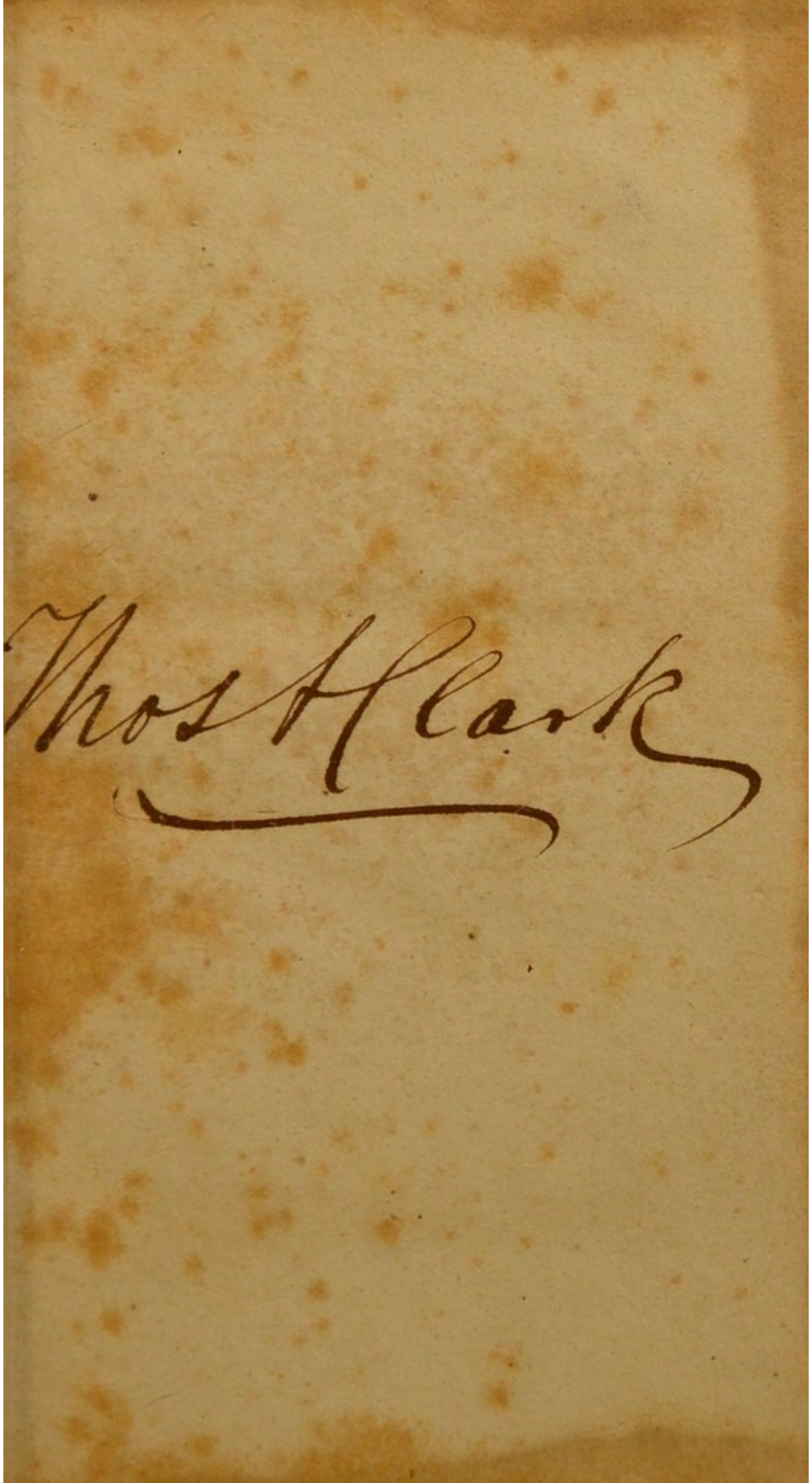
The printer's guide, or, An introduction to the art of printing ... / by C.S. Van Winkle.

VAN WINKLE,
C. S.


Thos H Clark

Aug 1, 1863

SONG OF THE PRINTER.

Pick and click
Goes the type in the stick,
As the printer stands at his case;
His eyes glance quick, and his fingers pick
The type at a rapid pace;
And one by one, as the letters go,
Words are piled up steady and slow—
Steady and slow—
But still they grow,
And words of fire they soon will glow,
Wonderful words, that without a sound,
Traverse the earth to the utmost bound;
Words that shall make
The tyrant quake
And the fetters of the oppressed shall break,
Words that can crumble an army's might,
Or treble its strength in a righteous fight.

Yet the type they look but leaden and dumb;
As he puts them in place with finger and thumb
But the printer smiles.
And his work beguiles,
By chanting a song as the letters he piles,
With pick and click,
Like the world's chronometer, tick! tick! tick!

O, where is the man with such simple tools,
Can govern the world like I?
With a printing press, and iron stick,
And a little leaden die,
With paper of white, and ink of black,
I support the Right, and the Wrong attack.

Say, where is he, or who may he be,
That can rival the printer's power?
To no monarchs that live, the wall doth he give.
Their sway lasts only an hour;
While the printer still grows, and God only knows
When his might shall cease to tower!

THE

PRINTER'S GUIDE;

OR, AN

INTRODUCTION

TO

THE ART OF PRINTING:

INCLUDING

AN ESSAY ON PUNCTUATION,

AND

REMARKS ON ORTHOGRAPHY.

BY C. S. VAN WINKLE.

Second Edition, with Additions and Alterations.

NEW-YORK:

PUBLISHED BY WHITE, GALLAHER, AND WHITE,

No. 7 Wall street.

1827.

Southern District of New-York, ss.

BE IT REMEMBERED, that on the ninth day of August, in the fifty-second year of the Independence of the United States of America, C. S. Van Winkle, of the said District, hath deposited in this office the title of a book, the right whereof he claims as Proprietor, in the words following, to wit:

"The Printer's Guide; or an Introduction to the Art of Printing: including an Essay on Punctuation, and Remarks on Orthography. By C. S. Van Winkle. Second edition, with additions and alterations.

IN CONFORMITY to the Act of Congress of the United States, entitled, "An Act for the encouragement of Learning by securing the copies of Maps, Charts and Books, to the authors and Proprietors of such copies during the times therein mentioned." And also to an Act entitled "An Act supplementary to an act entitled An Act for the encouragement of Learning by securing the copies of Maps, Charts and Books to the Authors and Proprietors of such copies during the times therein mentioned, and extending the benefits thereof to the arts of designing, engraving and etching historical and other prints."

JAMES DILL,
Clerk of the Southern District of New-York.

C. S. Van Winkle, Printer.

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INTRODUCTION.

A HISTORICAL SKETCH OF THE INVENTION AND PROGRESS OF PRINTING.

THE art of printing by moveable types was first practised, according to the most authentic accounts, at Mentz, in Germany, between the years 1440 and 1450, by John Fust or Faust, John Meydenbuck, and John Genesteisch, surnamed Guttemberg. Whether Guttemberg or Faust was the inventor has never been settled by the historians who have treated of this subject. Haerlem, Mentz, Strasburg, and Venice, have each laid claim to the honour of this invention, and all have had their advocates; but circumstances, as they have been detailed, award the honour to Faust, of Mentz. The first printed book upon record is The Book of Psalms, by John Faust, of Mentz, and Peter Schoeffer, published on the 14th of August, 1457. But Faust signalized himself and his art most by the first printed Bible, which he began in 1450, and finished in 1460. He carried a number of printed copies of the Bible to Paris, and sold hem as manuscripts, for which he was imprisoned,

on suspicion of dealing with the devil; for the French could not otherwise conceive how so many books should so exactly agree in every letter and point; nor would they release him till he had discovered the method by which they were done. The latter was probably the motive, and the former the pretence for imprisoning him.

From Mentz, or Haerlem, the art passed to Rome in 1467; and in 1468 it was carried to Venice. It was introduced into England in the year 1471, by William Caxton; but some writers have contended that it was practised seven years previous to that date, by one Frederick Corsillis, a workman in the printing house of Guttemberg, at Haerlem, who had been enticed to come over to England by Caxton, and a Mr. Robert Turnour, who had been sent, and furnished with money for that purpose, by King Henry VI. and Thomas Bouchier, archbishop of Canterbury.

It is stated that some of the Italian printers introduced the Roman characters, (the Gothic only having been previously used,) and brought it to such perfection, that in the beginning of the year 1474, they cast a letter not much inferior to those cast in England in the latter part of the last century; for a proof of which, reference is made, by Luckombe, to a Latin Grammar, written by Omnibonus Leonicenus, and published at Padua, on the 14th of January, 1474. From which work,

Lilly took the entire scheme of his Gramm. The Italian character was used soon after; but there were no Greek types till about the year 1476, the introduction of which was claimed by the Venetians, Milanese, and Florentines. It has been generally admitted that two Jewish Rabbins, Joshua and Moses, were the first who published the Hebrew in separate types at Sacceno, a small city in the duchy of Milan, in 1480.

About the end of the 16th century, the Vatican and Paris printers introduced the Syrian, Arabian, Persian, Armenian, Coptic and Egyptian characters.

The progress of the art was not long confined to Europe; it soon extended to Asia and Africa. The Society for propagating the Gospel in foreign parts, established in London, sent, in 1569, the whole apparatus of a printing house to Tranquebar, a town of Hindostan, with workmen and large quantities of paper.

In 1560, printing was introduced into Russia. The first book published was a Sclavonic Psalter, and printed at Moscow. The Spaniards and Portuguese introduced the art into Africa at an early period after its invention. Little progress, however has been made in that quarter of the globe.

Printing was introduced into America about the year 1604. According to the most authentic history, the city of Mexico has the honour of having

established the first printing press in America. Establishments were soon after formed in Lima and Peru. The presses in those countries were generally devoted to government printing, and heavy theological works. Elementary works on education were, however, published to a considerable extent at an early period after the art of printing was introduced.

About the beginning of the 17th century, printing was introduced into the Spanish part of the island of St. Domingo. The time of its introduction into the other West India islands does not satisfactorily appear.

The first press established in the United States, then British colonies, was erected in Cambridge, Massachusetts, in 1638, by the Rev. Jesse Glover, a worthy and wealthy dissenting clergyman from England.

The first press established in Connecticut, was in the year 1709, in New London, by Thomas Short, who had served his apprenticeship with Bartholomew Green, of Boston; and previous to the year 1775, there were in the whole state not more than four printing offices.

Printing was introduced into Rhode-Island in 1732, by James Franklin, brother of Dr. Benjamin Franklin.

Into New-Hampshire, in the year 1756, by Daniel Fowle. He established his business in Portsmouth.

Printing was first commenced in Pennsylvania, at Kensington, near Philadelphia, in the year 1686, by William Bradford, from Leicester, England. Mr. Bradford removed from Philadelphia to New-York in 1693, where, in that year, he established the first press in that colony.

James Parker established the first press in New Jersey, at Woodbridge, in the year 1751.

James Adams, an Irishman, established the first press in Delaware, in Wilmington, in 1761.

The first press in Maryland was established by William Parks, in 1726.

William Parks also established the first printing press in Virginia, at Williamsburg, in 1729.

Printing was introduced into North-Carolina, in 1755, at Newbern, by James Davis.

Into South-Carolina, at Charleston, by Eleazer Phillips, as early as the year 1730.

Into Georgia, at Savannah, in the year 1762, by James Johnston.

Into Vermont, in 1778, by Judah Padduck Spooner. He established his press in Westminster.

John Bradford commenced printing in Lexington, Kentucky, in 1786.

R. Raulston set up the first press at Knoxville, Tennessee, in 1793.

S. Freeman & Son introduced it into Cincinnati, Ohio, in 1795.

In Nova Scotia, printing was introduced in 1751.

Printing did not find its way into the province of New Brunswick till 1784; but into Canada in 1775. Into Montreal and Quebec in the same year

Newspapers began to appear in England toward the end of the 17th century. The Gentlemen's and London Magazines were established in 1731–2, and the Universal Magazine in 1747. Others followed rapidly throughout the kingdom.

STEREOTYPE PRINTING.

The origin of this branch of the art may be dated as far back as the invention of printing itself by moveable types, if not antecedent to that period. The modern stereotype art has the advantage of moveable fusil types, which makes the formation of the blocks, or plates, less expensive.

With respect to the origin of the invention, the editor of the London Philosophical Magazine, Vol. X., has given the following, translated from a Dutch writer: "Above a hundred years ago, the Dutch were in possession of the art of printing with solid or fixed types, which, in every respect, was superior to that of Didot's stereotype. The inventor of this useful art was J. Van der Mey, father of the well-known painter of that name. He resided at Leyden about the end of the 15th century. He prepared and cast the plates of a quarto Bible, which he also published in folio, with large mar-

gins, ornamented with figures; the forms of which are said to be still extant. Mr. Ged of Edinburgh, and Mr. Fenner and Mr. James, of London, cast plates for Bibles and Prayer Books in the University of Cambridge, in the year 1729–30. Mr. Ged, having been unsuccessful in this line of business, returned to Edinburgh, according to some accounts; but according to others, "he privately shipped himself and materials for the other side of the Atlantic"—the Island of Jamaica.

"Fifty years after the invention of Ged," says a writer, "Mr. Tilloch, with the assistance and joint labour of Mr. Foulis, printer to the University of Glasgow, overcame every difficulty of their predecessor, and were able to produce plates, the impressions from which could not be distinguished from those taken from the types from which they were cast."

M. Didot, sen. the celebrated French printer, some time after this period, applied the stereotype art to Logarithmic Tables, the Latin Classics, and various French publications.

The French have claimed the perfecting of the art as belonging to Didot; but the English award it to Earl Stanhope, with the assistance of Mr. Wilson, a respectable printer in London, and Mr. Tilloch. Mr. Wilson remarks, "That the genius and perseverance of Earl Stanhope, (whom he

confidently styles the inventor*) had overcome every difficulty; and that, accordingly, the various processes of the stereotype art had been so admirably contrived, as to combine the most beautiful simplicity, with the most desirable economy —the *ne plus ultra* of perfection, with that of neatness."

PRINTING PRESSES.

The name of the inventor of the first printing press has not been handed down to us; but the attention of machinists and experimental printers, from the days of Faust to the present day, have been engaged in the invention and improvement of this machine. Age after age, time and money have been lavished upon this object. Some have been practically beneficial, while others seem to have been originated only to perplex and discourage the printer. If it were correct to judge of presses from the execution of press work, the conclusion would be irresistible, that no real improvement has been made for at least 200 years; but this would be visiting on the press evils that may be attributed either to the paper maker, the ink maker, or the pressman. That too much import-

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* Earl Stanhope had too much candour to style himself so.—*Hansard.*

ance is, generally, attached to the construction and power of the press, is but too well known to most master printers; for both their pockets and their patience bear ample testimony to the fact. We regret that we are under the necessity of remarking, that the rage for new inventions seems to take the place of practical experience, attention, and close observation. While we look upon a laudable zeal for improvement as praiseworthy, we hope, nevertheless, to be excused for endeavouring to direct the attention of printers to other means of producing good work than the power and construction of presses. So much depends on the pressman, in wetting down, turning, and pressing his paper, in taking and distributing the ink on his balls, or roller, in keeping them in proper order, and in examining the sheets as they are pulled, that the press itself becomes, in fact, but a secondary consideration; hence the probability, that at the period above mentioned, when printers undoubtedly were men of more scientific knowledge, and more ambitious to be considered masters of their profession, greater inducements were held out to journeymen than at the present time. A slovenly pressman can never do good work. Let his press, his paper, his ink, and the type on which he works, be all of the best possible kind, if he does not keep his balls or roller in proper order, it would be in vain to expect good work

from him. So with respect to each article he uses. In short, a good pressman will do better work on a bad press, than a bad pressman will do on a good press. We would, however, by no means discourage new inventions, when they are of real utility; but most inventions of this kind have made those printers who are "*pleased with novelty*," "*pay too dear for their whistle.*"

On the authority of Moxon, we learn that the original press remained much the same until the days of William Jansen Blaew, who made great improvements on its first construction. He had a printing house established at Amsterdam, in the year 1620. With the exception of those of Blaew, very little was done towards improvement in presses till the invention of Earl Stanhope, who undoubtedly did much to incite others to emulation. Among the successful competitors for preeminence was our countryman, Mr. Clymer of Philadelphia, who, after labouring for some time, succeeded in bringing his press to such perfection as almost to supersede the use, in England, of that of Stanhope. We have had many new inventions in this country; but the press that had obtained the most extensive use for many years is the two-pull screw press, manufactured by Mr. Ramage of Philadelphia. Within a few years, however, the cast-iron one-pull press, called the Smith press, at present manufactured by Mr. Robert Hoe, and

that made by Rust and Turney, called the Washington Press, both in this city, have been pretty extensively introduced, and much approved. The labour of the puller is lessened, while the power is greater than the screw press.

The press invented by Mr. Napier of London, is used on newspapers in England; and an account has just been published in our papers of Mr. N's. having succeeded in finishing a press on his principles well calculated for book work.

An excellent machine was invented in Boston by Mr. Tredwell, a few years ago, one of which is now in successful operation by Mr. Fanshaw, in printing for the Tract Society of this city.

Indeed, there appears to be no end to the improvements in the press. Several different projects are now progressing in this city, in hopes of extending the advancements already made.

ROLLERS.

Rollers for inking the form are generally used with the one-pull press, instead of balls, and produce a saving, since a boy does the work of a man. These rollers are made of oil-dressed sheep skin, drawn over a cylinder covered with a horse blanket. They are sometimes made of an elastic substance. A composition of glue mixed with treacle, [molasses,] has been found to answer perfectly. This roller is made of a copper tube, covered

with canvass, and placed in a mould, which is a cylindrical metal tube, accurately bored, and oiled withinside; the melted composition is then poured into the space of the mould, and when cold the whole is drawn out of it, with the glue adhering to the copper tube, and forming an accurate cylinder, without any farther trouble. The composition will not harden materially by the exposure to air; nor does it dissolve by the oil contained in the ink. In England, the composition rollers are generally used, and preferred to those of the dressed skin.

INK MAKING.

In the manufacturing of Printing Ink, if we judge from the appearance of published books, there was very little improvement for about two centuries after the discovery of the art. Experiments in the manufacture of this essential article have been numerous in England ever since the time of Baskerville, about the year 1760. The difficulty of procuring a good black at home, induced the English printers (who generally manufactured their own ink) to send to the continent for that article. But the discovery of Baskerville, with the assistance of Thomas Martin, of Birmingham, supplied an article which met their most sanguine wishes, and furnished Mr. Bulmer the means of producing the most exquisite editions of

the standard English works, which will bear a comparison with the best printed works of the present day in any country.

The manufacture of good ink requires great care in selecting the proper material from which to make the black, and the variety of qualities in most of the ingredients, some of which seem to be at variance with each other. Good ink should appear to the eye of a clear black tint; not glaring or glossy, nor yet so mellow as to want an agreeable tone and strength of colour.

A number of receipts for making printing ink have from time to time been published; but the following, by Baskerville, we give as the best, on the authority of Mr. Hansard:—

"Take of the finest and oldest linseed oil three gallons; put it into a vessel capable of holding four times the quantity, and boil it with a long-continued fire, till it acquires a certain thickness, or tenacity, according to the quality of the work intended to be printed, of which a judgment must be formed by putting small quantities on a stone to cool, and then taking it up between the finger and thumb; on opening which, if it draw into a thread an inch long, or more, it may be considered sufficiently boiled. The mode of boiling requires long practice, and particular skill and attention in the person who superintends the operation; for want of which, the most serious consequences may oc-

cur. The oil thus prepared is suffered to cool, when a small quantity of black, or amber rosin, is dissolved in it; after which it must be allowed some months to subside; then mixed with the fine black to a proper thickness, and groud for use."—By this receipt Mr. Bulmer made his finest ink.

Mr. Savage, in his work on Decorative Printing, gives the following receipt as preferable, namely:

Balsam Capivi,	9 oz.
Best lamp black,	3 "
Prussian Blue,	$1\frac{1}{2}$ "
Indian Red,	$\frac{3}{4}$ "
Turpentine Soap, dried,	3 "

Mr. Hansard, however, prefers the receipt of Baskerville for making Black Ink; but observes: "For Coloured Inks I feel no hesitation in recommending that of Savage, when combined with about one-fourth by weight of soft soap, since this keeps the heavier bodied colours much longer suspended, and does not so soon become hard when ground with Prussian blue, or vermilion, which is always the case when the common printers' varnish is used.

The French have acquired great perfection in the manufacture of Printing Ink. We regret that we have not room to give an article on this subject, from the Printer's Manual, which gives the most precise directions, and is generally considered very valuable.

PREFACE.

TO THE FIRST EDITION.

The high price at which the Printer's Grammar of Mr. Stower has sold in this country, and the difficulty there always has been of obtaining it at any price, first suggested the idea of publishing a work that might in some respects, answer as a substitute. We have, however, selected from Mr. Stower's Grammar all that we considered of practical utility to the printer.

Most of the extracts taken from other works have been more or less altered, in order to adapt them to this; for which reason, we have not given credit to those writers of whose labours we have availed ourselves.

An opinion seems to prevail among printers, as well as others, that no defined rules can be laid down for pointing. This induced us to request a friend, whom we considered competent, to furnish us with his ideas on the subject. He cheerfully presented us with the trea-

tise we have given, for which we return him our thanks. That there may be a difference of opinion respecting its merits is not improbable; but we have no hesitation in recommending it as the best we have seen.

Correct pointing most certainly depends upon printers; and the following facts and observations will demonstrate the importance of their possessing an accurate knowledge of it:

Mr. Justice Johnson, of the Supreme Court of the United States, in construing the act for the punishment of piracy, remarks, that, "Singular as it may appear, it really is the fact in this case,* that the lives of these men may depend on the insertion [in the act] of a comma more or less."

The following is extracted from a late Liverpool paper: "The contract lately made for lighting the town of Liverpool, during the ensuing year, has been thrown void by the misplacing of a comma in the advertisements, thus: 'The lamps are at present about 4050, and have, in general, two spouts each, composed of not less than twenty threads of cotton.' The contractor would have proceeded to furnish each lamp with the said twenty threads; but this being but half the usual quantity, the commissioners discovered that the difference

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*The case of Palmer, Wilson, and Callaghan. See Wheaton's Reports, vol. iii. p. 636.

arose from the comma following, instead of preceding, the word *each*. The parties agreed to annul the contract, and a new one is now ordered."

The following Exercise on Punctuation, taken from an old Magazine, is inserted for the purpose of more fully impressing on the minds of printers, particularly the junior part of them, the importance of this subject:

I saw a peacock with a fiery tail
I saw a blazing star that dropt down hail
I saw a cloud begirt with ivy round
I saw a sturdy oak creep on the ground
I saw a pismire swallow up a whale
I saw the brackish sea brim full of ale
I saw a vial glass sixteen yards deep
I saw a well full of men's tears that weep
I saw men's eyes all on a flame of fire
I saw a house high as the moon and higher
I saw the radiant sun even at midnight
I saw the man who saw this dreadful sight.

This, on a first reading, appears absurd; but when properly pointed, it will appear correct, thus:

I saw a peacock; with a fiery tail
I saw a blazing star; that dropt down hail
I saw a cloud; begirt with ivy round
I saw a sturdy oak; creep on the ground

I saw a pismire; swallow up a whale
I saw the brackish sea; brim full of ale
I saw a vial glass; sixteen yards deep
I saw a well; full of men's tears that weep
I saw men's eyes; all on a flame of fire
I saw a house; high as the moon, and higher,
I saw the radiant sun; even at midnight
I saw the man who saw this dreadful sight.

"As punctuation," says Mr. Lindley Murray, in his Grammar, "is intended to aid the sense, and the pronunciation of a sentence, it might, perhaps, have been discussed under the article of syntax, or of prosody; but the *extent* and the *importance* of the subject, as well as the *grammatical knowledge* which it presupposes, seem to warrant us in preferring to make it a subsequent and distinct article."

A correct knowledge of grammar is a valuable acquisition to every person; but it is more particularly so to printers: to them it is so indispensably necessary in their daily occupation, that without it they cannot be considered proficient in their business. "*Follow the copy*" is a maxim with compositors, and too many aspire at nothing more; but this is degrading their profession below the meanest handicraft. It is in the power of printers, by proper study and application, to promote the cul-

tivation of literature and science, on which the prosperity of their business, and the happiness of society, so much depend. We conjure them, therefore, not to sit down contented, and think it sufficient that grammar was taught them at school, and that it is a fit study for boys only. Locke says, that "grammatical learning, which is almost entirly confined to boys, well deserves to be the study of men." "All excellence in writing and speaking," says Quintillian, "is founded on grammatical knowledge. They who treat this knowledge as either trifling or unpleasant, merit contempt; for the fabric that is raised on any other foundation, soon falls. It is necessary in youth, pleasing in age, and a delightful companion in retirement; and, contrary to *all* other studies, it has more utility than ostentation. They who engage in this important pursuit, will find it not only adapted to expand and invigorate the powers of youth, but to exercise the profoundest erudition, and the most exquisite taste."

It seems to be a prevalent opinion, that more than a superficial knowledge of grammar is unnecessary in any other than what are generally termed the learned professions; but to be convinced that this opinion is erroneous, we have merely to inquire what grammar is, and what the effect of studying it: "Grammar is the art of speaking and writing *correctly*;" and while we study to *speak* and *write* correctly, we are, at the same time, habituating ourselves to *think* correctly. And who will

say that it is not necessary for every person, although not liberally educated, to think correctly? An opinion is also frequently advanced, that no person can properly understand English grammar without a knowledge of the Greek and Latin languages. To this we cannot assent: We believe that a person may write a language grammatically, without possessing a knowledge of any other language, and think with Mr. Cobbett, that "Good grammar, written in Welch, or in the language of the Chippewa savages, is more learned than bad grammar written in Greek."

While we are urging others to study grammar, we are aware that our own deficiency is palpably exhibited in the following sheets; but it is the consciousness of this fact that induced us to say so much on the subject.

It may be the opinion of some, that we ought to have given, in imitation of Mr. Stower, a history of printing; at least, of its introduction into America, and of its subsequent progress in the United States. But as we have no data from which to give an account of the present state of printing, nor of its late improvements in this country, we must content ourselves with referring those who seek for information on this subject, to Thomas's History of Printing, which is brought down to the commencement of the revolution.

By comparing the state of printing in the city of

New-York, at the above period, with the state of it at the present time, we shall have a tolerably correct criterion by which to ascertain its progressive improvement in the United States; for we think we shall not exceed the truth when we say, that printing has increased in the same, or nearly the same ratio, throughout the whole country. And here we are led to digress, in order to remark, that the extent, and the importance to the nation, of this branch of domestic industry has never, we are fully persuaded, been properly estimated. Mr. Thomas gives an account of only twenty-two printing establishments in the city of New-York, from the first introduction of the art into this colony, in the year 1693, down to the year 1775, embracing a period of eighty-two years; and at present there are established in this city about fifty printing offices, employing nearly five hundred hands constantly.

The number of individuals engaged in, and who derive their support, directly and indirectly, from the business of printing in this country, far exceeds all calculations hitherto made. We have no means at present to make an estimate, with any degree of accuracy; but unless we are anticipated by some one more competent than ourselves, we will, to the best of our ability, give it at some future, and, perhaps, not distant period.

We have given a copperplate, exhibiting all the different marks necessary to correct a proof sheet. This, if attended to by authors and correctors of the press, will prevent much vexation and loss of time, both to themselves and the printer.

A scale to calculate the number of ems in a page, accompanied with directions to calculate press work, has also been given; by which any person may ascertain the expense of printing a work, without referring to a printer.

In concluding these prefatory remarks, it may be proper to observe, that the Compiler does not presume to anticipate the approbation of all; but if it answer, in the slightest degree, the purpose for which it is intended, he will enjoy the pleasing reflection, that the time and labour devoted to it has not been bestowed in vain.

New-York, December, 1818.

THE

PRINTER'S GUIDE.

ON PUNCTUATION.

PUNCTUATION is the art of dividing a written composition into sentences, or parts of sentences, by points or stops, for the purpose of marking the different pauses which the sense and an accurate pronunciation require.

The duration of each pause cannot be defined with precision; for it varies with the time of the whole. The same composition may be rehearsed in a quicker or a slower time; but the proportion between the pauses should be ever invariable.

THE SIGNS OF PUNCTUATION ARE,

1. The comma, , which marks the shortest pause.
2. The semicolon, ; which marks a pause a little longer than the comma.
3. The colon, : which marks a pause a little longer than the semicolon.
4. The full point, which is used for a pause longer than either of the foregoing.
5. The point of interrogation, ?
6. The point of exclamation, !
7. The point of suspension, ...
8. The dash, or division, —

Beside the signs above enumerated, the following are also used in printing, viz.

1. The hyphen, -
2. Inverted commas, "
3. The apostrophe, '
4. The parentheses, ( )
5. The crochets, or brackets, [ ]
6. The brace, }

THE COMMA.

RULE I.

The comma is used to separate all the similar parts of the same sentence, provided there are more than two. What is understood by the similar parts of a sentence is, for instance, several adjectives relating to one substantive, several nominatives to one verb, several verbs to one nominative, several nouns governed by one verb, &c.

RULE II.

The comma is used to separate several adjectives relating to one substantive; or several attributes relating to one subject.

Example. The Tyrians are ingenious, persevering, and laborious.

RULE III.

When the adjective has a restriction after it, the comma must be placed after that restriction.

Example. I am sensible *of the difficulty*, as well as you.

The restriction, however, may be separated from the adjective, by the interposition of an incidental phrase, between two commas.

Example. I am sensible, *as well as you*, of the difficulty which I have to encounter.

RULE IV.

The comma is also used to separate all the subjects of the same verb.

Example. Confusion, horror, carnage, unmerciful death, were advancing.

When the subject is followed by a restriction, the comma must be put after that restriction.

Example. The sullen austerity *that gleamed in his eyes,* awed the hurricanes of the north to silence.

RULE V.

The comma is also used to separate all the cases, both direct and indirect, governed by the same verb.

Example of the direct case. All the passions which had agitated Hercules, Philoctetes, Ulysses, and Neoptolemus, appeared by turns in his countenance.

Example of the indirect case. They proceeded to talk of the origin of the gods, of poets, heroes, &c.

RULE VI.

It is used to separate all the verbs which relate to the same subject. If the verb has a restriction after it, the comma must be placed after that restriction.

Example. He *soothed* him with expressions of pity, *offered* him such consolation as his situation would admit, and *exhorted* him to propitiate the gods by purity of manners, &c.

RULE VII.

It is used to separate several participles relating to the same auxiliary verb, and several infinitives governed by the same verb.

Example of participles. Who has ever thought, spoken, acted, and written, better than she ?

Example of infinitives. Troublesome old age will one day come *to wrinkle* your forehead, *bend* your body, *weaken* your limbs, *dry* up in your heart the source of joy, &c.

RULE VIII.

We separate by commas the similar parts of a sentence, which are under the government of the same preposition, provided those parts be not subdivided into other parts already separated by commas.

Example. The place abounds *with* columns of marble, pyramids, and obelisks, colossal statues, and furniture of silver and gold.

RULE IX.

We separate by commas different propositions, which, though complete in themselves, all concur to collect in one period the principal circumstances of an action.

Example. No, after what we have just seen, health is but a name, life but a dream, glory but a phantom, pleasure but dangerous amusement.

RULE X.

We put between two commas an incidental phrase, which is not determinative, but merely explicative.

Example. Telemachus, having his sword drawn in his hand, plunged into the tremendous darkness.

RULE XI.

An incidental phrase brought on by a relative pronoun is either determinative or explicative: It is determinative, whenever the substantive to which the relative belongs is taken in an individual sense; explicative, whenever the substantive is taken in a general sense: If it be determinative, the comma is omitted; if explicative, it is inserted after the substantive.

Example of the individual sense. Nature is the exterior throne of divine magnificence: The man *who* contemplates it, who studies it, rises by degrees to the interior throne of Omnipotence.

Example of the general sense. God alone knows the past, the present, and the future—He is of all times: *man*, whose existence is of but a few moments, sees nothing but those moments.

In the first example, *man* must have no comma after it; in the second, the comma is absolutely necessary.

It is proper to remark, that the incidental phrase is almost always explicative, and, consequently, is placed between two commas when the relative pronoun has for its antecedent a substantive proper.

Example. But neither *Nestor*, whom *I* saw at Pylos, nor *Menelaus*, who received me with affection at Lacedemon, could inform me whether my father was among the living or the dead.

But the incidental phrase will become determinative, if we place an article before the proper name; and in this case there will be no comma after the name.

Example. But neither *the* Nestor whom I saw at Pylos, &c.

If the proper name be the name of a people, the incidental phrase is either determinative or explicative: *determinative*, if the proper name be taken in a partitive sense; *explicative*, if the proper name be taken in a general sense.

Example of the partitive sense. The Romans who had taken refuge at Veii, and all those who had dispersed through the neighbouring villages, were assembled.

Example of the general sense. The *Romans*, who always fought with success, easily repulsed them.

In the first example, *Romans* must have no comma after it; in the second, it is, as we have said above, absolutely necessary.

RULE XII.

The comma is used after a noun in the vocative case, if that noun be at the beginning of a sentence; but if it be in the middle of a sentence, it must be placed between two commas.

Example. Madam, I am ready to obey you.
Come, my dear friend, that I may embrace you.

RULE XIII.

The comma is sometimes used to point out the suppression of a verb which is expressed in one proposition, and omitted, but understood, in others immediately following.

Example. Their gods *were* the sun, the moon, the stars; their temples, deep caverns; their priests, druids, &c.

RULE XIV.

The comma must be used after every member of a sentence which necessarily expects another.

Example. Impatient of perpetual suspense and uncertainty, I formed a resolution to proceed to Sicily, whither my father was said to have been driven by contrary winds.

When Telemachus heard the name of his father, the tears which stole down his cheeks added new lustre to his beauty.

RULE XV.

When a verb is separated from its subject by a long series of words which depend on that subject, a comma is placed before that verb.

Example. One of the finest artifices of the Egyptians to preserve their ancient maxims, *was* to invest them with certain ceremonies, which impressed them on the mind.

RULE XVI.

We place between two commas the following words: *said I, said he, answered they, replied she*, &c. when they are in the body of a sentence; and they are generally preceded by a comma when they terminate a sentence, or a member of a sentence.

Example. The recital of my misfortunes, said he, would be too long. I am not a Phœnician, said I; but, &c.

RULE XVII.

If the two similar parts of a sentence be without a conjunction, the comma is used after each of those parts.

Example. A dog that one strikes, and a lamb that one butchers, inspire us with pity.

RULE XVIII.

If the two similar parts of a sentence be connected by a conjunction, those parts, if long, are separated by a comma; if short, the comma is omitted.

Example 1*st.* Think rather of supporting the reputation of your father, *and* of overcoming fortune which persecutes you.

Example 2*d.* The hills *and* mountains grew level by degrees.

RULE XIX.

When there are two similar parts in a sentence, and one of the conjunctions *and*, *nor*, *or*, is used before each of those parts, then the comma is useless.

Example. Never suffer yourself to be mastered *either* by avarice *or* pride.

If, however, the two parts be lengthened to a considerable extent, they should be separated by a comma.

Example. Timid virtue is often oppressed, because it wants *either* boldness to show itself, *or* power to defend itself.

RULE XX.

When a sentence is composed of many parts, and the last is preceded by a conjunction, the comma

must be used between the two last, as well as after the others, to indictate that the last of those parts is not more connected with the last but one, than with the one immediately preceding that.

Example. The substantive, the adjective, the pronoun, and the verb, are variable words.

RULE XXI.

The comma is used between two complete propositions, though connected by a conjunction, provided those propositions be not subdivided into other parts separated by commas: in that case, the semicolon should be used between the two propositions.

Example. We always love those who admire us, but we do not always love those whom we admire.

RULE XXII.

In a simple sentence, when short, a comma is not necessary.

Example. Self-love is the greatest of all flatterers.

But should the sentence be too long to be pronounced at one breath, then the comma should be used, and must be inserted where the pause can take place without prejudice to the sense.

Example. Our repentance is not so much our regret for the evil we have done, as our fear of the evil which may happen to us on account of it.

THE SEMICOLON.

The semicolon is used when the preceding member of a sentence does not of itself give a complete sense, but depends on the following clause; and also when the sense of that member would be complete without the concluding one.

Example. Metophis hoped that by questioning us separately, he would make us speak contrary things; above all, he thought he could flatter me by his dazzling promises, and make me confess what Mentor had concealed from him.

When a period* is composed of many members of a certain extent, and which contains some parts separated by commas, each member of the period is separated by a semicolon.

Example. If we do not learn from history how to distinguish times, we shall represent men under the law of nature, or the written law, such as they were under the evangelical law; we shall speak of the Persians vanquished by Alexander, as we speak of the Persians victorious under Cyrus; and we shall make Greece as free in the time of Philip, as in that of Themistocles and Miltiades.

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* By the word *period* is to be understood, (contrary to the common acceptation of the word,) that portion of a discourse, arranged in a certain order, and composed of several members or sentences, which, being taken together, form a complete sense.

But when a period is only composed of two members, which are not subdivided, they must be separated by a comma only.

Example. I consider that she has redeemed her sins by the alms which she has secretly bestowed on the poor, and that she has expiated them by a long penance which she has borne with great fortitude.

If the two members of a period be composed of parts separated by commas, the semicolon must be used between those two members.

Example. When great men suffer themselves to be overcome by their misfortunes, they show that they supported them but by the force of their ambition, and not by that of their souls; and that, if we except a greater share of vanity they are possessed of, heroes are made like other men.

If only one of the members of the period be separated by commas, it is still necessary to use the semicolon.

THE COLON.

The colon is used before a direct speech quoted; and the quotation must begin with a capital letter.

Example. Telemachus said to Arcesius: I recognise Sesostris, that rich king of Egypt, whom I saw there not long ago.

The colon is used after a complete sentence, which is followed by another which serves to illustrate it.

Example. You see what he has lost for Ithaca, which he could not see again. He wished to quit me; he departed; and I was revenged by a tempest: his vessel, after being the sport of the winds, was buried in the waves.

When a period is composed of two or more members separated by semicolons, and a new member is added to it, which, though not of the same nature as the others, is connected by the sense to the whole period, the last member is separated from the others by a colon.

Example. Women have more wit, and men more genius; women observe, and men reason: from this difference result the brightest light and the most complete knowledge which the human understanding can acquire of moral things.

When a general proposition is followed by its enumeration, the colon is used after that general proposition.

Example. All the great revolutions were occasioned by women: by a woman Rome acquired liberty; by a woman the plebeians obtained the consulate; by a woman the tyranny of the decemvirs was ended; by women Rome was saved from the hands of an outlaw.

If the enumeration precede the general proposition, the colon must be placed after the enumeration.

The propriety of using a colon, or semicolon, is sometimes determined by a conjunction's being expressed, or not.

Example. Do not flatter yourselves with the hope of perfect happiness: there is no such thing in the world.

Do not flatter yourselves with the hope of perfect happiness; *for* there is no such thing in the world.

THE FULL POINT.

The full point is used where a sentence is so complete and independent, as not to be connected in construction with the sentence that follows it.

It is also used for abbreviation.

Example. Mr. for Mister; Mrs. for Mistress.

THE POINT OF INTERROGATION.

When an interrogative sentence is quoted in the very words of the person who asked the question, the point of interrogation is used at the end of the sentence quoted.

Example. Mentor said to him in a grave tone: Are these, O Telemachus, the thoughts which ought to occupy the heart of the son of Ulysses?

But the common rules of punctuation must be followed in sentences where there is a kind of indirect interrogation.*

Example. Adoam asked him by what adventure he had entered the island of Calypso.

When we quote an interrogative sentence, preceded or followed by some of these locutions, *said he, answered he,* &c. the point of interrogation is always placed at the end of the interrogative sentence.

Example. The goddess replied: Who then is that father whom thou seekest?

Who then is that father whom thou seekest? replied the goddess.

THE POINT OF EXCLAMATION.

The point of exclamation is used after every sentence expressing some emotion of the soul, as surprise, terror, pity, joy, &c. and after the interjections.

Example. Bless the Lord, O my soul! and forget not all his benefits!

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* The point of interrogation should be used in every place where an answer is expected, or *might* be given or expected.

Oh ! had we both our humble state maintain'd,
And safe in peace and poverty remain'd !

The utility of the points of interrogation and exclamation appears from the following examples, in which the meaning is signified and discriminated solely by the points.

What condescension!
What condescension?

How great was the sacrifice!
How great was the sacrifice?

In the Spanish language, the interrogation and exclamation points are used at the commencement, as well as at the conclusion of every interrogatory and exclamatory sentence : at the commencement the point is reversed. Where the sentence is long, this is necessary, since, in many instances, the sense and the inflection of the voice in reading depend on these points.

REMARKS ON NOUNS IN THE VOCATIVE CASE.

A noun in the vocative case at the beginning of a sentence, is commonly followed by a comma; but it must be followed by the point of exclamation whenever the noun in the vocative expresses an exclamation.

Example. Perfidious man! do you dare to present yourself before me?

A noun in the vocative case, which is in the body of a sentence, is commonly preceded by a comma; but it must be preceded by a point of exclamation, when the word which precedes the noun in the vocative is an interjection, or some other locution, which requires a point of exclamation.

Example. Alas! my lord, what misfortune is equal to mine?

By whatever point the noun in the vocative be preceded, it may be followed by any of the signs of punctuation, according to the sense intended to be expressed.

REMARKS ON THE POINTS OF INTERROGATION AND EXCLAMATION.

Those two signs of punctuation are equal to the full stop, only when they terminate sentences, the sense of which is complete; but after a member of a sentence, they may correspond with the comma, the semicolon, or the colon: it entirely depends on the connection which exists between the members of the same sentence.

In the following examples we shall, for the purpose of illustration, put after the points of interro-

gation and exclamation the sign of punctuation which they represent.

Example of a point of interrogation equal to a comma. But what shall I do?, continued Telemachus.

Example of a point of interrogation equal to a semicolon. I have then vainly endeavoured to interrupt the pleasure of these lovers, by declaring that I would go with them to the chase. Shall I still go?; shall I be a foil to her beauties?; shall I increase her triumph and his passion?.

Example of a point of interrogation equal to a colon. Why art thou cast down, O my soul?, and why art thou disquieted within me?: hope thou in God; for I shall yet praise him, who is the health of my countenance and my God.

Example of a point of exclamation equal to a comma. What innocence!, what virtue!, what horror of vice!.

Example of a point of exclamation equal to a semicolon. The son of Ulysses already surpasses him in eloquence, in wisdom, and in valour. What beauty!, what mildness!, what modesty!; but what nobleness, and what grandeur!.

Example of a point of exclamation equal to a colon. "With what magnificence does nature shine upon earth!: a pure light, extending itself from the east to the west, gilds alternately the two hemispheres of this globe, &c.

THE SUSPENSION MARK.

Several full points are used together to mark a suspension, or where some interrupted or unconnected sentences are wished to be expressed.

THE DASH.

Though often used improperly by hasty and incoherent writers, the dash may be introduced with propriety where the sentence breaks off abruptly; where a significant pause is required; or where there is an unexpected turn in the sentiment; as,

If thou art he, so much respected once—but, oh! how fallen! how degraded!

If acting conformably to the will of our Creator—if promoting the welfare of mankind around us—if securing our own happiness, be objects—then are we loudly called upon to cultivate and extend the great interests of religion and virtue.

Here lies the great—False marble, where?
Nothing but sordid dust lies here.

THE HYPHEN.

To divide words or syllables with propriety is an important part of a compositor's business: it

will exercise his judgment, and demands particular attention, as authors must necessarily leave the use of the hyphen in dividing words to the discretion of the printer.

The difficulty that formerly existed as to the proper method of dividing syllables, arose from the controversies in which authors were continually engaged on the subject of orthography. Without being able to establish a criterion, each arrogated to himself the adoption of his own particular mode, to the subversion of uniformity and propriety.

The Dictionary of Dr. Johnson is now looked up to as the highest authority; it has, in a great measure, silenced those pedantic clamours and divided opinions which distracted the attention of the compositor, who is now able to solve most difficulties by a reference to this excellent standard of English orthography. Authors of the present day seldom interfere with what is now deemed the province of the printer; they generally allow him, from his practice, to be a pretty competent judge of orthography, and therefore do not object to his mode of spelling, though it may vary from their own. To the printer this is an advantage of considerable importance, as it allows him to observe a system in his spelling, and enables him, at the same time, to acquire the proper use of the division, in which he should be careful not to suffer a syllable of a single letter to be put at the

end of a line, as *a-bide, e-normous, o-bedient, &c.* except in marginal notes, which, from their narrow measure, cannot be governed by this rule. The terminating syllable of a word should not be allowed to begin a line when it can be avoided, as *ed, &c.;* the hyphen being the thickness of one of the letters, the measure must, therefore, be very narrow, or the line very closely spaced, that will not admit the other. A compositor, who studies propriety and neatness in his work, will not suffer an unnecessary division, even in a narrow measure, if he can avoid it by the trouble of overrunning two or three lines of his matter.

In large type and narrow measure, the use of a division may admit of an excuse ; but in that case, care should be taken that they do not follow each other. In small type and wide measure, the hyphen may generally be dispensed with, either by driving out, or getting in the word ; but this ought not to be done if it infringes on the regularity of spacing. If the habit be once acquired of attending to this essential point, the compositor will find his advantage in the preference given to his work, and the respect attached to his character, from his being considered a competent and careful master of his business. The appearance of many divisions down the side of a page, and irregular spacing, are two of the greatest defects in printing.

The radical word should, if possible, be kept

entire and undivided; as, *occur-rence, gentle-man, respect-ful, &c.*

The following rule ought to be observed in dividing primitive words:

Where a single consonant is placed between two vowels, the consonant is carried to the beginning of the following line: For example, the word *general* ought to be divided *ge-ne-ral.* It is necessary here to observe, that this rule of division ought to be adopted in words like the following, notwithstanding the direction given to keep the radical word entire: Take, for instance, the word *terminating;* this word ought to be divided thus, *termina-ting,* in consequence of the final *e* being dropped; so, in all similar instances, where the adjunct causes an omission of the final letter of the primitive word.

The hyphen is likewise used to join two or three words together, which are termed compounds. It has been the practice of most writers and printers to compound two substantives, such as *bird-cage,** *love-letter, &c.* To this we object; for if words like the above are compounded, we must, to be uniform, also compound *flower-garden, goose-berry-*

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* Bird is a substantive, and cage is a substantive, but bird being the qualifying word, it is therefore used as an adjective; hence the compounding those words is incorrect.

bush, *apple-tree*, and many others, which would have a disagreeable appearance in print. To show the impropriety of compounding two substantives, we give an example: "I have transplanted *peach*, *plum*, and *pear-trees*;" here, from the reading, it would seem that *pear-trees* is of the same import, as *peach* or *plum*, not as *peach-trees* or *plum-trees*, on account of the last being connected with the hyphen, and the others not. The impropriety will appear more palpable, if we use words of more than one syllable; as, "I have transplanted *walnut*, *apple*, and *apricot-trees*."

The only case that requires words to be compounded is, where two or more words of different parts of speech are used to denote a simple adjective going before a substantive; as, *well-built house*, *well-informed man*, *handsome-faced child*.

The prepositions *after*, *before*, *over*, &c. are often connected with other words, but do not always make a proper compound; thus, *before-mentioned* is a compound when it precedes a substantive, as, *the before-mentioned place*; but when it comes after a noun, as, *the place before mentioned*, they should be two distinct words.

Hyphens should not be cast of too thick a body, as their principal use is in justifying and correcting; nor should they be used frequently at the ends of lines, for it gives a ragged appearance to the page.

INVERTED COMMAS.

Two commas, inverted, are used at the beginning of every line of a quotation; or, as is most usual at present, at the commencement of a quotation, and at the commencement of each paragraph quoted. Where a quotation occurs within a quotation, its commencement is designated by a single inverted comma.

THE APOSTROPHE.

Two apostrophes are used at the close of a quotation. They are not used at the close of each paragraph in the quotation. Where a quotation occurs within a quotation, its commencement and conclusion are marked by a single inverted comma and single apostrophe.

The apostrophe is used in poetry to contract two syllables into one; as, *form'd* for *formed*; *ne'er* for *never*.

The apostrophe is also used to show the genitive case of nouns, with an *s* following when in the singular number; but where an *s* is added to the word to form the plural, the apostrophe is used after it, without an additional *s*. The *s* is likewise

omitted after the apostrophe where the adding it would create too much of a hissing sound, as, for *righteousness' sake*, for *conscience' sake*. There are other words which, though ending with *s*, require an *s* added after the apostrophe, as "*Moses's minister*," "*Phineas's wife*," "*these answers were made to the witness's question.*" When a sentence consists of terms signifying a name and an office, or of any expressions by which one part is descriptive or explanatory of the other, it may occasion some doubt to which of them the apostrophe, or sign of the genitive case, should be annexed; or, whether it should be subjoined to them both. Thus, some would say, "*I left the parcel at Smith's, the bookseller;*" others, "*at Smith, the bookseller's;*" and perhaps others, "*at Smith's, the bookseller's;*" The first of these forms is most agreeable to the English idiom; for the bookseller is nothing more than an incidental or explanatory phrase, and might be inclosed in parentheses, and understood thus: "*I left the parcel at Smith's.*" *What Smith? Why, Smith, the bookseller.*

THE PARENTHESIS.

A parenthesis is a clause containing some necessary information, or useful remark, introduced

into the body of a sentence obliquely, and which may be omitted without injuring the construction: as, "Know ye not, brethren, (for I speak to them that know the law,) how that the law hath dominion over a man as long as he liveth?" If the incidental clause be short, or perfectly coincide with the rest of the sentence, it is not proper to use the parenthetical character; but the comma alone is sufficient.

The following instances are therefore improper uses of the parentheses:

"Every planet, (as the Creator has made nothing in vain,) is most probably inhabited." "He found them asleep again; (for their eyes were heavy;) neither knew they what to answer him." Here, when the parentheses are omitted, the comma should be used instead of the semicolon after the word *again;* and the semicolon after the word *heavy* should be retained. The parentheses mark a moderate depression of the voice, and may be accompanied with every point which the sense would require, if the parenthetical intercalation were omitted. It ought to terminate with the same kind of stop which the member has that precedes it, and the stop should be placed before the last parenthesis. This is the rule laid down by Lindley Murray, and we think it is better than that adopted by Mr. Stower in his Printer's Grammar, which is, that the point should be placed after

the last parenthesis. The reason is obvious why Murray's plan is preferable to that of Mr. Stower; for if the intercalation be long, the latter method of placing the point is inconvenient, since the reader, as far as he depends on points to guide him in the sense, is liable to lose the immediate connection between the matter which precedes, and that which follows the parentheses. It is distinctly to be understood that the parenthetical signs ought never to be used to enclose the last member of a sentence.

CROTCHETS OR BRACKETS.

These serve to enclose a word, or sentence, which might be explained in a note, or the explanation itself, or a word or sentence which is intended to supply some deficiency, or to rectify some mistake. Where the personal pronoun, used in the third person for two or more individuals, is so frequently repeated, as that one may be mistaken for the other, unless the name of the individual is repeated after the pronoun, here the proper name must be enclosed in brackets; as, he, [John,] &c.

THE BRACE.

A brace is used in poetry, at the end of a triplet, or three lines which have the same rhyme. This has lately got into disuse. The principal reason for which, however, seems to be, that modern poetry, and the late editions of the works of the earlier poets, is in general spaced, or leaded; but the use of the brace in poetry where triplets occur facilitates correct reading.

Braces are used chiefly in tables of accounts, and similar matter, that consists of a variety of articles, which would require much circumlocution were it not for the method of tabular writing. They stand *before*, and keep together, such articles as are of the same import, and are the subdivisions of preceding articles. They sometimes stand *after*, and keep together, such articles as make above one line, and have either pecuniary, mercantile, or other posts after them, which are justified to answer to the middle of the brace. The extreme points of a brace are always turned to that part of an article which makes the most lines.

Braces are generally cast to two, three, and four m's of each fount, but can be made larger if ordered. When there is occasion for them larger, *middle* and *corners* are cast, and used with dashes belonging to the fount.

REFERENCES.

References are those marks, or signs, which are used in a work with side or bottom notes, to direct the reader to the observations they may contain on that part of the text to which the reference may be attached, the note having a corresponding reference.

The references commonly used are, the *asterisk*, or *star*, * ; the *obelisk*, or *dagger*, † ; the *double dagger*, ‡ ; the *section*, § ; the *parallel*, ‖ ; and sometimes the sign of *paragraph*, ¶. Figures enclosed in parentheses have also been used as references, but they have a clumsy appearance. Superior figures and letters, which have lately come in use, are certainly the neatest, and preferable to the others, except where the type used for the notes is very small.

The asterisk, is used in the Roman church books to divide each verse of a psalm, and show where the responses begin. It is sometimes used to supply the name of a person, in satyrical or libellous works, provided it is well understood who is meant. The dash or metal rule is also much used in the same way. It is likewise used to denote an omission, or a hiatus, by loss of original copy, in which case the asterisks are multiplied according to the extent of the chasm.

ACCENTED LETTERS.

Those which are called accented by printers, are the five vowels, marked either with an

Acute, ...	á é í ó ú
Grave, ...	à è ì ò ù
Circumflex, ...	â ê î ô û
Diæresis	ä ë ï ö u
Long, ...	ā ē ī ō ū
Short, ...	ă ĕ ĭ ŏ ŭ

Those who call accented letters all that are of a particular signification, on account of being distinguished by marks, reckon the French ç and the Spanish n̄, in the class of accented letters, though not vowels. As the longs and shorts are used only in particular works, they are not cast to a fount of letter, unless ordered.

Vowels marked with an Acute.

The five vowels marked with acutes over them, it is probable, were first contrived to assist the ignorant monks in reading the church service, that by this means they might arrive at a proper and settled pronunciation in the discharge of their sacerdotal functions; and, by accenting the vowels afterwards in printed books, instruct others to conform to them in giving words their proper

sound; which, though it seems to be an ancient institution, is still observed in France, where the vowels in the Latin columns of their common prayer books are accented, in order to support a uniformity in the pronunciation. Some of our English etymologists have adopted the same method in their dictionaries, by placing an accent over, or next to the vowel which governs the sound and pronunciation of a word; but as authors differ in this point, it will be difficult to accomplish their design, unless they can first agree to uniformity in accenting, and afterward find out an expedient to establish their joint conclusion. The French have done this most effectually, by accenting the Latin in their mass books, as the most proper vehicle to make the pronunciation of the Roman church language more universal—an instance not unworthy of imitation in other nations. How essentially would such a plan of accenting enhance the beauty and sublimity of the church service, which is too frequently mangled and mutilated by inaccurate and injudicious readers.

Among the acuted vowels, the *é* is the most considerable with the French, by whom it is used and abused according to the fancy of the writer, though it is confined to rules as well as other letters; of which the following are the most general:

Where it sounds open and clear, at the end of words, as in *bonté*, *santé*, *pieté*.

Where it sounds sharp, and the voice is to be raised, as in *prédécesseur*, *prédestiné*.

In adjectives or participles of the feminine gender, which end in two *e*'s, as *une maison bien réglée*.

In preterits of the first conjugation, as *j'ai pensé*, *j'ai aimé*, *j'ai desiré*.

Where it takes off the sound of the *s* after it, as in *échevin*, *écaille*, *écarter*, *témoigner*, instead of writing *eschevin*, *escaille*, *tesmoigner*; which is become obsolete.

Thus we find, that beside the *e*, acuted letters are of no use in French orthography; and none of them in the English, save that the acuted *i*, *o*, *u*, may, upon occasion, serve in etymological dictionaries among small capitals, and save kerning them; which, however, cannot be done to A and E. Those *must* be kerned, or otherwise cut and cast, with an accent over them, on purpose, unless it be thought passable to put the accent at the side of a vowel; in which case the former ought to be very thin, especially if small capitals are cast to bear off each other.

Vowels marked with a Grave.

The *a* marked with a grave is used in several other languages beside the Latin and French, though we shall confine ourselves to these two, as being the principal languages which prove

beneficial to our presses. The *a* with a grave is used in Latin when it stands for a word by itself, as *à patre, à matre.*

In adverbs, to distinguish them from adjectives, or prepositions of the same termination, as *infrà suprà*, adverbs—*infra, supra*, prepositions.

e has a grave when it stands for a word by itself, as *redit è scholâ.*

e o u have a grave to distinguish adverbs and conjunctions from adjectives and prepositions of the same termination, as *doctè, meritò, adversùs, secundùm*, adverbs,—*docte, merito, adversus, secundus, secunda, secundum*, adjectives—*verò*, conjunction ; *vero*, adjective.

In French,

a has a grave in *là*, when it is an adverb, as *il est logé là.* But *la* has no grave when it denotes the article of the feminine gender ; as, *la femme, la sœur.*

a has a grave when it is a particle before the dative case, as *j'ai donné à Mr. il a dit à Mr.*

Also, when it stands before the infinitive mood, as, *facile à faire, propre à manger.*

Likewise, when it stands before the names of places, as, *il est allé à Paris, il s'en va à Lyons.*

a has a grave in the word *voilà.*

But *a* has no grave where it comes after a *y*, as *il y a un Dieu, il y a des hommes savans.*

Neither has *a* a grave when it makes a word of itself, but at the same time derives from the verb *avoir*, to have : as *il a bon tems à se promener*, where the first *a* is not accented, because it derives from *avoir ;* whereas the other *a* has a grave, because it stands before the infinitive mood.

The *e* has a grave in words whose last syllable has an open and sharp sound, as in *excès*, *procès*, *succès*, *exprès*, and the preposition *dès*, to distinguish it from *des*, which denotes the genitive of the plural number.

u has a grave in the word *où*, when it means *where*, as *où êtes vous?*

But *u* has no grave when it stands for *or*, as *souhaitez-vous de boire du vin, ou de la bière?*

Neither has *u* a grave when it stands for *either*, as, *Je partirai ou pour Paris ou pour Dieppe*—I shall go either to Paris or to Dieppe.

In English,

e is marked with a grave in poetry to prevent its being taken for the *e* feminine, which, not being sounded, would shorten the measure of the verse, were the *e* not marked to be pronounced ; as in these lines, viz.

Cithœron, Dindyme, in ashes mourn,
And Micalè. and proud Olympus shine.
Bœotia for her Dircè seeks in vain.

Vowels marked with a Circumflex.

The circumflexed vowels are used in the French more than in the Latin language.

In Latin,

â and *û* are chiefly made use of.

a is circumflexed where it distinguishes the ablative from the nominative case, of the first declension, as nom. *musa*, abl. *musâ*, unless a preposition stands before it; which shows the case without any other sign or distinction.

Also, where the preterperfect of the first conjugation is contracted, as *amâsti* for *amavisti*.

In French,

a is circumflexed where it retrenches the *s* after it, as *château*, *châtiment*, instead of writing *chasteau*, *chastiment*, as formerly.

e, *i*, *o*, *u*, are circumflexed where they have an *s* after them, which they show to be cut off, by assuming a circumflex; as does

ê in *fête*, *evêque*, *être*, *êtes*, and many others.

î in *maître*, *epître*, *connoître*, &c.

ô in *Apôtre*, *côte*, *vôtre*, &c.

û in *brûler*, *coûtume*, *coûteau*, *soûtenir*, &c.

But *s* maintains its place in *pasteur*, *gestes*, *distribuer*, *posterité*; and in all other words where the *s* after a vowel sounds clear and open; and where retrenching it would occasion a vitiated pronunciation.

Vowels marked with a Diæresis.

The vowels which are marked with two dots, or a diæresis, over them, are properly but three, ë, ï, ü, though ä and ö ought not to be omitted in casting. Their use is to separate one vowel from another, and to prevent their being taken for diphthongs; but the rules for placing the diæresis being as unsettled as many others relating to accented letters, we will not presume to fix upon any, but recommend it to authors to mark them in their copy, according to their own or their favourite grammarian's fancy, since it is not required of a compositor to concern himself about matters that are in dispute among writers. In the mean time, particular care ought to be taken in poetical works not to omit putting the diæresis where the dividing of two vowels makes two different syllables; otherwise, two vowels together may be taken for a diphthong, and make the verse fall short of its measure, as might have happened to the lines underneath, had no diæresis been used to prevent it, viz.

The Swans that in Cäyster's waters burn.
In flames Cäicus, Peneus, Alpheus roll'd.
The Tanäis smokes amid his boiling wave.*

* We think that the diæresis would be very properly used in the words *cöoperate, prëexist, prëeminent.* &c. The usual method of inserting a hyphen in words of this

Shorts and Longs.

Shorts as well as longs are invented to show the accent, sound, and quantity of syllables. They are chiefly used in classical dictionaries, and in scanning Latin verses, after their syllables have been brought into feet, and marked with shorts and longs, according to the measure of the verse. Thus, an adonic verse has two feet, a hexameter six, a pentameter five feet, which consist either of two, or of three syllables. Two syllables, both long, are called a *spondee.* A foot, whose first syllable is long and the last short, is a *trochæus;* and three syllables, viz. the first long and the other two short, is a *dactyle.*

French ç and Spanish ñ.

The *c à la queue,* or *c with a tail,* is a French sort, and sounds like *ss,* when it stands before *a, o, u,* as in *ça, garçon;* whereas a common *c* before the *same* vowels is pronounced like *k.* To

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kind, and omitting it in such as *premeditate, predispose,* &c. appears to us altogether incorrect, since it destroys that uniformity so much desired by all persons of taste. When we consider, also, that Dr. Johnson, in his Dictionary, has dispensed with the use of the hyphen in most words of this kind, we feel ourselves justified in recommending the use of the diæresis in instances similar to the above.

make a tail to a capital C, a figure of 5 inverted, and of a small size, is not improperly used, or a note of interrogation with the dot cut off.

The *n* marked with a stroke over it, is used in the Spanish, and pronounced like *gn* in French, as in the words *montagne*, *agneau ;* but short and quick, as in *España.* It is a sort which is used in the middle of words, but very rarely at the beginning.

The acute accent is almost the only one used in the Spanish language.

ARITHMETICAL FIGURES.

Arithmetical figures are nine in number, besides the cypher, or nought, which, though of itself of no signification, makes a great increase in the figure to which it is joined, either singly or progressively.

Figures require a founder's particular care to cast them exactly n-thick, and to a true parallel, as the least deviation, where a number of them come together in table work, destroys their arrangement, and causes an inconvenience in the justification, which the ingenuity of a compositor cannot always, or without considerable loss of time, rectify.

The excellence of figures does not consist in their having soft and fine strokes, but rather in such circles and lines as bear a proportion with the strength of the face. The improvement which has recently taken place, and is now generally adopted, of casting them to a fuller face than formerly, it must be allowed, adds considerably to their appearance, and to the beauty of the work in which they may be used.

NUMERICAL LETTERS.

Numerical letters were used by the Romans to account by, and are seven in number, I V X L C D M. The reason for choosing these letters seems to be this: M being the first letter of *mille*, stands for 1000, which M was formerly written CIↃ. Half of that, viz. IↃ, or D, is 500. C, the first letter of *centum*, stands for 100; which C was anciently written Ⅽ, and so, half of it will be 50, L. X denotes 10, which is twice 5, made of two V's, one at top and the other at bottom. V stands for 5, because their measure of five ounces was of that shape; and I stands for 1, because it is made by one stroke of the pen.

If a less number stands before a greater, it is a rule that the less is *taken from* the greater; thus,

1 taken from 5 remains 4, IV.—1 from 10 remains 9, IX.—10 from 50 remains 40, XL.—10 from 100 remains 90, XC.

If a less number follow a greater, it is a rule that the less is *added* to the greater; as 5 and 1 make 6, VI.—10 and 1 make 11, XI.—50 and 10 make 60, LX., &c.

Sometimes small capitals are used for numerals, in the same manner as the seven sorts of capitals, and look neater than the last.

Numerical letters were not originally the invention of the Romans: several nations, anterior to them, used that method in counting. The ancient Romans employed capital letters; but when printing was discovered, and before capitals were invented, small letters served for numerals. At the time of printing with Gothic characters, i v x l c d m were and are still of the same signification with capitals, when used as numerals. But it should be observed, that the Capital J is not a numeral letter, though the lower case ſ is as often and as significantly used as the vowel i, especially where the former is used as a closing letter, in iſ iiſ vſ viſ viiſ dciſ, &c. though it is as well not to use ſ's at all, unless out of respect to antiquity: for in Roman lower case numerals, which are of a more modern date, the j is not regarded, but the i stands for a figure of 1, wherever it is used numerically.

GREEK NUMERALS.

Instead of seven letters used by the Romans, the Greeks employed their whole alphabet, and more than the alphabet; for they contrived three symbols more, and made their numerals to consist of twenty-seven sorts, which they divided into three classes: the first to contain units; the second, tens; and the third, hundreds. Accordingly, the first class consists of the nine following numerals, viz.

α	β	γ	δ	ε	ϛ	ζ	η	θ
1	2	3	4	5	6	7	8	9

In this class, it may be observed, the Greek *st*, or *stigma*, is made an auxiliary numeral letter, to stand for 6, and is called ἐπίσημον.

The second class contains the nine numerals which express tens, viz.

ι	κ	λ	μ	ν	ξ	ο	π	ϟ
10	20	30	40	50	60	70	80	90

In this second class, a particular symbol, resembling an inverted Hebrew *lamed*, serves to express 90, though others use a *ψ* in the room of it, to which, as well as the former, they give the name of *koppa*.

The third class contains the numerals which carry hundreds with them, and are

ϱ	σ	τ	υ	φ	χ	ψ	ω	ϡ
100	200	300	400	500	600	700	800	900

In this class the additional symbol which stands for 900 is a compound of a *pi* and a *sigma*, for which reason it is called *sanpi;* though others represent it by a mark like this, ϡ.

To raise numbers to thousands, nothing else is required than to begin the alphabet again, and to mark each letter with a dot, or an acute under it, in the following manner:

1000	2000	3000	6000	10,000	100,000
ά	β́	γ́	ϛ́	ί	ϱ́

Still higher numbers are noted with double acutes under them; thus,

1,000,000	2,000,000	3,000,000, &c.
α̋	β̋	γ̋

The manner of joining these numerals may be learned from the following example:

11	23	104	1005	1754
ια	κγ	ϱδ	͵αε	͵αψνδ

Beside the above manner of counting by lower case letters, the Greeks make choice of six capitals to express sums by:

I	Π	Δ	H	X	M
1	5	10	100	1000	10,000

Among the numeral letters, the *pi* is peculiar, for admitting the *delta*, *eta*, *chi*, and *mu*, into its centre, and for giving such an incorporated letter five times the value which it has of itself; as,

[Δ] 5 times 10 are 50.
[H] 5 times 100 are 500.
[X] 5 times 1000 are 5000.
[M] 5 times 10,000 are 50,000.

To these inclosed numerals any part and quantity may be added, according to the value which is contained in each of the six numeral letters exhibited in the preceding page.

It should be observed, that when a numeral letter is marked at the top, it shows it to be a fraction; as,

One fourth.	One fifth.	Five eighths.
δ'	ε'	ε'η'η'

HEBREW NUMERALS.

The manner of counting by letters is derived from the Hebrews, who for that purpose made use of the letters of their alphabet, without the assistance of other symbols. Accordingly, the letters which express units are,

א	ב	ג	ד	ה	ו	ז	ח	ט
1	2	3	4	5	6	7	8	9

The following contain tens, viz.

צ	פ	ע	ס	נ	מ	ל	כ	י
90	80	70	60	50	40	30	20	10

And these underneath, hundreds, viz.

ץ	ף	ן	ם	ך	ת	ש	ר	ק
900	800	700	600	500	400	300	200	100

In joining Hebrew letters for numerals, it is a rule to put the letter of a greater signification before a character of a less; as,

יב	לא	צג	קה	רסו
12	31	93	105	266

The numeral signification of the five final letters is sometimes expressed by compounds; as,

ך by תק	ם by תר	ן by תש	ף by תת	ץ by תתק
500	600	700	800	900

א with an acute over it stands for 1000; but where the contents of a sum amount to above 1000, the letter to the right hand shows the order of thousands, and the א is doubly accented; thus,

״	״	״
בא	גא	חא
2000	3000	8000

And if hundreds are added to them, the double accented א is omitted, and only a common letter put at the beginning, to intimate the order of thousands; thus,

חרג	זתש	ות	דש	בק
8203	7700	6400	4300	2100

In printed books and letters, the Jews date their years [after the creation of the world] without putting an ה at the beginning to imply 5000, and only set down the hundred, and parts, of which their years consist above the thousands. But in this case they seldom forget to put the letters לפק after the date; which is to inform the reader, that the date thus abridged, is according to the minor supputation.

In writing 15, the Jews choose to do it by טו, instead of יה, because these letters are used in Jehovah; and, therefore, they think it a profanation of the Lord's name, if the said letters should be used for numerals. Neither do they express 16 by יו, but make use of טז, because the two letters, jod and vau, are likewise comprehended in the word Jehovah.

MATHEMATICAL, ALGEBRAICAL, AND GEOMETRICAL SIGNS.

+ Stands for *plus*, or *and*, or *with*; as, 9 *plus* 3, 9 and 3, 9 with 5.

— signifies *minus*, or *less*; as, 14 *minus* 2, or, 14 wanting 2.

= means *equal*; as, 9 + 3 = 14—2; *i. e.* 9 and 3 is parallel or equal to 14, wanting 2.

∞ This sign also denotes *equal*, but is become obsolete.

× is the sign for multiplication,

: : shows a geometrical equal proportion; as, 6.2 : : 12.4; that is, 6 is to 2, as 12 to 4.

: or ∴ is an arithmetical equal proportion; as, 7.3 : 13.9; *i. e.* 7 is more than 3, as 13 is more than 9.

÷÷ A continued geometrical proportion, or geometrical progression; as, 16.8.4.2.1; *i. e.* 16 is to 8, as 8 to 4, as 4 to 2, as 2 to 1.

÷ Arithmetical progression, continued; as, 19. 16. 13. 10. 7. 4; *i. e.* 19 is more than 16, as 16 is more than 13, as 13 is more than 10, as 10 is more than 7, as 7 is more than 4.

□ Quadrat, or regular quadrangle; as, □ AB = □ BC; *i. e.* the quadrangle upon the line AB is equal to the quadrangle upon the line BC.

△ Triangle; as, △ ABC = △ ADC.

< An angle; as, < ABC = < ADC.

⊥ Perpendicular ; as, AB⊥BC.

▭ Rectangled parallelogram ; or, the product of two lines.

√ Radix, root, or side of a square.

⊏ Greater.

⊐ Lesser.

—: The differences, or excess.

Q or *q*, a square.

C or *c*, a cube.

QQ The ratio of a square number to a square number.

These, and several other signs and symbols, we meet with in mathematical and algebraical works ; though authors do not confine themselves to them, but express their knowledge different ways, yet so as to be understood by those skilled in the science. In algebraical work, therefore, in particular, gentlemen should be very exact in their copy, and compositors as exact in following it, that no alterations may ensue after it is composed ; since changing and altering work of this nature is more troublesome to a compositor than can be imagined by one that has not a tolerable knowledge of printing. Hence it is, that few compositors are fond of algebra, and rather choose to be employed on plain work, though less profitable to them than the former, because it is disagreeable, and injures the habit of an expeditious compositor besides.

In the mean time we venture to say, that the composing of algebra might be more agreeable were proper cases contrived for the letter and sorts belonging to such work, where it is likely to make a return toward its extraordinary charges.

CELESTIAL AND ASTRONOMICAL SIGNS.

I. The names of the twelve signs of the zodiac

♈ Aries.	♎ Libra.
♉ Taurus.	♏ Scorpio.
♊ Gemini.	♐ Sagittarius.
♋ Cancer.	♑ Capricornus.
♌ Leo.	♒ Aquarius.
♍ Virgo.	♓ Pisces.

II. The names of the nine planets.

♄ Saturnus.	♀ Venus.
♃ Jupiter.	☿ Mercurius.
♂ Mars.	♅ Georgium Sidus.
⊕ Earth.	☉ Sun.

☽ Moon.

☊ The dragon's head, and

☋ The dragon's tail, are the two points in which the eclipses happen.

III. The names of aspects.

☌ Conjunctio happens when two planets stand under each other in the same sign and degree.

☍ Oppositio happens when two planets stand diametrically opposite each other.

△ Trigonus happens when one planet stands from another four signs, or 120 degrees; which make one third part of the ecliptic.

□ Quadril happens when two planets stand three signs from each other, which makes 90 degrees, or the fourth part of the ecliptic.

⚹ Sextile is the sixth part of the ecliptic; viz. two signs, which make 60 degrees.

☉ Denotes a new moon.

☽ First quarter of the moon.

● The full moon.

☾ Last quarter of the moon.

PHYSICAL SIGNS AND ABBREVIATIONS.

℞ stands for recipe.

℔ for pound.

℥ for an ounce.

ʒ for a drachma.

℈ for scruple.

j stands for 1; ij for 2; and so on.

gr. denotes a grain.

One pound makes twelve ounces.

One ounce contains eight drachmas.

One drachma is equal to three scruples.

One scruple consists of twenty grains.

One grain has the weight of a barley-corn.

M. signifies a handful.

P. means as much as can be taken between the ends of two fingers.

P. æq. stands for equal parts.

Ana. signifies, so much of the one as of the other.

q. s. as much as is sufficient.

q. p. as much as you please.

s. a. according to art.

OF THE GREEK.

The Greek is one of the sacred languages, and used more frequently in printing than any of the rest, which makes it almost necessary for every printing office to be furnished with Greek letter, though not to the same amount of weight; for a quantity of Greek letter that will moderately fill a case, and consisting of no other than useful sorts, is sufficient to serve for notes, mottoes, words, &c.

and such a collection of useful sorts may be lodged in a common pair of cases, by dividing some of the boxes of the upper case for the accents, and omitting useless letters, ligatures, and abbreviations. This was impracticable when ligatures and abbreviations were in use, for then seven hundred and fifty boxes were required for the sorts in a fount of Greek. What induced the first founders of the art to perplex themselves with cutting and casting so many different abbreviations and contractions, may be partly guessed, by supposing that they were intended to represent Greek writing, and to grace them with the same flourishes of the pen; but what could prompt them to confound themselves with an infinite number of ligatures we cannot well account for, and only suggest, that it was the contrivance of letter cutters to promote their own business. But this unprofitable system has almost entirely lost its credit; and Greek, at present, is cast almost every where without ligatures and abbreviations, unless where founders will not forbear thrusting them in, or where they have express orders to cast them. Some few ligatures, however, not only grace Greek letter, but are also profitable to a compositor who knows how to use them properly. Without saying any thing more concerning ligatures, we will consider the single letters of the Greek, and accordingly exhibit the alphabet.

The Alphabet.

Α α	Ἄλφα	Alpha	a
Β β ϐ	Βῆτα	Beta	b
Γ γ ɼ	Γάμμα	Gamma	g
Δ δ	Δέλτα	Delta	d
Ε ε	Ἐψιλὸν	Epsilon	e short
Ζ ζ ζ	Ζῆτα	Zeta	z
Η η	Ἦτα	Eta	e long
Θ ϑ θ	Θῆτα	Theta	th
Ι ι	Ἰῶτα	Iota	i
Κ κ	Κάππα	Kappa	k c
Λ λ	Λάμϐδα	Lambda	l
Μ μ	Μῦ	Mu	m
Ν ν	Νῦ	Nu	n
Ξ ξ	Ξῖ	Xi	x
Ο ο	Ὀμικρὸν	Omicron	o short
Π π ϖ	Πῖ	Pi	p
Ρ ϱ ρ	Ῥῶ	Rho	r
Σ ς σ	Σῖγμα	Sigma	s
Τ ͳ τ	Ταῦ	Tau	t
Υ υ	Ὑψιλὸν	Upsilon	u
Φ φ	Φῖ	Phi	ph
Χ χ	Χῖ	Chi	ch
Ψ ψ	Ψῖ	Psi	ps
Ω ω	Ὠμέγα	Omega	o long

Abbreviations.

ϛ, st. ȣ, ou. ϗ, kai. ὃς, os.

The Greek alphabet contains seventeen consonants and seven vowels.

Two vowels make a diphthong; of which there are six that are called *proper* diphthongs, formed from the short vowels, (including α short,) with ι or υ.

αι αυ ει ευ οι ου.

Instead of αι improper, ηι, and ωι, the Greeks write ᾳ, ῃ, and ῳ; the point under these vowels denoting the iota, which is therefore called *iota subscriptum*. But because capitals have no subscripts, the iota is put in lower case to the capital letter; as, ΤΩι ΠΟΙΗΤΗι.

The Greek vowels admit of two aspirations, viz. *spiritus asper* [‘] and *spiritus lenis* [’]

Spiritus asper has the sound of an *h;* and *spiritus lenis* denotes the absence of that sound.

All the words that begin with a vowel have one of these aspirations over them; but the vowel upsilon admits of no other than the *spiritus asper*, at the beginning of a word.

In diphthongs, the *spiritus* is put over the second vowel; as, αὐτὸς, not ἀυτὸς.

The letter ῥ, at the beginning of a word, has an *asper* over it, as ῥέω; and where two ῥ's meet in a word, the first has a *lenis*, and the other an *asper*.

The Greek has three accents, viz. acute [′], which can fall only upon one of the three last syllables of a word.

Grave [`], which must only be placed on the last syllable.

Circumflex [˜], which only occurs on the last syllable, and the last but one.

The apostrophe ['] is used for cutting off the vowels α, ε, ι, ο, and the diphthongs αι and οι, when they stand at the end of a word, and the next word begins with a vowel; as παρ' αὐτῷ, for παρὰ αὐτῷ; πάνΤ' ἔλεγον, for πανΤα ἔλεγον.

Sometimes the apostrophe contracts two words into one; as, κἀγὼ, for καὶ ἐγὼ; ἐγῶ'μαι, for ἐγὼ οἶμαι; κἀ'κεῖνος, for καὶ ἐκεῖνος.

Sometimes an apostrophe supplies the first vowel beginning a word; as, ὦ 'γαθὲ, for ὦ ἀγαθὲ; ποῦ 'στι, for ποῦ ἐστι. This is chiefly used in poetry.

But the prepositions περὶ and πρὸ suffer no apostrophe, though the next word begin with a vowel; for we write περὶ ὑμῶν, πρὸ ἐμοῦ; περὶ αὐτον, πρὸ ἑτῶν, &c.

The diæresis [¨] separates two vowels, that they may not be taken for a diphthong: thus, ἀϋτὴ with a diæresis makes three syllables; but without a diæresis αυ is a diphthong, and makes αὐτὴ have but two syllables.

Diastole [,] is put betwixt two particles that would bear a different sense without it; thus,

ὅ,τε ὅ,τι signify *whatever;* whereas ὅτε stands for *as*, and ὅτι for *that.* Τό,τε with a diastole implies *and this*, but when without, it answers to the adverb *then.*

The sign of interrogation, in the Greek, is made by a semicolon [;].

The colon, in the Greek, is made by an inverted full point [·].

Such compositors and readers as are not Greek scholars, and even those who are, but have not paid attention to accents, will do well to bear in mind what has been said above concerning the proper situation of the spirits and accents; as many of the faults which so frequently offend the scholar's eye might thereby be avoided. The following rules may be easily borne in mind:—No accent can be placed over any other than one of the three last syllables of a word. No vowel can have a spirit, except at the beginning of a word. The grave accent never occurs but on the last syllable; and this being the case, the asper grave [῍] and lenis grave [῾] can be wanted only for a few monosyllables, and less than half the quantity usually cast would be enough in a fount. Almost all words have an accent, and they very seldom have more than one; and when this happens, it is an acute thrown back upon the last syllable from one of those words called enclitics, which in that case has none, unless it be followed by another

enclitic. In no other case than this can a last syllable have an acute accent, except before a full point, colon, or note of interrogation, when the grave accent on the last syllable is changed to an acute; a circumstance which has often led printers who were ignorant of the reasons for accenting the same word differently in different situations, to think that there was an error in their copy, and thus to make one in their proof. Most errors, however, proceed from those who do not think at all about the matter—"*qui correctiones non curant, et cantando literas jungunt, quod non potest fieri, nisi mendosè.*"

OF THE HEBREW.

The Alphabet.

			No. 1.	No. 2.
Aleph	א		Sounded as *a* in *war*, (*vowel.*)	A gentle aspirate.
Beth	ב			*Bh.*
Gimel	ג		*g* hard.	*Gh.*
Daleth	ד			*Dh.*
He	ה		*a* in *hate*, (*vowel.*)	A rough aspirate.
Vau	ו		*u vowel*, or before a vowel, *w.*	
Zain	ז			*Ds*
Cheth	ח			*Hh.*
Teth	ט		*Th.*	
Jod	י		Like *ee* in English, (*vowel.*)	*j* consonant, or the softer *y.*
Caph	כ	ך	*k*, or *c* hard.	
Lamed	ל			
Mem	מ	ם		
Nun	נ	ן		
Samech	ס			Soft *s.*
Ain	ע		*o* long, (*vowel.*)	*hg*, or *hgh*, the roughest aspirate.
Phe	פ	ף		
Tzaddi	צ	ץ	*j* soft.	
Koph	ק		*q*, or *qu.*	
Resch	ר			
Shin	ש	or Sin		*s* hard.
Thau	ת			

Final Letters.

In the column, No. 1, of the foregoing table, the force of the Hebrew letters, when read without points, is expressed; and the next column, No. 2, gives you their force when the language is complicated with the Masoretic points or vowels, which are certainly of later date than the present Hebrew letters.

Letters that have a likeness to others

Beth	Caph		Gimel	Nun
ב	כ		ג	נ

Daleth	Caph	Resch	He	Cheth	Thau
ד	ך	ר	ה	ח	ת

Vau	Zain	Jod	Nun	Teth	Mem
ו	ז	י	ן	ט	מ

Mem	Samech	Ain	Tzaddi
ם	ס	ע	צ

The following five letters are cast broad, and are used at the end of words, viz.

Aleph	He	Lamed	Mem	Thau
א	ה	ל	ם	ת

but are not counted among the final letters, being contrived for justifying, because Hebrew is not divided.

Although the vowel points, in the opinion of the best scholars, are not essential to the language, yet as they are still used in some bibles, and in all works published by Jews, it may be necessary for a compositor to attend to them.

The Masoretic vowels, or points, are such as are here subjoined, under the consonant בּ, or beth.

1. *The long Vowels.*

Their names are—

Kametz	ָ *aa*	בָ baa
Tzeri	ֵ *ee*	בֵ bee
Long Chirek	ִי *ii*	בִי bii
Cholem	ֹו *oo*	בֹבֹו boo
Shurek	וּ *uu*	בּוּ buu

2. *The short.*

Patach	ַ *a*	בַ ba
Sœgol	ֶ *e*	בֶ be
Little Chirek	ִ *i*	בִ bi
Kametz-chatuph	ָ *o*	בָ bo
Kibbutz	ֻ *u*	בֻ bu

3. *Shevas, which imply a vowel to be wanting.*

Simple Sheva	חְ
Patach furtive	חַ
Chateph Patach	חֲ *a*
Chateph Sœgol	חֱ *e*
Chateph Kametz	חֳ *o*

The three last are called compound shevas; and, in fact, we see that they are only the short vowels, to which the simple sheva [:] is joined.

The best idea we can give of these shevas, is in the English words *ev'ry* and *indignant*. Between the *ev-* and *-ry* there is a kind of semi-sound of *e*; and between the *indig-* and the *-nant* there is a similar sound, as if the word was *indigenant*. These semi-sounds the Hebrews would call shevas.

Dagesch [·] and mappik [·] are two points placed in the body of certain letters.

The dagesch is either *forte* or *lenis*.

Dagesch forte may have a place in all the letters, except א ה ח ע ר, and it makes the letter sound double.

Dagesch lene has its place in ב ג ד כ פ ת, and raises the sound of the letter.

Mappik has its place in the letters *he* and *jod*.

Raphe is a short dash that heretofore was put over ב ג ד כ פ ת when they had no dagesch, to show that they should be pronounced soft, and with the aspiration of an *h*.

Maccaph — is used to connect words together, which is common in Hebrew.

Soph-Pasak is the name of the two great points [:], which stand at the end of each verse in the Hebrew bible.

Beside the vowels, the Hebrews have various accents, of which some have their place over, and some under the letter. They are not used in all Hebrew writings, but only in some books of the bible, where they stand for notes to sing by, and are therefore called *accentus tonici*. Others, again, are named *accentus distinctivi*, because they distinguish the sense, as pointing does in the English; and others have the appellation of *ministri*, or *servi non distinctivi*, which show the construction and connexion of words. The figures, names, and signification of the accents that stand over the letters, are as follow, viz.

Segol, or Segolta	׃	Strong colon.
Sakeph katon	׀	Comma.
Sakeph gadol	׀	Ditto.
Refia, or Rbhia	ׁ	Ditto.
Sarka	ׂ	Semicomma primum.
Pasta	׀	Ditto.

Geresch	׳ Semicomma secundum.
Geraschajim	״ Ditto.
Telischa gedola	׀ Semicomma tertium.
Paser minor	ׁ Semicomma quartum.
Paser major	ׁׁ Ditto.
Karne para	ׂׂ Ditto.
Schalscheleth	׆ Semicolon.
Pesik, or legarme	׀ Ditto.
Kadhma	ׅ Semicomma.
Telischa ketanna	׀ Ditto.

The following accents have their place under the letters, viz.

Silluk	׀ Punctum.
Atnach	׀ Colon.
Tiphcha	׀ Semicomma primum.
Tefir	׀ Ditto.
Jethif	׀ Semicolon.
Munach	׀ Semicomma.
Merca simplex	׀ Ditto.
Merca duplex	׀ Ditto.
Mahpach	׀ Ditto.
Darga	׀ Ditto.
Meajela	׀ Ditto.
Jerach ben jomo	׀ Ditto.

The Hebrew has no capitals, and therefore letters of the same shape, but of a larger body, are used

at the beginning of chapters, and other parts of Hebrew works.

But we must not pronounce it a fault, if we happen to meet in some bibles with words that begin with a letter of a much larger body than the text: nor need we be astonished to see words with letters in them of a much less body than the text; or wonder to see final letters used in the middle of words; for such notes show that they contain some particular and mystical meaning Thus, in 2 Chron. i. 1. the word Adam begins with a letter of a larger size than the rest, thereby to intimate that Adam is the father of all mankind. In Genes. i. 1. the great beth in the word Bereschith stands for a monitor of the great and incomprehensible work of creation. Contrary to the first, in Prov. xxviii. 17. the daleth in the word Adam is considerably less than the letter of the text, to signify, that whoever oppresses another openly or clandestinely, though of a mean condition, or who sheds innocent blood, is not worthy to be called man.

Sometimes the open or common mem stands in the room of a final one; as in Nehem. ii. 13. where the word Hem has an open mem at the end, in allusion to the torn and open walls of Jerusalem, of which there is mention made; and in Es. vii 14. where the prophet speaks of the conception of the Virgin Mary, the mem in

the haalma, or virgin, is a close or final letter, to intimate the virginity of the mother of our Saviour. Such are the peculiarities of some Jewish Rabbis, in bibles of their publication; of which we have instanced the above, to caution compositors not to take them for faults, if such mystical writings should come under their hands.

The Hebrew reads from the right to the left, which is the case with all the other oriental languages, except the Ethiopic and Arminian. In composing Hebrew, therefore, the Jews begin at the end of the composing stick, and justify the vowels and accents over and under the letters after the line of matter is adjusted.

The Hebrew, like the Greek, has more sorts than are required in a complete fount, which renders it difficult to make room for them in cases of common dimensions; considering that the powers of the Hebrew Alphabet are distinguished by points that letters have either in their body or over it. Accordingly, we observe in some founts the dagesch forte to have a place in all the letters of the alphabet, though in five of them it is not admitted. The second series is the whole alphabet, with a cholem over each letter; and a third alphabet has the dagesch in the body, and the cholem on the top. Exclusive of which treble alphabet, some founders cast a fourth, that is kerned on both sides, and makes the alphabet with

a cholem needless, because, by the help of the kerned alphabet, not only the cholem, but even the vowels, may be made to stand in their proper places, provided they are cast thin, after the manner of Greek accents, and inclining toward the middle of the foot of the letters.

ORTHOGRAPHY.

To ascertain in what instances to double the final consonant of verbs and participles, where they have the adjuncts *ed* and *ing* added, has caused a great deal of difficulty to compositors. Mr. Stower, in his Printer's Grammar, has given a list of such verbs as require the consonant to be doubled. But as it is impossible to give all the verbs of this kind used in the English language, his plan must necessarily be defective. The following rule will obviate this difficulty, and prevent the trouble and loss of time occasioned by referring to a list:

Where a verb, in the infinitive mood, is a word of one syllable, ending with a single consonant, which is preceded by a single vowel; and where it is a word of two syllables, with the accent on the last, ending with a single consonant, and preceded by a single vowel, the consonant must be doubled when *ed* or *ing* is subjoined.

Two examples will show the propriety of the above rule:

Infinitive mood.	Present participle.	Ind. mood, imp. tense.
To step.	*Stepping.*	*I stepped.*

Omit one *p* in the present participle, and the imperfect tense of the indicative mood, and you have stēping, I stēped, with the *e* long, and sounding like *steeping*, *I steeped*, from the infinitive *to steep*, which means to soak, to infuse: thus the signification of the word is changed. The following is an example of a word of two syllables, with the accent on the last syllable: *To incur—incurring—I incurred.* Omit one *r*, and you have incūring, I incūred.

Words ending with any double letter but *l*, and taking *ness*, *less*, *ly* or *ful*, after them, preserve the letter double; as harmlessness, carelessness, carelessly, stiffly, successful, distressful, &c. But those words which end with double *l*, and take *ness*, *less*, *ly* or *ful* after them, generally omit one *l*; as fulness, skilless, fully, skilful, &c.

Ness, *less*, *ly* and *ful*, added to words ending with silent *e*, do not cut it off: as, paleness, guileless, closely, peaceful; except in a few words; as, duly, truly, awful.

Ment, added to words ending with silent *e*, generally preserves the *e* from elision; as, abatement, chastisement, incitement, &c. The words

judgment, abridgment, acknowledgment, are deviations from the rule. Like other terminations, it changes *y* into *i*, when preceded by a consonant; as, accompany, accompaniment; merry, merriment.

Able and *ible*, when incorporated into words ending with silent *e*, almost always cut it off: as, blame, blamable; cure, curable; sense, sensible, &c; but if *c* or *g* soft come before *e* in the original word, the *e* is then preserved in words compounded with *able;* as, change, changeable; peace, peaceable, &c.

When *ing* or *ish* are added to words ending with silent *e*, the *e* is almost universally omitted: as, place, placing; lodge, lodging; slave, slavish; prude, prudish.

Words taken into composition, often drop those letters which were superfluous in their simples; as handful, withal, also, chilblain.

Words ending with *y*, preceded by a consonant, form the plurals of nouns, the persons of verbs, verbal nouns, past participles, comparatives, and superlatives, by changing *y* into *i*: as, spy, spies; I carry, thou carriest, he carrieth, or carries; happy, happier, happiest. The present participle in *ing*, retains the *y*, that *i* may not be doubled: as, carry, carrying; bury, burying, &c. But *y*, preceded by a vowel, in such instances as the above, is not changed: as, boy, boys; I cloy, he

cloys, cloyed, &c. ; except in lay, pay, and say ; from which are formed laid, paid, and said; and their compounds, unlaid, unpaid, unsaid, &c.

Words ending with *y*, preceded by a consonant, upon assuming an additional syllable beginning with a consonant, commonly change *y* into *i ;* as, happy, happily, happiness. But when *y* is preceded by a vowel, it is very rarely changed in the additional syllable ; as coy, coyly ; boy, boyish, boyhood ; annoy, annoyer, annoyance ; joy, joyless, joyful, &c.

The use of *k* after *c* final has lately been adopted in this country by some of the editors of newspapers. This not only gives a disagreeable appearance to print, (the *k* at the end of a word being an uncouth letter to the eye,) but it is inconsistent with analogy to write, *musick, musical; republick, republican:* it is better thus—*music, musical; republic, republican.* The *k* ought to be added after *c* final in verbs only; where it should be used in all its moods and tenses, in order to preserve uniformity of appearance in words forming the same part of speech. The use of it in any other part of speech is unnecessary; but the following example will show the utility of inserting it in the verb: Take the verb *to frolick :* If you omit the *k* in the present participle, and the imperfect tense of the indicative mood, you have *frolising*, I *frolised*, &c. since *c*, followed

by *c* or *i*, is pronounced soft like *s*. Here we would suggest, that as simplifying the orthography of a language is always to be desired, whether it would not be most convenient, especially to foreigners, to use the *k* alone, and omit the *c* in all the verbs; indeed, the *c*, with the exception of showing the derivation of a word, is totally useless. Perhaps it would be preferable to abolish the *k*, and make the *c* always hard like *k*. The use of *c* soft, and *s*, has caused a great incongruity in their use, and does so even at the present day.

Many barbarous words of uncouth sounds are still used by some of our best writers, notwithstanding there are others of the same import more pleasing to the ear. Such as—

whilst	for	while,
amongst		among,
betwixt		between,
amidst		amid.

No final sound can be more disagreeable than that of *st*, as it is only the sudden stop of a hiss.

downward*s*	for	downward,
forward*s*		forward,
toward*s*		toward.

What occasion is there for continuing the final *s* in those words?

Further—farther.

Why is this anomaly suffered to remain, when we

have the regular degrees of comparison in—far, farther, farthest ?

Beside—besides.

These two words, being of similar sound, are very improperly used promiscuously, the one for the other. When employed as a preposition, the word *beside* should always be used ; when as an adverb, *besides :* the first signifies *over and above ;* the last, *moreover*. As in the following sentences :

Beside [*over and above*] what has been advanced upon this subject, it is necessary to inquire, &c.

Besides, [*moreover*,] what has been advanced upon this subject may lead us to inquire, &c.

It is always an imperfection in a language to have the same individual word belong to different parts of speech ; but when there are two words differently pronounced, and differently spelt, used promiscuously for each other, both in point of meaning, and in discharging the different offices of preposition and adverb, it savours much of barbarism, as it is so easy to allot their peculiar province to each. When we said that the word *beside* should be always used as the preposition, and *besides* as the adverb, the choice was not made at random. In its prepositional state, it must be closely united to the following word ; in its adverbial it should always have a pause after it. Now, the word *beside*, not loaded with the final *s*, is rendered more apt to run glibly into the follow-

ing word; and the word *besides*, always preceding a pause, has, by the addition of the *s*, a stronger sound to rest upon.

Like—likely.

These two words, also, from a similitude of sound, though of such different meanings, are used promiscuously. *Like* should be confined to similitude—*likely*, to probability.

No-ways—nowise.

No-ways is a vulgar corruption from nowise, and yet has got into general use, even among our best writers. The terminating *wise* signifies manner; as, like*wise*, in like manner—other*wise*, in a different manner. It should be always written *nowise*, in no manner.

From whence—whence.

The preposition *from*, in the use of this phrase is for the mose part redundant, as it is generally included in the word whence. Thus—*whence* come you? signifies, from what place come you *Whence* it follows—from which it follows.

No—not.

The particle *no* is often substituted in the place of *not;* as, I care not whether you believe me or *no*. To show the absurdity of this, it will be only necessary to add the words after *no* which are understood; as thus: I care not whether you believe me, or *no* believe me, instead of do *not* believe me. The adverbs *no* and *yes* are particles expressive of the simple dissent or assent of

the speaker, and can never be connected with any following word; for we might with as much propriety say, I care not whether you do not believe me, or *yes*, as to make use of its opposite, *no*, in that manner. This vulgarism has taken its rise from the cause before mentioned—the similarity of sound between no and not.

Never so—ever so.

This is a strange solecism in language:—*Never* so, signifies *not* ever so Let us substitute the one for the other, and the absurdity will be apparent. Thus, when we say—I will do it, let him be *never* so angry; how contrary to the intention would it appear, should the phrase be changed to—let him not be ever so angry. Or if we use the same word in a phrase of like import—I will do it *however* angry he may be; how glaring would the absurdity appear, should any one say how*never* angry he may be!

I *had* rather.

This phrase is strangely ungrammatical: *rather* means more willingly. Now, let us substitute the one in the place of the other—as, I *had more willingly* go than stay; *rather* is expressive of an act of the will, and therefore should be joined to the verb to *will*, and not to the auxiliary to *have*. Instead of I *had* rather, it should be, I *would* rather.

A—an.

In the use of this article, it has been laid down

as a rule, that it should be written *a*, before a consonant, and *an*, before a vowel; but by not attending to the exceptions to this rule, the article *an* has been very improperly placed before words of a certain class, which ought to be preceded by the vowel singly. All words beginning with *u*, when the accent is on it, or when the vowel is sounded separately from any other letter, should have *a*, not *an*, before them. As, a ūnit, ūniverse, a ūseful project, &c. For the vowel *u*, in this case, has not a simple sound, but is pronounced exactly in the same manner as the diphthongs commencing with *y*, as in *you* the pronoun, the individual sound given to the name of the vowel *u*. Now, *an* is never written before any words beginning with *y*; nor should it be placed before words commencing with *u*, when sounded exactly in the same manner; if we write *a youth*, we should also write *a use*.

In like manner, *an* never precedes words commencing with *w*, nor should it therefore the vowel *o*, when it forms the same sound. Thus, the word *one* has the same sound as if written *won*, and yet it has been the custom to write, such *an* one: in both cases contrary to the usage of speech.

When words begin with the letter *h*, they are preceded sometimes by *a*, sometimes by *an*; and this by an invariable rule in speaking. When the

h, or aspirate, is sounded, the article *a* is used ; as, a house, a horse, ; when the *h* is mute, *an* is employed ; as, an hour, an honour ; pronounced as if written an our, an onnur. And yet in many books published of late years, the article *an* precedes all words beginning with *h*, alike—as, an house, an horse, &c. Surely the printers ought to reform this abuse, when they have such an obvious rule to guide them. They have nothing to do but to follow the established mode of speech, whereof printing ought, as nearly as possible, to be the transcript.

VERBAL CRITICISM;

*Its Nature and Use, with its principal Canons.**

It may be alleged, by some persons, that "If custom, which is so capricious and unaccountable, is every thing in language, of what significance is either the grammarian or the critic ?" Of considerable significance notwithstanding ; and of most, then, when they confine themselves to their legal departments, and do not usurp an authority that

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* This article is extracted from the octavo Grammar of Mr. Lindley Murray.

does not belong to them. The man who, in a country like ours, should compile a succinct, perspicuous, and faithful digest of the laws, though no lawgiver, would be universally acknowledged to be a public benefactor. How easy would that important branch of knowledge be rendered by such a work, in comparison of what it must be, when we have nothing to have recourse to, but a labyrinth of statutes, reports, and opinions. That man also would be of considerable use, though not in the same degree, who should vigilantly attend to every illegal practice that was beginning to prevail, and evince its danger, by exposing its contrariety to law. Of similar benefit, though in a different sphere, are grammar and criticism. In language, the grammarian is properly the compiler of the digest; and the verbal critic, the man who seasonably notifies the abuses that are creeping in. Both tend to facilitate the study of the tongue to strangers, and to render natives more perfect in the knowledge of it; to advance general use into universal; and to give a greater stability, at least, if not permanency, to custom, the most mutable thing in nature. These are advantages which, with a moderate share of attention, may be discovered, from what has been already said on the subject; but they are not the only advantages. From what I shall have occasion to observe afterwards, it will probably appear, that

these arts, by assisting to suppress every unlicensed term, and to stigmatize every improper idiom, tend to give greater precision, and consequently more perspicuity and beauty, to our style.

The observations made in the preceding chapter, might easily be converted into so many canons of criticism: by which, whatever is repugnant to reputable, to national, or to present use, in the sense wherein these epithets have been explained, would be condemned as a transgression of the radical laws of the language. But on this subject of use, there arise two eminent questions, the determination of which may lead to the establishment of other canons not less important. The first question is this: Is reputable, national, and present use, which, for brevity's sake, I shall hereafter simply denominate good use, always uniform in her decisions? The second is: As no term, idiom, or application, that is totally unsupported by her, can be admitted to be good, is every term, idiom, and application, that is countenanced by her, to be esteemed good, and therefore worthy to be retained?

Good Use not always uniform in her Decisions.

In answer to the former of these questions, I acknowledge, that, in every case, there is not a perfect uniformity in the determinations, even of such use as may justly be denominated good.

Wherever a considerable number of authorities can be produced, in support of two different, though resembling modes of expression for the same thing, there is always a divided use ; and one cannot be said to speak barbarously, or to oppose the usage of the language, who conforms to either side. This divided use has place sometimes in construction, and sometimes in arrangement. In all such cases there is scope for choice ; and it belongs, without question, to the critical art, to lay down the principles by which, in doubtful cases, our choice should be directed. The following canons are humbly proposed, in order to assist us in assigning the preference. Let it, in the mean time, be remembered, as a point always pre-supposed, that the authorities on the opposite sides are equal, or nearly so. When those of one side greatly preponderate, it is in vain to oppose the prevailing usage. Custom, when wavering, may be swayed, but when reluctant, will not be forced. And in this department a person never effects so little, as when he attempts too much.

Canon the First.—When use is divided as to any particular words or phrases, and when one of the expressions is susceptible of a different signification, while the other never admits but one sense ; both perspicuity and variety require, that the form of expression which is, in every instance, strictly univocal, should be preferred.

For this reason, *aught*, signifying any thing, is preferable to *ought*, which is one of our defective verbs. In the prepositions *toward* and *towards*, and the adverbs *forward* and *forwards*, *scarce* and *scarcely*, *backward* and *backwards*, the two forms are used indiscriminately. But as the first form in all these is also an adjective, it is better to confine the particles to the second.*

The following pertinent illustrations of the first canon, are taken from Dr. Crombie. To *purpose*, for "to intend," is better than to *propose*, which signifies also "to lay before," or "submit to consideration;" and *proposals* for "a thing offered or proposed," is better than "proposition," which denotes also "a position," or "the affirmation of any principle or maxim." Thus we say, "He demonstrated Euclid's *proposition*;" and, "He rejected the *proposal* of his friend." "I am mistaken," is frequently used to denote, "I misunderstand," or "am in error;" but as this expression may also signify, "I am misunderstood," it is better to say, "I mistake."

Canon the Second.—In doubtful cases, regard ought to be had in our decisions to the analogy of the language.

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* Mr. Murray differs from the suggestion in page 101, as to the use of the final *s* in these words. We prefer, however, to omit the *s*.

For this reason, I prefer contemporary to co-temporary. The general use, in words compounded with the syllable *con*, is to retain the *n* before a consonant, and to expunge it before a vowel or an *h* mute. Thus we say, concurrence, conjuncture, concomitant; but co-equal, co-eternal, co-incide, co-heir. If, by the former canon, the adverbs *backwards* and *forwards*, are preferable to *backward* and *forword*; by this canon, from the principle of analogy, *afterwords* and *homewards* should be preferred to *afterward* and *homeward*. The phrase, "though he were *ever so* good," is preferable to, "though he were *never so* good." In this decision, I subscribe to the judgment of Dr. Johnson. Sometimes *whether* is followed by *no*, sometimes by *not*. For instance, some would say "*Whether* he will or *no*;" others, "*Whether* he will or *not*." Of these it is the latter only that is analogical. There is an ellipsis of the verb in the last clause, which when you supply, you find it necessary to use the adverb *not*: *Whether* he will *or* will *not*."

Canon the Third.—When the terms or expressions are in other respects equal, that ought to be preferred which is most agreeable to the ear. Of this we have many examples. *Delicateness* has very properly given way to *delicacy*; and, for a like reason, *authenticity* will probably soon displace *authenticalness*, and *vindictive* dispossess *vindicative* altogether.

Canon the Fourth.—In cases wherein none of the foregoing rules gives either side a ground of preference, a regard to simplicity (in which I include etymology when manifest) ought to determine our choice.

Under the name simplicity, I must be understood to comprehend also brevity; for that expression is always the simplest which, with equal purity and perspicuity, is the briefest. We have, for instance, several active verbs, which are used either with or without a preposition indiscriminately. Thus we say, either *accept* or *accept of*, *admit* or *admit of*, *approve* or *approve of;* in like manner, *address* or *address to*, *attain*, or *attain to*. In such instances it will hold, I suppose, pretty generally, that the simple form is preferable.

Every thing favoured by good use, not on that account worthy to be retained.

I come now to the second question for ascertaining both the extent of the authority claimed by custom, and the rightful prerogatives of criticism. As no term, idiom, or application, that is totally unsupported by use, can be admitted to be good, is every term, idiom, and application, that is countenanced by use, to be esteemed good, and therefore worthy to be retained? I answer, that though nothing in language can be good, from which use withholds her approbation, there may be

many things to which she gives it, that are not in all respects good, or such as are worthy to be retained and imitated. In some instances, *custom* may very properly be checked by *criticism*, which has a sort of negative, and though not the censorian power of instant degradation, the privilege of remonstrating, and by means of this, when used discreetly, of bringing what is bad into disrepute, and so cancelling it gradually; but which has no positive right to establish any thing. I shall therefore subjoin a few remarks, under the form of canons, in relation to those words or expressions which may be thought to merit degradation from the rank they have hitherto maintained; submitting these remarks entirely, as every thing of the kind must be submitted, to the final determination of the impartial public.

Canon the First.—All words and phrases which are remarkably harsh and unharmonious, and not absolutely necessary, should be rejected.—Such as the words, *un-suc-cess-ful-ness, dis-in-ter-est-ed-ness; conventiclers, peremptorily; holily, farriering.* They are heavy and drawling, ill compacted, and difficult of utterance; and they have nothing to compensate for their defect of harmony, and unpleasantness of sound.

Canon the Second.—When etymology *plainly* points to a signification different from that which the word commonly bears, propriety and simpli-

city both require its dismission. Of this kind is the word *beholden*, for obliged or indebted. It should regularly be the passive participle of the verb *to behold*, which would convey a sense totally different. The verb *to unloose*, should analogically signify *to tie;* in like manner as *to untie* signifies *to loose*. To what purpose is it, then, to retain a term, without any necessity, in a signification the reverse of that which its etymology manifestly suggests.

Canon the Third.—When any words become obsolete, or at least are never used, except as constituting part of particular phrases, it is better to dispense with their service entirely, and give up the phrases. Examples of this we have in the words *lief, dint, whit, moot, pro, con;* as, "*I had as lief* go myself," for "I should like as well to go myself." "He convinced his 'antagonist *by dint of argument*," that is, "by strength of argument." "He made them yield *by dint of arms*,"—"by force of arms." "He is *not a whit better*,"—"no better." "The case you mention is *a moot point*,"—"a disputable point." "The question was strenuously debated *pro and con*,"—"on both sides" These are low phraseologies, and savour so much of cant, that good writers will carefully avoid them.

Canon the Fourth.—All those phrases which, when analyzed grammatically, include a solecism;

and all those to which use has affixed a particular sense, but which, when explained by the general and established rules of the language, are susceptible either of a different sense, or of no sense, ought to be discarded altogether.

It is this kind of phraseology which is distinguished by the epithet *idiomatical*, and which has been originally the spawn, partly of ignorance, and partly of affectation. Of the first sort, which includes a solecism, is the phrase, "I *had* rather *do* such a thing," for, "I would rather do it." "*I had do*," is a gross violation of the rules of conjugation in our language. Of the second sort, which, when explained grammatically, leads to a different sense from what the words in conjunction generally bear, is the following expression, common in the mouths of many persons: "He sings a good song." The words, strictly considered, signify, that "the song is good;" whereas the speaker's meaning is, that "he sings well." Under the third sort, which can scarcely be considered as literally conveying any sense, may be ranked a number of vile, but common phrases, sometimes to be found in good authors: like *shooting at rovers*, *having a month's mind*, *currying favour*, *dancing attendance*, and many others.

The first four of these canons are intended to suggest the principles by which our choice ought to be directed, in cases wherein use itself is waver-

ing; and the last four, to point out those farther improvements, which the critical art, without exceeding her legal powers, may assist in producing. There are, indeed, writers who seem disposed to extend her authority much farther. But we ought always to remember, that as the principal mode of improving a language, which she is empowered to employ, is by condemning and exploding, there is considerable danger, lest she carry her improvements this way too far. Our mother tongue, by being too much impaired, may be impoverished; and so more injured in copiousness and nerves, than all our refinements will ever be able to compensate. For this reason there ought, in support of every sentence of proscription, to be an evident plea from the principles of perspicuity, elegance, or harmony.

TO MASTER PRINTERS.

The compiler of this work does not indulge the presumption that any thing he may suggest will have much influence on the greneral treatment of apprentices; but he is well aware that there has been a great deal of traffick in the business of taking apprentices, much to the injury of the profession, and without a due consideration, on the

part of the master, of the reponsibility that devolves on him. The truth of this will be acknowledged by every one who has had means of judging. He does not charge any person particularly with neglecting the necessary instruction that ought to be given; but the conviction that there has been great remissness, forces itself upon his mind from the palpable deterioration he has witnessed in comparing the efficiency of workmen at present with those of fifteen or twenty years since. Every experienced master printer with whom he has conversed on the subject, has uniformly testified to this fact. These remarks are not made for the purpose of disparaging employers or journeymen, but merely to draw the attention of all to the existence of an evil, in the hope that it may be remedied.

But it may be asked, where does the fault lie? The answer is—in the want of proper instruction to apprentices. No doubt much may be attributed to causes beyond the control of employers. For instance: apprentices who serve their time on newspapers can hardly be expected to make good compositors; for all that is expected of them is to set up a certain number of ems as a daily task, and that is their whole employment; of course, they can learn nothing else. In some book offices, also, boys are employed for years, and perhaps their whole apprenticeship, in merely setting types, with-

out even making up or imposing a form, or receiving the necessary instructions concerning the general routine of business in an office. It cannot be doubted, that the first impression made on a boy when he enters a printing office, with a determination of learning the business, is likely to be lasting; hence it follows, that the particular attention of the employer, or foreman, to the little detail of the business which necessarily devolves on the youngest apprentice, is not only useful to both, but is calculated to inspire the apprentice with confidence and pride; and the tasks imposed on him, instead of becoming irksome, will be performed with alacrity; whereas a neglect of this may discourage an ordinary boy at the commencement, and destroy not only his hopes of proficiency in the business, but also the master's expectation of his usefulness to him. Nothing should be left untold him—no trouble spared to instruct him in every thing relating to the business; but graduated upon a knowledge of his capacity. To require of a boy what either his tender years, or a want of quickness of parts, disqualifies him from performing, is injurious and discouraging..

I cannot refrain taking notice of a practice that has been too prevalent in this city—perhaps, in other parts of our country; and against which, terms of reprobation cannot be too strongly expressed:—I mean the habit of advertising for boys who have been some time at the business. I

would ask, what is this but holding out inducements to bound apprentices to run away from their masters, or to quit them with impunity if not bound, (the moral turpitude of both being the same,) thereby ungratefully injuring the person who may have done every thing in his power to advance their interest, and rendering themselves liable to become vagabonds in society. Those master printers who practise this may have more to answer for than at first they may suppose; for what can more seriously injure society than that laxity of every sense of moral obligation produced by lures thus held out. I regret to state that some of our publishers of newspapers have not evinced, at all times, a sense of honour and justice above this corrupting habit.

DIRECTIONS TO APPRENTICES.

Boys, in commencing their apprenticeship, are generally ambitious to learn; but are apt to relapse into carelessness and inattention—disregarding, or not sufficiently valuing the instructions given them by their masters, or refusing to profit by the information to be derived from the journeymen in the office; they often regard as a trifle that which, in fact, is essentially necessary in their business.

A close examination of what others have done, and how they have done it, is calculated to improve a boy more than any thing else, in all the minutiæ of his profession.

The following directions should be strictly attended to, from which a great deal of benefit will be derived.

"The position or attitude which a young beginner, or apprentice, should endeavour to acquire at case, on his first introduction to that part of the business, does not appear to have been of sufficient importance to arrest the attention of former writers on this subject; yet, so great is the evil resulting from falling into improper habits at first, that nothing but a determined perseverance in those who experience their ill effects, can remedy them.

What to a learner may appear fatiguing, time and habit will render familiar and easy; and though to work with his case on a level with his breast, may at first tire his arms, yet use will so inure him to it, that it will become afterwards equally unpleasant to work at a low frame. This method will keep the body in an erect position, and prevent those effects which result from pressure on the stomach.

The standing position should be easy, with the feet not too much apart; neither should the idle

habit of resting one foot on the bed of the frame be encouraged, or standing with one foot bent inward, a certain forerunner of deformity. The head and the body must be kept perfectly steady, the arms alone performing the operations of distributing and composing."

DISTRIBUTING.

Distributing, or conveying the different sorts of letter to their respective apartments, is commonly the first of a compositor's practical exercises; though it would be found more safe and advantageous to master and to man, were this custom sometimes reversed, and composing made antecedent to distributing, which depends upon a perfect knowledge of what is, or ought to be, contained in each of the different boxes in a pair of cases. But as the disposition of sorts differ almost in every printing office more or less, it follows, that such irregularities must have their effects accordingly; of which we do not want for instances. The first which offers itself to our observation is, the loss which a compositor sustains every time he changes his place of work; for, being unacquainted with the situation of each sort, he is hindered, for some time, in his quick and ready way

of distributing, which might easily be prevented, were establishers of new houses to follow one uniform method. For this reason we give a plan of a pair of cases, not so much because we think it better than any other, but because we know that uniformity is essentially necessary to avoid confusion. It is hoped that all printers will see the propriety of the foregoing remarks.

Other evils result from this want of uniformity, and particularly affect the master. Some compositors, rather than charge their memory with different situations of particular sorts, transpose them into such boxes as contained them at their last place of work; consequently, the situation of the letters, in that roman case at least, is destroyed, and the transposed sort not being replaced, the boxes become receptacles for pi; for the right sorts being distributed at top, the undermost are rendered useless, because they are not expected to lodge in quarters that were not assigned them; therefore, if the hidden sorts happen to run short, they must be re-cast.

It would be the means of preserving a clean pair of cases, were they filled and provided with letter for a new compositor to begin his work upon, that by composing first, he might acquaint himself with the contents of his boxes, and be the better prepared for distribution; but as few compositors feel inclined to quit the beaten track, and

as a difficulty would occur in compelling them to leave the cases as they found them, or if they did leave them full of letter, might distribute it carelessly, knowing they would not have to set it out again, the evil might be still far from being remedied; therefore, those masters who take upon themselves the responsibility of deviating from general plans, must abide the consequences that inevitably follow.

The foregoing observations, however, apply with much force to the impropriety of permitting a young beginner to distribute before he has made himself acquainted with the boxes, as well as the letters, which he cannot acquire in a more ready manner than by first learning to compose.

He should be cautioned not to take up too much matter at a time, for, should he break his handful, he would have the less pi to clear. Even to those who are not likely often to meet with this accident, the caution is not unnecessary, as too great a weight weakens the wrist, and it is a mistaken notion that it gains time, for if one handful fall into the case, it will be more than equivalent to the time saved. When the accident does happen, the pi should be cleared away before any thing else is done.

In taking up a handful, the head of the page should be toward the distributor, which prevents

the trouble as well as danger of turning it round, in order to have the nick uppermost. So much matter should only be taken up at a time as can be conveniently held in the left hand, and not to be higher than the thumb, which guards the end of the lines from falling.

He should be careful not to throw the letters into the case with their face downward, as it batters them; neither should he distribute his case too full, for it invariably creates pi.

He should not be impatient to acquire a quick method at first; his principal study should be propriety, though his progress be slow; that attained, expedition will follow from practice, and he will find his advantage in composing from a clean case, though he may be longer in distributing it. A man loses double the time in correcting, that he imagines he saves from quick distribution.

With many compositors, much time is unnecessarily lost in looking at the word before they distribute it. By proper attention in the learner, he may avoid this, and become, without the appearance of hurry, an expeditious as well as clean distributor. To attain which, we would recommend him never to take more letter between his fingers than he can coveniently hold, and if possible, always to take an entire word; to keep his handful on an inclining position; so that the face of the letter may come more immediately under

his eye. By proper attention and practice he will become so completely acquainted with the beard or break of the type, as to know the word he takes from his handful, with the cursory view he may have of it while in the act of lifting it.

It is to this method that so many in the same business are indebted for their expedition and cleanness in distribution; though to an observer the movement of their hands appears but slow. It is not to velocity of movement that compositors are indebted for their expedition either in composing or distributing; it is to *system*, without which their attempts may have the appearance of expedition, but produce only fatigue from anxiety and false motion. Therefore, to system we would particularly call their attention; and as clean distribution produces clean composition, which not only saves time at the stone, but acquires them a respectable name, they cannot be too attentive to that part of their business.

Another material point before distributing is the well laying up of the form. In this particular many compositors are shamefully remiss, and from this negligence arise inconveniences that lose them more time than if they had taken the necessary trouble at first, beside the unpleasantness of working with dirty letter.

The letter-board should always be kept clean, and the bottom as well as the face of the form well

washed before it is laid on the board and unlocked; for if any of the dirt remain, from the ley brush after it is unlocked, it will sink into the matter instead of running off. This precaution taken, the pages should be well opened, and the whole form washed till the water appears to run from it in a clean state. A form cannot be well laid up without plenty of water. If the form appears particularly dirty, it is best to lock it up again, which works out the filth; then rinse the bottom of it, and proceed as before. The letter once washed perfectly clean, by care may be kept so afterward with little trouble.

Many compositors keep a piece of alum in their cases, in order to contract the grain of the skin of their fingers when distributing slippery letter; this is a declaration of the want of cleanliness, for had they washed their letter properly, it would not be slippery.

It is sometimes necessary to dry the letter at the fire after distributing; it is particularly recommended not to use the letter after it is dried in this way until it is perfectly cold, as very pernicious effects arise from the antimony, which the heat of the fire brings into action, when joined to the tender particles of the skin. It is always better, where it can be conveniently managed, to distribute at night, or before meals, so that the letter may dry gradually.

COMPOSING.

Composing is a term which includes several exercises, as well of the mind as of the body ; for when we are said to compose, we are at the same time engaged in reading and spelling what we are composing, as well as in taking care to space and justify the matter. But that we may observe some method in our remarks, we will begin with what immediately precedes it.

When the copy of a work is put into the hands of a compositor, he should receive directions respecting the width and length of the page; whether it is to be leaded, and with white lines between the breaks ; and whether any particular method is to be followed in the adoption of capitals, italics, &c. These instructions being given, the compositor will make his measure to the number of ems directed, which is done by laying them flatwise in the composing stick, and then screwing it up, not too tight, as that is apt to strain it, nor so slack as to allow the measure to give. The best plan to make up a stick is to put two thicknesses of paper at the end of the line, and press the slide tight while screwing up: this will give sufficient room in case the matter is leaded, to admit the leads freely into the stick, at the same time that it will guard against the thinner letters

slipping past the leads. It may be said that some compositors space their matter tighter in their sticks than others, and therefore this rule of making up sticks cannot benefit compositors generally; but we reply, that all compositors ought to space their lines of an equal tightness, as near as possible, and that the attention of apprentices ought to be directed to that object the first moment they take a stick into their hands. He then fits a composing rule to the measure, and his case being supplied with letter, he is prepared for composing.

If the copy he is to begin on be a reprint, to be got in line for line, he will observe whether there be any difference between the type he is about to use, and the copy, so that his spacing may not be affected, against which he must take the necessary precautions at the time, by widening or lessening the measure, if solid matter, or driving out or getting in each paragraph, if leaded. He should select a close-spaced line from the copy, which will at once prove if there be any variation.

Having taken notice of the state of the copy, and received his directions, the compositor begins to work; and here we would particularly call his attention to those rules by which he may compose with accuracy, ease, and expedition. As we before observed, an ill habit once acquired is with difficulty shaken off; the variety of motions exhibited by some compositors are truly ludicrous; such as nodding the head, agitating the body,

throwing out the arm, ticking the letter against the case or composing rule, with many other false movements, which not only lose time, but fatigue the mind, and exhaust the body. The swift movement of the hand is not the criterion of a quick compositor.

In composing, the left hand, which contains the stick, should always follow the right, which takes up the letters. If the left hand remain stationary, much time is lost in bringing each letter to it, and traversing a greater space than is necessary; the eye should always be fixed on the nick of the letter, before the finger is ready to fix it up; this will effectually prevent any false motion, as it may be lifted and conveyed to the stick in its proper position. A sentence of the copy should, if possible, be taken at one time, and while putting in the point and space which concludes that sentence, the eye is at full liberty to revert again to the copy for a fresh one. It is to perfection in this particular, that those compositors who are so much admired in the business, are indebted for their swiftness. The time they gain is considerable, without any appearance of bustle or fatigue. By thus taking into the memory a sentence at a time, they preserve the connexion of their subject, which renders the punctuation less difficult. If his copy be manuscript, he will find it to his advantage to read over each *take* before he begins to compose it.

From habit, the compositor becomes so well acquainted with the peculiar feel of each type, that he can generally detect a wrong letter without looking at it. Those who are careful in distribution find the advantage of it in composition. The greatest disgrace that can attach to a compositor, is that of being considered a foul or slovenly workman, to avoid which should be his earnest endeavour; it would be even better to read every line as he composes it, than to lose so much of his time at the stone, independent of the disgrace attached to a man of this description. We would recommend him to cast his eye over the line as he justifies it; this method, properly acquired, will not detain him in his work, but will enable him to be much more accurate.

Uniformity in spacing is an important branch of the compositor's business, requiring care and judgment, and ought to be particularly impressed on the mind of the young beginner. Close spacing is as unpleasant to the sight as wide spacing, and ought never to be allowed, except in very narrow measure; and frequently, even then, with care, it might be dispensed with. It is not merely necessary to have a line here and there uniformly spaced: a careful compositor will be anxious to give to every page that uniformity of appearance which is one of its chief excellences. Careless and foul compositors will never preserve this desirable uni-

formity; for when their proofs are crowded with corrections, the utmost care in rectifying those blunders will not make the spacing regular. We must therefore press on the mind of the young beginner this important maxim—That it is better to do little, and to be determined to do that little *well*, than to be anxious to put together a great number of letters, without any regard to accuracy and uniformity. Authors should send their copy *finally* corrected to the press; for when alterations and additions are made in the proof sheet, it becomes difficult, where there are few paragraphs, to make the spacing equal.

Many compositors, in correcting, do not overrun the matter, as they ought to do, in the stick, but on the stone, and frequently hair-space, or treble space, a line, in order to get in or drive out a word; when, by overrunning a line or two forward or backward, they might preserve uniformity.

The different size of spaces in a fount of letter are noticed hereafter; it is only necessary, therefore, to observe, that the en quadrat and hair space should be kept apart; the others, viz. the 3, 4, and 5 em spaces, are generally mixed together, as there is less trouble in justifying by taking them up at random, than when they are all kept separate; for should there be occasion to alter a thick space to the middling, or *vice versa*, it may be ne-

cessary to change them all in order to make the line even, when, by taking them up as they occur, there is the greater chance of justifying the line regularly, with the least loss of time.

Where the line is even spaced, and requires justification, put the additional space between those words in the line where it will be the least observed, viz. between a *d* and an *h*, being perpendicular letters, and will admit of the addition, though not in a greater degree than a middling and thin space to a thick spaced line : or, after a kerned letter, the back of which may bear upon the top of a perpendicular, as the *f* and the *h*; but not always after a kerned letter, as the *f* and the *w*, where the distance would be too conspicuous, which is one reason why an en quadrat should not always be placed after an *f*, as was formerly directed. The same rule should be observed where it may be necessary to reduce the spacing of a line ; less space is required after a sloping letter than a perpendicular one, and even after a comma. In regular spacing, all points should have a thick space after them, except the full point, which should have an em quadrat, as terminating a sentence.

Spaces are cast to such a regular gradation, that no excuse can be offered on the part of the compositor for irregular spacing.

We must call the attention of compositors to cor-

rect a habit that is too general; it is this:—In spacing out a line, the thick spaces, or double spaces, are put at the end of the line: that is, they commence to put the additional spaces from the end of the line, regardless of the irregularity above spoken of. This is done for expedition; but it is slovenly, and shows a want of both care and taste. This practice has obtained, no doubt, from the greater risk there is of breaking down the line in spacing at the beginning than the latter part; because the thumb of the hand that holds the stick will protect the first part of the line while spacing out the latter, but there is no guard for the protection of the latter, while spacing out the first part of the line. But this is a bad habit, and ought always to be avoided.

Having made these preliminary and most essential remarks, we shall proceed. Should the length of the page be left to the discretion of the compositor, he sets as many lines as he conceives a fair proportion, which is generally considered a little less than double its width, including the head and foot lines, and then cuts to it an exact gauge. This is done before he makes up the first page, as that will vary according to the different founts that mus tnecessarily be in it, from its usually having what is called a half title, a motto, &c.

Head lines are generally set in small capitals of the same fount, or in italic. Capitals of letter

about three sizes smaller than the body of the work, with folios of a proportionable size, have a much neater appearance than either of the foregoing. If only folios are placed at the top of the page, it is better to make use of full faced figures, without parentheses or crotchets.

The compositor should be acquainted, on beginning a work, with the number of volumes it is to consist of, that the first page of each sheet may contain the volume to which it belongs, in the left hand corner of the signature line.

The title, preface, &c. of a volume, if the work is original, is always left till the body of the work is finished, as many circumstances may alter the author's original preface, date, &c. or the work may conclude in such a manner as to admit of their being brought in at the end, in order to make a complete sheet, which may save both paper and press-work.

Instead of beginning chapters, &c. with a two-line letter, as formerly, a capital is now used, and the remainder of the word put in small capitals.

The running title is set in a neat letter, proportioned to the size of the page; but this must be governed by the quantity of matter necessary to be introduced at the head of the page. A full line, as a running title, has a clumsy appearance, and, if possible, should be avoided. The blank after the

head must be proportioned to the body of the page, whether it be solid or leaded.

It has a long time been, and still is, a practice too prevalent among compositors, to drive out a word at the close of a paragraph, or even to divide it, in order to reap the advantage of a break line. Part of a word, or a complete word in a break line, if it contains no more than three or four letters, is improper. It should be the business of the proof reader, at all times, to notice this encroachment. The last line of a paragraph should not, on any account, begin a page, neither should the first line of a paragraph come at the bottom of a page, if the work has white lines between the breaks. To obviate which, the compositor may either make his page a line short or long, as most convenient, only taking care that the page which backs it corresponds, so that the page may not have the appearance of differing from its proper length.

If the work is very open, consisting of heads, whites, &c. the compositor must be particularly attentive to their depth; so that though the whites may be composed of different sized quadrats, yet that their ultimate depth shall be equal to the regular body of the type the work is done in; for unless care is taken in this particular, the register of the work must be incomplete. The pressmen cannot make the lines back if the com-

positor is not careful in making up his matter ; for it is the pressman's duty only to see that the sides and head of the pages register—the backing of the lines throughout the page is undoubtedly the business of the compositor.

The first line of a new paragraph is indented an em quadrat, of whatever size the letter of the work may be. Authors vary very materially in the mode of making paragraphs ; some carry the argument of a position to a great length, before they relieve the attention of the reader ; while others break off at almost every place that will admit of only a full point. But in this case we ought to follow the author's plan, unless, upon particular occasions, it may be necessary to multiply or reduce the breaks in the copy, if it can be done with propriety, in order to make the work look uniform. Authors should always make the beginning of a new paragraph conspicuous to the compositor, by indenting the first line of it far enough to distinguish it from the preceding line, in case it should be quite full.

Many hints, in addition to what have already been dropped, relative to composing, might be added for the information of learners, were we not persuaded that practice and close attention to the mode of doing business by good workmen, will be of more service to them than a multiplicity of rules. It is the duty of the person under whose

tuition an apprentice is placed, to discharge that trust with fidelity. The youth's future prospects in life depend, in a great measure, on the principles on which his first instructions are formed; and it is the duty of every man to correct those habits in youth which may be improper, whether arising from carelessness, or any other cause. When a youth makes choice of a profession, and is aware that his future support and prospects in life must depend on a correct knowledge of that profession, he should be anxious to attain that knowledge; to withhold it, therefore, from him, or to indulge him in improper habits, without checking them, is both unpardonable and unjust.

After the body of a volume is completed, the contents sometimes follow, though they belong more properly to the beginning of the work; and for this reason we shall defer speaking of them here, but introduce them in their proper place. The index is generally placed at the end of the volume, and set in letter smaller than that of the work; it is begun upon an uneven page.

It was formerly the plan to set the subject word of each article in italic, and all the rest in roman, indenting all the matter an em quadrat that makes above one line, which is technically termed, to run out and indent; but the italic is now in a great measure exploded, it being attended with extra trouble, and at the same time destroys the uniformity of the page.

Care should be taken that the subject words are ranged alphabetically, as it is not expected that the compositor will transpose his matter afterwards, which is attended with loss of time, without being paid for it.

Where figures have a regular succession, a comma is put after each folio; and where their order breaks off, a full point is used. Thus, for example, after 5, 6, 7, 8, commas are put; and after 12. 16. 19. 24. full points; but to save figures and commas, the succession of the former is noticed by putting a dash between the first and last figures, thus: 5—8, which means, from 5 to 8 inclusive. Again; if an article has been collected from two pages, the folio of the second is supplied by *sq.* or *sequente*; and by *sqq.* or *sequentibus*, where an article is touched upon in different succeeding pages. A full point is not put after the last figures, because it is thought that their standing at the end of a line is a sufficient stop. Neither is a comma or a full point placed to the last word of an article in a wide measure or open matter; but it is not improper to use a comma at the end of every article in narrow columns, or where the figures are put after the matter, instead of running them to the end of the line.

At the conclusion of the index, the volume is considered as completed, with the exception of the title, preface, &c. A compositor's first conside-

ration, then, is in what manner the work has ended, what number of pages the titles, &c. will make, and whether he can impose them in such a form as to save paper or press work. To answer this purpose, a preface must be driven out or got in; or if matter is wanting, it is customary to set a fly title.

The method of setting or displaying a title page is governed entirely by fancy; no fixed rules for instruction on this head can be laid down, as it depends so much on the taste and ingenuity of the compositor; we shall therefore recommend the learner, as a help or guide to him in this part of his business, to refer to printed titles which are considered neatly executed; and it would be well for every apprentice to commence, when he begins his apprenticeship, to preserve, pasted in a book, all title pages, or cards, that may strike his fancy for neatness and proper proportions, and refer frequently to them; which would enable him to correct any deficiency in his taste.

Authors should endeavour to make their title pages as short and concise as possible, for a crowded title can never be displayed with elegance or taste. The use of what is called ornamental type should never be profusely indulged in; the plain roman capitals are generally sufficient where a title is not too full.

The dedication generally follows the title, and

seldom exceeds one page. It should be set in capitals and small capitals, displayed in the manner of a title; but where it extends to a considerable length, it is generally set in letter larger than the work. The preface is usually set in a type varying in size from the body of the work. The running title to the preface is commonly set in the same manner as that of the body of the work, and the folios are put in numeral letters, beginning with ii over the second page, and the rest continued in the usual manner. If the work itself was printed with folios only, then the preface should have them also in the middle of the line.

Figures are now generally used for signatures in the body of a work, but for the sake of distinction, to prevent the binder from committing errors in putting up the book, the signatures to the prefatory sheets, such as prefaces, contents, &c. are put in letters. For off-cut signatures in 12mo, or other forms that have off cuts, an asterisk is added to the figure.

The contents follow the preface or introduction, and are set in a size smaller than the body of the work; the first line of each summary full, and the rest indented an em quadrat, with the referring figures justified at the end of the respective lines.

Numerous errors would be avoided, were authors to endeavour to render their copy more legi-

ble, before they place it into the hands of the printer. It can hardly be expected that the proof reader, under whose inspection such a variety of subjects are continually passing, should be able to enter thoroughly into every one of them, and to guess so nicely at the author's meaning, when the copy is obscure, and unable to afford him any assistance.

CORRECTING IN METAL.

By correcting, we understand the rectifying of such faults, omissions, and repetitions, as are made by the compositor, either through inadvertency or carelessness.

Correcting is the most disagreeable part of the compositor's business, attended not only with loss of time, but great fatigue, from leaning over the stone, and is therefore extremely prejudicial to health. To avoid this, we recommend careful distribution, and silence and attention when at work. The noise and confusion which too often prevails in a printing office, from light and frivolous conversation, not only retards business, but at the same time distracts the attention of the compositor on the subject he has in hand, and causes

him to run into mistakes, which can only be rectified by loss of time, and fatigue at the imposing stone. Some men, no doubt, are capable of supporting a conversation, and at the same time compose correctly; but their noise confuses those who are unable to preserve that accuracy but in quiet, and by close attention to their copy. The practice of talking while distributing is too much followed; and though those who may be composing need not join in the conversation, yet they are disturbed and diverted from the business they have in hand. The press room is always, if possible, separated from the composing room, as the pressmen are generally discussing some *important point*, and are less liable to feel the inconvenience of much talking.

The first proof contains, generally, only the errors of the compositor; but it is almost impossible to discover the whole of them in the first reading; he is, therefore, expected to correct all his blunders, whether in the first or second proof, without making a charge for it.

Immediately on receiving his proof, the compositor should begin to correct it, as it is of the utmost importance not to delay; for it may occasion his standing still for want of letter, or be the means of keeping a press idle.

When he has gathered as many corrections between the thumb and fore finger of his left hand

as he can conveniently hold, and an assortment of spaces on a piece of paper, (or, what is more convenient, in a small square box, with partitions in it,) let him take the bodkin in his right hand, and instead of raising each letter he may have occasion to alter, he should place the point of the bodkin at one end of the line, and with the fore-finger of his left-hand against the other, raise the line altogether, sufficiently high to afford him a clear view of the spacing; he may then change the faulty letter, and alter his spaces before he drops the line. By observing this method, he will not injure the type, which must be the case where the bodkin is forced either into their sides or heads; it likewise insures a greater degree of regularity where there may be occasion to alter the spacing, and will not take up more time than the other method.

The practice of strewing the type taken out in correcting on the imposing stone, over the face of the letter in the form, on the chase or the furniture, is slovenly and destructive, frequently causing injury, by battering, particularly in leaded matter, after the form goes to press. The most careful compositor cannot, at all times, avoid leaving a word or words out, or composing the same word twice; when this happens, he should consider the best mode of rectifying the accident, either by driving out or getting in above the error

or below it; this ascertained, let the matter be taken into a galley, and overrun in the composing stick. Overrunning on the stone is an unsafe, unworkmanlike, and dilatory method, destroys the justification, renders the spacing uneven, and prevents the other compositors from proceeding with their correcting.

In correcting, care should be taken not to hair space a line, if it can possibly be prevented, but avoid it by overrunning, either backward or forward. He should also, in overrunning the matter, use the division as little as possible; for though he may carefully follow the instructions laid down in this work, on the subject of spacing and dividing, yet the effect of attention will be completely destroyed, if not followed up at the stone.

The first proof being corrected, a perfect sheet is pulled clean, to be sent to the author, or the person by him authorized; either of whom, if he understands the nature of printing, will not defer reading the sheet, but return it with as few alterations as possible, to be got ready for press.

CLEARING AWAY MATTER.

This is an essential requisite in a printing office, and should, as early as possible, be impressed on

the minds of apprentices. Carelessness in this respect, causes great confusion and loss of time. The following rules ought to be observed :—Every compositor, whether journeyman or apprentice, should keep a regular account of the matter he sets up, and ought to be held accountable for the proper return of the letter, either to the cases from whence it was taken, or have it tied up carefully, according to the wish of the employer. When tied up, care should be used to have all the different sizes separated, and put together ; all open matter must be returned to the respective cases, as well as the italic, small capital, and capital lines, since these are sorts that may be wanted when the solid matter is not. The furniture round the form must be tied up by the compositor, and labelled with the title of the last work for which it was used ; together with the size, as quarto, octavo, duodecimo, &c. Each compositor must be accountable for the type on the floor about his stand, whether of the fount he uses or not. The imposing stone, as well as the letter boards, should be kept clear of pi by all the compositors in the office, and each held liable for all. If a type drops while composing, it should be immediately picked up, and put in its proper box. Lines, or parts of lines, should never be put on the edge of the case: if overrunning in stick is necessary, a galley should be used for that purpose.

OF A FOUNT OF LETTEE.

A FOUNT of letter is composed of the following sorts :—

1. Capitals—A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, Æ, Œ.

2. Small Capitals.

3. Lower Case—a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, æ, œ.

4. Figures—1, 2, 3, 4, 5, 6, 7, 8, 9, 0

5. Points and Signs—, ; : . ? ! - ’ [ ] ( ) * † ‡ ‖ § ¶.

6. Four sorts of spaces—3 to an em, 4 to an em, 5 to an em, and hair spaces.

7. Em and en quadrats.

8. Three sorts of large quadrats—two, three, and four ems.

9. Accents, roman and italic.

These are the ordinary sorts cast to a fount of letter, and which the founders divide into long, short, ascending, descending, and kerned letters.

Long letters are those which take up the whole depth of their bodies, and are both ascending and descending; such is the j in the roman lower case, and the *j* and *f* in the italic.

Short letters are all such as have their face cast on the middle of their square metal, and called by

founders, shank, as, c, e, m, n, o, r, s, u, v, w, x, z, all of which will admit of being bearded above and below their face, both in roman and italic.

Ascending letters are all the roman and italic capitals; in the lower case, b, d, h, i, k, l, t; and f in the roman.

Descending letters are g, p, q, y, both roman and italic.

Kerned letters are such as have part of their face hanging over either one or both sides of their square metal or shank. In the roman, f and j, are the only kerned letters; but in the italic, *d*, *g*, *j*, *l*, *y*, are kerned on one side, and *f* on both sides.

The casting of those sorts is attended with considerable trouble, which accounts for the founders sending so few of them in a fount of letter, when, in fact, they require a larger number than their casting bill specifies; their beaks being liable to accident, especially the roman f, when at the end of a line. Kerned letters of the italic, especially *f*, *g*, *j*, and *y*, are likewise subject to the same risk.

Most italic capitals are kerned on one side of their face; but none ought to be more attended to than *A*, *T*, *V*, *W*, that their angles may not fall upon an ascending letter, which may stand next to them.

The kerning of letters, it must be owned, may serve many good purposes; of which the following are not altogether undeserving notice:—

1. In mathematical and algebraical works, where letters, figures, &c. are expressed according to the signification which they have, either over or under them, and which might be put more safely over or under kerned characters than be justified to them, which would render the composing of algebra more easy, and the work would have a more solid appearance.

2. In the etymological dictionaries the vowels, as well of large as of small capitals, might be kerned, to make room for the accent which governs the pronunciation of a word, whereby the separation which the acute makes between each letter would be prevented.

3. In Hebrew, one alphabet kerned on one side, and another on both sides, with vowels cast in the manner of Greek accents, would make room for the proper vowels to be put under consonants more readily than by justifying them, in separate lines, to their places. But kerned letters will not afford proper room for vowels, and accents too; and therefore the accents are justified over and under the respective places when their quality is expressed.

These are the classes into which the letter-founders divide the sorts of a fount, without including accented letters.

*	†	‡	‖	§	¶	☞	$	£					
							-	~~	3 em brace.	4 em brace.	⏜	⏝	⏟
		&	Æ	Œ	æ	œ	—	2 em dash.	3 em dash.	4 em dash.		Æ	Œ
A	B	C	D	E	F	G	A	B	C	D	E	F	G
H	I	K	L	M	N	O	H	I	K	L	M	N	O
P	Q	R	S	T	V	W	P	Q	R	S	T	V	W
X	Y	Z	J	U	[	)	X	Y	Z	J	U		ffl

ffi	fl	5 *m sps.* / *hr. sps.*	' / k	
j / ?	b	c	d	e
! / z	l	m	n	h
x / q	v	u	t	*spaces.*

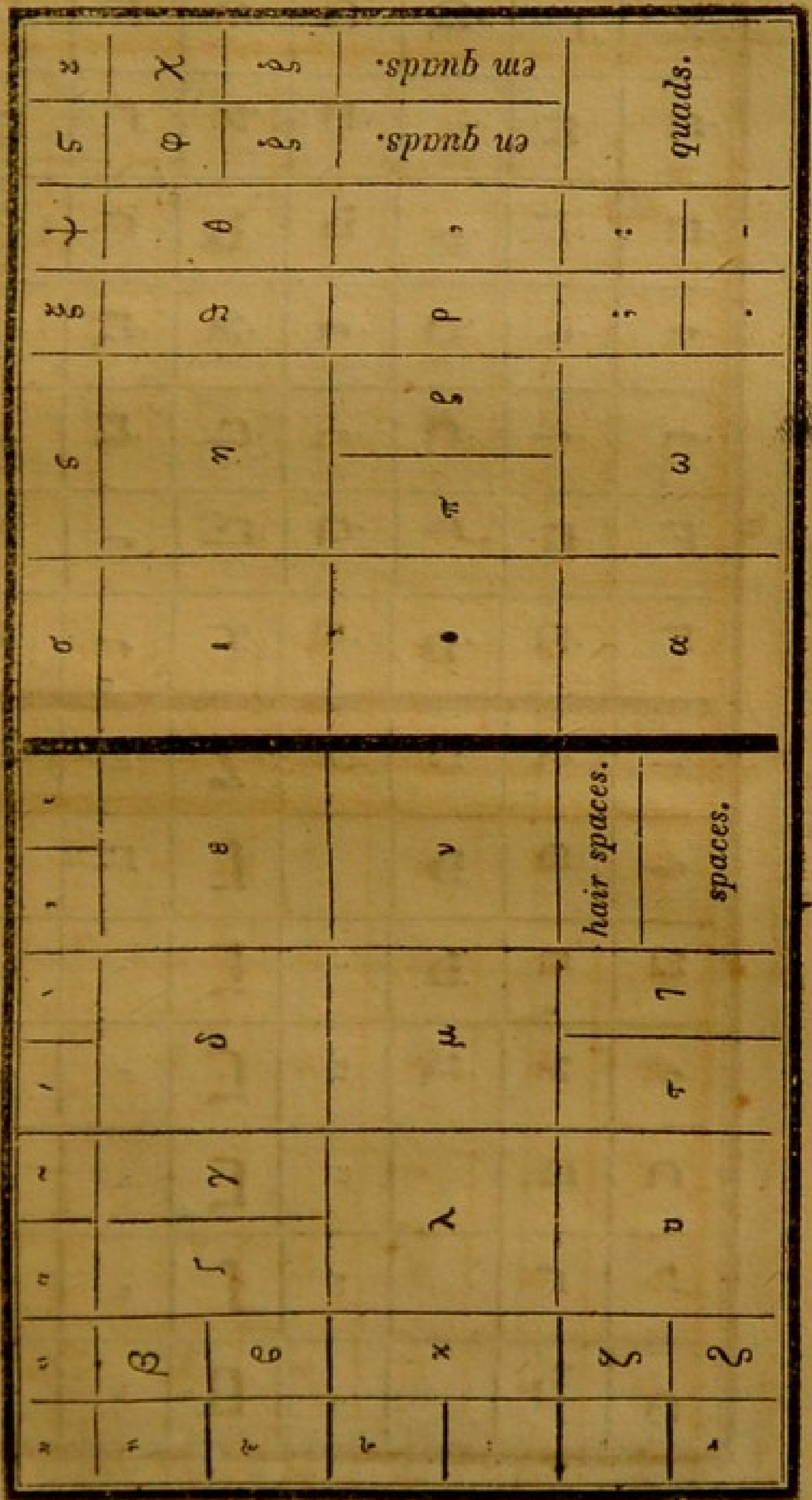
1 / 2	3 / 4	5	6	7 / 8
i	s	f	g	ff / 9
				fi / 0
o	y / p	w	,	*en quads.* / *em quads.*
a	r	; / .	: / -	*quads.*

GREEK UPPER CASE.

Α		Β		Γ		Δ		Ε		Ζ		Η	
Θ		Ι		Κ		Λ		Μ		Ν		Ξ	
Ο		Π		Ρ		Σ		Τ		Υ		Φ	
Χ		Ψ		Ω				ᾳ		ῃ		ῳ	
ϗ		ᘓ						kerned ᾳ		kerned ῃ		kerned ῳ	
ά	ὰ	ᾶ	ἁ	ἀ	ἅ	ἃ	ἄ	ἂ	ἇ	ἆ	α̈	α̈́	α̈̀
ᾴ	ᾲ	ᾷ	ᾁ	ᾀ	ᾅ	ᾃ	ᾄ	ᾂ	ᾇ	ᾆ	ᾳ̈	ᾳ̈́	ᾳ̈̀

´	`	῀	῾	᾿	῞	῝	῎	῍	῟	῏	¨	΅	῭
ώ	ὼ	ῶ	ὡ	ὠ	ὥ	ὣ	ὤ	ὢ	ὧ	ὦ	ω̈	ω̈́	ω̈̀
ή	ὴ	ῆ	ἡ	ἠ	ἥ	ἣ	ἤ	ἢ	ἧ	ἦ	η̈	η̈́	η̈̀
ό	ὸ	ο͂	ὁ	ὀ	ὅ	ὃ	ὄ	ὂ	ὁ͂	ὀ͂	ο̈	ο̈́	ο̈̀
έ	ὲ	ε͂	ἑ	ἐ	ἕ	ἓ	ἔ	ἒ	ἑ͂	ἐ͂	ε̈	ε̈́	ε̈̀
ί	ὶ	ῖ	ἱ	ἰ	ἵ	ἳ	ἴ	ἲ	ἷ	ἶ	ϊ	ΐ	ῒ
ύ	ὺ	ῦ	ὑ	ὐ	ὕ	ὓ	ὔ	ὒ	ὗ	ὖ	ϋ	ΰ	ῢ

LOWER CASE.



HEBREW UPPER CASE.

HEBREW LOWER CASE.

sps.	hair sps.	en qds.	em qds.	2 em qds.	3 em qds.	4 em qds.
׀	׀	׀	׀	׀	׀	׀
ׁ	ׁ	ׁ	ׁ	ׁ	ׁ	ׁ
ׂ	ׂ	ׂ	ׂ	ׂ	ׂ	ׂ
׃	׃	׃	׃	׃	׃	׃
א	ׄ	ׄ	ׄ	ׄ	ׄ	ׄ
ב	ׅ	ׅ	ׅ	ׅ	ׅ	ׅ
ג	׆	׆	׆	׆	׆	׆
ד	ׇ	ׇ	ׇ	ׇ	ׇ	ׇ
ה	׈	׈	׈	׈	׈	׈
ו	׉	׉	׉	׉	׉	׉
ז	׊	׊	׊	׊	׊	׊
ח	׋	׋	׋	׋	׋	׋
ט	׌	׌	׌	׌	׌	׌
י	׍	׍	׍	׍	׍	׍
כ	׎	׎	׎	׎	׎	׎
ל	׏	׏	׏	׏	׏	׏
מ	׀	׀	׀	׀	׀	׀
נ	ׁ	ׁ	ׁ	ׁ	ׁ	ׁ
ס	ׂ	ׂ	ׂ	ׂ	ׂ	ׂ
ע	׃	׃	׃	׃	׃	׃
פ	ׄ	ׄ	ׄ	ׄ	ׄ	ׄ
צ	ׅ	ׅ	ׅ	ׅ	ׅ	ׅ
ק	׆	׆	׆	׆	׆	׆
ר	ׇ	ׇ	ׇ	ׇ	ׇ	ׇ
ש	׈	׈	׈	׈	׈	׈
ת	׉	׉	׉	׉	׉	׉
׊	׊	׊	׊	׊	׊	׊
׋	׋	׋	׋	׋	׋	׋
׌	׌	׌	׌	׌	׌	׌
׍	׍	׍	׍	׍	׍	׍
׎	׎	׎	׎	׎	׎	׎
׏	׏	׏	׏	׏	׏	׏

spaces.	hair spaces.	quads.	en quads.	em quads.
׀	׀	׀	׀	׀
ׁ	ׁ	ׁ	ׁ	ׁ
ׂ	ׂ	ׂ	ׂ	ׂ
׃	׃	׃	׃	׃
ׄ	ׄ	ׄ	ׄ	ׄ
ׅ	ׅ	ׅ	ׅ	ׅ
׆	׆	׆	׆	׆
ׇ	ׇ	ׇ	ׇ	ׇ
׈	׈	׈	׈	׈
׉	׉	׉	׉	׉
׊	׊	׊	׊	׊
׋	׋	׋	׋	׋
׌	׌	׌	׌	׌
׍	׍	׍	׍	׍
׎	׎	׎	׎	׎
׏	׏	׏	׏	׏

COMMON HEBREW CASE.

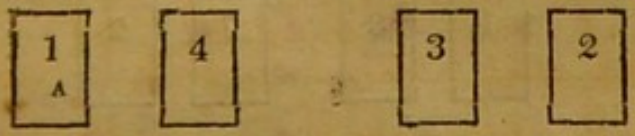
ד	ז	ן	ף	ץ	א / ה	ך	ם	ת
א	ב	ד	ה	ו	ח	ג	ן	ט
י	כ	ל	מ	נ	ס	פ	צ	en quads. / em quads.
ע	ק	ר	spaces.	ש	ת	ם / .	: / -	quadrats.

IMPOSING.

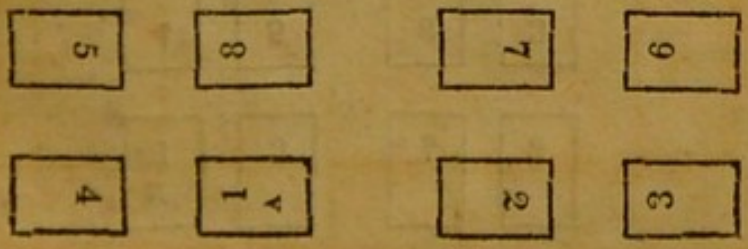
Imposing comprehends not only the knowledge of placing the pages that they may, after they are printed off, follow each other regularly, but also the manner of dressing the furniture, and making the proper margin.

Having composed as many pages as make a whole sheet, half sheet, or less part of a sheet, of whatever size, they are taken from under the frame, and carried to the imposing stone; taking care to put the first page in its right position, with the signature to the left hand, facing us, according to the following schemes.

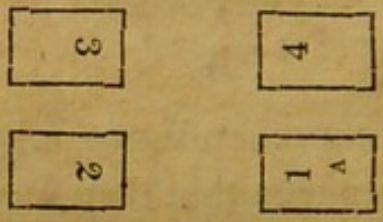
A Sheet in Folio



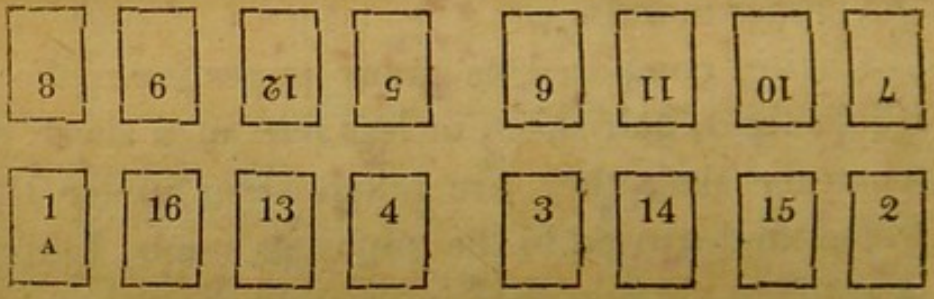
A Sheet of common Quarto.



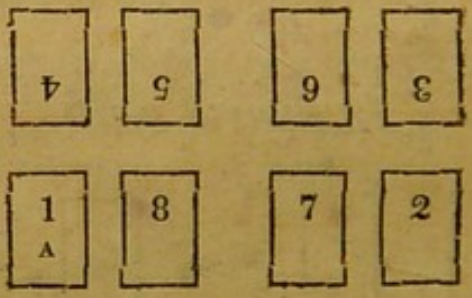
A Half Sheet of Quarto.



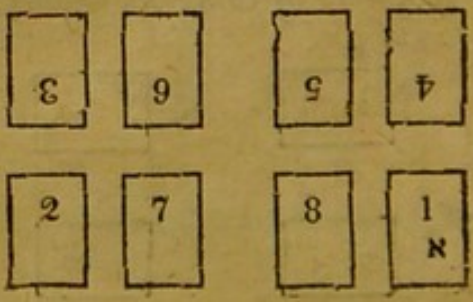
A Sheet of Octavo.



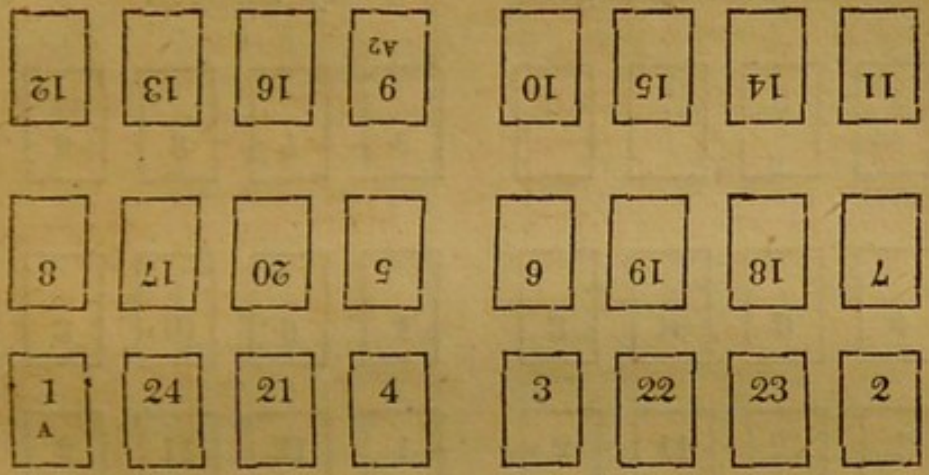
A Half Sheet of Octavo.



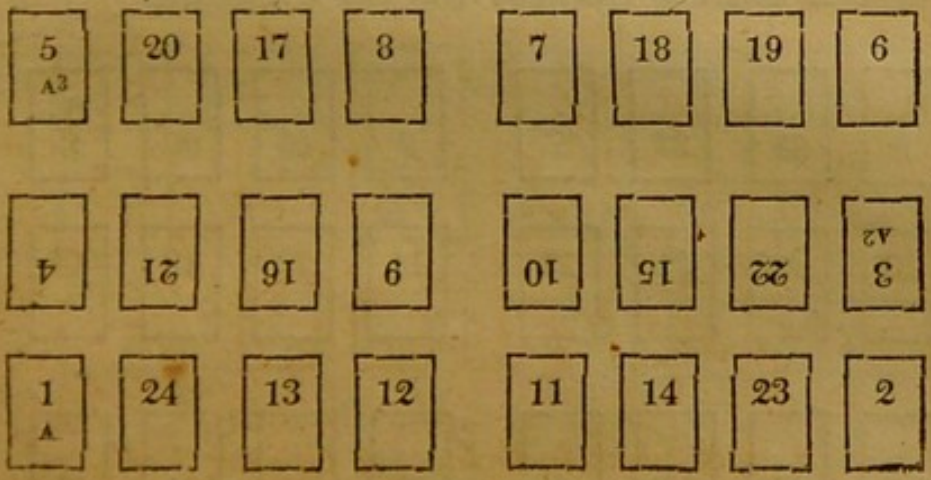
A Half Sheet in Octavo, of Hebrew Work.



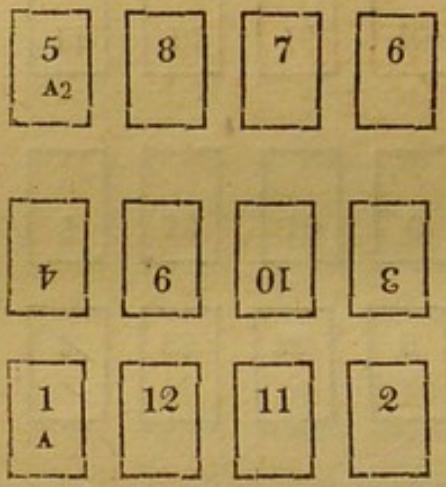
A Sheet of Twelves.



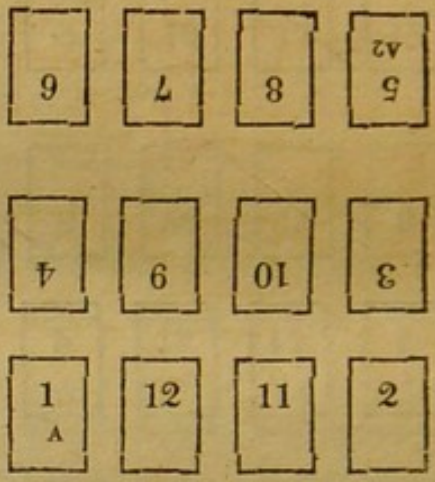
A Sheet of Twelves without cutting.



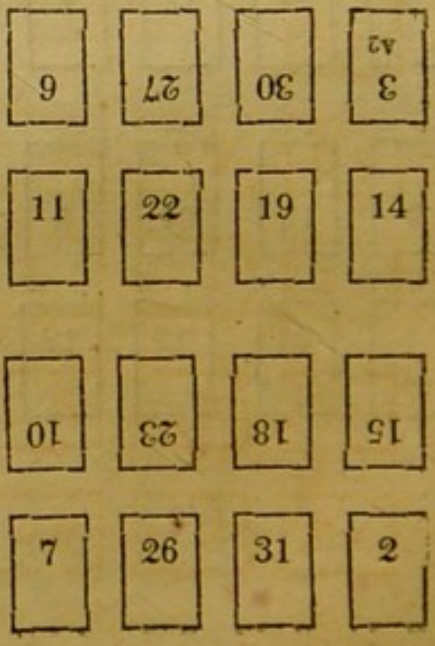
A Half Sheet of Twelves, without cutting.



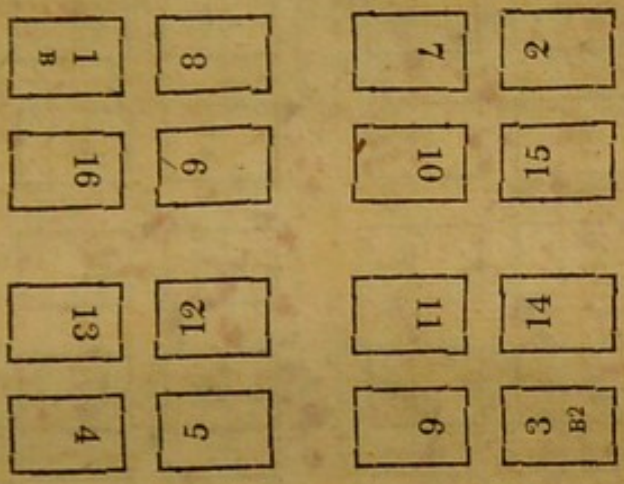
A Common Half Sheet of Twelves.



A Sheet of Sixteens with one Signature.



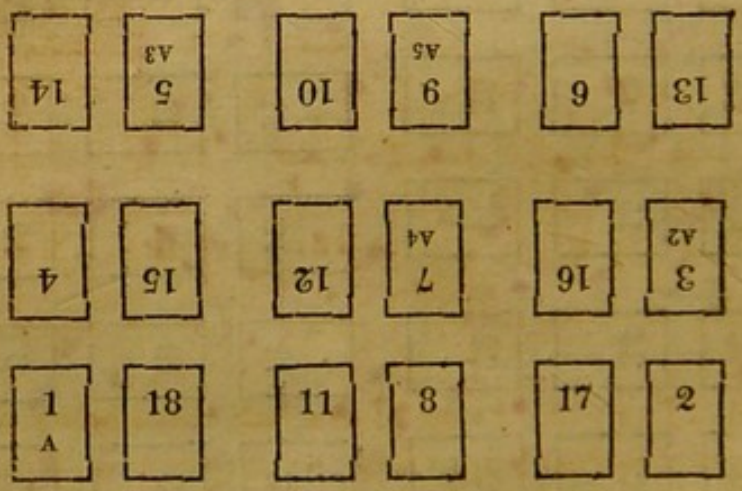
A Half Sheet of Sixteens.



A Sheet of Eighteens.

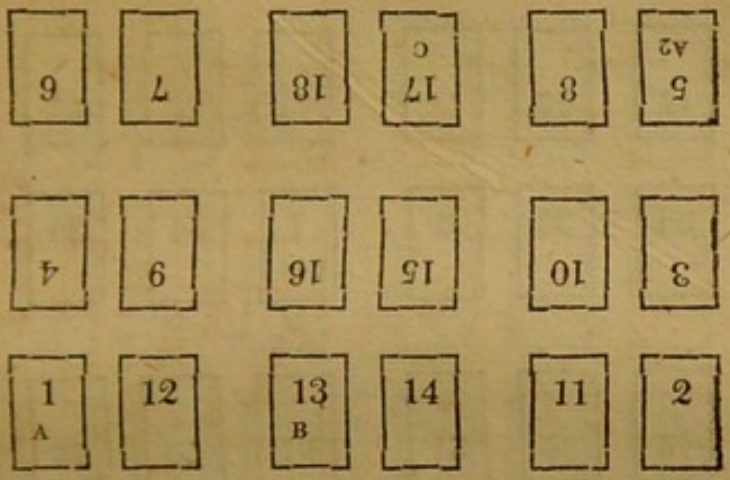
A Sheet of Eighteens to be folded up together.

A Half Sheet of Eighteens.

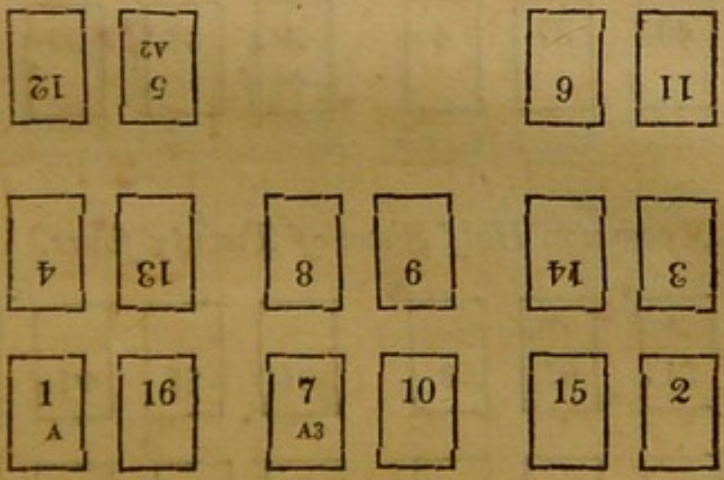


Note....The white paper of this form being worked off, the four lowermost pages in the middle must be transposed; viz. pages 8, 11, in the room of 7, 12; and pages 7, 12, in the room of 8, 11.

A Half Sheet of Eighteens, without transposing the pages.

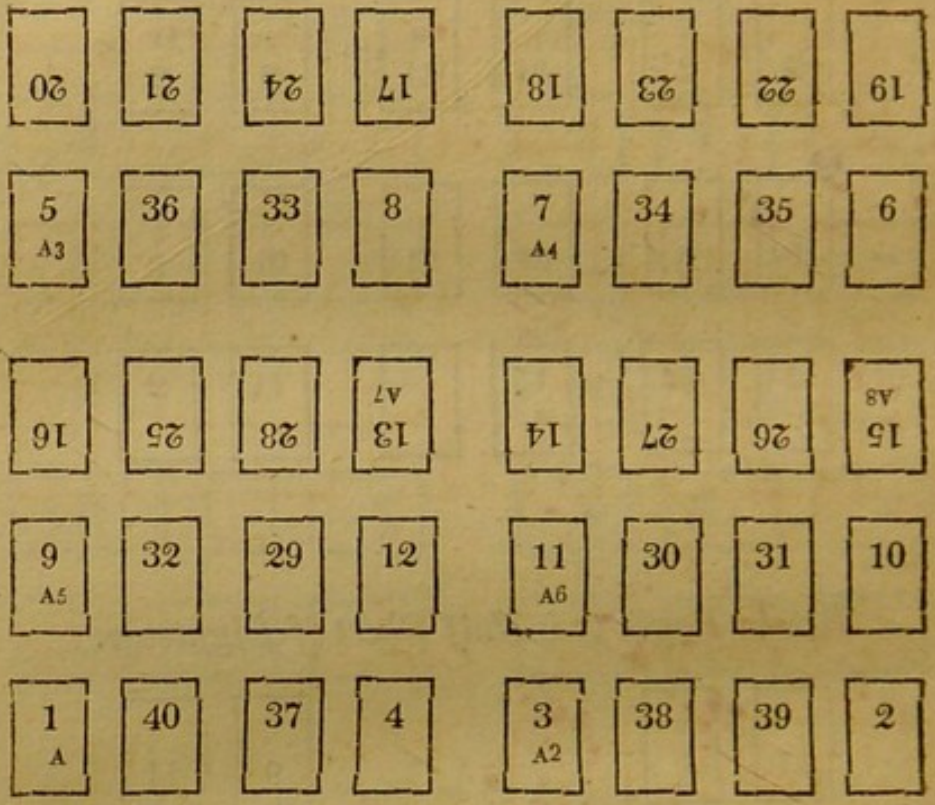


Sixteen Pages to a Half Sheet of Eighteens.

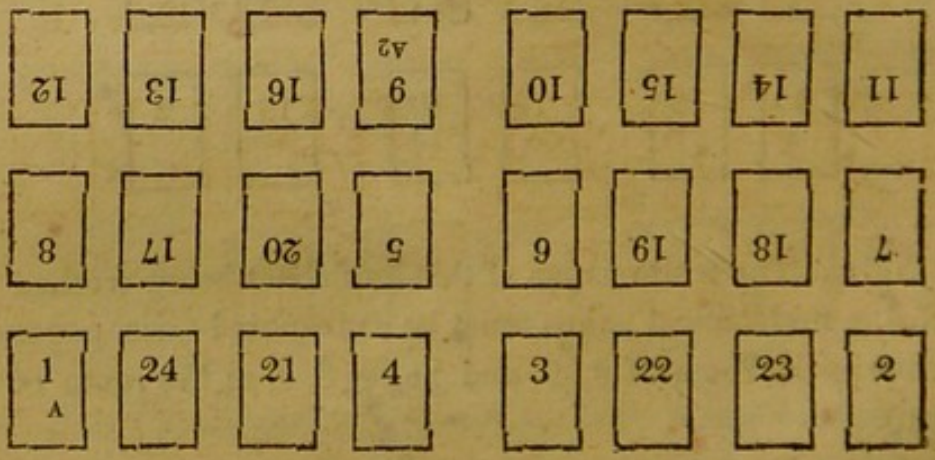


Note....The white paper of this half sheet being worked off, the middlemost pages must be transposed; viz. pages 7, 10, in the room of 8, 9, and pages 8, 9, in the room of 7, 10.

A Sheet of Twenties.



A common Half Sheet of Twenty-fours.

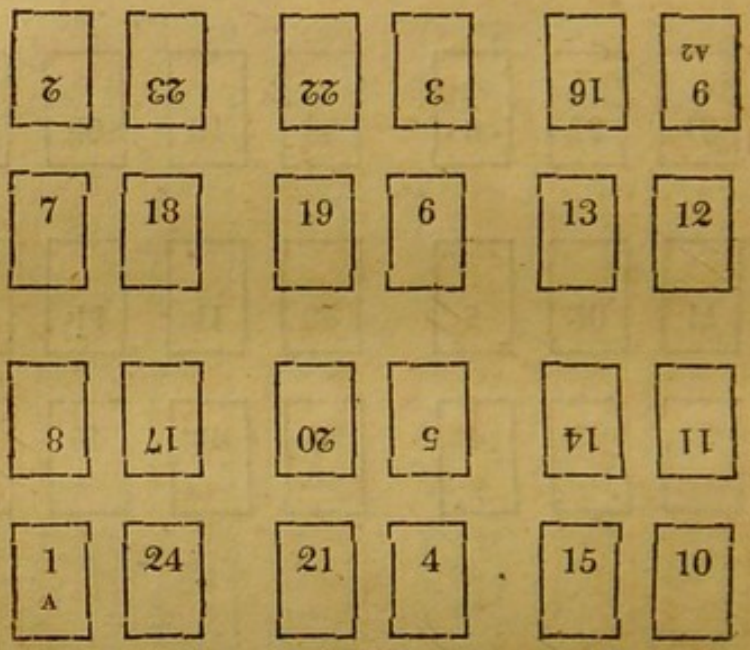


A Sheet of Twenty-fours with Two Signatures.

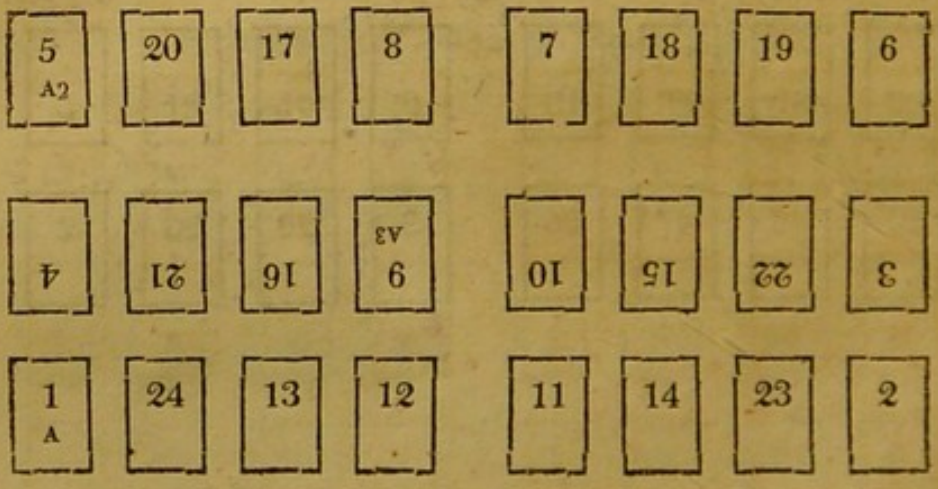
12	13	16	9 A2	36	37	40	33 B2
8	17	20	5	32	41	44	29
1 A	24	21	4	25 B	48	45	28

34	39	38	35	10	15	14	11
30	43	42	31	6	19	18	7
27	46	47	26	3	22	23	2

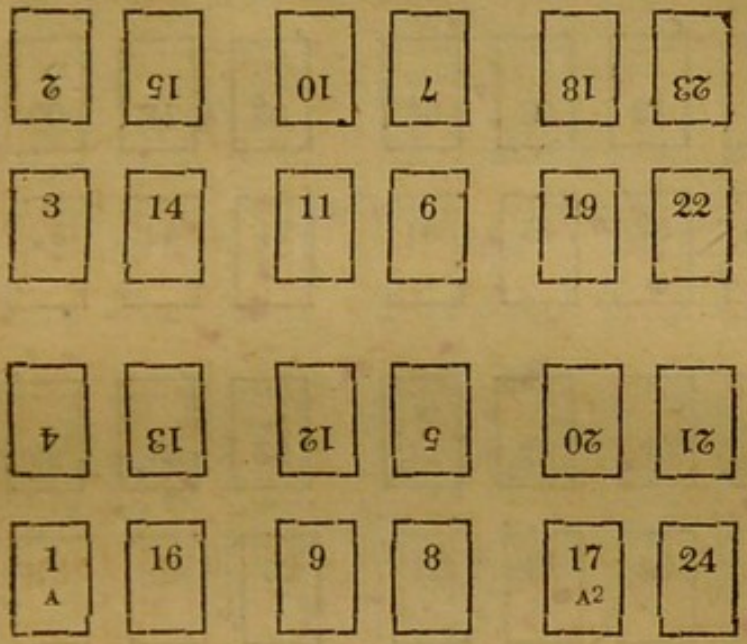
A Half Sheet of Twenty-fours, the Sixteen way



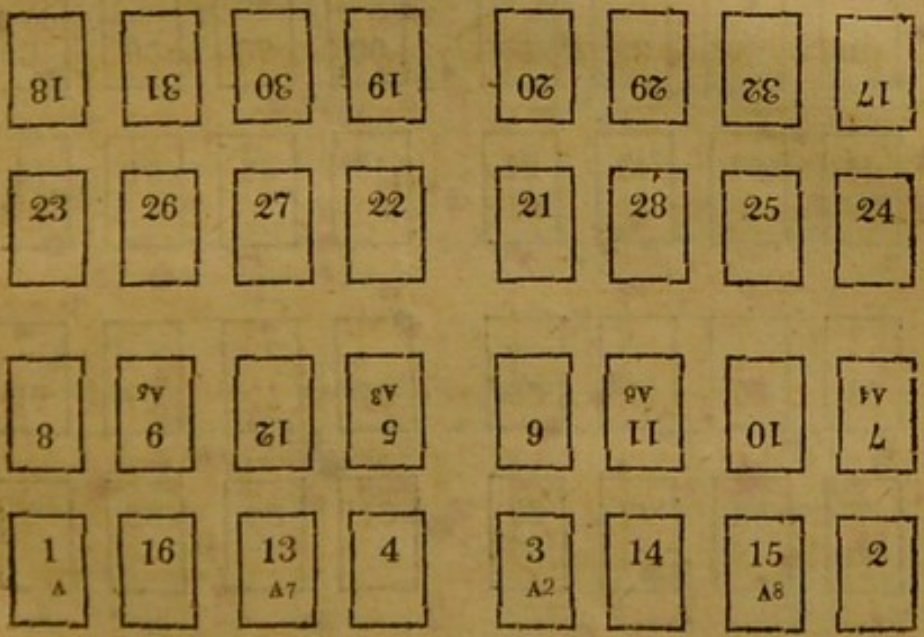
A Half Sheet of Twenty-fours, without Cutting.



A Half Sheet of long Twenty-fours.



A Half Sheet of Thirty-twos.

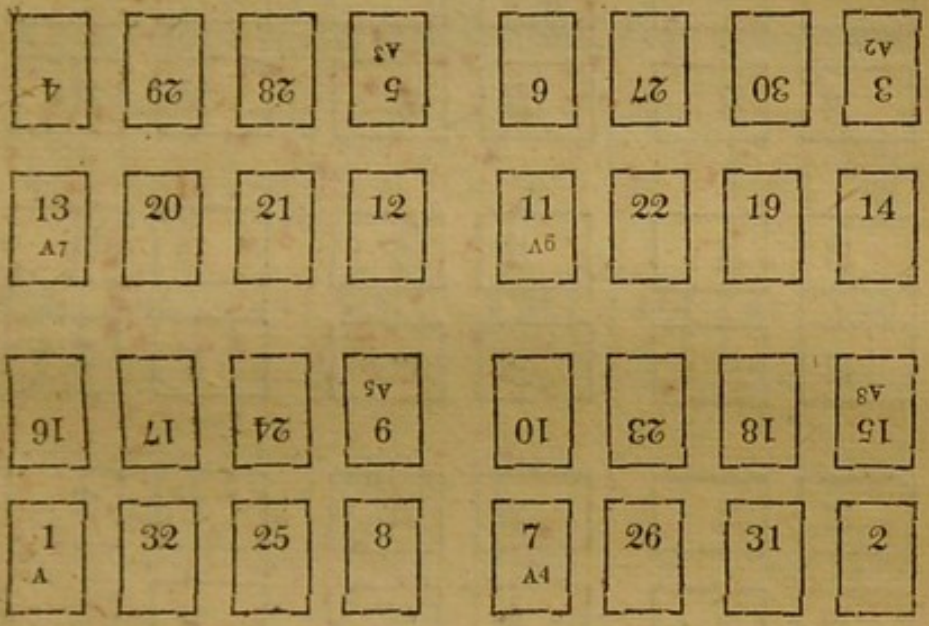


A Sheet of Thirty-twos.

4	61	36	29	28	37	60	5 A3
13 A7	52	45	20	21	44	53	12
16	49	48	17 A9	24	41	56	9 A5
1 A	64	33	32	25	40	57	8

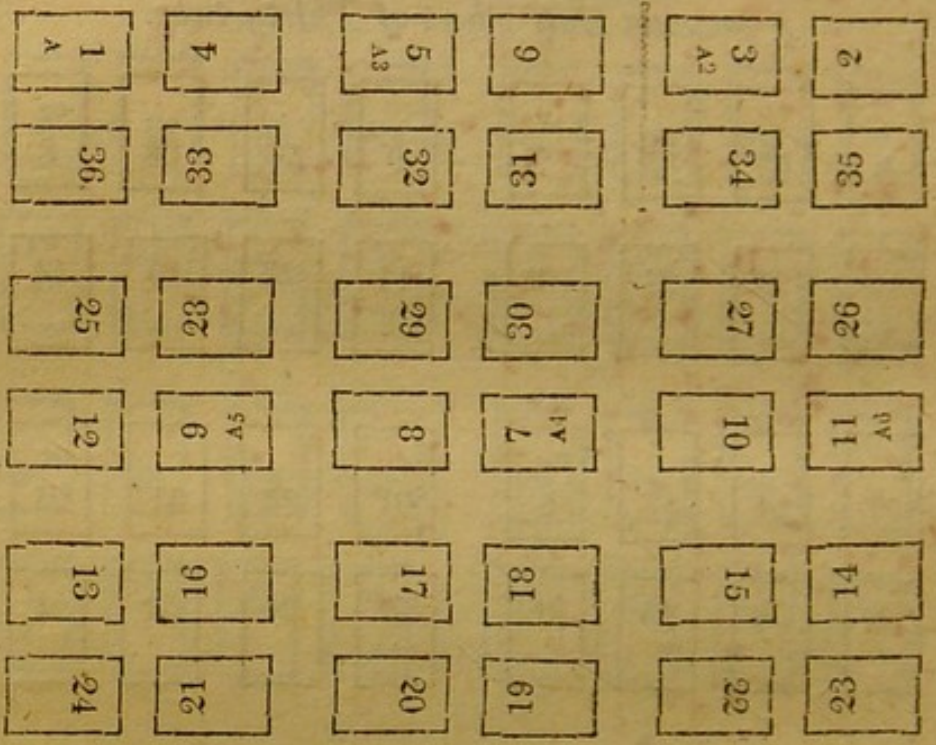
6	59	38	27	30	35	62	3 A2
11 A6	54	43	22	19	46	51	14
10	55	42	23	18	47	50	15 A8
7 A4	58	39	26	31	34	63	2

A common Half Sheet of Thirty-twos.

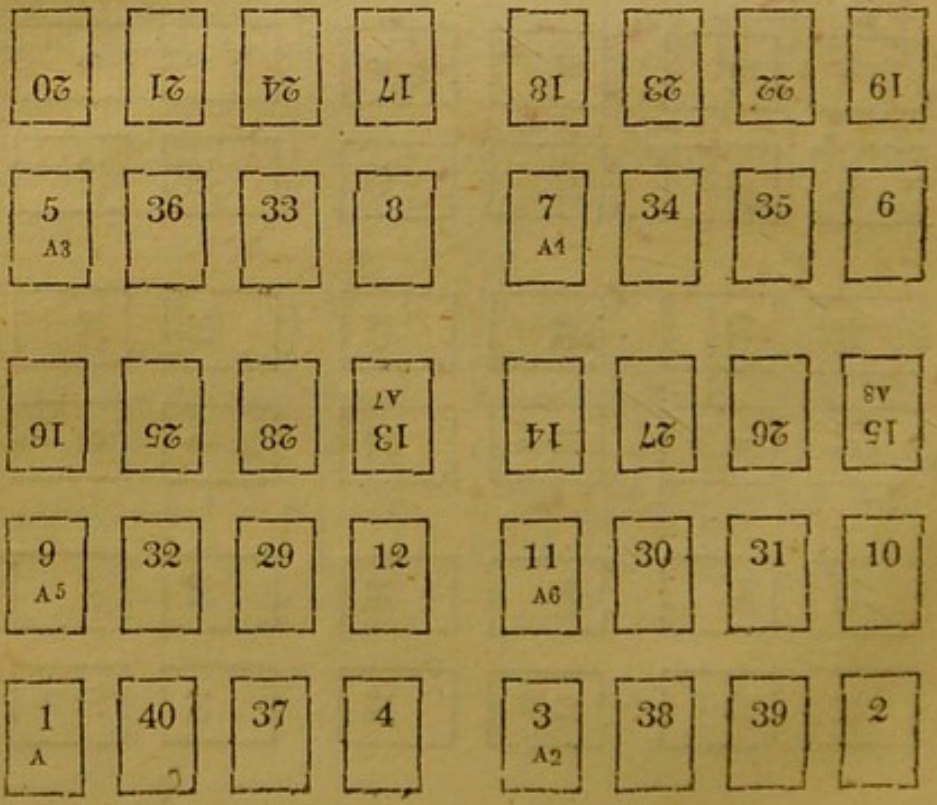


A Half Sheet of Thirty-sixes.

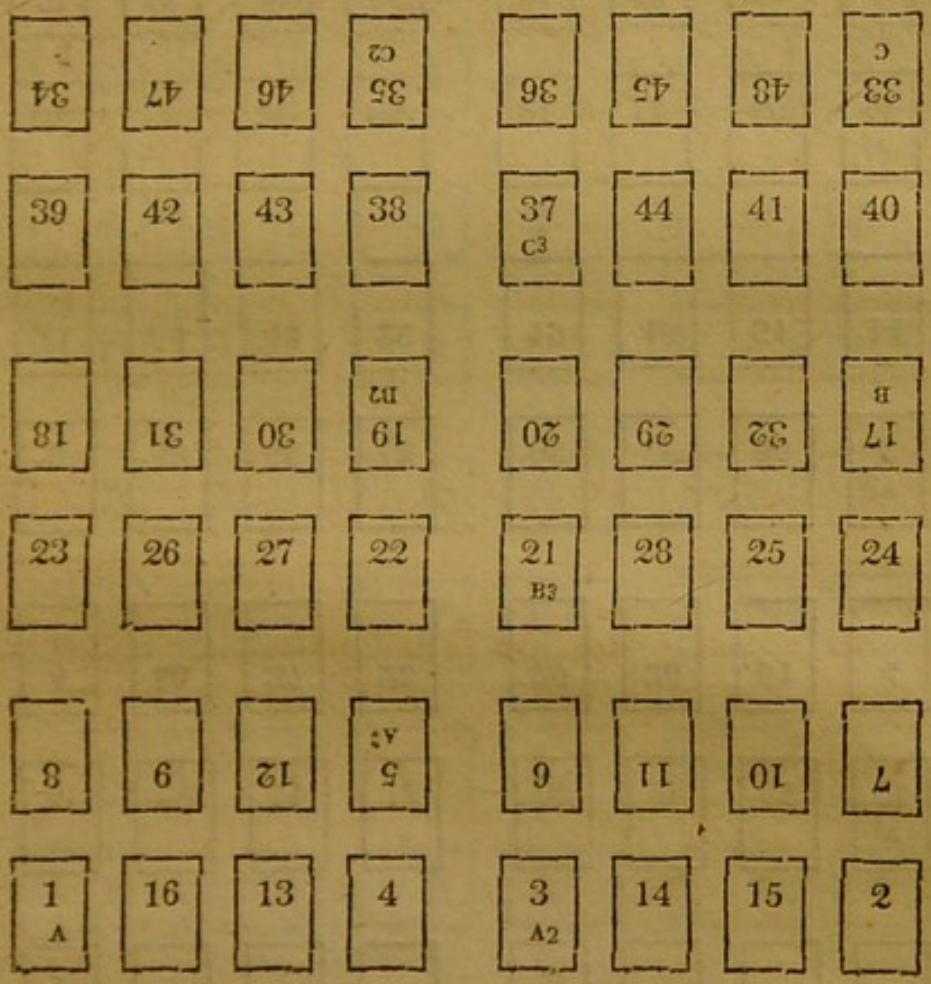
A Half Sheet of Thirty-sixes without cutting.



A Half Sheet of Forties.



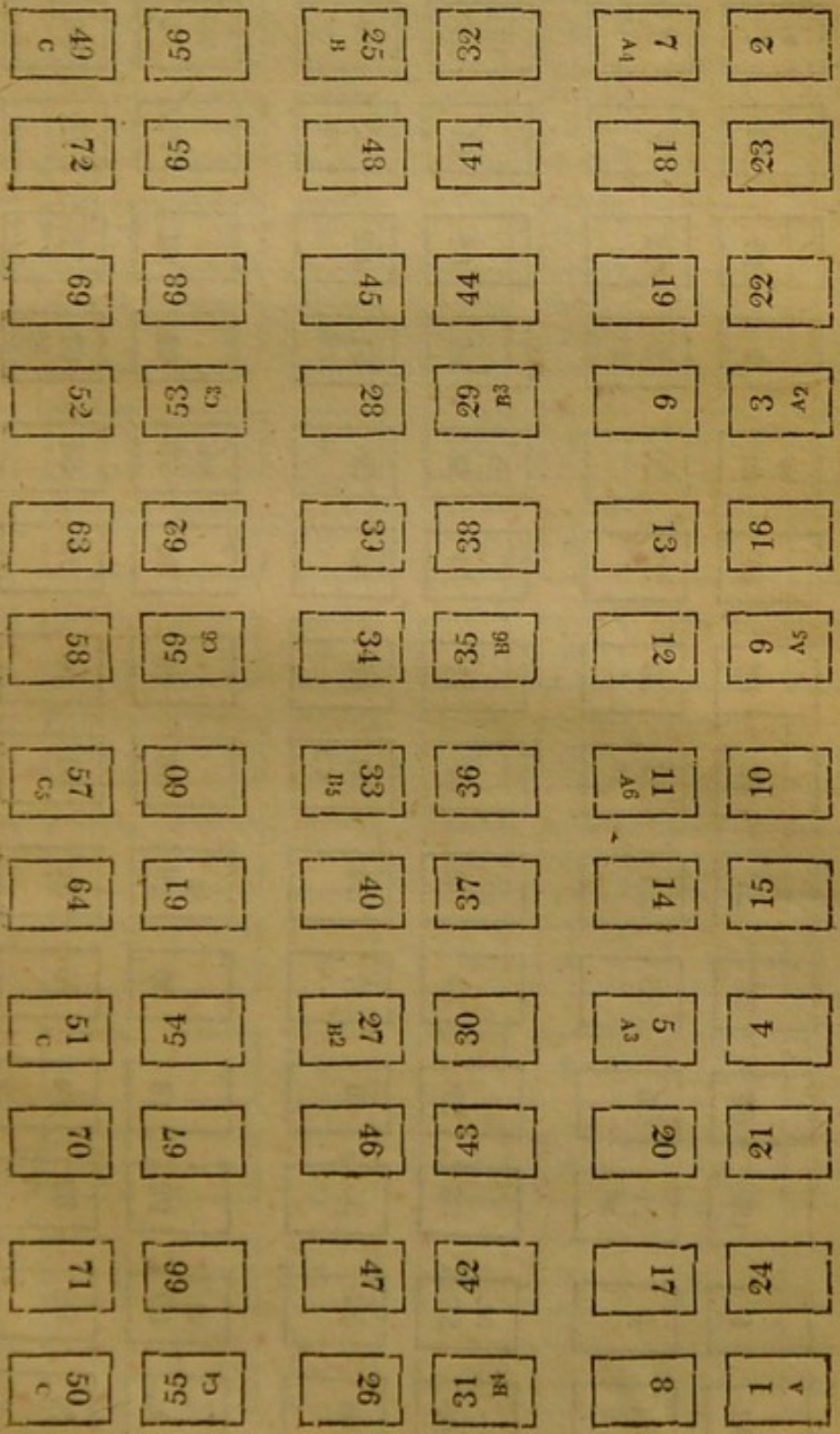
A Half Sheet of Forty-eights with three Signatures.



A Half Sheet of Sixty-fours.

2	63	34	31	26	39	58	7 A1
15 A8	50	47	18	23	42	55	10
14	51	46	19	22	43	54	11 A6
3 A2	62	35	30	27	38	59	6
4	61	36	29	28	37	60	5 A3
13 A7	52	45	20	21	44	53	12
16	49	48	17 A9	24	41	56	9 A5
1 A	64	33	32	25	40	57	8

A Half Sheet of Seventy-twos, with Three Signatures



A Half Sheet of Ninety-sixes, with Six Signatures.

1 A	16	13	4	19 B2	30	31	18	17 B	32	29	20	3 A2	14	15	2	8	9	12	5 B3	22	27	26	23 B4	24	25	28	21 B3	6	11	10	7 A4
55 D4	58	59	54	37 C3	44	41	40	39 C4	42	43	38	53 D3	60	57	56	50	63	62	51 D2	36	45	48	33 C	34	47	46	35 C2	52	61	64	49 D
71 E4	74	75	70	85 E3	92	89	88	87 E4	90	91	86	69 E3	76	73	72	99	67	87	79 E2	48	93	96	18 E	28	95	94	68 E4	89	77	98	69 E

A Half Sheet of One Hundred and Twenty-eights.

1 A	8	55 D4	50	71 E4	66	119 H4	114
16	9	58	63	74	79	122	127
13	12	59	62	75	78	123	126
4	5 A3	54	51 D2	70	67 E2	118	115 H2
19 B2	22	37 C3	36	85 F3	84	101 G3	100
30	27	44	45	92	93	108	109
31	26	41	48	89	96	105	112
18	23 B4	40	33 C	88	81 F	104	97 G
17 B	24	39 C4	34	87 F4	82	103 G4	98
32	25	42	47	90	95	106	111
29	28	43	46	91	94	107	110
20	21 B3	38	35 C2	86	83 F2	102	99 G2
3 A2	6	53 D3	52	69 E3	68	117 H3	116
14	11	60	61	76	77	124	125
15	10	57	64	73	80	121	128
2	7 A1	56	49 D	72	65 E	120	113 H

The preceding schemes will be found to contain every necessary imposition, consisting of folios, quartos, octavos, twelves, sixteens, eighteens, &c. together with many irregular sizes, viz. twenties, thirty-sixes, forties, forty-eights, sixty-fours, seventy-two's, ninety-sixes, and one hundred and twenty-eights; these and many more irregular sizes may be made, with a view to show the possibility of folding a sheet of paper into so many various forms. We have also given a plan for imposing a half sheet of eighteens without transposing the pages on the press, which will be found extremely useful, as works in that size are now constantly printing.

It is necessary, before we proceed further on the subject of imposing, to make a few observations on the method of tying up a page, which is done with a piece of fine cord, turned three or four times round it, and fastened at the right hand corner, by thrusting a noose of it between the several turnings and the matter, with a composing rule, and drawing it perfectly tight; the compositor taking care, during the whole time, to keep the fore-finger of the left hand tight on the corner, to prevent the page from being drawn aside when cord is strained.

The page being tied up, he removes it from the edge of the galley, and thrusts the cord to about the middle of the shank of the letter; lifts his

page, if not too large, with both hands, and sets it down on his page paper, previously laid on his case for that purpose, and carefully puts it under his frame on the left hand, with the foot toward him, that the other pages, which are in like manner set down afterward, may stand by it in regular succession, until he imposes them.

Matter that is too wide to grasp with the fingers should always be emptied on a slice galley, to prevent accidents.

To return to the subject of imposing:—Sixteens, twenty-fours, and thirty-two's, are but octavos and twelves doubled, or twice doubled, and imposed in half sheets. For example, the sixteens are two octavos imposed on each side of the short cross; twenty-fours are two twelves imposed on each side of the long cross, and a thirty-two is four octavos imposed in each quarter of the chase. And thus they double a sheet as often as they think fit. But as we said before, they are imposed on each side of the cross, or in each quarter of the chase, as the volume that is doubled or redoubled is imposed in the whole chase.

In half sheets, all the pages belonging to the white paper and reiteration are imposed in one chase. So that when a sheet of paper is printed on both sides with the same form, that sheet is cut in two in the short cross, if quarto or octavo; and in the short and long cross, if twelves, and folded as octavo or twelves.

In laying down the pages for imposing they must be placed in the same order as they present themselves on the press, for turning the paper, either for octavo or twelves. And though compositors do not lay down the pages of some sizes in the same manner, they nevertheless make them have their right succession without embarrassing the pressman.

The pages for a form being put down, we take notice, first, whether the correct signatures have been put to their proper pages; then, whether the number of an outside page, and the number of the page next to it, amount to one more than there are pages contained in a sheet or half sheet of our work. Thus, for example, in folio, one and four make five; in quarto, one and eight make nine; in octavo, one and sixteen make seventeen. In this manner we may examine every two pages in all other sizes, whether their joint number exceeds the number of pages in a sheet by one; which, if it does, is a proof that the pages are in their right places.

DRESSING CHASES.

Being sure that our pages are laid down right, we proceed to dressing of chases, which we will

suppose to be for a sheet of octavo. Accordingly, we endeavour to come at a good pair of chases, that are fellows, as well in circumference as in other respects; and having laid them over the pages for the two different forms, we consider the largeness of the paper on which the work is to be done, and put such gutter sticks between page and page, and such reglets along the sides of the two crosses, as will let the book have proper margins after it is bound. Having dressed the inside of our pages, we proceed to do the same to their outsides, by putting side sticks and foot sticks to them, and when properly secured by the furniture, we begin to untie them, quarter after quarter, the inner page first, and then the outer, driving at the same time the letter towards the crosses, and using every other means to prevent it from hanging or leaning; for which purpose, and to keep it from other accidents, we secure the pages of each quarter by a couple of quoins.

By observing a proper method in cutting up new furniture, the same will be serviceable for other works, as well as the one for which it is intended, even though the size of the page may differ, provided it agrees with the margin of the paper. The gutters should be cut two or three lines longer than the page; the head sticks wider; the back furniture may run down to the rim of the chase, but must be level with the top of the page, which

will admit of the inner head stick running in; the difference of the outer head stick may go over the side stick, and the gutter will then run up between them. The foot stick only need be cut exact, and the furniture will completely justify.

The pages of a sheet or half sheet being now dressed, our next business is to make the margin, or to try whether our furniture is so proportioned as that each page may occupy one side of a leaf, so as to have an equal margin of white paper left at the sides as well as at the head and foot thereof.

To make proper margin, some use the following method, for octavos: They measure and mark the width of four pages by compasses on a sheet of paper designed for the work, beginning to measure at the one extremity of the breadth of the sheet. The rest of the paper they divide into four equal parts, allowing two fourths for the width of two separate gutter sticks; the remaining two fourths they divide again into four equal parts, and allow a fourth for the margin along each side of the short cross, and one fourth for the margin to each outside page. But because the thickness of the short cross adds considerably to the margin, they reduce the furniture in the back accordingly, and thereby enlarge the outside margin, which requires the greatest share, to allow for the unevenness of the paper itself, as well as for pressmen

laying sheets uneven, when it is not the fault in the paper. Having thus made the margin between the pages to the breadth of the paper, they proportion the margin at the head, in the same manner to the length, and accordingly measure and mark the length of two pages, dividing the rest into four parts, whereof they allow one fourth for each side of the long cross, and one fourth for the margin that runs along the foot of the two ranges of pages. But though they count each part equal to another, they do not prove so upon examination: for as they did at the short cross, so they lessen the furniture on both sides the long cross, to enlarge the bottom margin, for the same reasons that were assigned for enlarging the side margin.

This being the method that is used by some in making margin to octavos, they go the same way to work in twelves; where their chief care is to fix upon a proper size for the head sticks; and, according to them, allow in the following manner: For the outer margin along the foot of the pages, the amount of two thirds of the breadth of the head sticks, and the same for the inner margin, that reaches from the foot of the fifth page to the centre of the groove for the points; and from the centre of that groove to the pages of the off-cut, they allow half the breadth of the head stick. As to the margin along the cross, it is governed by

the gutter sticks; and it is common to put as much on each side of the long cross as amounts to half the breadth of the gutter stick, deducting but little, if any, for the long cross, since that makes allowance to answer the outer margin, which is liable to be varied by the carelessness of the pressmen, and the cutting down of the book-binder.

Thus much may suffice about making margin the above way; which, though it is different from what others use, is nevertheless the basis for making proper margin. Some compositors make margin in the following manner: Having dressed their chases with suitable furniture, for octavo, they fold a sheet of the right paper to that size; then, opening it to the size of a leaf in quarto, they lay one extremity of it against the folio side of the fifteenth page, if it be an inner form, or against the folio side of the thirteenth page, if it be an outer form, to observe whether the opposite extremity of the paper, folded in quarto, reaches to, and fairly covers the third, or the first page, according to the form under hand; which, if it does, proves the margin of that quarter to be right, and that the others may be adjusted to that. Having in this manner made the margin to the breadth of the paper, they proportion it to the length, by trying whether the depth of the paper, folded in quarto, reaches to, and fairly covers the

bottom line of the fifteenth, or of the thirteenth page, when the upper end of the paper, folded in quarto, is laid against the back of the running title of the tenth or of the twelfth page; which, if it does, proves that the margin to the length of the page is right. In making margin, we should always take care that the gutter sticks be of a proper breadth, which may be tried by holding one end of the paper, folded in quarto, to the centre of the groove in the short cross, to observe whether the fold for octavo falls in the middle of the gutter stick; which, if it does, proves that the gutter stick is of a proper size. In this manner we may also try the margin of twelves and other sizes; for having folded with exactness a sheet of the right paper to the work, one quarter of a chase may be first dressed, and the margin to it made before we go further; for if the foldings fall in the middle of the respective parts of the furniture, it proves that the margin is right throughout.

The chases being now dressed, and the proper margin made, we take either leads or scaleboards, and put one, or sometimes more, along both sides of the long as well as of the short cross; not on account of enlarging the margin, but to supply the inequality of one cross to another, and to assist the pressman in making register; for though we find some so very nice, as to fancy here a thin lead too much, and there one too little, it amounts

to no more than mere imagination, since the very parts of the paper whose margin is adjusted by leads, are subject to the bookbinder's plough; and it is doubtful whether he will have the same regard to margin with the printer.

All that has been said with respect to making margin, relates properly to imposing the first sheet of a work; for after that is true dressed, a second, or more sheets, may be dressed with less trouble; for then we impose from wrought-off forms, where we have nothing else to do but to put the chase and furniture about the pages, in the same manner as we take it off the form we are stripping.

LOCKING UP FORMS.

We now proceed to locking up our forms; first carefully examining whether the pages of each quarter are of an exact length, for the difference even of a lead will cause them to hang. We ascertain their exactness by placing the ball of each thumb against the centre of the foot stick, raising it a little with the pressure, and if the ends of both pages rise equal with the stick, it is a proof they will not bind; we then fit quoins between the side and foot stick of each quarter and the chase, till

the whole form may be raised. Though locking up a form may be thought a trifling function, it demands our particular attention.

When we have pushed the quoins as far as we can with our fingers, we make use of the mallet and shooting stick, and gently drive the quoins along the foot sticks at first, (being careful to touch the quoin nearest the cross-bar first,) and then those along the side sticks, taking care to use an equal force in our stroke, and to drive the upper quoins far enough up the shoulders of the foot and side sticks, that the letter may neither hang in the one way, nor belly out the other; and the lower quoins ought likewise to be driven to a station where they may do the office of keeping the letter straight and even.

It often occurs, that the quoins, from having been locked up wet, stick so tight to the furniture as to render it troublesome to unlock them; in such cases, the inconvenience is remedied by driving the quoin up instead of down, which immediately loosens it, and it unlocks with ease.

PLANING DOWN A FORM, AND TAKING PROOF.

The form should be planed down but once on the imposing stone, and that before the quoins are

driven home; and when the form is raised, the hand should be rubbed across the bottom of it, in order to brush off any particles that may adhere. It must then be carried to the proof press to take a proof. It is necessary here to observe, that great care should be used in taking proofs: in the first place, the stone of the proof press should be rubbed off with the hand or a brush, before the form is laid on it. After this, the form should again be planed down *gently:* we say gently, because letter is frequently ruined by hard and careless planing. One great fault in taking proofs is putting too much ink on the balls, from an erroneous idea that high colour is necessary to show the letters distinctly; on the contrary, a proof should be rather paler than regular work, and three or four long and slow pulls given to it, varied at each time; this brings off the impression clean and fair, which is essential to correct proof reading, particularly as to imperfect or battered letters. After this the form is rubbed over with a wet ley brush, and then returned to the imposing stone for correction.

REMEMBER, that *time* is money. He that can earn ten shillings a ~~week~~ by his labour, and goes abroad, and sits idle one half of the day, though he spend but sixpence during his diversion or ~~or~~ idleness, ought not to reckon *that* the only expense; he has really spent, rather or thrown away, five shillings beside. [Remember, that money is *credit*. If a man lets his money lie in my hands after it is due,

He gives me the interest, or so much as I can make of it, a considerable sum where a man has good ~~and large~~ credit, and makes good use of it.

Remember, that money is of a prolific generating nature. Money can beget money, and its offspring can beget more, and so on. Five shillings turned is six, turned again it is seven and three pence, and so on, till it becomes a hundred pounds. The more there is of it, &c.

during that time. This amounts to

PROOF READING.

It has ever been the object of eminent printers to have the works they print without faults and errors, not only with respect to wrong letters and false spellings, but chiefly in regard to their correcting and illustrating such words and passages as are not fully explained or expressed, or are obscurely written in the copy. It would be of great advantage to a proof reader, if, beside having a thorough knowledge of his own language, he should likewise understand those in frequent use, as the Greek, Latin, French, Spanish, Italian, and German, and possess a quick and discerning eye; these are the accomplishments by which a proof reader may raise his own and his employer's credit; for it is a maxim with booksellers to give the first edition of a work to be done by such printers as they know to be either able proof readers themselves, or that employ fit persons, though not of universal learning, that are acquainted with the elements of those arts and sciences that may fall under their examination. We say examination; for in cases where a proof reader is not acquainted with the subject before him, he, together with the person that reads to him, can do no more than literally compare and cross-examine the proof by the original, without altering either the spelling or

punctuation; since it is an author's province to prevent mistakes in such case, either by delivering his copy very accurate and fairly written, or by carefully perusing the proof sheet. But where a proof reader understands the language and character of a work, he often finds occasion to alter and amend things that he can maintain to be either wrong or ill digested. If, therefore, he suspects that copy requires revising, he is not to postpone it, but to make his emendations in the manuscript before it is wanted by the compositor, that he may not be hindered in the pursuit of his business, or prejudiced by alterations in the proof, especially if they are of no real signification; such as far-fetched spelling of words, and thrusting in capitals, or any thing else that has nothing but fancy and humour for its authority and foundation.

The manner in which errors are noticed in a proof, is by marks, or signs; and in order still farther to illustrate the subject, an engraving is subjoined, in which each is exemplified.

A wrong letter in a word is noticed by drawing a short perpendicular line through it, and making another short line in the margin, behind which the right letter is placed. (*See Plate, No.* 1.) In this manner whole words are corrected, by drawing a line across the wrong word, and making the right one in the margin, opposite the faulty line. (*See No.* 2.)

Where a word or words have been left out, or are to be added to the line, a caret must be made in the page where they are intended to come in, and the word or words written in the margin. (*See No.* 3.)

Where a space is wanting between two words, or letters, that are intended to be separated, a caret must be made where the separation ought to be, and the sign No. 4. placed opposite in the margin. Also, where words or letters should join, but are separated, the mark, No. 5. must be placed under the separation, and the junction of them signified by the same mark in the margin.

When letters or words are set double, or are required to be taken out, a line is drawn through the superfluous word or letter, and the mark, No. 6. placed opposite in the margin.

A turned letter is noticed by making a dash under it, and the mark No. 7. in the margin.

Marking turned letters tries a corrector's skill in knowing the true formation of them, without which it would be better to mark them in the same manner as they do wrong letters, unless they are very sure that they can distinguish, *b*, *d*, *n*, *o*, *p*, *q*, *s*, *u*, *x*, *z*, when they are turned, from where the same letters stand with their nick the right way.

Where a space sticks up between two words, it is noticed by a cross in the margin. (*See No.* 8.)

Where two words are transposed, the word

placed wrong should be encircled, and the mark No. 9. placed in the margin; but where several words require to be transposed, their right order is signified by a figure placed over each word, and the mark No. 9. in the margin.

Where a new paragraph is required a line in the shape of a crotchet should be made, and the mark, No. 10. placed in the margin; also, when a paragraph should not have been made, a line should be drawn from the broken off matter to the next paragraph, and write in the margin, No Break. (*See No.* 11.)

Where several lines or words are added, they should be written at the bottom or top of the page, making a line from the place where the insertion begins close to those lines or words. (*See No.* 12.) But where so much is added as cannot be contained at the foot of the page, write in the margin, *Out, see copy.*

If letters or words are to be altered from one character to another, a parallel line or lines should be made underneath the word or letters, viz. for capitals, three lines; small capitals, two lines; italic, one line; and write in the margin, opposite the line where the alteration occurs, *Caps.*, *Small Caps.*, or *Ital.* (*See No.* 13.)

Where words have been struck out that have afterward been approved of, dots should be marked under such words, and in the margin write *stet.* (*See No.* 14.)

Where the punctuation requires to be altered, the semicolon, colon, and period, are marked as in the margin. (*See No.* 15.)

No. 16 describes the manner in which the hyphen and ellipsis line are marked.

No. 17 describes the manner in which the apostrophe, inverted commas, &c. are marked.

Where letters or lines stand crooked, they are noticed by drawing lines before and after them. (*See No.* 18.)

Where a smaller or larger letter, of a different fount, is improperly introduced into the page, it is noticed by the mark, No. 19.

Inaccuracy, in many cases, may proceed from the inattention and carelessness of the printer, which are always inexcusable; but this imperfection must often be ascribed to a want of thorough acquaintance with every language, whether those generally in use, or those which are denominated dead languages; also a deficiency of knowledge of many of the arts and sciences, and other abstruse subjects, wherein technical phrases and terms often occur, which, unless very distinctly written, may be misunderstood by the most attentive and accurate proof reader.

When it is considered that a part of each of these literary subjects may pass through the hands of the proof reader in his professional capacity, in one day, he who wishes to make accuracy his pe-

culiar study, need not be ashamed nor afraid to solicit the aid of the author to accomplish an end so desirable, and which would be so satisfactory to all parties.

In all cases, therefore, but particularly in those where the author has it not in his power to see the proof sheet, accuracy and distinctness of copy is peculiarly desirable.

If attention be paid to the right spelling of proper names of persons, places, technical terms, &c. the finishing of sentences marked by the period, that the author's ideas may not be misunderstood, and the hand writing tolerably legible, much time and a very considerable expense would be saved, and the great object of accuracy gained, by gentlemen who communicate their sentiments to the public through the medium of the press—or there must be an unpardonable fault on the part of the *printer*.

As we have given in the preceding plate a page in which each of the marks already described is exemplified, it may not be amiss also to give that page corrected.

The page represented in the Plate, corrected.

REMEMBER, that *time* is money. He that can earn ten shillings a day by his labour, and goes abroad, or sits idle one half of the day, though he spend but sixpence during his diversion or idleness, ought not to reckon *that* the only expense; he has really spent, or rather thrown away, five shillings beside.

Remember, that *credit* is money. If a man lets his money lie in my hands after it is due, he gives me the interest, or so much as I can make of it, during that time. This amounts to a considerable sum where a man has good and large credit, and makes good use of it.

Remember, that *money* is of a prolific, generating nature. MONEY can beget MONEY, and its offspring can beget more, and so on. Five shillings turned, is six; turned again, it is seven and three-pence, and so on, till it becomes a hundred pounds. The more there is of it, &c.

PRESS WORK.

Industrious and careful pressmen must stand high in the estimation of every master printer. This character is easily acquired by well-disposed men; yet it is to be lamented that so few endeavour to merit so desirable an appellation. We shall lay down a few directions, which, if properly attended to, will, we are persuaded, enable the pressman to do credit to himself, and justice to his employer.

Making Ready a Form.

The pressman will take care before he lays a form on the press, to wipe the press stone perfectly clean; for if any hard particle, though ever so small, be on it, the letter that lies on that matter will, with pulling, quickly rise, and not only make a stronger impression than the rest of the form, but in all probability, cause a dent in the platen, and bear off the adjacent letters. He must also carefully examine whether the back side of the form be clean, before he attends to the register, or otherwise make ready his form. The form should be laid under the centre of the platen.

He then lays the tympan down upon the form, and places the blankets, which he rubs to soften them, in it; then putting in the inner tympan, he

fastens it with the hooks and buttons for that purpose, which serve to keep it from springing upward. He then folds a sheet of the paper he is about to work, in quarto, and lays the long crease of it upon the middle of the long cross, and the short crease over the middle of the grooves of the short cross, if it lie in the middle of the form; for in twelves it does not, and then he folds his paper accordingly. Now wetting his tympan, which is done for close, heavy work, but not for very light, open works, he turns it upon the paper, and running in the carriage, pulls the sheet, which, with the wet tympan and the force of the pull, causes it to stick; and turning up the tympan again, he examines if the sheet is laid even; if it has not been laid even on the form, it is better to re-lay it, and pull it again, for it is of considerable importance that it should be put on perfectly even. This sheet is called the tympan sheet, and is placed there as a standing mark to lay all the other sheets exactly even upon, while he works the white paper.

Having laid on the tympan sheet, he chooses his points; for large paper short-shanked points, and for small paper long-shanked points, and others in proportion to the intermediate sizes of paper; for his points ought to be so placed, that he may prick the point holes within the grasp of the hollow between his right-hand thumb and fore finger; because, when he works the reiteration, he

may the better manage and point the sheet when laying it on the tympan.

Nor will he place his points too near the edge of the paper; because, in working the reiteration, he would be forced to carry his farthermost point hole the farther from him, which is a loss of time; and the laying sheets quickly on their point holes adds much to despatch. Also, the less distance there is between the off and near point hole the better, as it saves time; because he must draw his body so much the farther back, to place that hole on its point; he therefore places the near point farther into the paper than the farther point, if it be folio, quarto, octavo; but to twelves, equally distant from both edges of the paper. By placing the points unequally from the edges of the paper, as in folios, quartos, and octavos, as aforesaid, he also secures himself the more from a turned heap when he works the reiteration; because, without very much altering the quoins, he will not be able to make register; and pressmen, especially if they are employed upon the same sort of work, seldom or never remove the quoins on the farther side of the carriage, nor on the right hand end of the carriage, but let them lie as gauges for the next form; for, by thrusting the chase close against these quoins, the register is almost, if not quite made; the compositor having before chosen chases exactly of an equal size, and made equal whites between the crosses, &c.

Having chosen his points, he places them so that they may both stand in a straight line, parallel with the top and bottom sides of the tympan. He then lays the tympan down upon the form, holding the frisket end of it in his left hand, about an inch or an inch and a half above the face of the letter, and sinks his body downward till he can see between the form and tympan; and with the ball of the middle finger of his right hand, presses gently upon the tympan over the point ends of each point successively, to see if the points fall in or near the middle of the grooves in the short cross. If they fall exactly in the middle of those grooves, the form lies exactly between the middle of both the ends; if they fall not exactly in the middle, he moves the form between the ends of the carriage till they do, and then quoins up both ends of the chase.

Under this phrase, of making ready the form, are comprehended many other operations; for, 1. The frisket must be covered with brown or stiff paper, by means of paste, and cut; to perform which the pressman fits the match joints of the frisket into the match joints of the tympan, and pins them in with the frisket pins; and having beaten the form, turns down the frisket and tympan on the form, and pulls on the covered frisket.

Then he runs out the carriage, takes up the tympan and frisket together off the the form, and

lays them on the gallows; then draws the frisket pins out again, and takes off the frisket; and laying it flat on his bank, with a point of a sharp knife cuts through the frisket about all the sides of the pages, allowing to each he thus cuts out of the frisket about a nonpareil margin on all the sides of the cut pages; then he pins his frisket again on the tympan, as before.

2. He then sees that the form is properly locked up.

3. That no letters or spaces lie in the white lines of the form; which may happen if the compositors have made any corrections since the form was laid on the press.

4. If any wood cuts are in the form, that they are exactly letter high; if not, for it seldom happens that they are, he must make them so. If they are too low, he underlays them; but examines first how much they are too low, by laying one or more cards or scaleboards upon the face of the wood cut, and feels with the fingers of his right hand if the intended underlay is exactly even with the face of the letter. If it is not, he tries thicker or thinner underlays, till he has made it on a level.

Having evened his underlay, he unlocks the quarter the wood cut is in, and takes it out of the form, and fitting a scaleboard or card, or what he judges requisite, to the bottom of it, places it, thus

raised, in the form. But yet he trusts not to his judgment altogether for the thickness of the underlay; but locking up the form again, pulls a waste sheet upon it to sink it as low as it will go, and then observes if it is a proper height; thus adding or taking away till it produces a clear and perfect impression. If the wood cut is too high, it must be placed lower at the bottom; or he may introduce a few sheets of paper in the tympans, and cut away the part that bears on the wood cut, until he gets it even.

5. If a white page or pages happen in a form, and he uses a new-made frisket, he does not cut out that page; but if he works with an old frisket, and that page is already cut out, he pastes on a piece of paper to cover the white page in the form, that it may not black. Those pages adjacent to a white page will come off harder than any other in a form; to prevent which, the pressman fits a bearer on the frisket. Bearers are generally made of reglets, which, when laid on the form, will be about a thin lead higher than the letter. They are cut about an inch long, and then pasted and laid on the furniture of the form, with the pasted side upward; the frisket and tympan are then laid down upon the form, and an impression made, which will cause the bearer to stick on the frisket. Cork bearers are frequently used, which, from their elasticity, in many cases are very use-

ful, to prevent the slurring of folios, or other exposed parts of the form, by bearing up the tympan.

6. He examines whether the frisket bites; that is, whether it keeps off the impression from any part of the page; if it does, he cuts away so much, and about a nonpareil more, off the frisket, where this happens.

7. He examines if the beards of the letter print at the feet of the pages; if they do, he considers whether the too short or too far running in of the carriage causes it; or whether it is only the beard of a short page that comes off; if the last is the cause, he remedies it by a bearer.

8. If the carriage be run in too short, and the feet of the pages stand toward the platen, the hind side of the platen will press strong upon the feet of those pages; and if the carriage is run in too far, the feet of the pages which stand toward the hinder rail of the tympan will most feel the force of the platen; and according to a greater or less proportion of that force, and to the softness or yielding of the paper, tympan, and blankets, and all other springs of the press, the feet of the pages and beard of the letter will more or less print hard. In this case he runs the carriage under the platen, till the farther edge of the platen just covers the feet of those pages, and with a piece of chalk makes a stroke over the plank of the

near side of the carriage behind, and the upper side of the rail of the ribs; then he runs in the carriage again, till the fore side of the platen just covers the feet of the pages next the hind rail of the tympan, and makes another mark with chalk on the rail of the ribs, to join with the mark he first made on the plank of the carriage. He now runs out the carriage, and lays the tympan down on the form; then runs in the carriage again till he joins the mark or line he made first on the plank and rail of the ribs, and makes a mark with chalk on the farther rail of the tympan to range with the foreside of the platen. This mark on the tympan shows him how far he must run the carriage in against the fore edge of the platen for the first pull Then he runs in the carriage farther, till he joins the same mark or line on the plank to the second mark he made on the rail of the ribs, and makes another on the farther rail of the tympan to range with the foré side of the platen, for the mark to which he is to run the carriage in against the fore edge of the platen for his second pull.

9. He examines if the catch of the bar will hold it when the spindle makes a small spring, viz. when the bar flies but a little way from the pressure of the form; if it will not, he knocks up the catch higher, and then screws the screw on the shank, and, consequently, the catch close and firm

against the cheek of the press. But if the catch stands too high, so that it will, not without a great spring, (viz. when the bar is pulled hard from the farther cheek,) fly up, he then knocks upon the top of it, to sink it lower; and when it is well fitted, screws it up again as before. If the catch stands too low, it will not hold the bar, but will come down when he is at work; for if, as it often happens, he lets the bar fly back harder than ordinary, or if it slips out of his hands, it will knock hard against the cheek, and spring back again. If the catch of the bar stands but a little too high, the violence of the bar flying back to make it stick on the catch, will soon loosen the square of the bar in the eye of the spindle; and, indeed, subject the whole press to an unstable condition.

10. He considers whether the catch of the frisket stands either too forward or too backward. It may stand too forward, though when it is leisurely turned up it may stay the frisket; because, when the pressman is proceeding in his work, though he generally throws the frisket quick up with an accustomed, and, as he intends, equal strength, yet, if his guess at strength in throwing it up varies, and it comes but a little harder up, the catch will make the frisket return; and though, as it sometimes happens, a solid wall serves to do the office of a stay for the frisket, yet with a little too hard throwing it up, the frisket itself will so shake

and tremble from end to end, that before it recovers rest, its own motion will, by the quick running of a spring, throw it back again. If the catch stands too far back, then, after he has given the frisket a touch to bring it down, it will be too long before it comes down, and retard the progress of the work, and not unfrequently cause the sheet to slip out of its proper place; he therefore places the catch so that the frisket may stand a little beyond a perpendicular, backward, that, with a near-guessed strength in the tossing it up, it may just stand, and not come back; for then, with a small touch behind, it will again quickly come down upon the tympan.

11. He fits the gallows, so that the tympan may stand as much toward an upright as he can; because it is the sooner let down upon the form, and lifted up again. But yet he will not place it so upright as to prevent the white sheets of the paper from lying secure on the tympan; and for reiteration sheets, their lying upon the points secures them.

12. He considers the situation of the footstep, and he places it so as may best suit with his own stature; for a tall man may allow the footstep to stand farther off and lower than a short one, because his leg reaches farther under the carriage, and he can tread hard to add strength to his pull; while a short man must strain his leg to feel the footstep, and consequently diminish the force of his pull.

13. Few pressmen will set the range of the paper bank to stand at right angles with the plank of the carriage; but they draw the farther end of the paper bank so that the near side may make an angle of about seventy-five degrees, more or less, with the near side of the carriage. The reason is, if the near side of the paper bank stand at right angles with the near side of the carriage, he must carry his hand farther when he lays or casts sheets, which would occasion delay; besides, his companion has a nearer access to it, to look over the heap, which he frequently does, or ought to do, to see the colour of the work.

14. The pressman brings his heap, and sets it on the horse, on the near end of the paper bank, as near the tympan as he can, without touching it, and places an end of the heap toward him. He then takes the uppermost or outside sheet, and lays it on the bank; and taking three, four, or five quires off his heap, he shakes them at each end, to loosen the sheets that, with pressing, stick close together; and not finding them loose enough, he shakes them long-ways and side-ways, to and fro, till he finds he has sufficiently loosened or hollowed the heap. Then with the nail of his right-hand thumb, he draws or slides forward the upper sheet, and two or three more commonly follow gradually with it, over the hither edge of the heap, to prepare those sheets ready for laying on the tympan.

Rubbing out Ink.

Before the pressman goes to work, he rubs out his ink. If it has lain long on the ink block since it was last rubbed out, the surface of it is generally dried and hardened into a film or skin, for which reason he carefully takes the film quite off, before he disturbs the body of the ink; for should any, though ever so little of it, mingle with the ink, when the ball happens to take up the little particles of film, and delivers them again upon the face of the letter, they produce picks, print black, and deface the work; and if they get between the face of two or more letters, or the hollows of them, they will obliterate all they cover; and if they are pulled upon, and the pressman is not careful to overlook his work, they may run through the whole heap. Having carefully skimmed off the film, he brings forward a small quantity of ink near the edge of the block, which he rubs well with the brayer. Care should be observed not to brayer out much at a time; for if this is done, it will be impossible to preserve any degree of uniformity in taking ink.

Of Beating.

Beating is an important part of a pressman's business, which, if not properly done, renders every other operation almost useless. A careful beater will never be found to take much ink at one time, but keep brayered out in the front of the ink block a small quantity, that he may be certain of never receiving more than is necessary. The great art in beating, is to preserve a uniformity of colour, which is easily performed by paying a proper attention to the taking of ink; this done regularly, and the form beat well over, the beater may be said to have done his duty.

All pressmen do not beat alike; but the method generally followed by good workmen is, the moment the tympans are lifted up, to lay the balls on the left hand near corner of the form, that he may the more readily carry them to the near right hand corner, while his companion is casting the sheet on the bank; if this opportunity is lost, it occasions delay, and in all probability leaves that corner untouched by the ball, and makes what is technically called *a friar*.

In beating over the form, the elbows should be kept rather inward, and the ballstock handle inclining outward, in order that the balls may be perfectly upright; it will also enable him to go

over the corner before mentioned with greater care and certainty. This plan, if strictly followed, is unquestionably the most expeditious, as well as the least liable to defects, if common attention is observed by the beater. He begins, as already observed, at the left hand near corner, and goes up that side of the form and returns, and leaves off at the left hand near corner, taking care to make the form feel the force of the balls by beating hard and close. In the operation of beating, the balls should be constantly turning round in the hands, as it keeps them in their proper shape, which renders them more safe and pleasant to work with.

The balls should not go too far over the form, for they are liable to gather dust, and consequently throw picks on the form, which are not easily got rid of. These picks, and every other defect, it is the business of the beater to look after carefully, and to endeavour to mend and prevent. His companion can also, when taking off the sheet, give a slight glance over it; but the uniformity of the work will depend principally on the beater. He will point out to the puller any defects in laying the sheets on the tympan, or if he neglects to pull down the work with the force it requires.

Having thus gone twice upward and downward with the balls, beating close and strong, the form may then be considered sufficiently beaten; but if he beats the first sheet of a fresh form, or after a

form has been lately washed, and is consequently damp, or takes a proof, he goes three, four, or five times upward, or downward, for the letter will not take the ink without several beatings.

Of Pulling.

The puller lays on sheets, lays down the frisket and tympans, runs in and out the carriage, takes up the tympans and frisket, takes off the sheet and lays it on the heap. All these operations are in general mingled and lost in the name of pulling; and as in pulling, so in beating; for though the beater brayers out the ink, distributes it on the balls, peruses the heap, &c. yet these operations are also lost in the general name of beating.

To take a sheet off the heap, he places his body almost straight before the near side of the tympan; but he nimbly twists the upper part of his body a little backwards toward the heap, the better to see that he takes off but one sheet, which he loosens from the rest of the heap by drawing the back of the nail of his right thumb nimbly over the bottom part of the heap, (but in the reiteration care should be taken to draw the thumb on the margin, or between the gutters, that the sheets may not smear or set off,) and receiving the near end of the sheet with his left hand fingers and thumb, catches it with his right hand about two inches within the

farther edge of the sheet, near the upper corner, and about the length of his thumb below the near edge of the sheet, and brings it nimbly to the tympan, and at the same time twists his body again before the tympan, only moving his right foot a little from its first station forward under the coffin plank; and as the sheet is coming to the tympan, (suppose it to be white paper,) he nimbly disposes the fingers of his right hand under the farther edge of the sheet near the upper corner, and having the sheet thus in both his hands, lays the farther side and two extreme corners of the sheet down even upon the farther side and extreme farther corner of the tympan sheet; but he is careful that the upper corner of the sheet be first laid even upon the upper corner of the tympan sheet, that he may the sooner disengage his right hand. If, however, by a quick glance of his eye, he perceives the sides of the sheet lie uneven on the tympan sheet, with his left hand at the bottom corner of the sheet, he either draws it backward, or pulls it forward, as the sheet may lie higher or lower on the near corners of the tympan sheet, while his right hand, being disengaged, is removed to the back of the ear of the frisket, and with it gives it a light touch to bring it down upon the tympan, laying at the same moment the tympan upon the form. He then, with his left hand, grasps the rounce, and with a moderate strength nimbly gives it about one turn

round; but to regulate his running in, he first makes a mark, as before observed, on the farther rail of the tympan, to which mark he runs the carriage in, till he brings the mark in a range with the fore edge of the platen; and as it is running in, slips his hand to within an inch or two of the end of the bar, and then gently bears his body back, that his arm, as he pulls the bar toward him, may keep a straight posture; because in a pull it has then the greatest strength. He now puts his right foot upon the footstep, while his left hand holds fast by the rounce, as well to rest on the footstep and rounce, as to enable him to give a stronger pull; which will prove longer or shorter according to the strength put to it. Then disengaging his right hand again from the handle of the bar, he slips it to the bow of the bar, before the handle rebounds quite back to the cheek of the press; for should the bar by its forcible spring knock hard against the cheek of the press, it might not only shake some of its parts out of order, but subject the whole machine to injury; besides, the farther the bar flies back, the more he is retarded in recovering it again. But yet he must let the bar fly so far back, as that the platen may clear the tympan; lest, when he runs in for his second pull, the face of the platen rub upon the tympan, and force the sheet upon the face of the letter, which slurs or doubles it, and destroys the sheet.

Having made the first pull,* and the rounce still in his left hand, he turns it round again, till the carriage runs in so far that the second mark of the rail of the tympan comes in a range with the farther edge of the platen, as before, and then pulls his second pull, as he did his first, and slips his right hand again off the handle of the bar to the bow, guides the bar expeditiously to its catch; and just as he has pulled the second pull, he gives a quick and strong pressure upon the rounce, to turn it back, and run the carriage out again; and as soon as he has given this pressure, he disengages his left hand from the rounce, and claps the fingers of it toward the bottom of the tympan, to assist the right hand in lifting it up, and also to be ready to catch the bottom of the sheet when the frisket rises, and conveys it quickly and gently to the catch; and while the frisket is going up, he slips the thumb of his left hand under the near lower corner of the sheet, which, with the assistance of his two fore fingers, he raises, and by so doing allows the right hand also to grasp it at the top in the same manner, which lifts the sheet carefully and expeditiously off the points, and nimbly twist-

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* It is to be understood, that the directions here given to pressmen are intended for working on a two-pull press.

ing about his body toward the paper bank, carries the sheet over the heap of white paper to the bank, and lays it down upon a waste sheet or wrapper, put there for that purpose; but while it is coming over the white paper heap, though he has the sheet between both his fore fingers and thumbs, yet he holds it so loosely, that it may move between them as on two centers, as his body twists about from the side of the tympan toward the side of the paper bank.

Thus both the pressman's hands at the same time are alternately engaged in different operations; for while his right hand is employed in one action, his left is busy about another; and these exercises are so suddenly varied, that they seem to slide into one another's position, beginning when the former is but half performed.

Having thus pulled a sheet, and laid it down, he turns his body toward the tympan again; and, as he is turning, gives the next sheet on the white paper heap a touch with the back of the nail of his right thumb, as before, to draw it a little over the hither edge of the heap, and lays it on the tympan, &c. as he did the first; and so successively every sheet, till the whole heap of white paper is worked off.

As he comes to a token sheet, he undoubles it, and smooths out the crease with the back of the nails of his right hand, that the face of the letter

may print upon smooth paper. And being printed off, he folds it again, as before, for a token sheet when he works the reiteration.

Having worked off the white paper of twelves, or any form imposed like twelves, he places his right hand under the heap, and his left hand supporting the end near him, turns it over on the horse, with the printed side downward : if octavo, or similar works, he places his left hand under the heap, and also supports the outside near end with his right hand, and turns it over, viz. one end over the other. In performing this, he takes from the worked-off heap so much at once between both his hands as he can well govern, without disordering the evenness of the sides of the heap, viz. a token or more, and lays that on the horse ; then takes another lift, and so successively, till he has turned the whole heap.

Having turned the heap, he proceeds to make register,* which he does by laying one of the sheets just printed on one side, upon the tympan sheet, for a register sheet, and a waste sheet over that to keep it clean from any filth the face of the letter may have imprinted upon it, and pulls these two sheets. Then he runs out the carriage, lifts

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* If worked half-sheetwise, the register must always be made before any of the white paper is worked off.

up the tympan, and takes off the two sheets, laying the waste sheet by; but turns the other side of the register sheet, to try how the impression of the sides of all the pages agrees, and lies upon the impression in the first pulled side. If he finds they agree perfectly well, register is made. But if the impression of the last pulled side of the register sheet stand not even with the impression of the first pulled side, either the whole length of the sheet or part, he observes how much it stands uneven; then he loosens the quoin or quoins on the farther side of the coffin, and removes them backward till they stand the proper distance off the sides of their respective corners; then knocks up one or both the opposite quoins, till he has removed the chase, and in consequence has forced the loosened quoin or quoins close against their corners. Or if the impression of the last pulled side stand within the impression of the first pulled side, he observes how much also, and loosening the hither quoin or quoins, and knocking up the opposite, as before, makes register for the sides of the sheet.

He next observes how the register of the head and foot agree; and if he finds they agree on both sides the short cross, he has good register, supposing the compositor has performed his office, by making all the pages of an equal length.

If the impression of the last pulled sheet lies

without the impression of the first pulled sheet toward the upper or lower end of the tympan, he loosens the quoin at the not registered ends, and knocks up the opposite till he has made register; to try which, he pulls another clean register sheet as before, and if he finds register agree on all sides of the form, the task is performed; if not, he alters it till it does.

But it sometimes happens that the compositor has not made the white exactly equal between all the sides of the crosses; in this case, altering the quoins will not make good register; the pressman, therefore, observes which side has too much or too little white, and unlocking the form, takes out or puts in such a number of leads as he thinks will make good register, which he tries by pulling a sheet, and if it is necessary, alters it again, till he has pulled a sheet with good register.

Having made register, he proceeds to work it off; but he somewhat varies his posture in laying on the sheet; for, as before, when he worked white paper, he caught the sheet by the upper farther corner with his right hand, he now, having taken up the sheet, catches it as near the farther side of the farther point hole as he can, with the ball of his right hand thumb above the sheet, and the ball of his fore finger under the sheet, the readier to lay the point hole over its respective point; which having done, he slips his body a little backward,

and both his hands with it, his right hand toward the near point hole, with the back of the nails of his fingers to draw or stroke it over the point; and the fingers of his left hand, as they come from the farther corner, nimbly slipping along the bottom edge of the sheet, till they come to the hither corner; and then with his fore finger and thumb lays hold of it, in order to guide the point hole on that point also; then pulls that sheet, as before, as he did the white paper, and so successively all the rest of the reiteration. The token sheets, as he meets with them, he does not fold down again, as he did the white paper.

Covering Tympans.

The tympan is covered with parchment or linen; the former is preferable, because the latter is apt to stretch, and the tympan, in a short time becomes slack, and bags, which occasions a slur on the work. The skin of parchment that is used should be of an equal thickness, and about two inches and a half wider, and three inches longer than the tympan.

The pressman provides himself with some stiff paste made of wheat flour, and rubs as much of it on the edges of the skin as will cover the tympan, which is also well pasted. He then lays the skin on the tympan, and draws it regularly, as tight as

possible, on all sides. Those parts of the skin that come on the grooves of the tympan which receive the point screws, is cut and wrapt round the inside edge of the groove, thus admitting a free passage for the screws. After having fastened the skin on the sides of the tympan, he draws it toward the joints which receive the frisket, and with a knife cuts across these joints to let them through the skin; he then puts the frisket pins through the same, and makes that end of the skin fast. He next proceeds to the lower joints, and brings the skin as tight as he can round that part of the tympan. The point screws and duck's bill are then put on, which prevent the skin from starting.

The drawer is covered in the same manner, and in order to prevent its warping, a stick or piece of furniture is placed in the center of it till it is perfectly dry.

The skins are put on either wet or dry; if dry, they should be afterward well wet, which makes them give for the moment; as they dry they contract, and are by this means rendered much tighter than they would be if put on wet.

Wetting Paper.

Paper should be wet in a trough full of clean water. The pressman places the dry heap on the left hand of the trough, and a paper board with its

breadth before him on his right, laying first a wrapper or a waste sheet of paper on the paper board, that it may not soil the first sheet of the heap. Then he takes up the first token, and lays it with the backs of the quires toward his right hand, that he may the readier catch at the back of each quire with that hand; he lays that token across the rest of the heap, that he may the easier know when he comes to the end of it.

He takes a quire by the center of the back in his right hand, and the edge of it in his left, and lays it down upon the waste sheet, opens it, and lays on it a few sheets.

Having laid down his dry laying, he takes the remainder of the quire off the dry heap, with the back of it in his right hand, and the edge of it in his left, as before, and closing his hands a little, that the quire may bend rather downward between his hands, he dips the back of the quire into the left hand side of the trough; and discharging his left hand off the quire, draws it through the water with his right; but as the quire comes out, he quickly catches the edge of it again in his left hand, and brings it to the heap; and by lifting up his left hand, bears the under side of the quire off the dry paper, laid down before, lest the dry sheet should stick to the wet before he has placed the quire in an even position, and so perhaps wrinkle a sheet or two, or else put a dry sheet or two out of their

even position. But this drawing the quire through the water, he performs either quick or slow; if the paper is weak and spongy, he performs it quickly; if strong and stubborn, slowly. To place this quire in an even position, he lays the back of it exactly upon the open crease of the former, and then lets the side of the quire in his left hand fall flat down upon the heap; and discharging his right hand, brings it to the edge of the quire; and with the assistance of his left thumb, still in its first position, opens or divides either a third or half of the whole quire according to the quality and thickness of the paper; and spreading the fingers of his right hand as much as he can through the length of the quire, turns over his opened division of it upon his right hand side of the heap.

Having wet his first token, he doubles down a corner of the upper sheet of it on his right hand, so that the farther corner may lie a little toward the left hand of the crease in the middle of the heap, and that the other corner may hang out on the near side of the heap, about an inch and a half; this sheet is called the token sheet, as being a mark for the pressman, when he is at work, to know how many tokens of that heap are worked off.

Having wet the whole heap, he lays a wrapper or waste sheet of paper upon it, that the paper board may not soil the last sheet of the heap; then, three or four times takes up as much water as he

can in the hollow of his hand, and throws it over the waste sheet, that it may moisten and soak downward into the unwet part of the last division of the quire.

The paper being thus wet, he takes up the whole heap upon the paper board, and sets it by in a part of the room appropriated for that purpose, and lays another board upon it; and upon the middle of the board sets about half a hundred weight, and lets it stand by to press, commonly till next morning; for pressmen generally wet their paper after they have left work at night. All paper would be better if it were separated and turned in the course of the next morning, if it has been wet over night, and pressed again for at least twelve hours.

Knocking up Balls.

Pelts were formerly used for balls, but have, within these few years, been entirely laid aside. The oil-dressed skin has been substituted, and found to answer a much better purpose. They are got ready to knock up with less than half the labour, and last longer in working. They are not subject to putrefaction in hot weather, nor to being destroyed by maggots; consequently, printing offices are free from that nauseous stench to which they were formerly subject from the use of pelts.

The skin must be washed in clean water, and wrung dry; then stretched on a board, and a little ink rubbed on it, to make the lining adhere; some rub oil on it; but this, by finding its way through the pores of the skin, which in this state are very open, may mix with, and injure the ink; the lining (which is generally a skin that has been worn out) is then laid smooth on the skin, and both nailed, with one nail, to the ball stock; after which the different eardings of the wool are laid one upon the other, crosswise, till there is a sufficient quantity for a ball; it is then taken up by the bottom corners, and grasped into a circular form, with which the ball stock is filled; the skin is then brought opposite to the part already nailed, and fastened with another nail; two nails are then driven in opposite to each other, and between the fastenings already made, the skin is put in plaits, and a nail put through each plait.

Balls are well knocked up when the wool is so placed as to form a full even face, that every part of the skin may bear upon the letter; not having too much wool in them, for that will render them soon hard and uneasy for the pressman to work with; nor too little, for that will make the skin, as the wool settles with working, soon flap, and wrap over into wrinkles, so that he cannot so well distribute the ink on his balls.

Rules and Remedies for Pressmen.

Though something has already been said upon the duties of pressmen under the respective heads of *pulling*, *beating*, and *rubbing out ink*, the importance of presswork will justify the insertion of the following rules and remedies for pressmen:

About every three sheets a small quantity of ink should be taken, and during the intervals the beater is not employed in brayering out or taking ink, he should be overlooking the heap in order to detect any want of uniformity in the colour; to observe if any letters, quadrats, or furniture rise; that no letters are drawn out, or battered; that the register be good, and the work free from picks: during this examination, the balls must be distributed as much as possible.

When, through carelessness, too much ink has been taken, it should be removed by laying a piece of clean waste paper on one of the balls, and distributing them till the ink is reduced to the proper quantity.

Care should be taken that the ink does not accumulate on the sides of the balls, which, by careless beating, causes monks. To prevent this, the side of one ball must occasionally be distributed against the face of the other, alternately; for this

purpose it is best to distribute *underhanded*, as it is called.

If letters, quadrats, or furniture, rise up and black the paper, they should be put down with the bodkin, and the quarter locked up tighter.

If any letters are battered, the quarter they are in must be unlocked, and perfect ones put in by the compositor.

When bearers become too thin by long working, they should be replaced by thicker ones.

When the form gets out of register, which will often happen by the starting of the quoins that secure the chase, it must be immediately put in again, as there can scarcely be a greater defect in a book than a want of uniformity in this particular.

If picks, which are produced by bits of paper, skin, or film of ink and grease, or other filth, get into the form, they are removed with the point of a pin or needle; but if the form is much clogged with them, it should be well rubbed over with clean ley, or taken off and washed: in either case, before the pressman goes on again, it should be made perfectly dry by pulling a waste sheet or two, in order to suck up the water deposited in the cavities of the letter.

The puller should habituate himself to glance his eye over every sheet, as he takes it off the tympan; this may be done without retarding his progress. By following this plan, he will be ena-

bled to detect imperfections which may escape the beater.

In order to ensure uniformity in receiving ink from the block, care should be taken to brayer out at the edge of the block small quantities at a time. While this is doing, the balls must rest on the ball-rack, with the right hand on the upper ball-stock handle.

Torn or stained sheets, met with in the course of work, are thrown out and placed under the bank; but the pressman should be particularly careful to have them supplied by others. Creases and wrinkles will frequently happen in the sheets, through careless wetting of the paper; these should be carefully removed, by smoothing them out with the back of the nails of the right hand.

In twelves, and other works where the platen pinches twice upon the center pages, *doubling* frequently happens; the following, among many others, are the causes of, and remedies for, this evil.

It often happens that the face of the platen and the drawer are both dirty, which occasions them to stick together; but they should always be kept perfectly clean.

Slack or rickety tympans will cause doubling; and leaning the body against the carriage in reaching the bar, in presses without guide cramps, and in those also where these cramps do not act with truth.

The nut being loose in the head will also occasion this defect; the short bolts should be screwed up as tight as possible.

If the platen is slack, or otherwise improperly tied up, this defect will always happen.

Doubling will also happen from the following causes, which must be remedied by the joiner and smith :—

When the tenons of the head are so narrow as not to fill the mortices in the cheeks.

The nut and garter so worn as not to admit the spindle to work close in them.

The hose not working easy and steady in the shelves.

The wheel on the spit not well justified, and its having too much play in the ear, which causes an unpleasant check.

The paper being rather too dry, will sometimes cause the impression to double.

Slurring and mackling will frequently happen when the tympans are carelessly and suddenly put on the form: they should always be laid down easy, and the slur screw made use of.

Leaning against the carriage, as before mentioned, will cause a slur.

If the platen rubs against the rail of the tympan, it will inevitably cause a slur and mackle. This can easily be remedied by moving the tympans so as to clear the platen.

The ear of the frisket being so long as to cause it to rub against the cheek, always produces a slur; this can be prevented by filing off a part of it.

Loose tympans will at all times slur the work; great care must, therefore, be observed in drawing them perfectly tight.

Independent of the above causes, slurring and mackling will sometimes happen; it will be better in this case to tie as many cords as possible across the frisket, which will keep the sheet close to the tympan.

Before the pressman leaves his work, he covers his heap. He first turns down a sheet like a token sheet, where he leaves off, then puts a quantity of the worked-off sheets on it, taking care to have the printed side upward, that his companion, if he has any, on coming to work first in the morning, may not be deceived in taking it for the reiteration. Laying the blankets on the heap, after leaving off work, is a bad custom. If the paper is rather dry, it will be better to put wet wrappers on it. The blankets should always be kept as dry as possible, that they may not make the inner tympan damp and slack.

The pressman's next care should be to look after his balls. When he leaves work at night, he should rub the ink off his balls with ley, and cap them with a moist blanket. If the blanket is too

wet, the balls will become water soaked, and unfit for use, without much trouble and loss of time next morning.

The pressman next observes whether his form is clean; if so, he puts a sheet of waste paper between the tympan and frisket, and lays them down on the form: if it is dirty, it must be rubbed over with clean ley. On his return to work in the morning, he takes care to wet the tympan, but not for very light work. If there should happen to be any pages in the form particularly open, those parts of the tympan where they fall must not be made wet.

Printing Red or other Colours with Black.

When red and black are to be printed on the same sheet, the form is made ready in the usual way, and a line traced all round the outside of the chace on the stone with chalk, or any thing that will accurately show the exact situation in which the form must be placed after it has been taken off the press. The pressman then pulls a sheet, in order to get those words or lines marked, which are to be worked red; while this is doing, he washes the form thoroughly, as the least dirt remaining on it will destroy the beauty of the red. The form is then laid with its face downwards, on a letter board covered with a press blanket. Those words marked to be red are then forced down,

(which the soft and spongy nature of the blanket readily admits of,) and nonpareil reglets nicely fitted into the vacancies, which raise the red lines and words all of an equal distance from the other matter. A sheet of paper is then then pasted on the form, which keeps the nonpareil underlays in their proper places. The form is again laid on the press, observing the utmost care in placing it, agreeably to the marks before made, on the stone. It must then be made perfectly fast to the corner irons, as it is highly important that it remain firm and immoveable during its stay on the press. The frisket (which is covered with a wrapper) is then put on, the form beat over with the red balls, and an impression taken from it. The red words are then cut out with a sharp-pointed penknife, with so much nicety as not to admit the smallest soil on the paper from the other matter.

The red being finished, and the form washed, the compositor unlocks it, (which is best done on the imposing stone, as the pressman can easily lay it again by the marks made on the press,) and draws out the red lines, and fills up the space with quadrats. When this is done, the pressman cuts out the frisket for the black.

An extra pair of points are used to prevent the black from falling on the red, which is termed *riding*.

When a very extensive number is to be printed,

two forms are generally used, one for the red, and another for the black.

There is another method of placing the underlays, which is adopted for broadsides, &c. with large letter, and with perhaps only two or three lines of red in them. The red lines are taken out on the press stone, and the underlays put in with a bodkin, upon which these lines are placed, and the frisket cut out as before mentioned.

Balls having been once used for black, cannot be employed for any other colour; and as printing with red, &c. is but rarely performed, the balls for that purpose should be made of old parchment, well soaked, which may be done in a few minutes. These balls are made without stocks, and of a small size. For almanacks, broadsides, &c. where a large number is printed, a new pair of balls are made in the usual way.

Mixing and Grinding Colours with Varnish.

Varnish is the common menstruum for all colours used in printing. Red is the colour generally used with black. Vermilion, with a small portion of lake, produces a beautiful red, which should be well ground with a muller on a marble slab, till it is perfectly smooth. If it is in the smallest degree gritty, it clogs the form, and consequently produces a thick and imperfect impression; no pains should therefore be spared to

render it perfectly smooth ; it may then be made to work as clear and free from picks as black. A cheaper red, but not so brilliant, may be prepared with orange mineral, rose pink, and red lead.

The Prussian blue makes also an excellent colour, and will require a good deal of time and labour to render it perfectly smooth. It is also ground with the best varnish, but made considerably thicker by allowing a greater portion of colour with the same quantity of varnish, than the red ; it will then work clear and free from picks. As this colour dries rather rapidly, the balls will require to be frequently scraped.

Other colours may be made, viz. lake and russet, which produce a deep red ; verditure and indigo, for blues ; orpiment, pink, yellow ochre, for yellows ; verdigris and green verditure, for green, &c. All these colours should be ground with soft varnish, being in themselves dryers, or they will so choke up the form as to require it to be frequently washed, as well as dry and harden the balls, and soon render them useless.

The best colours for printing are those of the lightest body and brightest colour.

Hot ley, made of pearl ash, should be used for washing the forms.

TECHNICAL TERMS.

Ball-knife—A blunt knife, used to scrape the balls.

Ball-nails—Tacks used in knocking up balls.

Bank—A stage about four feet high, placed near the press.

Beard of a letter—The outer angle of the square shoulder of the shank, which reaches almost to the face of the letter, and commonly scraped off by founders.

Bearer—A piece of reglet to bear the impression off a blank page.

Bite—Is when the entire impression of the page is prevented by the frisket not being sufficiently cut out.

Blankets—Woolen cloth, or white baize, to lay between the tympans.

Body—The shank of the letter.

Bottle-arsed—When letter is wider at the bottom than the top.

Bottom-line—The last line of the page.

Brayer—Is a round wooden rubber, almost of the form of a ball-stock, but flat at the bottom, and not above three inches diameter; it is used in the ink-block to bray or rub ink.

Break—A piece of a line.

Broadside—A form of one full page, printed on one side of a whole sheet of paper.

Broken Letter—By broken letter is not meant the breaking of the shanks of any of the letters, but the breaking the orderly succession of the letters in a line, page, or form, &c. and mingling the letters together, which mingled letters are called pi. It is more properly termed *broken matter*.

Bur—When the founder has neglected to take off the roughness of the letter in dressing.

Cassé Paper—Broken paper.

Choke—If a form is not washed in due time, the ink will get into the hollows of the face of the letter.

Clean Proof—When a proof has but few faults in it, it is called a clean proof.

Close Matter—Matter with few breaks or whites.

Correct—When the compositor mends the faults marked in the proof, he is said to correct.

Corrections—The letters marked in the proof are called corrections.

Devil—The errand boy of a printing office.

Double—Among pressmen, a sheet that is twice pulled, and lifted ever so little off the form after it was first pulled, does most commonly (through the play of the joints of the tympan) take a double impression; this sheet is said to double. Doubling also happens by the loose hanging of the platen,

and by too much play the tenons of the head may have in the mortices of the cheeks, and indeed may be occasioned by the decay of several parts of the press.

Doublet—Among compositors, a repetition of words.

Dressing a chase, or *form*—The fitting the pages and chase with furniture and quoins.

Drive out—When a compositor spaces wide.

Empty press—A press that is unemployed. In general, every printing office has one for a proof press.

Even page—The second, fourth, sixth, or any other even numbered page.

Fat face or *fat letter*—Is a broad stemmed letter.

Fat work—Is when there are many white lines or break lines in a work.

Fat form—When the pressman has a single pull.

First form—The form the white paper is printed on, if sheetwise, which generally has the first page of the sheet in it.

Fly—The person that takes off the sheets from the press in cases of expedition.

Follow—That is, see if it follows; is a term used as well by the proof reader as the compositor and pressman. It is used by the proof reader and compositor, when they examine how the beginning matter of a succeeding page agrees with the end-

ing matter of the preceding page; and if the folios of those pages properly and numerically follow and succeed one another, lest the pages should be transposed. But the pressman only examines whether the folio of the second page falls on the back of the first.

Foot of a page—The bottom or end of a page.

Form—The pages when fitted into a chase.

Foul proof—When a proof has many faults marked in it.

Fount—The whole number of letters that are cast of the same body and face.

Frier—When the balls do not take, the untaking part of the balls that touches the form will be left white; or if the pressman skip over any part of the form, and touch it not with the balls, though they do take, yet in both these cases the white places are called friers.

Full form, or *page*—A form or page with few or no breaks or white lines.

Full press—When two men work at the press.

Fudge—To contrive without necessary materials, or do work in a bungling manner.

Get-in—Matter is *got in* in a line, page, sheet, or book, if letter be thinner cast than the printed copy the compositor sets from; or matter is got in if the compositor sets closer.

Good colour—Sheets printed neither too black nor too white.

Good work—Is so called in a twofold sense: the master-printer calls it good work when the compositors and pressmen have done their duty; and the workmen call it good work if it be light, easy work, and they have a good price for it.

Half press—When but one man works at the press.

Head page—The beginning of a subject.

Heap—So many reams or quires as are set out for the pressman to wet.

Heap holds out—When it has its full number of sheets.

Holds out, or does not hold out—These terms are applicable to the quires of white paper, to wrought-off heaps, to gathered books, and sorts of letter, &c. If quires of paper have twenty-four sheets each in them, they say the paper holds out four and twenties. Of wrought-off heaps, the heap that comes off first in gathering is said not to hold out. Of gathered books, if the intended number or perfect books are gathered, they say the impression holds out; but if the intended number of perfect books cannot be gathered off the heap, they say the impression does not hold out. And so for sorts of letter.

Horse—The stage on which the pressmen set the heaps of paper on their banks.

Horse—If any journeyman sets down in his bill

on Saturday night more work than he has done, that surplus is called horse.

Imperfection of letters—When the founder has not cast a proportionable number of each sort, it is making the rest of the fount imperfect.

Insertion—If the compositor has left out words or lines, the proof reader inserts it, and makes this mark ∧ where it is left out.

Keep in—Is a caution either given to, or resolved on, by the compositor, when there may be doubt of driving out his matter beyond his counting off, wherefore he sets close to keep in.

Keep out—The practice opposite to the preceding.

Kern of a letter—That part which hangs over the body or shank.

Lean face—A letter whose stems and strokes have not their full width.

Letter hangs—If the compositor is careless in emptying his composing stick, so as to set the letter loosely down in the galley, and they stand not perfectly square and upright, the letter hangs; or if after overrunning on the correcting stone, he has not set his letter in a square position again, before he locks up, the letter thus out of square is said to hang, and is difficult to remedy after having been locked up in the chase.

Long pull—Is when the bar of the press re-

quires to be brought close to the cheek to make a good impression.

Low case—When the compositor has composed most all the letters out of his case.

Mackle—When part of the impression on a page appears double, owing to the platen's dragging on the frisket.

Matter—The series of the disclosure of the compositor's copy; also, the letter, when it is composed, is called matter.

Measure—The width of a page.

Monk—When the pressman has not distributed his balls, and the ink lies in blotches, it is called a monk.

Naked form—When the furniture is taken from about all the sides of the pages.

Odd page—The first, third, and all uneven numbered pages.

Off—Pressmen are said to be off, when they have worked off the designed number from a form.

Out—A compositor is said to be out when he has composed all his copy. Also, when a word is not found in the proof which is in the copy, it is called an *out*.

Out of register—When pages, and the lines throughout the pages, do not exactly back each other.

Pale colour—When the sheets are worked off with too little ink.

Pelts—Untanned sheep skins used for balls.

Picks—When any dirt gets into the hollows of the letter, which chokes up the face of it, and occasions a spot.

Point holes—Holes made by the points in a worked off sheet of paper.

Press goes—When the pressmen are at work.

Pi—When a page is broken, and the letters confused.

Quarters—Octavos and twelves forms are said to be imposed in quarters, not from their equal divisions, but because they are imposed and locked up in four parts.

Register sheet—Sheet or sheets printed to make register with.

Reiteration—The second form, or the form printed on the back side of the white paper.

Reglet—A thin sort of furniture not grooved, and of an equal thickness all its length.

Rise—A form is said to rise, when in rearing it off the correcting stone, no letter or furniture, &c. drops out.

Runs on sorts—When some letters are more frequently used than in ordinary works.

Set off—Sheets that are newly worked off at the press often set off, and more particularly so when beaten with soft ink.

Shank—The square metal the face of a letter stands on.

Signature—Any figure or letter of the alphabet, used at the bottom of the first page of a sheet, as a direction for the binders to place the sheets in a volume.

Slur—When the impression of the sheet appears smeared.

Sorts—The letters that lie in every box of the case, are separately called sorts in printers' and founders' language.

Squabble—A page or form is squabbled, when the letter of one or more lines are got into any of the adjacent lines; or when the letters or lines are twisted about out of their square position.

Stem—The name given to the strait flat strokes of a straight letter.

Superior letters—These are often set to marginal notes, references, or authorities; they are letters of a small face, justified by the founder in the mould near the top of the line.

Hair space—Ought, by a strict, orderly, and methodical measure, to be made of the thickness of the seventh part of the body; though founders make them indifferently thicker or thinner.

Turn for sorts—It often happens when matter runs upon sorts, especially in capitals or some other sorts seldom used, that the compositor wants that sort the matter runs on; wherefore he is loth to distribute letter for that sort, as perhaps his case is otherwise full. Then, instead of that letter or