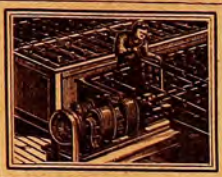


THE ART PRESERVATIVE OF ARTS

The Inland Printer

A Technical Monthly Journal devoted to the Interest of Printing and Affiliated Trades.

NOVEMBER, 1884

THE INLAND PRINTER CO., PUBLISHERS,

No. 2 TAYLOR BUILDING, MONROE STREET,

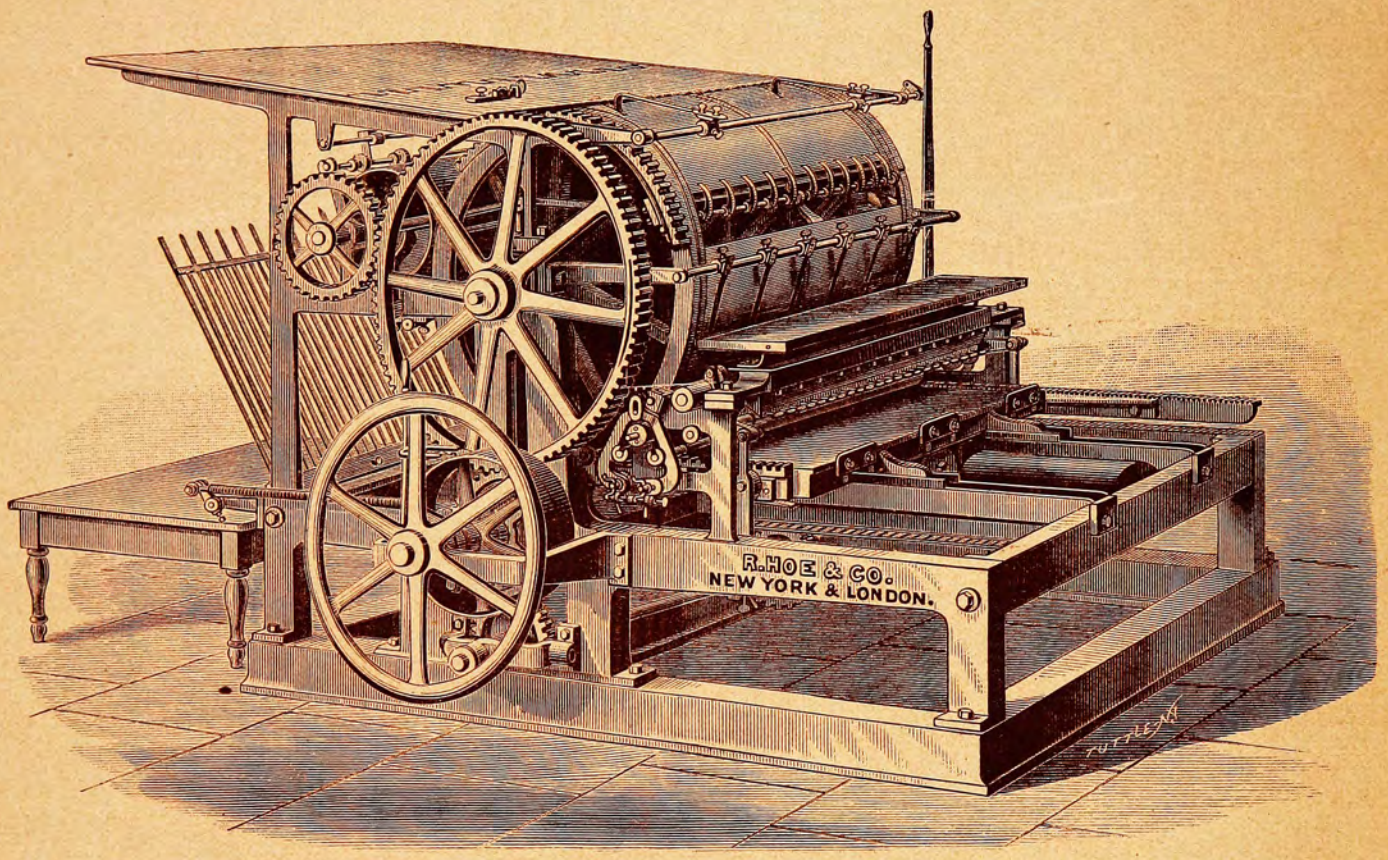
CHICAGO.

Vol. II.

No. 2.

NEW PATENTED

JOB AND NEWS CYLINDER PRESS.



Manufactured by R. Hoe & Co., at their Works, 504 Grand St., New York.

199 & 201 VAN BUREN ST., CHICAGO. TUDOR ST., LONDON, E.C., ENGLAND.

THERE has always been a demand for a first-class Single Large or "Drum-Cylinder" Press for the ordinary jobwork in city and country offices, which shall also print, at a rapid rate of speed, newspapers of moderate circulation.

We have made heretofore what we called our Hand-Cylinder Machine; but the labor of driving without steam power has proved too great in most cases. This new Press is intended not only to take the place of such machines, but, as before stated, to turn off the best class of job and stationery work.

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All the gearing throughout is cut from the solid. The workmanship and material used in it are all of the highest quality. We guarantee this Press in all respects.

Our facilities are such that in making them as we do, a number at a time, we are able to put the price low.

SIZES AND PRICES.

	Maximum Speed per hour.	Bed Inside Bearers.	Matter covered by two Rollers.	Price, net.
No. 1 size	2500	17 × 21 in.	13 × 17	$1,000
" 4 "	1750	26 × 35 in.	21 × 30	1,600
" 5 "	1500	29 × 42 in.	24 × 37	1,700
" 6½ "	1300	33½ × 49 in.	28½ × 44	2,000

									Weight boxed, Complete.	Horse Power.
No. 1 size	7 ft. 2 in.	long,	5 ft. 4 in.	wide,	4 ft. 4½	in.	high.	About	1¾ tons.	¾
" 4 "	10 ft. 6 in.	"	7 ft. 1 in.	"	5 ft. 5	in.	"	"	3¾ tons.	1½
" 5 "	11 ft. 1 in.	"	6 ft. 7 in.	"	5 ft. 8	in.	"	"	4 tons.	2
" 6½ "	12 ft. 6 in.	"	7 ft. 6 in.	"	6 ft. 2	in.	"	"	4½ tons.	2½

The price includes boxing and shipping, or delivery, set up, in New York; also roller moulds and two sets of stocks.

THE INLAND PRINTER

A TECHNICAL JOURNAL, DEVOTED TO THE ART OF PRINTING.

VOL. II.—NO. 2. CHICAGO, NOVEMBER, 1884. TERMS: $1.50 per year in advance. Single copies, 15 cents.

Written for THE INLAND PRINTER.

THE PRINTING-PRESS.

(*Continued.*)

BY STEPHEN MC NAMARA.

THE drawing presented in our last number, for which we are indebted to Colonel Richard M. Hoe, affords an opportunity to observe from whence Adams obtained many ideas. By reference to the Tufts it will be seen the main features are almost identical; one hampered with ingenious yet intricate devices at every point, the other characterized by greater skill, strict adherence to mechanical rules, and simplicity within the comprehension of all.

While the resemblance between the two is striking, the operation materially differs, and the automatic action of handling the sheet by nippers, lifting by the bellows, and depositing by the fly were original, unique and effective.

The platen, placed on top of the frame, is held in position by two powerful bars passing down through the winter-beam below; the bed has a vertical throw of about four inches given by a toggle-joint operated by a crank, rod, and peculiar shaped cam called the "goose neck," a slot in the upper portion of which permits the rod to pass when tripped by the foot without being carried along to the limit of the stroke, thus suspending the impression and supply of ink. Access to the bed is had by withdrawing the platen, and thus the whole surface of the form is exposed.

The carriage derives motion from a separate crank-pin and rod, coupled to a heavy rock shaft provided with links termed "ducks-bill" cams. Provision being made for perfect adjustment of the connections, the throw of the carriage is at all times under control and forms an especial feature of this good old press.

The feed board hinged to the top of a pair of standards while the tape frame or delivery hinged below, and thus swinging from a different center, by means of a small hook, acts as a lock to hold it in position when raised. Points of delicate construction and instantaneous action materially assisted the register, for which this press was always noted, and while this feature is omitted in modern machinery, all efforts, for a time, made to imitate or devise a substitute for them, in response to the demands for what was thought to be necessary to secure perfect register, proved abortive.

The ink is taken from the fountain by a ductor, for which one of the form rollers is used; on this rides a vibrator which distributes the *line* of ink while it is being spread upon the large drum. It is there distributed by a most ingenious device termed the "traverse motion." This consists of a small frame holding two short rollers against the revolving surface; the position of the rollers being controlled by a loose fitting inverted pendulum, which meeting stops at either end, reverses the angle and thus they travel back and forth in an endless journey.

If there is anything dear to a printer's heart it is uniformity of color, and we may here remark, not inappropriately, that of all the various devices since adopted to accomplish this desideratum, it seems strange this plan was never copied. A modification applied to the cylinder press, for the production of standard book or newspaper work, could not have been otherwise than beneficial. And while effective on the Adams where the rollers were charged at once with sufficient color to cover the form, how much more so would it prove on the cylinder where the rollers could be supplied as the form was being covered.

The Irishman's locomotive has been described as "two handles and a wheel," and to "barrow" the simile the same might answer for the nipper motion of the Adams press. A telescopic frame with three fingers—both were "handy implements." When Wm. O. Blake put the first form on this machine a rock shaft, used to close the fingers, occasioned some trouble, whereupon the flat bar with lateral motion was substituted and the motion was perfect.

At this time wet paper being used exclusively, some doubts existed in the mind of Adams. He feared the current of air from the bellows would tend to dry it too rapidly for printing the second side, but in practice this had no more effect than the action of the fly.

Until the advent of this press all work was more or less experimental; the difficulties encountered caused vexation and delay, all of which were at once removed and press work became a system, three tokens per hour being the average product.

For book work this press was, so long as wet paper was used, peculiarly adapted, and being easy on type and plates became popular, and when four and six roller presses were built all work was gauged by the excellence of their productions. Job presses of many sizes were constructed, and as they delivered the sheet at the side of the press in view of the feeder, answered every requirement.

That this press was used for other than book work can be accounted for only on the ground that the cylinder was not understood, and hence printers were prejudiced. To print a newspaper the head rules were cut to admit a string down beside the column rule, and illustrated heads which could not be thus defaced were thrown out of position that a wire could be drawn across the frisket to sustain the sheet. Posters were dependent upon the ingenuity of the pressman, while cards of a single line were, with every other class of work, treated with surprising skill.

In looking back to review the path over which we have thus far traveled, let us observe that here, at the end of the platen press journey, we can proudly trace the names of men who should never be forgotten, Stanhope, Clymer and Rust, each of whom contributed their mite towards perfecting the hand press, and Treadwell, Tufts and Adams, who finished the good work they commenced. Nor should we neglect to note the many pressmen who—like private soldiers are unknown, yet by whose prowess all victories are won—marched in the grand procession and contributed their efforts toward the final triumph; who, whether in charge of a press the counterpart of the old town pump, or the collective product of mechanical study, produced work all the more surprising when the limited facilities are known.

(To be continued.)

Written for THE INLAND PRINTER.

NOTES ON WOOD ENGRAVING.

BY S. W. FALLIS.

II.

AS previously remarked, wood engraving is the acme of pictorial art, and with its present rapid advancement toward perfection, it seems destined to remain at the head of the long and rapidly multiplying list of would-be competitors for pictorial honors in real composition or imaginary illustrations, and technical representations. A brief review of the rise and progress of the art for the last few centuries, cannot fail to interest and instruct the careful and appreciative reader.

It is claimed by some authors that the art of cutting figures in relief and printing impressions from them on paper was known and practiced by the Chinese as early as the reign of the renowned Emperor Wu Wang (1120 B.C.) There is no doubt that wood stamps were used by the Romans and ancient Egyptians for stamping bricks and other articles of clay, and that wood and metal stamps of monograms, etc., were used in various European countries at a very early period, for attesting deeds and other documents, when writing was an extraordinary accomplishment. We find, however, no evidence of wood engraving as we now understand it, until the beginning of the fifteenth century. It appears to have been used in Germany at that time for printing figures of saints, and playing cards.

The earliest print from a wood engraving, of which any positive information can be obtained, is in the collection of Earl Spencer. It was discovered in one of the most ancient convents of Germany, the Chartreuse of Buxheim, near Meiningen, in Bavaria, pasted within the cover of a Latin MS. It represents St. Christopher carrying the infant Saviour across the sea, and bears date of 1423.

Fig. 1 is a reduced fac-simile of this ancient and curious engraving.

Fig. 1.

It is a work of real merit for its day, notwithstanding its apparent crudeness when viewed by the critic of the present time. It is drawn with considerable skill and vigor, and the engraving is well and carefully done, considering the facilities at command.

The inscription at the bottom has been translated thus:

"In whichever day thou seest the likeness of St. Christopher, in that same day thou wilt, at least from death, no evil blow incur, 1423."

There is some evidence of the existence and practice of wood engraving in the latter part of the fourteenth century. Caxton's "Game and Playe of the Chesse," without place of publication or date, is generally supposed to have been printed in 1476. This edition, which was the second, was embellished with wood cuts. The first

edition of the same work, without cuts, was printed in 1474.

Other books, principally of a religious character, and illustrated with wood cuts, were published in the early part of the fifteenth century, but not wishing to tax the patience of our readers, with a prosy technical history of the art, we will go back to the Chinese. In the absence of any stronger proof than the assertions made by authors, who rely more on their antiquarian surmises than on positive and existing proofs, we will allow, as a historical fact, that they were really the inventors of the art of wood engraving.

They made no very marked advancement in the practice of the art as the centuries rolled along, nor indeed have they exhibited any great artistic skill in its manipulation to the present day. Their work always has been and is, as a rule, of a very crude and grotesque nature, and they are today centuries behind the capabilities of the art as evidenced by engravers of other and more progressive nations. As an illustration of this fact we herewith give No. 2, a reduced fac-simile of a good average Chinese wood engraving.

No. 2.

This engraving was executed in Shanghai, China, for the writer in the year 1882, and is one-fourth the size of the original. It is engraved on the side, or as usually described, "grain side" of the wood, and for the manner in which it is done, is a very creditable piece of mechanism indeed, for the "grain side" of the wood is not susceptible of any very fine lines and graduations; but while this is circumstantially creditable to the Chinese, it does not in the least excuse them for their lack of enterprise in keeping pace with the advancement of the art, and employing wood and tools with more capability and adaptability. The writer has in his possession still another Chinese engraving on wood, a set of Chinese engraving tools, and numerous proof specimens of Chinese engravings, all of which clearly show their lack of advancement in the art. By comparing the fourteenth century cut with the nineteenth century cut, of the Chinese, we leave the reader to judge for himself which is most deserving of praise. The Chinese figure illustrations do not attempt character or portraiture, but to each class of individuals is ascribed a certain conventional style and expression of face and figure, lacking variety. As nature demands to be faithfully illustrated, their attempts at engraving bear a crude similitude, contrary to the practice of other nations with keener susceptibilities, progressive ideas and artistic ability, who illustrate portraiture and nature with a reasonable degree of pleasing technicality.

(*To be continued.*)

Written for THE INLAND PRINTER.

ELECTROTYPING.

BY B. B.

(*Continued.*)

HITHERTO no form of single cell arrangement was adapted to the uses of the electrotyper, except the Daniell's, which employed a copper solution separated from the zinc element by means of a porous cell filled with diluted sulphuric acid. The medal to be copied hung in the copper solution connected with the metallic copper-containing vessel, or directly with the zinc *anode;* both copper cell and medal constituting the *cathodes* or negative elements, and receiving proportionately, the deposited copper. Dispensing with the copper jar, and substituting a glass or earthen one, the *black-leaded* mould, connected with the zinc *anode,* became the *cathode,* or negative element. In other words, the zinc plate and the black-leaded mould, become the electro-motive elements, in a modified form of a Daniell's battery.

The same arrangement could not be effected with a Smee, Grove or any other form of battery not employing sulphate of copper. But the introduction of a *separate jar,* containing simply a solution of copper, in which to place the mould, made the use of *any* style of battery available.

Some fifteen or eighteen years ago a process was discovered to render the face of the moulds more conductive, after being black-leaded. A difficulty existed in moulds of any considerable magnitude, in "coating" the *entire surface evenly* with a uniform thickness of copper, the deposition taking place first where the negative electrode connected with the mould, and then gradually spreading over the entire surface. By the time the more remote parts of the surface were covered by the copper deposit, that portion near the conducting wire was unnecessarily thick. Various devices were employed to obviate this defect, such as using bronzes mixed with the plumbago, and extra conducting wires connecting with different parts of the surface. This defect was an obstacle in the way of the rapid production of work. This process of which we speak,

consists of the use of *iron filings*, and a portion of the copper solution.

After the mould has been properly black-leaded, alcohol, slightly diluted with water, is poured over it and drained, then laid down flat and immersed to the depth of an eighth of an inch in a solution of the copper. *Iron filings* are then evenly sifted over the surface, and brushed over lightly with a camel-hair brush. Removing from the bath and rinsing with water, a fine metallic film of copper evenly covers the entire mould, which adheres sufficiently to be retained in the depositing battery. This discovery is of great importance, as it facilitates the production of plates several hours, the deposition taking place almost simultaneously over the whole surface of the mould.

Until the introduction of the *dynamo-electric machines*, Smee's combination was used pretty generally by large electrotyping establishments, both in Europe and this country. Very many electrotypers now employ the Smee battery in connection with their dynamo machines, using the Smee through the night when steam power has ceased.

The Smee battery is composed of plates of platinized silver and amalgamated zinc, immersed in diluted sulphuric acid, very simple in construction and continuous in action. The wonderful progress made within the last seven or eight years in developing the *dynamo machine* has had a tendency to retire the *galvanic* batteries as most too slow coaches in our era of progress, and in all large establishments in this country the dynamo is employed.

Really the *dynamo machine* is not altogether a strictly modern production. A magneto-electrical machine was made in England as far back as 1842, only six years after Professor Daniell made known his battery. A patent was taken out in 1842, by J. S. Woolwich, for the use of a *magneto-electrical* machine, using a commutator to reduce the alternating currents to a constant and continuous stream. In his patent he claimed it as available for the deposition of metals, and it is a little remarkable that the principles of this machine should so long have remained in abeyance.

Not choosing to go over all the intermediate steps in the progress of the art of electrotypy up to the present, we will endeavor, in a plain manner, to describe the methods as at present practiced.

A well arranged electrotype foundry of today requires a considera bleoutlay. In visiting one a person is somewhat bewildered as just where to commence to make a satisfactory and intelligent description.

Perhaps it is as well to follow up the "cuts" and type forms delivered by the printers, and watch the disposition of them in the working-rooms. First, we notice all the forms and cuts go to the "lock-up," where they are put in chases ready for the "moulder." He prepares flat, shallow pans, of a quarter of an inch in depth, of the proper dimensions to take in the "form," pouring in melted beeswax from a pot continually kept warm by steam, the beeswax containing a slight percentage of black lead and Venice turpentine. As soon as his "pan" becomes cool, he brushes the smooth, black surface over with a camel-hair brush until the surface is evenly black-leaded. At a certain temperature he transfers his waxen pan to the "moulding press." Taking the type matter or cuts, he brushes the face of them over with black lead, and then, by means of his powerful press, forces the face of the form into the wax. After remaining in this position for a few moments, the form is withdrawn. This mould or "matrix" of the form then goes to the "builders" bench. Here it is trimmed of superfluous wax, and the intended low portions in the electrotype are "built up" by means of wax, dexterously manipulated by the "builders."

The mould next goes to the black-lead machine, where, by means of a long camel-hair brush, in a closed chamber, the mould becomes thoroughly leaded over. After removing it from the rapidly vibrating machine, propelled by steam, it is submitted to a current of air, removing all superfluous lead from the face of the mould. Hooks composed of bright copper wire are imbedded in the waxen face of the mould, not interfering with the impressions of the form.

(*To be continued.*)

Written for THE INLAND PRINTER.

STENOTYPOGRAPHY AND ITS ORIGIN.

BY GUSTAV BOEHM.

IT is the custom, in this country, to print any works containing shorthand specimens, or the like, from relief-line plates, from stone or from photo-electro plates. The processes thus indicated seem to give best satisfaction under the present circumstances. It may not be generally known that there are yet other means to produce such prints, and although the system of stenotype printing is of European origin, and thus far only adapted to Gabelsberger's stenography, it may be well worth while to say a few words about it in this journal.

The reputation of the Austrian imperial government printing works, at Vienna, is of a world-wide character. Many of the best inventions, the most important improvements in the art, have their origin traced back to the work rooms of this establishment. Large sums of money are spent annually in experimenting and improving, and no other office in the world has command of such a large variety of occidental and oriental type-characters, especially designed, cut and cast for a special purpose, as this special institution. It was under the efficient management of the late Baron Auer that the Austrian government printing office achieved the most extensive successes in its experimental department. It was this man of restless nature and progressive inclination who invented the so-called natural autotype process, producing electro-relief plates direct from the objects, a cheap and efficient manner for book illustrations, thus making the first step to the popularization of science, by furnishing the means of highly true and accurate reproductions of the original objects at a comparative small outlay. Scientific works, formerly only obtainable by the wealthy, were then placed within the reach of all, and that with better illustrations than before at a high price. Among other pet ideas of this important man was the one of designing, cutting and casting shorthand type. Although much time, brains and money were spent on the execution of this project, Auer did not succeed, and after several unsuccessful attempts to introduce his stenotypes, he resolved to drop the matter, and to

return to the good old way of lithographing, *i. e.* autographing shorthand copy, and to print it from stone. But the foundation was laid, and it belonged to another era, and another man, to build on it. This era was the last decennium, and this man was Karl Faulmann, formerly a compositor, then a parliamentary reporter, the publisher of many valuable works on shorthand, teacher of the art at the University of Vienna, and the author of a unique "*History of the Alphabet*," and a "*History of the Art Preservative*." Faulmann's system worked admirably, and after selling his type to the Vienna court printing establishment, we find at this date—to my knowledge—this institution the sole possessor in the world of a system of movable stenographic type, practically in use. While Auer divided each of the stenographic characters in piece fractions, with which the compositor was expected to work and compose the single characters, Faulmann designed his letters and the most prevalent contractions in one piece, ready for the compositor and the stick. Auer's system proved to be tedious, unsafe, almost inadjustable and very expensive. Faulmann's had to encounter, at first, many vexatious obstacles, but after they were cleared by the energy and perseverance of the inventor, and the cordial assistance of the imperial manager, success crowned his efforts. The advantages of stenotype printing over the former manner are: first, a reduction of the cost of printing, especially where the publication of limited editions is involved; second, the composition of the matter being of a stereotype character, tends to produce a uniform, systematic picture, which is of great value, especially in works with a didactic purpose, a result which can never be produced with the aid of the free hand of the writer or lithographer, no matter how great his experience and skill may be. As mentioned above, the obstacles obstructing the success of the invention at first were manifold and of no easy character. To form an idea of the energy needed to attain success, I will but mention a few. The greatest of all, and the one which almost reduced the value of the invention to equal naught, was the want of men who could handle the stenotypes. Faulmann either had to teach the art of Gabelsberger to a number of compositors, or had to induce a number of stenographers to stand at the case. Both methods seemed to involve great loss of time and pecuniary sacrifice. Still the bold man stood firm, and professed to do what almost every one called an impossibility. In order to handle the stenotypes, it was indispensable to have a complete knowledge of the system, and also to be thoroughly acquainted with the stenotypes, and to attain the former it required years of experience.

I need not say any more at present. The use of the Faulmann types at the Vienna office is (long since) a fact. Many publications have been set up with these types, and Faulmann's *Kammer Stenograph*, a monthly for parliamentary reporters, is set up with and printed from them. Thus the success of stenotypography may well be recorded as an established fact.

To conclude, I desire to picture to the reader some of the technical difficulties of stenographic type composition. I possess a diagram of Faulmann's case. This is a lower case showing 282 compartments; 259 of these sections are filled with shorthand characters, 6 with quads and spaces, 9 with Roman figures, and 8 are blanks. The Gabelsberger alphabet consists of 26 letters and a few contractions. Calculating thus we find each letter represented about ten times in the case. As there is in most cases scarcely a perceptible difference in the position of the character on the body of the type, a difference which is of great importance in the connection of the characters, but of so minute a matter when a single, separate letter sign comes in consideration, that it is hardly discovered by the unskilled eye, the reader may form an idea as to the practice needed for a successful manipulation of the type, and of the indescribable trouble and care the final practical introduction of Faulmann's invention caused its creator.

Written for THE INLAND PRINTER.

MECHANICAL PROCESSES OF ENGRAVING.

BY HERMAN REINBOLDT.

AT present a good many mechanical processes are used for engraving, and new ones are springing up like mushrooms. In America the process of photo-engraving has come widely into use, where work is done equal to the best woodcuts, at lower prices and in considerably less time. In Europe this process is very little used, as it is not considered practical, and almost all work of this kind is done by etching, in combination with photography, which has been brought to the highest degree of perfection in Germany, and has given unequaled results.

There are quite a number of methods employed in photo-engraving, though they are all based on the same principle: the properties of gelatine in absorbing water and swelling up. I will give in this article a description of the two methods of photo-engraving, which give the best results; the one used to make stereotype, the other electrotype plates. There are many reasons why the stereotyping process is preferable to the other, though it has many disadvantages, as its working is more uncertain and accidents often spoil success in the last moment. But while it is a fact that with the stereotyping process a plate can be turned out in three hours, when everything works satisfactorily, yet the electrotyping is safer in all cases.

All photo-engraving is done from drawings or prints, which have to be photographed. In order to get a better effect, the drawings are mostly made larger and then reduced to the size desired to be engraved. The success depends altogether on the negative, therefore an experienced photographer and good instruments are necessary.

Of the various ways to intensify negatives for photo-engraving I have found the following the best:

When the negative is washed off, put it into a solution of 4 oz. sulphide of copper and 2 oz. bromide of potassium, in 12 oz. of water, until the film gets quite white. Then wash it and put on a solution of nitrate of silver, and wash it off again. Then put it again in the first solution and continue with silver until the negative is quite dense. Negatives for photo-engraving should not be varnished, but covered with gum arabic.

The negatives are used for printing on gelatine films, which can be prepared in different ways, the result being the same. In a dark room or a box, shelves may be fixed

to lay the glass plates on, which should be very heavy. In order to get a level surface, plate glass should be used, which is put on screws and leveled.

Prepare the following solution: 2 oz. Nelson's gelatine No. 2, are soaked in 10 oz. water, and to this ¼ oz. pure glycerine is added. As soon as the gelatine has taken up the water, melt it over a stove and make it hot, but do not boil it. Then add 2 drams of bichromate of ammonia or 3½ drams bichromate of potassium to the solution, and a few drops of carbolic acid. When the ingredients are dissolved, filter through cotton, and cover the glass plates with the solution. Put as much gelatine on each plate as it will hold, then close the room or box, to exclude dust. To have the plates dry quickly, the room may be heated, but the heat should not be very strong, as the plates will have a rough surface in this case, and therefore could not be used. If heat is applied the plates becomes dry in six or eight hours. When everything is rightly done the plates will be of light yellow color and perfectly smooth on the surface. This prepared plate is used to copy the photographic negative on, in order to get the picture raised and deep. The negative is placed on the gelatine plate, film sides together, in a printing frame, and exposed to full sunlight for twenty minutes or more, according to the strength of the light. The effect of the light is to change the chrome-salt, which has the property, when combined with organic substances, to be decomposed by the light.

Bichromate of potash, which consists of two parts of chromic acid, bound to a certain quantity of potassium, changes into simple chromate of potash and chromic acid, which gets free. As chromic acid has very strong tanning properties, it makes the gelatine hard and insoluble, wherever the light strikes it. The gelatine film, when long enough exposed, becomes dark brown on every place where the negative is clear. The plate is next taken out and placed in cold water, which enters the gelatine where it is unchanged. Wash out the undecomposed salt, and swell it up. When it is high enough, the plate is put in a solution of subsulphide of iron (Monsells salt) and washed off. From this a plaster cast is taken, from which an electrotype is made. Large white spaces, which are not deep enough must be dug out on the plaster. To get the plaster hard put some silicate of soda in the water before it is mixed; a little salt added makes it set quicker. The plaster should not be taken off the glass before it gets warm, as it has not consistency enough to stick if taken off sooner.

CLEANSING FORMS.—The cleaning up of forms on press should not be given out entirely to feeders. Machinemen should work with the feeders, and teach them to work carefully. The cleaning up should be followed by sopping the plates with a slightly moistened sponge, to prevent the gumming up of drying benzine in the counters. Make the delays of washing rollers or plates, or of getting up new lifts of paper, as short as possible. Have everything that is needed at hand and in good order for instant use. Try to do this work so as not to hinder the work of others. To work efficiently, the machineman should, with his own hands, take the lead in whatever has to be done, while he directs his feeder how to help him to the best advantage. As the performance of the machine is cut down more by unnecessary delays in stoppages than by slow speed while running, the active services of the machine man are really more needed during a stoppage than at any other time.

DEFECTIVE ELECTROS.

There are very few color printers who have not at one time or another experienced disappointment at the faulty registration of their electros. Of course this has nothing to do with the electrotyping process, if the original blocks themselves do not fit; but it not unfrequently happens that the original blocks register accurately, although the electros taken from them do not, and it is to this point that we wish to direct particular attention. Wax is the material commonly used to form the matrices in employing color blocks. This substance is more or less affected by atmospheric conditions; in a very cold temperature it shrinks in cooling, more than it does in a warmer atmosphere. If, therefore, we have a set of blocks in six printings, and three of them are molded on one day and three on another, it is a mere chance if the whole register accurately; the difference in the temperature will probably cause a difference in the size, and this difference will be marked in the some ratio as the variation in the temperature at the time of the respective moldings. The practical inference to be drawn from these facts is, the whole of the original blocks of any one subject should by sent to the electrotyper at the same time, and these should be molded at once. The electrotyper, if he has had any experience of color blocks, does this for his own sake, whenever it is in his power to do so, but he has frequently no choice in the matter; the blocks are sent to him one working at a time; they are thus molded under varying conditions of temperature, and the result is that the whole series may be faulty in register. An instance to illustrate:—Ten electros from brass originals in five workings were urgently required, but one of the original blocks (the outline) could not be found; the four first workings were therefore sent to the electrotyper; these were molded, and fitted each other very accurately. The outline block was subsequently found, and electroed by itself; when this came to be registered into the previous four workings it was found to be a six-to-pica lead too small. The cardinal rule, therefore, in multiplying by the electrotype process is to have all your blocks of one subject molded at the same time. If this is done, accurate register may be generally depended upon.— *Noble's Color Printing.*

GUTENBERG'S BURIAL-PLACE.

The London *Printers' Register* says: "It is remarkable that with reference to the burial-place of Gutenberg, an error should have existed up to the present day. It has been hitherto the opinion that Johann Genszfleisch, called Gutenberg, was buried in the Franciscan Monastery of Mentz. This, however, has been proved to be erroneous by an ancient record discovered by Dr. Bockenheimer, from which it appears that the inventor of printing rests in the Dominican Monastery in the same town. The document in which this interesting fact is recorded is the Mortuary Book of the Dominican Monastery of Mentz."

As the *Register* observes, the discovery of this "error" is "remarkable;" and a heavy weight of evidence inclines to make it more remarkable than valuable. Mr. De Vinne, in his "History of the Invention of Printing"—a work notable for the erudition and research displayed in its pages—maintains the theory that the Franciscan and not the Dominican Monastery of Mentz was the place of interment, and bases his support thereof upon the fact that Adam Gelthus, a near kinsman of Gutenberg's, not long after the great printer's death, caused a tablet to be erected to his memory in the Church of St. Francis, bearing an inscription of which the following is a translation:

"To John Genszfleisch, inventor of the art of printing, and deserver of the highest honors from every nation and tongue, Adam Gelthus places this tablet, in perpetual commemoration of his name. His remains peacefully repose in the Church of St. Francis, of Mentz."

As Mr. De Vinne backs up his information on the point by references which appear to be reliable, we should require strong proof before accepting Dr. Bockenheimer's doctrine. If the *Register* can advance such proof in justification of its acceptance of the Doctor's statement, and will do so, it will afford valuable information to its admirers in this hemisphere.— *Exchange.*

TYPOGRAPHICAL UNION No. 49 has donated $35 to the aid fund. The various assemblies of Knights of Labor in the city and state have made liberal donations to aid the needy brothers and their families.

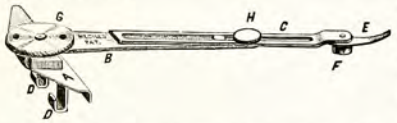
RADIATING SHEET SUPPORTERS.

A NEW AND SUBSTANTIAL REGISTERING DEVICE FOR ALL PLATEN JOB PRINTING PRESSES.

Will never shift out of position. The register is perfect, and the placing of the sheets so smooth that the most delicate touch will determine their position. The side supporter is so arranged that it will not obstruct the removal of the sheets, and the feeding may be done rapidly and accurately throughout with all thicknesses of paper, envelopes, cards, etc. They are an ornament to any press, being beautifully nickel plated and elegantly designed.

Their application will not in any way conflict with any movements of the press, or necessitate any delay or changes. A most simple and effective method of affixing them has been patented, and any pressman can apply them by hand in a few minutes to any size or style of press. The supporters may thereafter be instantly set to all positions on the lower half of the platen, for all sizes of sheets. They never prevent use of gripper.

The following cut represents one of the Bottom Supporters, with letters referring to the parts as follows:



A—Is the holder.
DD—Legs of holder.
B—Pivoted section.
C—Sliding section.
E—Tongue.
F—Guide-head.
G—Large screw.
H—Small screw.

They are adjustable to the very finest degree. The cuts show their parts distinctly. The holder enables them to be slid apart on the bail along the lower edge of the platen, and the supporters, being extensible as well as pivoted, may be lengthened, shortened and turned as desired. They are always on the platen ready for use. The parts are readily secured by thumb screws. The edge of the guide-heads impress the platen paper, which marks their position, and prevents sheets from feeding under. The tongues may be turned to suit all margins. The platen paper will not be punctured or wrinkled, or the making ready interfered with. The upper bail may be raised and platen paper renewed without disturbing the supporters. They will save hundreds of dollars worth of stock, and prove a profit to the employer, a glory to the pressman, and a delight to the feeder, and their extremely low prices will enable all to avail themselves of their advantages.

They are affixed to the press by simply bending the legs of the holder around the lower platen-bail, as shown in Fig. 2. They are applied to any size or shape of bail.

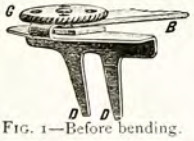


FIG. 1—Before bending.

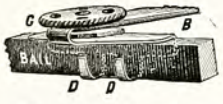


FIG. 2—After bending.

SIZES, PRICES,

AND PRESSES TO WHICH THEY ARE ADAPTED.

SIZE OF SUPPORTERS.	SIZE OF PRESS.	PRICE, PER SET.
2½ inches	6 x 9 inches	$2 00
3 inches	7 x 11 inches	2 10
3½ inches	8 x 12 inches	2 20
4 inches	9 x 13 inches	2 30
4½ inches	10 x 15 inches	2 40
5 inches	11 x 17 inches	2 50
5½ inches	12 x 18 inches	2 60
6 inches	13 x 19 inches	2 70
6½ inches	14 x 22 inches	2 80

The above sizes come within about half an inch of the center of the platen. Another size from that named may be selected for the press if desired. Measure from the lower edge of the platen up. Side supporters furnished to match.

If for a press in which the gripper bar prevents the extension of a gauge below the platen, as in the old-style Peerless, order set with special holder. The sets with regular holder suit the Gordon, Universal, Liberty, New Peerless, and all other presses.

EDWARD L. MEGILL, Patentee and Mfr.,

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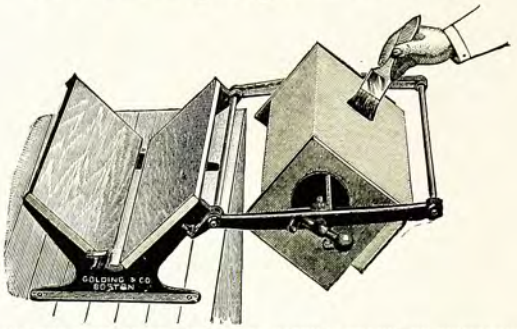
TABLET ✲ PRESS

For Blocking Paper of all Sizes.



SHOWS THE POSITION OF PRESS WHEN PAPER IS READY FOR CEMENTING.

This press reduces cost of blocking to comparatively nothing. Over 5000 sheets can be blocked at a time in about ten minutes.

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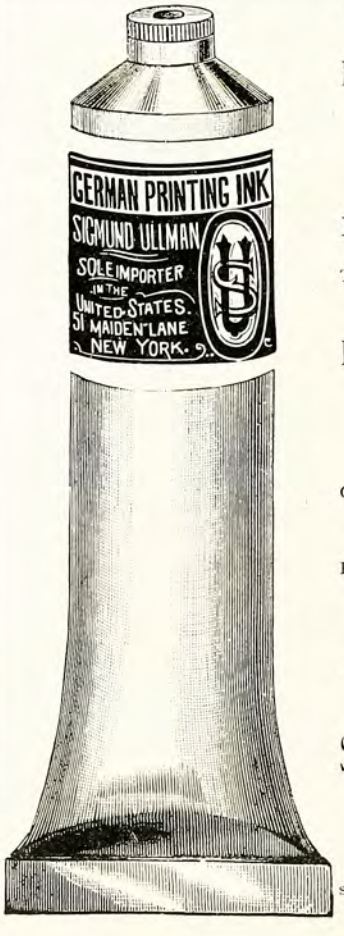

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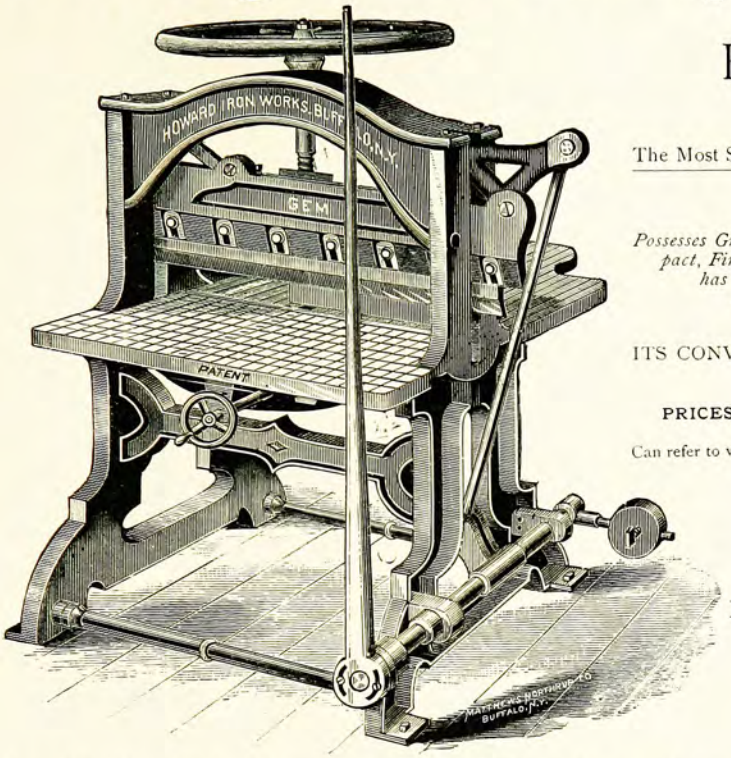

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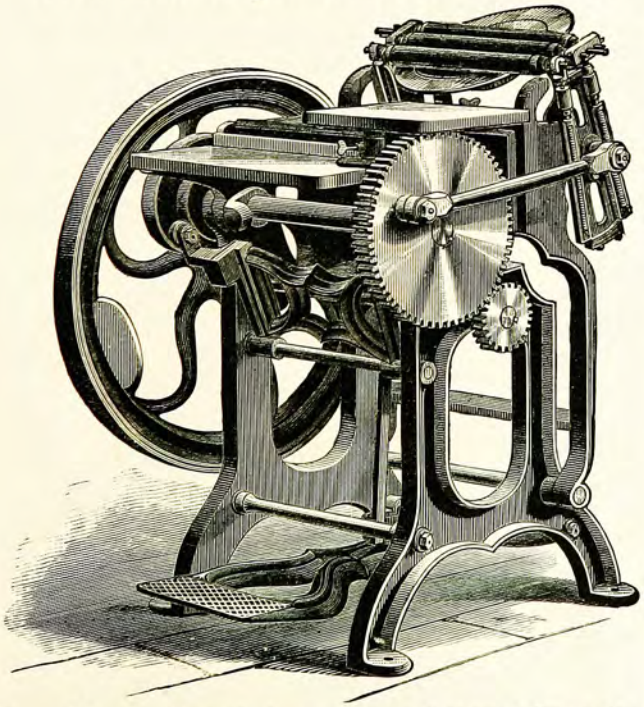

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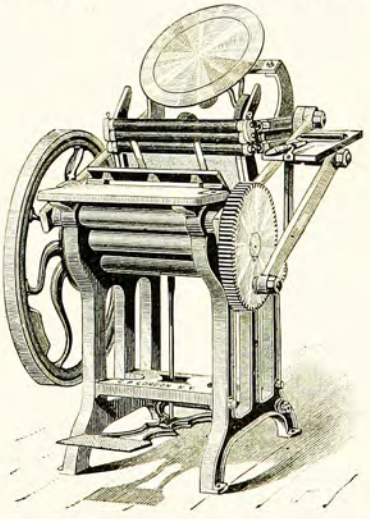

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CHICAGO, NOVEMBER, 1884.

PRINTING IN OUR PENITENTIARIES.

THE question of prison contract labor, as at present practiced in our penal institutions, is one which has recently attracted the attention of many earnest, right-thinking people. While no rational man, who has given the subject an hour's serious consideration, has advocated or will advocate a proposition to keep the criminal in *idleness* at the expense of the state, it must not be forgotten there is a vast difference between compelling the law-breaker to earn his living by the sweat of his brow, and aggregating the crime of the state on two or three branches of industry, compelling these callings to bear the brunt of such crime, and leasing the labor of the convicts to unprincipled speculators for their own enrichment. By this method a double wrong is perpetrated on society—a wrong too, which bears equally on the employer and mechanic—because it requires no argument to prove that the employer, who pays an honest day's wages for an honest day's work, cannot successfully compete in the labor market with a contractor who pays forty, fifty or even sixty cents per day for the labor of the convict, who frequently turns out work by the agency of the most improved machinery — furnished by the state.

While these facts have long been acknowledged, and the iniquity of the *contract* system conceded, they now possess a special significance to the craft by the proposition which has recently found favor in several quarters to have the "public printing" or the printing for the several states performed in our penitentiaries. Although we have no fears that any such project can successfully be carried into execution, the fact that it has been seriously broached by men who would feign poise as public benefactors, and its feasibility indorsed by a number of the clerical fraternity, regardless of the moral turpitude involved in the carrying out of such a scheme, warrants us in calling the attention of the craft to the subject. It has been urged that the whole question of prison administration should be regarded as a branch of political science, which has as important a bearing upon the public prosperity and well-being as any other department of public service. Accepting this proposition as sound in the main, we are at a loss to comprehend what process of reasoning these wiseacres adopt to justify their proposition that an intelligent, law-abiding class of skilled mechanics should be robbed of their daily bread, because a class of criminals, *outside of their profession*, have forfeited their right, for the time being at least, to liberty and the pursuit of happiness.

A few months ago a Senator of Cape May county, New Jersey, in moving a resolution for the appointment of a committee to examine and report upon the feasibility of having the public printing of that state done by convicts, had the temerity to insinuate that there would always be plenty of printer convicts to perform the work. An investigation by the Trenton Typographical Union, to determine what basis there was for such a statement, developed the fact that there had not been five printers confined in the penitentiary of that state for five years; and we have every reason to believe that similar investigations in the other states would give a similar result.

But, as stated, the advocacy of this system has not been confined to the random, reckless assertions of crack-brained would-be legislators. Many of our sensational, political preachers have recently taken up the cudgels in its behalf; and it is to the demands of these fanatics that we wish to present a counter proposition. The dearth of talent in a large number of our theological graduates has long been a matter of complaint—mediocrity being the rule, talent the exception; while their mammonized servility is apparent to all, the finger of Providence and the path of duty invariably pointing in the same direction —*an increase of salary*. Many of these can glibly discourse on evolution or revolution, humbug or Humboldt, but the gospel seems to be a closed book. Now our proposition is, that instead of establishing a printing office, a theological seminary be established in every penitentiary in the land. Some years ago we had George Francis Train for a companion, at dinner, at the Neill

House, Columbus. As soon as his presence was known, a bevy of ladies flocked to the table, and plied him with every imaginable question. "O, Mr. Train," said one, "do tell us *why* so many smart, intelligent women marry rascals?" "Women like brains; it requires brains to make a rascal," responded the interrogated. Receiving this explanation as a correct one, we have the *raw material* in abundance to commence operations with; certainly a great improvement on the intellectually unqualified occupants of many of our pulpits, and certainly no class is more in need of saving grace than our convicts. Next, let these criminals be made the subject of special prayer, and as the prayer of the righteous availeth much, there is every reason to believe conversion would follow; and the adoption of this method would ultimately develop a class of divines who would preach the gospel in its purity, the results of which would be a diminution of crime, and a decrease in the number of our penitentiary occupants. Then as to the question of re-imbursing the state for the necessary outlay, upon which so much stress is laid, we reply, that it would be amply repaid by the reformation effected in the criminals, and subsequently in society. But if even this is unsatisfactory, we have no doubt an arrangement could be made whereby a portion of the convict's first year's salary could be secured to the exchequer of the state. Be this as it may, we insist this proposition is neither more shocking nor unjust than the demand that the crime of the state be saddled upon the printing fraternity—a class of citizens ranking among the most intelligent and law-abiding in the community.

RISE IN THE PRICE OF WHITE PAPER.

A FEW weeks ago the Secretary of the Treasury, fearing infection by cholera, issued an order prohibiting the importation of rags from foreign ports into the United States. As the importations of last year reached the enormous total of 84,000 tons, or about one-third of the entire amount consumed in the country, and aas ll first-class book and writing paper is made in the main from rags, the effect of this virtual interdict on the product of our paper mills may be appreciated. The order, which was originally intended to go into effect September 1, was subsequently modified so as to admit all cargoes then on their way to the United States, except where it had been proved they were directly shipped from an infected port, after which the embargo was made imperative, irrespective alike of the port of shipment or destination. For a time this order created comparatively little trouble in the paper market; but as the domestic stock of rags diminished, and it became apparent that the embargo would be indefinitely extended, the manufacturers became alarmed, and as a result the price of paper advanced from forty to sixty per cent, while a further increase of ten to twenty per cent is now regarded as inevitable.

The New York *Evening Post*, in referring to the subject editorially, says:

> The treasury order prohibiting the importation of rags, without regard to the place of exportation and without regard even to the chances of cholera infection, is likely to work enormous injury to the cheap newspapers all over the country, as well as to paper manufacturers. It is estimated by good authority that if the order stands in force six months, it will cause such an advance in the price of print paper that it will nearly kill all of the one-cent papers and seriously cripple the two-cent papers, the margin between the cost of white paper and the selling price of the journals being very small.

Under these circumstances a meeting of the American Paper Manufacturers Association was held at the Metropolitan Hotel, New York, October 22, over 125 gentlemen being in attendance. President Parsons, of Holyoke, Mass., in his opening remarks emphatically denied that rags are dangerous to public health, and maintained that the embargo should be removed from cargoes coming from non-infected ports. He had written to Acting Secretary Coon, and had been unable to get even an opinion as to whether the prohibition would continue longer than December 1, or not. After debate, the following preamble and resolution offered by Augustine Smith was unanimously adopted:

> WHEREAS the order of the Treasury Department, dated August 30, 1884, prohibiting the landing of rags from all foreign ports between the 1st of September and the 1st of December, 1884, has been and is productive of great injury to the paper manufacturing and publishing interests of the United States, and, in the opinion of your memorialists, is entirely uncalled for in the interests of the public health and, as we are advised, is not warranted by any existing law;
>
> *Resolved*, That a committee of three be appointed by the chair, who shall nominate a committee of five, who shall take such action in the matter as they deem best for the interest of the association.

Several communications from members of the association, unable to be present, were read, advising curtailment of production and the raising of the price of paper, after which the following resolution, offered by Mr. W. R. Sheffield, of Saugerties, N. Y., was adopted with only five dissenting voices:

> *Resolved*, That it is the sense of this meeting of the American Paper Manufacturers Association of the United States, that we should curtail our production to the extent of fifty per cent of our output and that the details for carrying this resolution into effect be referred to the respective divisions of this association for their immediate action.

After the meeting of the eastern members of the National Association had adjourned, the manufacturers of writing and book papers held a conference to take action regarding the stoppage of the mills. To definitely settle the question, *pro* or *con*, a committee of five, composed of representative manufacturers, was appointed to decide on a plan of action and report before adjournment. As the result of their labors the following agreement was presented and immediately signed by the authorized agents of twenty paper mills, representing 600 tons of paper.

> We, the undersigned manufacturers of loft dried, animal sized and engine sized writing and book papers, agree that we will shut down our engines and machines the last full week of November, December and January, provided that eighty per cent of the production shall sign this agreement.

Since adjournment sufficient signatures have been obtained to warrant the announcement that the "shut down" is an accomplished fact.

It will thus be seen that the outlook from a business stand point is far from encouraging; and while there is no doubt this action will lead to temporary embarassment at least, it remains to be seen whether the inventive genius of the American mechanic will not ultimately rise equal to

the emergency, and by the appliances of new machinery, agencies and material, so far as publishers and printers are concerned, avert in some measure the threatened disaster.

CORRECT ESTIMATING.

WHILE conversing a few days ago with a friend on the slipshod method of estimating followed by too many of our business firms engaged in the printing and kindred trades, and the advantages to be derived from the adoption of a systematic, and as far as practicable, uniform rule, he remarked: "Let me give an example which recently came under my own observation. An acquaintance of mine, about to publish a work, sought an estimate of the cost of composition and press work from six different establishments, with the following results: composition, per page, first office, $2.50; second, $1.75. Press work, first office, $18 per form; second, $13; third, $15; and fourth, $10. Now, in the name of common sense how could there be a discrepancy of *80 per cent* between the estimate of rational business men in a transaction of this character, if business had been conducted on business principles?" The truth of the matter is a large proportion of the so-called collapses are the result of carelessness rather than intentional dishonesty. Many men in their overweening anxiety to get work, especially beginners, don't stop to think; they want to be busy, to see the presses running, and allowing their impulses to control their judgment, without duly considering the wear and tear of material and machinery, incidental expenses, etc., accept work at a positive loss, and, as they generally belong to a class who do not believe in taking *monthly soundings*, when adversity overtakes them they are forced to the wall, and lock the stable door after the horse has been stolen.

A comparatively short time ago an acquaintance engaged in the printing business, who seemed to float on the tide of prosperity, and who, to all appearances, was making money, was vehemently protesting against what he was pleased to call the red-tape system of monthly statements. "Why," said he, "its all nonsense. I know where I stand every Saturday night just as well as those who make out a statement as long as the moral law. These time tickets, and long-spun estimates, and the like are bosh, and in my judgment represent a sheer waste of time. I know the cost of and profit on 5,000 business cards or 10,000 letter circulars just as well as if I filled a sheet of paper to find it out." Time rolled by and a change came over the spirit of his dreams. Meeting him one day, when everybody was complaining, we inquired the state of business. He replied, "I'm in an ugly fix, and what's more I don't see my way out of it." Upon reminding him of his boast a short time before that he was making money, and that he didn't believe in detailed estimates, time tickets or monthly balance sheets, he remarked: "Well, by Jove I thought I was, but the film was taken off my eyes when I was compelled to pay out $2,500 for new to replace worn out material, and $350 or $400 for repairs, and then I found I came out at the little end of the horn." And this is just what nineteen out of twenty men will eventually experience who try to run their business on his method.

HINTS TO APPRENTICES.

IN connection with imposition, a few hints upon making up, furniture and locking up forms will not be out of place. Sufficient importance is not usually attached to this feature of the printer's work, and the locking up of a form is sometimes spoken of as a matter of small moment, which anyone can perform. But an examination of two forms, one locked up by a printer who has made the subject a study, and the other by one who has not, will show at once that there is more in the matter than appears upon the surface. The description of chase used, the furniture, side-sticks and quoins, all play an important part in locking-up; and a good selection of these materials goes a long way towards securing accuracy of workmanship.

First, with reference to the chase, if you have a choice, select one that is nicely squared and strong enough to resist the pressure exerted by the quoins as they are driven into position. When cross-bars are used, whether fixed or movable, there is not much danger of the chase "bowing," but when, either from the shape of the form or its size, cross-bars cannot be used, then the tendency to "bow" is great and needs to be guarded against, more especially in large forms. Wrought-iron chases are preferable in book-work to cast-iron, as they are usually better made and have a greater power of resistance. Cast-iron chases are liable to be affected by atmospheric changes, and frequently have flaws which develop at inconvenient times. Many a form has been pied on account of a flaw in a cast-iron chase, the existence of which was not known or suspected. Should necessity compel the use of cast-iron chases, they should be well tested on every occasion before using.

Second, as to furniture. In book or catalogue work, metal furniture is preferable to wood, for the simple reason that it does not shrink or expand, as is the case with wood furniture, and being cast to even faces is easier to make up. Especially in the case of a form composed of pages with borders or running heads with rules under, in which perfect register is expected should metal furniture be used. If it cannot be had, then all the furniture intended for gutters, backs and heads should be compared and gauged before putting it into the form, in order to be sure that no trouble will ensue after the form has gone to press.

No rules can be laid down as to the quantity of furniture to be used between each page in making up a form, as this will be governed by the margin allowed by the stock, or, in other words, by the difference between the size of the page of type and the page of the work when trimmed after binding. It is safe to say, however, that not less than one pica should be allowed for trimming, except in cases where the margin is very small. To make our meaning plain, we will suppose a sixteen-page form is to be made up, the size of stock being 22 by 32 inches, the type page measuring 4 by 6 inches, or 24 by 36 picas. The furniture for one quarter of the form—comprising pages 1, 8, 9, 16, for example—should be eight picas in the back, or in the spaces between pages 1 and 16 and 8 and 9, and ten picas in the head spaces between pages 1 and 8 and 9 and 16. This would give a pica for trimming and leave a fair margin around the page. The furniture between each quarter of the form should be sufficient to measure eleven inches one way, and

sixteen the other, from type to type, the bars of the chase running between each quarter of the form, to give strength and solidity in locking up. When wood quoins are used the beveled sticks for the side and foot of each quarter should be in good condition and properly planed, to avoid danger of "springing" when the quoins are driven into position. Where patent iron quoins are used the furniture should be perfectly squared to avoid the same trouble.

Having laid the pages down in regular order and placed furniture, chase, etc., in position, take off the cords around each page, beginning with the inside pages, and gently pressing the furniture around them as you proceed to keep the pages from "squabbling." When all the cords are taken off, adjust sufficient quoins to keep everything in place, and look carefully over the pages to see that no letters or points, at the ends of the lines have slipped. Being satisfied that all is correct in this respect, get the final proofs of the pages and compare each page of type with the proof to see that all corrections have been made, rectifying any errors that may have escaped the notice of the corrector. Then gently plane down the form, to make sure that every letter is well on its feet, and slightly tap the quoins all around the form; then drive them a little more forcibly, taking care not to put the form out of the square by driving the quoins more on one side than the other. We have seen printers locking up forms as though the mallet they wielded was a pile driver, and the quoins the piles to be driven; and having, by so doing, raised all the type from the imposing surface, take a planer and pound on the type to get it back to its place as though the type was made of case-hardened steel, which no amount of pounding would injure. This is not the way to lock up and plane down a form; and a little experience will soon prove to the typo that gentleness and patience will accomplish far more than merciless driving and pounding, both in saving of time and in preservation of material.

If the pages have running heads they should be gauged with a straight-edge, a strip of brass rule being the best instrument for that purpose, each page being filled out or reduced as may be necessary; for sometimes pages are not accurately made up and need a little attention before they can be sent to press. A press-proof should then be taken of the form for examination by the proofreader, who will see that pages are properly laid down, corrections all made and furniture correctly made up, to avoid delay after the form has gone to press. When this is not done the press is either delayed after the form is made ready, or errors pass which afterwards have to be corrected by a page of "errata" being added to the work.

The above remarks apply to an ordinary form of book-work. In a future number we will offer a few suggestions in relation to other classes of work which, perhaps, require even more careful attention than that treated of in the present chapter.

NOT A PERFECT SPECIMEN.

ABOUT one hundred years ago a number of the professors of the Edinburgh University attempted to publish a work which should be a perfect specimen of typographical accuracy. Every precaution was taken to secure the desired result. Six experienced proofreaders were employed, who devoted hours to the reading of each page; and, after it was thought perfect, it was posted up in the hall of the University with a notification that a reward of £50 would be paid to any person who would discover an error. Each page was suffered to remain two weeks in the place where it had been posted before the work was printed, and the professors thought they had attained the object for which they had been striving. When the work was issued it was discovered that several errors had been committed, one of which was on the first line of the first page.

AN apprentice in England writes to *The Printing and Paper Trades Journal*, London, under date of Sept. 1st, as follows:

Dear Sirs,—I received your post card on Tuesday morning last and beg to state that my master says that apprentices are not allowed to take trade journals, and as I didn't know when I wrote to you that I was not doing right, I beg to withdraw my name from the list of subscribers at present. I liked your *Paper and Printing Trades Journal* very much, but it seems that I am debarred from taking it.

The journal to which this communication was sent says, in reply: "If it were not for getting the poor lad into a row we should publish the names and addresses." Well, we should like to get hold of the addresses, accompanied with a likeness of the antideluvian who objects to his apprentice taking a trade journal. We don't think his counterpart can be found on the American continent, at least we hope not.

A MILWAUKEE correspondent writes: "In one of your near future numbers please state your opinion in regard to the wages that apprentices in job offices should receive each year of their apprenticeship, giving them four years to learn the business." Our correspondent should have been a little more explicit, because even the wages of an apprentice will be in a great measure gauged by the rate of wages paid to journeymen. Thus, an apprentice in Denver, where the scale is $21 per week, or Austin, where it is $20, will receive more than he would in Utica, Cleveland or Lowell, for example, where wages range from $8 to $14, because the cost of living is higher in the former than in the last named cities. Taking the wages in Chicago, however, $18 per week, as the average, we should say that $3, $6, $9 and $12, respectively, would be a fair compensation. As this is a question, however, upon which a diversity of opinion may be found, we shall be pleased to receive the views of our readers thereon.

THE last issue of *Caslon's Circular*, under the head of "Piracy Defeated," says:—

Our readers will be glad to know that in future all novelties produced by type founders, whether in this country or abroad, can, and no doubt will, be protected for a period of five years from date of registration, and the protecting mark is so simple that it will be possible to put it even upon a small type. Five years is a sufficiently long period to enable a type founder to sell his novelties throughout his market, and to reap the reward to which his enterprise and energy have entitled him. Many a printer has been attracted by the specimens of unscrupulous persons calling themselves type founders, which specimens, by the way, are invariably printed from types made by the legitimate founder whose types are pirated, and, in ignorance of

the abominable means by which the spurious imitations are produced, has ordered type in the expectation of receiving a good article, only to find out too late, that he has been grossly imposed upon. * * * To enable all legitimate type founders to protect their productions in future, we are glad to give publicity to the following particulars:

1. A set of capitals from A to Z constitutes one set of designs, which can be registered for twenty shillings.

2. A set of lower-case from a to z also constitutes one set, which can be registered for twenty shillings.

3. Registration of a set of types in one size protects all sizes or bodies in which it may be produced.

4. A combination border of an indefinite number of pieces constitutes one set, and can be registered for twenty shillings, provided the said pieces are component parts of one scheme or design.

5. The protecting mark signifying registration is simply the letters Rd. and the figures denoting the number of the registration. The former costly and ugly mark is therefore abandoned.

We hope that our American friends will at once avail themselves of the protection that is now within their reach, and secure to themselves the sale of novelties, which hitherto have no sooner made their appearance in this country than they have been unscrupulously appropriated, to our disadvantage, and, indeed, to the disadvantage of all legitimate type-founding, as well as to the loss of the original founder.

THE TRUE INVENTION OF PRINTING.

DISCOVERY OF DOCUMENTS UNKNOWN TO ANY HISTORIAN OF PRINTING.

We have already referred to the exceedingly interesting character of the paper read before the Dublin Congress by Mr. George Bullen, of the British Museum. The communication was founded on a recent discovery that the inventor of printing was identified, in a book published in 1470, as Bonne-montanus, the Latinized form of Gutenberg. Instead of reprinting Mr. Bullen's paper, we give the following account of the article on which it was based, with an *original* translation of the Latin passage in question:

In the number of the 10th of October, *Le Livre*, has given prominence to an article of M. Dutent, devoted to the interesting question, "Who is the Inventor of Printing?" the article being extracted from a new manual for the amateurs of engraving, written by one who had labored for many years in the rich library at Rouen. The author brought forward with much clearness and reviewed with considerable sagacity the texts of the principal known documents, distinguishing, after the example of Mr. Hessels, the pieces that were certainly apocryphal and those that were suspected of being so. This conclusion is a sensible one, and his opinion may be regarded as impartial, being altogether devoid of the blindness which the spirit of patriotism often induces when such questions are treated of.

It was in the Low Countries, evidently, that the first attempts at printing were made. Whether these were of the nature of block printing, originally, and whether later on they made use of letters separated one from the other, either engraved on wood, or on lead, or founded or cast by some imperfect process, the fact is that what it is convenient to call the Dutch school, or that of Haarlem, has not left any products of the art that are not merely rudimentary.

The story, told by Junius, of a workman named John, who in the middle of one Christmas night, stole the types and materials of Coster, and then proceeded with them to Amsterdam (then a place of no importance), thence to Cologne, and afterwards to Mayence, where he printed in 1442 certain books similar to those of Coster, with the type and utensils belonging to his former master, is in the last degree unworthy of belief, and ought to be regarded merely as a fable. The invention of a man of genius, the true practical secret of printing with movable types, such as that connected with Mayence, has no relationship with the legend of the dishonest workman.

What is really incontestable, is that during the first half of the 15th century, at a date earlier than is generally imagined, in various places such as the Low Countries, the banks of the Rhine, and Germany, people were engaged secretly in experimenting in processes for reproducing pictures, and for multiplying writings, by material and mechanical means, without the employment of the pen. There will be found, in the remarkable work of Mr. Hessels, on Gutenberg, page 7, various names of artisans in this branch of industry, with certain dates and the names of the places where they lived. Wimpfeling has made known in his "Catalogus Episcoporum Argentinensium," that Gutenberg, after the loss of his first process at Strasbourg, arrived at Mayence in 1445, and found there some investigators, men who were like himself making experiments in this direction "*in hac arte investiganda similiter laborantes.*"

In fact, printing could only have been invented in this way. The experience of one man is taken advantage of by another, and the failure of one is a guide to his successor. From mistakes and failures knowledge is derived. The first ill designed efforts give place to better processes. A man of intelligence, laboring and experimenting by himself, ultimately utilizes the experience of his predecessors, and, avoiding their errors, evolves a process, an art and an industry, in reality—and of this he was in reality, as was declared by his contemporaries, the inventor.

Such was the position of Gutenberg. The *document appended*, and which is *not known to any historian of printing*, is of prime importance; for in it Gutenberg is asserted to be the real inventor of typography, as it exists even in the present day.

In a letter of Savoisien Guillaume Fichet, addressed to Robert Gaguin, a printed letter, which we find at the head of some copies of the work entitled "*Gasparini Pergamensis orthographiæ liber*," in small 4to, the second book printed in Paris, we read, folio 2, *verso*, the following passage:

Instead of reprinting the original Latin we give the following translation: "The new class of book publishers whom, within our recollection Germany has, like a sort of Trojan horse, poured forth in every direction, have brought to us a great illumination, for they say that there was, not far from the city of Mentz, a certain John with a surname Gutten-Berg, who first contrived, some time ago, an art of Printing by which they make books, not with a reed as other scribes did in the old times, nor with a quill as we do now, but with brazen letters, and that too in an elegant, even and beautiful manner; that man certainly was worthy of being endowed with divine honors by all the muses, by all arts, and by all the tongues of those who delight in books, and of being esteemed much more eminent than the gods and goddesses * * * to, and as Ceres was the first to cleave the sod with the plough, the first to give food and sustenance to the world, yet that Gutten-Berg made a far more precious and divine discovery; for he carved out letters of such a kind that whatever can be said or thought may be very soon written and copied and committed to the memory of posterity. But I must not omit to mention here those among us who already surpass their masters in the art, of whom Ulrich, Michael and Martin are said to be the chief, who some time ago printed the letters of Gaspurin, which John Lapidanus revised. * * * Written in haste by me at the Sorbonne on the 1st of January at daybreak."

The value of these statements must be striking to every reader. We find here besides a eulogium on printing, the name of its inventor. This is the authentic testimony of makers of books by a new process. Who were these strangers, these new comers? One was named John, surnamed Gutten-Berg, who was the first to invent the art of printing. *This is clear and precise.*

We must now see who those were who became guarantees of Claudin's assertion. These were the master printers who brought to Paris the new art which it is said Louis XI induced to stay in Paris, and which the Prior of Sorbonne called the Germans. Among these three master printers we find Martin Krantz, who was the son of Peter Krantz, who figures as a witness in the second trial of Gutten-Berg, at Mayence, in 1455. The two others, Michael Friburger and Urich Gering, were also well known. They came from Basle before they established a printing office in Paris. There can be no doubt that the testimony of these three printers may be relied upon in regard to the inventor of the art. They brought with them to Paris the secrets of its origin, and in this way announced to all the world the name of the inventor of their new industry. Fichet edited their Declaration, which they signed for the benefit of posterity. Here certainly is a document

which may be called contemporaneous, as Gutten-Berg died in 1468, and the testimony authentic and undeniable just before, not hitherto discovered, the very earliest known up to the present time being the "Chronicle of the Popes," by Philip de Signamine, in addition to those of the "Chronicle of Cologne," etc. The date of the letter of Fichet is easy to fix. The book is, it is well known, the second one printed in Paris at the Sorbonne. The first book printed at Paris was issued at the end of the year 1469, or at the beginning of 1470. The preface of the book now under notice being dated in the month of January, the first of the three last months of the year, when it was begun at Eastertide. It therefore follows that the letter of Fichet to Goquin is at the end of the same year, namely, 1470.

Dr. Ingram remarked that there was no copy of the Orthographia in Trinity College Library. As to the main question—namely, who was the author of printing in Europe—he feared they must be content to remain in an agnostic state of mind.

Mr. Richard Garnett stated that he had had in his possession a copy of a work by an Italian writer of the sixteenth century, Passi, in which he stated Gutenberg learned the art of printing from a Chinese, through the medium of the Russians. Passi mentioned that he had seen Chinese works which had been presented to Pope Leo X by Portuguese, and learning from these that the Chinese were acquainted with printing, he formed his theory respecting Gutenberg.

Mr. Bullen remarked that the art of printing from blocks might have been introduced from China, but the real printing was printing from movable types, and printing from movable types was known in Japan and the Corea before the introduction of printing in Europe. The British Museum now contained 300 volumes which had been purchased from Her Majesty's Consul at Bangkok, and Professor Douglas had assured him (Mr. Bullen) that some of those works were printed about 1417.

Mr. Harrison (London) remarked that the irony of fate was shown in the fact that Fichet, who wrote of the art of printing as perpetuating the memory of man, did not get his own letter made known until 400 years after it was written.—*British and Colonial Printer and Stationer.*

TYPE RUSTING: ITS CAUSE AND CURE.

The *Austrian Printer's Gazette* has the following on the causes of type rusting, and on caustic lye as a preservative. It is written by Alios Sassik, head of the Imperial Printing Establishment, in Vienna: "With zincotypes the greatest possible cleanliness is most important, as oxidation takes place very rapidly in this kind of engraving. Zinc oxidizes very quickly when exposed to the air or to alkaline liquids; when the oxide is once formed, it freely develops under the influence of the soda potash. We would recommend the use of benzine or spirits of turpentine, then dry with a rag, leave a moment in the air, and place the zincotype in a drawer.

"When washing forms, dirty water or such as has already been used is often taken. This latter always contains potash, petroleum, and spirits and dirt. This is another cause of rusting. Another habit is no less injurious. When the potash does not act quickly enough, some washers are accustomed to pour spirits of turpentine on the brush or on a rag and to rub the rebellious spots, without taking the precaution, however, to use a little potash and clean water afterward.

"It has been ascertained by chemists that the spirits of turpentine, especially when old, absorb oxygen from the air and ozonizes it—that is, it transforms it into an active and positive oxide that acts very energetically—so that any spirits remaining on a form not only favors, but actually excites the development of the oxide on the type.

"The principal causes of type rusting may be resumed from the foregoing as follows: 1. Bad proportioned alloys. 2. Improper metals in the composition. 3. Placing the type in damp places, especially when not previously dried. 4. Want of care on the part of the washers of the forms.

"Let us now say a few words on potash of soda and the introduction of the fatty matters of soap into the potash. What we have said went to show that the soda lye does not produce the oxidation, but is rather neutral toward the type, and that the causes must be sought in negligence in washing and rinsing. Soda lye is the best caustic that we know, and it would be difficult to replace it; it makes the use of spirits of turpentine superfluous, and is only surpassed by benzine for cleaning zincotypes and wood engravings, as this latter oil prevents the wood from changing. The great point, therefore, is to make a good lye; there is no lack of receipts, but still there are complaints of the results obtained.

"Solid soda or soapstone, although dear, is excellent in its way, as it is put up in air-tight boxes and retains all its natural causticity and strength. Trade papers often give formulas in this matter that a chemist, the only judge, would not approve. The quantities for the mixtures are given, but no mention is made of the manipulation, nor the time required for boiling, nor the degree of heat, nor the quality of the substances—matters that are equally as important.

"In country towns the ashes of hardwoods, the beech, etc., are wetted with boiling rain water, some lime is added, the product is drawn off, and a very good lye and one that does not injure the type is obtained. In large cities, however, we have to follow another plan. The following receipt we have found excellent: Dissolve 2 kilograms of crystallized soda (carbonated sodic oxide), or 0.75 kilo of sub-carbonate of calcined soda, in 24 kilos of river water that contains no calcareous matters. Heat the mixture in boiler to boiling point. While boiling, slacken 2 kilograms of quick-lime in 6 kilograms of river water, make a kind of jelly of it and pour it into the solution while it is boiling; stir, lift from fire, cover up carefully and let cool and settle. Then pour the clarified part, the caustic solution, into stone jugs and cork hermetically, to prevent the carbonic acid gas of the air from entering. There will be a deposit of carbonate of lime on the bottom of the boiler; pour some river water on this, stir up and boil again. This second solution is weaker, and will serve for cleaning inking tables, cleaning rags, etc. The first solution should only be used for the forms. We have tried silicate of potash and found it inefficient; it contains but very little caustic soda."

THE FIRST NEWSPAPERS.

The initial printed newspapers of the world appeared in the following order, according to a writer in *Woodcock's Printer and Lithographic Weekly Gazette:*

	NAME.	TOWN.	YEAR.
0.	Printing introduced	Mayence	1438
1.	*Gazette*	Nuremberg	1457
2.	*Chronicle*	Cologne	1499
3.	*Gazette*	Venice	1570
4.	*Die Frankfurter Oberpostants-Zeitung*	Frankfort	1615
5.	*Weekly News*	London	1622
6.	*Gazette de France*	Paris	1631
7.	*Postosch Inrikes Tidning*	Sweden	1644
8.	*Mercurius Politicus*	Leith, Scotland	1653
9.	*Courant*	Haarlem, Holland	1656
10.	*Publick Occurrences*	Boston	1690
11.	*Pue's Occurrences*	Dublin, Ireland	1700
12.	*Gazette*	St. Petersburg, Russia	1703
13.	*News Letter*	Boston	1704
14.	*Gaceta de Madrid*	Madrid, Spain	1704
15.	*Mercury*	Philadelphia, Pa	1719
16.	*Gazette*	New York	1725
17.	*Gazette*	Annapolis, Md	1727
18.	*Gazette*	Charleston, S. C.	1731
19.	*Gazette*	Williamsburg, Va	1736
20.	*Gazette*	Calcutta	1781

GLUE, PASTE, OR MUCILAGE.

Lehner publishes the following formula for making a liquid paste or glue from starch and acid: Place five pounds of potato starch in six pounds of water, and add one-quarter pound of pure nitric acid. Keep it in a warm place, stirring frequently for forty-eight hours. Then boil the mixture until it forms a thick and translucent substance. Dilute with water, if necessary, and filter through a thick cloth. At the same time another paste is made from sugar and gum arabic. Dissolve five pounds gum arabic and one pound of sugar in five pounds of water, and add one ounce of nitric acid and heat to boiling. Then mix the above with the starch paste. The resultant paste is liquid, does not mould, and dries on paper with a gloss. It is useful for labels, wrappers, and fine bookbinder's use. Dry pocket glue is made from twelve parts of glue and five parts of sugar. The glue is boiled until entirely dissolved, the sugar dissolved in the hot glue, and the mass evaporated until it hardens on cooling. The hard substance dissolves rapidly in lukewarm water, and is an excellent glue for use on paper.—*Polytech. Notiz.; Pharm. Record.*

12A, 24a. THREE-LINE EXCELSIOR SIGNET. $2.10
Quads and Spaces, 30c. 24a Lower Case, (extra) 1.15

A hat is the canopy of thought, the roof of imagination.
A high hat is a proper loft for lofty ideas and things to skip around in.
A soft hat often covers hard thoughts.

O, Happiness! our being's end and aim,
Good, Pleasure, Ease, Content, whate'er thy name:
Plant of celestial seed, if dropt below,
Say, in what mortal soil thou deign'st to grow?

LOWDYOIGE & BAWLER,
Rearragged Newsmongers, and Local Gossip Venders,
1234 Printing House St.

10A, 20a. PICA SIGNET. $2.70
20a Lower Case, (extra) 1.30

Richardson's Patent Mining Tool
A sure and Expeditious Instrument for Penetrating and excavating Micaceous, Auriferous Shale,
537 Bonaventure Avenue.

The triumph of Creation, the pride of every nation
Is mighty Man—a shaft of animated gas,—
Made of the elements of grass and garden sass.
And his life is but the twinkling of an eye,
And he lives the little twinkle but to die.

Robert Paden & Co., 1884.
Dealers in Fire-cured Lumber and Charcoal Shingles,
Cleveland, Ohio, U. S. A.

Cleveland Type Foundry,
Cleveland, Ohio.

8A, 16a. THREE-LINE NONPAREIL SIGNET. $3.85
Quads and Spaces, 38c. 16a Lower Case, (extra) 1.85

Down by the Old Garden Gate
52 Temperance Principles Violently Upheld
$1234567890
Royalty & Righteousness

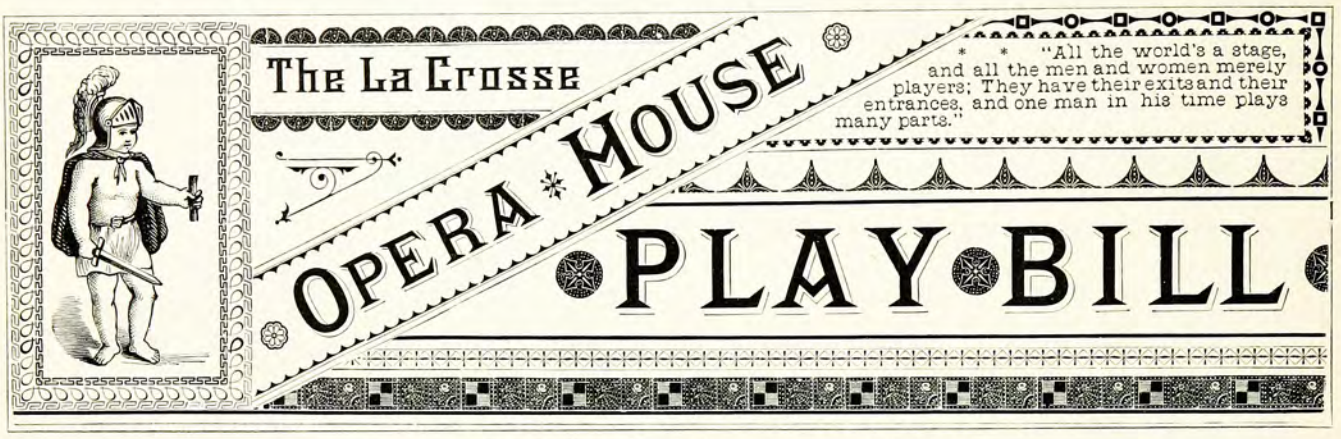
6A, 12a. TWO-LINE PICA SIGNET. $4.40

The Ides of March, 1884
Nothing Venture Nothing Gained
$1,234,567
Robert Burns & Co.

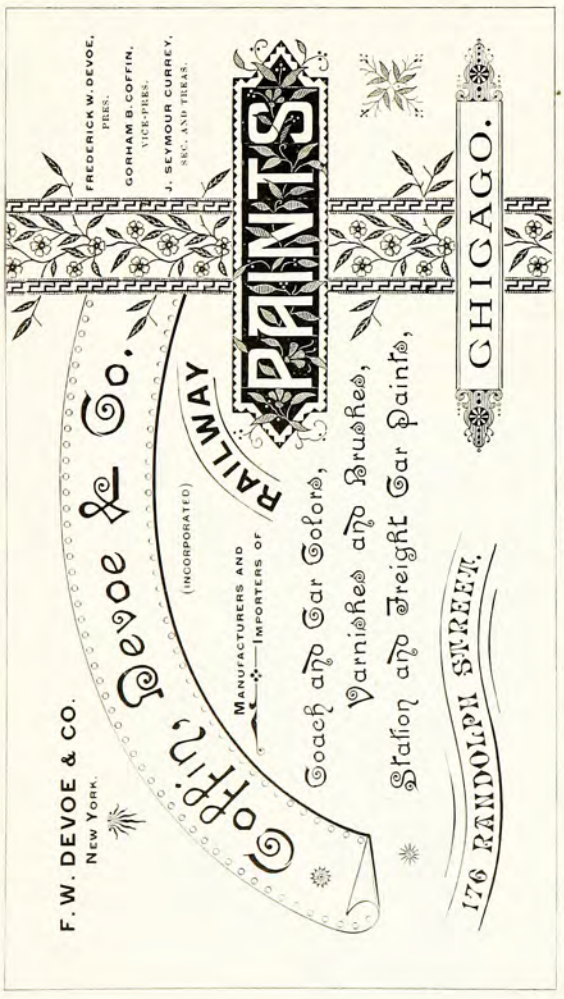
4A, 8a. THREE-LINE PICA SIGNET. $6.60
Quads and Spaces, 50c.

New Capital Stock
$1,648.00
Cleveland & Springfield
Ranny & Cook.

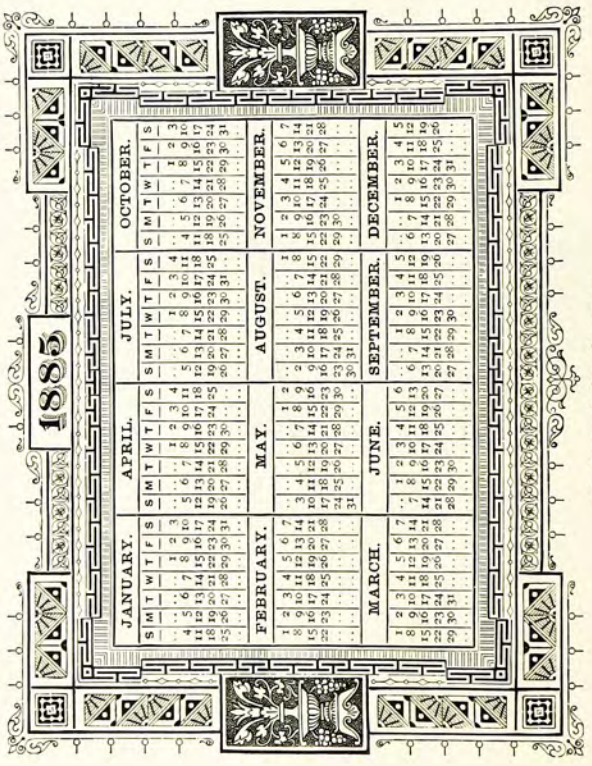
SPECIMENS FOR COMPETITION.



COMPOSITOR — E. L. SPICER, LA CROSSE, WIS., EMPLOYED BY N. P. TUCKER.



A. R. ALLEXON, CHICAGO.



A. ZEESE & CO., CHICAGO.

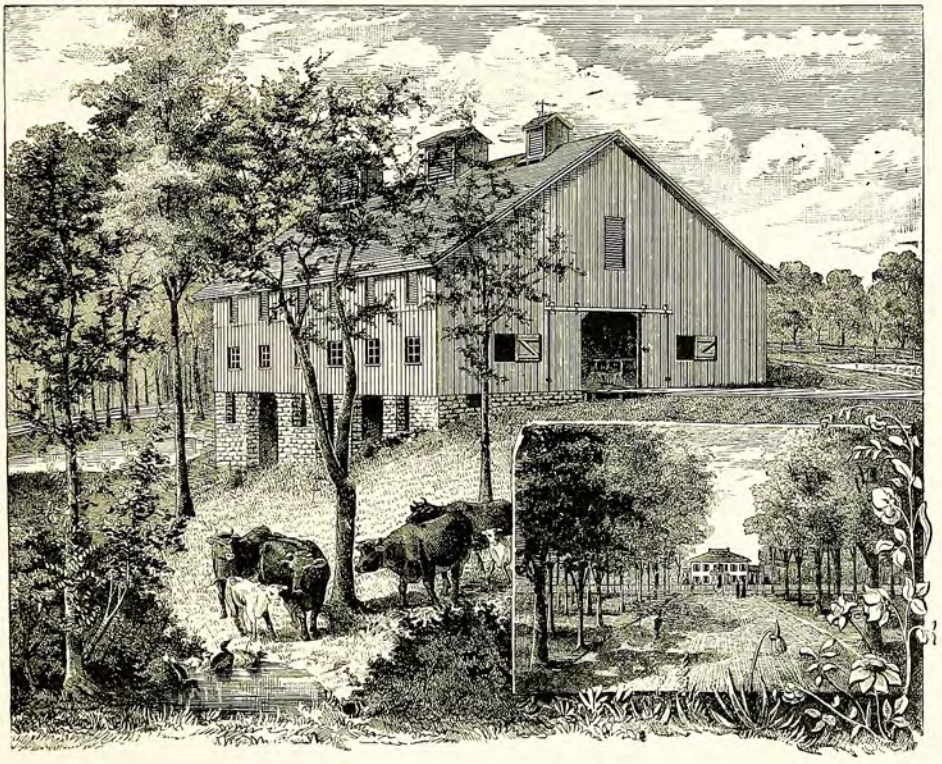
THE LEVYTYPE PROCESS OF PHOTO-ENGRAVING.

THE Levytype process of photo-engraving, by which was produced the plate from which the accompanying impression is printed, is a method of producing an engraved picture or design by means of the chemical action of light. The result of this process is a plate of hard type metal, furnished ready for use in any printing press, and which can easily be duplicated by stereo or electrotyping, the same as wood engravings. These plates are claimed to be equal to the most carefully engraved wood cuts, the printing surface being smoother, the lines sharper, and the "cut" deeper than by any other process at present in the market.

The special advantages claimed for photo-engraving is that it replaces the laborious tool handling of the engraver with the less costly, energetic, and untiring hand of nature. For years the labors of scientific research, both in the old and new worlds, have been devoted to this end, with a large degree of success, and a yet larger promise for the future. The photographically engraved plate of today is comparatively new as a commercial product, though from a scientific standpoint far from being a novelty. Photo-engraved plates were successfully produced in 1826, and the first experiments looking to their production date from the beginning of the present century.

The Levytype process is claimed to be capable of reproducing prints in the forms of engraved plates, regardless of the color in which the impression is printed, excepting *blue* and *purple*. Nor yet does a tint of color in the paper in which the impression is printed militate against the work, unless the color be too pronounced. Thus a print on a pink, buff, light green, light brown, blue or purple paper, etc., can be reproduced, but in all cases a good black impression on clear white paper is preferable, and renders the best results.

Reductions or enlargements in any picture, design or other original in line can be photographically enlarged or reduced almost indefinitely; but when an enlargement is carried too far the result is coarse and comparatively ineffective, while a too great reduction renders the lines too fine and close together, causing the plate to "fill up" in printing. The average of woodcut prints will stand a reduction to about one-half, and seldom more than that. Steel plates can generally be reduced somewhat; etchings as a rule will not bear any reduction, and copper plates and lithographs can be changed in dimensions, more or less, according to the nature of the work.



Pictures in *tone*, such as photographs, brush drawings in sepia, color or India ink, and, in short, all pictures wherein the effects are produced otherwise than in *lines*, cannot be *directly* reproduced in a form available for the ordinary printing press. A drawing which may be either in line or stipple, must therefore be made after such original and the drawing can then be reproduced as an engraving.

THE printing business throughout the entire country is in a very depressed condition, as the reports from our correspondents testify. Now that the excitement over the presidential contest has well nigh subsided, however, we hope in our next issue to be able to chronicle a different state of affairs. It is a serious question which the American people are beginning to ask themselves — do not these national elections occur a little too frequently?

CORRESPONDENCE.

(While our columns are always open for the discussion of any relevant subject, we do not necessarily indorse the opinions of contributors. Anonymous letters will not be noticed; therefore our correspondents will please give names—not for publication, if they desire to remain incog., but as a guarantee of good faith.)

FROM DETROIT.

To the Editor: DETROIT, Oct. 28, 1884.

Owing to misrepresentations made by the directory publishing firm of R. L. Polk & Co., Toledo Union suspended its scale, thus securing some gazeteers from Detroit, which they (Toledo Union) thought a rat firm in Indianapolis had been doing. Upon receiving a protest from Detroit they promised to restore the scale to its original figure, viz., 33⅓ cents for bookwork. However, Detroit has been running this work uninterruptedly for the past eighteen months, and it was the principal source of employment, giving work to an average of from 35 to 50 hands, and as the bottom has dropped out of it things are very uncertain here at present, with no visible signs of relief. Congratulating the publishers and editors of THE INLAND PRINTER, which is a credit to the craft and fills a long felt want, and assuring you that every typo in this city who has seen it thinks it is a marvel, and that you will receive a large accession to its subscription list from this city, I remain, yours fraternally, T. H. S.

THE IVES PROCESS.

To the Editor: PHILADELPHIA, Pa., October 18, 1884.

In the October number of your journal, Mr. Herman Reinboldt makes some statements which are inaccurate, and which I hope you will kindly correct.

Mr. Reinboldt says: "As Meissenbach patented his process long ago, and Ives' process is based on the same principles, it is clear that the latter is only a modification of the first one." The facts are as follows: 1. The Ives' process is *not* based on the same principles as Meissenbach's. 2. The Meissenbach process was *not* patented before the Ives' process. The Ives' process was patented more than a year before Meissenbach's, and was introduced into successful commercial operation more than a year before *any* other.

Mr. Reinboldt also says, "these processes are equal in their merits," etc. In this, there may be thought to be room for a difference of opinion but the editor of the London *Photo. News*, who thinks highly of Meissenbach's process, and has done much to call public attention to it, says of my recent specimens, they are "undoubtedly the finest yet seen in this country" (England).

In regard to color work, you will see by the inclosed cutting from the *Photo. News*, that work which I did in 1881 is now regarded as more remarkable than anything which has been done since.

The specimen shown by E. Brown & Co. is by substantially the same method as that patented by Paul Pretsch a quarter of a century ago. The method described by Reinboldt is also old, having been published and patented many times, and is incapable of producing first-rate results. Truly yours, FRED E. IVES.

FRICTIONAL ELECTRICITY.

To the Editor: PITTSBURG, November 4, 1884.

I have read several articles in different journals circulated among printers on a difficulty usually called "frictional electricity;" and having had some experience with it, and thinking, perhaps, it would interest the readers of your paper, I send you my experience for publication.

In the fall of 1883, a writer on frictional electricity overcame it partly, as he claims, by using a wire pointed with copper and leading to a gas or water pipe, which forms a ground current and carries off the electricity, at the same time cleaning the belts and keeping them tight. Another plan given is to use water to reduce the temperature about the press. After having tried both of these schemes and several others suggested, and not a few of my own, I commenced to think that we must be groping in the dark on this question, and that it must be something more than frictional electricity we had to contend with. I then commenced to look for other causes of this trouble of clinging sheets to the cylinder and fly, and scattering them over the floor when delivering them to the table. This does not occur in the summer; then what produces it in the winter? The answer must be because it is cold. Then it must be this agency that causes the clinging of the sheets to cylinder, fly, etc. When I reached this conclusion I examined the cylinder and found it very cold, although the temperature of the room was up to 80 degrees.

This is where I differ with the theory of frictional electricity, and call it "cold attraction," for as soon as the sheet comes in contact with the cylinder it is drawn tightly to it by the *coldness* of the cylinder, and when the sheet leaves the cylinder it will sometimes cling to the fly, it being colder than the atmosphere in the room.

To overcome this trouble in press rooms that are afflicted in this way (for there are some that are not, which, you will find, are kept at a certain temperature all the time, and their paper kept in a warm room), at first see that the paper is warm, then the cylinder, which may be warmed successfully by taking one or two thick wrappers and heating them very hot, and placing them on the impression part of the cylinder; but it matters not what means you use so you get the cold out of your machine. When the cylinder, fly and feed-board are warm, and a warm wrapper placed on your table to prevent the sheets from scattering, and your room is heated to 70 degrees, you will find the trouble has disappeared. PRESSMAN.

FROM NEW YORK.

To the Editor: NEW YORK, November 1, 1884.

The trade is still dull, and the supply of labor considerably beyond the demand, though the election gave us a temporary boom for a week. The Union, however, holds its ground, and has lost nothing since the strike on the *Commercial Advertiser* last August, when the superintendent, Mr. Bryant Godwin, reduced the price from 40 to 35 cents. Learning that the office was advertising for men in Philadelphia to fill their places, in case they refused the reduction, they immediately struck. Two additional strikes occurred in the office within a fortnight, the last being on the morning of the great labor parade, neither of which were successful. But the end is not yet. The *Commercial Advertiser*, while under the management of the late Mr. Hugh Hastings, had been a "card" office for twenty years, but within a year after its purchase by Messrs. Parke Godwin, Ledley & Company, the old hands were forced to leave the office or submit to a reduction.

The boycotting of the *Tribune* still goes on, although the election is over. That was only a side issue. The main point is the establishment of Union principles in the tall tower; when that is accomplished, and not till then, will the *Boycotter* be laid on the shelf.

The Concord Coöperative Printing Company, which was started some six months ago, has been followed by a second adventure in the same direction, known as the Knickerbocker, with a newstand attached for boycotting purposes.

The object of these coöperative movements is not so much the declaring of dividends for stockholders, as to drive out the amateur botches and "cock-robin" shops, which by their poor but cheap work prevent the competent workman from obtaining a fair compensation. There are some seventy assemblies of the K. of L. and thirty or more other trade societies in the upper portion of the city; and if the workingmen stand together, as they seem more inclined to do every day, there is no reason why this last venture should not succeed and be followed by others. What may be accomplished by coöperation, and to what lengths it may be carried, is shown by an article in the last INLAND PRINTER, on "Coöperation in England and America."

SIX.

OUR PHILADELPHIA LETTER.

To the Editor: PHILADELPHIA, October 27, 1884.

In the first place permit me to say, that the changes in the PRINTER have met with universal approval by the printers of the Quaker City. We thought when we first saw the PRINTER, one year ago, that here was the *ne plus ultra* of trade journals, but now we see our mistake, and we shall not be surprised hereafter when we see the PRINTER climb to still greater heights in the ladder of perfection. We congratulate the level heads at the helm.

In my last letter I spoke of the financial embarrassment of John E. Potter & Son, publishers. How the trouble has been settled I do not know, but I see the printing department is still running.

Since I last wrote, Wm. F. Fell & Co., printers, of 1,222 Sansom street, have passed through the waters of financial affliction. I hear that the matter has been adjusted and that they are now running as usual. Taking it as a whole, I think business is rather poor here just now. I have before now spoken of the great and unnecessary multiplicity of printing offices. It looks as though every journeyman or manager, who can control a job or two of any proportions, feels called upon to start an office and get in an unnecessary number of presses. The result is that he not only is not able to get along himself but cripples older establishments. If I had money to throw away I think I could find no better place to get rid of it than by starting a printing office in Philadelphia.

As the whole country is now in the throes of a great political struggle let me add a little to the agony by telling what a very foolish thing the Typographical Union is doing in this city. Calvin A. Wells, proprietor of the Philadelphia *Press*, summarily dismissed Unionism from his office. This gentleman is now at the head of the Republican electoral ticket in this state. The Typographical Union thought, as did everyone else, that here was a good opportunity to rebuke him for his unjustifiable act. Now, instead of selecting some reputable elector on the other ticket, who would have got the vote of a great party who are naturally opposed to Wells, and where a vote from a Republican working man would have counted *two*, they go to work and set up an independent candidate, a vote for whom will only count *half of one*. The result will be Calvin Wells will only run a little behind his ticket, be elected, and labor will be wounded in the house of its friends. How foolish!

At its last meeting the Pressmen's Union, after hearing a report from a committee who had been appointed to investigate the matter, concluded not to unite with the Knights of Labor.

We Philadelphians feel proud, when reading those masterly articles of Mr. McNamara in the PRINTER, to observe the part our sires had in advancing the printing-press to its present state of perfection. The thanks of the craft are due to Mr. McNamara for his unselfish devotion and untiring energy in the task of shedding light on the history of that mighty engine. C. W. M.

FROM WASHINGTON.

To the Editor: WASHINGTON, Nov. 3, 1884.

The power of the press is a theme that has been sung too often for me to take up in this, my first contribution to your journal, except to take it as a text for my remarks. Truly the press is a power; a silent yet mighty force, which moulds men's views imperceptibly, yet surely. But this great lever, I am sorry to say, is never used but for the advancement of a class already powerful; it is almost without exception the willing servant of capital, and scant justice and no favor is shown by the press to the labor element. Had labor the countenance of the great journals of the day, who will doubt that its aspirations, its highest hopes, were sure of speedy realization? But the press of the present day has little idea of ever dealing justly by the masses who produce. It is not "good form," aside from the interest which the wealthy owners of our leading journals may have in throwing obstacles in labor's onward march.

We all agree, then, that we have no favors to expect from what is termed the capitalistic press. Yet we are also forced to agree as to the desirability of possessing so powerful a weapon for defense and for offense. And that brings me to the point of what I wish to say which is this: Why do not workingmen sustain the journals which are published in their interest? That is a poser, is it not? You, Mr. Editor, have had many years of struggle in the field of labor journalism, and will appreciate the force of my charge when I say that the body of workingmen, even those who have the good sense to be organized, lack the judgment to appreciate the immense service which a prosperous, and therefore powerful labor press would be in the never ceasing conflict which labor is compelled to wage in order to restrain capital from crowding it to the very wall. Very few of the journals published in labor's cause are sustained as they should be, and many are crippled, if not put to death by the acts of the very class who should deem it their duty to sustain them. Now mark my words: the labor movement will never be successful, the work of organization will never be as complete as we hope to see it, unless the potent aid of the labor press is substantially recognized. The establishment of labor journals and their hearty support should go hand in hand with the enrolling of the army of toilers into unions and assemblies. Only thus can the latter be kept up to the good work.

If any one should think these remarks are not justified by the facts as they exist, let the critic take the case of the labor paper published at the place where he resides. What is the local circulation of *John Swinton's Paper* compared with the army of workingmen in whose behalf it labors so earnestly and well? What is the patronage of the Cincinnati *Unionist*, the St. Louis *Advocate*, and of all other labor journals, compared to that which workingmen in these same cities bestow on journals which are indifferent, if not actually hostile, to their interests? This is a state of things which we know exists. The sooner it is remedied the better. Let workingmen make up their minds that the editors of labor papers know their business better than those who delight in carping and finding fault, and that it is the duty of those for whom these editors toil, to uphold them with a fair degree of support; my word for it, by helping their journals the workingmen will help themselves. A. D.

MISTAKES IN PUNCTUATION.

Mistakes in punctuation, such as the omission or misplacing of a comma, may cause serious alteration to the sense of a passage. The contract made for lighting the town of Liverpool by wick-lamps during the year 1819 was rendered void by the misplacing of a comma in the advertisements, thus: "The lamps at present are about 4,050, and have in general two spouts each, composed of not less than twenty threads of cotton." The contractors would have proceeded to furnish each lamp with the said twenty threads; but, this being only half the usual quantity, the commissioners discovered that the difference arose from the comma following, instead of preceding, the word "each." In the following instance it was no doubt a bachelor compositor who, in setting up the toast, "Woman, without her, man would be a savage," got the comma in the wrong place, and made the sentence read: "Woman, without her man, would be a savage."—*Chambers' Journal.*

HOW TO SPLIT A SHEET OF PAPER.

It is one of the most remarkable properties of that wonderful product, paper, that it can be split into two or three even parts, however thin the sheet. We have seen a leaf of the *Illustrated News* thus divided into three parts, or three thin leaves. One consisted of the surface on which the engravings are printed; another was the side containing the letter-press, and a perfectly blank piece on each side was the paper that lay between. Many people who have not seen this done might think it impossible; yet it is not only possible, but extremely easy, as we shall show. Get a piece of plate-glass, and place on it a sheet of paper; then let the latter be thoroughly soaked. With care and a little dexterity the sheet can be split by the top surface being removed. But the best plan is to paste a piece of cloth or strong paper to each side of the sheet to be split. When dry, violently and without hesitation pull the two pieces asunder, when part of the sheet will be found to have adhered to one and part to the other. Soften the paste in water and the pieces can be easily removed from the cloth. The process is generally demonstrated as a matter of curiosity, yet it can be utilized in various ways. If we want to paste in a scrap-book a newspaper article printed on both sides of the paper, and possess only one copy, it is very convenient to know how to detach the one side from the other. The paper when split, as may be imagined, is more transparent than it was before being subjected to the operation, and the printing ink is somewhat duller; otherwise the two pieces present the appearance of the original if again brought together. Some time ago the information of how to do this splitting was advertised to be sold for a considerable sum. We now impart it to all our readers gratuitously. —*Exchange.*

PRINTER'S INK IS KING.

There is a host of men who boast
  Of powder, cotton, steam,
But every hour the mighty power
  Of printer's ink is seen.
It moves the world as easily
  As does some mighty thing,
And men proclaim in despot's ears
  That printer's ink is king!

The man of gold, of wealth untold,
  Printer's ink may scorn,
Or knit his brow, nor deign to bow
  To one so lowly born;
But printer's ink has built its throne
  Where minds their tributes bring,
And God's most gifted intellects
  Shout, Printer's ink is king!

King of the world of thought refined,
  No abject slave it claims;
Where superstition's victims pine,
  It bursts their servile chains.
In every clime, in coming years,
  Will men proud anthems sing,
And round the world the echoes float,
  That printer's ink is king!

STORY OF A CHAPEL CLOCK.

A curious story of a printing office clock has just come to our knowledge. About thirty years ago some compositors working in a provincial printing office thought they would like to have a clock. No sooner was the idea mooted than a subscription was commenced, and in a few weeks an excellent new clock was bought of a traveling hawker. The question soon arose as to whose property the clock should be. Some wished to "throw" for it, but this was objected to, because the owner might at any time take it away with him; so it was at last decided to let it be held on the tontine system, which was for the last subscriber left in the office to be the owner of the clock. A list of all the names of those who had contributed to the purchase was written out and pasted inside the clock case, together with a copy of the resolution, that when one name only remained of the list the clock should become his property. Time rolled on; men went away and returned, till at last, when nearly thirty years had expired, only one of the subscribers was left in the office. This man one day heard of a better situation, and was about to quit the office and take the clock with him.

On the day before this person (who we will call Mr. John) left, however, an old tramp called at the office and asked for relief. He said that he worked in that room many years before when a young man. Now, trade being rather plentiful, just then, the overseer offered the old man a few days' work, and he accordingly commenced operations at once. The next morning Mr. John came to pack up his effects, and one of the first things he did was to take down the old clock, which was ticking away merrily, suspended high up from a nail in the wall. As he opened the door at the back to blow out the dust, his eye caught the list of names inside, and he began to read them out, observing as he did so,

"Well, I never expected I should live to be the owner of this clock when I paid my subscription to buy it. I wonder how many of the poor fellows are now alive. Let me see, there were just twenty-one of them."

As he spoke he began reading out the names from the list, and when he came to one commencing with Robert, the old tramp, who was at work in a frame close by, called out, "Yes that's me; what's wanted?"

"You! Why, is this your name inside the clock?"

"Yes, sir; that's me, sure enough. I worked in this very room nigh thirty years ago, and now you read the names out I can remember the circumstance of paying towards buying that clock."

"Then, as there is another subscriber now working in the office, you are not entitled to dispose of the clock," remarked one of the comps. to Mr. John, as he was beginning to pack up.

"Decidedly not," joined in the old tramp. "According to the resolution, if this man leaves the office, and there is no other subscriber left, I think I can put in a claim to it."

A chapel was at once called to discuss the question, and to ascertain the identity of the claimant. The result of the deliberations was, that as Mr. John was no longer at work in the office the clock became the property of the tramp. At the close of his few days' work the chapel bought the clock of him for 10s., and after having it cleaned, it was once more hung up on the nail in the wall, where to this day it is ticking away right merrily.

THE MAN WHO "KNOWS ALL ABOUT IT."

Who has not encountered the client who "knows all about printing, you know?" He sails into your office to give his orders for circulars and posters.

"What do you say to this size? you blandly inquire, showing him a double-medium poster.

"Yes, that would do; or, say a size larger. This is demmy, isn't it?" he ventures, doubtfully.

"No, double-medium," you explain.

"Ah, we used to call that Dem-me."

"De*my*, you mean?"

"Ah, yes; we always call it demmy. Well, that size will do, and put some black Romans and some Gothics and Condensed in it."

Probably been looking through a type-founder's specimen book, you think, but do not say so.

"And with regard to the circulars?"

"Well, now, I want that put in plain Pica type—no nonsense, no flourish," says he emphatically.

"Do you really mean in Pica?" you ask, when you see enough copy to warrant it being set in Nonpareil.

"Yes! oh, I know something about printing, you know. I was apprenticed to the business, and worked at it for nearly a week."

You show him a circular set in Pica, when he exclaims:

"Dear me, no! Much too large—something about this size (pouncing on a line of Long Primer small caps) would be better."

Then he tells you he wants it on good foolscap paper. You show him a sheet of foolscap, folded to quarto, and he thinks that will do nicely, only it must be larger; and you discover that he wants folio post quarto, and that he thinks foolscap is a quality instead of a size. And with many valuable minutes wasted in many valueless references to long pica, small primer and "*Rejoice*, don't you call it?" he leaves the type question and discourses learnedly for some minutes about paper, on which subject, as you do not contradict him, he manages to land himself in a complete fog.

He presently backs out of the premises, leaving you in possession of his order and a soul thoroughly vexed, while he goes away fancying he is going to get his printing done at what he calls trade price, which he thinks is next to nothing.—*Printing Trades Journal.*

THE committee of management of the Technological Museum of New South Wales, report that the collections are rapidly increasing, and that the present building will shortly be greatly extended. Raw materials are shown, illustrative of nearly every industry, including the paper manufacture. The Government printer of Japan has forwarded from Tokio samples of Japanese paper and imitation leather, and Messrs. Brookes and Currie, of the Melbourne paper mills, have furnished a variety of samples of paper, illustrating the processes of manufacture at their mills. The United Asbestos Company, London, contributes a collection of specimens, illustrating the uses to which asbestos is put; Professor Liversidge, F.R.S., samples of fibre from New Zealand; G. Philip and Son, a valuable collection of schoolroom maps, atlases and class books; and Messrs. Caslon, specimens illustrating the manufacture of types. Patent literature is represented, whilst periodicals and works of reference have been sent from publishers of all nations.

PRINTING ON COLORED PAPER.

No kind of work so much taxes the resources, the knowledge, and the taste of the printer as printing on colored paper; hence the following data, the results of many experiments, may be appreciated.

BLACK ON VERMILION PAPER.

Pure black ink is quite useless for this purpose. All the trials made with the different qualities of black ink gave no satisfactory result. A mixture of Parisian blue and copal varnish, however, gave a good effect; but the best was obtained by using pure Paris blue, the recipe being:

Paris blue	5 parts.
Varnish (middle)	8 "
" (weak)	2 "
Copal varnish	1 "

BLACK ON LIGHT YELLOW PAPER.

The ink must be weaker than in the preceding case. The stronger the black ink selected the weaker will the impression be. The most suitable ink was found to be that made from the following recipe:

Paris blue	5 parts.
Common black ink	5 "
Copal varnish	2 "
Dryers	½ "
Linseed oil	1 "

BLACK ON DARK BLUE PAPER.

This can be satisfactorily done only by a mixture of one-third black and two-thirds Paris blue; the recipe being as follows:

Paris blue	6½ parts.
Black	4½ "
Copal varnish	½ "
Dryers	1 "
Linseed oil	1 "

RED ON YELLOW PAPER.

The best recipe is:

Geranium varnish	5 parts.
Weak varnish	6 "
Varnish (middle)	8 "
Copal varnish	2 "
Dryers	½ "

Instead of geranium varnish another red, for instance vermilion, may be used; the other component parts need not be varied.

RED ON BLUE PAPER.

The following is a useful recipe for this very difficult kind of printing:

Vermilion	5 parts.
Varnish (middle)	½ "
" (weak)	1-5 "
Tallow	¼ "
Lard	⅓ "
Copal varnish	1-5 "
Linseed oil	¼ "

BRONZE ON COLORED PAPER.

This, too, is a difficult kind of printing, especially as it is impossible to print with strong gold varnish. Let the following mixture be prepared:

Mordant brown	5 parts.
Linseed oil	2 "
Copal varnish	¾ "

WHITE ON BLUE PAPER.

The recipe is the following:

White lead	1 part.
Lard	5 "
Varnish (weak)	1 "

A rather light white lead should be selected. It is impossible to print white on hot-rolled blue paper, as the white is so easily rubbed away.

BLUE ON SILVER PAPER.

Use the following:

Milan blue	5 parts.
Varnish (middle)	5 "
" (weak)	5 "

In nearly every case the printing done as above is improved by hot-rolling. Let it be remembered that rollers suffer severely by the use of dryers, although they may generally be remelted. Red ink penetrates through a roller, and usually spoils it for any other job.— *British and Colonial Printer and Stationer.*

ACCORDING to Muller, a liquid for etching on glass has recently been introduced into commerce, and can be used with an ordinary pen. It consists of hydrofluoric acid, ammonium fluoride, and oxalic acid, and is thickened with barium sulphate. A better ink is obtained as follows: Equal parts of the double hydrogen ammonium fluoride and dried precipitated barium sulphate are ground together in a porcelain mortar. The mixture is then treated in a platinum lead, or gutta percha dish with fuming hydrofluoric acid, until the latter ceases to react.—*Dingl. Polyt.*

STANDARD MEASUREMENT.

The accompanying table, taken from a valuable little work of interest to employing printers, recently published by Mr. David Ramaley, of St. Paul, gives the correct measurement for the bodies of the Johnson Foundry. Several other foundries run smaller bodies which in large measurements would materially add to the number of ems of composition. The figures on the first line of the table give the increased number of ems in a square inch of the smaller bodies of other foundries. For example, in 10 inches of small body bourgeois, there would be 100 ems added to 576, making 676 ems in ten inches; in long primer the amount to add would be 43 ems, making a total of 563 ems.

NUMBER OF EMS IN SQUARE INCHES.

Sq. Inches.	Pica.	Small Pica.	Long Primer.	Bourgeois.	Brevier.	Minion.	Nonpareil.	Agate.
		7·4	4·3	10	7·3	8·5		30
1	36	43	52	64	81	106	144	171
2	72	86	104	128	162	212	288	342
3	108	129	156	192	243	318	432	513
4	144	172	208	256	324	424	576	684
5	180	215	260	320	405	530	720	855
6	216	258	312	384	486	636	864	1026
7	252	301	364	448	567	742	1008	1197
8	288	344	416	512	648	848	1152	1368
9	324	387	468	576	729	954	1296	1539
10	360	430	520	640	810	1060	1440	1710
11	396	473	572	704	891	1166	1584	1881
12	432	516	624	768	972	1272	1728	2052
13	468	559	676	832	1053	1378	1872	2223
14	504	602	728	896	1134	1484	2016	2394
15	540	645	780	960	1215	1590	2160	2565
16	576	688	832	1024	1296	1696	2304	2736
17	612	731	884	1088	1377	1802	2448	2907
18	648	774	936	1152	1458	1908	2592	3078
19	684	817	988	1216	1539	2014	2736	3249
20	720	860	1040	1280	1620	2120	2880	3420
21	756	903	1092	1344	1701	2226	3024	3591
22	792	946	1144	1408	1782	2332	3168	3762
23	828	989	1196	1472	1863	2438	3312	3933
24	864	1032	1248	1536	1944	2544	3456	4104
25	900	1075	1300	1600	2025	2650	3600	4275
26	936	1118	1352	1664	2106	2756	3744	4446
27	972	1161	1404	1728	2187	2862	3888	4617
28	1008	1204	1456	1792	2268	2968	4032	4788
29	1044	1247	1508	1856	2349	3074	4176	4959
30	1080	1290	1560	1920	2430	3180	4320	5130
31	1116	1333	1612	1984	2511	3286	4464	5301
32	1152	1376	1664	2048	2592	3392	4608	5472
33	1188	1419	1716	2112	2673	3498	4752	5643
34	1224	1462	1768	2176	2754	3604	4896	5814
35	1260	1505	1820	2240	2835	3710	5040	5985
36	1296	1548	1872	2304	2916	3816	5184	6156
37	1332	1591	1924	2368	2997	3922	5328	6327
38	1368	1634	1976	2432	3078	4028	5472	6498
39	1404	1677	2028	2496	3159	4134	5616	6669
40	1440	1720	2080	2560	3240	4240	5760	6840
41	1476	1763	2132	2624	3321	4346	5904	7011
42	1512	1806	2184	2688	3402	4452	6048	7182
43	1548	1849	2236	2752	3483	4558	6192	7353
44	1584	1892	2288	2816	3564	4664	6336	7524
45	1620	1935	2340	2880	3645	4770	6480	7695
46	1656	1978	2392	2944	3726	4876	6624	7866
47	1692	2021	2444	3008	3807	4982	6768	8037
48	1728	2064	2496	3072	3888	5088	6912	8208
49	1764	2107	2548	3136	3969	5194	7056	8379
50	1800	2150	2600	3200	4050	5300	7200	8550

A MODEL TIME TICKET.

We present herewith copy of a form of Job ticket, for the benefit of those printers requiring such. Properly filled out, it records the history of the job from the time it comes to the house to its entry in the book-keeper's journal. The Long Time ticket speaks for itself. It is supplemental to the regular ticket.

JOB TICKET.

This Ticket must be FILLED OUT with as COMPLETE INSTRUCTIONS as possible before job is given out.

Job No. ..... *Date*.....

Name.....

Address.....

PARTICULARS.

.....

.....

.....

Proof by..... *Job wanted*.....

How Blocked.....

Quantity..... *Ink*.....

STOCK.

.....

.....

.....

Cost of Stock $.....

COMPOSITION.

This Ticket must be FILLED OUT with FULL and CORRECT TIME by the compositor when the form is sent to press.

COMPOSITOR.	TIME.	COMPOSITOR.	ALTERATIONS.

Electrotyping $..... *Binding $*.....

New Material $..... *Ruling $*.....

PRESS WORK.

The pressman is responsible that this portion of the ticket be properly filled out, and, when practicable, an IMPRESSION OF THE JOB taken on the back.

PRESSMAN.	FEEDER.	TIME.

Total Time, ...

NO. IMPRESSIONS.	NO. FORMS.	INKS.		QUANTITY OF INK.
		Color.	Price.	

Total,

Compo		
Presswork.		
Stock.....		
Electro		
Ruling.....		
Binding.....		
Total Charges.....		

CHARGED.

.....

Jo. Folio.....

Book-keeper will charge this job

$.....

LONG TIME TICKET.

This Ticket is to be used supplementary to the regular job ticket, and MUST be attached to same on completion of the job.

No. of regular ticket.....

Name.....

Description .....

.....

.....

DATE.	COMPOSITOR.	TIME.	ALTERATIONS.

FIRE-PROOF PAPER.

A fire-proof paper is made by a combination of asbestos and infusorial earth.

About forty parts, in bulk, of fine or disintegrated asbestos fiber and about sixty parts of what is known as "infusorial earth" are taken and placed in a dry state in an ordinary beating engine, and then sufficient water is added while the machine is in operation to beat the mass into pulp just thin enough to form upon an ordinary cylinder. The web is taken from the cylinder and finished in the usual manner. The asbestos fiber is long enough to give strength and elasticity to the paper, and the infusorial earth, which is a good non-conductor of heat and fireproof, forms a filler or padding, the two adhering together strongly and forming a flexible paper, which may be used wherever ordinary paper board is employed, it differing, however, from ordinary boards in being fire-proof.

The infusorial earth should be calcined before use, to free it from impurities not fire-proof

If desired, and in some instances, a small quantity of lime, starch, or other cementitious substance is added. The proportion of asbestos and infusorial earth may be varied.—*Scientific American.*

WHO INVENTED METAL TYPES?

Meeting Colonel Rush C. Hawkins, I naturally referred to his book on early printers, which, after years of labor, has just been published. In the conversation which ensued, I gathered some curious facts; one of these is the improbability of ascertaining when the metal type was adopted, and who invented it. He said that it was probably enough that the wooden blocks and metal type had existed side by side in some establishments for a considerable time.

The great beauty of the early typography can be accounted for, by the fact that the invention of printing coincided with the renaissance in art, when the current meaning of the word "art" was very comprehensive, and embraced almost all handicrafts. The excellence and accuracy of many of the early texts is due to the scholarship of the early printers, who all knew Latin, and some of whom knew Greek as well.

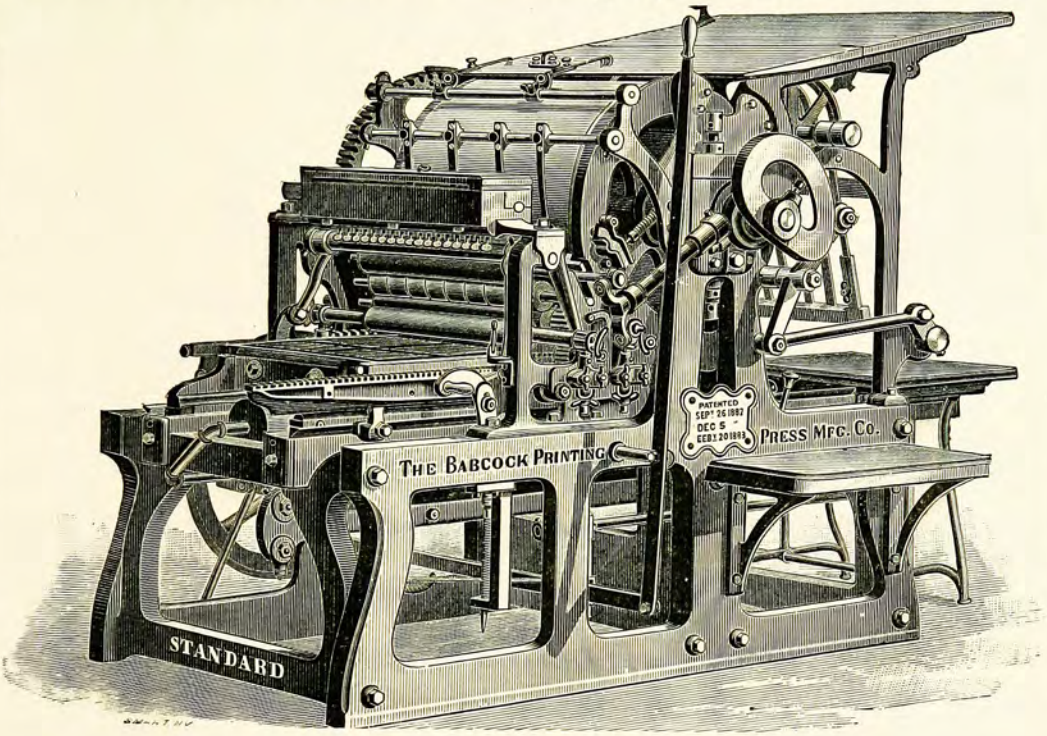
The Colonel spoke with an enthusiasm of Father Antonio Cheriani, Director of the great Ambrosian Library, at Milan, to whom the book is dedicated. Him he described as the typical scholar, brimful of learning, absolutely exhaustive in some directions, and yet with perfect unconscious simplicity. This Ambrosian Library contains Leonardo da Vinci's famous illustrated manuscripts on civil engineering, in which there is a drawing so closely resembling the Howe truss pattern of a bridge, that it was once in contemplation to get a copy for use in a suit relative to that patent.— *Exch.*

A JOURNALISTIC enterprise, upon somewhat novel lines, is on the carpet in England. Mr. George W. Plant, an English journalist, has for some time past been perfecting a project for establishing and publishing in London a daily newspaper devoted to the interests of the numerous American and Canadian visitors and residents in England and Europe generally. The principal feature of this new journal will consist of special cablegrams from every part of the United States and the Dominion of Canada, from specially appointed correspondents. *The Cable* will be the name of this news sheet.—*New York Tribune.*

BABCOCK PRINTING PRESS MFG. CO'S

Drum Cylinder, Two-Revolution AND Lithographic Pat. Air-Spring Presses.

New Style Elevated Fountain, allowing easier access to forms and furnishing better distribution than the old style.



Tapeless Sheet Delivery, Perfect Register, Rapid, Strong, Durable, Handsome, and Guaranteed in all respects.

BABCOCK "STANDARD" PRESSES.

These Presses are built from new designs combining strength and durability with increased capacity for speed, and embody several new and very important improvements, among them the following:

NOISELESS GRIPPER MOTION, with PERFECT REGISTER. AIR VALVE, for removing the spring when desired, and invariably restoring it when the press is started. THE SHIELD, which effectually protects the Piston and Cylinder from paper, tapes, etc., that might fall upon them and produce injury. THE PISTON can be adjusted to the size of the Air-Cylinder, so that the wear of either can be easily compensated. This easy, positive and perfect adjustment prevents leaks and vacuums and secures evenness of wear in the Air-Spring. THE ROLLER-BEARING has the following advantages: Any single roller may be removed without disturbing the others. All of the rollers may be removed and replaced without altering their "set." When desired, the form rollers may be released from contact with the distributor and type without removing the rollers from their bearings or changing their "set." THE INK FOUNTAIN is set very high, allowing easy access to the forms, and furnishes much better distribution than the old style. These improvements will commend themselves to the approval of printers and pressmen.

SIZES AND PRICES OF "STANDARD" PRESSES.

No. 1,	Size bed	19 x 24	$1,100.00	No. 5,	Size bed	29 x 42	$1,600.00
2,	"	20 x 26	1,250.00	6,	"	32 x 46	1,650.00
3,	"	25 x 31	1,400.00	7,	"	33 x 51	1,750.00
4,	"	27 x 39	1,525.00	8,	"	36 x 53	2,200.00

No. 9, Size bed 38 x 56.....$2,500.00

THE BABCOCK NEW TWO-REVOLUTION PRESS

DELIVERS THE SHEETS IN FRONT PRINTED SIDE UP.

In bringing out a series of Two-Revolution Presses, the BABCOCK PRINTING PRESS MANUFACTURING CO. has sought to not only combine the best features known in other machines of this class, but also to add a number of valuable improvements which greatly increase the durability, usefulness and convenience of these Presses. In addition to the general features of the Babcock Drum Cylinders enumerated above, the Two-Revolution Presses *deliver the sheet in front printed side up*, without the use of either fly or swinging arms. They also have the new *backing-up motion*, enabling the pressman to back up his press while the belt is on the loose pulley and without the aid of either gears or friction—a most valuable improvement. The mechanism for raising the cylinder is remarkably simple—an important fact when the tendency to wear and lost motion in the joints is considered, and also requiring less power to run. These Presses are made very heavy for speed, and in every respect thoroughly constructed.

THE BABCOCK PATENT AIR-SPRING COUNTRY PRESS.

The best Newspaper and Job Cylinder Press for the price in the market. Size of bed 32 x 46 inches, will work a 6-column Quarto Newspaper without "cramping." It is simple, strong, and in every way splendidly constructed. It combines all the latest improvements for fast and good work, together with beauty in design and solidity in all its parts. With its other qualifications it is capable of a high rate of speed; has perfect register, fine distribution, runs easily and almost noiselessly. It is adapted to all kinds of work, having Air-Springs and Vibrators on Form Rollers. Price, $1,100. Steam Fixtures, $50 extra.

The best material which the market affords are used in all our Presses, and are adapted and combined with a special view to secure the best possible wearing qualities. All the running parts are made and adjusted with extra care. All the patterns are new, and carefully studied with a view to combining simplicity, strength and durability. All gearing is accurately cut with new and improved machinery, with cutters made on scientific principles. Prices include boxing and delivery on cars at New London, Conn.

BABCOCK PRINTING PRESS MFG. CO.

BARNHART BROS. & SPINDLER, Gen'l Western Agents,
115 & 117 Fifth Avenue, CHICAGO.

NEW LONDON, CONN.

PERSONAL.

MR. JOSEPH SPRAGUE, representative of Geo. Mather's Sons, of New York, the well known ink manufacturers, is in town. He is as jolly as ever.

MR. S. P. ROUNDS, government printer, has been in the city for some days past. He has been interviewed by a large number of his old friends, and is looking as fresh as a daisy. THE INLAND PRINTER acknowledges the compliment of a call.

WE had the pleasure of a call a few days since from Mr. Ault, of the firm of Ault & Wiborg, manufacturers of printing and lithographic inks, Cincinnati. He reports an improvement in business.

LOCALS.

S. P. ROUNDS, JR. has started in the printers' supply business, at 186 Fifth avenue.

THE ILLINOIS TYPE FOUNDING COMPANY have just issued their first supplement to their Specimen Book of 1883.

W. K. WEAVER has been elected secretary and treasurer of the J. M. W. Jones Stationery Co., in place of Mr. Mars, resigned.

CARDY, BARSTOW & Co., job printers at 84 Market street, were recently burned out. Loss, $4,000; insurance, $2,000.

MR. THOS. FAULKNER, of the book room, has succeeded to the foremanship of the J. M. W. Jones' job room vacated by Mr. Gillespie.

WM. F. RUSSELL, stricken with paralysis a few weeks ago, is improving, and is now able to visit the printing offices with the aid of a crutch.

GEORGE H. TAYLOR, 140 to 146 Monroe street, has recently taken probably the largest order for paper ever given in Chicago, it amounting to over $250,000.

IT is stated that MacKellar, Smiths & Jordan, the well known Philadelphia type founders, will shortly establish a branch foundry in their Chicago building.

WM. PROCTOR, for many years foreman of the *Live Stock Journal*, and a life-long consistent member of the union, died October 17th, of pneumonia, aged 67 years.

M. H. MADDEN, who has been for some time at Hot Springs, Ark., being treated for a dangerous and stubborn case of eczema, has returned to his labors in this city, apparently cured.

AT the recent disastrous fire, on the corner of La Salle and Michigan streets, the repair shops of the Campbell Printing Press Company were totally destroyed. Loss, $20,000; insurance, $15,000.

CARHART, WRIGHT & Co. have been added to the long list of non-union offices sold out by the sheriff during the past year. It confirms Darwin's theory of the "survival of the fittest"—the union offices.

IT will doubtless gratify the many friends of Mr. Wm. Lindsay, manager of the Illinois Type Founding Company, of this city, to learn that he is slowly but surely recovering from his long and severe illness.

PETER PETERSON, publisher of *Der Nye Tid*, a Danish weekly, published at Chicago, has made an assignment. He states his liabilities to be $1,569; and his assets, consisting of type, printing material and subscriptions and advertising, bills $2,700.

MR. DAVID B. COOK, the well known publisher and bookseller of this city, died on Tuesday, October 29, in the 59th year of his age. He had been a resident of Chicago since 1851, and at the time of his death was purchasing agent for the American Express Co.

THE Shniedewend & Lee Company have been incorporated at Chicago with a capital of $100,000, for the purpose of doing an electrotyping and stereotyping business, and to manufacture printing presses. The incorporators are Paul Shniedewend, Jas. L. Lee and Henry F. Wellman.

THE Levytype Co., 75 and 76 Market street, have just issued a sample book, showing specimens of work done by the Levytype photo-engraving process. It is from the press of Shepard & Johnston, and contains a large number of finely executed engravings, reproductions from photographs and pen and ink drawings, that reflect credit on the company.

WE learn from Mr. E. A. Blake, the Chicago representative of the Cottrell Press Company, that he has recently supplied Mr. P. G. Thompson, of Cincinnati with a full line of Cottrell presses, also a complete stereotyping outfit. The presses are all of their new style front delivery.

BUSINESS in the printing line continues exceedingly depressed in this city, and large numbers of craftsmen are idle. Secretary Rastall reports 323 arrivals, to November 6, by traveling card since May 1, last, and states that this number does not include those who arrived and departed again without obtaining employment, who numbered at least 100 more.

WE direct the attention of our readers in the West to the advertisement of Tenney & Reese, manufacturers of all kinds of hand stamps, rubber, dating, official seals etc., and we can say from an actual knowledge of their workmanship that they cannot be beaten in the United States either in price or quality. If you are requiring anything of the kind write them for their catalogue.

A. ZEESE & Co., electrotypers, 155 and 157 Dearborn street, have the largest and most complete assortment of calendars in this country as a look at the many exquisite designs to be found in their book of specimens will verify. They range in size from the country town quarter sheet to one which can be carried in the vest pocket without inconvenience. Country publishers and printers would do well to remember this fact.

GEO. FANTLEY, a compositor with one hand only, paid this city a brief visit a few days since. He was born with the right hand missing. Holding the stick against his body with the stump of the right arm, he sets type with the left hand. He is above the average compositor in rapidity and workmanship, and claims to be as useful in the job room, as in straight composition. Mr. Fantley, finding Chicago overrun with printers, started for the South.

THE MARCH OF THE CAMERON MEN.—On Saturday evening, October 9, Mr. D. R. Cameron of the firm of Cameron, Amberg & Co. printers, stationers, etc., 71 and 73 Lake street, was married to Miss Emma Grange, daughter of Davis Grange, Esq. After the ceremony the happy couple left on an eastern trip. On their return they will be at home to friends at their residence 630 Washington Boulevard. Friend C., we wish you health, wealth and happiness, and the sharer of your joys and sorrows every blessing which this world can bestow.

EQUAL TO THE BEST.—A few days ago we had the pleasure of examining, at the establishment of Messrs. Ostrander & Huke, 81 and 83 Jackson street, an "old style" Gordon press, every portion of which had been manufactured by the above named firm on their premises. In point of finish, workmanship and material it was equal in all respects to any similar press which was ever made outside of Chicago, while in ease and smoothness of motion it could not be surpassed. As both members of the firm are finished, practical workmen, who devote their entire attention to the supervision and execution of all orders intrusted to them, their customers can rest assured that nothing of an inferior character is allowed to leave their establishment.

MR. JAS. GILLESPIE, for some years foreman of the job department of the J. M. W. Jones printing house, has returned to the ticket department with which he was formerly connected. On Saturday afternoon, November 8, he was presented with the following address, accompanied by the signatures of the employes. The presentation was made by Mr. J. H. White, and feelingly responded to by Mr. Gillespie, who carries with him to his new field of labor, the respect and best wishes of his former associates, who always found in him the courteous, conscientious gentleman, who while a faithful conservator of the interests of the firm he represented, never forgot that employes have rights which even foremen are bound to respect.

TO J. GILLESPIE, ESQ.: CHICAGO, November 8, 1884.

It was with feelings of deep regret we learned you were about to sever your connection with our Department, over which you have so ably presided for several years. We cannot let the opportunity pass without expressing our strong appreciation of the gentlemanly demeanor you have always exhibited toward employes. We are rejoiced to know that your *form* will still be seen within our establishment, and we trust that the star of prosperity may continue to shine on you brightly.

As a token of our esteem we ask your acceptance of "Chambers' Encyclopedia."

DEATH OF WILBUR F. STOREY.—The demise of this well known journalist occurred at his residence in this city on Monday evening, Oct. 27th. He was born in the town of Salisbury, Vt., in 1819, and was consequently in his 65th year. Though connected with several journals during his lifetime, it was as the proprietor of the Chicago *Times*, which he purchased from Mr. Cyrus H. McCormick in 1861, that he attained his notoriety, which was not altogether of an enviable nature. He was able, energetic and vigilant, but his distinguishing traits of character were far from lovable, or even worthy of emulation. While he made the *Times* a phenomenal success and established a national celebrity, the *sensational* invariably predominated in its columns, often at the sacrifice of truth, and generally at the expense of the better feelings of society. In the collection of news, however, the *Times* had literally no rival, as neither money nor agencies to obtain it were spared, while its corps of reporters were among the best known in the country. He was a man of iron will and indomitable energy, but possessed none of the finer feelings which dignify true manhood. He was an ardent opponent of the Typographical Union, and died as he lived, its bitterest enemy. But he has gone, and the Chicago *Times* remains, and will remain, as a splendid monument of his journalistic ability and business management.

A FRAUD.

The following is a copy of a communication received by us from a fellow craftsman:

PITTSBURG, October 27, 1884.

Inland Printer Co.

DEAR SIR,—On last Decoration Day I paid one dollar to one James Clark, a printer of this city, who represented himself to be your agent, for a subscription to your journal. I have never received a copy yet. I hear of others who have been treated in like manner. Yours, etc.

We desire to call the attention of our friends throughout the continent, that the only gentlemen authorized to receive and receipt for subscriptions in our behalf are those whose names we publish each month, and that in any case where the subscriber fails to receive his copy promptly, our secretary should be apprised of the fact. We beg to inform our Pittsburg friends that the above named person has no authority whatever to act for us, and that any subscriptions he may have taken have been obtained by false pretense, if he represented himself as our agent, and should they prosecute the swindler we will do our part to furnish evidence to convict him. In any case of doubt send your money to our Chicago office and a receipt will be mailed you per return.

OF INTEREST TO THE CRAFT.

PHILADELPHIA has become the nursery for one cent daily papers.

E. B. WALKUP, of Delphos, Ohio, has invented a feed guide for printing presses.

TYPOGRAPHICAL UNION No. 30, of St. Paul, has put in operation a new scale of prices. For some time back the scale has been suspended.

M. M. POMEROY, better known as "Brick," has begun the publication of a paper in New York City, which he calls the *United States Democrat*. Its politics are indicated by its name.

THE contract for printing the poll books of St. Louis goes to Buxton & Skinner, at fifteen cents per name. Twenty cents was the price paid for the last contract. There are upwards of 60,000 names registered.

F. F. DONOVAN, New York State Deputy of the International Typographical Union, has been making an extensive tour of that state. As a result of his trip five or six new unions will shortly be established.

HERMAN H. STOLTZ, of Clarion, Pa., is missing, and his wife desires information of his whereabouts. When last heard of he had left Bradford, Pa., with a Bradford card. Address Mrs. H. H. Stoltz, Clarion, Pa.

THE compositors of the Sabine Pass (Texas) *Times* were presented with a number of very suspicious looking bottles from a first-class saloon. As the aforesaid compositors are all girls the compliment was rather dubious.

FREDERICK B. OPPER, whose grotesque illustrations in *Puck*, notably those accompanying Bill Nye's articles have brought him well earned praise, is but twenty-seven years of age. Acquiring the trade of compositor in his native place, Madison, Ohio, he went to New York at the age of eighteen, and began work on *Wild Oats* as draughtsman, from which he went to Leslie's and, after three years to *Puck*.

A PETITION is being circulated by the Typographical Union of St. Louis against the convict labor system, which is meeting with signers among the foremost business men, showing that progressive ideas are taking root.

THE New York *Evening Telegram* now brings out but one edition, the five o'clock. The suspension of the earlier editions is a sensible move, resulting in economy, and allowing copy to go to the composing room several hours later.

IN 1769 the first type foundry in America was established by Abel Buell, at Killingworth, Ct., in which he made good long primer type. That year he had asked assistance of the Connecticut Legislature in establishing a type foundry.

IT is stated that James Gordon Bennett has sold a third interest in the New York *Herald* to John A. Mackay, the Nevada millionaire, to enable him to go into his cable scheme. It is also stated that the *Herald* lost $100,000 last year.

A COTTRELL printing press was used by the *Electric World* in the Electrical Exhibition at Philadelphia for printing the paper. It is run by a Daft motor, which receives its power from a Daft dynamo. The dynamo is driven by a straight line engine.

THE cities of New York, Brooklyn, Jersey City, Newark, Philadelphia, Boston and Chicago, with an aggregate population of 3,750,000, and with eighty-four daily newspapers, issue an aggregate edition of 1,693,000, being at the rate of 140 copies per annum for each person in those places.

MESSRS. R. HOE & Co., New York, are building a perfecting press to print a twelve-page paper directly from type at the rate of twelve thousand per hour, and to work either eight, ten or twelve-page editions. They are also building a press for the New York *Telegraph* that will print seventy-two thousand folio sheets per hour.

GEORGE W. WEAVER, the publisher of the Ilion *Citizen*, on the 26, ult. printed the first newspaper in the world the type of which was entirely composed by a type-setting machine. The entire edition of 5,000 copies was printed by the aid of an electric monitor, the same which on March 14 printed Mr. Weaver's journal, being the first in the world to accomplish the feat.

FATHER PRESCOTT, the oldest printer in Iowa, and, perhaps, in the West, died at his home in Corning recently. Mr. Prescott began as a printer in 1819, and at the age of sixteen years, and until he lost his sight a year ago and became totally helpless, followed the craft. He was a native of New York, and was at the case alongside of Horace Greeley when the latter was a tow-headed boy apprentice at the trade. Sixty-four years almost continuously at the case — almost twice the average life-time of printers — is the record left by Father Prescott.

REV. LEONARD WITHINGTON, of Newbury, is probably the oldest printer in the United States, as it was eighty years ago that he became an apprentice to Messrs. Thomas & Andrews, of Boston (at that time the leading publishers and booksellers of New England). After laboring several years at the business, Mr. Withington left the same and prepared for the ministry, and is the oldest Congregational divine in New England. He has a son, editor of the Newburyport *Herald*, and a grandson who labors at the case, and is a member of the London (England) Typographical Union.

WE are pleased to announce the election to Congress, from the Thirty-second New York (Buffalo) Congressional District, of our old and esteemed friend, John M. Farquhar. Although his election was bitterly opposed by the *Express* and *Telegraph*, the old soldiers and workingmen pulled him through. Mr. Farquhar is a printer by profession, and an ex-president of the International Typographical Union. He is a Scotchman by birth, a thorough American in every fibre of his composition, an earnest, unflinching advocate of the rights of the industrial classes, and, above all, an honest, able, true-hearted man.

A SOUTH BEND (Ind.) correspondent of *The Craftsman*, under date of October 29, writes as follows: As many of the papers have a good

deal to say in regard to old printers, I would like to say a few words. We have a typo in this (*Tribune*) office, Lea Johnson, familiarly known as "Pap" Johnson, who has worked continuously at the case since 1832 (fifty-two years), and from appearances is good for several more years. He worked for ex-Vice-President Colfax during all his newspaper days, and is a valued personal friend of the distinguished statesman. "Pap" has a son now working in the government office in your city. This equals if not excels any "old print" story yet published, and is true, as any one can find out by calling at this office.

THE many interesting stories told of men, in the latter part of their lives, acquiring large stores of learning may be very encouraging to middle aged and old men; but they afford no proper example for boys and young men, to incite them to put off study until their powers are dulled and weakened. The best time for the acquisition of knowledge is in the heyday of youth and young manhood, when it is most easily retained. When mature years arrive, each one has generally to bear burdens and cares unknown to him earlier, leaving him little opportunity for gaining the knowledge that he may desire. Especially is this true in regard to technical learning of any kind. We often hear men say that if they could live their lives over again, they would devote a larger share of their time to a more thorough acquisition of the details of their chosen avocations, and some essay to do this even in middle life. Unfortunately, they begin too late, and they have to bear the torment of useless regrets, and, in middle life, to see younger men advanced over them to places that, under other circumstances, they could have better filled. As men aim to secure material wealth while in their fullest vigor, that they may enjoy it in middle life and old age, so should the young workman gather stores of practical wisdom for use when manual labor can, in a measure, be given up, and the acquirements of early years made use of in directing and governing the labors of others. Employ the present time in study, and do not put it off till you are worn out.—*Lithographer and Printer.*

FOREIGN.

IN the city of Canton, China, which has a population of 1,500,000, there is not a newspaper of any kind.

A RECENT inquiry into the affairs of the Servian government printing office has brought to light the fact that the amount of outstanding debts is over £20,000.

ON or about the fifteenth of November, the Grolier Club of London will hold its second exhibition, the subject being missals. The exhibition will remain open for several days.

THE *Hiogo News* says a large number of machines have been sent from Nagasaki to Shang-Hai, for the purpose of establishing there a Japanese printing office and a Japanese newspaper.

The coöperative associations of the Paris compositors do not seem to have prospered. The shareholders of the Grande Imprimerie have almost unanimously resolved to liquidate, and the Imprimerie Nouvelle will follow the same step.

HERR GUNTHER, machine minder at Klinkhardt's printing office, at Leipsig, has invented and patented a new self-flyer, which not only takes the printed sheets from the cylinder, but automatically ranges them on the taking-off board.

JOURNALISM is in a flourishing condition in the little kingdom of Greece. There are 122 printing houses, which produce annually about 1,000 different works. Nearly every village has its newspaper. In Athens alone there are no fewer than 54 political papers.

THERE is published once a month at Yokohoma an extraordinary comic called the *Japan Punch*. It consists of about a dozen pages, lithographed, both text and pictures, on the thinnest paper imaginable. The drawings are rough but exceedingly funny.—*Paper World.*

THE late Mr. James Figgins, of London, who was for many years on the Court of the Stationers' Company, has bequeathed £3,000 Oude Rohilcund Railway Stock to the company, to establish four pensions of £24 per annum each for aged, sick or worn out compositors.

THE *Paper and Printers' Journal* says:—As illustrating the rapid growth of some of the large metropolitan printing firms, it was stated at a recent festival gathering of the managers and clerks associated with Messrs. Waterlow & Sons, Limited, that, exclusive of the staff, 3,240 hands, at a weekly cost of £4,157, are now employed by the company, as against 2,459 hands receiving £2,997 in wages in 1877.

THE town of Norwich, in England, has a newspaper 170 years old—the *Mercury*—which was started, or is supposed to have been started, in 1714. From the year 1727 the file in the office of the proprietor is complete. Reprints of the issues in 1727 are being made.

THE Melbourne Typographical Society has just held its half-yearly meeting. According to the report and balance sheet the society is in a very flourishing state, both financially and numerically. A sum of twenty pounds was voted on behalf of the proposed Working Men's College.

SPAIN imports by far the greater part of its paper from Germany, the quantity coming from that country last year reaching 1,304,300 kilogs., against 909,417 from Belgium, 697,275 from France, 179,516 from England, 113,830 from Austria. The best kinds of paper are supplied by France.

HERR KRUPP, the great German manufacturer of guns and war material, does his own printing. At his works, at Essen, he has a complete printing office, comprising three machines and six hand presses, besides the usual accessory plant. There is also a lithographic branch and a photographic studio.

MR. JOHN SANDS, printer, of Sydney, proprietor of "The Official Directory and Year-Book of Australia," offers premiums of £10 for the best suggested improvements in the contents of the volume, and a similar sum to the person who can find the largest number of mistakes (not typographical) in the issue for 1884.

AN important and valuable book has just been issued from the printer's. It is a catalogue of all English printed books from the invention of printing of the year 1640, contained in the British Museum, and consists of three handsome volumes, arranged alphabetically under the name of authors. The indexes of printers and titles are of great value.

A FACTORY inspector lately summoned an employing printer trading in the West-end of London for ignoring those provisions of the act which direct factories to be periodically lime-washed. In pressing the case before the magistrate the inspector asked that a heavy fine should be inflicted, as he had called attention to the same circumstances, at the same place, two and a half years previously.

WHEN Koenig, the inventor of the printing machine, returned to Germany, in 1817, there were only one or two machine paper mills, and it was his great aim, in which he finally succeeded, to establish one himself. Now Germany possesses 620 factories for paper and pasteboard, with 826 machines at work. Besides these there are about 100 small mills for hand-made papers, with about 200 vats.

THE *Gaulois* now undertakes to pay a sum of 5,000 francs, at the decease of any subscriber who may meet with his death on a railway or tramway, or by being run over by a vehicle in the street. A proportionate sum is paid for injuries received. All that is necessary to produce is the last receipt of subscription. The *Gaulois* also pays compensation to any purchaser of a single copy, or his heirs, should he be injured or killed on the day on which the paper is bought.

THE employment of web machines for daily newspapers has become all but universal, and no doubt their application to book work is only a question of time. Messrs. Brockhaus, of Leipsic, are now using a web machine for printing the new edition their Conversations Lexicon, and report very favorably of its achievements. Its reputed speed is 10,000 per hour, and Messrs. Brockhaus obtain usually about 8,000 hour. The machine we saw in operation was of moderate dimensions, large enough probably to take a sheet of double demy.—*Exch.*

OUR colonial brethren will soon be on a par with the British newspaper proprietors in the rapid production of their journals. Mr. Conquest, the London manager of Messrs. R. Hoe and Co.'s manufactory, informs us that they have nearly ready for exportation two full-sized rotary news machines, to work from the web, with folders also, for the *Melbourne Age*, the circulation of which has grown so enormously that nothing less than two of these fast machines are equa to its production.—*British and Colonial Printer.*

IT has been computed that the average number of unemployed operative printers in Germany was for the year ending June 25, last, 1500. This excessive number of unemployed is attributed, not to any falling off in the printing trade, but to the fact that far too large a number of apprentices is annually indentured. At the present time there are said to be in Germany some 7000 printer's apprentices, and rather less than 16,000 journeymen. The membership of the Friendly Society of German Printers comprise 11,000 operatives.

THE electric light is being adopted in Australian printing offices. Its installation in the *Brisbane Courier* (Queensland) composing-room was witnessed by a large number of visitors. The *Brisbane Courier*, the *Daily Observer*, and the *Queenslander* staffs were all at work on the occasion. The "electric light edition" of the *Observer* was printed in the presence of the visitors on pink-toned paper specially supplied from England, each visitor being presented with a copy. It contained two interesting articles on "The Electric Light."

THE second competition for jobbing work invited by M. Berthier, of Paris, has proved a comparative failure. There were three prizes—a first prize of 200 francs, and a second prize of 100 francs for the best composition, and a prize of 150 francs for the best press work. There were eight competitors, of whom four were from Paris. The first prize was not given, and the second was obtained by a compositor for a title-page. The prize of 150 francs for the best press work was also not awarded. The best work was sent in by a Paris pressman, Groené, but he died before the awards were made.

LIKE the Hungarian, the Austrian newspaper press has made decided progress in recent years, especially since 1872, notwithstanding the legislative restrictions placed upon it. The number of periodicals was 866 in 1873, and has risen gradually to 1,378 in 1882. The number of daily political papers rose from 97 to 100, weeklies from 287 to 358, monthlies from 152 to 311. The greatest increase has been in belletristic and comic papers, the numbers of which rose from 78 to 118. The military papers decreased by one. Of the 1,378 papers which appeared in 1882, 912 are in German (against 590 in 1873, an increase of 322), whilst papers printed in the Czech language numbered only 176 (105 in 1873, an increase of 71).

MANY printers have doubtless wondered why Dr. Mackie's composing machine—undoubtedly the best and most original yet introduced—has never been employed elsewhere than in his own office. It now appears that he is not satisfied with its performance, and has of late been turning his attention to simplifying and increasing its productiveness. We learn that he has discovered a method whereby his machine may be made to set four times as many types in an hour as it does now. At present it works at the rate of 8,000 letters per hour; the new one will produce at least 32,000 an hour, or a quantity of matter equal to three news columns of the *Times*. He intends to work it with logotypes—as, ac, be, co, etc. This will materially increase its productive power. It is intended to do away with distribution entirely, the news type of the previous day being recast each morning.—*The Paper and Printing Trade Journal.*

ITEMS OF INTEREST.

THE Telford prize has been awarded by the Institution of Civil Engineers to Mr. J. W. Wyatt for the best essay on the art of paper-making.

NEW SOUTH WALES possesses, it is said, in large quantities, several kinds of wood suitable for the use of engravers, such as the yellow box, which has a fine close grain, and corkwood, a beautifully fine white timber.

THE invention of paper bags has been ascribed to the Moravians of Pennsylvania some fifty years ago. Their thrifty habits would not permit the waste of paper employed in the old-fashioned method of putting up bundles.

MORE than three-fourths of the cedar used in the manufacture of cedar pencils in the world is shipped from Florida; large groves of cedar grow up and down the coast and the Suwanee river, and the supply seems inexhaustible.

THE LAPI OAKE, which means "the wood carrier," is the name of an Indian newspaper published at the Santee Agency, Nebraska, under the supervision of the Rev. Alfred L. Riggs. There are two editions printed, one in English and one in Indian.

MULLER'S Artificial Lithographic stones consist principally of carbonate of lime, to which small percentages of alumina and silica, as well as metallic oxides, are added. The various qualities of the stone are obtained by a proportionate mixture of these substances.

T. FLETCHER, of Warrington, has designed a new book finisher's stove which is said to be an improvement on those now used. It is so arranged that the wood handles of the tools cannot be burnt, and the longest wheels may be heated evenly and quickly over the center hole, through which all the waste heat rises. The letter-plate is removable, so that a glue-pot may be heated by the stove.

PAPER may be stuck on wood by means of this solution: Gum arabic, half-ounce; powdered gum tragacanth, half-ounce; water, one and one-half ounces and acetic acid, twenty drops; it will cause labels to adhere very firmly without staining them, unless the paper is of an unusually bad quality. A clear solution of gum arabic applied once or twice is all the varnish required in finishing for most purposes.

FOR ENAMELING CARDBOARD AND PASTEBOARD.—Dissolve ten parts of shellac in a sufficient quantity of alcohol and add ten parts of linseed oil. To each quart of the mixture add also about one-fourth of an ounce of chloride of zinc. The board may be immersed in it or the solution applied with a brush. The board is thoroughly dried and the surface is polished with sand-paper or pumice before applying this preparation.

FLOUR PASTE is much used by bookbinders for fastening sheets of paper or paper and cloth together. This may be made stronger by the addition of a small quantity of glue. Starch is also much used for mounting, where clear work is required. A little white glue added to the starch strengthens it. A little gum tragacanth in the paste or starch also strengthens and makes clean work. The sheets should be pressed if flat work is required.

MR. ALBERT R. BAKER, of Indianapolis, Ind., has secured patents upon a numbering attachment for printing presses. The press has an additional cylinder, with numbering heads properly mounted thereon, and appropriate mechanism for operating them, the cylinder being in such relation to the regular cylinder that the numbers in the numbering heads will come in contact with the paper thereon as the cylinders revolve, with various other novel features.

THE GERMAN SODA PROCESS CHEMICAL-WOOD PULP.—At the International Forestry Exhibition, at Edinburgh, specimens of this pulp, in successive states of preparation from the wood to the paper produced entirely from the pulp, and made both by hand and machine, were shown. Some estimate of the present extent of the trade in wood-pulp with this country may be formed by a reference to the published import returns, which show that one firm alone has received about 11,000 bales of the material during the past twelve months.

A REGULATOR for paper drying machines has been patented by Mr. Augustus H. Morrison, of Mechanicsville, N. Y. The invention consists in journaling one of the top rollers in one arm of a three armed lever, to another arm of which is attached a rod and tension spring, while to the opposite arm is connected the handle of a steam valve for regulating the supply of steam to the drying cylinders; there is also a bell for giving alarm if the web of paper breaks, with other novel features.

RESEARCHES made by M. Kayser, of Nuremberg, have shown that a gold varnish, distinguished both by its hardness and beautiful color, may be obtained by the use of picric and boracic acid. A very pure solution of gum lac should be mixed with picric acid, and about half per cent of crystallized boracic acid, the two acids having been previously dissolved in alcohol. In this way a gold varnish may be prepared possessing all the advantages of those that are met with in commerce.

ALTHOUGH petroleum oil is a highly useful fluid for cleansing wood letter or wood-cuts, the printer should be cautioned that it is highly injurious to type and stereo-plates. While it has no effect in opening the pores of wood, but on the contrary, hardens the surface, rendering the face peculiarly smooth, it corrodes or rots the metal, and leaves a white

powder on the face, which, although it may be removed with a brush, shows that the type has been injured. Besides this petroleum is highly dangerous on account of its inflammability.

MERIMEE gives the following properties as characteristic of superior ink: "When broken, its fracture is black and shiny. The substance is fine in texture, and perfectly homogeneous. When you rub it with water you do not feel the slightest grit, and, if you mix it with a great deal of water, there will be no sediment. In drying its surface takes upon itself a skin which has a metallic appearance. It flows easily from the pen, even at a low temperature, and, when it has dried on the paper, a brush charged with water passes over it without disturbing it. This property is very remarkable, for the same ink dried upon marble, ivory, or porcelain, gives away as soon as it is wetted."

COPPERPLATING ON ZINC.—Take an organic salt of copper—for instance, a tartrate. Dissolve 126 grammes sulphate of copper (blue vitriol) in two litres of water; also 227 grammes tartrate of potash, and 286 grammes crystallized carbonate of soda in two litres of water. On mixing the two solutions a light bluish green precipitate of tartrate of copper is formed. It is thrown on a linen filter and afterward dissolved in a half litre of caustic soda solution of 16° B., when it is ready for use. The coating obtained from this solution is very pliable, smooth, and coherent, with a fine surface, acquiring any desired thickness if left long enough in the bath. Other metals can also be employed for plating, in the form of tartrates Instead of tartrates, phosphates, oxalates, citrates, acetates, and borates of metals can be used, so that it seems possible to entirely dispense with the use of cyanide baths.

THE BANK OF ENGLAND PRINTING OFFICE.—A correspondent of the London *Press News*, in describing this establishment, says: "Besides the usual composing, press and machine rooms, there is a very complete stereo-foundry connected with the establishment, as well as an extensive warehouse and binding department. Although there is always an amount of regular work, giving constant employment to the ordinary staff of the bank printing-office, there is also a large amount of what may be called periodical work, necessitating the assistance of additional or "grass" hands at case. The regular staff comprises about fifty printers, and in times of pressure it is not unusual to call in the "reserve forces" of from sixty to eighty. During the last month the department has been called upon to issue about 300,000 printed packets in connection with the National Debt (Conversion of Stock) Act, 1884."

THE report of the French consul in Mexico throws some additional light on the paper imports to that country: "All the papers used come from France, England, the United States and Germany. Ordinary papers come from Belgium, but superior or fancy papers are mostly imported from Austria. French newspaper would be much more used (French news is about the worst and dearest in the world—*Trans.*—) if the manufacturers would only reduce their prices. Counting house stationery comes more from the United States and Germany than from France." Speaking of imports of books the report states that France does most in this line, then comes Spain, a little is done with Germany and Belgium and *very* little with the United States. Almost all the young men in the cities can read French, and books in that language are used in all the colleges for scientific and other studies. Many of the Spanish works are printed in Paris. There is no duty on imported books, unless they are *de luxe* with ivory or fancy bindings.

THE economy of having office stationery put up in "pads" or tablets is fully recognized by the business public, and this branch of the printing business is assuming large proportions; a single order lately placed with one of our large houses for 300,000 tablets, consumed 18,600,000 sheets of paper, which placed in a row would extend 9,300,000 feet, or 1,761⅓ miles; or piled on top of each other would be one mile and a quarter high. An ingenious, yet simple, machine has been patented by Golding and Co., which overcomes every difficulty in making pads, and reduces the cost to the merest trifle. It can be operated by an office boy. This machine has had a surprisingly large sale among stationers, binders, and printers, and is conceded to have met a "long felt want." It is advertised in another column, and merits attention. Golding & Co. have in the past introduced many labor-saving machines, and their new catalogue of 166 pages has just been issued, and will be sent to any address on receipt of three two-cent stamps. It is in fact a printer's hand-book, profusely illustrated, covering the entire range of a printer's requirements, and containing a deal of interesting information not hitherto collected in one volume. The address of the firm is, 183 Fort Hill Sq., Boston, Mass.

COUNTRY NEWSPAPERS.

The country newspaper is the most useful and least compensated of all the agencies which stamp the impress of progress upon villages and inland cities. Without the aid of local newspapers local towns are, as a rule, thriftless and dead. It is common for small great men to speak with contempt of the local newspapers, but the village newspaper makes more great men out of less material—more bricks without straw—than any other factor in politics, and it is the one ladder on which men climb to local distinction as the beginning of wider fame. The advent of the local newspaper has always dated the increased thrift of the community. The local newspaper is the life of the locality, and the measure of its support, as a rule measures the advancement of the people. Not only subscribe but pay for your local newspapers. They are friends and helpmates of all seasons.—*Philadelphia Times.*

RECIPES FOR THE REMOVAL OF STAINS.

To remove stains from prints or pictures, the following recipes give excellent directions:

1. GREASE SPOTS, if of long standing, may be taken out with caustic potassa, applied in a more or less concentrated solution to the back of the sheet of paper in question. The printing, which may have a grayish appearance after the removal of the grease spot, should be touched up by an application of one part of muriatic acid in 25 parts of water. For grease spots of recent date, carbonate of potassa (1 part to 30 parts of water), chloroform, ether and benzine, prove of good service. Sometimes it will be found advantageous to immerse the entire sheet in one of those solutions.

2. WAX SPOTS will disappear readily, if, after a soaking in benzine or turpentine, the spot is covered with folded blotting paper and a hot iron applied, until the dissolved wax is absorbed. Paraffine may be removed with boiling water or hot alcohol.

3. INK OR IRON STAINS yield to oxalic acid and boiling hot water. After the application the paper should be placed for some hours in clear water.

4. STAINS left by chloride of silver or chloride of gold are removed by a weak solution of corrosive sublimate or cyanate of potassa.

5. SEALING WAX BLOTS may be softened by means of heated alcohol and then scraped away with ossa sepia.

6. BLOTS CAUSED BY INDIA INK are to be brushed with oil, which after some twelve hours may be saponified with sal ammonia. After the ink has been drawn out, the carbon like particles which still remain, may be removed with a blotter.

7. BLOOD STAINS are taken out by the application, for about twenty minutes, of chloride of lime; the yellow light stains left will yield to any weak acid.

8. PASTE STAINS, if fresh, may be wiped off with a moistened sponge; if of older date, hot water should be tried.

9. MOLD STAINS of yellowish color, edged in by darker lines, will disappear if the paper is bathed for one or more hours in clear water, to which some chloride of lime has been added. If these stains are in bound volumes, they may be removed by placing damp linen over and under the discolored leaves and separating them by means of tin foil from the other leaves. When the desired effect has been secured, linen and tin foil may be taken out, the leaf operated upon put between sheets of blotting paper, and the volume closed. Should there be a great many of these stains, the cover ought to be taken off and the volume placed over night in a basin filled with water. The separated parts will afterwards have to be hung up to dry.

Sometimes the mold stains, caused by dampness, occupy a large space and are marked all over with little black dots. In this case the paper has to be backed with an additional sheet, after which tartaric acid may give the result desired.

BUSINESS OUTLOOK.

CORRECTED FROM MONTH TO MONTH.

Boston.—State of trade, bad; prospects, bad; composition on morning papers, 40 cents; evening, 35 cents; bookwork, 38 cents; job printers, per week, $15. The quarrel with the *Post* still continues, and we advise printers to stay away.

Butte.—State of trade, fair; prospects, fair; composition on morning papers, 45 cents; evening, 40 cents; bookwork, 40 cents; job printers, per week, $25. No difficulty, but well supplied

Cincinnati.—State of trade, dull; prospects, poor; composition on morning papers, 40 cents; evening, 37 cents; bookwork, 40 cents; job printers, per week, $18. No difficulty, but bookwork is exceedingly dull, and will not keep present supply with more than two-thirds work.

Detroit.—State of trade, very bad; prospects, discouraging; composition on morning papers, 35 cents; evening, 32 cents; bookwork, 33⅓ cents.

Denver.—State of trade, fair; prospects, better; price of composition on morning papers, 45 cents; on evening papers, 40 cents; bookwork, 45 cents; job printers, per week, $21. No difficulty, though we have more printers than can find constant employment.

Indianapolis.—State of trade, fair; prospects, not very bright; composition on morning papers, 35 cents; evening, 33 cents; bookwork, 35 cents; job printers, per week, $15. We have no difficulty, but have more printers than there is work for.

Joliet.—State of trade, fair; prospects, good; composition on morning papers, 30 cents; evening, 27 cents; bookwork, 27 cents; job printers, per week, $12 to $15. There is no chance at present for job printers. The scale has recently been raised from the old rate 25 and 28 cents.

Keokuk.—State of trade, good; prospects, good; composition on morning papers, 30 cents; evening, 30 cents; bookwork, 30 cents; job printers, per week, $12. No use coming here, plenty of printers.

Milwaukee.—State of trade, fair; prospects, good; composition on morning papers, 38 cents; evening, 33 cents; bookwork, 35 cents; job printers, per week, $14 to $18. Let me congratulate you on the good paper you are publishing. I see you have a good circulation here.

Minneapolis.—State of trade, fair; prospects, good for newspapers; composition on morning papers, 38 cents; evening, 33 cents; bookwork, 35 cents; job printers, per week, $16. Town full of "subs" at present; no difficulty.

New Haven.—State of trade, dull; prospects, not good; composition on morning papers, 35 cents—three papers non union; evening—union—35 cents; bookwork—union—35 cents; job printers, per week, $15. Our advice is, steer clear of New Haven, as there are compositors leaving every day. There is a strike on the *Morning News*, the only paper that was in the union is now ratted. The union scale in this city, is 40 cents for morning papers; the rat offices are paying 35 cents.

New Orleans.—State of trade, very poor; prospects, bad; composition on morning papers, 45 cents; evening, 40 cents; bookwork, 40 cents; job printers, per week, $18. No difficulty, but printers are flooding the town.

New York.—State of trade, dull; prospects, far from encouraging; composition on morning papers, 46 cents; evening, 40 cents; bookwork, 37 and 40 cents; job printers, per week, $18. Still boycotting *Tribune* and *Commercial Advertiser*

Omaha.—State of trade, very dull; prospects, not encouraging; price of composition on morning papers, 33 cents; evening, 30 cents; bookwork, 30 cents; job printers, per week, $15. The *Bee* office has been opened under a compromise with the publishers. There are more printers here than can secure employment.

Philadelphia.—State of trade, medium; prospects, brightening; composition on morning papers, 40 cents; evening, 32 cents; bookwork, 38 and 40 cents; job printers, $18. Difficulty existing, the same as reported last month.

Pittsburg.—State of trade, good; prospects, good; composition on morning papers, 40 cents; evening, 35 cents; bookwork, 35 cents; job printers, per week, $15

Quincy.—State of trade, fair; prospects, not bright; composition on morning papers, 33⅓ cents; evening, 30 cents; bookwork, 33⅓ cents; job printers, per week, $15. Keep away, as we have all the "subs" wanted.

Rochester.—State of trade, fair; prospects, reasonably good; composition on morning papers, 33 cents; evening, 30 cents; bookwork, made up and imposed, 33 cents; job printers, per week, $14, but first-class hands command more. While there is work enough for resident printers, there is a surplus of "subs," though all manage to live. There is a difficulty of a trifling nature—a dispute as to double and single price matter. If not settled immediately, boycott will be declared on *Sunday Herald*. A new scale of prices is being drawn up, and trouble ahead. Present scale of prices expires Nov. 1. K. of L. very strong here.

Sacramento.—State of trade, fair; prospects, fair; composition on morning papers, 50 cents; evening, 45 cents; bookwork, 45 cents; job printers, per week, $21. Enough men here to fill the demand.

Springfield, Ill.—State of trade, very dull; prospects, very poor; composition on morning papers, 33⅓ cents; evening, 30 cents; bookwork, 30 cents; job printers, per week, $15. There is no room for printers here. Over one-half of our own members are idle. All outsiders are warned to give Springfield a wide berth, as there is absolutely nothing to do. There is a difficulty here at present. The state printer has let his work by sub-contract, which is contrary to union laws; hence there is a lock-out in that establishment, which does not savor of a speedy adjustment.

Stockton.—State of trade, poor; prospects, poor; composition on morning papers, 45 cents; evening, 40 cents; bookwork, 40 cents; job printers, per week, $18. The *Mail* and *Herald* have been "ratted"; cause—plates. No use of printers coming here at present.

St. Louis.—State of trade, very bad; prospects, gloomy; composition on morning papers, 40 cents; evening, 35 cents; bookwork, 40 cents; job printers, per week, $18. The *Post-Dispatch* is still non-union, and is being "boycotted." The *Republican* has entered the fold of the union. Our advice to printers is, stay where you are, as times must be as good wherever you are as they are in St. Louis.

Topeka.—State of trade, dull; prospects, anything but bright; composition on morning papers, 30 cents; evening, 25 cents; bookwork, $15 per week; job work, $15 per week. As stated last month, there is only one union paper in town, and the town is overcrowded.

Toronto.—State of trade, very dull; prospects, not encouraging; composition on morning papers, 30 cents; evening, 28 cents; bookwork, 33⅓ cents; job printers, per week, $11. No use in coming to Toronto, as there are large numbers of printers out of employment. The Trades Council is "boycotting" the *Mail*.

Wilmington, Del.—State of trade, fair to medium; prospects, brighter; composition on morning papers, 30 and 35 cents; evening, 25 cents; bookwork, 20 and 25 cents; job printers, per week, $10 and $12. There is one "rat" sheet here which the union seems unable to get, as a union man is not allowed by the proprietor to work in his office.

Wilkesbarre.—State of trade, fair; prospects, good; composition on morning papers, 30 cents; evening, 25 cents; bookwork, 30 cents; job printers, per week, $13 to $14. A fresh invoice of tourists arrives daily; we advise other printers to stay away until those here, have sought new pastures. Our job offices have a good run of work, and it promises to keep up all winter.

PRESSMEN'S REPORT.

Pittsburg.—State of trade, rather slow; prospects, fair. There are no difficulties in any of our pressrooms, but there are no vacancies.

SECOND-HAND
PRINTING PRESSES AND MACHINERY

FOR SALE BY

MARDER, LUSE & CO.,

139 and 141 Monroe St., Chicago, Ill.

CYLINDER PRESSES.

32x46 **Hoe** Drum Cylinder, steam fixtures, tape delivery	$ 900
36x55 **Hoe** three-revolution, speed 2,000 to 3,000 an hour	2200
41x58 **Hoe** three-revolution, all complete, will print 7-col. quarto sheet,	2500
41½x60 **Hoe** three-revolution,	2500
28x41 **Hoe** Drum Cylinder	800
27½x33 **Hoe** Drum Cylinder	900
35x47 **Campbell,** complete press, steam fixtures, 4-roller	1000
38x52 **Campbell,** complete press, steam fixtures, 2-roller	900
28x32 **Campbell,** complete press, steam fixtures, 6-roller, springs	1000
24x29 **Campbell,** complete press, with steam, 2-roller, springs	850
31x46 **Campbell,** complete press, steam fixtures,	1200
32x46 **Cottrell & Babcock,** first-class press, steam fixtures, tape delivery, spiral springs, 2-roller	1200
34x52 **Cottrell & Babcock,** first-class press, with steam, tape delivery, spiral springs, 2-roller	1500
34x50 **Cottrell & Babcock,** first-class press, with steam, tape delivery, spiral springs, 4-roller	1600
34x52 **Cottrell & Babcock,** first-class press, with steam, tape delivery, air springs, 2-roller	1600
32x50 **Cottrell & Babcock** Country Cylinder, table distribution, spiral springs and steam fixtures	850
32x46 **Potter,** first-class press, with steam fixtures, tape delivery, 2-roller	1500
34x52 **Potter,** first-class press, with steam fixtures, tape delivery, 2-roller	1300
34x56 **Potter** Drum Cylinder, table distribution	1400
30x46 **Potter** Country Cylinder, with springs, hand fixtures	750
34x52 **Potter,** fluted columns, table distribution	900
32x46½ (9-col.) **Prouty** Cylinder, with hand fixtures, good as new	500
27½x43½ (8-col.) **Prouty** Cylinder, with hand fixtures, first-class	450
33x49 **Taylor,** 3-revol., with air springs, steam fixtures, speed, 2000 an hour	1400
35x52 **Taylor** Drum Cylinder, with steam fixtures, air springs	1200
26x33 **Taylor** Drum Cylinder, steam and hand fixtures, spiral springs.	900
31x46 **Fairhaven** Cylinder	650
31x46 **Fairhaven** Cylinder	650
28x42 **Fairhaven** Cylinder	475

JOB PRESSES.

14x18 **Nonpareil** Jobber, with fountain	$ 225
13x19 **Chromatic** Job Press	200
14x18 **Nonpareil,** with steam	235
11x17 **Chromatic**	175
12x17 **Chromatic**	175
12x17 **Chromatic**	175
13x19 **Gordon,** old style, with throw-off and steam	225
13x19 **Globe**	200
10x14½ **Novelty**	18
10x15 **Gordon,** old style	200
10x15 **Gordon,** with throw-off	225
13x19 **Chromatic,** with crank	200
13x19 **Chromatic,** steam	215
13x19 **Globe,** with fountain	215
14x18 **Nonpareil**	225
Gordon Segment Cylinder, will print one page of 6-col. paper	250
17x24 **Nonpareil,** with treadle and crank	325
15x19 **Nonpareil,** treadle, fountain and crank	275
15x19 **Nonpareil,** old style	200
10x15 **Globe**	175
10x15 **Globe** Job Press, with fountain	200
10x15 **Globe** Job Press	175
10x15 **Standard** Job Press	175
10x15 **Globe** Job Press	175
10x15 **Favorite**	175
11x16 **Star Lever**	75
10x12 **Alligator,** crank	75
10x15 **Lever** Job Press	60
10x14½ **Novelty**	18
9x16 **Nonpareil,** old style	175
10x15 **Gordon,** new style	225
10x15 **Gordon,** old style	200
9x13 **Gordon,** old style, in frame, with fountain	125
8x12 **National** Jobber	100
8x12 **Improved National** Jobber	115
8x12 **Young America**	125
8x12 **Globe**	100
8x12 **Empire**	125
8x12 **Canfield** upright	125
8x12 **Young America** old style	115
8x12 **National**	125
8x12 **Gordon** new style	175
7x11 **Gordon Franklin**	125
6x12 **Nonpareil**	100
6x10 **Liberty**	100
6x10 **Amateur,** treadle	75
3¼x5½ **Model** Lever	12
6x9 **Model** Lever	25
6x10 **Excelsior** Lever	25
7½x11 **Star** Lever, with treadle, iron frame	50
5½x10 **Eclipse**	65
7x11 **Favorite**	65
5½x8½ **Favorite**	50
7x11 **Star,** side treadle	50
7x11 **Gordon Franklin**	125
6x9½ **Young America**	75
7½x11 **Gordon,** frame all around	100
7x10 **Ruggles**	60
6x10 **Nonpareil**	100
7x10 **Model** Rotary	75
7x12 **Nonpareil,** new style	$125
7x11 **Liberty**	125
6x10 **Model** Lever	25
6x9 **Columbian** Rotary	65
7x11 **Gordon Franklin**	125
5x7½ **Columbian Lever Press**	20
Hoe Card and Ticket Press	275

HAND PRESSES.

9-col. **Cincinnati** Washington	$ 225
9-col. **Cincinnati** Washington	225
7-col. **Washington**	175
7-col. **Cincinnati** Washington	175
7-col. **Washington,** with rolling bed	200
6-col. **Washington**	150
7-col. **Army** Press	65
6-col. **Army** Press	45
Cap **Foster** Press	40
8-col. **Washington**	200
6-col. **Army** Press	45
6-col. **Army** Press	45
6-col. **Foster**	100
6-col. **Smith**	125
7-col. **Smith**	150
7-col. **Washington**	175
8-col. **Washington**	200
7-col. **Washington**	175
7-col. **Washington**	175
8-col. **Washington**	200
8-col. **Washington**	200

PAPER CUTTERS.

30-inch **Wisconsin,** Improved	$140
32½-inch **Hercules,** hand lever	140
32-inch **Sheridan,** steam and hand	175
34-inch **Diamond,** steam	350
46-inch **Dooley,** steam, fine order	600
28-inch Plow Cutters, iron frame	30
28-inch Plow Cutter, wood frame	25
28-inch Plow (**Hoe**) Cutter, wood frame	25
36-inch Plow Cutter, iron frame	40
30-inch **Riehl** Cutter	125
30-inch **Clark,** Wisconsin	100
32-inch **Acme,** hand and steam fixtures	250

CARD CUTTERS.

26-inch **Ruggles,** iron frame	$18
26-inch **Ruggles,** iron frame	18
30-inch **Ruggles,** iron frame	20
28-inch **Thorp's** Improved, No. 1	25
32-inch **Curtis & Mitchell**	25
28-inch **Anson Hardy**	25
30-inch **Anson Hardy**	30

ENGINES AND BOILERS.

8-horse Horizontal Engine and Boiler	$350
4-horse Engine and Boiler	275
3-horse Engine and Boiler (Payne)	200
2-horse Genuine "Baxter," first-class	200
3-horse new Baxter	200
1-horse walking beam Engine and Boiler	125

MISCELLANEOUS.

15½-inch Book Trimmer	$115
26-inch Book Trimmer	150
21-inch **Semple** Book Trimmer	125
21-inch **Semple** Book Trimmer	125
21-inch **Semple** Book Trimmer	125
Bookbinder's Stabbing Machine	35
Steam Mitering and Sawing Machine	75
Treadle Mitering and Sawing Machine	75
3-horse **Todd** Water Motor	100
Hickok Backing Machine	50
Hickok Standing Press, 20x27 inches	100
Iron-Frame Bookbinder's Press, 16x24 inches	75
Paging Machine, with 4-figure wheels	75
Paging Machine, with 4-figure wheels	75
Victor Mauger Paging Machine, with 5-figure wheels (first-class)	100
Hoe Mailing Machine and 67 galleys	50
Forsaith Folder, will fold a sheet 36x52, 5 folds or less	300
Hughes stereotype outfit, 11x18	75
Ruling Machine	125
Automatic foot power Stitching Machine, nearly new	60
Small Stereotype Outfit	25
Hughes Stereotype outfit, 7½x12	50
Stereotype outfit, 9x16	65
Stereotype outfit, 10x18	75
Stereotype Shaving Machine, 17 inches	130
Stereotype Drying Press, 20x26 inches	150
Circular Saw Table and gauges	115
Stereotype Trimmer, 24 inches, with overhead fixtures	140
Casting Box for plate 12x15 inches	95
Two pair Stereotype chases, 6-col	70
Two Beating Tables, 20x24	60
Stereotype Metal Pot and Furnace, 22 in. dia	95
Black & Clawson Perforator, 20-inch	55
Bookbinders Standing Press, 16x24 inches	75

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PATENT

Lithographic · Power · Press.

Since we first constructed this machine there have been many improvements made upon it. These have been patented from time to time.

No expense is spared to make it as perfect as possible.

Among other things, we lately altered the cam motion, so that the speed is increased about 25 per cent. without detriment to the press or quality of work turned off by it

Experience has shown that these machines are not only the most speedy, accurate and reliable, but the most economical in the end. The fact that those made by us twenty years ago are still in operation and doing as good work as ever, is the best proof of their superiority.

The stone is adjustable from on top.

The patent clamp causes the impression cylinder to stop without jar and stand without tremor.

The pressman has perfect control of the machine by means of a brake worked by foot.

The damping apparatus is automatic and the quantity of water can be regulated while the press is working.

A special feature of this machine is the patent delivery cylinder, which takes the sheets from the impression cylinder, and transfers them to the self-acting sheet-flyer with perfect certainty and without smutting.

The bed can be run once, twice or three times to each impression, and will also roll any number of times without the impression, thus securing a thorough distribution of ink.

NEWLY REDUCED PRICES.

No.	Size of stone.	Size of design.	Rollers covering form.	Price.
1	22 x 28 in.	20 x 26 in.	4	$3,900
2	25 x 33½ in.	23 x 31½ in.	6	4,400
3	29 x 41 in.	27 x 39 in.	6	5,000
3½	31 x 45½ in.	29 x 43½ in.	6	$5,500
4	33 x 47 in.	31 x 45 in.	6	6,000
5	37 x 53 in.	35 x 50 in.	6	6,750

The prices include boxing and shipping, or putting up in New York; also, apparatus to roll twice, two sets rollers, counter-shaft, hangers, driving pulley, and two cone pulleys go with each machine. The rollers varnished when desired without extra charge.

DIMENSIONS, WEIGHT, SPEED AND POWER.

No.	Length.	Width over all.	Height.
1	13 ft. 5 in.	7 ft. 2 in.	5 ft. 5 in.
2	15 ft.	7 ft. 7 in.	6 ft.
3	16 ft.	9 ft. 10 in.	7 ft.
3½	16 ft. 5 in.	10 ft.	7 ft.
4	18 ft.	10 ft. 6 in.	7 ft. 8 in.

No.	Weight boxed, including steam fixtures.	Maximum speed at which the presses can be run to advantage.	Horse. power.
1	About 5 tons.	1310	½
2	About 7½ tons.	1200	⅝
3	About 9½ tons.	1100	¾
3½	About 10 tons.	1100	⅞
4	About 12½ tons.	1000	1

PRICES OF MOLLETON CLOTH, ETC.

Best quality molleton for lithographers' rollers, 30 inches wide	$1 50
Best quality molleton for lithographers' rollers, 60 inches wide	2 25
Mole-skin, 29 inches wide	1 25
Thick flannel, 30 inches wide	$4 00
Thick flannel, 60 inches wide	7 25
Thin flannel, 60 inches wide	4 25

R. HOE & CO., 504 Grand Street, N. Y.

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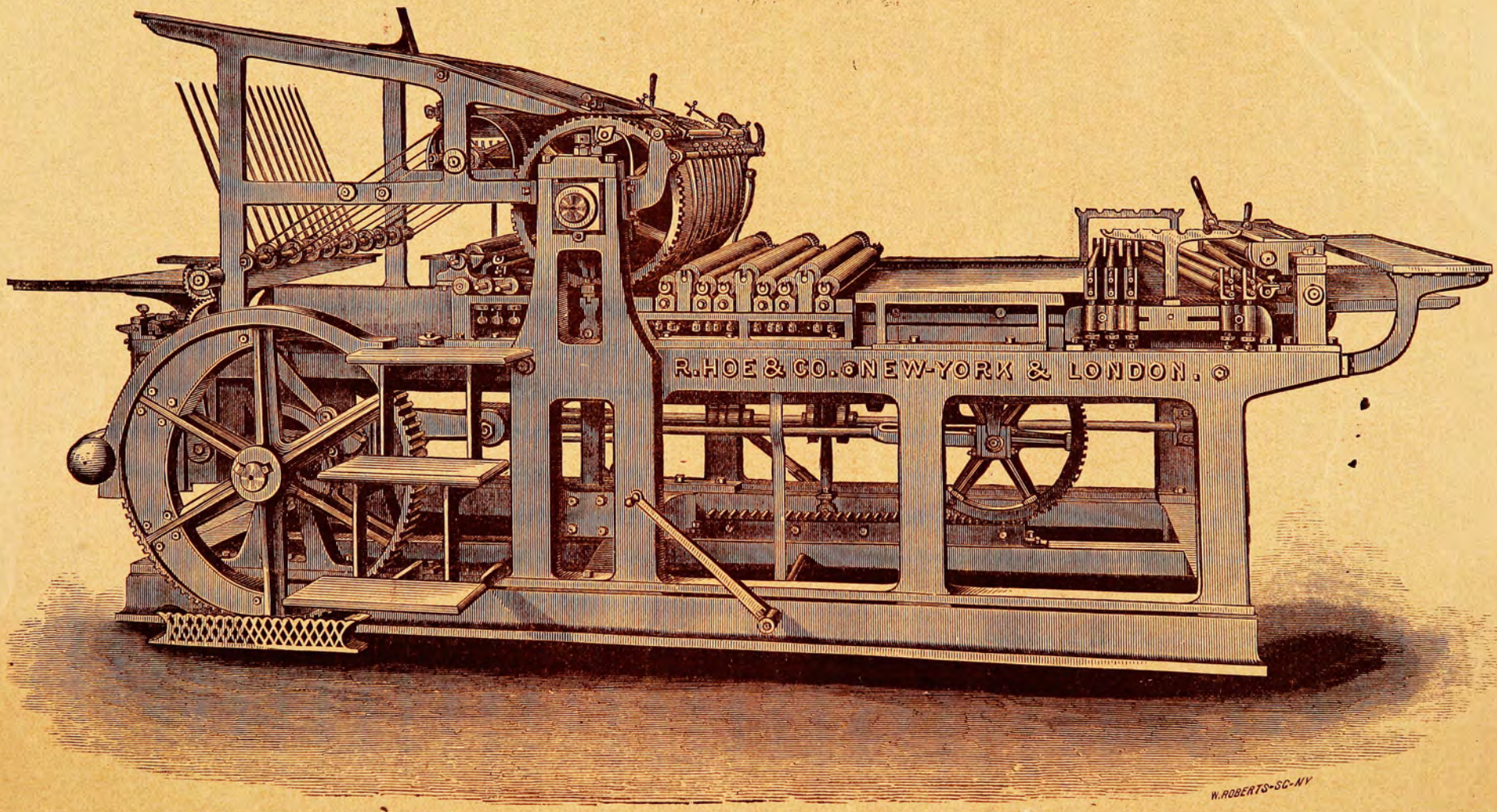
FOR ILLUSTRATION, SEE OPPOSITE PAGE.

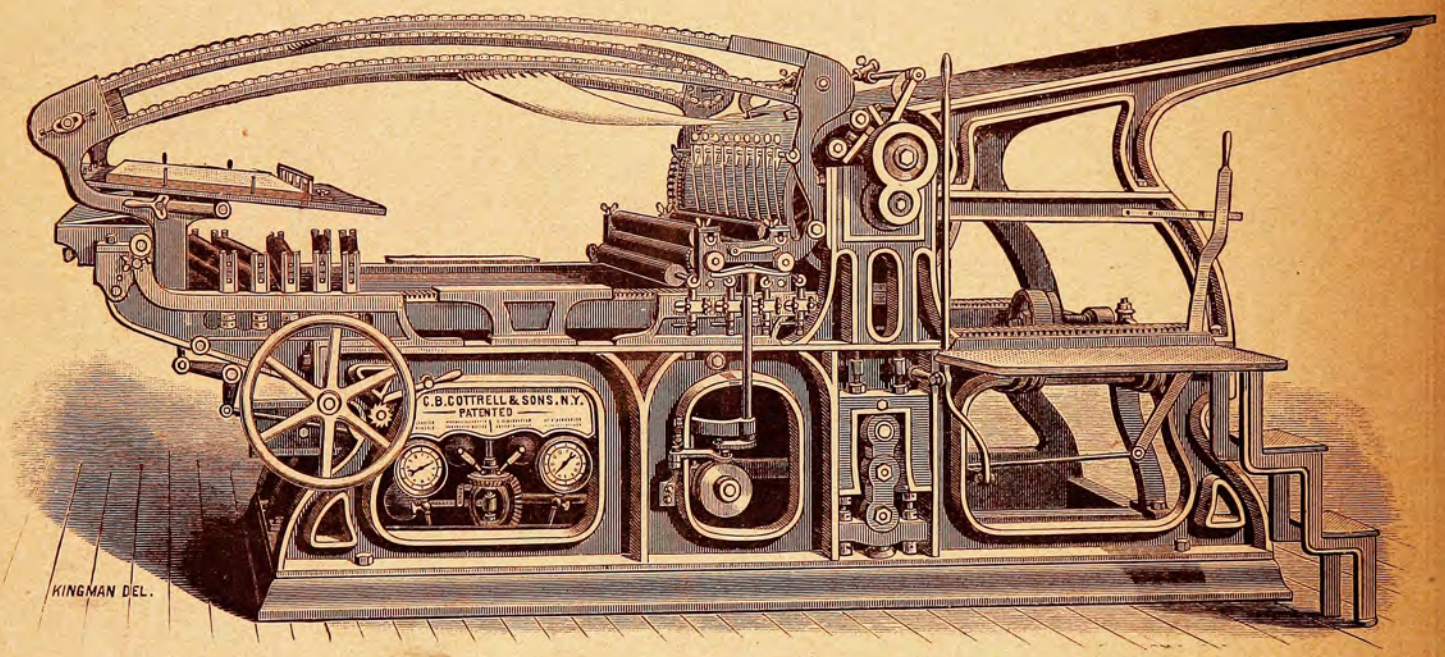


HOE PATENT LITHOGRAPHIC POWER PRESS.

For Description and Price List, see Page 96.

C. B. COTTRELL & SONS',

Front-Delivery Two-Revolution Press.



THE above engraving represents our new FRONT DELIVERY. This is unquestionably the most important improvement in Printing Machinery that has been made in many years. It delivers the sheet printed side up in full view of the Pressman. No part of the printed matter being touched by anything, thus avoiding all possibility of smut, no matter what the quantity or quality of ink it may be found necessary to carry. In addition to this, it leaves the front and back of the Press free of access at all times; there being NO FLY, STRINGS, TAPES OR OBSTRUCTIONS OF ANY KIND, and as it lays the PRINTED SHEETS almost AS STRAIGHT as when they came from the mill, it will be admitted that the percentage of WASTE is REDUCED to the MINIMUM. It delivers the sheets at FAST OR SLOW SPEEDS equally well, it does not require to be set for different size sheets. This improvement is in operation in many of the leading Printing Offices of this country. We respectfully invite examination and criticism.

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