time, without any danger of cold. In many places, the lower class have a prejudice against removing the scurf from children's heads at all, waiting till it comes off of itself; but this is also an error, and

leads to many of the bad consequences of dirt, as they neglect to wash the head, which should be done every day, as long as the scurf is suffered to remain. When the head is once perfectly clean, the best means of preserving it in that state is by a brush, which should be changed from time to time for one harder. The seldomer a fine comb is applied to the head of an infant the better; and on no account should those of ivory, tortoise-shell, or bone be ever used; for, even when they do not wound the skin and produce a sore, (as frequently happens,) they are very likely to augment the production of that substance they are intended to remove."

In some rare cases, cutting the hair has very singular effects upon the head. In certain individuals it does harm, in others it is advantageous. When the hair is profuse and thick, thinning it or cutting it short, has been known to cure obstinate head-aches; and, strange to say, the same thing has been strongly suspected to be the cause of head-aches. Dr. Parr, the author of the London Medical Dictionary, was for many years a sufferer from a head-ache, which returned irregularly, and for which he could at first assign no cause; but, at last, he discovered that it frequently returned after shaving his head. He consequently suffered his hair to grow, and from that time the disease

gradually lessened in violence, in duration, and in the frequency of its return; and from being a complaint highly serious, and beginning to affect his memory, its return became rare and never violent. We have above mentioned an instance from Bichat, in which cutting the hair proved fatal. M. Lanoix has mentioned several cases of a similar nature.

There cannot be a doubt, however, that such cases are very rare, and anomalous exceptions to the general rule; for in most affections of the head, particularly in those which are of a nervous kind, or connected with mental disorder, cutting the hair, and even shaving the head, are highly beneficial as remedies, and are free from danger in ninety-nine cases in a hundred.

Madame Voiart is, therefore, quite right in saying that cutting, combing, and brushing the hair, are the most simple, certain, and economical methods, not of increasing the number of the hairs, but of promoting their developement. Frequently cutting the hair also, we may remark, prevents it from splitting at the ends and growing forked, which gives it a very vulgar and ungraceful appearance.

VII.—DECAY OF THE HAIR.

The hair, as we have seen, is composed of a root and a hollow jointed stem, into which a colouring oil rises. From these facts we can deduce a very rational account of the causes of grey hair; and it is a medical maxim, to which there are few exceptions, that a disease seldom can be cured without knowing its cause. If, therefore, we can give you a satisfactory account of the causes of grey hairs and baldness, we put you in half possession of their remedies, even though we go no farther, or, at the very least, show why no remed need be tried.

CAUSES OF GREY HAIR.

It is supposed by Dr. Darwin and others, that the bright white reflected from the winter snow, is the cause of all the animals in the high northern latitudes becoming white in winter. Even in our own country, this singular change takes place in two instances: the Alpine hare, and ptarmigan, or mountain partridge, though brownish grey in summer, become wholly white as soon as the snows begin to cover their places of resort. Dr. Dar-

win's opinion on the subject seems to have been derived from the chameleon, which is said to take the colour of every object at which it looks. If it look on a grass field, it becomes green; if it look at the sky, it becomes blue; if it look at snow, it becomes white. He maintained accordingly, that it was the action of the white snow upon their eyes which turned all the polar animals white in winter; and for a similar reason he would infer that larks are grey, because they frequent sandy fields; and canaries yellow, because they are reared in brass-wire cages. He forgets to inform us how our cattle and our sheep escape being green, or how a painter escapes having his face variegated with all the colours of the rainbow.

On the contrary, we are strongly inclined to believe that the winter white colour of the polar animals is mainly to be attributed to the cold. For if you can so contract, by any means, the skin at the roots of the hair, as to compress the tube and prevent the coloured oil from rising, there will only remain the dry body of the hair, and it will of course be white.

Such a contraction of the skin may be produced by cold, by grief or fear, and by fever and other diseases; and the skin, independent of the hair, will assume a similar appearance to a fowl stript of

its feathers. Every body has heard of instances of the hair, by grief or fear, being turned white; for

> Deadly fear can time out-go,
> And blanch at once the hair.
>
> MARMION.

And this, we conceive, is the true explanation of the occurrence. Dr. Parr explains it from chemistry, and thinks that some acid, generated by the depressing passions, whitens the hair, as bleaching liquor whitens cloth. This is, to say the least of it, very far-fetched.

Our principle gives a clear explanation why the hair becomes grey in old age, as at this period the skin, like the bones, shrinks and contracts for want of moisture; and the same effect will follow in the young, from any cause that will make the skin shrink and contract so as to strangle the hair at its roots, and prevent the coloured oil from rising in its tube. The same principle will show you the utter inefficiency of most of the advertised remedies and preventives of this; as, unless they be directed to the removal or prevention of the cause, it is quite impossible that they can be successful.

Grey hair is, therefore, usually a mark of shrunk and contracted skin, whether it be the effect of external causes, such as cold, or internal causes, such

as grief, fever, head-ache, or too much business; and whether it occur in manhood or old age.

There is another cause of grey hair, worthy of mentioning, as of extensive influence, namely, the superabundance of lime in the body. The bones are known to be chiefly composed of lime, jelly, and oil; but the lime often predominates so much that the bones are rendered extremely brittle; and often, also, bones are formed in the heart, the brain, &c., where they produce serious trouble. The brittleness of the bones is sometimes so great, that a fit of coughing will break them. Dr. Good informs us that he once saw an old woman break both her thigh bones by simply kneeling at church, and, on raising her up, her arm was also broken.

Now this superabundance of lime in the body is caused by every sort of intemperance and external indulgence, or, in a word, by whatever robs the body of its juices. It is consequently the usual attendant of old age, when the juices fail. When it does occur, the tubes of the hair at the roots seem to be obstructed by this lime; the colouring oil cannot of course get into the stem of the hair, and it becomes grey, dry, and brittle, like the old lady's bones. The same thing has been known to follow small-pox and scrofula, which may therefore be also a cause of grey hair.

There is another cause of grey hair, which is worth explaining. The hair in a healthy state is semi-transparent, and partly varies its colour according to the light in which it is viewed. It may also be observed, that the darker the hair is, it will be the more thick, strong, and transparent. On the same principle, a very thick transparent piece of ice, or a thick piece of glass, appears almost black. A diamond, when finely polished, always appears in the centre of a deep black, because all the rays of light pass through it, and none can therefore be returned to the eye. All these substances, however, become white whenever you destroy their transparency; as you can prove, by scraping the piece of ice on the surface, or preparing the glass as it is done for sinumbra lamps. In the same way you will find that all white hair is opake, and does not permit the light to penetrate it; because, we say, the colouring matter, which also makes it transparent, is prevented from rising, in consequence of the strangling of the root by the shrunk skin.

PREVENTIVES OF GREY HAIR.

If you would avoid this prominent mark of approaching old age, you must avoid all the causes of it which we have now pointed out, as constricting the skin, and strangling the hair at its roots.

as well as whatever may throw into the blood an undue portion of lime. We say an *undue* portion, for a certain quantity of lime is indispensable in our system for repairing the wear and tear of the bones, the teeth, &c. The lime necessary for the repair of bone is manufactured by the stomach and liver, along with the blood, from various articles of our diet which contain it. The greatest supply is usually from the water which we drink, or which is employed in the various processes of cooking and preparing of liquors. All animal food, also, contains some portion of lime, as well as some of the sorts of vegetable food. Ascertain then by chemical trial, whether the *water* used for your tea, coffee, soups, punch, &c., contains a large proportion of lime, and, if it does, you must either have it chemically purified, or remove to some other place where the water is more free from lime. If water is hard, you may be certain, without farther trial, that it contains too much lime to be safely used by the gouty; nor is it safe indeed for the most healthy to use much hard water. Early grey hair will be the least of the evils which it has every chance to occasion. Pump water is, therefore, always bad, except in rarer instances, when it is soft. Rain water which has not come in contact with lime during its fall, is the safest for tea and other liquids.

Bread will always contain a portion of lime, derived both from the wheat, which naturally contains it, and also from the water used to mix the flour; but it is also well known, that both the millers and the bakers are in the habit of improving the colour and increasing the weight of flour by mixing it with whiting, which is a preparation of lime. Nothing can be worse than bread of this description; and it will be advisable to ascertain carefully, whether your bread or your flour is so adulterated. It is of the more importance to have the flour examined, because it is the common popular opinion that all the bread adulterations are made by the bakers; and when bread is made at home, all suspicions of fraudulent mixture are lulled. The truth is, however, that the miller is much oftener culpable of such frauds than the baker; and therefore, even home-made bread is not safe, unless you are certain what sort of flour you employ. Lime is also much employed in the refining of wines, the manufacture of sugar and other articles of diet, and it is scarcely possible that no portion of it should remain in the goods when brought to market.

REMEDIES FOR GREY HAIR.

We are not aware that it has ever been attempted to cure grey hair, by restoring the func-

tions of the skin to youthful freshness and pliancy; though, from what we have already stated, it would appear that such a cure may be within the limits of possibility. But it can only be tried under skilful medical direction, and few perhaps would willingly subject themselves to any regimen that might be pointed out for the mere purpose of giving their hair a more youthful shade of colour, as this can be more expeditiously done by some of the advertised hair dyes. It is worthy of remark, however, that by the regimen to which we allude, not only the hair would be benefited, but the whole body would, in some degree, experience renovation and improvement. It would lead us too far from our subject, and take up too much room, to detail this plan so as to make it practically useful; yet it may be worth remarking, that the same remedies recommended for baldness will greatly improve or prevent grey hair, particularly the Palma Christi oil.

DYES FOR GREY HAIR.

When treating of the colour of the hair, we detailed at some length the methods which have been proposed for changing its natural colour. The same preparations are usually employed for tinging grey hair; but the only effectual one is the solution of the nitrate of silyer, which is sold under so

many different forms and disguises, and under many names,—such as Grecian Water, Vegetable Hair Dye, Essence of Tyre, Egyptian Water, Chinese Water, Eau Apollonienne, &c.—these are all, we say, solutions of the nitrate of silver, mixed with certain other ingredients, to colour and perfume them. The great objection to this dye is, that it soon becomes purple, and consequently gives the hair a most unnatural and unsightly hue. Nothing has hitherto been discovered to prevent this purple tinge from appearing in hair that has been dyed with any of these preparations.

The French are said to use a preparation of bismuth for giving grey hair a dark tint, but we are unacquainted with the manner in which it is applied.

CAUSES OF BALDNESS.

The more remote causes of baldness are as numerous as those which influence bodily health, and tend to accelerate the advance of old age; but the more immediate causes, or rather the consequences of the remote causes, may be reduced to three, which we shall now consider in their order.

1.—CONTRACTION OF THE SKIN.

Since the superabundance of lime in the body is one main cause of grey hair, as we have just seen, of which the reader may convince himself by observing the early grey hair of people who live in a limestone or chalk district, or where the water is peculiarly hard, so is the constriction of the pores of the skin one of the chief causes of baldness. What the surgeons call *cutis anserina*, which means "goose skin," from its resembling the skin of a plucked goose, may be produced, as we have seen above, by cold, by grief, by fear, or by fever; and in this way the hairs may be partially strangled, preventing the rise of their colouring matter, and of course turning them grey; or they may be cut off or snapt short on their exit from the skin, and the roots only left behind, but wholly confined and kept out of view below the skin, the consequence of which will be baldness. As, from various causes, the skin strangles or destroys the hair, the remedies which can remove this state of the skin will be the most likely to succeed in effecting a cure.

2.—RELAXATION OF THE SKIN.

We have just said that one of the chief causes of baldness is the contraction of the pores of the

skin, which cuts off or snaps short the hairs at their exit, and leaves only the roots behind, but wholly confined and kept out of view below the skin. It will also be necessary to remind you of the fact, that the hairs do not rise perpendicularly from their roots, but pass very obliquely, and at an acute angle, through the two outer coats of the skin, serving to bind these down to the inner coat, as if Nature had used the hairs for sewing thread, and hence the difficulty of pulling them out. On these facts, taken in conjunction with the structure of the roots of the hair, we have already shewn how baldness may arise from causes which produce an unnatural contraction of the skin; and we now take up the converse of the position.

People are often heard to complain of their hair—not falling off—but *coming out* in great quantities whenever it has been combed or brushed. By observing them narrowly or inquiring farther, it will be found that the complainants are of a weak or relaxed constitution, affected with indigestion, consumptive, nervous, or bilious; or that they have been weakened by intemperance or long illness. It frequently, for example, occurs among women who have had a tedious confinement in child-bed, or to robust men who have been long confined with fractured bones or other injuries. It is still more common in the weakness remaining

after a severe fever, for the whole hair to fall off, or come out; and even in women, with whom baldness, if not altogether unknown, is rare, this temporary loss of the hair is common.

The cause in all those cases is very clear, though we are not aware that it has hitherto been mentioned in books. The skin, being under the influence of the whole system, is weakened in consequence of the general disorder, and, instead of maintaining its natural healthy tone and firmness, becomes relaxed and loose. The pores also become enlarged, and perspiration much more abundant; for it is almost a uniform circumstance, that those whose hair is coming out, or has come out from relaxation, are prone to sweat on the least exertion or exposure to heat.

The skin, accordingly, having become relaxed from the causes we have just mentioned, the firm interlacement of the hairs with it is partly destroyed, and they have consequently little to hold them except their own roots. Now, by pulling out a hair with the root, and examining it, you will at once see that the root can have extremely little power of retaining it, as the root is soft and pulpy, and, besides, it is naturally fixed in the softer portion of the skin, or, as some anatomists say, in the fat immediately underneath it. The firmness and tone of the outer skin being therefore relaxed, and

the hairs owing their chief stability to this, it is not wonderful that they should be loosened and come out.

From these plain principles, it will at once appear, that, as remedies for baldness or thin hair, arising from debility and relaxation, nothing can be more improper than the hair oil usually applied, as oil of any kind cannot fail to increase the relaxation of the skin. We wonder, indeed, how the proprietors of the expensive nostrums, puffed off with this view, have so long been able to gull the public with so barefaced a hoax, as a few trials must demonstrate the truth of what we have now said. If the patient, then, is prone to perspire, particularly on the head; if there be general weakness, indigestion, nervous or bilious ailments, or other symptoms of infirm health and shattered constitution, avoid, we advise you most earnestly, all oils and greasy applications, however much lauded and puffed by those who are interested in their sale.

3.—DECAY OF THE ROOTS OR BULBS.

Towards the decline of life, the hair feels the influence of the general obliteration that occurs in almost all the exterior vessels. It first ceases to be supplied with colouring matter; the internal pulp dies, the external part only remains, and the

hair of the head turns grey or white; that of the beard and other parts follows. This decay, however, admits of innumerable varieties, according to the freshness or falling off in individual constitutions. In some men it is observable at the age of thirty, and in rare cases even ten years earlier; in others at forty, fifty, or sixty. A multiplicity of causes, originating from the passions and affections of the mind, diseases, food, &c., will produce this premature old age of the system, indicated by decay of the hair.

At an uncertain period, after the hair has become white, it falls off; then the small bag, which contained the root, is obliterated by degrees, and finally disappears. I have examined, says M. Bichat, several bald heads minutely after death. The skin of the scalp was remarkably smooth on the internal surface, although it had been cleared of all fat and cellular substance; not one of the numerous prolongations formed by the ducts can possibly be traced, after the hair they contained has been removed. I have also, continues M. Bichat, dissected a subject who had become completely bald in consequence of a putrid fever. In this subject, all the bulbs were left perfectly unimpaired; and, in the bottom of the bulbs, even the rudiments of new hair were already observable. There is a difference, therefore, it should seem,

between the fall of the hair in old age, and that proceeding from disease. In the former case every thing dies, because the vessels which produce the root cease to supply it with fluids; whilst, in the latter case, the hair only falls, and the bulb or root remains healthy.

The different changes which the hair, the skin, and all the exterior organs of the body undergo by age, proceeds entirely from the laws that overrule nourishment, and not from the action of exterior bodies upon these organs. This forms an important distinction between organic bodies and those which are inorganic. The latter have two different ways of wasting, by the contact of exterior things: one mechanical, by rubbing, tearing, &c.; and another chemical, by combining with substances, such, for instance, as air, the divers principles of which admit of being combined in a thousand different ways, whence both its nature, and that of the different forms it comes in contact with, are changed. All inorganic bodies grow old, in this sense of the word. After a certain time they lose their former appearance. Let us only observe our public buildings, stuffs of every description, paintings, engravings, grounds, metals, stones, &c., every thing, in short, which in the arts, manufactures, commerce, sciences, and necessaries of life, are composed of inert substances, whether these

substances have never been animated, or, having enjoyed life, could not exist without it, as the solid parts of the vegetable creation, the bones, horns, as well as the hair of animals, &c.; every thing in nature, in short, must ultimately bear the marks of the rude hand of time. Every thing grows superannuated—is stripped of its original lively appearance. Every thing outwardly decays as well as inert organized bodies; but, as the surrounding forms only have acted in respect to the former, the inward part has still retained its youth, when the exterior is already old, if we may be allowed such expressions. Thus, we find that the massy rock, the exterior of which, blackened by time, still retains inwardly the appearance it was possessed of in the very early days of the creation: internal organs, on the contrary, both in animals and vegetables, will decay in the progress of time. Age stamps the internal as well as the external organs with marks of decay. Surrounding bodies act effectually upon us: they actually impair life, as it were; but they act as stimulants, by exhausting sensibility and contractibility, and not by combining from mechanical contact and friction. The tongue is sufficient to make this distinction obvious. At the sight of a new building, of a new dress, of a landscape newly painted, the expression of youth is never used. Why then

do we say, an old building, an old stuff, &c.? These expressions may pass as metaphors, but they cannot possibly express a state similar by its nature to that of an old animal, or an old plant.

GROWTH OF THE HAIR AFTER DEATH.

We have more than once in the preceding pages alluded to the generally-received opinion that the hair continues to grow after death. M. Bichat says he is rather inclined to believe that we are somewhat destitute of proofs respecting this singular phenomenon. He affirms, however, that he has instanced an actual extension in the beard of a head he had carefully shaved, and had submitted to maceration in a cellar during a whole week. An attendant in the dissecting rooms, who had prepared a number of heads for skeletons, assured Bichat that he had often made a similar remark when the progress of putrefaction was prevented for some space of time. Another positive fact is, that the growth of the beard is not in a direct ratio with the vital powers: in diseases by which these powers are depressed, it grows as much as in those characterised by a general increase of these powers. This is often observed in hospitals, where the effects of an inflammatory fever, a putrid, a slow nervous one, &c., may often be compared. Why should not the hair also retain, after ge-

neral death, sufficient power to grow, since the lymphatic vessels retain sufficient power to absorb?

MARK OF CURABLE BALDNESS.

One of the most usual causes of baldness being, as we have seen, a hardening or acquired insensibility and thickening of the skin, whatever can be found to remove this affection will most certainly make the hair grow again even on a bald part, so long as the bulbs remain vigorous and undecayed. As a mark, by which it may be ascertained whether the skin has not entirely lost its tone, we give you the following, which has been confirmed by considerable experience:—Rub the bald part smartly with the hand for a minute or so, and if it become easily red, there is hope for a cure; but if it remain obstinately white and unaffected by the friction, it may be pronounced incurable. This is founded on the principle, that the more irritable the skin is, it possesses the more life, and has the greater chance to be brought back to the freshness of boyhood; while, on the other hand, the less irritable and the more dead it is, the hopes of rendering it soft, and permeable to the hair again springing from its roots, must be less sanguine.

PREVENTIVES AND REMEDIES FOR BALDNESS.

When the hair is observed to be growing thin, and losing its former luxuriance, it will be proper to ascertain the cause, before any measure is resorted to, by way of prevention or remedy: for it may be perceived, from the statement which we have just given of these causes, there may be some danger of injuring, rather than benefiting the growth of the hair—the loss of which is threatened. For example, in a relaxed state of the skin, indicated by copious perspiration, or a tendency to corpulence in the system, or by nervous weakness, what could be more preposterous than Russian oil, Macassar oil, bear's grease, or any other relaxing application; and yet these are the very things which are universally resorted to, though the only effect they can possibly have, will be to hasten the fall of the hair, by increasing the relaxation of the skin. Should the hair, therefore, be observed to come out much in combing or brushing it, avoid all such oils and pomatums as those which we have just mentioned.

On the other hand, when there is a harsh, dry, contracted skin, and when the bulbs are beginning to decay for want of a supply of nourishment, because the small blood-vessels which carry it are, for the same reason, cramped and obstructed in

their course, and the current of blood is impeded, oils may so far tend to relax the skin and do good; but there is something more required than this. There must be a stimulus to rouse the vessels from their torpor, and quicken the current of the blood. Mild oils, therefore, and bear's grease, are of no avail at all when applied alone, and without combination with some stimulus; something to bring a colour into the skin; that is, a fresh supply of blood, from which alone the hair can be nourished. These are the philosophical principles on which we ground our directions, and they are, we conceive, beyond the refutation of any empiric or monopolist, who may find it his interest to put them down. They are founded on reason, on experience, and on science, and will bid defiance to attack.

It is much easier, however, to lay down right principles, than to follow them up in practice; and we cannot promise so unconditionally as your advertisers do, to give receipts for oils and waters which will make hair grow on the palms of the hands, and, if care be not taken in its application, will be apt to cause the brow, and even the cheeks, to be covered with hair. We must bound our hopes within something less miraculous and improbable, which shall soften the skin if it be hard, and stimulate it at the same time; and if it

be relaxed, shall also at the same time stimulate and strengthen it. The only thing which we have heard of as answering these conditions, and which we have by trial and experience found to be successful, is the Palma Christi oil of the West Indies, which, as yet, is but little known in this country as a promoter of the growth of the hair and a preventive of baldness, but has long been used for these purposes with success in the countries where it is produced. It has lately, however, been making its way in this country, in consequence of being noticed in some of our periodicals. One thing distinguishes it from all other oils, and gives it the superiority which we have described,—it is a brisk stimulant, without the aid of onion juice, and other deleterious and poisonous trash, so often put in the usual hair oils. It both, therefore, softens the skin, stimulates the blood-vessels which nourish the hair, and gives it an additional gloss. We should not have ventured to praise its effects so much, were it not that we cannot be accused of possessing the least interest in its sale, which is open to all the world, and in no private hands; and we have no doubt it will soon be kept by every perfumer, though at present it can only be had of chemists, &c.

As our readers will naturally wish to see a collection of receipts for the various sorts of hair oils

and hair waters, however useless, (*innocent*, we prefer to say,) or injurious they may be, we shall here spend a page or two to gratify them. We shall begin with that which has long obtained a high reputation in popular prejudice,—we mean

BEAR'S GREASE.

We marvel exceedingly how this disgusting stuff ever became popular, unless it might be, perhaps, from the far-fetched analogy of the bear being a very hairy animal, and that its grease would therefore effect miracles. We are certain it could never have got into decent company, much less obtained a place on the fashionable toilette, without the substitutes and adulterations palmed on the public by the venders; as we shall soon convince the reader by a description of the genuine bear's grease, contrasted with the stuff usually sold as such.

There are two sorts of genuine bear's grease; one of the consistence of thick olive oil, which is procured by boiling from the fat about the caul and intestines of the animal; the other much harder, and in appearance like frozen honey, procured from about the kidneys. Now it is to be remarked that both the sorts, even when fresh, stink intolerably; "which," says Lillie, "is perhaps the reason that but very little of it is im-

ported from the bear-countries, that it is seldom used, and often thrown away as soon as it is smelt." Even of this very unfragrant and nasty stuff, it is difficult to obtain the genuine sort, unless the perfumer, when a bear is killed, takes pains to stand by to see the caul and kidney fat taken out, tied up, and cleansed, and in that state puts it up for use. Some tell us in their advertisements and bills that they do so; but it is much more probable, we think, that they throw away the stinking grease, which all the perfume of Arabia will scarcely sweeten, and substitute in its stead the grease of dogs or goats; or in the case of those buyers who pretend to be judges of the true bearish odour,—old, rancid, yellow hog's lard, which has acquired, by being rusty, a proper shade of yellow, and a sufficient perfume, will pass off with great *eclat* as genuine bear's grease. When you do happen to have some genuine bear's grease, and are determined to use it, though it should make you smell like a bear, and though it should weaken the roots of the hair by its relaxing property, you should mix it with half the quantity of fresh beef marrow, as directed by M. Bertrand in his "Perfumeur Imperial," to give it more consistence, and temper its unpleasant oiliness. If you want it still more consistent, you

must melt it in a vessel placed in boiling water, with a fourth part of the best wax.

FRENCH POMATUM.

Into a proper vessel put two pounds and a half of prepared hog's lard, with two pounds of picked lavender flowers, orange flowers, jasmine, buds of sweet briar, or any other sweet scented flower, or a mixture according to your choice, and knead the whole with the hands into a paste, as uniform as possible. Put this mixture into a pewter, tin, or stone pot, and cork it tight. Place the vessel in a vapour bath, and let it stand in it six hours; at the expiration of which time, strain the mixture through a coarse linen cloth by means of a press. Now throw away the flowers which you have used, as being useless, pour the melted lard back into the same pot, and add four pounds of fresh lavender flowers. Stir the lard and flowers together while the lard is in a liquid state, in order to mix them thoroughly, and repeat the first process. Continue to repeat this till you have used about ten pounds of flowers.

When you have separated the pomatum from the refuse of the flowers, set it in a cool place to congeal; pour off the reddish-brown liquor or juice extracted from the flowers, wash the pomatum in several waters, stirring it about with a

wooden spatula to separate any remaining watery particles, till the last water remains perfectly colourless. Then melt the pomatum in a vapour bath, and let it stand in it about an hour in a vessel well corked: then leave it in the vessel to congeal. Repeat this last operation till the watery particles are entirely extracted, when the wax must be added, and the pomatum melted for the last time in a vapour bath in a vessel closely corked, and suffered to congeal as before. When properly prepared, it may be filled into pots, and tie the mouths of them over with wet bladder to prevent the air from penetrating. This pomatum will be very fragrant, and form an excellent preparation for improving the gloss and luxuriance of the hair.

HARD POMATUM.

Take six ounces of common pomatum, and add to it two or three ounces of very clean white wax, scraped very fine. Melt the whole together in an earthen pan, which is immersed in a larger one, containing boiling water, over a clear and steady fire. When properly incorporated, take it off, and keep stirring it with a spatula until it be about half cold or congealed, and then put it into small pots, as before directed, or make it up into rolls of the size of the little finger. This pomatum

may be scented with whatever agreeable flavour the perfumer pleases. It will keep good, even with less wax than has been above directed, in the East Indies, or any other warm climate, for a long time.

SOFT POMATUM.

Take twenty-five pounds of hog's lard, eight pounds of mutton suet, six ounces of oil of bergamot, four ounces of essence of lemons, half an ounce of oil of lavender, and a quarter of an ounce of oil of rosemary. These ingredients are to be combined in the same manner as those for the hard pomatum, and kept in pots for use.

ORANGE POMATUM.

Take five pounds of hog's lard, one pound of mutton suet, three ounces of Eau de Portugal, half an ounce of essence of Bergamot, four ounces of yellow wax, and half a pound of palm oil. Mix as directed for hard pomatum, and put it into small gallipots, which must be well covered.

Another way is to melt, in a water bath, the quantity required of common pomatum, and add an equal weight of fresh orange flowers. Let the whole remain for four hours, when it is to be passed through a linen cloth by pressure. Put this with a fresh quantity of the flowers again

into the water bath, and continue to repeat the process in this manner for five or six times, when it may be set aside to cool, and in fifteen days remelted in the water bath, and put into pots.

ROYAL HONEY-WATER.

There are many varieties of receipts for this sort of hair water. The following, given by Lillie, is one of the best: take twenty-eight pounds of coriander seeds, ground small in the starch mill; twenty-eight common bunches of sweet marjoram, in flower, dried, and stripped of the twigs; one pound of calamus aromaticus; one pound of yellow saunders; and one pound of orange and lemon peel. Beat the three last substances separately into a gross powder; mix the whole, and put them into a sixty gallon copper still, and add to them twenty gallons of proof spirits, and the same quantity of rain or spring water. Have all the joinings of the apparatus well luted, and leave the ingredients in this state without fire for forty-eight hours: at the end of this time begin to distill by a very gentle heat, lest the flowers and seeds, which are very light, should rise suddenly in the still head, stop up the worm, and endanger the whole work. Increase the fire after the first half hour, and keep it regular thereafter, till the termination of the process. Draw off about twenty-

six or twenty-seven gallons, or continue so long as the spirit will burn, by the application of a lighted paper to a small quantity of it in a saucer. Next day, when the still is perfectly cold, let it be well cleaned out, saving the remaining ingredients for further uses. Now return into the still the spirits drawn off the preceding day, and add thereto ten or twelve gallons of water: then put in the following ingredients, bruised and mixed as directed, namely, fourteen ounces of nutmegs, four ounces of cloves, twelve ounces of cinnamon bark, eight ounces of pimento, and forty ounces of cassia lignum. These are to be separately broken or bruised in an iron mortar, until they are about the size of small peas. If there be any dust, it must be sifted from them before they are used. When the above are broken, take forty ounces of storax, forty ounces of gum benjamin, forty ounces of labdanum, forty vanilloes by tale; break and bruise these also, but make as little dust as possible. Put the dust of these and the foregoing together into a coarse muslin bag, which is to be hung in the still, so that the liquor during distillation may extract its virtues. These are to remain in the liquor in the cold state for forty-eight hours, attention being still paid to luting and stopping close as before. At the end of this time kindle the fire, and work off (slowly at first) as before,

until twenty-six gallons are distilled. Mix all the different runnings together in a copper vessel kept for this purpose only; and as for what may come over after the twenty-six gallons, it must be kept for other purposes. Now add to this twenty-six gallons drawn off by the second distillation, in a copper vessel that will hold forty gallons, six gallons of orange-flower water, and eight gallons of rose water, fresh made; then mix together ten ounces of spirit of musk, ten ounces of spirit of ambergrise, half an ounce of good essence of bergamot, and half an ounce of oil of rhodium. When properly mixed, put all these into the copper vessel, and stir the whole well together. It would be better, however, if these strong perfumes were put in before the orange-flower and the rose water. Add to all these a quart of milk which has stood for a night, and which has had all the cream taken clearly off; then agitate and mix the whole well together, and stop the vessel up close, till the time it is to be used.

There ought to be a lock-cock fitted to the jar, to prevent accidents: this should be placed fully two inches from the bottom, in order that the milk and other impurities may fall to the bottom, and not flow through into the vessels in which it is drawn off for use.

If this honey-water be made in the spring, about

March or April, and if the weather be fair, it will be quite fined down in the course of a month; that is, if it be not opened nor disturbed. When it is found, by drawing off a little in a glass, that the milk, &c. have fallen to the bottom, the whole may be drawn off into clean well-seasoned stone or glass bottles, or, what is still better, into another copper jar. If this honey-water be twenty years old, so much the better.

BOTANIC WATER FOR THE HAIR.

Take a handful of southern-wood leaves, a handful of leaves of box, two pints of boiling water, and infuse till a strong tea is formed, wash the head with it morning and evening for a month. This is said to be very powerful, but we have no experience of its efficacy.

LINIMENT FOR BALDNESS.

Take half an ounce of spirit of rosemary, half an ounce of the best honey, one ounce of prepared lard, four drops of oil of lavender. Mix, and rub into the roots of the hair twice a day.

OINTMENT FOR BALDNESS.

Take half an ounce of simple ointment, one drachm of balsam of Peru, ten drops of oil of pimento. Mix, and use in the same manner as the last.

PATCHED OR PARTIAL BALDNESS.

Besides the general baldness just described, it often occurs in patches both on the scalp and beard, the skin being left very white, smooth, and shining, and the rest of the hair suffering no change in colour or thickness. Sometimes this partial baldness commences at the back part of the head, and winds in a line not exceeding the breadth of two fingers towards each ear, and occasionally towards the forehead. It is sometimes cured spontaneously, and sometimes by medicine; in which cases, when the hair begins to grow again, it is of softer texture and lighter in colour than the rest. Dr. Bateman is of opinion that it has some connexion with ringworm, as it has been observed among children exposed to this infection; but as no eruption, even according to his own account, can be traced, we think his doctrine must be rejected as conjectural and unfounded.

"If the scalp," says Bateman, "is cleared by constant shaving, and at the same time some stimulant liniment be perseveringly applied to it, the bald patches may at length be remedied, and the hair be brought to its usual strength and colour. Some of the more active ointments may be employed with friction; but liniments containing an essential oil dissolved in spirit—two drachms, for

example, of oil of mace in three or four ounces of spirit of wine, or prepared oil of tar, camphor, turpentine, &c., are more efficacious." We should prefer pouring cold water over the head every morning to most other things, though all applications in many cases are equally unavailable. According to Celsus, it was the practice of the ancient Romans sometimes to scarify the bald places with a knife, or anoint them with stimulants mixed with oil, particularly burnt paper. He thinks daily shaving is preferable, as it lays bare the small roots of the hair. The shaved parts, he recommends to be rubbed frequently with copperas.

VIII.—DISORDERS OF THE HAIR.

We shall comprehend under this division several diseases which involve the hair of the scalp, either in a primary or a secondary sense. To several of these, such as plica polonica, we have repeatedly alluded; but we think that this work would be imperfect without a distinct notice of each, with the remedies that have been found from experience to be most successful. We shall begin with a very singular variety of the disorders of the hair, called by Dr. Good

MISCOLOURED HAIR.

As the hair receives its colour from the same source as the colouring membrane of the skin, whatever varies the character or colour of the one will in the same way influence the other. From this source, as may be inferred from what we have said above, the hair obtains iron and sulphur, as also the blood-red oil, which is procured by digestion from red hair, and forms a third constituent, since it does seem, from the experiments of Vauquelin, that this is a result of the iron. The greyish green oil, which this excellent chemist has been also able to extract from black and other dark kinds of hair, is another distinct principle; and, from an excess or deficiency, or a peculiar combination of the colorific constituents, we are able to account for some of the extraordinary hues which the hair is occasionally found to exhibit, though others seem to elude all explanation. The chief varieties they display are the following: hair of a blue colour, or changed from another colour to a black; or of a green colour, of which we have had very numerous examples; or spotted, like the hair of a leopard,—of this the examples are more common than of any of the preceding varieties.

Many of these singular hues are said to have

followed upon some natural colour of the hair, and in some instances suddenly. This is particularly the case with the second variety; or that in which the hair has abruptly become black, which seems to have occurred as a result of fever, of exsiccation, and of terror. Schurring gives a case in which the beard, as well as the hair, was transformed from a white to a black.

We have observed above, that one of the causes of white or rather hoary hair, is a dry, shrivelled, or obstructed state of its bulbs, by which the coloriffic matter is no longer communicated. And it is possible that as both terror and fevers, and many other violent commotions, have sometimes proved a cure for palsy, they may occasionally produce a like sudden effect upon the minute vessels of the bulbs of the hair, remove their obstruction, or arm them with new power, and thus reenable them to throw up into the tubes of the colourless hair the proper pigment of colour.

PLICA POLONICA.

We have very frequently mentioned and alluded to this disorder in the foregoing pages. It is described by Dr. Good, in his Nosology, to consist in the hairs being increased in thickness and vascularity, inextricably curled and matted by the secretion of a glutinous fluid from their roots.

It is supposed to afford a complete proof of the vascularity of the hair; but this, we think, may be fairly disputed. Vauquelin ascribes it to a superfluous excretion of the fluid that nourishes them; but there must be something more than this, there must be also an intumescence or dilatation of the vascular tunic of the hairs, since their capacity is always augmented, and in some cases so much so as to permit the ascent of red blood, in consequence of which they bleed when divided by the scissors.

Most authors ascribe it to uncleanliness, which is no doubt the ordinary exciting cause, though there seem to be others of equal efficiency. It is also generally affirmed to be contagious. But as Dr. Kerckhoffs strenuously maintains the contrary, after a very minute attention to the complaint in Poland itself, and more especially after having endeavoured to inoculate first himself, and then two children, from the matter issuing from the bulbs of hair, pulled for this purpose from a boy who was suffering from it in the most loathsome manner, the symptoms must be given up.

Dr. Kerckhoffs reduces plica to a much simpler principle than it has hitherto been described under, and strips it of most of the most formidable features by which it has been characterised, particularly its connexion with hectic fever, or any idio-

pathic affection of the brain. He regards it as a mere result of the customs common among the lowest classes of the Polonese, of letting the hair grow to an immense length, of never combing, or in any other way cleaning it, and of constantly covering the head with a thick woollen bonnet or leathern cap. "And hence," says he, "while the rich are in general exempt from this disease, it is commonly to be met with among the poor alone, who wallow in filth and misery, and particularly among the Jews, who are proverbially negligent of their persons." He contends, in consequence, that it is no more endemic to Poland than to any other country; and that nothing more is necessary to effect a cure than general cleanliness, and excision of the matted hair.

The first person he saw labouring under this disease, and he gives the case as a general specimen, was a boy from fifteen to eighteen years old, in a miserable poor village in the neighbourhood of Posen; most offensively filthy, lying in a dark hole, and stinking beside the beasts. He had black hair, very long, very coarse, and braided into thick plaits of a twelvemonth standing. His head was covered with grease, his brain was greatly affected, and he was complaining of terrible head-aches. The medical practitioner that attended him opposed a removal of the hair, from a

vulgar belief that the common outlet of morbid humours being thus cut off, such humours would flow rapidly to the brain, and produce apoplexy, or some other cerebral affection. At length he consented that after a brisk purge the process of cutting the hair should commence, but only to be proceeded in by degrees; the length of two fingers was therefore taken off; and this producing no mischief, it was again shortened to the same extent two days afterwards; and in this manner the whole was cut off in about twenty days. After this the patient was allowed to comb his head a little, and wash it with milk; a few bitters and other tonics were prescribed for him, and he was very shortly restored to perfect health.

Admitting Dr. Kerckhoffs' explanation of this disease to be correct, it is somewhat singular that the same explanation has never hitherto been given by the most intelligent and most celebrated Polish, or even German physicians; as it is also that the disease should be unknown in other countries, where the hair is, in like manner, suffered to grow without cutting, and where as little attention is paid to cleanliness.

Hence Sinapius, and numerous other writers, deny uncleanliness to be the only, or even the ordinary cause. They contend for a predisposition in the habit, and affirm that under such predis-

position any local accident, and a variety of affections in remote organs, may become exciting causes. In the Ephemera of Natural Curiosities is a case in which it seems to have been produced by a wound in the head. Vehr relates another, in which it followed, together with jaundice, upon a suppression of the catamenia for three months. It is also occasionally a sequel of several of the varieties of dandriff.

Cutting off the hair, however, though generally supposed to exasperate the disease, or to lead to some secondary evil, does not appear to produce these effects; and hence Vieut recommends the use of the scissors whenever the hairs bleed. It is far better, with Dr. Kerckhoffs, to use them before hand.

A similar affection to Plica Polonica is mentioned in the Quarterly Journal of Foreign Medicine, for January 1823. In the Hospital of the Royal Guards at Paris was a private soldier, who had received a violent kick from a horse on the back of the head. The excitement in the brain thence produced was extreme, and could only be kept under by almost innumerable bleedings, both general and local. Amongst a series of phenomena produced by this state of preternatural excitation, the sensibility acquired by the hair was immediately felt, and cutting it gave exquisite pain, so

that the patient would seldom allow any one to come near his head. When dressing his wounds, Baron Larrey, to shew that this was not merely a pretence of the patient, gave a hint to one of the assistants to clip one of the hairs. This, as he was standing behind, he was able to do unperceived; and on the instant, the soldier broke out into a volley of oaths, and afterwards of complaint, and it was some time before he could be appeased.

SCALES.

The scales, which are often made a subject of complaint, as tending to injure the beauty of the hair, are the worn fragments of the scarf-skin, that are raised by the comb or brush, and dispersed among the hair. Nobody is or can be altogether free from this; but in some persons it is much more prominent and troublesome than in others. There cannot be a doubt that it will prevail according as the individual is declining in years or in vigour; and, in one word, from the same causes which produce baldness and grey hair, such as the predominance of the phosphat of lime in the system, the obstruction or obliteration of the small blood vessels of the skin, &c.

The best remedies for this affection (which frequently gives much uneasiness, though it is not of very serious moment) are whatever will strengthen

and give tone to the skin. The oils commonly used for the hair are therefore bad; but the Palma Christi Oil will prove in most cases very beneficial, in consequence of its tonic and stimulant qualities. Pouring cold water over the head every morning will also be an excellent tonic for the skin. Combing and brushing, when performed too frequently, are apt to increase the evil, by fretting the skin and rubbing off the sound portions which otherwise would have had no tendency to scale. When the scales are once detached, a small ivory comb will remove them most expeditiously; but great care must be taken not to press so hard with it as to form more scales.

DANDRIFF

When dandriff attacks infants, it exhibits minute scales, and when it appears in advanced age, scales of a larger diameter. It shews itself at the upper end of the forehead and temples, as a light whitish scurf, set in the form of a horse-shoe; on other parts of the head there are also exfoliations of the skin, somewhat longer, flat, and semi-pellucid. Sometimes, however, they cover nearly the whole of the scalp, are imbricated in position, or with an overlap, as in tiling.

Little attention is necessary to this complaint beyond that of cleanliness and frequent washing:

where, however, the scalp is attacked, it is better to shave the head, when the scales may be removed by a careful use of soap and warm water, or by an alkaline lotion. This is the more expedient, because the scales in this situation are often intermixed with perspirations; and pustules, containing an acrimonious lymph, are formed under the incrustations; and in this way it may, and occasionally does, degenerate into ringworm.

It may be considered generally as indicating debilitated action of the vessels of the skin, by which a delicate and ill-formed production of this substance is effected. The causes of this local debility of these vessels are sometimes constitutional, and in adults it often follows great and exhausting exertion, and consequent debility of system. When this state of things is manifest, of course constitutional remedies of a tonic kind should be had recourse to. The exhibition of bark, a better mode of living, and less labour, the use of cold sea-bathing, &c., constitute what is usually required under such circumstances. It sometimes continues after the cause originally producing it has ceased to exist; in which case, supposing the cause to have been debility, as above alluded to, which may subsequently have been removed, local applications form the chief grounds of dependence. The very best among these is diluted spirit, in

which a few grains of the acetate of zinc have been dissolved. With this lotion the part affected may be bathed morning and evening with a soft sponge, the patient availing himself of the sedative effects of the evaporation of the spirit from the surface.

Where the skin is originally of a preternaturally irritable kind, the scales may be thicker, and much itching may prevail; in which case, it may perhaps be advisable to employ the warm bath, or the sulphur vapour bath.

When dandriff occurs on the scalp of children, after the hair has grown pretty thick and strong, great necessity exists for strict attention to cleanliness and frequent washing. Cases no doubt have occurred in the children of the lower classes of people, where the accumulation of scurf had been the primary cause of confirmed ringworms. Hence, if common attention to cleanliness be not adequate to the complete removal of the scurf, it will be proper to remove the hair, and make use of the sedative evaporating lotions prescribed.

DRY SCURF.

This seems to be a disorder much the same as the preceeding; but it is sometimes, according to circumstances, confounded with some of the following. Sometimes it is found in patches, and at other times it is more spread and diffused. It is, how-

ever, not contagious, but is apt to be produced in women, or in children, by sudden chills after being much heated. Cleanliness is the best cure which has hitherto been discovered.

RINGWORM OR SCALD HEAD.

This troublesome and unmanagable disorder usually appears in distinct and even distant patches of an irregularly circular figure, upon the scalp, forehead, and neck. It commences with clusters of small light yellow pustules, which soon break and form scabs over each patch, which, if neglected, become thick and hard by accumulation. If the scabs are removed, however, the surface of the patches is left red and shining, but studded with bright elevated points, in some of which minute globules of matter again appear in a few days. By these repetitions of the eruption, the incrustations become thicker, and the areas of the patches extend, often running together and becoming confluent, if the progress of the disease be unimpeded, so as to affect the whole head. As the patches extend, the hair covering them becomes lighter in its colour, and sometimes breaks off short; and as the process of pustulation and scabbing is repeated, the roots of the hair are destroyed, and at length there remains uninjured only a narrow border of hair round the head.

This very unmanageable form of ringworm generally occurs in children of three or four years old and upwards, and often continues for several years. Whether the circles remain red, smooth, and shining, or become dry or scurfy, the prospect of a cure is still distant; for the pustules will return, and the ulceration and scabbing will be repeated. It can only be considered as about to terminate, when the redness and scaling disappear together, and the hair begins to grow of its natural colour and texture.

The disease seems to originate spontaneously in children of feeble and flabby habit, who are ill-fed, uncleanly, and not sufficiently exercised; but it is principally propagated by contagion, that is, by the actual conveyance of the matter from the diseased to the healthy, by the frequent contact of the heads of children, but more particularly by the use of towels, combs, caps, and hats. Whence the multiplication of boarding-schools appears to have given rise to an increased prevalence of this disease among the more cleanly classes of the community at the present time. For such is the anxiety of parents to regain the lost years of education, that they too often send their children to these schools when capable of communicating the infection, although supposed to be cured; against

which no vigilance on the part of the superintendant can afford a sufficient security.

Local treatment is particularly applicable in this species of ringworm. While the patches are in an inflamed and irritable condition, it is necessary to limit the local applications to regular washing or sponging with warm water, or some softening fomentation. Even the operation of shaving, which is necessary to be repeated at intervals of eight or ten days, produces a temporary increase of irritation. At this time, a light linen cap may be worn, and should be frequently changed; while all stimulants, lotions, and ointments, which tend only to aggravate the disease, should be proscribed.

In the progress of the disorder various changes take place, which require corresponding variations of the method of treatment. By degrees the inflammatory state is diminished, and a dry scaling and scabbing ensue; but again the eruption breaks out, and the patches become again red and tender; or, in some cases, without much redness, there is an acrimonious oozing of matter, with considerable irritability of the scalp. In other instances the surface becomes inert, and in some degree torpid, while a dry scaly scab constantly appears, and active stimulants are requisite to effect any change

in the disorder. It is very obvious, as Dr. Willan used to remark, that the adoption of any one mode of practice, or of any single specific, under these varying circumstances of the disease, must be unavailing, and often extremely injurious.

In the more irritative states, the milder ointments, such as those prepared with cocculus indicus, with the submuriate of mercury, the oxide of zinc, the superacetate of lead, or with opium, or tobacco, should be employed; or sedative lotions, such as decoctions or infusions of poppy heads, or of tobacco, may be substituted.

Where there is an acrimonious discharge, the zinc and saturnine ointment, with the milder mercurial ones, or the ointment of calomel, or a lotion of lime-water with calomel, are advantageous.

According to the different degrees of inertness which ensue, various well-known stimulants must be resorted to, and may be diluted, or strengthened and combined, according to the circumstances. The mercurial ointments are often effectual remedies; and those prepared with sulphur, tar, hellebore, and turpentine, &c., separately, or in combination, occasionally succeed, as well as preparations of mustard, staves-acre, black pepper, capsicum, galls, rue, and other acrid vegetable substances. Lotions, containing the sulphates of zinc and copper, or the oxymuriate of mercury

in solution, are likewise occasionally beneficial. In the very dry and inert state of the patches, the more caustic substances are often extremely successful. A lotion, containing from three to six grains of the nitrate of silver in an ounce of distilled water, sometimes effectually removes the disease in this condition. Touching the patches with the muriated tincture of iron, or with any of the mineral acids, slightly diluted, in some cases, removes the diseased skin, and the new one assumes a healthy action. The application of a blister, in like manner, sometimes effectually accomplishes the same end. But, in many instances, the effect of these renovations of the skin is merely temporary, and the disease returns in a week or two upon the new surface.

Professor Hamilton of Edinburgh, who considers the ringworm of the scalp as "quite different from the scald head," affirms, in a late publication, that he has seldom failed to cure the former, by the use of Banyer's ointment. For delicate children, he dilutes this ointment with an equal portion of simple cerate, and sometimes alternates the use of it with that of common basilicon.

These various applications are enumerated, because not one of them is always successful singly, even under circumstances apparently the same.

They must be varied and combined; and the best criterion, in the choice and combination of them, is the degree of existing irritation in the diseased parts, or in the general habit. The rude and severe employment of depilatories, which some practitioners have recommended, is to be deprecated, as often inflicting great injury to the scalp, and retarding, rather than expediting, the progress to recovery.

Mr. Plumbe, a recent author, in opposition to this, has strongly advocated the removal of all the hair from the diseased parts, as the only means of cure; yet we cannot but think that the pitch plaster, which is sometimes used, is a most barbarous measure.

LEPROSY.

After a great deal of mystery and uncertainty as to what was in ancient times, and particularly among the Jews, denominated leprosy, we think Dr. Good has clearly shown that there are three distinct species which require consideration,—the dull white or common leprosy, the dusky or black leprosy, and the bright white leprosy.

The dull white leprosy is described as forming scales, circular and definite, of a glossy but dull white, preceded by a reddish and glossy elevation of the skin, surrounded by a dry, red, and slightly

elevated border, scattered, and sometimes confluent, and irregularly exfoliating and being reproduced. This sort is not contagious, but is a consequence of unclean habits in those who are much exposed to dust, such as millers, bakers, plasterers, bricklayers' labourers, dustmen, coal-heavers, and chimney-sweepers; among which classes, in this country, it is by no means rare. Dr. Bateman and Mr. Plumbe say it is very common among debilitated young ladies. According to the accurate description of Moses, it is not thought to penetrate deeper than the skin, nor require separation from society. "If a man," says he, "or a woman, have in the skin of their flesh bright spots—white bright spots, then the priest shall look; and behold, if the bright spots in the skin of their flesh be darkish white, it is a freckled spot that groweth in the skin, he is clean." Levit. xiii. 38, 39. Mr. Jackson says, that in Barbary this kind of leprosy destroys the eye-brows, but produces little other deformity. Forskâl, the annotator on Niebuhr, says that it does not affect the colour of the hair.

The dusky or black leprosy is characterized by glossy scales of a dusky or livid hue, without any depression in the centre. The patches are scattered, confluent, and gradually increase in size. The natural colour of the hair is not changed by

it. This disease is highly contagious. In this country it is not uncommon among soldiers, sailors, stage-coachmen, sculler-men, brewers' labourers, and others whose occupations require much fatigue, and expose them to cold and damp, while their diet is none of the best. It is not uncommon in women exposed to similiar causes. It is much more common, however, in warm countries.

The bright white leprosy, by far the most obstinate and serious, is characterized by spreading scales of a glossy white, with a deep depression in the centre, encircled with a red border, the hair on the patches becoming white or hoary: it is highly contagious. Dr. Good thinks that the white colour of the skin and the hair is probably caused by a superabundance of the phosphate of lime.

The cure of leprosy has always been looked upon as difficult and uncertain, and many things have been recommended which are far from being efficacious. Warm bathing may be tried, and particularly the sulphureous springs of Harrowgate, &c. The only internal medicines which have been found of advantage, are the infusion of bitter-sweet (solanun dulcamara) and arsenic. The solution of arsenic has often been found to succeed when every other medicine had been abandoned. The dose is five drops twice or thrice

a-day, according to the state of the stomach. It is needless to say that its exhibition must always be superintended by a skilful medical gentleman.

ELEPHANTIASIS.

In this terrible disorder, which is characterized by swelling and roughness of the skin, a fierce lion-like countenance, and hoarse voice, the hair falls entirely off—in some kinds of the disease, from the body, and not from the head; in other species, from the head also. No remedy has yet been discovered, though, as in the instance of leprosy, arsenic has been often tried.

VERMIN INFESTING THE HAIR.

We think we could scarcely make our book complete without considering this as one of the disorders incident to the hair; though it is only so in a secondary sense. There are two species of lice that infest the hair: one confined to the hair of the head; and another, called, from its form, the crab-louse, which is peculiar to the arm-pits, the eye-brows, and other parts.

The male of the common species is described by Lewenhoeck, who curiously observed its habits, as furnished with a sting, to which is owing the irritation and itching produced, and not to its bite, as is usually supposed. In the male,

the tail is rounded; in the female it is forked, and without the sting. The animal is produced from an egg called a nit, which is firmly glued to the hair on which it is deposited. Lewenhoeck imprisoned two females in a black silk stocking which he wore night and day for some time, and found that in six days each laid fifty eggs, and in twenty-four days the young ones were capable of laying eggs themselves; so that, by calculation, the two females might produce a brood of eighteen thousand in two months. In children they often give rise to ulcerations and scald head. It is remarkable that they most commonly infest those who are unhealthy and weakly, and seldom those who are strong and robust.

The other variety is seldom found except among the lowest people, or those of very uncleanly habits. It adheres so closely to the skin as to be extremely difficult to detect or dislodge, and the itching produced is intolerable. Its excrement stains the linen of a bloody colour. It is remarkable that in certain fevers, &c. they spontaneously quit the persons they had previously infested.

The most fatal poisons to all these disgusting vermin are stavesacre, the oxydes of mercury, rue, opium, angelica, laurel, saffron, pepper, tobacco, the seeds of hellebore, camphor, turpentine, &c. Calomel mixed with starch-powder, and applied with a

down puff, is the best thing for eradicating the crab-louse. But, above all other means, cleanliness will be most successful, and ought to be strictly enforced.

IX.—FASHIONS OF THE HAIR.

"What," says Madame Voiart, "can be more seducing than jet black hair, falling in undulating ringlets upon the bosom of a youthful beauty." Accordingly, the most celebrated poets, both ancient and modern, have taken delight in singing the charms which accompany fine hair, and describe it as crowning the stature with grace, and, according to the fashion in which it is worn, imprinting a different character upon the features. When the hair flows gracefully from its roots, takes the form of finely turned ringlets, and discloses the forehead, it imparts to the countenance an air of great elegance and superiority. There is often a sweet natural parting of the hair from the top of the head to the forehead, making it to flow gracefully over the temples on each side, and presenting that beautiful line which may be said to be continued in the nose, giving the contour of the features, those traits of interest which are so much admired in the heads painted by Guido and Raphael.

Among all nations, and in every age, the hair

has been considered the chief ornament of the head; and there is not a voluptuous nor luxurious scene in poetry or romance into which a description of the hair is not introduced. When Homer mentions the celebrated fair who set all Asia in arms, he always calls her "the beautiful-haired Helen." Circe is described with hair spreading over her shoulders, in rays resembling those of the sun; Amasia, with hair distilling the perfumes of myrrh and roses; and that of Venus, as diffusing around the divine odours of ambrosia. Without this ornament, indeed, the goddess of beauty, though possessed of the brightest eyes and the most fascinating charms, would appear hideous and deformed.

Yet, notwithstanding all its natural beauty, though acknowledged universally, the hair is no less subject to the caprice of fashion than dress itself. In ancient times, we have more than once mentioned that the nations who were the most polished, the most civilized, and the most skilful in the fine arts, were passionately fond of red hair. The Gauls, the ancestors of the modern French, had the same predilection, though that colour is now held in abhorrence by their descendants, who like black hair. In some districts of Africa they prefer light hair, which in China is detested. A taste for red hair, however, still exists in ex-

tensive regions. The Turks, for example, are fond of women who have red hair. The inhabitants of Tripoli, who probably learned it from the Turks, give their hair a red colour by the aid of vermilion. The women of the kingdom of Deccan also stain their hair yellow and red, as the ancient Romans did, in imitation of German hair.

A still more preposterous fashion than that of dying the hair red, was introduced, if we mistake not, during the mania for liberty that prevailed at the period of the French revolution. We allude to the crops, which, even among ladies of wealth and taste, were extensively introduced. "What!" our descendants will exclaim when they are told this, "women of a dissolute character were formerly condemned to lose their hair as a punishment; and is it possible that this privation could, in a few years afterwards, become the prevailing fashion? Females who, when they took the monastic vows, renounced the delights of life and the pleasures of the world, had their hair cut off, and in a few years the whole sex went cropped in honour of liberty. In all ages, cutting off the hair was a sign of grief, and yet the gayest nation in the world consents to be shorn of its locks. In every country, the women who devoted themselves to a life of austerity and penitence, began all their sacrifices with that of their hair, which

indicated that they renounced the art of pleasing, and the Europeans sacrificed theirs out of coquetry. What inconsistence!" Inconsistence indeed! and yet it is indisputably true, that in many countries the loss of the hair was a punishment inflicted by public authority. The Greeks and the Chactas punished an adulteress by cutting off her hair, which was not suffered to grow again for a whole year. The loss of the hair was considered by females as the greatest of misfortunes. Thus Martial, the epigrammatist, when uttering imprecations against the woman he detests, exclaims: "May the salamander, which possesses the property of making hair fall off, leave upon thy head traces of his poison; or may the unsparing razor strip it entirely, that thy mirror may exhibit to thee an image worthy of thyself!" And, if it be permitted to pass from a heathen to a sacred author, the prophet Isaiah says: "Because the daughters of Zion have exalted themselves, and have held their heads high as they walked, making signs with their eyes, and gestures with their hands; because they have measured all their steps, and studied all their attitudes, the Lord will make bald the daughters of Zion, and will pluck up all their hair." If the prophet could a few years ago have risen from the grave, and paid a visit to Paris or London, and have seen all

the ladies of fashion with their hair cropt short, would he not have supposed it to be the accomplishment of his prediction? It is true that most of them held their heads high as they walked, making signs with their eyes, and gestures with their hands; but they punished themselves with the greatest willingness and infatuation, and did not wait to be punished with the loss of their hair by Divine displeasure.

It is equally true also, that, not only in England and France, but among an infinite number of nations, the voluntary sacrifice of the hair was either a sign of grief, or a last farewell to the world and its pleasures. Bion the poet, speaking of the Loves weeping over the corpse of Adonis, represents them cutting off their hair. Pliny informs us that vestals cut off their hair, on their entrance upon their sacred office.

How many proofs, indeed, might we not adduce of the value which nations have in all ages set upon their hair. Among the Romans, those who were bald and would not wear a wig, had recourse to a method which to us appears truly extraordinary. They caused hair to be painted on their bare skull with perfumes and essences, composed expressly for that purpose. The existence of so strange a custom might, perhaps, be doubted, had we not proofs of it in the works of contemporary

writers. We shall forbear to illustrate this by a display of learning, which would appear out of place upon so light a subject; but we cannot omit the following quotation from Martial, who in an epigram on Phœbus thus addresses him: "Your counterfeit hair is a falsehood of the perfume which imitates it; and your sense, disgracefully bald, is covered with painted locks:—you have no occasion for a barber for your head, Phœbus; you may shave yourself much better with a sponge."

The Jews of old wore their hair very long, and they thought nothing too valuable to enhance the beauty of this highly-prized ornament. Josephus informs us that the guards of king Solomon had long hair floating down their shoulders, and that they every day powdered their hair with gold spangles, which glistened exceedingly when the sun shone upon them. Absalom, likewise, powdered himself with gold; and the second book of Samuel says, that when he polled his head, the hair weighed two hundred shekels after the king's weight. Very grave authors, we are told, have written large volumes merely for the purpose of discussing the weight of Absalom's hair; but the question is still undecided, and it is more than probable that it will never again be brought on the carpet.

The fashion of embellishing the hair with gold

powder, which certainly proves the high value that was set upon it, was not confined to the Jewish nation alone. Some of the Roman emperors adopted the practice, as we are informed by Trebellius, Pollio, and others, concerning the Emperor Gallienus, and by Ælius Lampridius, respecting the Emperor Commodus. Suetonius also relates, that when Nero appeared upon the stage, either for the purpose of playing on the lyre, or reciting verses of his own composition, which his soldiers with drawn sabres obliged spectators to applaud, he had his hair sprinkled with gold powder, that he might resemble Apollo. The Gauls imitated their conquerors in this, even so late as the fifteenth century. In 1475, when Charles the Bold was slain before Nancy, his conqueror, Réné, Duc de Lorraine, caused funeral honours to be paid to him. The chronicle of Lorraine says: "He was clothed in the ancient manner, wearing a long beard of gold thread frizzled; as much to mark the victory he had gained, as to imitate the fashion of the ancient soldiers."

When Rome was free and half barbarous, with virtuous though austere manners, the head-dress of the women was extremely simple; it consisted in separating the hair upon the forehead, and twisting it up behind into a knot that ornamented the crown of the head. Antique monuments prove

that such was the most ordinary head-dress of the Grecian females, who knew well in what manner to unite simplicity and grace. The hair thus set off they reunited either behind or on the fore part of the head, by a sort of knot, which the Greeks called *corymbion*, and the Romans *nodus*. Sometimes also, after tying the hair in this way, they brought it again to the top of the head, where it was fixed by a single pin.

In the progress of civilization and luxury, the head-dress became more complicated. Sometimes the natural hair, curled by a hot iron called *calamistrum*, was confined by a bandeau of gold or jewels, which separated the false hair and kept it smooth. Sometimes they parted the hair into many tresses, which surrounded the head, folded back upon itself, and was fixed by a long pin. These two kinds of head-dress, by a graceful mixture, formed a third, which united the knots upon the forehead and the tresses behind. Both Juvenal and Martial mention this mixed species. Married ladies affected to imitate the vestals, by wearing, like them, a veil which concealed their hair and descended upon the shoulders; the only difference was, that the matrons had their hair curled and arranged with much art on the forehead.

A passage in that curious book, the TOILETTE OF SABINA, by Boettiger, gives an interesting de-

tail of the different kinds of head-dressamong the Roman ladies. It describes the *nodus*, the *diadema*, and the *tutulus*, or " bourrelet," as the French would call it, a kind of knot, pad, or loop, which, when prettily made with the natural hair, they considered as the perfection of art. Ladies of rank had slaves whose sole employment was to do up this hair-knot with taste and elegance.

There were, however, so many sorts of head-dresses among the Romans, that it would not be easy to enumerate, much less to particularise them. Ovid, one of the oldest masters in the art of pleasing, ingenuously confessed that he would as soon think of counting all the acorns on an oak, as enumerate all the ephemeral fashions of the day. He mentions particularly six different sorts of head-dresses;—one, which was doubtless a very singular one, took its name from the lyre, because it consisted of two horns, similar to those of the musical instrument: it was a conquest made over the Germans, Gauls, and Belgians, already enslaved; the Romans begging, from the women of these nations, the tresses and hair knots whose arrangement imitated the horns of wild animals.

At this period the taste for fair hair became a popular mania; and hair of this colour, imported from Germany and Gaul, was sold at Rome for its weight in gold, as we are told by Chrysippus the

architect, in his work on the Palace of Scaurus. This method, however, was not always employed: the Roman beauties were afraid of accidents in wearing false hair; and they had not forgot the ridicule with which Horace had assailed old Sagana, for the loss of her peruke when coming out of the bath. They had recourse, therefore, to soaps and dyes for changing their dark locks to a lighter tint.

With the Romans the toilette was an important affair. They employed in it the greatest part of the morning; while its various preparations, the number of slaves which were employed, and all the researches of luxury expended on it, consumed a great part of their enormous revenues. They used a great number of small instruments, constructed with much art and intelligence: the handles of their curling-irons were made of silver curiously worked; their combs were made of box, shell, or ivory highly polished and carved, enriched with gold, and often with precious stones. The poet, Martial, in order to recommend himself to the ladies, made verses upon all these little articles, copies of which he gave away as presents on high festival days.

When the Romans established themselves in Gaul, they carried thither all their refinements of art and luxury, and soon rendered the province,

particularly in the southern parts, a new Italy; but among the women they found a taste already decided for ornament and dress. Their historians, who all acknowledged the wisdom and the beauty of the Gaulish women, say that they had an exquisite taste in dressing their hair, which they took great care of and esteemed very highly. Their fine tresses, indeed, arranged on the top of the head, formed their chief ornament. Although their hair was naturally light, they endeavoured to render it of a more brilliant colour, by the frequent use of caustic and coloured pomades; for the fairer the hair, the more beautiful it was esteemed.

It is probable that the Gauls adopted by degrees the Roman customs, and that they tried to set off their natural graces by foreign fashions. After five centuries of slavery, Gaul escaped from the Roman yoke, and fell a prey to the barbarians of the North, who imposed upon them the more austere virtues, and gave them a name which was destined to celebrity among the nations. France arose from the united tribes that settled in Gaul, and established herself on the ruins of the empire. Among the French, the prerogatives of nobility and of royalty were established by the personal advantages bestowed by nature, and long hair became one of the chief characteristics: it was permitted to grow in infancy, its growth was pro-

moted by fragrant oils, but iron was not suffered to touch it; it was parted in a graceful manner on the forehead, and waved over the shoulders. The rest of the nation wore their hair short before, and that behind was ornamented with a plume of feathers, which waved over the top of the head. Among other tribes, the Sicambres twisted their hair, formed it into a large knot behind, and brought the extremities forward. It is in this manner that they are described by Agathias and Sidonius Apollinaris.

Before the establishment of the monarchy, the Gauls wore their hair very long; "and this custom," says Pliny, "gave the whole country the appellation of *Gallia comata*, or hairy Gaul;" but, on the foundation of the monarchy, the kings, desirous of having a distinctive mark of their preeminence, reserved the right of wearing long hair for themselves and the princes of the blood; their subjects were forbidden to wear long hair; and this custom continued till the twelfth century, when Pierre Lombard, bishop of Paris, at length prevailed on the king to repeal this prohibition.

The hair, during the early periods of the monarchy, was held in such veneration, that if it was designed to degrade a prince, his head was shaved. In this manner Clovis treated Curaric, whom he had conquered. The son of the king, involved in

the same disgrace, said to his father, in order to comfort him: "My hair, which has been cut off, was nothing but green branches, which will grow again, for the trunk is not dead."

At this time people swore by their hair; and this oath was as sacred as when now-a-days they swear by their honour. Traitors implicated in one and the same plot, were sentenced to cut off each other's hair. Fredegonde caused the hair of a mistress of her son-in-law to be cut off and hung up at the door of the prince's apartment: this proceeding was then considered as the height of barbarity. A very singular custom of those times likewise proves the great value that was set upon the hair: in saluting any one to whom it was intended to show the greatest respect, the highest compliment that could be paid was to pluck out a hair and present it to him. Historians relate that Clovis pulled a hair from his head, and gave it to St. Germier, to prove how highly he esteemed him; and that the courtiers, who witnessed this action of the monarch, were eager to pluck each of them a hair, and to present it to the virtuous bishop, who withdrew enchanted with the politeness of the court.

Under the first dynasty, the French women wore their hair separated on the forehead, lightly curled on the temples, and again united in long flowing

tresses. Such were the statues of the great personages of this period, which formerly decorated the portal of the church of St. German des Prés. There were seen Ultrogoth, and Clotilda the wife of Clovis: the latter was remarkable for two long tresses, that descended to her shoulders, and were decorated with rings of pearls and other ornaments: the hair of the former waved in a graceful manner over his broad shoulders. This was also the fashion adopted by the beautiful and terrible Fredegonde, and by Bertrude the wife of Clotaire II. Odelia, the daughter of a German prince, allowed to be seen, under her veil, her hair twisted in the form of a long cord. Hadwida, the wife of Gerard of Alsace, Duke of Lorraine, as represented on her tomb, has her hair parted into two long tresses descending upon her bosom; a kind of small bonnet in form of the head, the only ornament being a tress of hair which surrounds it.

Among the queens and princesses whose images are preserved by antique sculpture, all those that are celebrated for their piety are represented with their forehead covered by a veil, without any appearance of hair. The wives of Charlemagne, without entirely concealing the hair, set off their tresses, and allowed only a few thin curls to appear around the face. Richilda, the wife of Charles the Bald, raised her hair up in a bunch, and con-

cealed its extremities under a kind of *toque*. Richarda, the wife of Charles le Gros, plaited and twisted the lower half of her hair, and raised them again on each side of her cheeks,—a fashion which was prevalent in the ninth and tenth centuries. The eleventh century was remarkable for the entire disappearance of the hair on the forehead, and the invention of *bourrelets*, which in later times degenerated into *hennins*, or horns.

Oftener than once, the church interposed its authority to prohibit or enjoin in France particular modes of dressing the hair; and sometimes long, and at other times short hair, excited the wrath of the ecclesiastical authorities. The unhappy result is well known of the ill-judged piety of Louis VII., who, thinking his conscience interested in setting the example of submission to the reiterated ordinances of the bishops, had his hair cut short.

At the end of the twelfth, and during the thirteenth century, fashion made a retrograde movement. Blanche of Castille resumed the head-dress of Clotilda, her hair waving about her temples, and her veil over her crown. Jeanne, the Countess of Toulouse, made some happy innovations: her hair, parted on the forehead, displayed her ears, and fell *en tresse* over her shoulders; and she wore a *chapel*, from which fell a very thin gauze. Her head-dress was very graceful; but the novelty did

not last long, for the veil and the stomacher soon after concealed the hair, the head, and the graces of female beauty.

The fourteenth century ushered in a morning of splendour. A lady whose name, dear to the Muses, is deservedly celebrated—Clemence Isaure, appeared, and drew forth her sex from the obscurity to which it had so long been condemned during the ages of ignorance and tyranny. A beautiful print of this lady, illustrating the head-dress of the times, is given by M. N. H. Jacob in the *Collection du Miroir*. In spite of the evils which at this period desolated France, luxury made extraordinary progress. The vain and coquettish Isabelle de Baviere, invented the most extravagant fashions. By a strange perversion, or rather dereliction of all the harmony and principles of taste, she concealed her hair altogether, and displayed her shoulders and bosom. No graceful recollection is associated with the corrupted and unnatural taste of this extravagant queen. It was she who brought into fashion those head-dresses, so extravagant in form, and ridiculous in altitude, called horns, or *hennins*, the wearing of which kindled such zealous fury in the preachers of the time. Every body, says Paradin, a contemporary author, was at this time very extravagant in dress,

and that of the ladies' heads was particularly remarkable; for they wore on them prodigious caps, an ell or more in length, pointed like steeples, from the hinder part of which hung long crapes or rich fringes, like standards. These extravagant head-dresses arose from the gradual enlargement of bonnets in form of a heart. The women, says Juvenal des Ursins, ran into great excesses in dress, and wore horns of wonderful length and size, having on either side ears of such monstrous dimensions, that it was impossible for them to pass through a door with them on. About this time the Carmelite Cenare, a celebrated preacher, exercised his talents against these horns. They likewise wore hoods, strengthened in front with leather, and hoops of whalebone, to give them more consistency. Above this kind of funnel, figure to yourself a head surmounted with two huge horns, and pads with prodigious ears, and you will have a correct idea of the ladies of that age.

It must not be imagined, however, that this head-dress was worn generally, for we should think that then, as at present, the most ridiculous costumes were more especially adopted by those who courted distinction, and disfigured themselves in proportion to their rank and dignity; and if monuments have been handed down to us of many strange dresses,

the reason is, that painters and sculptors usually perpetuate only the portraits of distinguished persons.

During this period the sugar loaf hats began to grow numerous, having veils fastened to them, which hung more or less low, according to the quality of the wearer The fashion appears to have been first imported into France from England, the earliest monument in which, it appears, being a miniature in an ancient manuscript copy of Froissart, representing the entry of Isabel, queen of England, and sister of Charles the Fair, into Paris. This princess is represented with a peaked head-dress of extraordinary height, trimmed with lace that floats in the air.

In emulation perhaps of Cenare, we find that another Carmelite, named Thomas Conecte, preached vehemently against the *hennins;* but, alas! the poor friar was ill requited for his zeal; for, six years afterwards, in 1440, he was burned alive at Rome as a heretic. "This preacher," says Paradin, "held the *hennins* in such abhorrence, that most of his sermons were directed against them; attacking them with the bitterest invectives, and launching out into the severest animadversions against those who wore them. Wherever brother Thomas went, the *hennins* durst not shew themselves, on account of the hatred

which he had sworn against them. This had an effect for the time, and till the preacher was gone; but, on his departure, the ladies resumed their horns, and followed the example of the snails, that, when they hear any noise, speedily draw in their horns, and, when the noise is passed, suddenly erect them to a greater length than before. Thus did these ladies; for the *hennins* were never larger, more pompous, and more superb, than after the departure of brother Thomas." Such is the effect of warmly contending against prejudices.

Those high head-dresses rendered it necessary, at this period, to heighten the door-ways, as they had been previously widened on account of the ears. They at length vanished, though only to make their appearance at other periods more ridiculous than ever. Becoming weary of head-dresses a yard high, they passed, as is commonly the case, from one extreme to another; and reduced them to such a degree, that the women appeared as though their heads were shaved.

In the reign of Charles VIII. in 1483, the ladies, renouncing the extravagant taste to which they had been so long enslaved, composed a head-dress of their hair, by turning it up. In the gallant and splendid court of Francis I. in 1515, the ladies also turned up their hair; and Queen Margaret of Navarre, his grand-daughter, frizzed

the hair at both temples, and turned it back in front; sometimes adding to this head-dress a small cap of satin or velvet, enriched with pearls and precious stones, and ornamented with a handsome and tasteful plume of feathers.

Leonardo da Vinci has left us portraits of the most celebrated beauties of the time. In those of the beautiful Feronniere, the fair Joconda, and Petrarch's Laura, the hair is parted and bound on the forehead, while it is reunited behind, covering the ears and falling on the shoulders. The most characteristic mark of the fashion of this period is the loop, which, parting in front, gives so much sweetness to the countenance. Sometimes this was adorned with a diamond; sometimes there was only a black fillet, or band of gold, or polished steel.

This head-dress was charming; but the beauties who invented it became old, and the next generation, disdaining imitation, had recourse to what was more novel, though less graceful. Under the sway of the princesses of the Medicis family, all was changed, and caprice and frivolity became the character of the time. The hair was imprisoned, the waist laced tight, and stiffness and restraint took the place of the elegant simplicity which had begun to distinguish the toilette of France. In a very curious and rare work, keenly satirizing the

manners of the sixteenth century, we find the following passage :—

" Scarcely had I entered the chamber," says the author, " when I saw three men, who turned up the hair with little pincers, taken hot out of certain braziers, or foot-stoves; the hair sending forth clouds of smoke. I was afraid at such a commencement, and with great difficulty restrained myself from crying; as I wondered what caused them to commit such an outrage. But when I began to survey their operations more nearly, I saw that they meant no harm; for one read in a book, another talked to his valet, and the third conversed with one who called himself a philosopher. You would have said they wished to make up their hair like rolls of cloth, it was in such a manner wound about the pincers; and when the whole ceremony was completed, their heads resembled *un temps pommele.* The head of one they shaked so violently, that one might have thought it was a tree from which they were shaking fruit: each had many servants around his chair, one undoing what another had done."

This could not last long. Anne of Austria gave to the hair its natural grace and freedom, and prepared the way for the charming head-dresses of Maucini, Ninon, Sévigné, and all the elegance which characterised the reign of Louis XIV. At

the end of the seventeenth century, however, the lofty head-dresses, then called *fantanges*, were resumed, and made more ridiculous than ever. Figure to yourself a vast edifice of wire, sometimes two feet in height, and divided into several stories. On this frame was put a great quantity of bits of muslin, ribband, and hair; at the least motion the whole fabric shook and threatened destruction: though it was so inconvenient, yet, it was said, husbands liked the fashion, as it was supposed to guarantee the discretion of their wives. Every piece of which this enormous head-dress was composed had a particular name, and these names were not less ridiculous than the things they denoted. Among these were the duchess, the solitaire, the cabbage, the mouse, the musqueteer, the crescent, the firmament, the tenth heaven, and others equally ludicrous. This fashion was, however, suddenly relinquished; the head-dress became extravagantly low, and, to make amends, the women adopted high-heeled shoes.

The happy change in the head-dress was not of long duration; the ladies soon began again to erect magnificent edifices upon their heads, till the tide of fashion was again changed, in consequence, it was said, of the following circumstance: Two English ladies, who had recently arrived in Paris, went to Versailles, in June 1714, to see Louis XIV. at

supper. They wore an extremely low head-dress, which was then as ridiculous as one two feet high would appear at present. No sooner had they entered than they produced such a sensation, that a considerable noise took place: the king enquired the reason of this extraordinary bustle, and was informed that it was occasioned by the presence of two ladies, whose heads were dressed in a very singular style. When the king saw them, he observed to the duchesses and other ladies who were supping with him, that, if the women had any sense, they would relinquish the ridiculous head-dress then in fashion, and adopt that of the two strangers. The wishes of a king are commands to his courtiers; the ladies were sensible that they should be obliged to submit; the sacrifice was painful: to demolish such lofty head-dresses was little better than decapitation. There was no remedy. The fear of displeasing the monarch overcame every other consideration, and the whole night was employed in destroying the edifice of three stories; the two uppermost were totally suppressed, and the third was cut down to one-half.

Four years afterwards, Lady Mary Wortley Montague writes from Paris, describing the French fashions not in the most favourable style. "So fantastically," says she, "absurd in their dress! So monstrously unnatural in their paints! Their hair

cut short and curled round their faces, and so loaded with powder that it makes it look like white wool? And on their cheeks, to their chins, unmercifully laid on a shining red japan, that glistens in a most flaming manner, so that they seem to have no resemblance to human faces. I am apt to believe that they took the first hint of their dress from a fair sheep newly ruddled."

In the New Monthly Magazine for April 1825, we have the following facetious notices of the perukes of the period of King Charles II.

* * * * "The first paper I lit upon was a copy of verses by Dick Honeycomb, on the perukes that flourished in his time. I have written them out with much the same veneration with which the peruke itself would have been taken out of its box, had it survived to the present age. But see the changes of this world! that which was one of the airiest head-pieces, is now the symbol of gravity. It is to be seen only on heads of judges, or on those other preparatory ones which maintain so inflexible a countenance in certain windows in the inns of court. The only third instance I can call to mind is that of a Mayor of Garratt, whom I encountered one day, when a boy, leading his processional splendour up the road to Kennington. 'There is secure,' as the Parisian said, when he lost his tooth-pick. On the stage his peruke is

now a burlesque. I confess I wish it were retained in comedy. There are passages in Farquhar and Hoadly, of which we cannot have a proper taste without it: some are obliged to be altered in consequence, and are much the worse for the alteration. Garrick, in the first scene of the Suspicious Husband, used to make a sensation with holding up his two perukes; the one he had worn all night raking, and the fresh one was brought in by his servants.

"Why, how like a rushing dog do you look, compared to that spruce gentleman! Go, you buttered devil, and be made fit to be seen." (*Throwing his wig to the servant.*)

Ranger now throws a cocked-hat, which is a very different business. The wig tumbled, and jaded, and out of curl, was the representative of the night. It brings the table with it,—the rakery in-doors. It was one of the company. The cocked hat may have done something coming home; encountered a watchman, or been knocked down. But this is a poor part of the matter. The wig is high and genial. Besides, the hat is all night in the anti-room, and has no pretensions to be bedeviled. The Frenchmen understand the faculties of perukes and other patrician personages better; and will not commit Louis XIV., even in a serious drama, without his wig. Comedy, being founded on the man-

ners of particular times, implies a necessity of costume; for which reason there is no comparison between the performance of one of Moliere's plays in France, and one of Congreve's or Farquhar's in England. The stage, in the former instance, is like a piece cut out of the actual times of Grammont and Voiture. It is a world of perukes, trimmings, and gallant shoe-leather; and respires pulvillo.

MASCARILLE. Favour these gloves, Madam, with a slight apprehension of their scent.

MADELON. Terribly fine, upon my honour.

KATE. I have never inhaled a better conditioned odour.

MASCARILLE. And this (*holding down his peruke*).

MADELON. Quality every inch of it. The sublime is touched there deliciously.

MASCARILLE. You say nothing of my plumes—what do you think of them?

KATE. Divine to the last degree.

MASCARILLE. Do you know, the brim cost me a louis-d'or. It is a passion I have for knowing no bounds to expense, in cultivating the beautiful.

MADELON. I assure you we sympathise in that matter; I am desperately sensitive in all my

apparel. I cannot endure any thing, even to an under stocking, which does not come from the most scientific hand.

MASCARILLE (*Crying out on the sudden.*) Oh! oh! come now, softly, it is not fair; God damme, ladies, this is a very bad usage. Upon my soul, I have to complain of it.

KATE. What is it,—what is the matter?

MASCARILLE. Two of you at a time; it is really too much. Right and left against one poor heart. No, no! it is not fair; it is contrary to the laws of nations. I'll cry murder, upon my soul.

KATE. (*to Madelon.*) It must be confessed, he has a very particular way of putting things.

MADELON. (*to Kate.*) He has an admirable turn of wit.

These exquisites of Moliere would tell well on the English stage even now, with the help of proper costume. The dress and the people are co-existent. I wish I had Cibber's Apology by me, to give his account of the wig which Colonel Brett bought of him. The audience were as much in love with it as the Colonel. Cibber used to have it brought in by chairmen in a sedan, from which he handed it forth with great ceremony, the spectators clapping as though it had been a lady. One almost fancies that, if the Colonel had been off from

his bargain, the wig would have brought an action against him for breach of promise.

Perukes had their conveniences, and have done something for posterity. We owe them a pleasant variety in our recollections, the distinct marking out of particular periods, and the poetical caps of Prior and Pope. If a periwig was hot in the wearing, it must have been delicious in the taking off: the hot-head, poetical or fashionable, must have rioted in its basin of water. The baldness of a lover is not so agreeable to the imagination; but fashion reconciles every thing in the scene above mentioned. Garrick stood bald-headed while comparing his two perukes; yet Ranger was one of the characters in which the ladies most admired him. The illustrious authors of the French Encyclopædia (in an article of becoming length and solemnity, on the manufacture of wigs, to wit, fourteen folio pages and upwards, the double columns of which appear so many periwigs with full bottoms,) inform us that the first person who appeared in a peruke of this kind, was the Abbé de la Rivire. They might have added, that the custom originated as a compliment to Louis XIV., whose fine head of hair, when young, it affected to imitate. On this account, the first perukes were without powder. The colour varied according to the whim of the day, or the complexion; they were scented, and

furnished the beaux with something to do with their fingers' ends, when not handing their snuff-boxes.

It appears by the verses that Dick Honeycomb had fallen out with these inventions, owing to a wig that had made his mistress unfaithful. Who Jack Hall was, I have not been able to discover; he rivalled his betters in his lifetime, and must be content to remain obscure. Two or three of the lines are very rough; but Dick could write softly, as the reader may see by the rest. The satirists of those times (till Dryden ran ease and strength together in one fine mass of fusion) thought occasional roughness fitted for their purpose, or, at least, a robust carelessness, that gave hard hits with an air of contempt. Some of Butler's verses, cramming their words and thoughts close together, acquire a sort of dignity from their scorn of the melodious. They rattle their consonants and elisions, as if the vowels were not worth taking into the account. Donne's ruggedness in the preceding age appears to have arisen from a theory about satire, equally unsuitable to verse and to the English language. It was an imitation of the Horatian style carried to excess; but in these, ruggedness is turned to its proper purpose of strength and variety, and looks like the knots in polished wood.

In the concluding paragraph I have omitted

twenty lines, in which the poet runs riot in similes. Besides the images retained, he compares a wig to the pillory, to a yoke, to a balance, (in which the head is found wanting,) to the Greek letter Π, to a gibbet, to the pillars of Hercules, of Samson, of free masonry, &c.

Verses on a full flowing peruke, by Richard Honeycomb, Esq.
1673.

Did ever laurel, famed in story,
Cover a man with so much glory,
Or warrant him to look so big,
As that great modern boast—a wig?
Some Roman ladies wore a front,
With hyperbolic friz upon 't;—
And we are told of Goths and Scythians
With wigs; but their's were short and pithy ones.
None of the ancients, as I see,
Laid claim to our crinosity,
Or took the breath of the beholders,
With hairy torrents down their shoulders,
Melting a dozen scalps in one—
Enough to make a lion run.
The monarch whose inglorious look
(Having a natural bon peruke)
Gave rise to his great capillation,
Ill treateth sure his gallant nation,
And takes too many pains by far
In seeking such renown in war,
Picking for 's head superfluous laurels
In shape of Dutch and Spanish quarrels,

When he must know, that he who claps
Two yards of goat's hair at his chops,
Succeeds at once to all the rights
And privileges o' the greatest knights,
Reaping such honours from the dead
As never yet invested head;
And may dispense with wit and parts,
In vanquishing the ladies hearts.
To have a little reading, once
Might mark a gallant from a dunce;
Some grammar did not come amiss,
And wit could much exalt a kiss:
But now your man is he who saddles
His head with the greatest hairy straddles;
And all that sep'rates wits from ninnies,
Is, "Did your wig cost fifty guineas?"
Hail! two-tail'd comet of this age,
Portending bills and amorous rage!
Hail! brains of beaux turned inside out,
Tossing your scented froths about,
And turning brisk on the beholders
With copied airs across his shoulders!
Through thee we come at beauty's blushes,
Like Love through clouds, or Pan through bushes.
To thee I owe, (besides, I fear,
Some hundreds to my peruquier;)—
To thee I owe my Chloe's passion,
Her fears, and fond incarceration,
And, more than all, I owe to thee
That Jack Hall's wig has set me free.

In the reign of Charles II. the ladies had their hair curled and frizzled with the nicest art; and

they frequently set it off with artificial curls, called heart-breakers. Sometimes a string of pearls, or an ornament of ribband, was worn on the head; and in the latter part of this reign, hoods of various kinds were in fashion. A few years afterwards, in the reign of William the Third, the hair was much frizzled and curled, and ornamented with pearls, amber, and jewels. In the reign of Ann, the ladies wore the hair in a becoming manner curled round the face. This queen was very observant of decorum in dress. Lord Bolingbroke was once sent for in haste to her Majesty, and went in a ramallie, or tie-wig, instead of a full-bottomed one; which so offended his sovereign, that she said: "I suppose that his lordship will come to court next time in his night-cap."

In Portugal, as the present Mrs. Baillie informs us in her letters from Lisbon, the quantity of false curls and braids of hair worn by every woman is really surprising. All ranks and all ages adopt the custom; nor is it without necessity, for the heat of the climate, inducing great perspiration, prevents the natural hair from retaining its curl; and it grows so thinly upon the forehead and temples, as to have a very disagreeable bald effect unless assisted by art. "I had formerly heard," our authoress continues, "that the length and

luxuriance of the hair was a chief feature in the beauty of the Portuguese ladies; but this appears, from all I have been able to observe, to be a total mistake. The *length*, indeed, is always considerable, because the hair is suffered to grow from the earliest period of childhood; and I have often seen female infants of two years old, with their little tresses tied up behind in a knot with coloured ribbands. But the *thickness* is not genuine; and where it appears so, it almost always proceeds from the mere *coarseness* of the hair. The art of the friseur being a refinement, of course you will not be surprised to hear that there is not one good *professor* in Lisbon;—they do not even know how to cut hair properly. I ought to add, however, that I have seen several exceptions to what I have just said, among ladies with whom I am acquainted." She mentions one remarkable exception in Nina, the daughter of the Condeça d'Anadia, whose hair was the most luxuriant she had ever seen. When performing a character in a private theatrical piece at her mother's, "she uncoiled its superb length, and I assure you it electrified the audience; being done suddenly, and in the most graceful manner,—reminding one of Altisidora in Don Quixote, whose ringlets were said to

"Brush the ground."

Another fashion, which has fortunately been out of date for some years, is that of wearing hair-powder. Nothing so ill becomes a woman as powdered hair. This addition alone spoils the prettiest face. Powder makes a fair woman appear insipid, and a dark one to look frightfully black. What inconsistency to call in the aid of art, in order to give the hair that white colour which we are so much afraid of receiving from the hand of nature! The practice of wearing powder (if we except gold-powder) is not of very ancient date. We find no mention of it in authors before the year 1593. We are told, that about this time the nuns walked about the streets of Paris frizzled and powdered, probably to give themselves a venerable look. It would be curious enough if it should appear that this practice originated in a convent;—it would have been much better if it had been left there. So much is certain, that from the abovementioned period the use of powder became general in France, and was afterwards diffused among most of the nations of Europe.

Louis XIV. hated hair-powder, and never made use of it till the last year of his reign. "We boast," says a French author, "of being the inventors of this scented powder, which makes all our heads appear alike; but let us not be so proud, for the Poles have made use of it, from time immemorial,

to hide the disgusting effects which the *plica* makes in their hair. Among the Papous have likewise been found little presumptious creatures who whiten their hair with pulverized chalk; so that we share this discovery at least with the diseased heads of Poland, and the *petit-maîtres* of the South Seas."

It may not be amiss, however, to give a few receipts for the preparation of hair-powders, as it is still partially used, and is rather an expensive article of consumption.

RECEIPTS FOR HAIR-POWDER.

To fourteen pounds of fine mellow cask starch, add seven pounds of the scrapings of Poland starch, and a quarter of an ounce of very finely powdered calcined smalt of a light blue colour, and grind the whole in a steel starch-mill, but not too fine. Sift this through a very fine cypress sieve. In making the finest hair-powders, these siftings only must be used. What is left will do for making a second sort. Common starch, ground and sifted, though often used, will not be nearly so fine; but, if this is made, care must be taken that the starch is neither too damp nor too dry. The hair powder kept in the shops is often adulterated with Paris plaster, or burnt alabaster, or fine flour, barley-meal, &c., all of which entirely

spoil it, even for the commonest purposes. It may readily be perfumed with any of the fragrant oils, according to the fancy of the maker.

BLACK HAIR-POWDER.

Take about four pounds of fine starch-powder, put in an earthen pan, and, with a pint of the blackest japan ink, make it into a paste. Dry this in an oven which is by no means very hot, until it becomes of the consistency of starch; then grind it in the mill, and sift it very fine. Mix the black powder with ink the second and third time, and dry and sift as before. Add to the last powder a pound of ivory-black in fine powder; then mix and sift through a fine hair sieve. There is an inferior sort of this powder made in imitation of the genuine kind; but, from its greater weight and other bad qualities, it has no resemblance to it whatever. It is made from small coal, and sea-coal, which are mixed together, and then powdered in a mortar.

BROWN HAIR-POWDER.

Take four pounds of umber of various colours, and in the state of fine powder. Mix it well with water, and let it stand, that it may all fall to the bottom of the glass jar. When settled, pour off the water, and then take off the top of the mass

only; for, by frequent stirring previously, all the dirt and sand will be separated, and fall to the bottom. These impurities, instead of being of any use, will be extremely hurtful in the composition in which the umber is to be used. Dry the fine parts as above directed for black hair-powder; and to this, which will weigh about two pounds and a half, add half a pound of the black hair-powder and two pounds of the second remains from honey water in fine powder. Mix all these together and sift them twice over. By putting more black hair-powder or more umber, the brown colour will be deeper or lighter. If it is wished to lighten the colour much, a little fine dry starch powder may be added before sifting.

X.—ON BEARDS, MUSTACHIOS, AND WHISKERS.

"Henry VIII.," says Puttenham in his rare work entitled the Art of Poesie, "caused his own head and all his courtiers to be polled, and his beard to be cut short. Before that time it was thought to be more decent both for old men and young to be all shaven, and wear long hair, either rounded or square. Now again at this time (the reign of Elizabeth,) the young gentlemen of the court have taken up the long hair trayling on their

shoulders, and think this more decent; for what respect I would be glad to know."

When ladies were accustomed to behold their lovers with beards, the sight of a shaved chin excited feelings of horror and aversion; as much indeed as, in this less heroic age, would a gallant whose luxuriant beard should

"Stream like a meteor to the troubled air."

When Louis VII., to obey the injunctions of his bishops, cropped his hair, as we have already mentioned, and shaved his beard, Eleanor, his consort, found him with this unusual appearance, very ridiculous, and soon very contemptible. She revenged herself as she thought proper, and the poor shaved king obtained a divorce. She then married the Count of Anjou, afterwards our Henry II. She had for her marriage dower the rich provinces of Poitou and Guyenne; and this was the origin of those wars which for three hundred years ravaged France and cost the French three millions of men; all which would probably never have occurred, had Louis VII. not been so rash as to crop his head and shave his beard, by which he became so disgustful to the eyes of our Queen Eleanor.

We cannot perhaps sympathise with the feelings of her majesty, though at Constantinople she

might not have been considered quite unreasonable. There must be something more powerful in beards and mustachios than we are quite aware of; for when these were in fashion, with what enthusiasm were they not contemplated! When mustachios were in general use, an author in his Elements of Education, published in 1640, thinks that "hairy excrement," as Armada calls it in "Love's Labour Lost," contributed to make men valorous. He says, "I have a favourable opinion of that young gentleman who is curious in fine mustachios. The time he employs in adjusting, dressing and curling them is no lost time; for the more he contemplates his mustachios, the more his mind will cherish, and be animated by masculine and courageous notions." The best reason that could be given for wearing the longest and largest beard of any Englishman, was that of a worthy clergyman in Elizabeth's reign, "that no act of his life might be unworthy of the gravity of his appearance."

The grandfather of Mrs. Thomas, the Corinna of Cromwell, the literary friend of Pope, by her account, "was very nice in the mode of that age, his valet being some hours every morning in starching his beard and curling his whiskers, during which time he was always read to." Taylor the water poet, humourously describes the great variety of beards in his time, which extract may be

found in Grey's Hudibras, vol. I. p. 300. The beard, says Granger, dwindled gradually under the two Charles' till it was reduced to whiskers, and became extinct in the reign of James II. as if its fatality had been connected with that of the house of Stuart.

In most classes of animals, says Bichat, the male is distinguished from the female by some exterior production or other. The comb of the cock, the mane of the lion, the horns of deer, &c. are examples of these distinctive characters. In man the beard is the attribute of the male; it covers the chin, the sides of the face, the lips, and the upper part of the neck, leaving the cheeks and the surrounding parts of the eyes bare; hence those parts which serve to express passions, would be concealed by the hair if it were allowed to cover the lower part of the face. Although the hairs of the beard are generally shorter than those of the head, yet they are longer than similar productions on the body. They are usually of the same colour as the former, but somewhat darker, and have more of the red cast, which is frequently conjoined to light hair. They curl, are stronger, and are more resistant, and invariably less oily than those of the head. The fullness of the beard varies very considerably in different individuals. Strength and power, in general, are the properties

of those in whom it abounds, and assumes a deep black. It may also be remarked, that, in different species of animals, the strongest males are those in which the exterior production, by which they are distinguished from the females, is most perfect. This characteristic may be said to indicate the energy or weakness of their constitution. A small lion is never seen with a large mane: large horns always belong to a fine deer; long and strongly twisted ones to a well-built ram. The same observation is not applicable to the other hairs common to both sexes: those of the arms, thighs, &c. are often quite as large, and even more numerous, in a weak than muscular person.

The habit of shaving, as in most parts of Europe; of wearing the beard long, as in Asia; of plaiting it, as in China, gives to the face various expressions, by which each nation is characterised. A manly and characteristic physiognomy, expressive of powers and energy, cannot be deprived of this exterior covering without losing a part of that character. That of the eastern nations coincides with their natural vigour, and forms a contrast with the effeminacy of their habits. We are rather inclined to think, that, on perusing the history of the people of different nations that suffer their beard to grow, and of those who are in the habit of shaving it off, we should be induced to

believe that the muscular power is in some degree connected with it, and that part of the power is in some measure lost by the habit of shaving. Every body knows how very powerful the ancients were; how strong were the nations that wore long beards; how very strong, again, were an order of monks, who, by some monastic law, were compelled to wear long beards. A multiplicity of causes may certainly connect weakness with the beard; but, in a general point of view, we believe that some connections may be admitted between the powers and the beard. Deprive the cock of its comb, which, in respect to this part of the feathered creation, is the attribute of the male, as the beard is that of man, and he becomes in some degree more languid. We are convinced that the lion would lose part of his strength if he were deprived of his mane. The results of the experiments tried by Russell on the castration of deer are sufficiently known; after this operation, their horns either grow in an irregular manner, or cease to shoot forth. This exterior attribute of the male in this species manifests itself towards the period of virility, when the powers increase. The same observation applies to the human beard. This single coincidence would be sufficient to prove that the latter was intended as an exterior character of the masculine sex. Eunuchs,

remarkable for a weakness of powers, frequently lose part of their beard.

Such are our prejudices respecting the ideas we have formed to ourselves of beauty, that we consider ridiculous that which is really beautiful; for whatever proves organic perfection, must undoubtedly be such: a male peacock, deprived of the emerald plumage of its tail; a ram, robbed of its horns; a deer that has lost them, have something displeasing: Why, then, should not a man, deprived of his beard, produce a similar feeling?

PRINCIPLES OF SHAVING.

Of late years philosophical experiment has produced most marvellous effects in all our domestic affairs, and is certainly well fitted, when it becomes farther diffused among the middle ranks, to produce many more. We begin now to philosophize on every thing that interests us in common life, and to inquire into causes and effects, with a view to the useful and the practical, rather than for the sake, as was formerly done, of showing our learning. We philosophize upon the conveniences and inconveniences of every fashion as it arises; of every proposal for increasing our personal or domestic comfort; or for diminishing our family or personal expenses. This is creditable to the age

It is no longer looked upon as mean to be economical; or selfish to take means for procuring comfort; or pedantic to be scientific in every thing. A few years ago, it would have been considered as a gross misdemeanor for a man of science to inquire into the art of shaving, or to have suggested any thing to improve it; but now, if we are not greatly mistaken, it would immortalize the most celebrated philosopher to make any useful or important discovery in the art, or to establish it on scientific principles. Till some chemist perform this task of usefulness, we shall contribute such hints as have occurred to ourselves.

The first thing necessary to be done, in order to render the hair of the beard easy to be cut, is to make it hard, crisp, and brittle; for you may as well think of cutting moist paper smoothly with a pair of scissars, as of shaving your beard while the hair is soft and oily. But it is the chemical nature of all hair to be more or less oily, as oil forms one of its main ingredients, which is readily seen on burning it, and this is farther augmented by the greasy secretions from the skin. Were you to shave dry, or with plain water, therefore, the razor would either slip over the soft, oily hair, without cutting it at all, or would only enter it about half way, and, instead of cutting directly through it, would bend the hair and slice it in the length, and

in this manner, dragging it outwards from the root, would cause a similar pain to that of pulling off the skin. When the razor is thus employed in slicing and pulling two or three hundred hairs at once, the operation must have all the characters of literally flaying alive. The longer the beard has been suffered to grow, the longer, of course, will be the slice of the hair, and the greater the pain. It is upon this principle, indeed, that the whole science of easy shaving is founded.

The best means hitherto discovered for rendering the beard crisp and brittle, without injury to the skin, is the application of an alkali, which combines with the oil of the hair, and leaves only its hard fibre. Alkalis, however, in order to be fitted for shaving, must first be combined with some sort of oil, such as olive oil, otherwise they would be too strong, and would injure the skin. About 60 parts of soda, 60 of olive oil, and 30 of water, is the composition of the best Spanish soap. Those who prefer the "Essence Royale pour fair la Barbe," or Shaving Liquid, may prepare it for themselves, 200 per cent. cheaper than they can buy it, by dissolving a quantity of the best Spanish soap in spirits of wine, or any common spirit, when the liquid will be formed of a fine transparency, and of a somewhat gelatinous consistence.

TRANSPARENT SOAP

Is made by slowly and carefully evaporating this solution, which will leave a beautiful mass of pure soap, that may be used in the same way as other soap. It is not, indeed, so cheap, but it pleases the fancy of some better than articles procured at less expense. The more creamy the lather is, and the less watery and frothy, the better; as in that case the alkali is in a more fit state for crisping the beard, and this can only be done with very hot water.

The fineness of the edge of a razor is by most people injured or destroyed by the use of strops, so that they never can shave with any ease or comfort. The hone or razor stone ought to be kept constantly moist with oil. Soap, once proposed for giving a fine edge, is not so good as oil. When the razor has been finely honed, it should never be suffered to touch any thing but

THE CHEAPEST AND BEST RAZOR STROP.

This is not a piece of calf's leather, prepared with paste or emery powder; nor any other composition, however celebrated by patent or otherwise, to roughen and hack the edge of the razor, and make it about equally fit for shaving as a butcher's knife, or a carpenter's hatchet. The best strop

ever invented is the Hand, moistened with its natural oil---a strop which will fine the edge of your razor beyond conception, if you are careful to let it touch nothing else except the hone. To obtain the full advantage of it, however, it will be necessary not to be sparing of your labour, but to give the razor as many strokes on both sides of its edge, as Dr. Kitchener gives of munches to his mutton, when he prepares it "for its journey down the red lane," namely, "30 or 40*." This, we hope, will lead many to use their hands, save their purses, and make the finest possible edge on their razors.

INCONVENIENCES FROM SHAVING.

It requires some care, when the face is irritable, to shave without inconvenience.—A patient of Mr. Earle's, of St. Bartholomew's Hospital, cut himself while shaving, and probably he had divided obliquely some of the hairs near their roots, which continued to grow; but not finding a proper passage through the skin, they coiled up beneath it, and formed several very painful pimples, that put

* Peptic Precepts, p. 295, 4th edit. The learned doctor has had this, like many of his other good things, from the French; "Qu'il faut trente-deux coups de mâchoire pour qu'une aliment solide soit assez bien trituré."—*Almanach des Gourmands*, tome III. p. 249.

on a very angry ulcerated appearance, and, unless Mr. Earle had carefully extracted the roots of the hairs, they might have ended in a fatal cancer. He says, that many such cases arise from the irritation of shaving, and the patients usually refer to a slight cut, or scratch, from a blunt or a foul razor. A wound thus made, is irritated and aggravated every time the patient shaves; or if not, the hair being allowed to grow, gets matted together, and prevents the application of proper remedies. He properly directs the hair to be cut close by small cornea scissars; and if the wound does not improve, but continues foul and spreading, to cut out all the diseased part with the knife, or burn it out with caustic, as a little pain at first is better than running the danger of an incurable cancer. The older the patient is the more is the danger, as cancer seldom attacks the young. There is greater chance of danger if a wart or a mole has been cut or scratched. We request our readers not to treat such as if it were a light or trifling matter; for it may end in a loathsome disease, and a painful death.

XI.—ON THE EYE-BROWS AND EYE-LASHES.

THE EYE-BROWS.

Part of the soul, if we believe the elder Pliny, resides in the eye-brows; but though we may be sceptical in this, we must agree with Lavater that they always give the tone to the expression of the face, and are the least equivocal interpreters of the feelings: though pride have its birth in the heart, it always takes its seat on the eye-brows. In women, the eye-brows, from being more soft and delicate, are more easily moved than in men; and hence they have for the most part a stronger expression, and, according to the German poet Herder, may become the seat of serenity or chagrin; of intelligence or stupidity; of sweetness or discord: the iris of peace, or the bended bow of war; the test of dislike, or the sign of affection. Since the eye-brows, therefore, form so important a feature of the countenance, they will require careful attention to improve and preserve their beauty.

The reader may have remarked that the eye-brows are commonly of a darker shade than the hair of the head, a circumstance more remarkable in those who have light-coloured hair. A good

hint may thence be derived for improving both their beauty and usefulness without betraying the artificial means employed. We mean, that as it is natural for the eye-brows to be a shade darker than the hair, a slight additional artificial tinge will not be readily detected, while it will give a tone of character to the forehead that must be deficient where the eye-brows are light. Very light eye-brows indeed impart to the countenance a sort of babyish vacancy and simpletonism, which must always detract from the influence of the most beautiful features or the finest eyes. In light eye-brows also the hair is usually less in quantity than in the dark, which is another reason for adding to their colour by artificial means. For this purpose we recommend the following wash for darkening the eye-brows: Dissolve in one ounce of distilled water, one drachm of sulphate of iron, add one ounce of gum water, a tea-spoonful of Eau de Cologne. Mix, and after having wetted the eye-brows with the tincture of galls, apply the wash with a camel hair pencil.

We shall here give another receipt of a different description, being a celebrated paste for darkening the eye-brows. Take an ounce of walnuts, an ounce of frankincense, an ounce of resin, an ounce of mastiche. Burn them all on clear red-hot charcoal, and receive the fumes into a funnel, in which a

very fine black powder, slightly perfumed and unctuous, will adhere. Mix this with a little oil of myrtle, in a leaden mortar, and apply it to the eye-brows. This paste has the property of resisting both heat and perspiration; but it must be occasionally renewed. The following method may also be used: Burn a clove in the flame of a wax candle, dip it in the juice or the *rob* of elder-berries, and apply it to the eye-brows.

The powder also which is used in the East for painting the eye-lashes, and which is composed of antimony and bismuth; or a paste prepared from powdered black-lead with Eau de Cologne, or oil of myrtle, or essence of Bergamot, may be safely and advantageously used.

Though, however, it is indispensable to beauty to have the eye-brows of a dark colour, and also a protection to the sight, as they are the natural shade of the eye; yet, when they become large and shaggy, it gives a look of vulgarity, and is also a mark of old age; we must request you to attend to this, and, if the hair grow too long and thick, to keep it down with the scissors. If this be not sufficient, some of the longest hairs may be removed by the tweezers. The same means may be tried, and are much better and safer than any depilatory, to diminish the extent of the eye-brows and prevent them from spreading. We have a very different taste in this

respect from the ancient Romans, who considered it indispensable in a beauty to have her eye-brows meet, what is in Scotland called *lucken browed*, from a notion that the person whose eye-brows are so formed is or should be *lucky*. Instead therefore of painting the space between the eye-brows to imitate hair, we consider it more handsome to have all the hair removed, and the eye-brows well separated. The Roman fashion, it must be confessed, formed a better outwork to prevent the perspiration of the forehead from falling into the eyes; and this, besides forming a shade for the light, is their chief office, according to Socrates, who instances the form and place of the eye-brows as* a strong argument for Providence.

THE EYE-LASHES.

We need not dwell on the beauty of long, silken, glossy, eye-lashes, which have so often been the theme of lovers and poets. Lord Byron, who had all the fine tact of an eastern lover, while he had all the deep feeling of a poet, often hung some of his finest gems on a beautiful eye-lash: one example will be enough:

> As a stream late conceal'd
> By the fringe of its willows,

* See Xenophon's Memorabilia of Socrates.

Now rushes reveal'd
In the light of its billows ;
As the bolt bursts on high
From the black cloud that bound it,
Flash'd the soul of that eye,
From the LONG LASHES *round it.*

BRIDE OF ABYDOS.

It is no less strange than true, however, that European beauties are quite inattentive to the growth of their eye-lashes, though in Circassia, Georgia, Persia, and Hindostan, it is one of the first objects of a mother's care to promote the growth of her children's eye-lashes. We have already explained generally the growth of the hair, as well as its colours and the means of tinging it, and we may now observe that hair left to itself seldom grows long ; but either splits at the top into two or more forks, or becomes smaller and smaller, till it end in a very fine gossamer point. When it does so, it never grows any longer, but remains stationary. The Circassian method of treating the eye-lashes is founded on this principle. The careful mother removes with a pair of scissors the forked and gossamer-like points (not more) of the eye-lashes, and every time this is done their growth is renewed, and they become long, close, finely curved, and of a silky gloss. This operation of tipping may be repeated every month or six weeks. The

eye-lashes of infants and children are best tipped when they are asleep. Ladies may, with a little care, do the office for themselves. This secret must be invaluable to those whose eye-lashes have been thinned and dwarfed, as often happens by inflammation of the eyes.

We presume that all our fair readers who are aware of the effect of fine eye-lashes will follow our simple directions on this point from the moment they peruse them, in order that they may stand the rivals of Circassia's fairest daughters in the gloss and the richness of this high mark of beauty. Except among the ancient Romans and the modern Chinese, large eyes have always been esteemed essential to beauty. By this test alone we can distinguish whether an antique statue of Venus or Juno be Roman or Grecian, as the classic Greeks had more taste than to represent a goddess with small peering miserly eyes. Homer indeed seldom mentions Juno without comparing her eyes to those of the ox.* The oriental poets drew a more elegant simile from the large-eyed antelope or gazelle, which has not escaped Lord Byron.

> Her eyes' dark charm 'twere vain to tell,
> But gaze on that of the gazelle,
> It will assist thy fancy well. GIAOUR.

* βοωπις ποτνια Ἡρη. The ox-eyed venerable Juno.—ILIAD, *passim*.

The brilliancy of the eye and its appearance of fullness, depend of course in some degree on its form, and on the magnitude of the eye-ball; but still more on the closeness and amplitude of the eye-lashes and the diameter of the pupil. It is the eye-lashes only over which we possess the greatest power, as we can bring them to the highest perfection of gloss and thickness by the Circassian method we have already detailed.

This is not all: the oriental beauties from time immemorial, have practised the art of darkening the eye-lashes with antimony, which is put both on the hairs and on the skin at their roots, while a small streak of it is often extended outwards from the exterior angle of each eye. This has a very imposing effect when artfully performed; and we have seen European ladies who had been in the East, employ this method to give a brightness and beauty to their eyes, altogether inconceivable, making even the plainest little grey eyes appear full orbed and piercingly dark. It is for such, indeed, that we write; others have no need of antimony nor frankincense black. The latter is much inferior, as all European cosmetics are, to those of the East; but, to such as choose to try it, we give the following receipt for rendering the eyes brighter and darker. Take an ounce of frankincense, the same quantity of resin and pitch, and half as much mastic. Throw

all these ingredients upon a piece of red-hot charcoal, receive the fumes into a large funnel, and a fine black powder will adhere; mix this with a little oil of Benjamin, Eau de Cologne, or, what is perhaps better, the juice of elder-berries, and it is fit for being applied to the eye-lashes, or to the eye-brows.

THE END.

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