













# Photo-Engraving Art



727  
689

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From specially Denatured Alcohol

Made from the simplest formula authorized by the U. S. Government.

It is an unfinished Collodion base, and the Photographer adds the additional Iodides and Chlorides, in accordance with his usual custom. It saves you \$1.30 on each gallon of alcohol used, and the Photographer practically makes his own Collodion, as in the past.

### OUR COMPLETE FORMULA

Pure Alcohol,  $\frac{1}{2}$  gallon ; Pure Ether,  $\frac{1}{2}$  gallon ; Iodide Cadmium,  $2\frac{7}{10}$  grains per liq. oz.; and Negative Cotton—the kind and quantity as ordered.

Our Collodion is now a recognized standard.

SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.

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Our Photo Chemicals Department is a special branch of our business, and we carry a full line. Complete Price List on application.

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**Manufacturing Chemists**

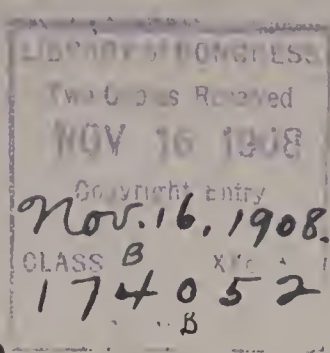
**115 MAIDEN LANE**

Established 1869

New York

Incorporated 1906





# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users of Photo-Engraving

VOL. I., NO. 1

NOVEMBER, 1908

## CONVENTION OF THE I. P. E. U. OF N. A.

With Introductory Summary by  
President MATTHEW WOLL

THE International Photo-Engravers Union, which was organized October 22nd, 1900, is a splendid example of what workmen can accomplish by organization. Those familiar with conditions as they existed prior to our present effective organization know only too well what organization has done for its members in the matter of wages, hours of labor, regulation and instruction of apprentices and ameliorating of many of the evil shop conditions then existing.

The International Movement of Photo-Engravers has justified its existence, not only by the good it has accomplished for its members, but also has proven beneficial to employers. I know there are those who would deny this assertion and who would seek to deprive our movement of much deserved credit. However, if our movement is judged impartially and without prejudice the influence it has had upon the photo-engraving craft in general is apparent, and the truth of the above assertion cannot be denied. The International Photo-Engravers Union has always endeavored to improve not only the conditions of its members but

their skill as well. It has always tried to the best of its ability to maintain and perpetuate friendly relations with employers and maintain our craft upon a co-operatively profitable basis.

Surely, it cannot be justly said that because we endeavor to improve our working conditions that we are, as a body, opposed to the interest of our employers. Is it not true that every nation, every civilized society, is endeavoring to improve the conditions of its members? To say that our organization is opposed to the interest of our employers, would subject them to the severe criticism of being opposed to the policy of every civilized society.

I am of opinion that employers generally do not wish to force their employees to work for lower wages or longer hours. On the contrary, I believe they would concede many advantages to their employees if they felt themselves free to grant them.

With competition prevailing as it does in our craft, it is at times difficult for one employer to grant better conditions than those which his competitor is not willing to grant. Competition oftentimes has limited employers

in their kind disposition toward their employees, and were it not for our organization, no means of limitation would be provided whereby a stop could be placed upon such competition, which, if permitted to continue unrestrained, would ultimately ruin the entire craft. It is here that our organization has been of benefit to every employer who wishes to see the men in his employ improve their condition and make of themselves better and more contented workmen.

At our recent convention, held September 8th to 12th in New York City, many propositions were considered by the delegates which are destined to benefit employers quite as much as ourselves. Not one can be considered unfair, impracticable or unreasonable. On the contrary, actions prevailed there which have aroused the favorable comment and opinions of many employers, including among them those most hostile to the idea of workmen uniting for the improvement of their conditions.

Among the matters most directly affecting employers are those relating to improving, if possible, the skill of our members along such lines as will permit our employers and ourselves to extend our activities into fields at present being operated by other illustrative crafts than that of photo-engraving. Also, to assist our members by interchange of thoughts and ideas to overcome many of the difficulties which continually crop out in our work and which prove as annoying to the journeyman as to employers.

Our organization has also determined to engage actively in all legislative matters which affect our craft or are likely to. It will direct its in-

fluence in favor of such legislation as will protect the American engraver and advance his interests and will oppose



PRESIDENT MATTHEW WOLL  
I. P. E. U. OF N. A.

such legislation as will have a detrimental effect. There is need at this time for an organized influence upon all legislative matters affecting our craft, and our movement does not intend to remain silent or indifferent to such legislation as will benefit or harm the photo-engraving fraternity.

We have also arranged for a procedure whereby we hope to improve our shop conditions. Many of our workrooms are not in a condition conducive to the health of our members or safety of their lives, and it is our desire to assist employers in so arranging their workrooms as to make them more sanitary and safe, and to make it possible for our members to work with less interruption, waste of effort and consequent loss of time, and to

provide for additional facilities, all making for better workmanship.

These are but a few of the actions on the part of our Union which evidence the fact that as a movement we do not antagonize the interests of our employers. Within the past two years we have had but two conflicts with

employers, affecting in all about a dozen members, which have not as yet been satisfactorily arranged.

Our ninth annual convention, recently adjourned, has demonstrated our movement to be one of intelligent direction and founded upon sound economic principles.

PROCEEDINGS OF THE NINTH ANNUAL CONVENTION  
of the  
INTERNATIONAL PHOTO-ENGRAVERS' UNION OF N. A.

Held at New York, September 8-12, 1908

The ninth annual convention of the International Photo-Engravers' Union was opened by Mr. Jas. H. Gibson, chairman of the local convention committee, who extended a welcome on behalf of the committee to delegates and visitors.

President Wm. H. Zehr, of New York Photo-Engravers' Union No. 1, in a few appropriate remarks extended a hearty welcome of his union to the delegates and visitors.

Mr. Zehr then introduced Mr. Matthew Woll, president I. P. E. U., who, on behalf of the delegates, thanked the committee for the excellent arrangements.

President Woll now declared the convention opened for the transaction of business and appointed the following committee on credentials: Otto Bartels, Peter J. Dunn, Max Schoener, Chas. Tygart and Robert C. Kroll.

Delegate Schwarz announced the death of Mr. Manning of the firm of Gatchel & Manning of Philadelphia. He stated that Mr. Manning always showed a spirit of friendship to our organization and suggested that we send telegrams of condolence to the firm and to Mrs. Manning.

On motion the secretary was instructed to send the following telegrams:

Gatchel & Manning,  
Sixth and Chestnut Streets, Philadelphia, Pa.

The Ninth Annual Convention of the International Photo-Engravers' Union of North America extend expressions of sincere sympathy on account of the death of Mr. Frank Manning.

Respectfully yours,  
H. E. Gudbrandsen,  
Secretary.

Mrs. Frank Manning, Sr.,  
Care Gatchel & Manning, Sixth and Chestnut  
Streets, Philadelphia, Pa.

The Ninth Annual Convention of the International Photo-Engravers' Union of North America extend to you and your family the most sincere expressions of sympathy on account of the death of Mr. Frank Manning. Respectfully yours,  
H. E. Gudbrandsen.

The following letter from Gatchel & Manning,

Philadelphia, Pa., was received:

Philadelphia, Pa., Sept. 9, 1908.  
International Photo-Engravers' Union of N. A., in  
Convention Assembled, Riccadonna Hotel,  
Brighton Beach, N. Y.

Mr. H. E. Gudbrandsen, Secretary.

Dear Sir—We beg to thank you for your kind expression of sympathy conveyed in your telegram on account of the death of our Mr. Frank E. Manning. Sincerely yours,

GATCHEL & MANNING,  
H. A. Gatchel.

REPORT OF COMMITTEE ON OFFICERS'  
REPORTS.

President's Report.

To the Officers and Members of the I. P. E. U.:  
Gentlemen—Your Committee on Officers' Reports respectfully presents the following for your consideration:

After carefully examining all accounts and reports of our worthy President, we concur in same, with a few exceptions which affect legislation that the convention in general is better fitted to concur or non-concur in than your Committee.

The Committee wishes to commend our worthy President in conjunction with his co-members comprising the Executive Council of the I. P. E. U. for their diplomatic, economic and effective manner in which they have conducted the affairs of this, your International body, having attained an economic basis never before enjoyed by this body from the time of its inception.

Relative to "Apprentices," on page 5, Officers' Reports, the Committee recommends the general enforcement of this law.

Relative to the appeal from George S. Busk the Committee recommends that it be referred to the Committee on Appeals. It was amended by Delegate Kroll, that inasmuch as Mr. Busk had as yet not appealed to the Local Union, that it should be referred to St. Louis Local No. 10.

The amendment was carried.

FIRST, SECOND AND THIRD VICE-PRESIDENTS' REPORTS.

The Committee further heartily commends the reports of the First, Second and Third Vice-Presidents, congratulating them on their very earnest, faithful and effective work in behalf of the I. P. E. U.

SECRETARY-TREASURER'S REPORT.

The Committee, after carefully examining report of Secretary-Treasurer, which was made easy by the very systematic way in which all his accounts

Continued on page 16



MADE WITH A No. 1 APOCHROMAT TESSAR PROCESS LENS

Courtesy of  
BAUSCH & LOMB OPTICAL CO.  
Rochester, New York.

# WILL SMILE

*by*

CHESTER KNOWLES

## A Short Dissertation on Halftones, Screens, and Their Relation to Printing—with a side-light on Minimum Charges

WILL SMILE was entering up some work left by the last customer when Mr. James Wantano dropped into the office of the Doem Quick Photo-Engraving Company.

James is a printer of average intelligence. He has a fairly good photograph of a woman from which he wants a cut made. He imparts this information to Will Smile, whose most natural query is:

“What screen do you wish us to use?”

“Screen? What do you mean by screen? I want a very fine cut, two and one half inches wide by five inches high. I’m going to use it in a little circular,” replies Wantano.

“What kind of paper are you going to use?”

“Oh, a very good paper, costing about eighteen cents a pound. Something on a buff color. One of those new rough artistic papers you see so much of nowadays—sort of an antique finish.”

“I see,” says Smile; “you want a coarse screen cut.”

“I don’t know anything about screens, but I think I want a fine screen cut. Is there any difference in the price?”

“Oh, yes,” answered Smile; “a coarse screen cut is generally etched on zinc, and seldom costs more than 60% as much as a fine screen which is etched on copper. Coarse screen on

zinc costs about 10 or 12 cents a square inch, while fine screen on copper costs from 14 to 16 cents per square inch.”

“But I really do not care what it costs. I want the best cut you can make from that copy. Now, which will give the best results—a coarse screen or a fine screen?”

“Unquestionably a fine screen——”

“Then that’s what I want.”

“Let me finish what I was about to say,” quietly requested Willie. “A fine screen cut will give you a good result on a highly coated paper, but a coarse screen cut is sure to give you a better result on a rough stock such as you intend to use.”

“Well, if you are sure of that, give me the coarse screen cut.”

“Positive of it. Now, another difficulty presents itself. You have your copy marked two and one-half inches by five. It will be impossible to get those proportions unless we crop the cut on each side, and if we do, it will be necessary to cut off the lady’s arms, which will produce an awkward result.”

“No, no; I want the whole picture just as it is, reduced to the size I’ve marked. You’ll spoil it if you cut the arms off.”

“Very well, then, it will be necessary to make it either two and one-half wide or five inches high. Your copy measures six and one-half by eight and one-half, and if we make it two and one-half wide it will fall three and one-

third high, and if we make it five inches high, it will fall three and three-quarters inches wide."

"All right. Make it up two and one-half inches wide by three and one-third high. How much will it cost?"

"A coarse screen cut on zinc will be a minimum, and will cost one fifty."

"I thought you said it would cost twelve cents an inch. A cut two and one-half by three and one-third inches—let's see—will figure out less than eight and one-half inches, and ought not to cost more than a dollar. You must not think that because I have displayed a little ignorance about screens and proportions that I can't count money."

"No, I'm not endeavoring to take advantage of your lack of knowledge," said the conscientious Smile. "But all engraving houses, including ours, have established a minimum charge for cuts and——"

"Oh, I see—formed a trust to keep up prices," broke in the customer.

"No, you misunderstand. It costs us a certain amount of money in time and material to produce a cut, and it actually costs more to make a lot of minimum cuts than it does to make one or two large cuts of an equal or even greater number of square inches."

"I don't understand why."

"Well, let's figure it out. Say, for instance, we have sixteen minimum cuts, all of which added together make one hundred square inches. They total up at \$1.50 each, \$24.00. Now, we take four cuts of fifty inches each, and at twelve cents an inch we get \$24.00. It will be necessary to make sixteen exposures to make the sixteen minimums, but it takes only four exposures to make the two hundred

inches. It takes just as long to expose a small copy as it does a large one. So you see we get as much money for two hundred square inches as we do for the hundred square inches, except that the two hundred square inches are made with seventy-five per cent. less effort and time than the sixteen minimums, for which we apparently charge more. This explains why we must make a minimum charge. Really, now, if we made nothing but minimum cuts we would have to close up shop."

"Well, is the minimum rate higher on the fine screens as you call them?" asked the customer, suddenly becoming thirsty for knowledge.

"Oh, yes; fine screen cuts at sixteen cents per inch cost \$2.25 for minimums."

"Why?"

"Well, you see, fine screen cuts on copper are made more carefully and are re-etched and refinished. This is not necessary in zinc cuts, as it is possible to get more contrast in the negatives for zinc etching than it is in copper work."

"All right, I'm much obliged for all this information. Now, how soon can I have my cut?"

"To-morrow at nine A. M."

"Thank you; good day."

"Well, that was hard work for a cut you only get \$1.50 for," said a customer who had been waiting during most of the argument. "However, I'm glad I heard it, as I could never quite reconcile that minimum charge. It is certainly equitable when it is presented to one properly. You exhibited laudable patience."

"Yes, it pays to have patience in this business. It gets customers and it holds them," said Will Smile.



Courtesy of the Century Co.

THE STUDIO OF ROSA BONHEUR — *By Stephens*

Swelled Gelatine Process Plate. Appeared in *Century Magazine*, October, 1884

## THE DETERIORATION OF LINE WORK IN THE LAST TWENTY YEARS?

By G. H. WHITTLE

WITH the enormous spread of the photo-engraving business to-day to meet the ever increasing output of pictorial matter in books, periodicals, advertisements, etc., etc., and the large sums of money that have been expended in the enlargement of photographic mechanical appliances and facilities, would it not be well to pause and consider whether there is a corresponding improvement in the quality of the work done now, over that of fifteen, or even twenty years ago.

The illustrations here given relate to line-etching only: Examine carefully the plate "Studio of Rosa Bonheur," published in the *Century Magazine*

(October 1884)—a "soft" metal plate at that. There is a clearness and firmness of line and delicacy of detail which challenge the photographer and etcher of to-day to equal, in spite of the technical difficulties and accidents incidental to the old "swelled-gelatine" process of which this is an example. Certain it is that the enthusiasm and artistic feeling of the workman more than negated the special obstacles he had to contend with.

In the January, 1891, issue of the same magazine is an etching on copper after the drawing by Mr. Harry Fenn. The stipple work united with line here is most sympathetically reproduced and with a firmness and sure-



Courtesy of the Century Co.

#### THE TOMB OF EDWARD HILL

Pen Drawing by *Harry Fenn*—Etched on Copper, appeared in the *Century Magazine*, January, 1891



Here lyeth Interred the Body of  
 EDWARD HILL one of his Maj<sup>ties</sup>  
 Hon<sup>ble</sup> Councell of State Colonel and  
 Comander in Chiefe of the County  
 of Charles Cittie and Surrey Iude of  
 his Majestyes high Court of Admiralty  
 and Sometime Treasurer of Virginia who  
 dyed the 30<sup>th</sup> day of Nov<sup>r</sup> in the 6<sup>d</sup>  
 year of his age Anno Dom 1700.

ness of detail in line with clearness and gradation in the stipple we despair of seeing to-day.

One more example, this time from a zinc plate after Mr. A. B. Frost's pure

pen and ink line drawing in the June, 1891, "Century." Where do we find such refinement and perfection in the work of to-day. Observe how the artist's exquisitely modulated lines and minute but most important details of expressive drawing are preserved with the loving attention of the craftsman working with the feeling of an artist.

In all art it is the quality of the workman that counts and in the midst of the rush and competition of to-day, are we not forgetting that he is superior to the machine, and that to safeguard him from the nervous worry, incidental to continuous cheap and rushed work, and to increase his self-respect by encouraging his best efforts must at least precede all merely mechanical expedients, if good artistic work is not to be hopelessly driven out of our reach.

EDITOR'S NOTE—No one questions the fact that the art of halftone photo-



engraving in one or more colors has been wonderfully improved and has reached a high state of perfection in the past twenty years. However, it must be admitted, that line work has shown a great decrease in quality in a corresponding period.

Is the lack of quality caused by price cutting, inferior quality of material, chemicals, inexperienced or careless workmen, haste in production, less quality in original drawings or general apathy on the part of the trade and a feeling that line work is only a necessary evil with which they must contend in their desire to improve their halftone and color work.

There is no doubt about the fact that the art quality is sadly lacking in the bulk of line drawings that are produced nowadays. Where is there to-

day the *Vierge* or the *Abbey* of a generation ago?

It may be that the spirit of the twentieth century — SPEED — has taken hold of our artists, engravers, and printers and that if they really tried they could easily improve on the results obtained twenty years ago.

Just where and how to go about it we must leave to those who actually produce the plates. Toward this end PHOTO-ENGRAVING ART offers a prize of \$10.00 for the best letter covering a way to improve the quality of line work. We expect that this symposium will bring out many good suggestions. All letters which tend to instruct will be printed in PHOTO-ENGRAVING ART from time to time and the prize awarded in May, 1909.



Courtesy of the Century Co.

Zinc Etching from Line Drawing by *A. B. Frost*, in the *Century Magazine*, June, 1891.

## A RECENT RULING ON COPYRIGHTS

PHOTO-ENGRAVERS, publishers, editors, advertisers and all those who have been in the habit of using, borrowing or cribbing pictures which have been published and copyrighted by some one else will be interested in a recent decision by the Supreme Court. It has been the general impression that if a painting or picture did not show the notice copyright with the name of the owner of copyright, any one had the right to reproduce it. According to the new ruling the published copies only need be so marked.

It appears that the Berlin Photographic Co. purchased the right of reproduction of Sadler's painting "The Chorus," and secured the copyright. The picture was placed on exhibition at the Royal Academy, the fact that it was copyrighted being entered in the gallery salesbook, but it was not so indicated on the canvas. Afterwards the original was placed in a private collection and the American Tobacco Co., not procuring the consent of the owners of the copyright, reproduced the painting, claiming that the copyright

not appearing on the canvas permitted any one to use it. The Berlin Co. opposed this, and was supported by the court in the opposition. It claimed that "the statute could not have intended that the original painting be disfigured with the notice." The decision as handed down by Justice Day is as follows:

"We think it was the object of the statute to require this inscription not upon the original painting, map, photograph, drawing, etc., but upon those published copies concerning which it is designed to convey information to the public, which shall limit the use and circumscribe the rights of the purchaser. It would seem clear that the real object of the statute is not to give notice to the artist or proprietor of the painting or the person to whose collection it may go, who needs no information, but to notify the public who purchase the circulated copies of the existing copyright in order that their ownership may be restricted. There does not seem to be any purpose in requiring that an original map, chart or painting shall be thus inscribed, while there is every reason for requiring the copies of editions published to bear upon their face the notice of the limited property which a purchaser may acquire therein."

In view of the above decision responsible photo-engravers, publishers and all those tempted to reproduce an unmarked picture should first endeavor to secure a release from the artist.

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## ADVICE

Get busy.



Do to-day what you intended to put off till to-morrow.



Treat every job as though the customer had said that if it wasn't perfect he would take his work elsewhere.



Remember that there is always an engraver around the corner or across the street who is willing to try and

please the customers whom you think, in your prosperity, that you can get along without. If they are good pay, hang on to them.



He who is always watching the clock will find that the old man has been watching him, and should not be disappointed if the fellow who was watching his work and had forgotten the clock gets the large slice of melon when promotions are in order.

# A GOOD ENTRY SYSTEM

## A Simple Method of Entering and Keeping Track of Work in a Photo-Engraving Shop

IT is claimed by those who know, or ought to, that there is no business so hard to apply a general system to as photo-engraving. The main reason for this lies in the fact that from the time the copy leaves the customer's hands to its return to him with the finished cut, it has passed through no less than twelve pairs of hands, and often more, namely: representative, entry clerk, foreman, artist, photographer, negative turner, printer, etcher, finisher, proofer, shipping clerk, and delivery boy.

Size makes no difference, and a cut one inch square must go through the same procedure that one fifty times as large goes through; therefore the opportunity for error is always at least 12 to 1. If one person received the order and then carried it through to completion, the percentage of possible error would, of course, be considerably lessened.

PHOTO-ENGRAVING ART presents herewith a system which minimizes the chance for error. Of course, different houses are noted for specialties. Some are high grade, some are mediocre, some are fast, some are cheap. The blank which we print herewith can be modified to fit almost any condition. In this particular instance it is used by a house which lays its claim to patronage to the fact that it is fast, and has three shifts of men operating twenty-four hours a day, including Sundays and holidays. Three shifts of men immediately suggest thirty pairs of hands through which any one copy is likely to pass.

The necessity for a comprehensive system must be readily apparent. As no one man can possibly be foreman of three shifts, the system must be the court of last resort and must never be found wanting.

The original, No. 1, should be a dif-

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| No 6256   |  | No 6256            |     | WANTED            |     |                |     |              |  |  |  |
|   |  | Mon                | Tue | Wed               | Thu | Fri            | Sat |              |  |  |  |
|   |  | A                  | M   | A                 | M   | A              | M   |              |  |  |  |
|   |  | P                  | M   | P                 | M   | P              | M   |              |  |  |  |
| HALFTONE LINE CUT   |  | DESCRIPTION        |     |                   |     |                |     |              |  |  |  |
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| LINE CUT _____  |  | PROOFS _____       |     |                   |     |                |     |              |  |  |  |
| LAYOUT _____  |  | INSERTS _____      |     | SCREEN _____      |     |                |     |              |  |  |  |
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| SIZE _____  |  | INSTRUCTIONS _____ |     |                   |     |                |     |              |  |  |  |
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| PROOFS _____  |  | WILL CALL          |     | DELIVER           |     |                |     |              |  |  |  |
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Original No. 1.

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| No 6256   |  | No 6256            |     | WANTED            |     |                |     |              |  |  |  |
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| HALFTONE LINE CUT   |  | DESCRIPTION        |     |                   |     |                |     |              |  |  |  |
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Duplicate No. 2.

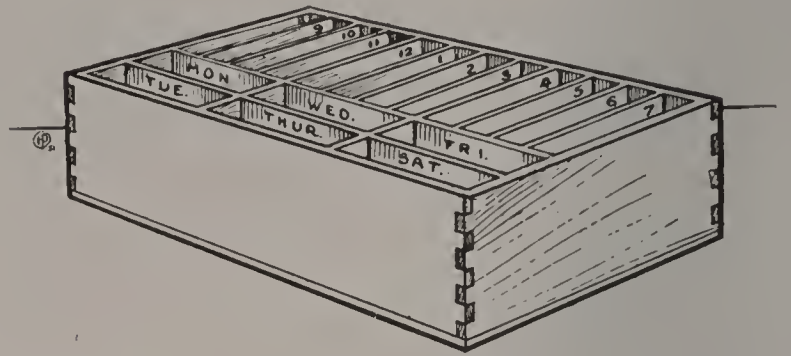
ferent color from the duplicate, No. 2. The original we will say is pink and the duplicate white. On the pink ticket all information which it is necessary for the shop to know is checked or written. That which the office only should know—price, credits etc.—is written on the white or duplicate slip, for which there is an extra line provided.

An autographic register machine is used so that no matter who enters the work it will be possible to refer to them when in doubt about instructions. At the top there is a row of boxes which contain the days of the week. On the left there is one large box; the original is perforated so that this can be separated from the main ticket and attached to the drawing or photograph. There are duplicate rubber stamps provided so that more than one drawing can be entered on the same order. If there should be six, each one would be numbered to correspond with the order number, and beneath it would be marked six. Any one picking up a copy could easily see that it was one of an order of six. As the delivery is of the utmost importance it is placed first, and is purposely made large and prominent. Next comes the size, then the screen and number of proofs, and finally the blocking, mortising, etc. All possible and necessary instructions are contained on this slip, and, except in unusual cases, are all sufficient.

Another point which makes this system especially valuable is the fact that when arranged in the box which is described below it is possible for the foreman and the entry clerk to tell at a glance just what work has been entered for a certain time and day.

The box, which is made up of  $\frac{3}{8}$  in.

and  $\frac{1}{4}$  in. material, is made with twelve narrow and six larger divisions, and is made of sufficient height and width as to allow the slips to extend just far enough to be easily seen.



The six large sections are for the days of the week and the twelve smaller ones the hours of the day. They commence with eight and run on to seven.

As the work is entered the clerk can see at a glance whether or not too many cuts are promised for any one day or hour. If a customer asks for a special rush, before a definite promise is made, the foreman can be communicated with and the possibility of a rash promise eliminated, because by glancing at his file he can easily see just what the possibilities are. Keeping old customers in preference to securing new ones is always the best policy. The tendency, however, is to scramble to please a transient customer, who, if he is pleased, may be turned into a regular patron. If the clerk can make what appears to be an off-hand promise and then make good, the customer is likely to be impressed by the service, and a pleased photo-engraving customer is, without doubt, the best advertisement.

In addition to being an assistance by simplifying the movement of work through the shop, this system is a splendid check for billing purposes. When the work is completed the pink ticket

is removed from the foreman's box and sent to the office with the flat proofs. There the white slip is placed with the pink ticket and the receipted delivery slip. After the bill has been made out all the slips and flat proofs are numbered to correspond with the invoice number and filed in a vertical

file for possible future reference.

If a white slip remains in the entry clerk's box too long a query is sent into the shop regarding the work and can be immediately answered to the effect that either the work is uncompleted or has been finished but not billed.

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## PROGRESS DEPARTMENT

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### NEGATIVE COLLODION FROM TAX FREE ALCOHOL

IT is now some little time since the Government has allowed the use of pure alcohol free of tax, when suitably denatured, for the manufacture of photo-collodion. It has only recently come within reach of photo-engravers for the reason that they have been obliged to look to various chemical manufacturers to give them the benefit of the new law by supplying the tax free alcohol in the form of an acceptable collodion base.

There have been two formulas authorized by the Commissioner of Internal Revenue for denaturing pure alcohol for use in making photo-collodion. This alcohol is all denatured under Government supervision at the denaturing warehouse of the U. S. Industrial Alcohol Co., the distillers, at Peoria, Ill.

The first formula authorized was composed as follows: To 100 gallons pure alcohol it is necessary to add 100 lbs. ether, three pounds cadmium iodide and three pounds ammonium iodide. The ammonium iodide, however, is one of the most unstable and delicate of the chemical salts, and its use as a denaturant has been looked upon with much disfavor. The second formula omits the ammonium iodide, and is composed as follows: To 100 gallons of pure alcohol shall be added 100 lbs. of ether and 10 lbs. of cadmium iodide. The use of an alcohol denatured according to the above formulas is confined to the manufacture of a photo-collodion, and a photo-collodion sold on the market as such should contain as much as one and a quarter ounces of cotton per gallon to properly

meet the requirements of the law.

The chemical manufacturers are beginning to realize the impossibility of successfully marketing the collodion that would be made up from a set formula as to the kind and quantity of cotton used, for the reason that the average photographer will use only his favorite brand of negative cotton, and this will vary in quantity from one and a quarter to two ounces of cotton per gallon, according to the individual photographer. The chemical manufacturers have also foreseen the impossibility of marketing a finished negative collodion, and have, in fact, seemed rather loath to take up the matter at all.

The photo-engraving trade is, however, never lacking in enterprise. "Uncle Sam" had offered them an alcohol free of tax, and they were bound to have it. A negative collodion, however, is of the most vital importance to the photographer and cannot be trifled with. It must be made up to suit each individual operator, and this is an item which needed much careful study. The matter was eventually taken up by a number of the photo-engravers with the Geo. A. Erkenbrach Co. of New York, and was carefully studied in an experimental way for two months. Having thus the advantages of both the laboratory and gallery tests at its command the Erkenbrach Co. is now marketing a negative collodion base that seems to be giving general satisfaction, having adopted the simplest possible formula containing one-half pure alcohol, one-half ether, two and 73-100 grains cadmium iodide per liquid ounce, and cotton of the kind and quantity as ordered by the operator.

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving.

FRED. J. WILLOCK . . . . .EDITOR.

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NOVEMBER.

## OUR POLICY.

Independence.

We feel that there is room and a field for a magazine to represent the photo-engraving trade artistically and practically.

We intend to fill it.

We are going to make PHOTO-ENGRAVING ART a helpful monthly magazine which subscribers will look forward to with pleasure and interest.

It is our desire to produce a magazine whose excellence from a typographical standpoint will be unsurpassable.

We will not try for a big, bulky magazine, but rather will make a special effort to keep the size down.

It is our intention to give you a magazine which you will read from cover to cover and then want more.

We will endeavor to not give you so much each month that you will say to yourself as you lay it aside: "That looks like good stuff, I'll read it when I get time." What we will give you, however, will be good, instructive reading and helpful discussion.

The value of PHOTO-ENGRAVING ART to you should be measured, not by the amount of good matter we give you, but how much you take advantage of.

We are hungry for interesting notes and news of conventions and doings of the allied trades and would appreciate having the secretaries send us any matter which in their judgment will be of interest to our readers.

Our columns will be open at all times to discussion by employer or employee.



On page four is an excellent reproduction of a silver manicure set, made with a Bausch & Lomb Apochromat Tessar Process Lens, and is reprinted from their catalogue of Photo-Engraver's Accessories.



## NOTES.

Williams-Lloyd Machinery Company have put a complete electrotype plant in the Rand-McNally branch at Ossining, N. Y.



The plant of the Davidson Engraving Co., bankrupt, was sold at auction by Charles Shongood, U. S. Auctioneer, October 9, 1908.



Robert Mayer & Co., the lithographing supply house, has recently issued a fine catalogue of inks and colors that should be in every printer lithographer's hands. The colors and tints are perfect and are handy for comparisons.

The fact that there are already nearly fifty engraving establishments on Manhattan Island and the very unsettled state of the money market does not seem to have a discouraging effect on practical men, as is evidenced by the fact that two new engraving companies have been started in the last month: The Farmer-Zehr Company, 165 William Street, and the Co-Operative Engraving Co., 6 Park Place. Wesel Mfg. Co. supplied all the machinery for the latter firm.

The Presidential election had the effect of once more unionizing the Zeese-Wilkinson shop. The Republican Campaign Committee placed an order for \$100,000 worth of pictures of Taft and Sherman and when Zeese-Wilkinson delivered the first consignment, amounting to \$10,000, they were rejected because of the absence of the label. Bing! Zeese-Wilkinson Co. saw a great light, and soon had a union shop.

We are in receipt of a booklet from the Eclipse Electrotpe & Engraving Co., of Cleveland, O. It is rather a simple get up, but contains some very extraordinary names of towns which one would never suspect existed in the United States. The front and back pages are devoted to the usual bid for business and while ordinary in composition are sure to be read with interest after one tries to make sense of or pronounce the jaw-breaking names in the main part of the book.

On September 14, the New York Photo-Engravers' Ex-Delegates' Association, assisted by the F. Wesel Manufacturing Company, gave an outing and dinner to visiting delegates. The outing took the form of a tour of Coney Island. At the salesrooms of the Wesel Company, with the other photo-engraving machinery usually in stock, was shown the company's new Rotary Diagonal Planing Machine, and the Drill and Blocking Machine, both of which are time-savers for cut-makers, and exacted many favorable comments by the men who viewed them.

The Powers Photo Engraving Co. added the N. Y. Tribune to its list of newspaper customers in October. They now handle all the work of a majority of the New York newspapers which do not maintain their own photo-engraving plants and many daily and weekly New Jersey and Connecticut

papers. Powers plant is open 24 hours every day—Sundays and holidays included. They have a record of 14 minutes for a halftone and 15 minutes for a line cut. Their slogan is "The Fastest Engravers on Earth," and they seem to live up to it.

The Curtis Publishing Company pays a cent a pound more than the list price for the paper used in the Ladies Home Journal. When it is known that more than twenty carloads of paper are necessary to produce a single edition, it must be apparent that it is considered good business policy to guard against possible inferior goods by the purchaser voluntarily increasing the price he is asked to pay. There is no question but that if the ordinary buyer of photo-engraving would follow in the Curtis Company's footsteps the quality of line and halftone engravings would soon be improved.

Gatchel & Manning are "right on the job," when it comes to helping the fellow far away from the scene of operations. Their little booklet on "The Blue Print, The Artist, and The Halftone," and "Methods of Illustrating Machinery," are fine examples of conciseness. They are short, instructive and to the point, and should be good business bringers. The foot rule, the last to arrive with its simple rule of reduction: "Multiply required dimension of plate (height or width) by the opposite dimension (width or height) and divide by remaining dimension of copy and the result will be the dimension of the plate," will be a valuable aid to many people to whom the rule of proportion, which while simple to the initiated, is often a hard nut to crack.

R. Hoe & Co., the famous New York and London inventors and press builders, have designed, constructed and installed for the Frank A. Munsey Company a mammoth magazine color press, capable of printing 384 pages of magazine size at every revolution of its cylinders. The web of paper may be printed in four colors on both sides, in perfect register, and everything is delivered associated and folded without smut or offset. The press is an achievement of which the Hoe Company, with all its numberless advances in printing presses, may well be proud, and may mark the character of press on which in future all the high-circulation American magazines will be printed.

Continued from page 3

and reports were kept, concur in same. We would especially recommend to the Convention assembled that part of the Secretary's report pertaining to placing of the I. P. E. U. finances to the end that such measure may be taken and laws enacted that will put it within the province of the Executive Council to invest such moneys in such manner as suggested by the Secretary-Treasurer in his report. Fraternaly yours,

WILLIAM H. ZEHR, Chairman.

H. F. WHITE, Secretary.

WALTER R. BURNS,

JOHN P. SIMONDS, JR.

H. F. JACOBI.

REPORT OF THE COMMITTEE ON LAWS.

Proposition No. 17, by Delegate John P. Simonds, Jr., Boston, No. 3.

Amend Article XX, Section 1, by striking out the words on the tenth line, "but not on the printing surface of same," making the section read:

"The label, stamp or device used and intended to be used by this Union for the purpose of distinguishing the products of the labor of the members of this Union" shall consist of a steel die containing the letters I. P. E. U., together with the number of said label. The imprint shall be placed on the bevel, cuts without bevel wherever applicable. The label may appear on the printing surface whenever it will promote the interests of our craft. Said label shall be of the following design:



Adopted as amended by Committee.

Proposition No. 25, by Delegates Robert C. Kroll and L. E. Ostrander, St. Louis, No. 10.

Amend Article XX by adding the following sections:

Section 6. The I. P. E. U. label may be stamped on such cuts only as are made in their entirety by members of this Union.

Sec. 7. No employer who has his photo-engraving done wholly, or in part, by others than members of this Union shall be permitted to use the label.

Adopted.

Proposition No. 66, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

Amend Article XX, Section 5, by adding to this section the following: "and that all engravings to be used in behalf of our organization, Local or International, must be stamped with the I. P. E. U. label," making the entire section read:

Sec. 5. It is enjoined upon all subordinate Unions that they use every possible effort to promote the use of the I. P. E. U. label on all engravings made in Union shops by Union members, and that all engravings to be used in behalf of our organization, Local or International, must be stamped with the I. P. E. U. label.

Adopted.

Proposition No. 71, by Delegates Hoffert and Schussler, Chicago, Ill.

Article XX, Section 1. The label stamp or device used and intended to be used by this Union for the purpose of distinguishing the product of the label of the members of this Union shall consist of a steel die, containing the letters I. P. E. U., together with the number of said label. The imprint shall be placed on the bevel, cuts without bevel wherever applicable, or on the block, if necessary. The label may appear on the printing surface whenever it will promote the interests of our craft. Said label shall be of the following design:



Adopted as amended by Committee.

Proposition No. 35, by Delegate Andrew J. Galagher, San Francisco, No. 8.

Amend Section 6 of Article XIV by inserting: "It is also ordered that all local Unions affiliate with the nearest central body of the American Federation of Labor," making the entire section read:

Section 6. Whenever an allied Trades Council exists within the jurisdiction of a subordinate Union it shall be compulsory for said subordinate Union to unite with said Council.

It is also ordered that all local Unions affiliate with the nearest central body of American Federation of Labor.

Adopted.

Proposition No. 37, by Delegate A. J. Galagher, San Francisco, No. 8.

Add new section to Article XIV, to be known as Section 14, and to read:

Section 14. Any member alleged to have been guilty of any conduct not becoming a member, whilst in possession of a withdrawal card, shall be subject to trial in accordance with local laws, and if his offense be such as to preclude his readmittance in the local Union, the case may be referred to the International Union for decision in the matter, and their decision shall be binding, subject to appeal to the next Convention.

Adopted.

Proposition No. 41, by Delegate Andrew J. Galagher, San Francisco, No. 8.

Amend Article VI, Section 1, by inserting after the words "Executive Council" on the ninth line, "and they shall all assemble at least once a year," making Section 1 read:

The elective officers of the International Photo-Engravers' Union of North America shall be a President, First, Second and Third Vice-Presidents, and Secretary-Treasurer. They shall be elected at the regular Convention and serve for one year (or until their successors have qualified) and they shall constitute the Executive Council, and shall all assemble at least once a year. All officers of the Union shall at the expiration of their term of office, or on demand, turn over to the Union all properties in their possession belonging to the Union.

Adopted as amended by the Committee.

Proposition No. 64, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

Amend Article XV., Section 6, by adding to this section the following: "and file a monthly report to the International President of all matter pertaining to and concerning the interest of Photo-Engravers," the entire section as amended to read:

"Article XV. Sec. 6. Whenever an Allied Trades Council exists within the jurisdiction of a subordinate Union it shall be compulsory for said subordinate Union to unite with said Council and file a monthly report to the International President of all matter pertaining to and concerning the interest of Photo-Engravers."

Adopted.

Proposition No. 68, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

Add to general laws: "An appeal for financial aid from a local Union to subordinate Union shall first be approved by the Executive Council."

Adopted.

Proposition No. 84, by Delegate A. Andonian, New York, No. 1.

Amend Article XI by adding:

All appeals from the decision of subordinate unions shall be outlawed, unless submitted within one year from the time such appeals are taken by a member or members of a subordinate union for the final judgment of the International Photo-Engravers' Union, making the whole section read:

ARTICLE XI.

Appeals.

Section 1. All appeals from the decision of a subordinate union shall be submitted to the President of the International Photo-Engravers' Union, accompanied by a receipt in full for all indebtedness to the local Union, and a decision rendered by that officer. Should either party feel aggrieved at the decision of the President of the International Photo-Engravers' Union he shall have the right to appeal to the Executive Council, and



if not satisfied with the verdict of the latter body he shall be permitted to present his case to the International Photo-Engravers' Union at regular session, which judgment shall be final. All appeals from the decision of subordinate unions shall be outlawed, unless submitted within one year from the time such appeals are dated by a member or members of a subordinate union for a final judgment of the International Photo-Engravers' Union.

Moved and adopted that this law go into effect at once.

#### REPORT OF COMMITTEE ON RESOLUTIONS.

Proposition No. 3, by Delegate P. J. Brady, New York, No. 1.

RESOLVED, That the International Photo-Engravers' Union, in Convention assembled, does hereby protest against the use of injunctions in labor disputes, believing that the writ of injunction was never intended to restrain men from exercising their constitutional liberties, and we heartily endorse any action of the American Federation of Labor which will eradicate this abuse.

Adopted as amended by Committee on Resolutions.

Proposition No. 4, by Delegate P. J. Brady, New York, No. 1.

#### TARIFF REVISION.

WHEREAS, It is now impossible, owing to the low tariff on Photo-Engravings, and their products, for the Photo-Engravers of the United States to compete with the cheap labor of foreign countries, therefore, be it

RESOLVED. By this Convention, that the Executive Council be instructed to enter into negotiations with all other branches of the printing industry, including the employers' associations, to have the tariff revised so that the American workman will get proper protection.

Adopted.

Proposition No. 5, by Delegate P. J. Brady, New York, No. 1.

#### UNIVERSAL FORTY-EIGHT HOUR WEEK.

WHEREAS, Certain locals under the jurisdiction of the International Photo-Engravers' Union are still working over forty-eight hours per week to the detriment of all other locals that have established a forty-eight hour week, especially those situated near by, therefore, be it

RESOLVED, That the forty-eight hour clause be inserted in all future agreements between local unions and their employers, and be it further

RESOLVED, That the Executive Council see that the above resolution is strictly enforced.

Adopted.

Proposition No. 6, by Delegate P. J. Brady, New York, No. 1.

#### UNION LABEL.

RESOLVED, That our International President be instructed by this Convention to communicate with the International Presidents of the International Typographical Union, the International Stereotypers' and Electrotypers' Union, the International Printing Pressmen and Assistants' Union, and the International Brotherhood of Bookbinders with the object in view of devising some system of placing the label on work so that it will be a guarantee that it is the product of Union labor throughout.

Adopted.

Proposition No. 7, by Delegate P. J. Brady, New York, No. 1.

#### ALL CONVENTIONS TOGETHER.

RESOLVED, That our Executive Council be instructed to enter into negotiations with the other branches of the printing trades, with the intention of getting them to hold their conventions at the same time and place; to be mutually agreed upon by them all.

The Committee recommended that it be referred to the Executive Council.

Adopted.

Proposition No. 9, by Delegate John P. Simonds, Jr., Boston, No. 3.

#### Joint Ownership of the Allied Label.

WHEREAS, We have not received the proper protection of the Allied Label, be it

RESOLVED, That this Convention demand the joint ownership of the Allied Label. That the said Label shall be the property of the Joint Con-

ference Board. That all revenue derived from sale of Label shall be the property of the Joint Conference Board. That the expense of protecting and prosecuting the unlawful use of the Label shall be borne by the respective organizations jointly of the Joint Conference Board.

Proposition No. 9.—The Committee recommended that the sense of the resolution be concurred in and they recommended same to be referred to the Executive Council for their consideration. The recommendation of the Committee was concurred in.

Proposition No. 33, by Delegate P. J. Brady, New York, No. 1.

RESOLVED, That our Executive Council allow no scale contract or agreement to be made by any local Union with any newspaper or newspaper syndicate unless that said newspaper or newspaper syndicate agrees in the event of them syndicating their work to make one plate for their own use and one for the use of their syndicate.

Proposition No. 33.—The Committee recommended that the Convention concur in the sense of the resolution, but that the enforcement of same be left to the discretion of the Executive Council.

The Committee's recommendations were concurred in.

Proposition No. 49, by Delegate M. McDonnell, Cincinnati, No. 13.

RESOLVED, That as the South is in a disorganized state that the International Photo-Engravers' Union of N. A. take some action toward sending an organizer through that territory and reorganize the entire South. That this International Convention endorse the plan of all union departments in publishing houses signing agreements simultaneously; thereby unions can be of assistance to each other.

Adopted as amended by Committee.

Proposition No. 50, by Delegates Robert C. Kroll and L. E. Ostrander, St. Louis, No. 10.

#### RESOLUTION.

RESOLVED, That the Executive Council of this Union enter into negotiations with the International Stereotypers' and Electrotypers' Union with the view to securing an agreement or understanding with that Union, whereby its members will be prohibited from doing routing and blocking which properly belongs to members of the I. P. E. U., and that in return our members shall be enjoined from doing such routing and blocking as properly belongs to members of the I. S. & E. U.

Concurred in and placed on file.

Proposition No. 51, by Delegates Robert C. Kroll and L. E. Ostrander, St. Louis, No. 10.

RESOLVED, That our representative on the Joint Conference Board be instructed to present to that body the following amendment with the object of incorporating same into its agreement:

"In all cases where photo-engraved cuts are used in printed matter bearing the Allied Printing Trades Council label all such photo-engraved cuts must bear the union label stamp of the International Photo-Engravers' Union, and in no case shall the Allied Printing Trades Council label be permitted on printed matter having photo-engraved plates not bearing the International Photo-Engravers' Union label. This section shall not require the International Photo-Engravers' Union label to appear on any duplicate plate made by other processes than photo-engraving."

Adopted.

Proposition No. 52, by Delegates Robert C. Kroll and L. E. Ostrander, St. Louis, No. 10.

RESOLVED, That this Convention urges all local Unions to provide a chapter in their Constitutions and By-Laws to regulate the use of the label in shops under their respective jurisdictions; and that no Union relinquishes the right to take up any label when conditions warrant such action.

Adopted.

Proposition No. 53, by Delegate Andrew J. Gallagher, San Francisco, No. 8.

RESOLVED, By the International Photo-Engravers' Union of North America, in Convention assembled this day of September, 1908, that the terms of the Chinese exclusion act should be enlarged and extended so as to permanently exclude from the United States and its insular territory all classes

of Asiatics other than those exempted by the present terms of that act; further

RESOLVED, That these resolutions be submitted through the proper avenues to the Congress of the United States with a request for favorable consideration and action by that body.

Proposition No. 54, by Delegate A. J. Gallagher, San Francisco, No. 8.

Moved: That the International Photo-Engravers' Union of North America heartily endorses the course, policy and action of President Gompers and his associate members of the Executive Council of the American Federation of Labor in pointing out to the wage earners of our country the proper course for them to pursue in the coming Presidential campaign, and the proper way to cast their votes on election day in November next, in order that their constitutional rights and interests may be preserved.

Adopted.

Proposition No. 60, by Delegate Glenn, Philadelphia, No. 7.

RESOLVED, That we, the delegates in Convention assembled, give endorsement to the policy of our International officers for 1908, and that we pledge ourselves to lend every aid to our incoming officers.

Adopted as amended by Committee on Resolutions.

Proposition No. 72, by Delegates Schussler and Hoffert, Chicago, No. 5.

RESOLVED, That the International Secretary be and is hereby authorized to procure a copy of Union labels now in use in order that we may publish a gallery of labels regularly in the Official Journal, and be it further

RESOLVED, That we call upon Unions using engravings to see that the I. P. E. U. labels be stamped on the surface of the plate.

Referred to Executive Council.

Proposition No. 73, by Delegate N. F. White, Des Moines, No. 25.

#### RESOLUTION.

There shall be no out of work list furnished employing photo-engravers except through secretary of local under whose jurisdiction such person or persons need employment.

Adopted.

Proposition No. 74, by Delegate Otto E. Rumpel, Detroit, No. 12.

RESOLVED, That at future conventions the delegates each contribute the sum of \$10, this to be turned into the Local Entertainment Committee, and that the International appropriate the sum of \$200 for the same purpose, so as to encourage locals to ask for conventions, so that they may be benefited thereby.

Adopted.

Proposition No. 75, by Delegate W. H. Birmingham, Rochester, No. 22.

#### RESOLUTION.

RESOLVED, That the Executive Council of the I. P. E. U. be empowered to purchase one (1) or more "Portable Photo-Engraving" plants to be owned by the I. P. E. U. and to be used as a means of defense in case of strikes or lockout.

Adopted.

#### REPORT OF COMMITTEE ON SUBORDINATE UNIONS.

Proposition No. 86, by Delegate H. E. Kennison, Denver, No. 18.

#### RESOLUTION.

Moved that this Convention donate Denver No. 18 the sum of \$250 out of such fund as may be allowed by law, to reimburse Denver Local for moneys paid out for the care of members afflicted with tuberculosis.

Moved that Two Hundred and Fifty Dollars (\$250.00) be paid by the International Secretary-Treasurer to the Denver Local.

Carried.

Proposition No. 87—The Committee reported favorably and recommended that the Executive Council be given full power to act.

Moved to concur.

It was amended that he be instructed to appeal to the Executive Council and they to act as they may see fit.

Amendment to the amendment—That the I. P.

E. U. loan One Hundred Dollars (\$100.00) to Milwaukee Local No. 19 on a note and the collection of same to be left to the discretion of the Executive Council.

Carried.

Proposition No. 91, by Delegates Schussler, Jacobi, Sloan and Hoffert, of Chicago, No. 5.

WHEREAS, The Metal Plate Workers of the City of Chicago are desirous of affiliating with the International Photo-Engravers' Union of North America; therefore be it

RESOLVED, That the Executive Council be instructed to take the matter up with the Metal Plate Workers and report their findings to the general body with recommendations.

Adopted.

#### REPORT OF THE COMMITTEE ON TUBERCULOSIS.

Proposition No. 19, by Chairman Stinson of Committee on Tuberculosis.

Amend General Laws by the addition of a new Section:

#### TUBERCULOSIS BENEFITS.

Any member of a subordinate Union who may become afflicted with tuberculosis shall be entitled to care and treatment at such sanitariums as are approved of and selected by the I. P. E. U. of N. A. for such purposes, provided that such member shall have been in continuous good standing in the International Photo-Engravers' Union of North America for a period of six months preceding his illness; this proviso not to apply to regularly indentured and registered apprentices becoming journeymen members. Members applying for tuberculosis benefits shall fill out a blank form provided for that purpose and present the same to the officers of his local union. Said officers shall then refer the applicant to a local physician for examination and shall insist upon receiving a written report, covering the applicant's case, from said physician. The local officers shall then fill in the application with their signatures under the seal of the union and forward the application, together with the physician's report, to the President of the International Photo-Engravers' Union of North America, who shall take immediate action regarding the same.

Referred to Committee on Tuberculosis.

Proposition No. 20, by Chairman Stinson, of Committee on Tuberculosis.

Amend Article XII, Section 3, making the entire section read:

Sec. 3. Every member shall pay the International Photo-Engravers' Union 35 cents per capita tax monthly, 50 cents quarterly dues and 50 cents quarterly to the Tuberculosis Fund, which becomes due the first month of the quarter, and on payment of the same shall receive from the local Union in which membership is held International Due Stamps so canceled by the local officers so as to indicate the month or months and quarter or quarters for which International Dues have been paid

Referred to Committee on Tuberculosis.

Proposition No. 21, by Chairman Stinson, of Committee on Tuberculosis.

Amend Article XII, Section 2, making the entire section read:

Sec. 2. The revenue of the International Photo-Engravers' Union of North America shall be derived as follows: From charters to subordinate Unions, \$10 per charter; from necessary supplies at prices to be fixed by law, thirty-five cents monthly dues paid to the International Union from subordinate Unions as provided in Article XII, Section 3, fifty cents at the end of every quarter for the Defense Fund and fifty cents at the end of every quarter for the Tuberculosis Fund. The monthly dues are payable monthly to the International Union on or before the third Monday in each month. The quarterly dues are payable on or before the third Monday of the last month of the quarter in which they become due. Money so received from subordinate Unions shall be immediately receipted for by the Secretary-Treasurer. Returns from subordinate Unions under seal shall be made monthly to the Secretary-Treasurer, stating the number of members and the amount forwarded to the order of the International Union.

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Proposition No. 22, by Chairman Stinson, of Committee on Tuberculosis.

Amend Article VIII, Section 1, by inserting after the words "his office" on the forty-third line "he shall have direct authority and supervision over the Tuberculosis Department, and shall be empowered to appoint an advisory visiting committee when deemed necessary," making the entire section read:

#### ARTICLE VIII. Duties of Officers.

Section 1. The President.—The President shall attend and preside at all meetings of the International Photo-Engravers' Union during his term of office; he shall have the casting vote whenever there shall be an equal division on any question, except where he shall have voted on the call of the yeas and nays; he shall at all times exercise a general supervision over all officers of the International Photo-Engravers' Union, requiring a faithful performance of duties and a strict and businesslike manner of keeping all accounts, paying out money and conducting correspondence; he shall, with the Secretary-Treasurer, see that all moneys belonging to the International Photo-Engravers' Union, exceeding the sum of \$50, are properly deposited in a responsible bank to the credit of the International Photo-Engravers' Union, and money shall be drawn from such bank only by check signed by him and the Secretary-Treasurer, and only then when fully satisfied that such money is lawfully and justly due the person or persons for whose benefit the check is drawn; he shall appoint an Auditing Committee of three to examine and audit the accounts of the Secretary-Treasurer, quarterly for the quarters ending January 31st, April 30th, July 31st, October 31st, of each year, said committee to be composed of members of the local Union of which the Secretary-Treasurer is a member; he shall at the close of each year see

that the accounts of the Treasurer with such bank are balanced, and a sworn statement to that effect shall be published, together with all receipts and disbursements of the International Photo-Engravers' Union; he shall be chairman of the Executive Council, and preside at all meetings, and shall have the right to vote upon all questions submitted to it; he shall properly discharge the duties of his office; he shall have direct authority and supervision over the Tuberculosis Department, and shall be empowered to appoint an Advisory Visiting Committee when deemed necessary; he shall, with the sanction of the Executive Council, appoint, oversee and direct the operations of organizers; he shall have authority, should he become satisfied that any officer is derelict in the performance of any duty, or has been guilty of any dishonest act, to suspend such officer from his official position. In such event he shall furnish the officer so suspended with a detailed statement of his reasons for so doing, and shall also forward to the Vice-President a similar detailed statement, who shall thereupon appoint a committee of three of the Executive Board to try such suspended official upon the charges presented by the President, and in accordance with a law to govern impeachment and trial; he shall, before accepting the official bond of any officer, be satisfied that such bond is valid and in proper form, and for that purpose he is hereby empowered and instructed to take competent legal advice upon the matter; he shall, in case of mismanagement or misappropriation of any funds of this Union by any official charged with the custody, collection and disbursement thereof, at once proceed to collect the same from the official in default, or, in the event of the failure of such official to make good such deficiency, institute legal proceedings against such defaulting officer and his sureties. The President shall have power to appropriate moneys for organizing purposes or for

representation at labor conferences which he shall deem advisable.

#### REPORT OF COMMITTEE ON TUBERCULOSIS.

To the Officers and Delegates of the International Photo-Engravers' Union of North America, in Convention Assembled:

Gentlemen—The Convention of 1907 instructed President Woll to appoint a committee to take up the two propositions submitted to and endorsed by them as to the best and most practicable way our organization could help those of our members who were stricken with tuberculosis.

After several months of investigation, etc., the committee met in Chicago, and in conjunction with President Woll thoroughly considered matters from every standpoint. A brief report of their work and a recommendation was then submitted to every member in the I. P. E. U. A large majority have endorsed their recommendations for adoption and leave it for the delegates of 1908 to start the good work.

Your committee then proceeded to work in making preliminary arrangements with such sanitariums that would offer our members the best of care and treatment at reasonable prices. So far we have been able to make terms, etc., with the Y. M. C. A. Health Farm, near Denver, and the King Edward Sanitarium, near Toronto, for our Canadian members.

It now remains for our organization to get in touch with these institutions and make definite arrangements.

We have prepared such rules and regulations for submission to you that we think should be adopted for the control of this new department of our organization. We also submit the necessary changes which must be made in our present Constitution; also a form of application which must be made out by every member seeking this benefit.

It will be noted that we suggest the delegation of control and authority over this department to our President. This power must be centralized for prompt, effective action. There will be cases and situations where considerable discretionary power must be used, and we feel that for best results such power should be centralized. While endeavoring in the rules and regulations to safeguard in every way the interests of all, the point ever before us has been to make the work of this relief fund a blessing and a prompt blessing to all our members who may need its benefits.

Before closing our report we wish to say a few words in regard to the I. P. E. U. Health Farm. This idea appeals to all of us. It has our hearty approval and fullest consideration. But for a starter in this good work it was found impracticable. Its great cost and our lack of experience would close the work ere it scarcely began. But starting out in this manner we feel sure that as time shows the good work accomplished, and with the experience gained, we may then, as an organization, see a clear way to start the larger enterprise and extend its benefits to members afflicted in other ways. Fraternal yours.

CHAS. A. STINSON,  
Philadelphia.

A. NORDHAUSEN,  
Denver.

HENRY J. GRAY,  
Chicago.

To the Officers and Delegates of the International Photo-Engravers' Union of North America, in Ninth Annual Convention Assembled.

Gentlemen—The plan submitted by the Committee on Tuberculosis was carried by a fair majority. The main objection was the increased taxation to our members, so expressed by many who voted in favor of same. Would suggest that this Convention devise some plan whereby this project can be carried out without an additional expense to our members.

#### REPORT OF COMMITTEE ON SHOP IMPROVEMENTS.

Your Committee on Shop Improvements respect-

fully presents the following for your consideration:

Committee reports that statistics on shop improvements were gone over carefully, and recommend that the International Secretary-Treasurer instruct all Local Unions to notify all chapels through their chairmen that questions Nos. 6, 10, 12 and 13 be pushed for all possible improvements wherever possible, and that questions Nos. 18, 19, 21, 23, 24, 25, 32, 34, 38 and 42 be given all possible consideration. Respectfully,

M. McDONNELL, Chairman,  
J. H. SCHUSSLER,  
CHAS. TYGART,  
OTTO E. RUMPEL,

Committee.

Moved, That the report of the Committee be approved and that the President be authorized to appoint a Committee and they be empowered to act until next Convention, and to have each delegate act as representing his local in conjunction with this Committee. Carried.

Proposition No. 10, by Delegate John P. Simonds, Jr., Boston, No. 3.

RESOLVED, That this Convention appropriate such sum of money as is necessary to give Boston a 100 per cent. organization; it is further

RESOLVED, By this Convention that we place at once an official organizer in said city for a period of not less than one year.

Proposition No. 10—The Committee reported unfavorably, but recommended that the Executive Council give all possible aid to Boston. Moved to concur. Carried. Delegate Simonds asked to be recorded as voting "No."

Proposition No. 12, by Delegate William Patterson, Toronto, No. 35.

To the Delegates of the I. P. E. U. in Convention:

Gentlemen—Owing to the fact that a number of members have at different times borrowed money from their respective locals and have gone away leaving their notes as security and then failing to redeem them when due, Toronto local respectfully requests that this matter be taken up for discussion and a law framed which will protect the locals from whom the money is borrowed.

Proposition No. 13, by Delegate William Patterson, Toronto, No. 35.

Amend Section 50, General Laws, making the section read as follows:

On the death of a member of a Subordinate Union the local President and Secretary shall draw an order on the Treasurer of the International Union for the sum of one hundred dollars (\$100) for the burial expenses of the deceased; provided that the deceased has been in continuous good standing in the International Photo-Engravers' Union of North America for a period of six months preceding his death; this proviso not to apply to regularly indentured and registered apprentices becoming journeymen members. Such order, if correct, and accompanied with the dues book of the deceased member, containing the declaration, properly signed, must be immediately honored.

Proposition No. 18, by Delegate John P. Simonds, Jr., Boston, No. 3.

Amend General Laws by adding: "No foreman shall discharge or cause to be discharged any regular for alleged incompetency of substitute."

Proposition No. 23, Delegates Robert C. Kroll and L. E. Ostrander.

Since this International Union by referendum vote has undertaken the work of combating tuberculosis in our craft, such work should be directed by a small but representative body of officers selected for that one purpose and should be kept wholly apart from any political or other undue influence. With this object in view, we offer the following propositions:

1. There shall be appointed a Tuberculosis Relief Committee of three and be constituted as follows:

A. The Executive Council shall appoint one member each year, but no member shall be appointed for more than one term of three years.

B. The tenure of service shall be three years.

C. Not more than one member shall be appointed from any one city at the same time.

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D. The chairman of the committee shall be the member serving his third year.

2. The Tuberculosis Relief Committee shall receive and pass upon all applications for sick benefits and authenticate all vouchers drawn on the Tuberculosis Relief Fund.

3. Only regular members in good standing shall be eligible to receive benefits from the Tuberculosis Fund.

4. Any member wishing to make application for tuberculosis benefits must first make application to his local Union, which application must be accompanied by a physician's certificate certifying that such member is afflicted with tuberculosis. The local Union shall thereupon designate a physician to make another examination of the applicant, and if the second examination shows the applicant to be affected with tuberculosis, the local Union shall immediately forward both, with the member's application to the Tuberculosis Relief Committee; provisional members shall send such application to the Secretary-Treasurer, who shall follow the procedure prescribed for local Unions.

Referred to Committee on Tuberculosis.

Proposition No. 24, by Delegate W. H. Birmingham, Rochester, No. 22.

Move to strike out Section 5, Article VI, and substitute the following:

Article VI, Section 5, "Any member in good standing of any subordinate union shall be eligible to election to any of the following offices: President, First Vice-President, Second Vice-President, Third Vice-President and Secretary-Treasurer, whether he has been sent as a delegate to a convention or not, provided there are no charges pending against him in his local union; and that any officer shall be eligible to re-election."

Referred to Committee on Laws.

Proposition No. 25, by Delegates Robert C. Kroll and L. E. Ostrander, St. Louis, No. 10.

Amend Article XX by adding the following sections:

Section 6. The I. P. E. U. label may be stamped on such cuts only as are made in their entirety by members of this Union.

Sec. 7. No employer who has his photo-engraving done wholly, or in part, by others than members of this Union shall be permitted to use the label.

Referred to Committee on Laws.

Proposition No. 32, by Delegate P. J. Brady, New York, No. 1.

Added section to the General Laws.

When a Local Union finds that it has more apprentices than its ratio calls for, it may, with the permission of the Executive Council, refuse to register any more apprentices, until it has caught up with its proper ratio, and in order that there shall be no discrimination against an employer that has not his proper ratio of apprentices, the Union may take apprentices from one shop and transfer them to the shop that has not its proper ratio.

Referred to Committee on Laws.

Proposition No. 34, by Delegate Andrew J. Gallagher, San Francisco, No. 8, I. P. E. U.

Amend Article 8, Section 1, by inserting the following after the word advisable, on the last line of page 10: He shall receive an annual salary of \$1,500.00 and devote his time exclusively to the business of this organization, making the entire section read:

Section 1. The President.—The President shall attend and preside at all meetings of the International Photo-Engravers' Union during his term of office; he shall have the casting vote whenever there shall be an equal division on any question, except where he shall have voted on the call of the yeas and nays; he shall at all times exercise a general supervision over all officers of the International Photo-Engravers' Union, requiring a

faithful performance of duties and a strict and businesslike manner of keeping all accounts, paying out money, and conducting correspondence; he shall, with the Secretary-Treasurer, see that all moneys belonging to the International Photo-Engravers' Union, exceeding the sum of \$50, are properly deposited in a responsible bank to the credit of the International Photo-Engravers' Union, and money shall be drawn from such bank only by check signed by him and the Secretary-Treasurer, and only then when fully satisfied that such money is lawfully and justly due the person or persons for whose benefit the check is drawn; he shall appoint an Auditing Committee of three to examine and audit the accounts of the Secretary-Treasurer, quarterly for the quarters ending January 31st, April 30th, July 31st, October 31st, of each year, said committee to be composed of members of the local Union of which the Secretary-Treasurer is a member; he shall at the close of each year see that the accounts of the Treasurer with such bank are balanced, and a sworn statement to that effect shall be published, together with all receipts and disbursements of the International Photo-Engravers' Union; he shall be chairman of the Executive Council, and preside at all meetings, and shall have the right to vote upon all questions submitted to it; he shall properly discharge the duties of his office; he shall, with the sanction of the Executive Council, appoint, oversee and direct the operations of Organizers; he shall have authority, should he become satisfied that any officer is derelict in the performance of any duty, or has been guilty of any dishonest act, to suspend such officer from his official position. In such event he shall furnish the officer so suspended with a detailed statement of his reasons for so doing, and shall also forward to the Vice-President a similar detailed statement, who shall thereupon appoint a committee of three of the Executive Board to try such suspended official upon the charges presented by the President, and in accordance with a law to govern impeachment and trial; he shall, before accepting the official bond of any officer, be satisfied that such bond is valid and in proper form, and for that purpose he is hereby empowered and instructed to take competent legal advice upon the matter; he shall, in case of mismanagement or misappropriation of any funds of this Union by any official charged with the custody, collection and disbursement thereof, at once proceed to collect the same from the official in default, or, in the event of the failure of such official to make good such deficiency, institute legal proceedings against such defaulting officer and his sureties. The President shall have power to appropriate money for organizing purposes or for representation at labor conferences which he shall deem advisable. He shall receive an annual salary of fifteen hundred dollars (\$1,500) and shall devote his time exclusively to the business of this organization.

Referred to Committee on Laws.

Proposition No. 38, by Delegate Andrew J. Gallagher. San Francisco, No. 8.

Add new section to Article X, to be known as Section 6, to read as follows:

Section 6. Ten per cent. of the per capita tax collected shall be set aside in a fund to be known as the "Convention Fund," and the railroad and per diem expenses of delegates shall be paid from said fund; this fund may be used for no other purpose; provided, that upon permission of twenty (20) local Unions after each shall have been requested to grant such permission it may be used for a specific purpose. Said purpose to be stated when permission is asked and the amount in the fund at the time of said request, to be made known to the local Unions.

Referred to Committee on Laws.

#### REPORT OF COMMITTEE ON OFFICIAL JOURNAL.

Your Committee on Official Journal respectfully submit the following for your consideration:

After carefully considering propositions Nos. 28, 45, 47, and 48, relating to Official Journal, your Committee recommend that the Executive Council be instructed to proceed without unnecessary delay to publish such Official Journal for one year as an

experiment, and that a copy be sent to every member. The Executive Council to report to the next regular convention. We also recommend the adoption of the following rules for the guidance of the Executive Council to govern the publication of the Official Journal during its experimental stage:

1. That we publish an Official Journal and that a copy be sent to every member.

2. That the name of the Official Journal shall be The American Photo-Engraver, and it shall be known as the Official Journal of the International Photo-Engravers' Union of North America.

3. The editor shall be appointed by the Executive Council and shall be under their direct supervision.

4. Each Local Union shall elect an official correspondent, whose duty it shall be to report to the editor once a month on all matters of interest touching upon the welfare of the craft.

We recommend that all the propositions submitted to the convention pertaining to the publication of an Official Journal be referred to the Executive Council for their consideration and that all other matters pertaining to the publication of the Official Journal, such as revenue from advertising, subscription, etc., be left to the Executive Council.

Respectfully submitted.

PETER J. BRADY, Chairman,  
H. JACOBI,  
W. H. BIRMINGHAM,  
F. H. GLENN,  
ROBERT WILSON,  
Committee.

Moved to non-concur in the Committee's report. It was amended that we take up sections separately. Carried.

Moved that we add the words "for 50 cents per year" to Section 1. Carried.

Moved that we concur in Section 2. Carried.

Moved that we concur in Section 3. Carried.

Moved that we concur in Section 4. Carried.

Moved that the subscription (fifty cents) be made voluntary. It was amended that this question be left to local unions to determine. Amendment carried.

The motion to non-concur in the report of the Committee was now put and lost.

It was moved to concur in the report of the Committee as amended.

Carried.

Moved that we reconvene Saturday morning at 9 o'clock sharp.

Carried.

Proposition No. 28, by Delegate P. J. Brady, New York, No. 1.

#### OFFICIAL JOURNAL.

Amend General Laws by adding the following:

Section 1. The International Union shall publish a monthly journal, a copy of which shall be sent to every member in good standing.

Sec. 2. The name of the journal shall be The American Photo-Engraver, and it shall be known as the Official Journal of the International Photo-Engravers' Union of North America.

Sec. 3. The editor of the American Photo-Engraver shall be appointed by the Executive Council and shall be under their direct supervision. He shall receive a salary of three hundred dollars (\$300) a year.

Sec. 4. Each local union shall elect an official correspondent, whose duty it shall be to report to the editor of The American Photo-Engraver once a month all matters of interest touching upon the welfare of the craft.

Sec. 5. There shall be published monthly in the Official Journal fac-simile copies of such Union labels as in the opinion of the Executive Council the members should become acquainted with.

Sec. 6. A tax of five cents (5c.) monthly shall be levied on every member of the International Union for the support of the Official Journal.

Referred to Committee on Official Journal.

Proposition No. 45, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

Amend Constitution by adding new Article No. . . . ., and to be entitled "Official Journal."

Section 1. There shall be published monthly by the Executive Council a journal of . . . . . pages or more to be non-political and non-sectarian and to

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be known as “The Photo-Engravers’ and their Journal, Official Journal of the International Photo-Engravers of N. A.” which shall be so far as practicable the International Photo-Engravers’ Union’s official organ to communicate to subordinate Unions.

Sec. 2. The President, with the assistance of the Secretary-Treasurer, shall edit and manage the Official Journal, subject to recall from their duties by the Executive Council upon proper and sufficient cause or provocation.

Sec. 3. The Official Journal shall at all times be under strict supervision and control of the Executive Council and must at all times meet with its approval.

Sec. 4. The Official Journal shall contain the reports of the Auditing Committees, official order; charters granted; charters suspended and the cause; shall publish a list of names and addresses of Corresponding and Financial Secretaries of subordinate Unions free, and of such Unions as desire to publish a list of the names of their officers shall be charged at the rate of \$1 per line per year; state of trade; notices of changes in the scales of prices; advertisements meeting the approval of the Executive Council; the name of all applicants for membership about whom information is desired as to previous good character and such other matters as may be of interest and importance to the craft generally.

Sec. 5. The subscription rate of the Journal shall be fifty cents per annum, postage in addition to be charged foreign subscribers, and the price for single copies shall be five cents, provided that one copy of said Journal be furnished free to the Secretary of each subordinate Union; and, provided further, that the Executive Council may dispose gratis of such number of copies as is deemed by them best to promote the interest of our Union and our Journal.

Referred to Committee on Official Journal.

Proposition No. 47, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

Add General Laws:

The International Photo-Engravers’ Union recommends and urges that each local Union subscribe for as many copies of the Journal as it has members and that such subscriptions be paid by local Union from its funds.

It is recommended and urged that all subordinate Unions publish their card in the Journal. The revenue derived from this source, while being light on finances of local Unions, will materially aid placing the Journal on a sound financial basis.

Referred to Committee on Official Journal.

Proposition No. 48, by Delegates H. F. Jacobi and A. Sloan, Chicago, No. 5.

RESOLUTION.

WHEREAS, Our International Union has now a membership numbering over 3,000 members and has assumed such proportionate strength as to make it imperative, or nearly so, that we own and control the Official Journal of our Union;

WHEREAS, Such a feature added to our Union will place an effective organizing means within our control, and

WHEREAS, Our Executive Council at the last Convention was instructed to inquire and report to this Convention as to the possibility of our Union owning and controlling our Official Journal; therefore, be it

RESOLVED, That in event of favorable report by the Executive Council that we instruct our Executive Council to proceed without unnecessary delay to publish such Official Journal and make such arrangements with the Ostranger-Seymour Company, publishers of the Criterion, to retain this journal until such time as these resolutions can be put into effect.

Referred to Committee on Official Journal.

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The Hillside Press, Publishers, Richmond Hill, N. Y.

Volume 1

DECEMBER, 1908—JANUARY, 1909

Numbers 2—3

## CONTENTS

|   |    |
|---|----|
| Frontispiece, "SAFE!"<br>Courtesy of the C. P. Goerz Am. Optical Co.....                    | 26 |
| HOW ONE NEWSPAPER GOT RESULTS<br>By FRED J. WILLOCK.....                                    | 27 |
| THE WAY SOME ADVERTISERS BEAT THE RATES<br>By CHESTER KNOWLES.....                          | 31 |
| ADVICE .....  | 31 |
| BILLING PHOTO-ENGRAVING BY TYPEWRITER<br>By R. G. FLAGLER.....                              | 33 |
| PHOTO-ENGRAVING PRICES TWENTY YEARS AGO<br>S. H. HORGAN, in the <i>Inland Printer</i> ..... | 35 |
| THE METZOGRAPH GRAIN SCREEN.....  | 36 |
| EDITORIAL—OUR POSITION.....   | 38 |
| RETOUCHING NEWSPAPER COARSE SCREENS.....  | 40 |
| A FEW SIMPLE WAYS TO TEST PAPER.....  | 42 |

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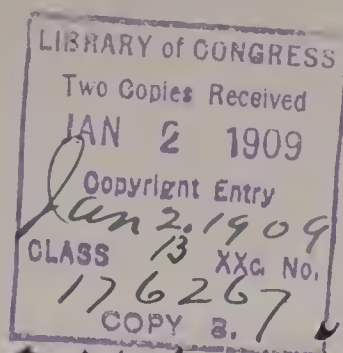
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# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users of Photo-Engraving

VOL. I., NOS. 2—3

DECEMBER, 1908—JANUARY, 1909

## HOW ONE NEWSPAPER GOT RESULTS

A Short Story Which Contains a Few Logical Hints Which May or May Not Be Valuable

By FRED J. WILLOCK

With Drawing by the Author

YES, that's all very well to say that you will improve the quality of our halftones so that no other paper will look as good. Why haven't you done it before? You have been making our cuts for six or seven years, and if anything they appear worse each day."

The publisher of a large metropolitan daily thumped his desk emphatically as he delivered himself of the above before a meeting of the Business Manager, Managing Editor, Sunday Editor of his paper and the President and manager of a large engraving house.

"In my opinion the cuts are not etched deeply enough," broke in the Managing Editor.

"My complaint is that the quality is not uniform, some are good and some are bad. The ones we wish to have appear best almost always disappoint us," the Sunday Editor explained.

"And every little extra is charged for," complained the Business Manager. "The bills have been mounting steadily for the past four or five years. Where we used to spend from \$100.00 to \$150.00 per week, it now costs us nearly \$500.00. This is all out of pro-

portion to the results obtained. I have been going over some back numbers of our paper and note with considerable surprise that the quality of the cuts four or five years ago, printed on our old presses, was superior in every way to those we print to-day, and now we have the latest web perfecting presses."

"In my opinion," said the Managing Editor, "we ought to establish our own plant. Then, and then only, could we be sure of a uniform quality of cuts and proper depth for our purposes. Depth is what all our halftone cuts lack. We never have any difficulty with our type or line work. They always print clear and sharp. This proves conclusively that the halftones are either slighted or improperly etched.

The President of the Engraving Company sat quiet and attentive while his product was being mercilessly hammered. He wore a winning smile as he declared positively:

"Gentlemen, our cuts are all right. The real trouble is that you do not know how to print coarse screen halftones from stereotypes! We make better cuts to-day than we ever did. One hundred per cent. better. We

have a more perfect organization, higher salaried craftsmen, experts, every one in his own department. Latest improved machinery, and behind it all runs a loyalty toward your paper, a real loyalty, from the office manager down to the errand boys. We appreciate your patronage and friendship toward us. We have tried to give you perfect service. We know you are satisfied with it. We have given you good cuts,—better cuts than any of your contemporaries are getting from their own plants—and the harder we try and the better the quality the more unsatisfactory the results.

“I must confess that it is more discouraging to us than it is to you. We want to satisfy you. When we first secured your contract six years ago ours was probably the smallest and most incomplete plant in the city—to-day it is unquestionably the largest. No other plant in the country or in the world operates three shifts of men every day in the year, including Sundays and holidays.

“These additional shifts were installed primarily to improve our service to you. Every man in our employ is with us because he has ‘made good’ elsewhere at his particular branch of the trade. We employ no incompetents. Every man is employed because he ‘delivers the goods.’ They are all comparatively young men, and every one is a ‘live wire.’

“The percentage of errors in following instructions is nominal compared with what you would have to contend with if you try to install your own plant. It will take you years to attain the state of perfect organization which we have reached.

“Now I will get back to my contention that your present force does not know or want to learn how to print halftone cuts well. I am willing to stake my reputation and the whole amount of your next month’s account against a plugged nickel that inside of two weeks I can improve the appearance of your paper at least fifty per cent. To do this, however, it will be necessary for all four of you gentlemen to give me his whole support. There may be a few heads fall or there may be some new machinery to be installed, and if I find it necessary I am going to order it and send the bill to the publisher. If after I say I am through you are not satisfied I will stand for any expense I have incurred and replace everything as I found it. If results have been obtained you pay the bills and I get the plugged nickle and your commendations. Are you willing to give me a trial, gentlemen?”

“Your proposition sounds fair, and as we apparently have nothing to lose and everything to gain, if you do as you say, I am tempted to permit you to try to see what you can accomplish,” said the Publisher.

“I must be permitted to have my way in everything for two weeks,” said the engraver, “and have the undivided support of every department, and I request the Business Manager to notify the heads of the mechanical departments to that effect.”

“Yes, but the financial part is what interests me. How do you account for the steady increase in your bills?” asked the Business Manager.

“Mr. Brandt, we won’t discuss our bills to-day or attempt to explain till my two weeks grace have expired. In the meantime I will have the account-



ing department go over the matter carefully and give you a detailed report.

\* \* \* \* \*

Two weeks later the same group of men were assembled in the Publisher's office. The President of the Engraving Company asked:

"Well, gentlemen, what's the verdict?"

"Fine!" cried all four in a breath.

Editor: we did not give any more than the usual amount of attention to your cuts—that is, not at our plant. And to answer the Publisher: I will begin from the time I left you two weeks ago," said the President of the Engraving Company.

"When I went away I had only a very vague idea as to just how I was going to proceed to make good my



"Well, gentlemen, what's the verdict?"

"It's easy to see that you etched the cuts deeper," said the Managing Editor.

"And that you gave more attention to the quality. The effect of careful etching is quite noticeable. The cuts have all shown up well, and one is as good as the other," chimed in the Sunday Editor.

"You certainly have made good. Just how did you go about it?" asked the Publisher.

"To answer the Managing Editor first, I wish to say that we did not etch the cuts deeper. To answer the Sunday

boast. However, I had unbounded confidence in the high-grade quality of our cuts and was positive that the trouble was not in the cuts, but in your printing of them.

"I returned to the office and threshed the matter out thoroughly with the heads of each department and received their assurances that nothing further could be done to improve the quality. That deeper etching would materially injure the plates and, furthermore, that

(Continued on page 43.)

# Sherlock Holmes is Coming Back

TWO more "reminiscences" by Dr. Watson of the Great Detective are to see the light. The first one is entitled "The Singular Experience of Mr. J. Scott Eccles." It will appear in COLLIER'S for August 15th, which will be a "SHERLOCK HOLMES" Number. There will be an intimate sketch of Sir Arthur Conan Doyle, creator of Sherlock Holmes, of his old teacher, Professor Bell of Edinburgh, who was the original of the Great Detective, and many anecdotes and illustrations of the unique place in literature and on the stage achieved by "the greatest character in fiction since *Monsieur Dupin*."

Here is what Collier's Fiction Editor wrote:

"I think I can safely say that it is one of the most remarkable detective stories of modern times. Not only is the plot novel, but the author brings to this tale all of the atmosphere of mystery and the extraordinary character drawing which long ago made him famous. I consider the story a great asset for any periodical. It is one of those cases where an author wins success along a certain line, creates a band of imitators, drops out for a time, and then comes back as if to show just how good he really was."

## Collier's

*The National Weekly*

Sherlock Holmes Number—August 15th

*Courtesy of "Collier's Weekly."*

## THE WAY SOME ADVERTISERS BEAT THE RATES

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Hard Times Sharpen the Wits of the "Money-Spenders"

By CHESTER KNOWLES

THAT "necessity is the mother of invention" is amplified by the way in which hard times, coupled with steadily advancing rates, developed for the advertiser a method by which it is possible to get twice the amount of actual space, in addition to a two-color effect, at the regular advertising rates.

It was a publication which first pointed a way to accomplish this apparently impossible feat. Collier's advertisement which announced the return of Sherlock Holmes, reproduced on the opposite page, was used during August in the popular magazines, and shows how R. T. Snodgrass, of the advertising department of Collier's, evolved the method of showing the great character in a subtle, behind-the-scenes manner which perhaps makes it particularly appropriate and effective.

We also present an advertisement which was arranged by Frank Presbrey Co.—for Wilcox & White Co.—presenting as it does a large figure of the Angelus Piano Player, which occupies nearly the whole amount of available space in the advertisement and the letterpress which apparently is printed over it.

Of course the method used to produce this effect is obvious to the practical engraver, but to the lay mind and also to many advertising men and printers it is more or less of a mystery, and it is the intention of PHOTO-ENGRAVING ART from time to time to initiate all those who care to learn into the mysteries of the possibilities of the beautiful and practical results to be ob-

tained by mixing a little brains with chemicals, acids and metal.

To produce this effect two line negatives are made—one of the type matter, and one of the figure. The figure is drawn solid black, as if for straight line reproduction. A half-tone negative is made by exposing to a pure white sheet. This negative is stripped and placed on the glass over the straight line negative of the figure. The copper plate is sensitized as usual for an ordinary print, and the double negative given the usual exposure. The negative of the type matter is then printed on the same sensitized plate. Care must be taken to have the negative squared up and also to have the plates marked in such a way that the type matter will be sure to be printed at right angles to the upright figure.

---

### ADVICE

Build up!



Never pull down your house about you.



It is easy enough to find fault. It is the man who can remedy the trouble, and does, who makes good.



The man who hasn't the courage of his own convictions must always tag along behind. Dig up an idea, develop it, get in front and lead the way.



People who do only what they are told to do are never told to do anything they have not shown they are capable of doing. Actions, not words, count.

---

It will soon be time to purchase or exchange your present piano for a player-piano. When that time comes there are three things it will pay you to remember—

---

There is just as big a difference in player-pianos as there is in pianos.

The chief difference in player-pianos—the difference that really counts—is in the facilities with which the instrument provides you for rendering music properly.

There is only one instrument, *one player-piano only*, whose expression devices cover every requirement necessary to the correct production of every class of music, and whose equipment of expression devices enables you to produce music of the highest and most artistic kind

*That Instrument is the*

# ANGELUS PLAYER PIANO

## THE MELODANT

the wonderful new device which brings out the complete melody clearly and distinctly, subordinating the accompaniment and emphasizing the melody notes.

## THE PHRASING LEVER

enabling you to retard or accelerate at will—to pause on any particular phrase or rest on any note. By this means the most delightful tempo effects may be secured.

## DIAPHRAGM PNEUMATICS

increase or decrease the blow of the fingers. This gradation of volume is accomplished either gradually or instantly, which gives the effect of the human touch to your playing.

## THE MELODY BUTTONS

provide a means for accenting properly in either base or treble.

The little ANGELUS, in the form of a small portable cabinet, plays any make or style of piano. The ANGELUS is also incorporated in the world-famous Knabe Piano and in the Emerson Piano, making the KNABE-ANGELUS and the EMERSON-ANGELUS

It is an obvious and indisputable fact that the expression devices of the ANGELUS player-piano are more complete and more practical than those of any other instrument. If you make your purchase before satisfying yourself of the truth of this, you'll be making a very serious mistake.

Unless you are provided with expression devices which allow for the proper degree of musical expression, you will not be satisfied for any length of time with either your instrument or the music it enables you to produce.

When you are ready to purchase, remember that it is simply a case of satisfaction or the disappointing reverse. It will pay you, therefore, to make a thorough investigation of the ANGELUS player-piano before deciding finally on any other.

*Write for name of convenient representative*

**THE WILCOX & WHITE CO.**

MERIDEN, Conn.

Regent House, Regent St., LONDON

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*Courtesy of  
Frank Presbrey Co.,  
New York.*

## BILLING PHOTO-ENGRAVING BY TYPEWRITER

A Modern Method of Making Out Invoices and Entering in Salesbook at One Operation

By R. E. FLAGLER

THE wonderful success and development of American industries can be attributed to the fact that our institutions are not content to carry on their operations



The Billing Machine.

Showing how page from loose leaf sales book is inserted in the machine. The bill can be removed without disturbing the page.

along the old lines of years past, when a better way is apparent.

Typewriters and billing machines have come to stay—commercial exigencies demand them—it is not at all perplexing to comprehend why they occupy the place they do in the business world. They are time saving, hence a necessity.

Business men to-day do not tolerate dead wood, either in the form of employees or office equipment. They know from experience that an unsystematic arrangement will produce chaotic results. Each employee, as part of the office machine, must do his share and do it well. Competition is keen—it's a "survival of the fittest," and the fittest can mean nothing more or less than system. It is the concentrated result of the necessary only.

Business would be paralyzed if typewrit-

ers and billing machines were taken away. They are used in all departments of railroad offices, libraries, retail and wholesale stores. They are used for writing checks, registering hotel charges and rendering bills, and in fact all forms of correspondence where pen and parchment was formerly used, and where bound books for recording bookkeeping entries were thought to be indispensable. The old antiquated method of the past, with its red tape, has not been able to meet the demand of today, and that is why billing typewriters and loose leaf books have been so universally adopted.

For instance, let us cite the case of an order received, either by mail, telephone, telegram, or through the salesman.

According to the old routine, this order is recorded at least once in the office; then the various departments interested must take their entries, the order traveling around until it reaches the shipping department. The shipping department has no knowledge of what is coming through, or what is expected of it, until goods for shipment come flooding in from all sides.

Now compare with the system we advocate:

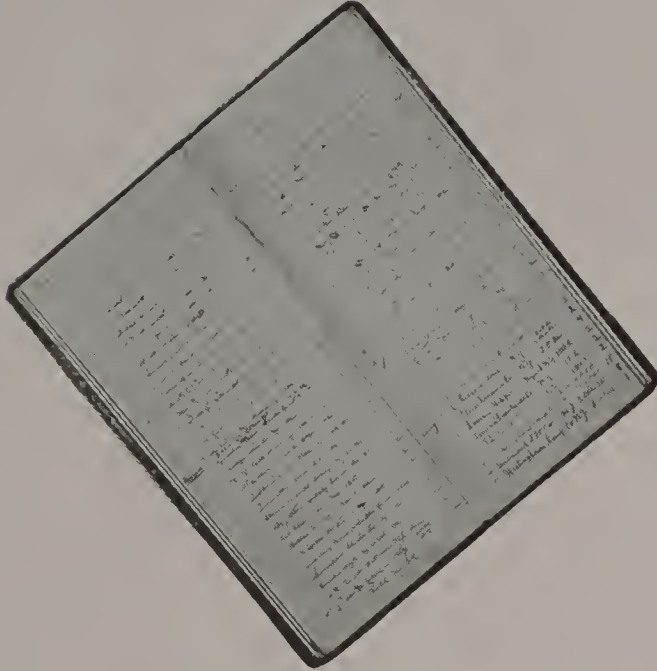
Printed order forms\* are filled in by

\* This complete system was described in PHOTO-ENGRAVING ART last month.

| CHARLES W. BECK<br>PRESIDENT   |  | CHARLES W. BECK, JR.<br>VICE-PRESIDENT |                            |
|--|--|--|----------------------------|
| <b>The Beck Engraving Company</b><br>Incorporated<br>147, 149 and 151 North Sixth Street<br>Designs Engravings Illustrations |  |  |                            |
| BILL NO.   | 173  | Philadelphia, Dec 15, 1908             |                            |
| SENT TO  | Underwood Typewriter Co                        | New York                               | BELL AND KEystone PHOT. Co |
| TERMS  | 2% 10 Days                                     | ORDER NO.                              | 2567                       |
| 3  | Line minimums @ 60¢                            | \$1 80                                 |                            |
| 2  | Half tones - 133 screen - 4x5 - 20" @ 15¢ 3.00 | 6 00                                   |                            |
| 1  | Line out 16x9 144" @ 6¢                        | <u>8 64</u>                            |                            |
|  |  |  | \$16 44                    |

Showing neat appearance of invoice.

using an autographic register machine, copies for the various departments interested being made at one operation. Each is a correct copy of the original, each bears a cor-



Scrawly appearance of ordinary sales book.

responding number with the copy for office use. They furnish a complete record for goods delivered from each department for shipment. These records are filed systematically and can be referred to instantly. All departments know what is expected of them and prepare accordingly. The shipping department receive their copy of the order when same was made out, and have a check on the work so as to be in a position to answer queries when they arise.

Time, your most valuable asset, is saved; shipments are expedited; an automatic check on the different departments is secured; a systematic record is established in each department.

Now, as to billing the order.

Formerly this operation consisted of transcribing the entry in a bound book with pen and ink, the bill being copied therefrom—a laborious task when many bills are daily rendered. Excess copying of the same detail is time wasted, and transpositions are apt to creep into the work.

The approved form of

billing now-a-days has trimmed down these needless operations—there is little chance for error, and the weak points of the old methods are the strongest of the system of to-day.

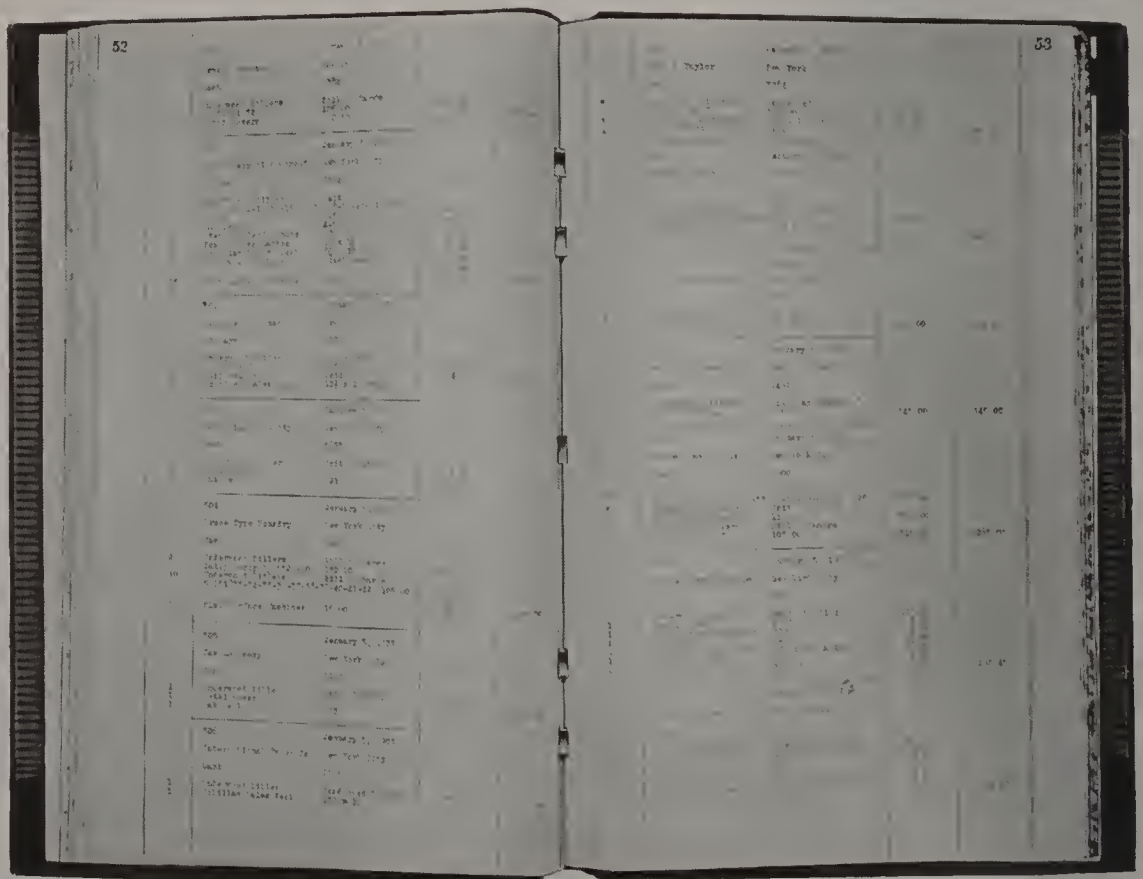
The sales sheet and invoice are made at one operation on the typewriter; one is an exact copy of the other. The records are more legible; in fact, a typewritten sales book is usually the best record in the office. Bills rendered customers are typewritten, a courtesy which is appreciated. More than one employee can have access to the loose leaf sales book, as the billing clerk is only using one page at a time.

Since the advent of their first billing machine four years ago, the Underwood Pioneer Visible Typewriter Co. now have a list of twenty-five machines for handling all kinds of detailed office work. Their machines and business systems cover such a wide scope that “Bookkeeping on the Underwood” is a popular phrase in modern offices to-day.

\* \* \*

“YOU CAN’T TURN IT DOWN!”

Van Norden’s “The World Mirror” for January presents a bold but expensive idea to Publishers. It has the cover printed on the front and back, so that, no matter how it lies, “Van Norden’s” is always in sight.



Neat, legible appearance of modern sales book.

## PHOTO-ENGRAVING PRICES TWENTY YEARS AGO

With Some Comparative Prices of To-Day

JUST twenty years ago, this month," writes S. H. Horgan in *Inland Printer*, "I called on over a dozen firms in New York and Philadelphia for estimates on engraving for use by a syndicate. The copy was to be supplied weekly, and the estimate was for plates of 275 square inches or less. The following six firms bid for the work: One—Electro-Light Engraving Company. Two—Galvanotype Engraving Company. Three—The Photo-Engraving Company. Four—Moss Engraving Company of New York. Five—Grosscup & West. Six—The Levytype Company of Philadelphia. The square-inch prices for half-tone on that regular business from the firms in the above order was 16 cents, 14, 15, 16, 18 and 11. The prices for minimum half-tones were given in the same order: \$4.50, \$4, \$4, \$5, \$7 and \$3. Line reproduction was: 10 cents, 10, 10 to 12, 12 to 15, 10 to 15 and 8 to 12; the minimum prices being \$1, 75 cents, \$1, 75 cents, \$1.50 and 75 cents. The time required for half-tone making was as follows: Three to five days, three to four days, four to six days, two to six days, six days and one day. Line engraving required two days, two days, two to three days, two days, two days and one day. Grosscup & West, it will be noticed, charged 18 cents a square inch with a minimum of \$7 and required six days to do the work, while the Levytype Company charged 11 cents a square inch, \$3 for a minimum cut, and required but one day to engrave it."

Editor's Note.—Being a little curious as to how present-day prices would compare with those of 20 years ago, we wrote the

following letter to the Electro-Light Engraving Co., Galvanotype Engraving Co., the Moss Engraving Co., and in place of the Photo-Engraving Co. we wrote to the Union Engraving Co. Their answers speak for themselves and we make no comment.

New York, Nov. 16th, 1908.

Gentlemen:—We have in process of formation a weekly syndicate service and would appreciate your sending us by return mail your rates per square inch on newspaper line work, 65 screen half-tone, and combinations of line and coarse screen half-tone, also the minimum on each. We will supply the copies about a week in advance, but would like to know just how fast you could turn out a halftone or line cut if we should be pressed for time.

An early answer regarding prices and delivery will be much appreciated.

We will give you satisfactory financial references if we place our business with you.

THE HILLSIDE PRESS.

New York, Nov. 19th, 1908.

Photo-Engraving Art, Richmond Hill, N. Y.

Gentlemen:—Replying to your favor of the 16th inst. our prices for making line work would be at the rate of 6c. per square inch, with a minimum of no cut to cost less than 75c.

Half-tones, square finished, 65 screen, 15c. per square inch, with a minimum of \$2.00.

Combination line and coarse screen half-tones, 25c. per square inch, with a minimum of \$3.50.

And we can ship single orders to you the same day if necessary, or the following day if time permits.

Trusting that these quotations will be satisfactory, and hoping to be favored with your orders, promising best attention, we remain,

(Signed) ELECTRO LIGHT ENGRAVING CO.

New York, Nov. 19th, 1908.

The Hillside Press, Richmond Hill, N. Y.

Gentlemen:—Yours of the 16th at hand. Our prices for line work is 5c. per square inch. For 65 screen half-tones we will charge you 6c. per square inch, with a minimum of \$1.00. Combination areas of each class of work is charged at its square inch price, or minimum cost; that is, if you had a line cut 6 in. x 5 in. and wanted a combination made of it by inserting one small half-tone, we would charge this line plate at its inch measurement and the half-tone at its

minimum price, just the same as though they were made separately.

I hope these prices will meet with your approval and that you will favor us with the work you have to do.

(Signed) GALVANOTYPE EN-  
GRAVING CO.

New York, Nov. 19th, 1908.

Hillside Press, Richmond Hill, N. Y.

Gentlemen:—Your communication of Oct. 16th to hand and contents noted. We shall be pleased to furnish you with line reproductions for 6c. per square inch, no piece less than 60c.; half-tone square edge style, 12c. per square inch, no piece less than \$1.50; Cut out half-tone, 14c. per square inch, no piece less than \$1.75; vignette half-tone, 18c. per square inch, no piece less than \$2.50.

We operate a day and night force and could deliver plates in eight hours or less if necessary.

Under separate cover we are sending you a catalogue showing the various screens printed on various grades of papers.

(Signed) THE MOSS PHOTO-EN-  
GRAVING CO.

New York, Nov. 19th, 1908.

Photo-Engraving Art, Richmond Hill, N. Y.

Gents:—Yours of the 16th inst. received. We wish to state in response that we do not care to have our lowest rates written. If

you could send your manager over here we could talk it over with him.

Regarding the delivery we give prompt attention.

(Signed) HAMMALIAN BROS.

#### HALFTONES AT FIFTY CENTS EACH

A circular from an engraving house reads as follows: "How does 50 cents strike you for a one-column cut? This is the lowest offer we have ever made to a publisher—and it is only for cash, we prepay all delivery charges. In the last two years this house has lost considerable of its newspaper business and upon investigation we find that other firms have cut our original seventy-five-cent price. We believe we can come out all right at fifty cents if we get a sufficient volume of business, if not this price will be discontinued and other branches pushed."

Some specimens of the work of this house have been sent to us, and they are, of course, about as poor as they can be. However, no engraving house could turn out work, poor or good, for that price, and make a profit worth looking at. It is not necessary for one thing, for people whose trade is worth having are willing to pay a fair price for what they get; and it is demoralizing to the trade as a whole for another thing. Too many firms are not inclined to take the second point into consideration, but it is a vital one nevertheless.—*American Printer*.

### THE METZOGRAPH GRAIN SCREEN

THESE screens will be found to differ essentially both in appearance and particular qualities from all ruled screens hitherto employed for obtaining halftone cuts.

The chief points of novelty which they present are—

Their transparency; hence, in shortness of required exposure, differing largely from all others.

The grain exhibits an evenness and contour impossible of attainment by any process other than is followed for its production, the same consisting essentially in the sublimation of Pyrobetulin, which, being deposited upon the glass in a reticulated film of any desired fineness, is afterwards treated with Hydrofluoric Acid, whereby a like character of reticulation is imparted to the glass itself.

The etched—prismatic—reticulations thus obtained are found on exposure to impart, in the exact ratio of the light received, a

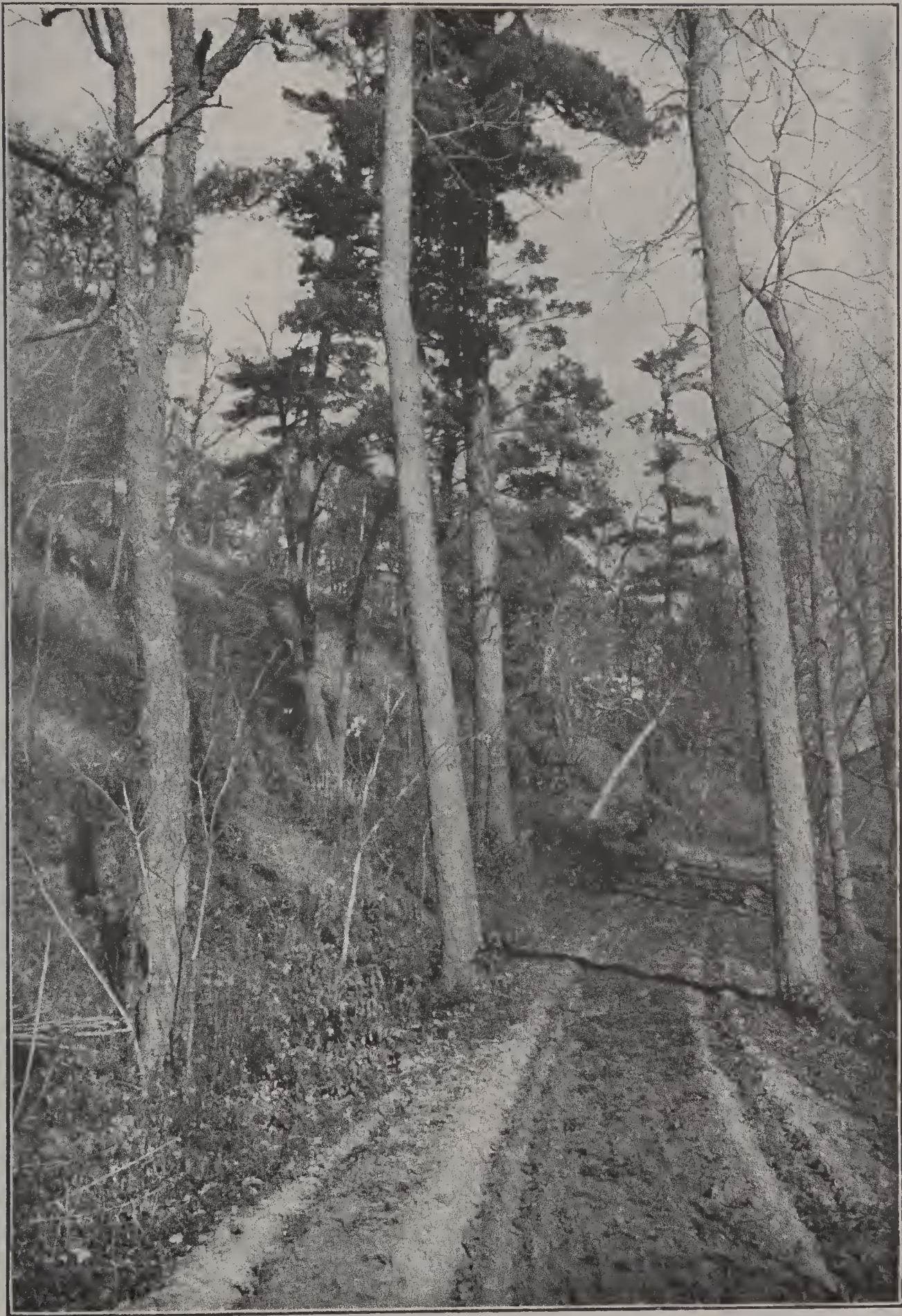
similar reticulated grain to the sensitized plate.

It is seen, therefore, that, as by reason of the greatly shortened exposure peculiar to these screens there is obtained, with perfect integrity of tone, also a characteristic colotype grain, unattainable by any other process.

The procedure for the production of the negative is similar to that followed with the lined screen, but the plate should have an exposure not exceeding one-sixth of the time necessary with a lined screen, and the Metzograph Screen should be placed much closer to the sensitive plate than in the case of the ruled screen. A small stop, as f/45, should be used before and throughout exposure.

We show herewith a cut made with a grain screen. The negative was made with an Apochromat Tessar, and the cut was loaned us by Bausch & Lomb Optical Co., Rochester, N. Y.





*F. H. L. Cotton, Eau Claire, Wis.*

**METZOGRAPH SCREEN**

Made with a No. 1 Achromat Tessar-Process Lens.

*Courtesy of  
Bausch & Lomb Optical Co.,  
Rochester, N. Y.*

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

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FRED J. WILLOCK.....EDITOR.

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THE HILLSIDE PRESS  
Publishers,  
Richmond Hill, New York.

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turn postage should be enclosed.

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year, single copies 10 cents. Foreign countries,  
\$1.50 per year, single copies 15 cents.

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DECEMBER AND JANUARY.

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We wish our readers, subscribers and  
advertisers a Merry Christmas and a  
Happy New Year.



## OUR POSITION

### ENGRAVERS!

Employers and employees! PHOTO-ENGRAVING ART is your magazine. It is a magazine whose columns will be open to you at all times for the exploitation of samples of any exquisite results you may obtain; a place to air your ideas on prices or any other vital matter, to discuss pro and con such matters as can be discussed publicly between employers and employees.

We intend to develop PHOTO-ENGRAVING ART so that it will be the recognized encyclopedia to which all users of engravings will turn when in search of information.

It will become this authority quickly if given your support.

Without the immediate support of

every photo-engraving house in the country it will be hard work and an uphill fight—not that we are afraid of work, nor do we doubt our ultimate success.

You are all business rivals; wanting what you haven't got, and getting what you do not want. You may each want all the business the other fellow has, but your actual interests are identical. You want business—but first of all need fair prices in exchange for honest work. This means the education of the user who does not, as a rule, appreciate the amount of effort necessary to produce cuts. PHOTO-ENGRAVING ART is out for higher prices for engravers.

If photo-engravers everywhere will give us the support we ask they will never have cause to complain of the results which we will accomplish.

Can you question the value to yourselves of a magazine of this character in which will be discussed the actual cost of the production of a properly made cut; in which will be explained the numerous processes necessary to produce a cut? The reason for and the equity of the minimum charge, etc.? Of necessity the printer who wants to know a good cut when he sees it; how to print it when he gets it, and what it ought to cost, will be an interested reader.

We expect we will err often, and when we do we want you to set us right.

The postal laws make it necessary for us to have a certain number of actual subscribers before the authorities will allow us second-class mail privileges. We must have second-class entry to be able to accomplish anything.

Your dollar and subscription will help us to get it, and *you* will benefit by it. SEND IT TO-DAY.

NOTES

We printed as a fact and without investigation a rumor which we received from what we considered an authentic source. If in doing so we have caused Messrs. Zeese-Wilkinson any inconvenience or annoyance, we hasten to apologize.

\* \* \*

Owing to advertising copy arriving late we find it necessary to omit from this issue our symposium on "The Deterioration of Line Work." We will resume it next month with some fine samples of high-grade line work and many letters from interested parties. Incidentally we are offering \$10.00 for the best letter for or against our contention that line work to-day does not compare with that of a decade or more ago.

\* \* \*

A "Two-Minute Story of a Twenty-Minute Cut" came to us the other day from the Powers' Photo-Engraving Co., Tribune Building, New York City. Besides the short story, it contained four very strong testimonials from such representative people as The George Etheridge Co., "Van Norden's Magazine," The Democratic State Committee of New Jersey, and Theo. H. Price, the Cotton King. "What the Powers Plan Provides" should appeal to all users of printing plates. On another page we show a 65-screen cut which was made by Powers for the "New York Commercial" in fifteen minutes.

PREMIUM FOR SUBSCRIBERS

Through an arrangement with Mr. Morton R. Edwin, whose advertisement appears on another page, we are in a position to offer to any smoker who wants to enjoy one hundred good smokes, one box of Key West Havana Seconds, if he will send us six subscriptions to PHOTO-ENGRAVING ART for one year, at one dollar each. We do not feel that PHOTO-ENGRAVING ART needs a premium to make it of value to any one interested in the process, but we realize that our friends should be repaid for any effort which they may exert in our behalf, and we can think of no more appropriate gift for a man than a box of these "friend-making" cigars that Mr. Edwin advertises and has so much faith in.

\* \* \*

Any enterprising artist can get one of O. C. Wold's fine air brushes by doing a little work for us. Write us for particulars.

ENGRAVING PLANT FOR SALE

FOR SALE—Complete engraving plant; will sell all or parts; almost new. Fred S. Mayer, Courier Journal Bldg., Louisville, Ky.

WE WANT A

**LIVE**

WIDE-AWAKE ADVERTISING

**MAN**

TO REPRESENT US IN

**CHICAGO**

**SAN FRANCISCO**

**BOSTON**

**PHILADELPHIA**

AND ANYWHERE ELSE

¶ In fact, if you consider yourself a bright energetic fellow, old or young, and you can give us all or part of your time, you may interest us, and we may put you in the way of making a little extra money or even a steady income.

¶ Tell us about yourself and we will go into details.

**THE HILLSIDE PRESS**

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Under this heading we will print each month a number of artist's cards. Rates on application.

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DECORATIVE DESIGN LETTERING  
RETOUCHING PHOTOS

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Telephone 2041 Worth



Copyright, 1905.

“ON THE BEACH AT ARVERNE”

One of the many 15-minute 65 screen newspaper cuts made by Powers Photo Engraving Co., 154 Nassau St., New York.

## RETOUCHING FOR NEWSPAPER COARSE SCREEN HALFTONES

### A Tip or Two For the Beginner

**N**EATNESS and despatch. These are the necessary requisites for a successful newspaper artist. Speed is usually of paramount importance, neatness is secondary, but nevertheless essential, inasmuch as it is often a matter of minutes, often seconds, to catch an edition, and there is usually no time to spare to “dress up” drawings.

The first thing a would-be newspaper artist runs up against when he endeavors to enter the newspaper field is “rush!” “hurry!” “slight it but get it out!” etc., etc.

When one scans the dailies he is prone to criticise too harshly the drawings and designs he finds there. He does not realize the pressure under which the drawings are produced. It has often been said that like musicians and poets, “newspaper artists are born, not made.”

The first stumbling block which confronts the commercial artist who has been in the habit of retouching photos for reproduction for fine screens is the fact that a newspaper

or coarse screen cut has so very few tints or planes. If more than four tints are used an artist is losing time and wasting energy. As it will be found that all planes will blend into one or the other of these four tints, and of necessity *must* to give satisfactory printing results. Bold brush work is necessary for coarse screen retouching, and an effort should be made to get as much simple contrast into the copy as is possible, working for broad, simple effects—contrast is necessary because the dots in the coarse screen are so far apart and the tints are so cut up that what would be excellent retouching for fine screen work would be very poor for newspaper work. The proofs on coated paper might show all the gradations of the original copy, but after the cut has been stereotyped and printed on a web press at the rate of 40,000 or more per hour, it would be seen that the four and sometimes only three planes are in evidence; in fact, when the paper and ink are poor and the printing particularly bad, only the grey

of the highlights and solid blacks are left.

Of vital importance is the necessity of the artist being in close touch with the photographer who is to make the negative from the retouched copy. Often an inexperienced retoucher will think that to get contrast all that is necessary is to throw on a lot of solid white alongside of solid black. Nothing could be more erroneous. Take, for instance, a portrait which is dark and has a dark background; to put a pure white background in would make it almost impossible for the operator to get a satisfactory negative, as the white background would flash up and he would not be able to expose for the middle tones. Before putting in a background the artist should first study out the "key" of the original and, say, if it is a very dark solio, he should mix enough brown or sepia with his white to kill off the glary color. If the original is a velox a little touch of lamp black or ivory black will gray down the white.

Most of the large newspaper art departments have a velox enlarging department, and throw up the poorer copies to four and five times the original size and retouch with large brushes in a bold way. When reduced the retouched enlargements give a very soft effect and satisfactory printing results for sixty-five screen cuts.

Unlike fine screen work—the negatives of which are usually made flat to be staged out, re-etched and burnished—the negatives for coarse screen work on zinc are made as full of snap as it is possible to make them, it being impossible to improve them in any way after they have been etched, and usually, time being a very potent factor, there is very little opportunity to do so.

Very often it is necessary for the artist to retouch a copy two or more times to get the very best results, because under varying climatic conditions the action of the chemicals have a peculiar effect; and then, too, what appears to give excellent results under certain conditions, under slightly changed ones will result in utter failure. Very often in mixing one manufacturer's make of color with that of another the results, while apparently not visible to the naked eye, will be bad, when the photographer attempts to produce a negative.

## BLOWING OUR OWN HORN

### What Some Subscribers Say of Us

That PHOTO-ENGRAVING ART is going to be a success is evidenced by the way subscriptions began to arrive the day after it was mailed out. Every day has brought additional subscriptions, and we wish to assure our friends and well-wishers that we will do everything in our power to deserve the confidence which they have placed in us.

It is very encouraging to receive the kind of commendatory letters which accompany the remittances.

Philadelphia, Pa., Nov. 19, 1908.

Hillside Press, Pub.

We desire to thank you for the copy of PHOTO-ENGRAVING ART sent us, which is, we think, nicely arranged, attractive and full of interesting matter. Wishing you every success in your enterprise, we are

Very truly yours,  
(Signed) DILL & COLLINS Co.

New York, Dec. 8, 1908.

Hillside Press, Pub.

Enclosed please find one dollar in payment for one year's subscription to PHOTO-ENGRAVING ART, the first copy of which we read with much interest. Wishing you the best of success, I am

Very truly yours,  
(Signed) ALEXANDER NICHOLAS KAHN.

St. Louis, Mo., Dec. 4, 1908.

Hillside Press, Pub.

We have just received a copy of the first number of PHOTO-ENGRAVING ART, and we wish to congratulate you on its appearance. Wishing you success, we are, Very truly yours,

ST. LOUIS & CANADIAN PHOTOGRAPHER.

Dallas, Texas, Dec. 6, 1908.

Hillside Press, Pub.

I have looked over your interesting little magazine and think you have a winner and are filling a long-felt want. A magazine dealing with the photo-engraving business as yours does is something we have long been in want of.

Very truly yours,  
(Signed) J. C. BROCKHAUSEN, Sec. Local 38.

Buffalo, N. Y., Nov. 25, 1908.

Hillside Press, Pub.

We enclose herewith \$1.00 for a year's subscription to your paper. We also enclose clipping from a letter we received this morning from a customer who has been ordering zinc etchings for years. We clipped the "Will Smile" article from your first number and sent it to him. Hoping your enterprise will be successful, we are

Very truly yours,  
(Signed) BUFFALO ENGRAVING COMPANY.

(Enclosure with the above letter.)

Buffalo Eng. Co., Gentlemen:—We note on your invoice of November 13th, No. 6126, that you bill us zinc etching at .60. This etching measures  $2\frac{3}{4} \times 1\frac{3}{4}$  inches. At this rate you are charging us more than 10 cents per square inch. Will you kindly advise what your regular rates are?

The first issue of a new periodical is always interesting, and Volume 1, No. 1, of PHOTO-ENGRAVING ART is one that should appeal to all interested in publications devoted to this trade.—*American Printer*.

## MISCELLANEOUS BITS

The Penrose Annual, whose advertisement appears on another page, will be ready for distribution about January 1st, 1909.

\* \* \*

The Eclipse Electrotype and Engraving Co., of Cleveland, has placed an order with William Henry Baker for 2,500 copies of "The Dictionary of Engraving," of which he is the publisher.

\* \* \*

A twelve-year-old contemporary of ours announces our arrival as one of the "drops" in the old saw, "it never rains but it pours." In defense of our presumption to arrive we wish to say that a little rain of the kind we hope we are will do no one any harm, and we are going to make a mighty hard effort to be a benefit to our readers.

\* \* \*

Mr. Frank E. White, Eastern representative of the Ostrander-Seymour Co., of Chicago, as a starter sold the Thorp Engraving Co., of New York city, a complete plant, including everything necessary to transact business. All machines are driven by individual motors.

\* \* \*

Business has been equally good for the Ostrander-Seymour Co., in other parts of the country. During the last month they report having equipped with complete plants, The Buchanan Engraving Co., 22 E. Randolph street, Chicago, The Tennessee Engraving Co., Chattanooga, Tenn., Mr. Michael McDonnell, Cincinnati, Ohio, and Mr. Earl Olson, La Crosse, Wis.

\* \* \*

Our idea in running a column of artists' cards is to bring the names and addresses of artists before the photo-engraver, or advertising man who is in need of the assistance of a specialist in retouching, illustrating or designing; sort of a mutual benefit association. Take advantage of it. We'll vouch for the quality of work they'll give you.

\* \* \*

Just as we were going to press we received a copy of the initial issue of the official journal of the I. P. E. U. of N. A., the "American Photo-Engraver," edited by President Matthew Woll. We wish to extend to President Woll and the I. P. E. U. our heartiest congratulations, and trust their enterprise and effort will be crowned with success.

\* \* \*

February 12th, 1909, every American will celebrate the one hundredth anniversary of Lincoln's birthday. Now is the time to begin to think up novelties for your customers'

use. There will be many cuts and pictures of Lincoln and his family, the old homestead, etc., used at that time, and engravers should prepare copies and designs now.

\* \* \*

J. D. writes: "I received the initial issue of PHOTO-ENGRAVING ART, and am much interested in the possibilities of your publication. I can easily see how a magazine of the nature of yours can be of great value to a man in my position. I am an advertising man and use many cuts, line, half-tone and electrotypes, and while I know a good cut when I see it, I have not the remotest idea how they are made. Let me suggest that you present as many articles as possible in non-technical terms, so that other laymen as well as myself can understand and get a fair idea of the processes necessary for the making of cuts. I wish you success and trust you will pardon my presumption."

EDITOR'S NOTE.—We will pay \$5.00 for the best five-hundred-word explanation of the production of a line cut, and a similar amount for a description of the production of a half-tone. For the second best in each case, we will give a year's subscription to PHOTO-ENGRAVING ART.

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## "Duck Mallette"

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Goods bearing this trade-mark have received universal  
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## BLANC D'ARGENT

For Process Reproduction

IN LARGE BOTTLES

## WINSOR &amp; NEWTON, Ltd.

OF LONDON

298 BROADWAY, NEW YORK CITY

Our goods are sold by all art dealers

(Continued from page 29.)

we have always given every plate which you receive one bite more than is thought practicable by all expert engravers. To etch deeper would mean to weaken the small or highlight dots to such an extent that they would not stand the pressure of matrix making, and would also have a tendency to undercut, this would produce an overhang which would tear out the mats and cause a bad blur in printing.

“Our end was all right, so I decided to see just what could be done at your end, so I visited your pressroom and made the acquaintance of your pressroom foreman. He seemed to be a conscientious fellow, and appeared to be trying hard to achieve results. He said that he had tried every expedient known to his trade. Had discussed the matter with pressmen in other shops. Tried all their suggestions, but seemed to get deeper in the mire the harder he tried. I inquired if the ink or paper could be the cause, but he assured me that they could not possibly be as he was using better ink and more expensive paper than most of your contemporaries. Suddenly, while talking, he ordered the presses stopped and had a plate removed, explaining that he wished to put an underlay beneath it, as it was not showing up darkly enough. To me it appeared to be just the proper effect, but I decided to wait and see what the result would be. After the presses had been running a while he brought me a copy of the paper to show how much better the cut showed up.. It was blacker—I had to admit that—but the halftone effect had to a great degree disappeared. I made no comment, an idea had flashed

through my mind and I asked him to introduce me to the foreman of the stereotyping department. This he did, and I found him as interested as the pressman. He explained that he and his men were always striving to get the best results. The assistant stereotyping foreman explained that in his opinion the presses were run too fast. Five years ago, when your edition was less than half what it is to-day, he said, the pressmen would commence at six and print slowly on the magazine section till eleven thirty, while now you print double the number of papers, and the pressmen commence at nine and work till eleven thirty—two hours and one-half—the consequence being that the presses must run at top speed—four times as fast.

“While this might have some effect on the result I did not give it serious thought, as I figured that the presses being of the latest improved pattern should be expected to produce satisfactory results at top speed.

“I then visited the matrix-making department and arrived just in time to see a matrix made. The page contained a two-column cut, and after it had been run through the preliminary roller, the journeyman thumped the portion which contained the cut with a matrix-making brush in a perfunctory way. Here, another idea struck me, was a flaw in making which must be improved. I asked the workman if he had ever tried placing a piece of blotting paper on the back of the portion of the matrix which had a halftone cut in it.

“‘Naa,’ he said, ‘it is always done this way. Nobody never does it no other way!’

“But, I persisted, I think it would

be a good idea to try it. So he made over a matrix, cutting a piece of blotting paper to fit over the back of the matrix to press it deeper into the tone. I saw to it that a plate was cast off each matrix and submit the result. The paper marked one is from the brush-finished mat, and number two was made using the blotting paper. Number two is even and clear, while number one is uneven and streaky.

"While I stood to one side watching the make-ups preparing a form for the steam tables, I noticed, as a boy was removing the superfluous leads, that a three-column cut in the centre of the page was considerably higher than type high because, as he slid the leads across the page to scoop them into his apron a number stopped on the sides of the cut. I sought out the composing room foreman and pointed out the page and told him I would want that cut just as it was on the block after the matrix was made, and did not want the matter disturbed. After a while he gave it to me. I then borrowed a micrometer gauge from the lintotype machinist and discovered that the height was 12/1000 higher than type high. Learning that there was a shaving machine in the stereotype department, I took the cut there and ordered the blocker to put it through the machine, as I thought it was too high. As he did so, he remarked that it was better that it should be high than low, and added that it was customary to watch carefully to see that they were not blocked lower than type high. They had no definite instructions on a specific height, only it shouldn't be low. Well, I told him to shave it exactly type high, which he did. I then had him put two sheets of paper under the cut and shave off

some more. He did as directed, and said: 'It's a cinch that cut will not amount to much if they try to print it in the paper.'

"I took it back to the composing room and had the page locked up again. I had a piece of blotting paper placed over it while the mat was being made and hand you herewith the two results. The first is the result which you have been getting, and the second is the result I obtained. The first is black and indistinct, and the second is crisp and full of detail. Both are from the same cut. My theory, gentlemen, is that the only way to get good results from coarse screen halftones on a web press printing from stereotypes is to mount the cuts a trifle less than type high and cut an overlay for the solids or blacks."

"But it is against all precedent," broke in the Business Manager, "I've had some thirty years experience as a printer. In fact I have worked at the case, on the stone and fed anything from a kicker Gordon to a cylinder, and whenever a halftone didn't print up properly, we would always raise it or add an overlay. No, your theory is wrong. You might get good results in isolated cases, but I'm afraid you will not find it practicable in the long run."

"Against all precedent?" asked the Engraver.

"Yes."

"You wouldn't like to have me show you how to stand an egg on its end, would you? You know it is possible."

"Oh what is the use of dodging the issue?" testily asked the Business Manager.

"Well, the wireless telegraph was against all precedent, but it is a commercial possibility to-day, is it not?" asked the Engraver. "But we are get-



# HOW TO GET FREE These 3 Articles



## I Want Your First Order!

Once I demonstrate to you that I save you at least 50% of your cigar money, because I make every cigar I sell and sell them direct to the smoker, cutting out every in-between profit, I am sure you will buy your cigars from me regularly. For that reason I am satisfied to give you more than my profit on your first order and send you FREE a box of Old Fashioned Havana Smokers, a box of a new kind of Smoking tobacco, and a patented cigar cutter.

If you'd rather smoke quality than looks, if you don't buy a cigar for what it seems but for what it contains, let me send you 100 of my

### KEY WEST Havāna Seconds

They are by no means handsome cigars. I haven't pasted pretty pictures on the box, nor have I placed bands around each cigar. I don't believe in scenery. **THEY LOOK ROUGH BUT TASTE SMOOTH** and in taste are the equal of any 3 for a quarter cigar. They are irregular but none shorter than 4½ inches, some even longer. I call them Seconds because they are made from the shorter pieces of tobacco which is used in my finest brands. I am really selling you two dollars' worth of Havana Tobacco with nothing added for rolling it into cigars.

**The above offer holds good up to and including Jan. 21st, and, of course, applies only to your first order**

I can produce only a limited number of these Seconds and therefore will not sell more than 100 to any one new customer as I want to interest as many new Smokers as possible by this Special "Get Acquainted" offer.

## Pay Cash

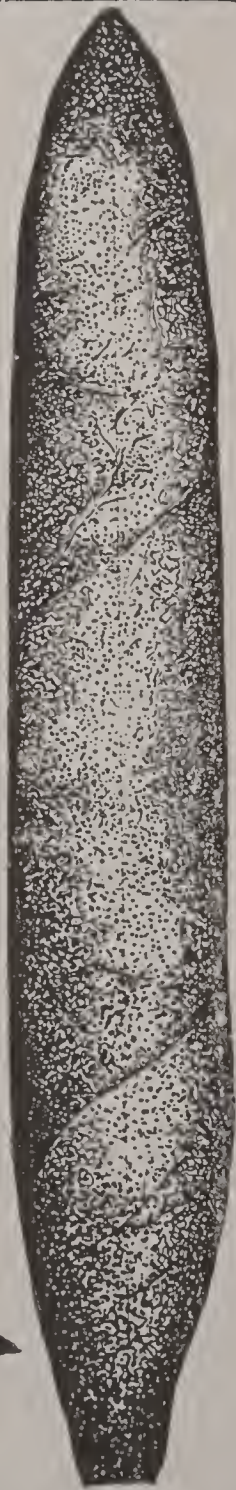
for your cigars. Buying them on credit means that you have to pay for the cigars "the other fellow" bought and did not pay for

Send me \$2.00 (check, money-order, draft or bills) for 100 Genuine Key West Havana Seconds and the three free articles. You needn't hesitate, if, after trying them, you like your money better than the cigars—it's yours. You can't go wrong.

*Morton A. Edwin*

Dept. I 64-66 and 67-69 W. 125th St., New York

Make remittance payable to Edwin Cigar Co.  
References: The State Bank of New York, Dun and Bradstreet's.



ting away from the point at issue, let us take the matter up from the practical side. Have any of you gentlemen ever looked at a zinc halftone through a powerful magnifying glass?"

"I have," said the Managing Editor.

"And I," said the Business Manager and the Sunday Editor in a breath.

"Did you ever saw a cut in two and note the depth of the etching? No? Well, if you did you would be surprised at its extreme shallowness and would wonder how it is possible to obtain any results at all, much less satisfactory ones.

"Now the Business Manager claims that he is an old pressman, and I'd just like to ask him if it was customary to use a hard or soft typan for the cylinders and beds of the kind of presses he fed in his time?

"Why a hard one of paper of course," exclaimed the Business Manager.

"Exactly," exclaimed the Engraver. "Now, another question: What do you use on your web perfecting press cylinders to-day, a hard or soft backing?"

"Why, we use a blanket."

"Right. Now as I said just a minute ago, if you will inspect a cross sectional cut of a zinc halftone you will be surprised at its shallowness. In its deepest part, the highlights, you will find that it is seldom more than 5/1000 or 6/1000 deep, and in the blackest, the shadows, the depth is infinitesimal.

"Now suppose a cut is etched 6/1000 of an inch deep and is blocked from 10 to 12/1000 higher than the surrounding type matter, what is the logical result when stereotypes of soft metal are on the press and the paper is being rapidly printed from them, oily ink, comparatively soft blanket backing and a paper

which acts a good deal like blotting paper?"

"My theory is that not the dots or surface of the cut are being printed but, rather, that the etched-out or back of the cuts is being squeezed into the paper. This causes the blurred, heavy, unsatisfactory effect which you would like to avoid. Further, it does not take many thousands run to wear down the dots in the halftone so that no amount of washing out will make them print better. To prove this I hand you the three-column cuts which I had sawed from the plates used to print the papers which I just showed you, the one which was mounted too high is all mashed, while the other is just as good as the surrounding type.

"If the cuts are mounted a trifle lower than type high the surrounding type acts as a brace or offset and insures a much more uniform and crisp effect.

"Your ink is cheap, at most it costs 7c. a lb., is thin and oily. The paper is made from wood pulp and acts a good deal like blotting paper, especially when the surface is broken as it is when the plates are pressed through the outer coating.

"For the past two weeks all cuts have been mounted on blocks two thicknesses of paper less than type high. The result you commend—the means to the end you may question, but 'seeing is believing.'"

---

#### TO GET RID OF ROLLER STREAKS

Every job pressman knows how aggravating it is to have a roller streak on a small cut, often necessitating double rolling. I have remedied this many times by having a piece of old brass rule bent at one end to right angle so that it could be locked in the bottom of the chase over to one side and extend about two or three inches below it. This changes the action of two of the rollers on their upward travel.—*American Printer.*

¶ This cut represents the **Standard Interchangeable Air-Brush** for the photo-engraver, fitted with lightning interchangeable glass jars or metal side cups all in one brush. Illustration shows the exact size of the instrument. It weighs only  $1\frac{1}{2}$  ounces.



All the main parts are on the outside of the shell, adjustable for high or low pressure. With one movement of the index finger and with a sweep of the hand it will go from a hair line to a broad spray. Any kind of colors may be used. 🌿 🌿

*"Construction Simplicity"*

For further information and prices address the Patentee and Manufacturer

**O. C. WOLD**

155 W. MADISON ST.  
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In answering please mention "The Photo-Engraving Art"

## Quality in the Negative



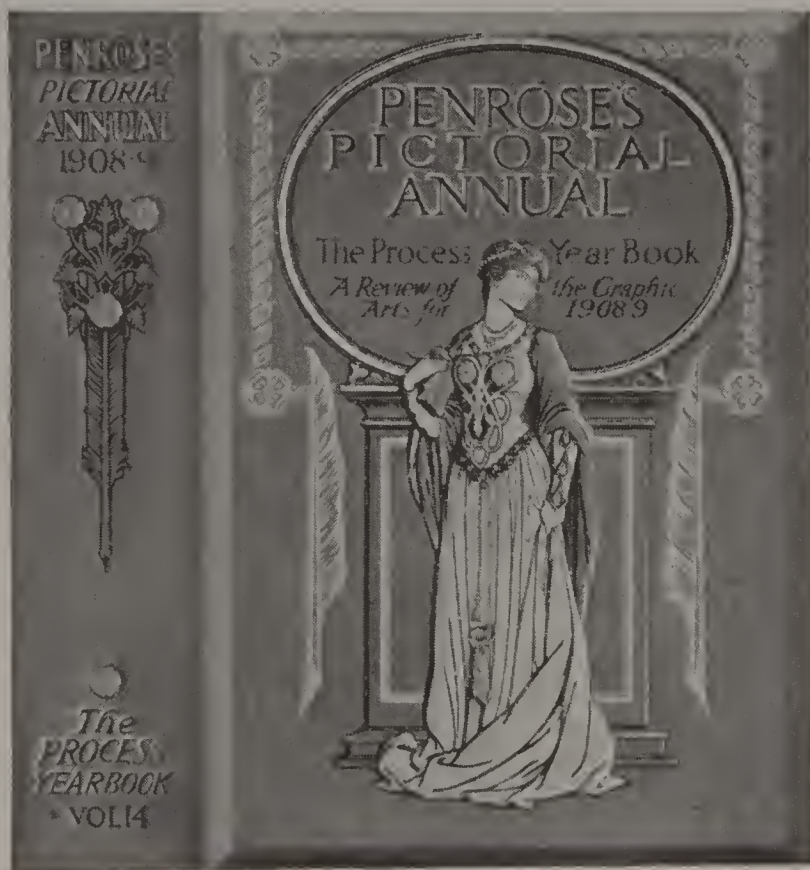
¶ The making of the photographic negative is not only the first but the most important step in the mechanical processes involved in photo-engraving. A chain is no stronger than its weakest link, and by the same reasoning you can't get the quality in your finished product unless you have it at the start. That means your lens must be right. With a

**Goerz "Process Dagor"**

you are insured of the necessary quality in the negative. It is specially designed to meet the demand which improved methods in half-tone and process work have created. It is *completely* corrected for stigmatism, is free from coma, axial and marginal spherical aberration. It is faster than ordinary process lenses, working at F. 7.7. The field of view covered sharply at full opening is 60 degrees. The lens is used by leading process workers throughout the country, and its every-day work is its best recommendation. Especially suitable for three-color work.

Address dept. K for booklet describing the lens, also our liquid filters and mounted reversing prism for process workers. We would also be glad to send samples of work done with this lens.

**C. P. Goerz American Optical Co. 52 Union Sq. E., New York**



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SIZE 11x14 INCHES

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*(of Parts of an Inch)*

|        |        |
|--------|--------|
| 1/16"  | .0625  |
| 1/8"   | .1250  |
| 3/16"  | .1875  |
| 1/4"   | .2500  |
| 5/16"  | .3125  |
| 3/8"   | .3750  |
| 7/16"  | .4375  |
| 1/2"   | .5000  |
| 9/16"  | .5625  |
| 5/8"   | .6250  |
| 11/16" | .6875  |
| 3/4"   | .7500  |
| 13/16" | .8125  |
| 7/8"   | .8750  |
| 15/16" | .9375  |
| 1"     | 1.0000 |

**Business Man's Calculator**

**PROPORTIONS**

**2 to 1**  
 Example: Set 20 on the lower and 10 on the outer scale. In this position every figure on your scale is twice larger than corresponding figure on lower scale. 100 on 100 scale is 200 on 200 scale.

**1 to 2**  
 Set 20 on lower and 10 on upper and read on lower 10 (lower) 20-20, 10-10, 100-50, 200-100, etc.

**GOODS 17% TO 14**  
 A given lot is sold 17% to 14 @ cost \$10.00 and when what amount does he net?  
 Set 17 on lower and 14 on upper 10 on lower and answer 10.50 on upper at this point on outer circle.

**INTEREST**

**6% OF \$175.00**  
 What amount of \$175.00 is 6% in other words 6 to 100.  
 Set 100 on lower circle on a 100 scale. Find 6 on upper scale and read at this point answer 10.50 on outer circle. Similarly 5 1/2%, 8 1/2%, 10%, 12 1/2%, 15%, 20%, etc.

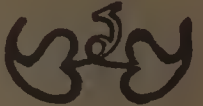
**DAILY AND MONTHLY INTEREST**

**17% OF \$100.00 for 75 days 6750**  
 What is 17% of \$100.00 for 75 days? Set 100 on lower circle to 17 on outer circle. Opposite 75 on lower circle, read answer 67.50 on outer circle.  
 Similarly 10% will amount opposite 100 (lower) 10.00 opposite 100, etc.

**1 1/4% OF \$100.00 FOR 120 DAYS**  
 How much is 1 1/4% of \$100.00 for 120 days? Place handle of outer circle over 120 on lower circle and read in the question outside of dial. Answer lower dial 120 (lower) 11.25 (lower) 120. Now opposite 120 on lower dial will appear answer 11.25 on outer dial.

**1294 X 713 = 923,562**  
 Bring 1294 over and 8371 over circle together. Find answer 562 on outer circle opposite 1294 on lower dial.

Any questions regarding use of this Chart will be promptly answered. Address communications  
Alexander Nicholas Kahn, 140 Nassau Street, New York



The attached  
3x11-inch  
booklet is an  
encyclopedia  
of different  
business  
problems



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Vol. 1, No. 4

February 1909

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|            |  |        |  |  |
|------------|--|--------|--|--|
| Outer disk |  | Set 11 |  | Under 5, $6\frac{1}{2}$ , $13\frac{1}{4}$ , etc.                           |
| Inner disk |  | To 4.5 |  | Find $2\frac{3}{64}$ , $2\frac{21}{32}$ , $5\frac{7}{16}$ , etc., Answers. |

What would be the rate for various portions of the week of the salary \$22.50 (54 hours a week)?

|            |  |           |  |   |
|------------|--|-----------|--|---|
| Outer disk |  | Set 22.50 |  | Find 3.75, 5.21, 11.35, etc., Answers.                          |
| Inner disk |  | To 54     |  | Above $9\frac{1}{3}$ , $12\frac{1}{2}$ , $27\frac{1}{4}$ , etc. |

What is the price of cuts of all possible sizes, price per inch being  $14\frac{1}{2}$  cents?

|            |  |         |  |  |
|------------|--|---------|--|--|
| Outer disk |  | Set 145 |  | Find 1.38, 3.92, 21.08, etc., Answers.             |
| Inner Disk |  | To 10   |  | Above $9\frac{1}{2}$ , 27, $145\frac{1}{2}$ , etc. |

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# Photo-Engraving Art

The Hillside Press, Publishers, Richmond Hill, N. Y.

Volume I

FEBRUARY, 1909

Number 4

## CONTENTS

|   |    |
|---|----|
| Frontispiece, ABRAHAM LINCOLN<br>Drawn by TOM FLEMING.....                              | 50 |
| CONCERNING THE COST OF HALF-TONES<br>By GEORGE H. BENEDICT.....                         | 51 |
| THE ENGRAVING OF A LINE<br>By TOM FLEMING.....  | 53 |
| ON THE DETERIORATION OF LINE WORK<br>By FRANKLIN BOOTH AND HAYWORTH CAMPBELL.....       | 55 |
| PRACTICAL HINTS FOR PRINTING AND CARE OF CUTS<br>From the <i>American Printer</i> ..... | 60 |
| EDITORIAL—THE QUESTION OF PRICE.....  | 62 |
| REVIEW OF THE ARTS AND CRAFTS AND<br>PENROSE'S PICTORIAL ANNUAL.....                    | 64 |
| DON'T THROW THE BLAME WHOLLY ON HARD LUCK<br>By JOHN K. LeBARON.....                    | 67 |
| PROGRESS DEPARTMENT.....  | 69 |

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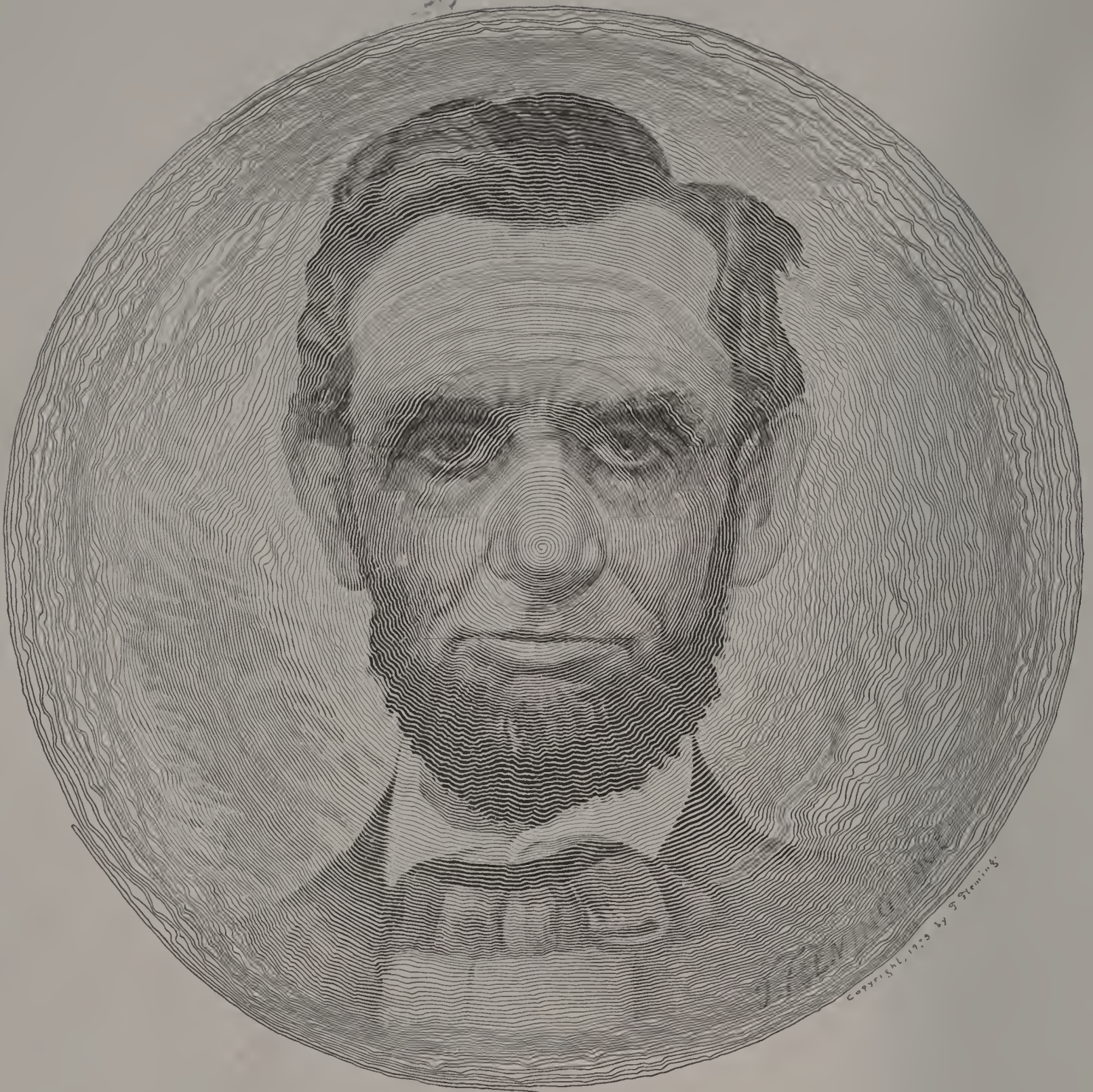
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Abraham Lincoln  
- Gettysburg - 1863 -

FORMED IN ONE, SINGLE CONTINUOUS LINE FROM CENTRE TO CIRCUMFERENCES.

ABRAHAM LINCOLN

Illustration for "The Engraving of a Line." By Tom Fleming. (See page 53.)

Engraved by the Powers Photo-Engraving Co., 154 Nassau Street, N. Y.

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# Photo-Engraving Art

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VOL. I., NO. 4.

FEBRUARY, 1909

## CONCERNING THE COST OF HALF-TONES

By GEORGE H. BENEDICT

*President of the Globe Electrotype and Engraving Co.*

IN the infancy of the process some one guessed that 60c. per square inch was about the proper rate for half-tones, but wisely concluded that a one-inch half-tone could not be made for 60c.; therefore decided that \$6.00 for ten square inches should be the minimum charge.

The accuracy of the surmise that a square-inch rate and a ten-inch minimum was the correct method of putting a value on half-tones was not questioned until competition had lowered the rate until the cost of production and the minimum charge had come together.

It is an accepted theory of the photo-engraving craft that photographers should make from ten medium to twenty of the smallest and an average of fifteen negatives per day, and that the crew that make up the force to complete the cuts can keep up with the photographers regardless of the size of the negatives or cuts.

The smallest negative or cut considered is one containing ten square inches, or less. A medium negative is any size up to 8 x 10 inches; therefore, twenty minimum negatives and cuts, or 200 square inches, is a good day's

work, and ten 8 x 10 negatives and cuts, or 800 square inches, is no more than a good day's work, with the output in intermediate sizes in gradually increasing proportions, and the only difference in the cost of a day's work is the cost of the material used. It is, therefore, obvious that the labor cost of minimum half-tones is four times as great per square inch as 8 x 10 half-tones, and that there can be no square-inch rate or so-much-per-cut basis of figuring the cost or a consistent selling price for half-tones.

Considering that the possible daily production of half-tones and zinc etchings by the same crew of men varies with the size of the cuts, and that the cost likewise varies with the size, it is plain that the buyers of large cuts are being taxed beyond reason to make up for the lack of profit on small cuts.

For example: The material used in making four 2½ x 4 cuts is no less than will be required to make one cut 6 x 9, containing 54 square inches, face measure, from one subject, for which you will charge, at 15c. per square inch, \$8.10, which is two dollars and ten cents more than you would charge for the four separate cuts at \$1.50 each,

although you make one negative instead of four, one stripping and print, one etching and re-etching, one beveling, blocking and trimming, and one proof; and if the four ten-inch cuts are for different customers, you have four bills instead of one, likewise four packages to deliver, or four shipments, and four collections, etc., etc.

Is it not ridiculous that the four operations should pay less than one? Would it not be more reasonable and consistent if the returns should be greater instead of less than from one operation?

You have undoubtedly noticed that when you have had a month filled with orders for large half-tones, business was good and profitable.

You have likewise noticed that when you have had a month of handling small half-tones you have made nothing.

Is it reasonable that with all hands busy your per cent. of profit should be less on small than on large work?

When at the end of a month you have figured your profit and found that you have made five per cent. on your sales, have you thought of the possibility of having made a handsome profit on the large cuts and an actual loss on the small cuts you have turned out?

Do you appreciate that the square-inch rate and the profit on large work is the reason the price for half-tones has gradually dropped from 40 to 10 cents?

If you keep a record of shop costs, and output, you have found that fifty per cent. of the half-tones you make are minimums, and if you are not making money, it is because you are giving the profit you are making on the

large plates to the buyers of small cuts, and because—

You are dividing the profit on one-half your output with the customers that get the other half.

The square-inch rate was born of a guess and has kept everyone in the business guessing ever since. It was ridiculous when the business was new and rates were high, and it now forces you to sell at least one-half your product at cost or less.

In support of the contention that the square-inch rate and the profit on large cuts is why the price for half-tones has come down from 40c. to 10c.—consider a case like this: Mr. Customer phones you and me to call and estimate on some work. I get there first, am shown a lot of photos, told that a portion are to be 8 x 10 half-tones, the rest minimums; look them over and name your price. I select the 8 x 10 copy and quote 10c.; am told to take as many as I want. I take all the 8 x 10's. Then you arrive, get the same story, offer to take all that are left (minimums) at your top price—\$1.50 each. You are told you are a robber—that I had taken a lot at 10c. per inch. You conclude that I am a cutthroat—you won't stand for it. You meet the rate and offer \$1.00 for the minimums. How do you and I fare on our respective orders? With one camera I can easily make ten 8 x 10's in a day; with one camera you are not likely to make more than twenty minimums in a day. I get \$80.00 for my day's work, you get \$20 for your day's work, and at \$1.50 each you would get only \$30.00 for your day's work. Am I not justified in taking an order for 8 x 10 cuts at 10c., knowing that I can make as much money on

## THE ENGRAVING OF A LINE

How I was Inspired to Make My Single-Line Drawing of Abraham Lincoln

By TOM FLEMING

**H**AND engraving has become one of the lost arts. The line engravers on steel and copper and the engravers on wood have, like Othello, "found their occupation gone."

No more do we see the beautiful cross-hatched and stippled engravings on the walls of our homes. Their places have been supplanted by the products of a hastier age. The chromo crowded out the fine steel engraving, and was in turn crowded out by the half-tone, and now the three-color print seems fair to reign supreme until it is in turn dethroned by some superior mechanical method of engraving which is sure to crop up some day in this age of invention.

In the meantime, the artist engraver languishes for want of patronage and his art eventually dies. This is to be deplored, for engraving is one of the fine arts, and in this beautiful family has been the especial handmaiden of painting. According to Longhi, the celebrated engraver, an engraving is a translation. Dwelling on the general aid it renders to the lovers of art, he claims for it greater merit in "publishing and immortalizing the portraits of eminent men for the example of the present and future generations; and, better than any other art, serving as a vehicle for the most extended and remote propagation of deserved celebrity."

The first engraved portraits are by Albert Dürer, who carried the art from infancy to a condition not far from flourishing perfection.

The great school of French Engravers brought the art to a splendid climax. The school was opened by Claude Melan about 1630. He was at the height of his power in 1649, when he executed his famous single line portrait of Christ.

Perrault in one of his beautiful volumes on engraving thus described this masterpiece of line engraving:

"It is a Christ's head, designed and shaded with his crown of thorns and the blood that gushes forth from all parts, by one single stroke which, beginning at the tip of the nose, and so circling on, forms most exactly everything that is represented in this plate

only by the different thickness of the stroke, which according as it is more or less swelling makes the eyes, nose, mouth, cheeks, hair, blood and thorns, the whole so well represented and with such expressions of pain and affliction that nothing is more dolorous or touching."

This engraving of Christ excited the admiration of all Europe at the time. Copies were sold at extravagant prices, and connoisseurs were amazed at the dexterity of the engraver. The Czar of Russia devoted a special room in the Imperial cabinet of engravings at St. Petersburg solely to this exquisite print, and Longhi records that it was thought at the time to be inimitable and was praised to the skies. This print is known as the Sudarium of St. Veronica, and is now very rare.

While touring through Europe several years ago I accidentally came upon one of these prints in Antwerp. After closely scrutinizing this unique engraving, I was seized with a desire to emulate its beautifully rhythmical manipulation of line. After many abortive attempts, during which time I was repeatedly on the verge of abandoning my apparently impossible task, I at length succeeded in producing the portrait of Abraham Lincoln, which appears elsewhere in this issue.

In executing this work I was confronted by the difficulty of maintaining a uniformity of tone when coming to the lighter areas of the face after guiding the line across the darker portions of the hair and beard. At the same time strict attention had to be paid to the necessity of securing a good likeness; a difficulty which was not encountered by Melan, whose face of Christ was mere fancy and not necessarily conformable to any particular likeness.

After completing my work I regarded it in very much the same manner as the violinist, who, having performed a solo on his violin, cuts all the strings of his instrument but one, upon which he renders the same exquisite melody.

# GLIMPSES OF MUNICH LIFE BY RENÉ REINICKE



*From Scribner's Magazine,  
Copyright, 1908, by  
Charles Scribner's Sons.*

Pen Drawing by Franklin Booth.



From *Everybody's Magazine*,  
Copyright, 1908,  
The Ridgeway Company.

Zinc Line Etching From Pen Drawing by H. D. Nichols.

## ON THE DETERIORATION OF LINE REPRODUCTION

By FRANKLIN BOOTH

THERE has been in the last few years, I think, some deterioration in the quality of line reproduction, and almost any one who may have given the matter attention at all this fact will appear past doubt. It may not, however, be properly styled deterioration. Covering all line work done, we might better say it is a lack of that general advancement in the doing and perfecting of that sort of product which has characterized the doing and perfecting of the other kinds of reproduction.

There are obvious reasons for this condition; and many reasons not so obvious but rather a bit more far-reaching; reasons which, when in a final analysis found, do not necessarily exist in our engraving shops. Without question the main reason, not to speak at all specifically, is the fact of the wide-spread popularity of the halftone in the recent past years. Demands for the popular

must always be met, or at least such a procedure is good business, and as halftone and line reproduction are two phases of the same thing practically, time and attention persistently expended on one is naturally time and attention deducted from the other. From this very superficial fact alone it is but natural that line work should suffer deterioration.

But to go a bit deeper into the matter: there has been a deterioration in the quality of line reproduction along with a deterioration in the quality of line drawing. I cannot say if poor line reproduction has driven artists to the tone mediums, or if bad line drawing has brought about and justified a carelessness in the matter of line reproduction. I am inclined somewhat to the latter idea. During the period of line reproduction deterioration I should say that there has not been the demand generally for the higher class of line work; zinc has been cruelly crowded over to the second-rate place in our shops. Now, when the awaking approaches, it is naturally found a bit wanting.

Our art students and illustrators, ambitious to get into the profitable work, have rushed into the easier, quicker and more pliable

EDITOR'S NOTE.—Franklin Booth, who draws exclusively for *Scribner's*, is recognized as one of the cleverest artists of this generation. His style is distinctive. His pen drawings have a quality and atmosphere which is seldom equalled by the workers in the broader and simpler medium of painting. His opinion on the reproduction of line work is unquestionably authoritative.



*From Scribner's Magazine,  
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Illustration for Poem. Drawn by Franklin Booth.  
Etched on Zinc.



mediums. Pen and ink has come to mean only thumb-nail and border effects, and at best mere sketchy stuff. Those of our artists who have presumed to be pen-and-ink men have been, one might correctly say, disciples of Gibson and Tom Brown; men whose styles are broad, bold and strong: Perfect for their styles, but styles that do not embody tonal or other subtle effects, which, if not faithfully reproduced, suffer.

As against this, we have few followers of Vierge or Abbey or Max Klinger. However, it is now apparent that a time approaches when we shall see a revival or an advent of varied and individual pen-and-ink line work. Publishers and people have wearied of an

overabundance of tone drawing, which, to speak for a moment beside the point, has indisputably deteriorated. This reversion is widespread and but natural. All things move in waves, and usually accomplish their own adjustment and perfection. I am confident that such a tide of taste followed by a flow of fine art work will soon remove all lack of quality, or trash, or imperfections in line reproduction. The outlook is not so awfully cloudy; it might be clearer did artists feel absolutely confident of line reproduction. It might be still clearer were engravers constrained or called upon by demand and high-class line drawings to show their real mettle.

## LINE WORK HAS *NOT* DETERIORATED

By HAWORTH CAMPBELL

*Art Department, "Everybody's Magazine," New York*

WITH the birth of the text-paper, line-illustrated magazine—a score of years ago a struggling, ill-supported infant, but to-day a giant of ever-increasing proportions—the clamor against the quality of line work was duly laid on the doorstep of the engraving houses.

The public took a fancy to the text paper periodical; they adopted the youngster, as it were, and there you have the cause for the majority of the sadly inferior grade of engraving and printing. The public supports the work—pays for it—so what's the answer? The publishers cater to the public—that is, the big majority, the non-critical.

The flood of the deplorable engraving work of to-day has cast a shadow over the better grade of work—work that is far superior to the old-time efforts—but being in the minority, the critically inclined are wont to shake their heads and declare, "times and work are not what they used to be."

That good work can be, and is being done, is readily demonstrated by the double-page drawings by C. D. Gibson in *Collier's*. Here we have the happy combination of thoroughly good drawing, engraving, and printing. Mr. Gibson has a little trick of blotting some of his heavy lines, which, though it has its particular artistic value in the original, is a decided obstacle in making a

perfect line plate. Examine any of the reproductions carefully and you will find that the blotted effect, as well as every quality of tone, intended by the artist is faithfully reproduced.

So we *can* get good work—*do* get good results. Some modern pen and ink artists, in an effort to create a "style" of their own, often present a problem to be solved by the "anxious to please" engraver. These artists disregard reproduction entirely, "fuss" with their drawings, rub, scratch, and smear until there is not a healthy black line left. Of course, the result is not a vision of joy in an engraving house. After the printing (in most cases on a pulpy text-paper), the general criticism is: "Good drawing, very bad reproduction."

Then, again, this demand for illustrations, ordered in pen and ink for line reproduction, not because of admiration or appreciation of any style, but because of the saving in paper, lessens the value of the picture and discourages any enthusiasm on the part of the artist to make "paintings in pen and ink."

This demand is also responsible for the artists who imagine that, for line reproduction, every stroke of the pen must be clean, firm, and strong. I have in mind artists with good reputations who, although showing a great deal of originality and ability,



January

*From Everybody's Magazine,  
Copyright, 1908,  
The Ridgeway Company.*



February

Two samples of present-day copper line etchings from drawings by C. B. Falls.

are so impressed by the "problems of reproduction" that they labor over their drawings, trying to make "good copy" for engraving. In most cases, as an artistic production, their work is a failure—a failure because of over-attention to unnecessary details.

And yet, I realize that to a certain degree—and please note the degree—lack of quality and faithfulness of reproduction is the fault of the engraving.

What more can be expected when a much-scratched and gray pen and ink, a soft pencil drawing, and a heavy solid decoration (this ordered with all the fine, unprintable Ben Day tints) are put upon the same flat for etching? Something will surely be sacrificed. The best of engraving houses are tempted to put through, together, drawings of conflicting mediums. Not always because of "RUSH," and not because of any cut in rates, but just the natural outcome of running an engraving house on department store methods—a foolish form of economy for which the engraver can not justly be blamed, as he is not encouraged to give individual attention. Realizing that most line plates are ordered for use on text paper, and in most cases of a cheap, pulpy quality, engravers will not turn out first-class etchings, although fully capable.

This can only be remedied by giving the engraver "fairer" copy for reproduction. Examination of engravers' proofs and a little honest criticism now and then will soon prove to the most ardent lover of pen drawing that the engraving of to-day has *not* degenerated below the scale of yesterday—yesterday meaning a score and more of years ago.

It is possible that I have pointed out the guilty condition—not party—but condition. It takes more than the ability of the artist or the mechanical perfection of reproduction to get good results. Appreciation and enthusiasm, not discouraged groans about conditions, are all that's necessary for perfection.

---

Philadelphia, Pa., Jan. 25, 1909.

HILLSIDE PRESS, PUB.

We take pleasure in enclosing herewith \$1.00 for a year's subscription to your publication, for which we wish you all success.

GATCHEL & MANNING,  
H. A. Gatchell.

## MORE LETTERS FROM SUBSCRIBERS

The following letters are from our subscribers and the writers may rest assured that they touch a responsive chord, as will be attested by the effort we will make to merit a continuance of their confidence. We would like to print all we receive, but space forbids. We would add that if you like PHOTO-ENGRAVING ART tell your friends about us, or better still, send us your friends' names and we will send them sample copies.

---

Winnipeg, Manitoba, Jan. 11, 1909.

HILLSIDE PRESS, PUB.

Enclosed please find subscription to PHOTO-ENGRAVING ART for one year. If you keep up the pace you have set for yourselves in the first two numbers you will be bound to succeed. We look forward to getting \$200 worth of information for our \$1.00.

RANSOM ENGRAVING Co.,  
E. J. Ransom.

---

Cedar Rapids, Iowa, Jan. 22, 1909.

HILLSIDE PRESS, PUB.

Enclosed find subscription blank and \$1.00. You were entitled to this upon receipt of the first number. The craft has long needed a publication of this character, and you are to be complimented upon the manner in which you are filling this requirement.

ALDEN ENGRAVING Co.

---

Effingham, Ill., Dec. 17, 1908.

HILLSIDE PRESS, PUB.

Enclosed please find check for \$1.00 for one year's subscription to PHOTO-ENGRAVING ART. If any of the crafts are in need of a good technical journal it is photo-engraving, as at the present time there is not a single magazine in the United States devoted exclusively to that work. Wishing you success,

L. H. BISSELL, Pres. Bissell Colleges.

---

San Francisco, Cal., Jan. 25, 1909.

HILLSIDE PRESS, PUB.

Enclosed herewith find \$1.00 for subscription to PHOTO-ENGRAVING ART. The writer has personally read your first issue and considers it in every respect good. There is no reason why you should not make a success of this publication, and we feel that anyone in business who refuses to subscribe the small sum of one dollar to it is very small.

COMMERCIAL ART Co.,  
A. F. Broad, Mgr.

## A FEW FROM ABROAD

January 11, 1909.

To the Editor, PHOTO-ENGRAVING ART.

DEAR SIR:—May I, as the editor of the oldest existing photo-engraving journal, *The Process Monthly*, congratulate you on the first issue of the youngest—PHOTO-ENGRAVING ART. Knowing a good deal of the difficulties of this particular field of journalism, I feel that you have surmounted them in gallant fashion. Wishing your new magazine all possible success, I remain,

Yours faithfully,  
(Signed) H. SNOWDEN WARD.

---

Glasgow, Scotland, Jan. 19, 1909.

HILLSIDE PRESS, PUB.

Please send copy of PHOTO-ENGRAVING ART, edited by Fred J. Willock, as soon as possible. Sixpence enclosed in payment of same.

DUX ENGRAVING Co.

## PRINTING HALF-TONES

## Practical Hints for Printing and Care of Cuts

*(From The American Printer)*

**H**ALF-TONE engravings are very delicate to handle, and too much care cannot be taken in printing them to get good results. First of all, the cuts should be cleaned quite often. I have frequently noticed apprentices pick up rags to saturate with benzine, the rags often being from old clothes with buttons on, and so it happened the cuts got scratched. After this, the rags were thrown in some dirty place around the press and used again, not knowing or considering what may have got on them. This is all carelessness, and pressmen should remedy it by teaching apprentices the importance of handling cuts with the greatest care. Neglect of this kind often causes the press to be tied up while the engraver is called upon to repair the damage. Some of these repairs require fifteen to thirty minutes, perhaps longer, and if repeated these accidents mean quite an amount of unnecessary expense. Should you let them pass by as of no importance, without repairing the blemishes in the engravings, you are open to reproach and cannot expect to build up a reputation for good printing.

Pressmen, too, frequently blunder in the use of cuts. I've often noticed a workman bending over a form of cuts carelessly permitting the buttons of his shirt cuff to rub the plates. Another criticism is this, pressmen would do better if they had less regard for their personal opinions as to how cuts should look and would seek more to interpret what the artist tried to picture. If a cut contains some hard washes towards the edge, the complaint shouldn't be made that the engraver should have left more room for vignetting. If you try to vignette a cut of this kind the chances are that you'll get a spotty effect. Pressmen should not try to alter the appearance of an O.K.'d engraver's proofs unless ordered to do so.

## THE KEEPING OF CUTS

My system for the care of cuts is as follows: Half-tones and small cuts I put, after pulling a proof, in a Hamilton cut cabinet, the drawers of which are numbered. This proof I paste in a large, strong sixteen-by-

twenty-three book. I allow two or three pages in book to each drawer, and number those pages to correspond with number of drawer in cabinet. When I want a certain cut, I look through the book, find the proof, look at the page number and pull out the drawer of the same number.

I also keep an index book with the name of each cut in it and the number of the drawer for cuts of objects readily named. With from two to three thousand cuts to look after you can readily note the great saving of time.

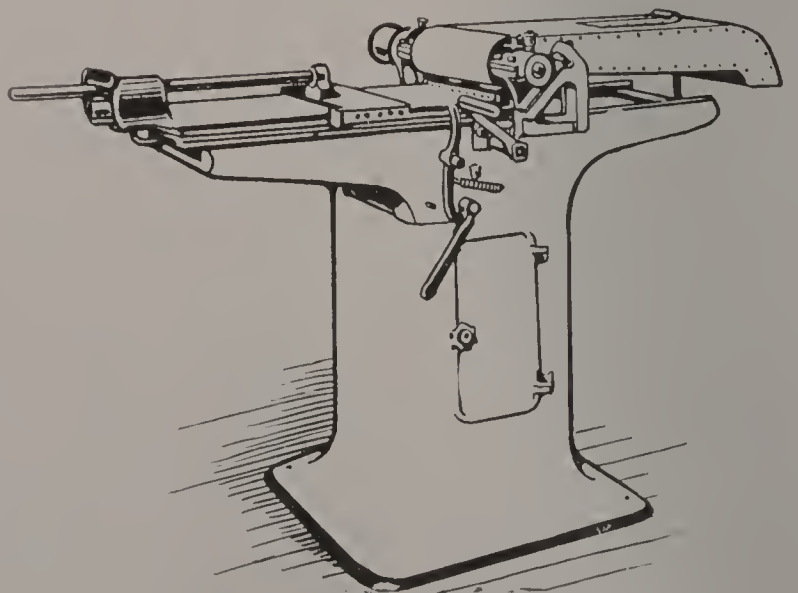
## HELP FOR CLOSE REGISTER WORK

On long runs of close register work which remain on the press for several days at a time, a good plan whereby register is assured is to oil the manila top sheet all over with machine oil, which draws the top sheet smooth and tight; and to prevent the tympan from "bagging" over night during damp weather, place a large, heavy card to the guides when leaving work at end of day, and lay a folded newspaper over the card and entire tympan. This prevents the dampness from affecting the register and tympan.

## TYPE-HIGH PLANER

This machine has only been in use a short time, and is too expensive for the small office having little cut work.

The object of this gage is to bring all mounted cuts to a uniform height before going to press.



Many large offices have a man whose business it is, as soon as cuts are received,

to go over them carefully and if found too high to plane them down, and if too low to remount and bring to type height.

With bringing the cuts to type height it is also desirable to square them.

This method is a good one and many hours are saved in the press-room.

### GETTING RID OF FUZZY CARD EDGES

When printing half-tone subjects on heavy cardboard on job presses, the work is more or less difficult when the cardboard is cut on a regular cutting machine which causes a "fuzz" or "hairy edge" to adhere to the cardboard. This "fuzz" in turn falls to the surface of the cardboard and is then conveyed to the half-tone, filling it up and causing the ink to "pick."

The remedy: A quantity of raw cotton is wrapped around a thin board, size about three-by-six inches. The board is then nailed to the edge of the feed board, and as the press is operated the feeder takes each card and turns it over while feeding, drawing it over the cotton-covered strip quickly. This causes the "fuzz" or "hairy" edge to fall to the floor, making each card perfectly clean. A little practice on the part of the feeder is all that is necessary.

### PULLING PROOF IN TWO OR MORE COLORS

Make ready as for one color, then set gages and print several sheets of thin, tough, stiff paper. Select one sheet for each color, ink the back with a proof roller in color desired and cut out portions from each sheet, so that when the sheets are all fed to the gages again, one over the other, with a clean cut-out sheet next to the proof sheet at the bottom, and an impression is taken, all the colors will be impressed on the proof sheet at one impression. Or ink the sheets after cutting out.

Colored carbon papers can sometimes be utilized in this manner. Borders or complex forms will require narrow connecting segments to be left in the cutting, to hold the stock together. For two-color proofs, orange and black, for instance, ink the press in black, a sheet of paper with orange, all black cut out, and place the latter over a clean cut-out sheet. In either case the "clean cut-out sheet" referred to must have all print cut out and simply serves as a frisket to keep the proof clean. For a simple job, where a good press proof is desired in the colors to be employed, there is nothing to equal this method.



Back in November the Barnes-Crosby Co., Chicago, sent us the little "Football Kiddie," drawn by Sarah Crosby-Buck, and while we know that the football season is long since past, we make a special effort to give the youngster representation, because he "looks good to us." We feel that most of our readers will agree with us that it is a fine printing plate. The vignetting and toolwork being carefully and artistically handled.

### SIMPLE AND STRONG

The biggest concerns—the Steel Trust and the Standard Oil Company—have the fewest words on their letterheads; but Bill Jones in Podunk, who makes dog-collars, will have a lithographed heading, with a bird's-eye view that includes some six or eight buildings that he is going to build some time—maybe.

Pick out the most successful advertisers, like Macbeth, the lamp-chimney man, Regal or Douglas, shoemakers, the makers of C. & K. hats, or the newspaper ads of the *Ladies' Home Journal* and notice how simple they are. Take the Wanamaker advertisements, or those of Strawbridge & Clothier in Philadelphia, or Tom Murray in Chicago, and you won't find seventy-seven styles of type in them.—*Profitable Advertising*.

### "ITS RECEIPT EACH MONTH WILL BE OF SERVICE"

Philadelphia, Pa., Jan. 12, 1909.

HILLSIDE PRESS, PUB.

We are in receipt of sample copy of PHOTO-ENGRAVING ART, which we have read with considerable interest, and feel that its receipt each month will continue to be of service to us. Therefore we inclose herewith our check for \$1.00, for which we would be glad to have you enter our subscription commencing with the February number.

ELECTRO-TINT ENGRAVING Co.

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

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FRED J. WILLOCK.....EDITOR.

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THE HILLSIDE PRESS

Publishers,  
Richmond Hill, New York.

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To insure the return of unavailable manuscript return postage should be enclosed.

Subscriptions—United States and Canada, \$1.00 per year, single copies 10 cents. Foreign countries, \$1.50 per year, single copies 15 cents.

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FEBRUARY

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## THE QUESTION OF PRICE

As our leading article this month we reprint a circular which has been profusely distributed by the International Photo-Engravers' Association and has already appeared in most of the printing trade journals. It was written by Mr. Benedict about two years ago.

We reprint it realizing full well that you may have read it before, and while we do not agree with the argument in its entirety, we will admit it has some logical conclusions. We will feel that we have accomplished some good if it brings out only one new idea on how to increase prices in a way that will enable a photo-engraver to reap the whole benefit of his knowledge, skill and investment.

We do not advocate raising your prices so high that you will lose your customers, but do say that you should maintain a scale which will be equitable

and permit you to realize a fair business profit on your effort and equipment and still guarantee your customers first-class work.

You are never so badly in need of work that you can afford to lose money on it. Should you figure to break even and you get the job you will lose money in the long run, because you are giving the customer a weapon to use on you through other customers or a rival engraver. If your competitor learns that you are cutting rates he is likely to meet your price—not knowing your reasons for dropping—and both you and he are permanently injured, and instead of being good friends and pulling together to mutual advantage there is likely to be hard feelings, which are inimical to the interests of both.

We suggest that you read the article carefully—if you have not already done so—and after you have considered it you take time to write us your opinion on the matter of "What a Cut Should Cost to Produce," and "The Best Way of Arriving at What It Should Cost the Customer." Your letter may not solve the whole problem, but perhaps it will bring out some other idea which in turn will develop still another, and so on.



We do not hesitate to say that we would appreciate having our readers get in touch with our advertisers. In a magazine of this character the advertisements should be of as much interest as the other reading matter. And as the advertisers are paying for the use of space in which to call attention to their products, we are going to ask our readers to help us by looking into what our advertisers have to offer.



Next month we will have another short story about Will Smile, by Chester Knowles.

NOTES

Luther's, the old reliable chemical house, whose advertisement appears on another page in this issue, is offering a prepared negative collodion which is giving universal satisfaction. A trial will convince you.

\* \* \*

O. C. Wold's airbrush has many improvements over the old styles which have been so long in use. Mr. Wold's brushes are backed by a reputation of long standing. If you are considering the purchase of an air brush drop him a line and look his catalogue over before you place your order.

\* \* \*

Abraham Solomon, who is calling on photo-engravers for L. Solomon, whose advertisement appears elsewhere in this issue, is offering the trade a superior grade of negative glass. Send him your specifications and see how promptly he will fill your order and how well you'll be satisfied.

\* \* \*

The Business Man's Calculator should be on every engraver's desk. Its operation is simplicity itself, and as soon as the rules are mastered its use makes intricate figuring easy and faster than the methods now in use in most engraving shops. It is fine for figuring up the cost of cuts. It cannot err.

\* \* \*

Deck's Palette, which consists of a set of five tubes of retouch colors, which are mixed to give the best effects with the least effort, is the result of much experiment on the part of Francis A. Deck, of New York City. Mr. Deck has a world-wide reputation as a first-class retoucher, and these colors, which are being handled by Windsor & Newton, are fast finding favor with all who have given them a trial.

\* \* \*

The F. Wesel Mfg. Co., of New York and Chicago, have just installed a most complete up-to-date motor-driven Photo-engraving plant in Baltimore, Md. The purchasers, the A. G. Ogden Co., Incorporated, after a most thorough investigation decided that the Wesel machinery and equipment was what they wanted, and placed their order with that concern. Everything, including the building with improved sky-light, is new. The practical men in the concern are Mr. A. G. Ogden, a well-known artist, who has been for several years connected with the photo-engraving business, and Mr. Chas. Gaybor, equally as well known as a first-class photo-engraver.

WE WANT A  
**LIVE**  
 WIDE-AWAKE ADVERTISING  
**MAN**  
 TO REPRESENT US IN  
**CHICAGO**  
**SAN FRANCISCO**  
**BOSTON**  
**PHILADELPHIA**  
 AND ANYWHERE ELSE

¶ In fact, if you consider yourself a bright energetic fellow, old or young, and you can give us all or part of your time, you may interest us, and we may put you in the way of making a little extra money or even a steady income.  
 ¶ Tell us about yourself and we will go into details.

**THE HILLSIDE PRESS**  
 PUBLISHERS  
 RICHMOND HILL, N. Y.

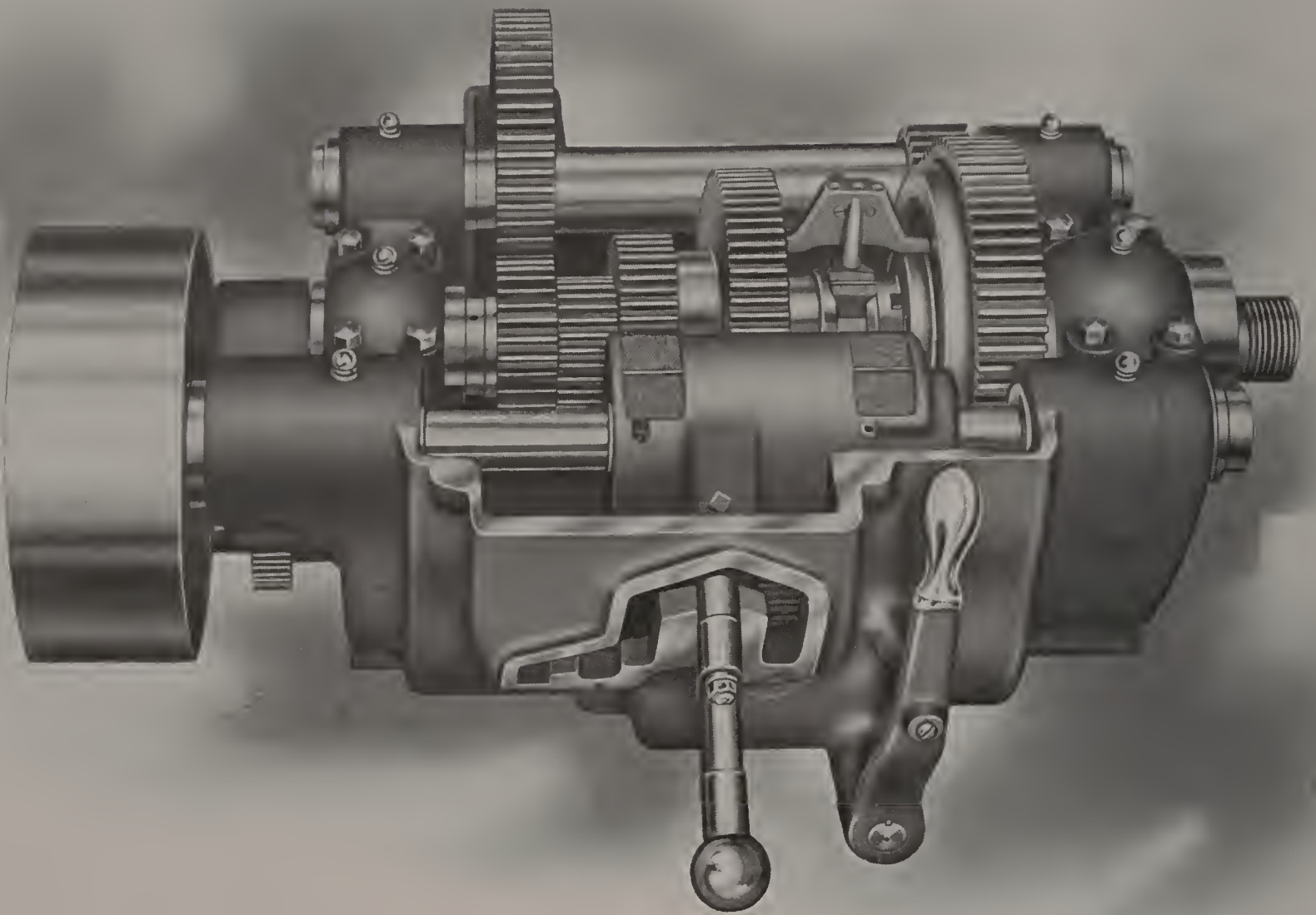
## Artist's Cards

Under this heading we will print each month a number of artist's cards. Rates on application.

**PAUL PHILIP GOOLD**  
 GENERAL ILLUSTRATING  
 Specialist on Army and Navy Matters  
 Tel. 1630 River. 2314 BROADWAY, N. Y.

**JOHN J. HOFF**  
 PHOTO-RETOUCHER ILLUSTRATOR  
 DESIGNER  
 Tel. 3120 Gram. 27 EAST 22d ST., N. Y.

**H. R. NORTHROP, DESIGNER**  
 320 BROADWAY, NEW YORK  
 DECORATIVE DESIGN LETTERING  
 RETOUCHING PHOTOS  
 No Amateur work. Specialists in Each Line  
 Telephone 2041 Worth



Half-tone from Retouched Photograph, by the Springfield Engraving Co., Springfield, Mass. By courtesy of the Hendy Machine Co., Torrington, Connecticut.  
(Specimen illustration from the Graphic Arts and Crafts Year Book.)

## REVIEW OF THE PENROSE PICTORIAL ANNUAL AND THE GRAPHIC ARTS AND CRAFTS YEAR BOOK

BY THE EDITOR

**T**HE Penrose Pictorial Annual and The Arts' and Crafts' Year Book reached us simultaneously. Both are fine specimens of the graphic arts, and to those interested we paraphrase the Globe Electro. & Engraving Co.'s advertisement, "With these two books on your library table the necessity for further purchases is practically eliminated."

As the reproduction of illustrations becomes a more and more potent factor in the graphic arts, books of the nature of these help us to better appreciate the real advance which is being made, containing, as they do, each year's best examples and newest thought

developed by the foremost exponents of each particular branch of the arts preservative.

As the volumes lay side by side on the Editor's desk, The Graphic Arts' Year Book is the most imposing, and a casual glance through both would lead one to believe that the American publication was the better book. On close examination, however, both volumes have their leading points, and while the Graphic Arts' Year Book may be typographically more pleasing, the Penrose Annual presents more new things in the way of screens and processes. Perhaps I am in error, but it seems to me that the 1908-9



edition contains fewer examples of American work than it has in former years. This may be because the publication of the Graphic Arts' and Crafts' Year Book makes the American contributor feel that he should patronize home industries. So long as there are to be two Annuals dealing with the graphic arts, one American and the other European, perhaps it is better that each should draw only on its own producers, let-

ting the comparison of results be made by comparing both volumes.

It is no easy task to review two books of such similarity of purpose at the same time and do justice to them, inasmuch as they are deserving of more space than we feel we can conveniently allot to both. Even if we should devote a whole issue of PHOTO-ENGRAVING ART to a review, we know there would still be something which would be left unsaid.

## THE GRAPHIC ARTS YEAR BOOK

THE GRAPHIC ARTS AND CRAFTS YEAR BOOK, 1909. VOL. III.—The American Annual Review of the Engraving, Printing and Allied Industries; 400 pages, 8x10x2 inches. Profusely illustrated. Published by Republic Publishing Co., Hamilton, Ohio. Price, \$5.00, express prepaid.

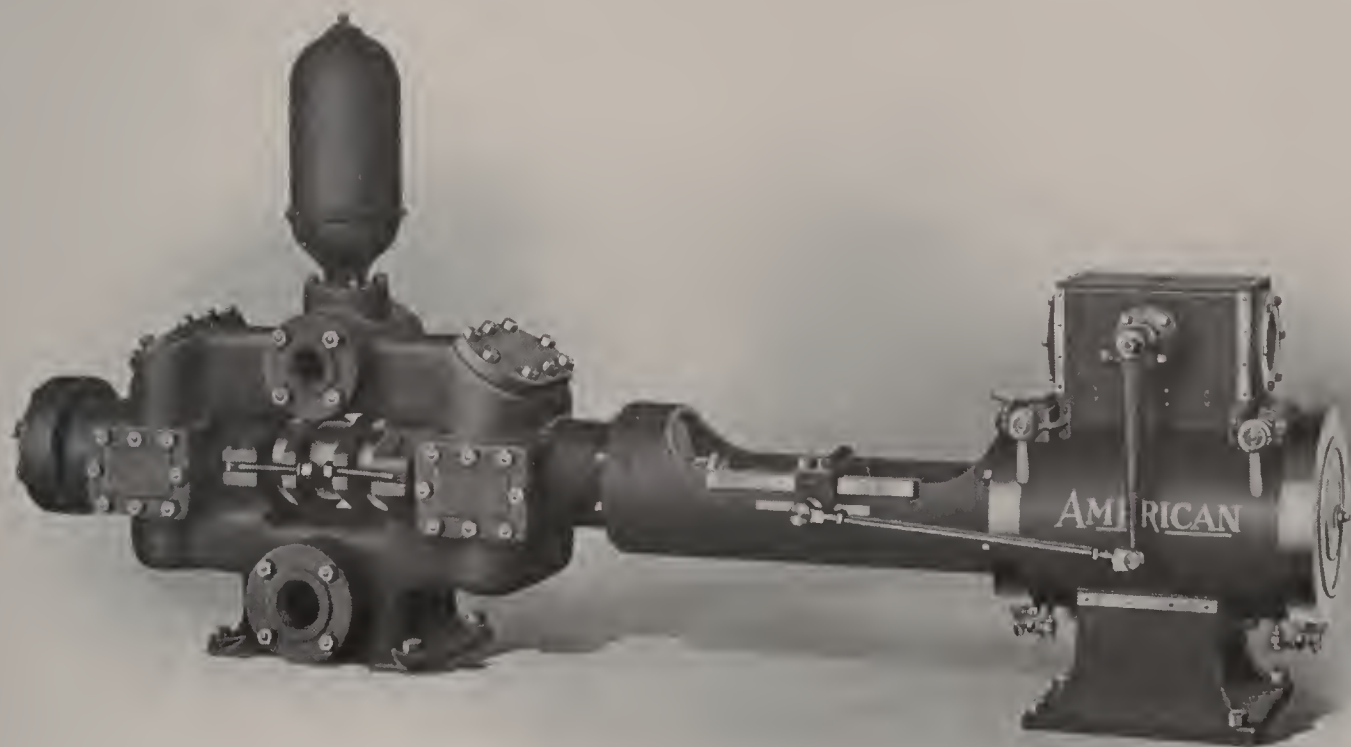
WE will first take up the Graphic Arts' and Crafts' Year Book. No publication of this kind would be complete without its interestingly profound and diagrammatical article by N. S. Amstutz, the research expert, nor the review of "Past Events," by S. H. Horgan, sometimes termed "The Father of Photo-Engraving."

William Gamble, editor of Penrose's Pictorial Annual, presents an interesting "Review of Process Work in Europe." "A New

Theory Concerning the Halftone Screen" is advanced by Henri Calmels, editor of *Le Procédé*, Paris, France, and Arthur Payne, of England, reservedly explains some points about the Payne-type method of "Direct Photo-Engraving."

Four articles on the development of color photography are presented in an easily understood manner, and upwards of forty beautiful samples of color work show the advance in color-plate making and printing.

"Commercial Photograph Retouching," by William Marchant, is profusely illustrated with fine examples of retouched mechanical subjects, which were submitted by representative American engravers and printers.



Half-tone from Retouched Photograph, by the Republican Publishing Co., Hamilton, Ohio. By courtesy of the American Steam Pump Company, Battle Creek, Michigan.  
(Specimen illustration from the Graphic Arts and Crafts Year Book, 1909.)

Perhaps no one publication has ever contained so many really fine samples of high-grade retouched, silhouetted and vignetted commercial halftones, printed in one, two and three colors. The word "exquisite" makes a long story short.

The selection of these cuts reflects the discernment and good taste of the editor, Mr.

Joseph Meadon, who deserves considerable personal credit for the comprehensive manner in which he has arranged the different articles. Taken all in all, the Graphic Arts' and Crafts' Year Book for 1909 is a very creditable production, and anyone who buys a copy will unquestionably not regret his purchase.

## PENROSE'S PICTORIAL ANNUAL

PENROSE'S PICTORIAL ANNUAL. VOL. XIV. —The Process Year Book, 1908-1909. Three hundred pages; 7x10x1½ inches. Embossed covers. Profusely illustrated. Published by A. W. Penrose & Co., 109 Farringdon Road, London, England. American agents, Tennant & Ward, 124 East 25th St., New York. Price, \$2.50, express prepaid.

THE Penrose Pictorial Annual for 1908-9 is a volume of which any editor might well be proud. Compared with previous issues, nearly all of which it has been the writer's good fortune to have seen, the current volume is far and away the best. It is larger than in previous years, and, strange though it may seem, presents a greater number of new things in the way of mediums and methods than ever.

The only adverse criticism the writer has is that the volume lacks arrangement. As one thumbs the pages it suggests a sort of "grab bag" of delight—the next picture may be a fine specimen of color printing, or a beautifully retouched piece of machinery, or a new screen, or even an ordinary tone of a handsome woman. All good, but if presented in a more methodical manner might, perhaps, be made still more pleasing.

The articles are well written and are interesting and instructive alike to the experienced man and the tyro.

"Alzinography," the lithography of the future, is described by Frederic Sears, in an article which deals with the Rubel Patent Rotary Offset Press. "Grain Color Blocks," by J. S. Sunderland, explains some points about the use of grain screens for color work. Grain color plates have been developed more highly in Europe than in America, and for some color-work subjects are superior to the straight line screens. The "Paynetype" is described by the editor.

The editor of the *Electrotyper and Engraver*, William Hughes, writes on "Engravers Paid Twenty Cents a Day." "Some Observations on the Treatment of Autochrome Plates," by Prof. R. Namias, is a short but thorough article on the use of color plates.

"Comparative Value of Lead and Wax Moulds in the Electrotype Process," by George E. Dunton, of New York. This should be very interesting to those who have occasion to use electros. Mr. Dunton, who is a practical electrotyper, declares positively that the wax process, properly operated, is just as good, if not better than the Dr. Albert lead process.

"The Finishing and Reproduction of Retouched Photographs" described by C. Hargreaves, shows several methods of preparing a photograph for reproduction to suit the fancies or uses of a customer. There are six plates shown and each is distinctive. The first is not retouched, the second is partly retouched, the third is all retouched, square finish; the fourth is silhouette and vignette, the fifth is all vignette, and the sixth is a vignetted wood cut. The plates were made by Wallage & Gilbert, Ltd., Birmingham, England.

The Penrose Pictorial Annual for 1908-9 is well worth its purchase price, and can be bought of Tennant & Ward, whose advertisement appears on another page in this issue.

### FROM THE PRINTING ART

Cambridge, Mass., Jan. 28, 1909.

HILLSIDE PRESS, PUB.

The last copy of PHOTO-ENGRAVING ART is just at hand, and we congratulate you upon it. We believe that there is a good field in this country for a publication dealing with photo-engraving news and for such technical matters as we find in PHOTO-ENGRAVING ART. With best wishes,

THE UNIVERSITY PRESS,

(The Printing Art),

By Henry Lewis Johnson.

## DON'T THROW THE BLAME WHOLLY ON HARD LUCK

By JOHN K. LeBARON

IT is quite the fashion to assert that there is no such thing as luck; that the game of deserts and rewards is poised in perfect equity.

The man who actually believes this must belong to the class which feasts on theory without reference to practice.

It is better to accept conditions as they are, meet and control them as best we may, than to shut our eyes to the truth and deceive ourselves with sophistry.

The average man thinks he has had more than his share of "tough luck." Maybe he is mistaken!

The fact that we charge to hard luck about all the things that go wrong does not prove anything—except that the average man is disposed to shield himself by blaming "the other fellow."

The almost unanimous spirit of speculation which forms a part of the make-up of mankind is largely responsible for the charges against hard luck.

A New York bank cashier, for example, commits suicide. His accounts are found to be short. He was the victim of his own dishonesty; he took chances entirely unjustifiable. He put his head in a noose and pulled the rope. The note he left laid the blame to hard luck. There is no element of luck involved. It was the expected that happened.

Hard luck is only chargeable when mishaps which we have no power to avert overtake us.

That bank employee deliberately planned his own ruin.

If I were a millionaire, multi or otherwise, I would establish a charity to be known as the Hard Luck Protective League.

When a man lost his home in a forest fire; when a poor man's horse was struck by lightning; when a woman was widowed by her husband being drowned attempting to rescue others, those people would find themselves possessors of dividend-paying policies in the league. But the man who made a fool investment, or ran a desperate risk with an automobile, or looked down the barrel

of the gun "that wasn't loaded," would not be eligible.

They tell us that only 13 per cent. of business men are even moderately successful. The other 87 per cent. charge their failures to hard luck. It isn't fair. Eighty-six per cent. of the failures are due to poor judgment, neglect, greed or lack of grit.

Hard luck often proves a friend in disguise. Small losses tend to make men more conservative and often prevent greater losses.

Good luck is sometimes a greater curse than ill luck. Every winning ticket in a lottery means a thousand losses in the next drawing—a thousand false charges against hard luck.

Before you charge your ills to hard luck look the situation over without prejudice and then ask yourself the question honestly; just ask yourself if you are not accusing hard luck for things for which you yourself are entirely to blame.—*The Evening World*.

### CARLO NEGATIVE COLLODION

No mixing—ready for use—  
never varying—superior to any  
that can be made in the shops.  
Price \$2.00 per gallon, including  
containers.

### CARLO STRIPPING COLLODION

Price \$1.25 per gallon, including  
containers.

A free sample of each sent to any  
address on request.

R. H. LUTHIN  
DRUGS AND CHEMICALS  
191 BOWERY, NEW YORK

| COPY—HOW BEST TO REPRODUCE THE VARIOUS KINDS |                     |            |                       |
|--|---------------------|------------|-----------------------|
| COPY   | Halftone            | Metzograph | Zinc                  |
| Wash drawing, water color, etc. [1]          | Good                | Good       | No                    |
| Line drawing (pen-and-ink) [2]               | Good if re-engraved | Fair       | Best                  |
| Crayon, charcoal or pencil drawing [2]       | Good                | Best       | Good                  |
| Photograph [1]                               | Good                | Good       | No                    |
| Ross paper (lines, stipple, etc.)            | Poor                | Good       | Best                  |
| Reprint from wood engraving [1]              | Fair                | Good       | Good                  |
| Reprint from halftone                        | Not recommended     | Best       | Fair if coarse screen |
| Reprint from line                            | No                  | Fair       | Best                  |
| Lithograph                                   | Fair                | Best       | Only fair             |
| Steel and copperplate engraving [1]          | Good                | Good       | Fair                  |
| Etchings (dry point, etc.)                   | Fair                | Best       | Fair                  |
| Maps, intricate rule work, etc. [3]          | No                  | No         | Good if good copy     |
| Combination wash and pen-and-ink             | Good                | Good       | No                    |
| Oil paintings [1]                            | Good                | Good       | No                    |
| Type matter, writing, etc. [4]               | No                  | No         | Best                  |

[1] May also be photographed on wood and engraved by hand; excellent for artistic results [2] May also be drawn or photographed and cut on wood [3] Wax engraving is preferable. [4] Wax engraving sometimes better adapted.

Copyright 1908 by William Henry Baker, Cleveland, O.

Presented with the compliments (and with the hope that the usefulness of this chart will suggest the complementary usefulness) of

**The Eclipse Electrotype & Engraving Co.**  
"THE COMPLETE ESTABLISHMENT" CLEVELAND

Makers of

Cuts by all Processes for Printing in one or more Colors in Newspapers, Catalogues, Magazines, Trade Journals, Etc.

Reproduced above is a reduction of a card which the Eclipse Electro & Engraving Co., Cleveland, Ohio, is sending out to its customers. To the layman and the ordinary user of photo-engraving, who is often "up a tree" when ordering cuts, this chart will come in handy. The full size is 5½x10½.

### WHAT ADVERTISING DOES

Advertising introduces the goods and paves the way for the salesman.

Advertising insures for the traveler a respectful hearing when he arrives.

Advertising brings orders when the salesman is not on the ground.

Advertising cements the friendship between the house and the merchant.

Advertising makes the merchant respect the firm and the salesman.

Advertising increases the volume of the

order which the salesman can secure in person.

Advertising tells the merchant what the salesman forgets to mention.

Advertising supports the salesman in his statements to the merchant.

Advertising brings about a better acquaintance and understanding between the merchant and the traveler.—*Profitable Advertising.*

## QUESTIONS AND ANSWERS

We are in a position to answer any question which may come up, as we have within our organization or can draw on the experience of other practical men who are now actively engaged in the production of plates by the photo-engraving process.

Any question is welcome, and we will endeavor to make our answer to the point, so that it will be easily understood and will really answer the question.

If we find that we cannot answer the question ourselves we will print it, and in that way put it to every engraver in the country.

**WINSOR & NEWTON'S**

**"Beck Palette"**

(Francis A. Deck, New York City)

**For RETOUCHING and SPOTTING for  
Reproduction**

**FIVE TINTS IN LARGE TUBES**



Goods bearing this trade-mark have received universal commendation for the past seventy-six years

"ALBATA" Red Sable Brushes  
"BRITISH" finest ever made

**BLANC D'ARGENT**

**For Process Reproduction**

**IN LARGE BOTTLES**

**WINSOR & NEWTON, Ltd.**

**OF LONDON**

**298 BROADWAY, NEW YORK CITY**

**Our goods are sold by all art dealers**

# Progress Department

## THE APOCHROMAT TESSAR, SERIES VIII

WITH the advent of the three-color process of illustration and printing there came a problem for opticians requiring the most careful and elucidatory computations. We refer to the correction of photographic lenses so that the color process may be correctly carried out without requiring too much time. In the beginning of this work very careful and somewhat tedious focusing had to be done for each exposure to insure perfect registration of the various plates when printing. Naturally there were many failures and much loss of time in this method, so that the need of an Apochromat lens was keenly felt before that perfect objective, the Bausch & Lomb-Zeiss Apochromat Tessar, Series VIII, was placed upon the market.

The precise delineation, the crisp definition, the even illumination, perfect covering power and ability of the Zeiss lenses to render all straight lines correctly are well known. The Apochromat Tessar possesses all these attributes, and in addition is especially corrected chromatically and spherically. In fact, having as a primary requisite to meet the needs of the color workers, this lens is so precisely corrected for the three

regions of the spectrum that refocusing for each color is entirely avoided. The same size images are produced in exactly the same location with each of the color screens.

The Tessar, Series VIII, is constructed from four thin elements of Jena glass. The two in front of the Iris diaphragm are separated by an air space, while the others are cemented. This construction produces a lens which absorbs practically no light, is compact and requires comparatively short exposures.

The lens is supplied in a brass barrel fitted with an Iris diaphragm, and having a slot for the insertion of waterhouse stops which are supplied at extra cost. The Apochromat Tessar is regularly made in six sizes, with equivalent focus lengths ranging from 18 3/32" to 70 7/8", covering plates from 14x17 to 48x60. The prices can be obtained from the makers.

The Bausch & Lomb-Zeiss Apochromat Tessar is to-day one of the mainstays of color workers in many high class establishments. This popularity is sufficient proof of its excellence, and the perfect reproductions to be obtained direct from the goods with this lens makes it even more desirable. It is an optically correct instrument made in the best possible manner.

## CONCERNING THE COST OF HALF-TONES

(Continued from page 52)

them at 10c. as I could on minimums at \$3.00 each? Twenty at \$3.00 is \$60.00. Ten at \$8.00 is \$80.00.

For several months we have kept an accurate record of the number, size and shop cost of all the half-tones and zinc etchings we have turned out.

In the shop cost we include wages, material, rent, power and light, but do not include the cost of any work charged as extras, or any portion of the office expense.

The result is: the shop cost of all

half-tones turned out was 9c. per square inch, the average cost per cut was \$1.48½, but it is certain that cuts under the average size cost more per square inch and less per cut, and cuts over the average size cost less per square inch and more per cut.

My theory is that one-half the square-inch cost, and one-half the average cut cost, is the true cost of a half-tone of any size.

As to zinc etchings, our records show that the cost per square inch and per

cut is approximately one-half the cost of half-tones. The output in inches, at almost the same expense, was double, but the average size of the zinc etchings was one-third greater than the half-tones.

Our recent records show that the expense of operation is now \$24.00 per day per camera. The average cut made contains  $16\frac{1}{2}$  square inches.

Fifteen negatives is considered a fair day's work.

Fifteen cuts at  $\$1.48\frac{1}{2}$  each is \$22.28.

Fifteen cuts of  $16\frac{1}{2}$  square inches each is 248 square inches. At 9c. per square inch, 248 square inches costs \$22.32.

The labor expense is \$15.00 per day per camera. The total expense of \$24.00 per day—less the labor expense of \$15.00 per day, leaves \$9.00 per day for material, rent, power, light, etc. An average output of 248 square inches at a cost of \$9.00 is about  $3\frac{1}{2}$ c. per square inch for material and other expenses.

Twenty minimum half-tones of 10 square inches (a fair day's work) is 200 square inches. The labor cost is \$15.00. The material, etc., at  $3\frac{1}{2}$ c. per square inch will cost \$7.00. Total shop cost \$22.00, or 11c. per square inch.

Ten 8 x 10 half-tones (likewise a fair day's work) is 800 square inches. The labor cost is \$15.00. The material, etc., at  $3\frac{1}{2}$ c. per square inch will cost \$28.00. Total shop cost \$43.00, or  $5\frac{3}{8}$ c. per square inch.

Believing that selling half-tones and zinc etchings by the square inch regardless of size is wrong from every point of view, I have endeavored by a variety of arguments to show:—

First, that there is a great difference in the cost of producing the different sizes of half-tones.

Second, that the excessive profit on large cuts is why the price has been reduced to a point at which the craft complain of a lack of profit.

Third, that the selling price for minimum cuts is often less than the cost of production.

Fourth, that it is not just or equitable to divide the profit on large cuts with the buyers of small cuts.

I have stated that in a month when the orders run to large cuts there is a satisfactory profit, and that in a busy month of work on small cuts there is no profit or an actual loss.

To make a comparison I have gone over the record of sales and profit of our business for the past twenty years, and find that, notwithstanding that we are now selling half-tones for one-half the price we were getting in the most profitable period of our experience, and the yearly returns have been getting lower and closer to the cost of production and are now far from satisfactory, yet, owing to the conditions stated, we occasionally have a short period of one or more months in which the orders run to a quantity of large half-tones when we do make a profit equal to the best in the days of high prices.

I also find that we occasionally had a losing month then as we do now.

While I do not claim that my figures are absolutely correct, I am certain that minimum half-tones sold at \$2.50 each would be no more profitable than 7 x 9-inch half-tones at 10c. per square inch, and I believe that a scale of prices based on a fixed charge of \$1.50 per cut, plus 10c. per square inch for half-tones and one-half these prices for zinc etchings will be as just and equitable as can be devised.

¶ This cut represents the **Standard Interchangeable Air-Brush** for the photo-engraver, fitted with lightning interchangeable glass jars or metal side cups all in one brush. Illustration shows the exact size of the instrument. It weighs only  $1\frac{1}{2}$  ounces.



All the main parts are on the outside of the shell, adjustable for high or low pressure. With one movement of the index finger and with a sweep of the hand it will go from a hair line to a broad spray. Any kind of colors may be used. 🌿 🌿

“Construction Simplicity”

For further information and prices address the Patentee and Manufacturer

**O. C. WOLD** 155 W. MADISON ST. CHICAGO

In answering please mention “The Photo-Engraving Art”

## Quality in the Negative



¶ The making of the photographic negative is not only the first but the most important step in the mechanical processes involved in photo-engraving. A chain is no stronger than its weakest link, and by the same reasoning you can't get the quality in your finished product unless you have it at the start. That means your lens must be right. With a

### Goerz “Process Dagor”

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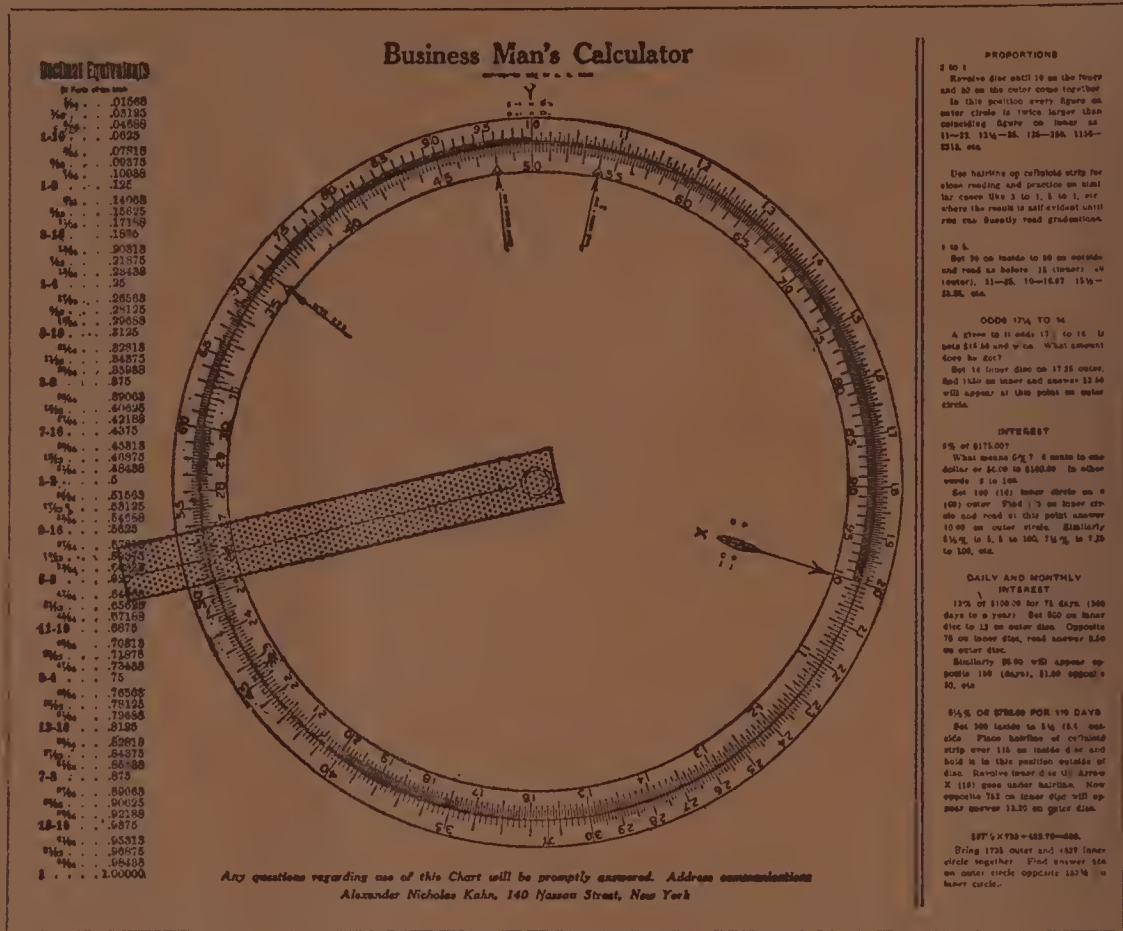
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# Photo-Engraving Art

The Hillside Press, Publishers, Richmond Hill, N. Y.

Volume 1

MARCH-APRIL, 1909

Number 5-6

## CONTENTS

|   |    |
|---|----|
| Frontispiece, "THE LAUGHING CAVALIER"<br>By FRANZ HALS..... | 74 |
| ESTIMATING VS. GUESSING<br>By FRED J. WILLOCK.....          | 75 |
| RURAL ENGLAND<br>By SIDNEY R. JONES.....                    | 78 |
| THE LEVY ACID BLAST<br>By WILLIAM GAMBLE.....               | 79 |
| WILL SMILE<br>By CHESTER KNOWLES.....                       | 83 |
| SAMPLES FROM GATCHEL & MANNING.....                         | 85 |
| PROTECTION OF THE DESIGNER.....                             | 87 |
| EDITORIAL—PERSISTENCY .....                                 | 88 |
| SOME HINTS ON STRIPPING AND DRYING NEGATIVES.....           | 90 |

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# Photo-Engraving Art

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VOL. I., No. 5-6.

MARCH-APRIL, 1909

## ESTIMATING VS. GUESSING

To the Man of Ability Belongs the Contract---A Wrong and a Right Way to Try to Secure It

By FRED J. WILLOCK

ONE morning in the early Spring the General Manager of the Photo-Etching Company, in opening his morning mail ran across a letter, which read as follows:

Gentlemen:—We are working on twelve volumes of "My Adventures in Jungle Land," by Reddy Toosvelt, which will contain upwards of 6,000 cuts, all half-tones. A large percentage will be minimums, perhaps forty per cent. The rest will average twenty inches or over. We would like to get a rock-bottom price on them.

Please have your representative call on our Mr. Stuart Taylor, who has the matter in charge. Your early attention will oblige,

Yours very truly,  
The African Publishing Co.

The manager called a salesman and told him to see Mr. Taylor and get all the details, as they could use a job of that character to carry them over the Summer months.

The salesman called on Mr. Taylor and was shown the dummy for the initial volume, also a sample of the style and quality of work expected. He was shown a large packing box full of pictures, at which he gave a fond but only a casual glance.

Mr. Taylor explained that it was his desire to get the best possible price per minimum and square inch on his work, but that he did not want the work slighted in the minutest detail. He had, however, received a very low bid from several other engravers, but on investi-

gation had decided that only two of the number were in a position to deliver the goods if they were awarded the contract.

He impressed upon the salesman the necessity of a figure being submitted within twenty-four hours, as the photos were all ready to be given out and the whole job must be completed within six months. The salesman jumped up and hustled out, saying as he left:

"I'll have a price here before five o'clock this afternoon."

He rushed back to the office and, bursting in on the business manager in great haste, he gasped out: "Say! Here's a job we must get. Nearly everybody in town is figuring on it, but only two other houses besides ourselves are capable of handling it. All we have to do is to get under their price and the job is ours."

He then described his visit, and the manager, elevating his eyebrows, asked: "What do you think will get it?"

"Oh, I guess about seven and one-half cents per inch, with a seventy-five cent minimum will about land the job," answered the salesman.

"How do you think he feels toward us?"

"Why, I'm sure he's partial to us. You know we have done quite a few stunts for him at different times."

"Then why don't you try him out by saying you will allow him a rebate of five per cent. off the lowest price which was quoted by either of the two houses which he considers our only competitors? It isn't possible that they figure to lose and by 'digging' a little we may pull out. We want that job!"

"That would be an easy way to estimate, but maybe he wouldn't want to accept a bid in that way," said the salesman.

"Well, try it, anyway, and report to me. Get right down to see him while the iron is hot. Stick to that job for the next two or three days, or until you land it. But, remember, we want it!"

While the above conversation was taking place the representative of a rival concern was closeted with Mr. Taylor, who was explaining to him the requirements of the job.

"I see," said the representative. "Now, may I ask a few extra questions?"

"As many as you wish," answered Mr. Taylor.

"You say there are approximately six thousand copies; does that mean more or less?"

"Well, the probabilities are that there will be considerably more."

"What screen do you wish to use?"

"One hundred and fifty."

"Do you want any special line around the cuts?"

"No line whatever."

"H'm. Will there be any circles or ovals?"

"None. Every cut will be square finish; no line."

"Blocked?"

"Yes."

"Any retouching?"

"Wherever necessary."

"How soon do you want the job completed? Will there be any special rush on any or all of it?"

"We must have the whole job complete within six months, and we expect the engraver to average twelve hundred cuts a month. I should say that the job would be considered more or less of a filler, and I would expect a price accordingly," answered Mr. Taylor.

"You say you have a very low bid from several other engravers?"

"Yes; but I am afraid that in most cases their desires are larger than their capacities."

"Of course it will be necessary that you be guaranteed deliveries. I will take up the matter of our ability to 'deliver the goods' later. May I look at a few of the copies?"

"Certainly. Only one other representative out of all who have called has asked to see them."

"Well, you want a price and I want the job, and to get at a price I must know what is to be done. I see you have several bundles of portraits; have you any set idea about the size of the heads? In other words, must they all be of uniform size?"

"No, we will leave that entirely to you."

"What I mean is, will it make any difference to you if some of the pictures are just head and shoulders and some three-quarter figures; that is, run about the same as the copy does, or must they all be run the same—all heads and shoulders of uniform size."

"I think we would prefer to have all the copies reproduced as is. There will



be so many portraits that if all heads are the same size there will be too much monotony throughout the volume, besides it might necessitate enlargements, which, in some instances, would be likely to give poor results."

"How have you figured the retouching? On a job of this size there is sure to be a considerable amount of retouching necessary."

"I must confess that when it comes to retouching we will have to trust to the honesty of the engraver who is awarded the contract. Of course, I realize that it will have to be time work and that there is no possible way to figure in advance what it will amount to. All that I can suggest is that you quote your best 'price-per-hour' rate."

"Can I spend about a half hour looking over this box of photos?"

"Just as long as you like."

After devoting a half hour to a careful scrutiny of the box of pictures and making notations as he went along, the representative decided that he had learned all he could possibly use to advantage, so thanking Mr. Taylor for the opportunity to put in a bid he hastened back to the office.

Arriving there he figured the approximate number of minimums which could be worked to advantage on a flat and the largest flat which could be handled economically. Figured the cost of a flat of minimums. Taking into consideration the fact that there would be no line around, and that the negatives could be made with a prism camera, thus eliminating the turning of the negatives, and in that way saving a big part of the time in handling. When the cuts were etched there would be a still further saving in time when the cuts were being bevelled, because the

flat could be sawed apart and four operations of the beveler would complete the mechanical part of each cut.

In this way he arrived at the average price, adding the usual percentage for errors, makeovers and unexpected contingencies, he decided that he could make a good grade of half-tone cut, 2x3, at \$1.10 each, and after going over his costs again figured that the larger cuts could be made at a profit for 9 cents per square inch.

He figured from his examination of the photographs that out of the two hundred and fifty he had scrutinized, forty would need on an average of three dollars worth of retouching each, and that the rest would need none at all. Taking this as a basis for figuring, he found that the cost would be forty-eight cents each. Adding twenty-five per cent. for profit gave him sixty cents each as a price at which he could make a fair margin of profit.

Dictating an estimate on these lines he went back with a firm determination to get the job at his price, realizing that it might be higher than others, but knowing positively that it would be impossible to produce a better grade of work than that which he figured on for less than his concern could; he was fortified and in a position to devote all his energies to the highest grade of salesmanship.

Mr. Taylor read over his estimate and looking up with a smile, said:

"You are considerably higher than the lowest bidder and a trifle higher than the highest. If you are in earnest you will have to come down in your price. I am disappointed in your figures, because I felt from the way you



*John Swain & Son, Ltd.  
London, E. C.*

*From the Penrose  
Pictorial Annual—1908-9.*

### RURAL ENGLAND

Etched on the Levy Blast Etching Machine.

## THE LEVY ACID BLAST

By WILLIAM GAMBLE

MR. WILLIAM GAMBLE delivered on December 3d a lecture on "The Levy Acid Blast" before a large audience of members of the trade, at the London County Council School of Photo-Engraving and Lithography, London, England. He first showed that it was known to all etchers that if acid fell in a steady stream on to the plate, it had the effect of removing the oxide, and keeping it bright, so that etching was done more quickly. This was really the principle of an old French method of Intaglio Etching of Photo-gravure Plates, known as "eau forte à coulleur," in which the plate was inclined at 45 degrees and the acid dashed on it from a jug. This method was shown to the lecturer many years ago by an old etcher without the importance of the idea being realized, and it really embodied the principle of the later developments of mechanical etching. Years after there was



LOUIS EDWARD LEVY

published in "Process Work and The Printer" an article and illustrations descriptive of a scheme suggested in an American paper by Mr. S. H. Horgan, showing how a barrel perforated at the bottom with holes could be arranged so as to rain down an acid solution on to a plate placed in a receptacle beneath, and it was suggested that means might be adopted of pumping back the acid into the barrel above. Another idea was to have a barrel with compartments at the top and bottom, and an opening at the side for inserting the plate. The barrel was swung on trunnions, so that it could be revolved, and the end compartments were perforated, so

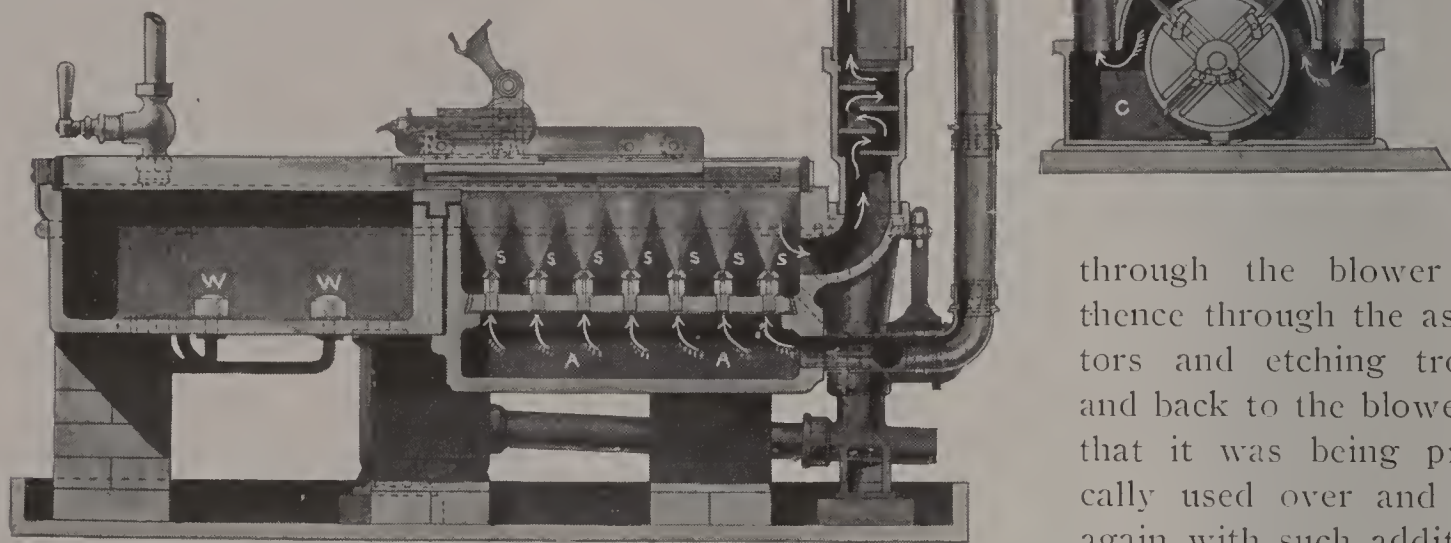
that when the acid was poured into the bottom compartment, and the barrel then turned upside down, the acid rained through the perforations on to the plate, and thence fell into the bottom compartment, so that by turning the barrel again a fresh supply of acid was obtained. It was also suggested that an arrangement might be made something like a shower bath, and the acid lifted

by means of a rotary pump. This arrangement has been patented since, viz., Thorp, of San Francisco, and Danesi, in Rome. Some such ideas as these must have been passing through the mind of Louis Edward Levy, when he started experimenting on the production of a mechanical etching machine, which was ultimately patented in the year 1899. His idea from the first, however, was not simply to allow the acid to fall on the plate by gravity, but to discharge it with force in the form of a fine

spray, and it no doubt naturally occurred to him that the best way of accomplishing this was by means of compressed air. The early difficulties of the inventor were chiefly in the direction of finding what acid-resisting materials could be employed in the construction of the machine, and after various materials had been tried it was found that earthenware troughs with aluminum and phosphor bronze fittings were the most satisfactory. The tendency of recent improvements had been towards the use of less and less metal. The machine in its present form was the outcome of some twelve years' continuous experiments, and it now differed materially,

and particularly in the direction of simplicity, from the one shown at the Paris Exhibition of 1900.

The lecturer then described the construction of the machine and particularly the working of the Aspirators, which were constructed somewhat on the principle of the steam injector, and performed the function of atomizers, when submerged in the acid and compressed air blown through them. The action of these aspirators was very neatly shown by the lecturer by means of a simple model consisting of a wooden trough



Cross Sectional View of the Levy Etching Machine.

with a single aspirator at the bottom. This was connected with a pump for supplying compressed air, and a solution of sulphate of copper was poured in the bottom of the trough. A zinc plate was supported a few inches above, and as soon as the air supply was turned on the copper solution was sprayed up on the underside of the plate, blackening it and thus showing the area of the action, proving thereby that with a large number of aspirators acting close together, whilst the plate was rocked to and fro, the etching must necessarily be perfectly uniform. Although the air was no doubt heated by compression, it was equally cooled by expansion on emerging from the aspirators, and the inventor took advantage of this principle in pneumatics to absorb the heat caused by the action of acid on the plate. Another effect that was useful was that the suction of the air back to the blower through the flue opening in the etching trough caused a partial vacuum, which increased the impact of the sprays, and caused a current to enter the acid chamber from the outside through whatever crevices or open-

ings there might be around or under the lid of the acid chamber. This effectually prevented any fumes escaping into the room, as the direction of the air current was inward. The air supply was drawn by the rotary compressor from the etching trough

through the blower and thence through the aspirators and etching trough, and back to the blower, so that it was being practically used over and over again with such additional admixture as might reach the etching trough through

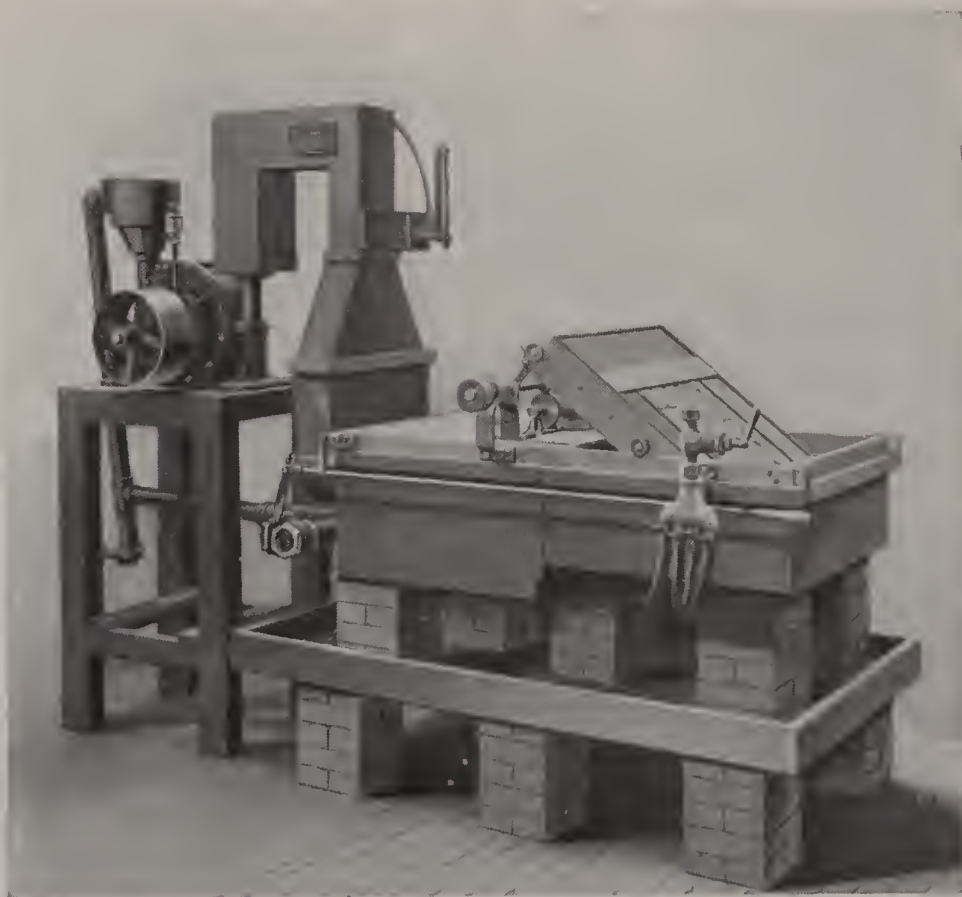
the openings which it was impossible to close up entirely around the lid. A certain amount of the air and generated gases, however, escaped through the regulating valve when the same was not completely closed, and thence through a pipe leading to the open air. In this way neither the blower nor the etching trough could become choked with gases, and the constant admixture of oxygen from the air freshened the acid and caused it to continue to act vigorously. The interior of the blower was constantly charged with oil, so that it could not be attacked by the acid fumes. The air pressure could be varied and the amount of it readily seen by means of a mercury gauge fixed in front of the flue. A good feature of the later patterns of machines was that the pressure could not be put on until the plate carrier was over the etching trough, and this plate carrier could not be pulled back until the pressure was off, or, in other words, the valve was open. Whilst the etching was in progress the plate was continuously moved to and fro by means of a spurred gearing

operating the crank motion. In this way the action of the spray was equalized all over the plate and the drops of acid clinging to it readily fell off. When the plate was considered to be sufficiently etched, the plate holder was pulled back into the second compartment, which formed a washing chamber, and a powerful spray of clean water turned on. The plate holder could then be turned back to permit of examination of the plate, and from the latest pattern machine the plate holder could be entirely removed by lifting it out of its connections, which was a useful feature for quick work, as by having two plate holders two etchers could work the machine alternately, one getting a plate ready and affixed to the holder, while the other had his plate in the machine. Means were provided for pouring the acid into the machine through a funnel-shaped aperture and for draining it out for cleaning purposes. The sink underneath the machine ensured cleanliness in case any etching solution was splashed or dripped over.

The strength of the acid employed was usually about 6 degrees on the Beaumé hydrometer, though in newspaper offices it was often increased to about 10 or 12 degrees to attain greater speed, this proportion being equivalent to about three parts of water to one of acid. The etching solution could be used over and over again throughout the day's work with an occasional slight addition of fresh acid, as the solution does not become sluggish in action as in the case of acid used in the ordinary etching trough. The gases and hydrate on the surface of the plate were carried off by the blast. It was unnecessary to varnish the back of the plate as there was no action on it, nor was there any necessity to localize the action from the front, as in the case of tub etching by painting the margins and large white spaces with resist varnish.

In the case of half-tone work an etch of 30 seconds duration with one-half pound air pressure, and the acid strength of 6 degrees Beaumé was generally sufficient

with screens not coarser than 133 lines to the inch, and with coarser rulings the time of etching might be increased to about 3 minutes in the case of very coarse work such as 55 lines etched extra deep for rotary newspaper printing. The Fish Glue Enamel, or a Dragon's Blood or Bitumen top upon etching ink, stood the blast very well throughout the first etching. For line work it was best to employ the Dragon's Blood Process, and start with an etch of about 30 seconds duration with  $\frac{1}{2}$  pound air pressure and 6 degrees of acid. A second etch after the fourways powdering might be two minutes, and a third etch of four minutes, which would probably be sufficient in the case of close work, though a fourth etch might be given with a higher pressure, and one or two minutes longer time. According to Mr. Levy the average time for each etch was as follows: First etch, 30 to 40 seconds, with  $\frac{1}{2}$  to  $\frac{3}{4}$  pound air pressure; second etch, 1 to  $1\frac{1}{2}$  minutes, with 1 pound air pressure; third etch, 4 to 5 minutes, with  $1\frac{1}{2}$  pound air pressure. In the office of "The Boston Herald" the Sunday magazine work is completed in two bites, with a glue enamel top, one bite on the half-tone of three minutes, one fourway powdering, taking four and a half minutes, and then a second bite of



Levy Acid Blast Etching Machine.

five or six minutes. In that office the turning out of a full-page plate, 18x22 inches, ready for routing inside of twenty minutes, was reckoned an everyday matter. The class of work done was shown by the lecturer with a number of proofs and newspapers. The reason why the time of etching was lengthened in England was due to the fact that the etchers could not get out of the habit of rolling-up at some stage or other of the process, and thus they did not get the full benefit of the saving of time which the etching machine should give them. If the American Dragon's Blood Process with four-ways powdering was adopted exclusively, a much greater saving of time would be shown, especially when the Levy Etch Powdering Machine was used.

The latter machine was fully described by the lecturer, and illustrated by means of lantern slides. No etcher could powder the plates as fast or as evenly as the machine; moreover, the machine never gets tired, and it always did work of the same uniform quality. It only used gas for heating, and there was not the same waste of powder as in hand work; moreover, it was almost entirely automatic in its action.

The lecturer quoted the opinion of one other large New York engraving company in regard to the execution of high-class copper etching by means of the Acid Blast. They were doing the work in just one-quarter the time of hand etching, and the plates turned out were much superior. The color was retained, and the dots did not break abruptly where the high lights meet the middle tone. There was a decided softness instead where the two tones meet, and where a high light joins a solid, for instance on the edge of a plate, the dots did not etch away as in the case of hand etching. The plates were deeper and cleaner than they were before, and very fine screen work up to 400 lines per inch could be made deeper and more printable.

An important point which all firms using the machine were making in their advertisements was the greater depth obtained in the half-tone plates, enabling much finer screens to be printed on common papers, and with cheaper inks; and, further, that the

plates are much more suitable for electrotyping and stereotyping. This was obvious when microscopic enlargements of the plates were examined, which the audience were enabled to do by means of a number of lantern slides showing sections of the plates greatly enlarged. Amongst these were a series of tests made in the Bolt Court School with tub etching against four different etching machines, including the Levy, and these results indisputably showed that under the same conditions as to time and strength of acid the Levy machine gives greatest depth and with entire freedom from undercutting. The lecturer concluded by saying that his view was that etching by machinery marked a great advance in the process industry, and lifted it at once to a higher plane, both for uniformity and quality, and from a commercial point of view.

The application of machinery to any industry must always be a decided gain, and it was the only possible way of combating increasingly strenuous competition. Machine etching had been introduced at the most opportune moment, just when trade was on the verge of desperation owing to the extremely cut prices, and to the fact that small firms could do equally as good work, and at as low a price as the big ones, in spite of the capital and facilities possessed by the latter. The firm taking up Etching Machines could gain a strong lead, and show advantage in price, quality and speed. From the workman's point of view, the lecturer did not think machine etching was a serious menace. He had not heard that it had displaced labor to any marked extent, if at all. The men who had been put on the machine were, in all cases he knew of, experienced etchers, and in most cases the best men in the shop had been selected to work the machine. The lecturer's view was that the greater the facilities provided for doing the work more quickly and cheaply, the greater would be the influx of work; that was true always, and in every industry where machinery has been introduced. There might be a little displacement of labor for a time, but the men who were thrown out of employment would soon fall into other grooves. It was useless to sneer

at machine etching. It had come to stay, and the lecturer was convinced that in a very short time there would not be a photo-

engraving firm of any consequence without this invaluable aid to economical production of halftone and line plate.

## WILL SMILE

His Explanations are Accepted by a Customer Who Also Learns Something to His Advantage

By CHESTER KNOWLES

“WHAT screen shall I use?” inquired Will Smile, the entry clerk for the Doem Quick Engraving Co.

“Screen? Why, I don’t want a halftone, I want a line cut,” answered the customer.

“Well, then, we’ll have to make a line drawing from this copy,” replied Smile.

“Why? Can’t you make a line cut from that photograph?” asked the customer. “I wish to print it on a rather rough stock.”

“No, it would be impossible. We can make you a coarse screen halftone on zinc, but not a line cut.”

“Well, a halftone will not do. I must have a line cut, but can not understand why you must make a drawing. How much will a drawing cost?”

“Oh, about \$2.50,” answered Smile.

“And how much would a halftone cost?”

“One dollar and seventy-five cents. It is a minimum size.”

“Yes, and I suppose there would be an additional charge for the line cut after the drawing had been made, or does the two-fifty cover it?”

“The line cut would cost seventy-five cents after the drawing was made,” was the answer.

“H’m, only a dollar and a half in your favor. Now, why can’t you make me a line cut for a dollar seventy-five from my photograph and cut out the drawing? I can’t see why you must make a drawing anyway, it is an exceptionally clear photo. It strikes me that it is ‘graft.’”

“Well, I’ll tell you why in a few words,” answered Will Smile. “In the first place the processes are entirely different. To make a

line cut, one method is employed, and to make a halftone an altogether different one.

“A halftone is so called because of the screen which covers the entire picture and which enables us to produce an etching in

which are preserved the middle or halftones and we get a result which is exactly like a photograph, with the exception that the entire picture on close inspection will show a screeny effect all over. This screeny effect is what makes the cut or halftone printable.

“A line cut is simply a direct reproduction of a line drawing, design or other matter, such as type, maps, etc., in which it is impossible to retain any of the middle tones, and the negative is sensitive only to certain colors, such as black, red, yellow, brown which contains a large percent-

age of red and yellow, and green which contains plenty of yellow. Blue, unless it is very dark, will not photograph at all. A line cut negative can be made with a fast lens in about a minute and a half, while it generally takes from twelve to fourteen minutes to make a first-class halftone negative.

“The rest of the process is practically the same in both cases, except that when a line cut is etched there is nothing to be done except to rout it, which means cut away the surplus metal so that there will be no offset in printing, while in the case of a halftone a considerable amount of time can be spent on it to improve its quality by what is known as re-etching and burnishing. There is seldom any routing on a halftone except when it is silhouetted or vignettted.”

“What do you mean by silhouetting and vignetting?” asked the customer.



WILL SMILE.

"Why, when you speak of a silhouette it means to be all cut out. For instance, this piece of machinery is what would be called a silhouette, and this picture of a typewriter would be considered a vignette. The difference between the two being that the background is all cut away and only the object is left in the silhouette, while to vignette a cut means to blend away the background, and if it is properly done and well printed it is impossible to tell where the halftone begins or ends," answered Smile.

"Of course," he added, "vignetted and silhouetted cuts are much more expensive than straight halftones. They are generally figured at the same rate as square cuts with an additional charge for the extra finishing and hand tool work. On minimums the charge is generally from seventy-five cents to one dollar and a half additional, while on larger cuts the price is generally increased from four to eight cents an inch, according to the amount of work necessary to achieve the best results."

"Well, say, go ahead and make a line drawing, and if by spending a little more you can get a better drawing, why, go ahead and do it. Don't let fifty or seventy-five

cents stand in the way of a good result. I guess you know your business. The trouble with me is that I have always thought I knew something, but I find that there are a number of things which I have still to learn."

"Very well, sir, you may drop around in a few days and we will show you the drawing before we make the cut," and as the customer left the office Will remarked to himself: "It is a pleasure to deal with a man who acknowledges that he don't know it all and will take advice in the spirit in which it is offered. The trouble with most of the 'ginks' who think they are wise is that their egotism forms cobwebs on their brains and an honest suggestion won't soak in."

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Price-cutting means wage-cutting, and profit-cutting, and cost-cutting; so that the wage-earner, the capitalist and the supply house whence the materials are drawn must all suffer. No one in the trade benefits. The only advantage is given to the customer. —(*Circular British Federation of Master Printers.*)

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## PRESIDENT TAFT'S IDEAS ON THE RIGHTS OF ALIENS

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THE admission of Asiatic immigrants who can not be amalgamated with our population has been made the subject either of prohibitory clauses in our treaties and statutes, or of strict administrative regulation secured by diplomatic negotiation. I sincerely hope that we may continue to minimize the evils likely to arise from such immigration without unnecessary friction and by mutual concessions between self-respecting governments.

Meantime, we must take every precaution to prevent, or, failing that, to punish outbursts of race feeling among our people against foreigners of whatever nationality who have by our grant a treaty-right to pursue lawful business here and to be protected against lawless assault or injury.

This leads me to point out a serious defect in the present Federal jurisdiction which ought to be remedied at once. Hav-

ing assured to other countries by treaty the protection of our laws for such of their subjects or citizens as we permit to come within our jurisdiction, we now leave to a State or city, not under the control of the Federal Government, the duty of performing our international obligations in this respect.

By proper legislation we may, and ought to, place in the hands of the Federal Executive the means of enforcing the treaty-rights of such aliens in the courts of the Federal Government.

It puts our Government in a pusillanimous position to make definite engagements to protect aliens and then to excuse the failure to perform those engagements by an explanation that the duty to keep them is in States or cities, not within our control.

If we would promise, we must put our-



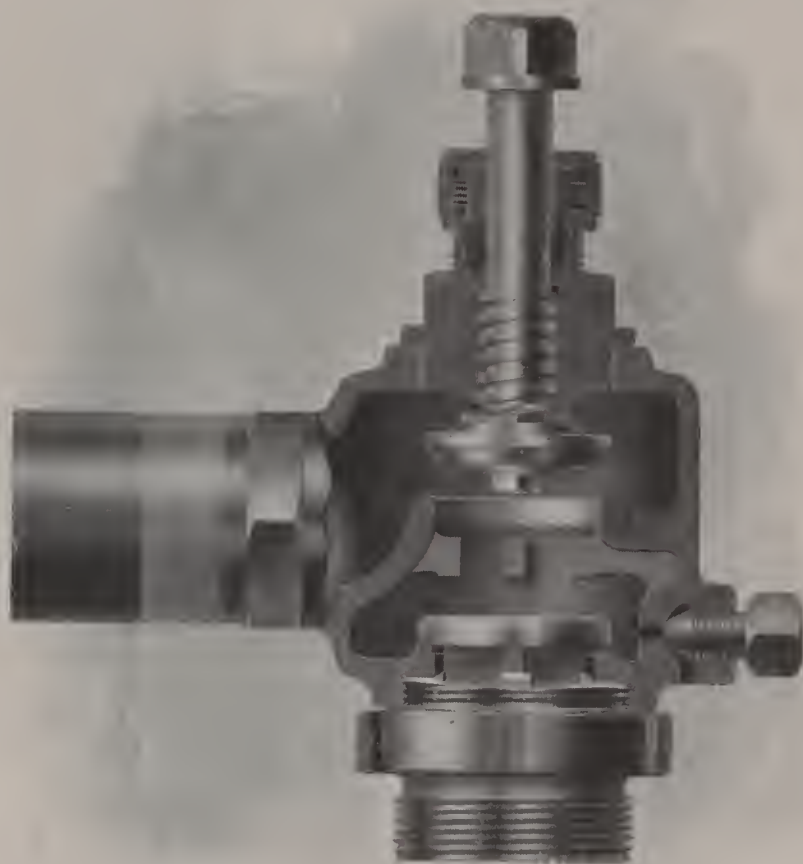
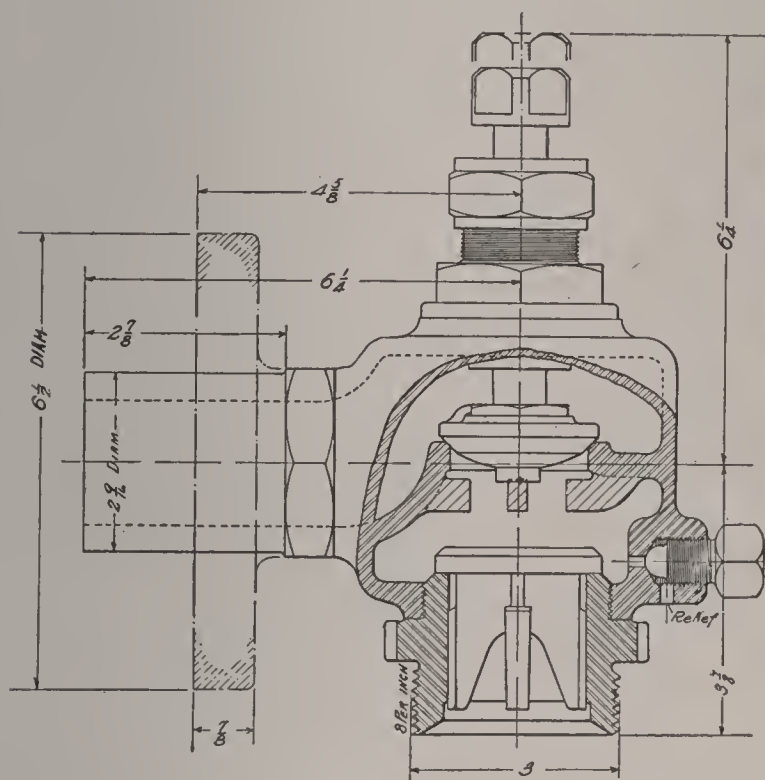
selves in a position to perform our promise. We cannot permit the possible failure of justice due to local prejudice in any State or municipal government to expose us to the risk of a war which might be avoided if Federal jurisdiction was asserted by suit-

able legislation by Congress and carried out by proper proceedings instituted by the Executive in the course of the National Government.

*Extract from President Taft's Inaugural Address in the Senate Chamber, March 4th.*

## SAMPLES FROM GATCHEL & MANNING

While not the illustrations used in their interesting little booklet "The Blue-Print, the Artist and the Halftone," the cuts reproduced herewith illustrate the ability of Gatchel & Manning, Philadelphia, Pa., to produce striking results from a tracing or blue-print. Even a critical expert must admit that the finished cut has the appearance of realness which is so essential in a drawing of this character.



## A GOOD TIP FOR PRESS PHOTOGRAPHERS

How to get a quick Bromide Print for Newspaper Work.—First of all, you have to print from your gelatine negative while it is wet, therefore no hypo must remain in the film or it will upset the bromide paper, and a man cannot wait long for the negative to wash. When taken from the hypo wash for about two minutes, and to remove all further traces of hypo soak for one minute in the following: Alum, 4 oz.; citric acid, 2 oz.; water, 20 oz.; wash again for two minutes. Then soak your bromide paper in water and squeegee it on to the negative, taking out all the water bubbles. Now carefully wipe all the water off the front of the negative (as tears of water will show on the print), stand up in front of the light and expose in the

ordinary way. A printing frame need not be used. The print will come away from the negative without any trouble. Now develop print in the ordinary way; if the print is no good for want of proper exposure repeat. If the negative is of value and requires keeping in stock after the print is obtained, it is advisable to again fix the negative, wash, dry in the ordinary way, as the silver of the promide paper will cause it to stain if not fixed the second time.

Press photographers often save the trouble of much washing of their negatives, when they want to print from them whilst wet, by interposing a piece of thin celluloid between print and negative film.

### AN IMPROVED PROOF PRESS

There is on exhibition at the Inland Printer Technical School a proof or rather hand press of new design that deserves special mention.

The accompanying illustration shows the general appearance of the machine, which is known as the Vandercook Press, and is the

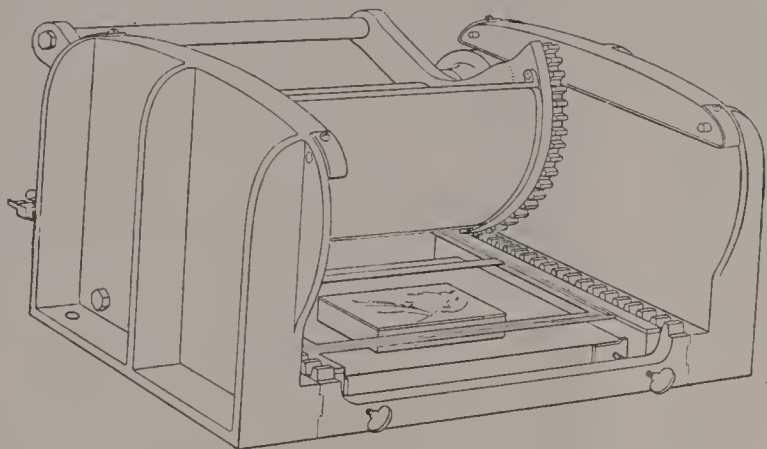


FIG. 1.—The Vandercook Press.

invention of R. O. Vandercook, of Chicago.

It is constructed on the "rocker" principle, by which it is impossible for the rocker to pull away or dip into its work. The bed is a heavy solid casting, with type-high iron bearers and gear rack. The operation of the rocker (or platen) in taking an impression is shown in Fig. 2. The wheels on the rocker travel in exact parallel with the type-high bearers below, over the entire printing surface. These wheels, while taking an impression, are prevented from pulling away from the work by solid ways which face downward, and which are firmly supported at the sides. The impression is taken with the initial position of the rocker being on either side of the press. The rocker advances far enough on the extension of the racks and gears to clear the bed sufficiently for inking and preparing for the next impression. The rocker is

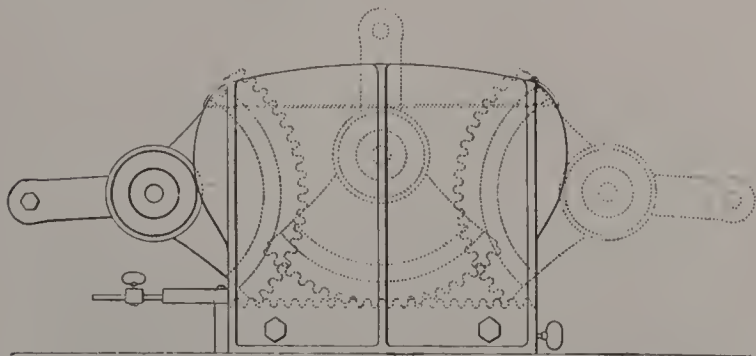


FIG. 2.—Position of rocker of Vandercook Press when taking impression.

made to carry a regular cylinder press tympan three-sixteenths of an inch thick. The tympan is held in position by clamps similar to those used on Gordon presses.

The position of the form which is to be proved is shown in Fig. 1. The stock to be printed is placed above the form on a depressible frisket, which holds the stock away from the form until the moment of taking the impression. The frisket is made with a

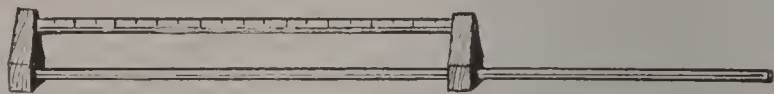
very simple but effective device for printing to register. The frisket is pushed quickly out of the way to clear for inking, and then back again in register for the next sheet.

Because the rocker cannot pull away from or dip into the work, it is possible to print a single hair-line letter or a halftone with the same number of tympan sheets.

The construction of the machine shows that the pressure is bound to be absolutely uniform all over the printing surface, therefore it makes no difference on what part of the bed the work is placed, and it is possible to print hair-lines and cuts in combination without make-ready.—*Inland Printer*.

### NORMAN PROPORTIONAL RULE

A. W. Penrose & Co., London, England, are manufacturing the Norman proportional rule. It consists of a polished wooden rod with a fixed bracket at one end and a movable bracket sliding on the rod, the two brackets being connected by a strip of heavy india rubber on which is printed a graduated scale, divided into inches and fractions. To find the proportions to which a given drawing or design will reduce the rubber is stretched until the number of inches to which the copy has to be reduced coincides with the width or height of the original. The rubber measure is then applied to the other dimension, the height or



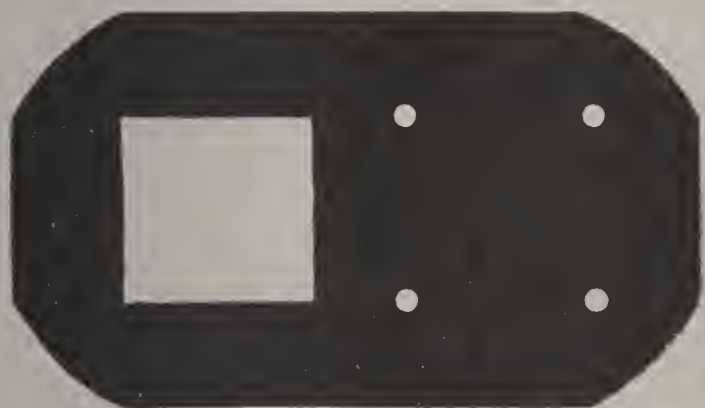
width as the case may be, and the measurement is read off directly on the scale. The Williams-Lloyd Machinery Co., 337 Dearborn St., Chicago, handle the rule in the United States.

### A \$200 PRIZE FOR SOME ENTERPRISING PRINTER

A large printing establishment is about to move into a new building, and its management desires to arrange the machinery and other equipment in the best possible manner with a view to economical operation. A prize of \$200 will be paid for the best plan submitted for the purpose. The increased cost of equipment necessitated by high-priced machinery and the added expense of operation brought on by higher wages and shorter workdays make the matter of the economical operation of a plant one of very great concern to employing printers. This contest will therefore be of value not only to the firm which will make use of the best plan submitted, but to the trade at large. Full particulars giving the dimensions of the floor space, the list of machinery, etc., to be installed will be published in *The American Printer* for April. Its address is 25 City Hall Place, New York.

### FINDING PROPER SCREEN DISTANCE

H. Calmels demonstrated in *Le Procédé*, of which he is editor, a new method of finding the proper screen distance. We show herewith the reversible stop which he uses for this purpose. On one end is the square stop which the operator intends to use, the other has four holes, the centers of which correspond exactly with the corners of the square stop. After the operator has focused the image to the desired size, he inserts the screen as close to the ground glass as possible, then places in the slot of the lens the end of the stop containing the



four holes. These show in four dots on the ground glass for each aperture on the screen. By racking the halftone screen away from the ground glass, each group of four dots of light gradually merge together, and when they form a single dot of light the proper screen distance for that particular exposure is found.

### HOW TO MAKE A MEASURING GLASS

Process workers often require an open glass measure for mixing up solutions, especially fish glue, etc., which cannot very well be done in a bottle. Here is a hint to make one. Take a 60 oz. bottle (there are always plenty of these about the operator's room), and dry and warm it thoroughly. While it is still warm tie round it at the top of the straight part a piece of thick string about a yard long, and which has been well soaked in spirit. Stand the bottle (still warm) on something dry in a sink. Light the soaked string all around and allow it to burn about 25 or 30 seconds. Then pour over the whole of the bottle a large basin of water. Knock off the top part of the bottle (if not already off) and a beautiful clean-cut measure will be the result. Be careful to shut out all draught from the room.

### PROTECTION OF THE DESIGNER

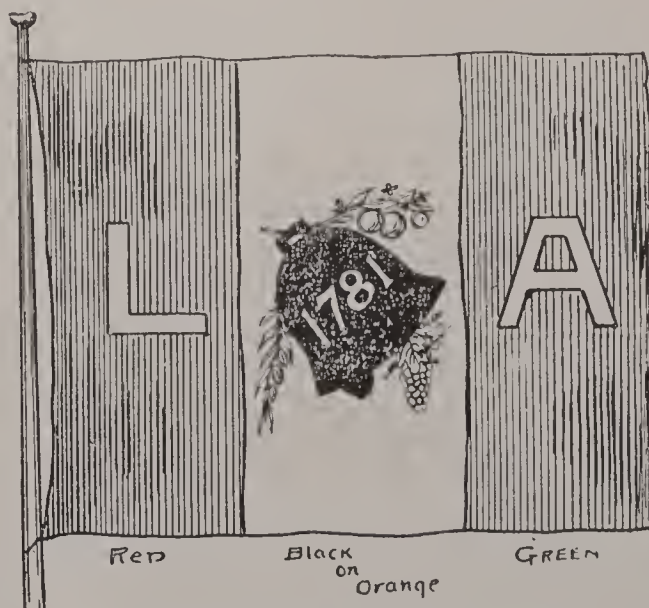
That the designer is lawfully entitled to the parental rights in his brain children, and may collect cash from anyone caught kidnapping said children, has had new evidence in the latest instance of complaint in this direction. Fred S. Lang, a

Los Angeles printer, being requested by Montgomery Brothers, local jewelers, to submit a design or idea for menu cards to be used at the banquet given in honor of the visiting war ships in that city, at the Hotel Alexandria, did so under agreement of prompt return if not accepted. The design's chief and essential element of originality consisted of a flag as shown in the reproduced cut herewith; and the court's finding was to the effect that defendant used the design, and must pay Mr. Lang the sum of seventy-five dollars and costs, about one hundred and seventy-five dollars in all. The suit was for one hundred dollars.

The defense failed to substantiate its claim that it "did not get its idea from the Lang dummy." This decision is of interest to all who handle drawings and designs and furthers the proper recognition of rights on the part of one who submits ideas, finished or in the rough.

It is a source of satisfaction to everyone honestly working in the advertising field to witness the supremacy of right in matters of this kind, and the decision will be far-reaching in its indirect effect, as cumulative with others of like kind to just ends.

When an artist submits his ideas he must perforce "show up" exactly how they are to be treated; and if the one examining same shall not feel disposed to grant the owner of such ideas his rights to their ownership, it is a simple matter to return them as "unavailable" and then proceed to practically duplicate the treatment, working out what might have cost a hundred dollars for a trifle of such cost.



The disputed design submitted by Fred S. Lang of Los Angeles, to Montgomery Bros.

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

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FRED J. WILLOCK.....EDITOR.

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THE HILLSIDE PRESS

Publishers,  
Richmond Hill, New York.

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MARCH—APRIL

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## PERSISTENCY

Persistency built the pyramids, the Eiffel Tower, the Washington Monument, the Singer Building, the Metropolitan Tower and many other monuments to the ingenuity and skill of the human race.

Persistency built up the big business of the Standard Oil Company.

No one questions the fact that sticking everlastingly at it is sure to achieve a result. The difference between success and failure is separated by a partition thinner than tissue paper. The genius laboring hard and on the verge of despair will often turn to find success crowning his efforts.

Don't work at tangents. Don't get your wires crossed. Map out your course. Make sure you are right; then stick to it.

If you find you have made a mistake, switch—switch quickly. Don't straddle. Have one purpose.

If you are an employer, honesty is the best policy. Honesty with your customers, your employees and yourself.

The rocks of the pyramids have for ages withstood the ravages of time. To withstand competition and financial depression your reputation must be as solid as the rocks of which the pyramids are composed.

Square dealing persistently meted out to your customers and employees will react to your benefit and will eventually pay big dividends in the shape of increased volume of business and loyalty on the part of your workmen. This is not theory, but practice.

Make every minimum on a single order as good as you would on a large order; and make one cut on a large order as good as another, and make every cut as good as you can. Try to make each month's work show an improvement on the previous month.

Try to build up a reputation for honesty of purpose. Endeavor to keep your promises. The majority of employers who read this will say: "This doesn't apply to me, but Bill Smith around the corner would profit by it." Stop a minute and think. Have there not been many times when you have considered it good business to get a customer to accept a cut which should have gone straight to the scrap box, and then suddenly discovered that his name no longer appeared on your books?

If you have the slightest doubt about the printing quality of a cut, don't let it get out of your shop. The only purpose for which a half-tone or line cut is made is to print from, and if it fails of that purpose you are pulling one of the foundation stones out of your reputation.

Make up your mind that you are

going to make the best cuts that money will buy. Don't fool yourself by *thinking* that you are. Keep close to your customers' needs and *see that they get what they pay for*. If they don't want to pay enough, you don't want their trade. That is, if you are in business to make money.

**ENGRAVERS AND THE TARIFF**

The tariff seems to be disturbing many dealers in and manufacturers of supplies for photo-engravers, and statistics are flying around which tend to show clearly that each faction is right and should have the undivided support of the engravers in their efforts to have the tariff either raised or lowered, or maintained as it is at present.

\* \* \*

The National Carbon Co. of Cleveland has sent out a long letter on the tariff on "Carbons for Electric Lighting."

\* \* \*

Semon Bache & Co., of New York, importers of glass, are agitating the tariff question, as it relates to plate and sheet glass and are circularizing the photo-engraving trade with a thirty-two page booklet on the subject.

\* \* \*

The latest bulletin issued by Secretary F. H. Clark of the International Association of Photo-Engravers gives up a great deal of space to the tariff on lithographs and colored plate printing as applied to imported post cards, calendars, etc.

**MUTILATED MAXIMS**

Loaf and grow fat.  
 Taste not want not.  
 Let sleeping debts lie.  
 Beggars can't be boozers.  
 "Still" whisky runs cheap.  
 Lend me little lend me long.  
 Fine feathers make fine beds.  
 None but the bald repine for hair.  
 Absence makes the heart to wander.  
 Charity covers a multitude of skins.  
 Discussion is the better part of valor.  
 We never know who we can do till we try.  
 Whoever's worth doing is worth doing well.  
 Never put off till to-morrow the man you can do to-day.—*Profitable Advertising.*

WE WANT A  
**LIVE**  
 WIDE-AWAKE ADVERTISING  
**MAN**  
 TO REPRESENT US IN  
**CHICAGO**  
**SAN FRANCISCO**  
**BOSTON**  
**PHILADELPHIA**  
 AND ANYWHERE ELSE

¶ In fact, if you consider yourself a bright energetic fellow, old or young, and you can give us all or part of your time, you may interest us, and we may put you in the way of making a little extra money or even a steady income.  
 ¶ Tell us about yourself and we will go into details.

**THE HILLSIDE PRESS**  
 PUBLISHERS  
 RICHMOND HILL, N. Y.

**Artist's Cards**

Under this heading we will print each month a number of artist's cards. Rates on application.

**PAUL PHILIP GOOLD**  
 GENERAL ILLUSTRATING  
 Specialist on Army and Navy Matters  
 Tel. 1630 River. 2314 BROADWAY, N. Y.

**JOHN J. HOFF**  
 PHOTO-RETOUCHER ILLUSTRATOR  
 DESIGNER  
 Tel. 3120 Gram. 27 EAST 22d ST., N. Y.

**H. R. NORTHROP, DESIGNER**  
 320 BROADWAY, NEW YORK  
 DECORATIVE DESIGN LETTERING  
 RETOUCHING PHOTOS  
 No Amateur work. Specialists in Each Line  
 Telephone 2041 Worth

## SOME HINTS ON STRIPPING AND DRYING NEGATIVES

The following are some answers as to the best way of drying an 18x16 glass of stripped films very quickly (drying-oven barred).

First, use a very good stripper, viz., the collodion and rubber must be fairly thick. If it is at all inclined to be thin it will make the film, when stripped, cockle, and tiny bubbles appear. These bubbles are full of water, and even when the negative seems dry when the metal plate comes in contact with it, it will probably stick, or even if the plate comes about all right it will not develop out. It is necessary that the solution be thick as mentioned, and when the negative is dry cut round. When it is soaked enough lay a piece of wet paper over it, and with a good solid rubber roller (this is one of the chief things), squeeze the paper on to the negative. Now carefully lift one of the corners with a knife, and the film will come away, with the paper perfectly smooth, much better than if done without the paper. Carefully lay the film and paper down on the glass, which should be quarter-inch plate, so that you can give it some good hard rubbing without fear of breaking. Roll it all ways very hard so that you get every particle of water from under the film. The plate will dry much quicker if it is rolled over with a piece of blotting paper. Now, what is wanted is a metal barrel about two feet in diameter, with a gas stove at the bottom (this is not an oven), lay two sticks across the top and place your negative on them, and when the gas is lighted the warmth is evenly distributed all over the negative at the same time, using all the heat; none escapes until after it has performed its duty, and the negative will dry in a remarkably short time. There will be no chance of cracking your negative, as often happens when it is dried in one's hands over a gas stove. This breakage so often results because the heat is not evenly distributed.

\* \* \*

In drying off an 18x16 negative, a few minutes should be allowed for the surface gum to drain off, and then the negative is dried, film down, over a gas ring burner. The knack of drying off negatives of the above size quickly without breaking the glass, is in keeping the negative moving, so that it gets heated evenly all over. It should not be allowed to get too hot, either; laying it aside for a few minutes till it cools down. If in drying off there is a tendency for the stripped film to curl up at the edge the collodion is not flexible enough, so a few drops of castor oil should be added to the stripping collodion. Strip the films on to a rubber substratumed glass, squeegeeing all superfluous water out by means of a squeegee and blotting paper, the edge of each job be-

ing fastened down with rubber solution or gum applied with a brush. This method has an advantage in that having all moisture blotted off, the drying should take less time, as the rubber substratum makes it very difficult to move the film about.

\* \* \*

A good method for drying stripped negatives without the use of heat and instantaneously is as follows: First make the stripping collodion a little thicker than usual, so that the film can be handled by the fingers; then rub the 18x16 glass over with cotton wool soaked in naphtha oil. Strip the film dry, place on glass and rub over from centre with a dry piece of cotton wool until air bubbles disappear, when the film will be found in contact and perfectly dry.

\* \* \*

The following method of drying stripped negatives is in general use on the continent, where stripping the films is more indulged in than in England. Having obtained the negative, place it on a level surface and pour on the film a thick solution of gelatine, enough to make a strong film; let it set and dry with spirit in the ordinary manner. When

### CARLO NEGATIVE COLLODION

No mixing—ready for use—  
never varying—superior to any  
that can be made in the shops.  
Price \$2.00 per gallon, includ-  
ing containers.

### CARLO STRIPPING COLLODION

Price \$1.25 per gallon, includ-  
ing containers.

A free sample of each sent to any  
address on request.

**R. H. LUTHIN**  
DRUGS AND CHEMICALS  
191 BOWERY, NEW YORK

ready cut through film down to the glass and strip. In color work it is always advisable to allow ample time for the solvents of the rubber and collodion to evaporate spontaneously, and then drying the stripped films down on their support glasses without using artificial heat; even then it is not always in register, making it imperative to utilize a prism or adopt some other means of reversing which will have an even contraction.

\* \* \*

If the flowing and stripping of line films is conducted in the usual way, there should be no trouble whatever in getting the stripped "flat" to dry quickly. No artificial heat, such as obtained with a drying oven, should be needed, as if the films are treated in a proper way they dry spontaneously and in a reasonably short time. The reason for "Stripper's" flats not drying satisfactorily may be that he is using too large a percentage of castor oil in his stripping collodion. The following is a formula given in "The Halftone Process," and is generally considered to be a good one. I should recommend him to try this and then his trouble will probably disappear. Alcohol, 220 parts; ether 220 parts; gum cotton, 10 parts; castor oil, 7 parts.

\* \* \*

The next best thing to a drying oven is a small electric fan which could be portable. The stripper can then lay his batch of stripped films on a shelf or put them on a bench and bring his fan so that it should send a nice brisk breeze across his plate; this will very soon dry it. If he cannot get

**TWO BOOKS**  
*for the*  
**ENGRAVER'S**  
**—ARTIST—**

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**LETTERS & LETTERING**  
*By Frank Chouteau Brown*  
**\$2.00**

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**PEN DRAWING**  
*By C. D. Maginnis*  
**\$1.00**

---

*There isn't anywhere enough space here to tell about these—the two best books on their respective subjects ever published. Get them and see for yourself. If you don't want to keep them, get your money back. Thousands have been sold on these terms. For designing advertising "copy," LETTERS & LETTERING is worth \$10.00 to any artist.*

**BATES & GUILD CO., PUBLISHERS**  
**46 CHAUNCY ST., BOSTON**

an electric fan the best way would be to have a shelf put in a convenient position so that the heat escaping from his stove should catch it and thus dry it.—*Process Work.*

## A FEW COMMENDATORY LETTERS

January 28, 1909.

Hillside Press Pub.:

We enclose you herewith M. O. for \$1.00 in payment for one year's subscription to PHOTO-ENGRAVING ART. The first two numbers which you sent us were very interesting, and we wish you success with your publication.

THE YOUNGSTOWN ARC ENGRAVING CO.

Bolton, Eng., January 25, 1909.

Hillside Press Pub.:

We thank you for the specimen copy of PHOTO-ENGRAVING ART, and have been most interested in its contents. Please enter us for two subscriptions, and if possible start with the first issue.

TILLOTSON & SON, LTD.

Springfield, Ill., Jan. 22, 1909.

HILLSIDE PRESS, PUB.

Enclosed please find \$1.00. Please send PHOTO-ENGRAVING ART for one year to the address below. What little I have seen of your magazine I think it contains the plainest, more-to-the-point information than any other magazine I have been able to get hold of. Do you intend answering questions regarding engravers, etc., such as the *Inland Printer* does? As a rule you get some of the most evasive

answers to inquiries for information. Most magazines in our line that you write to, asking for information regarding some trouble, you will get an answer similar to the following: "We understand that some firms have had a certain amount of success by doing the following"; and others of that nature I could mention, and if you come out with plain, easily understood facts, I am sure it will add greatly to our success.

NEWS ENGRAVING CO.,  
 F. G. McDermid, Mgr.

December 11, 1908.

Hillside Press Pub.:

You will find enclosed check for \$1.00 for subscription to PHOTO-ENGRAVING ART, commencing with the January number. We believe there is a field for your magazine, and will be pleased if we can be of any assistance.

BALTIMORE-MARYLAND ENGRAVING CO.

February 3, 1909.

Hillside Press Pub.:

Enclosed you will find \$1.00 P. O. M. O. for subscription to PHOTO-ENGRAVING ART. It is an excellent book and should readily meet with recognition.

W. H. BIRMINGHAM,  
 P. E. U. No. 22.

## MISCELLANEOUS BITS

The J. Sander Engraving Co., of Chicago, Ill., has been incorporated with a capital of \$6,000 for engraving, wood cutting, lithographing and other artistic work.

\* \* \*

Mr. and Mrs. Lewis Horace Bissell, of Effingham, Ill., announce the marriage of their daughter Ruby Harriet to Mr. Joseph F. Magee on Wednesday, March 10, 1909.

\* \* \*

Mr. Frank H. White, Eastern Representative of Ostrander-Seymour Co., Chicago, sold a complete photo-engraving plant to the Commercial Engraving Co. of Allentown, Pa.

\* \* \*

We learn on fairly good authority that The Walker Engraving Co., New York, has purchased the Central Bureau of Engraving, of the same city. It is also rumored that Gill is negotiating for control of the Electro-Light Engraving Co.

\* \* \*

The next convention of the International Association of Photo-Engravers will be held July 6, 7 and 8 in the Catskill Mountains, either at the Catskill Mountain House or the Hotel Kaaterskill. The exact place has not as yet been determined.

\* \* \*

The Thorp Engraving Co. gave up the ghost after a brave fight against overwhelming odds in New York City. New York already had over fifty engraving shops when Thorp started, and not a few of them have been "digging" to make both ends meet.

\* \* \*

"One-eighth inch Negative Glass," L. Solomon claims, is saving some engravers fully 100 per cent. on their glass bills. This is not a window glass, but an imported glass very well adapted to engravers' uses. Twenty years in business has enabled Solomon to become well acquainted with the requirements of engravers.

\* \* \*

With L. H. Bissell, of Effingham, Ill., nominated to the Mayorality, Lon Sanders, of St. Louis, Mo., who can have the nomination for Mayor if he wants it, and A. J. Powers, president of the Powers Photo-Engraving Co. of New York, appointed by Mr. Jerome to an Assistant District Attorneyship, the engravers of the country are showing an activity in politics which is commendable.

\* \* \*

Capt. F. V. Blythe, Fort Worth, Tex., ordered a complete photo-engraving plant from the Ostrander-Seymour Co., Chicago, comprising an extra heavy proof press, straight line routing machine, beveling machine with lining attachment, saw, trimmer, Daniel's planer, jig-saw and drill, etc., all fitted with individual motors. This

with the photographic equipment ordered gives Capt. Blythe one of the very best plants in Texas.

\* \* \*

The Williams-Lloyd Machinery Company, of Chicago, has added a complete experimental laboratory and testing department to its already fine equipment. The new department is located at Harrison and Clinton Streets and is under the direction of Henry B. Colby, who is a well-known expert on photo-engraving. Mr. Colby invites photo-engravers to submit their problems to him and his technical knowledge is sure to be of inestimable value to them.

\* \* \*

"How to Print Our Multicolor Plates" is a neat little booklet issued by Gatchel & Manning, Philadelphia. It shows in a comprehensive manner the way to print a set of their four-color plates. First the yellow is printed; then the red is shown just below. Next the yellow and red are shown printed one over the other, and following is a proof of the blue plate, and after it is shown the yellow, red and blue plates all printed together. This is followed by a proof of the black or key plate and, finally, the complete result is shown and it is a color effect which should satisfy the most fastidious.

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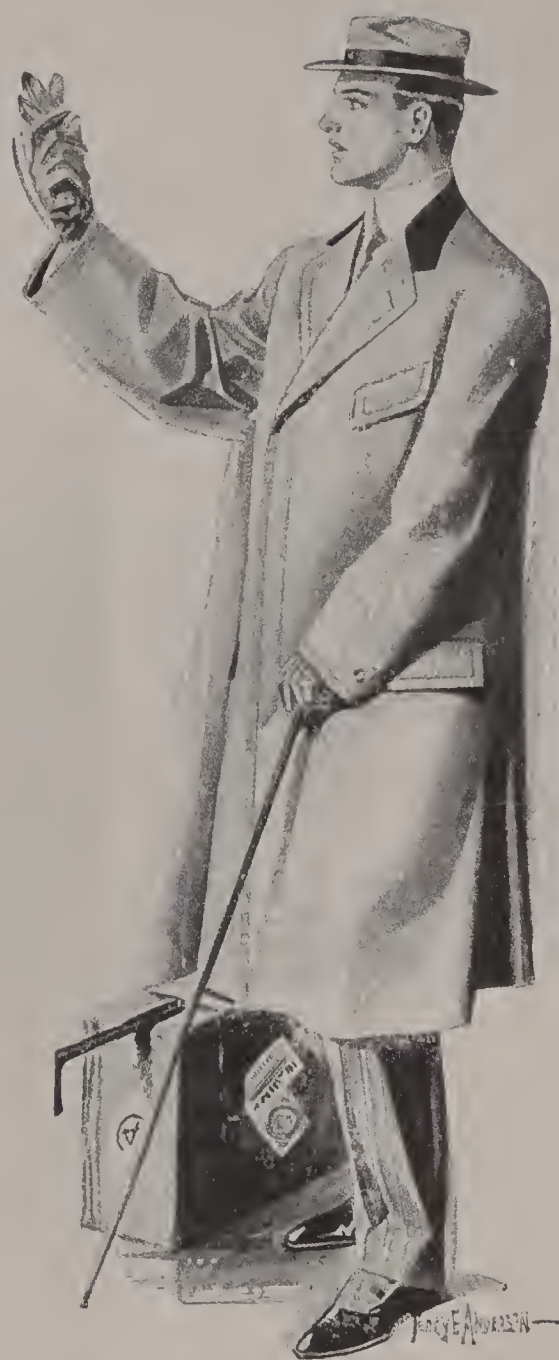
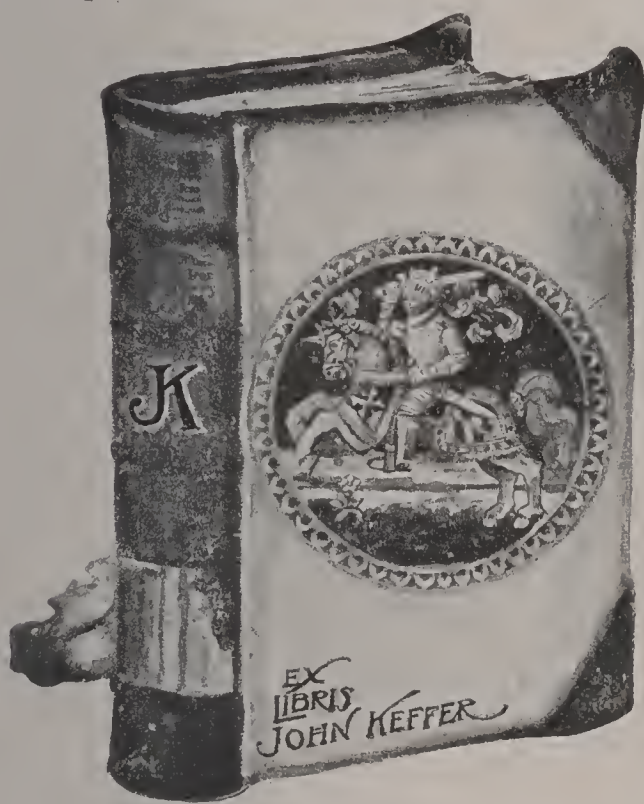
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## METZOGRAPH SAMPLES

We present herewith two line samples of metzograph grain screen silhouettes made by the Eclipse Electrotyping and Engraving Co., of Cleveland. The Williams-Lloyd Machinery Co., of Chicago, used them as samples to advertise metzograph screens. We feel that the book plate is excellent and only criticism of the figure is; that if it is intended for a clothing advertisement it has almost too much of the quality of a high-class magazine illustration. This leads us to ask if there is any logical reason why we do not see more of the metzograph screen in the popular publications.



## ESTIMATING VS. GUESSING

(Continued from page 77)

went about it that you would get the job."

"I still expect to get it," quietly answered the salesman.

"I do not see how at the price you quote. Why, did you see that young fellow who just left here? Well, he represents the Photo-Etching Co. and he quoted a price almost twenty-five per cent. lower than yours."

"He did, eh? Well, you couldn't risk giving it to him at that price, could you?"

"I don't see why not. His is a reliable concern, is it not?"

"Yes, as they go."

"Then where is your argument?"

"My argument is this, Mr. Taylor. If you will give me a little of your time I would like to go over this whole matter in detail, and before I'm through I will have convinced you that if we make your cuts at the price I quoted you they will be cheaper in the end than the price quoted by the representative of the Photo-Etching Co.

"First, we have the equipment: more cameras, routers, bevellers, presses, etc., than any two houses in this or any other town. Next we have more men, three shifts for each department. Multiplying our equipment by three gives us

at least six times the capacity of any one plant in this town, as none works a full second shift. Occasionally, one or two of them may work a little overtime, but we maintain three shifts every day in the year.

"Further, we hold the record for fast work. Still further, we do work for the best houses in town. No job is too large nor too small, none too high grade. Our quality is unsurpassable, our deliveries the marvel of the trade. We have our plant so systematically organized that each individual cut receives the same attention, whether a small single cut or part of a large order. Each is sure to be a perfect printing plate. The fact that a plate is made by us is proof positive that it is quality par excellence.

"Now the price I quoted you is the result of considerable figuring. Using as a basis the statistics which we have at our command and taking into consideration the fact that we are large buyers of supplies at all times, and therefore get the best prices on our materials, we must be in a position to figure, not GUESS, as close as anyone in the trade.

"If the Photo-Etching Co. have estimated twenty-five per cent. lower than we, and you think they will give you the quality you want, I will tell you in advance, that either you will be sadly disappointed or they will lose fifteen per cent. on the job, possibly more, inasmuch as they have neither the equipment nor the ability to buy material as cheaply as we. Frankly, the grade of work you showed me as a sample is easily worth twenty-five per cent. more than I quoted, and on a smaller lot and under different conditions I would not be justified in quoting you less. I

am not figuring this job as a filler, but as a money-maker, and can assure you a high grade half-tone cut of uniform quality throughout the entire job. At twenty-five per cent., or even a fraction less than my figures, it would be impossible to guarantee anything. Both you and I would be gambling on the result.

"I take it from my talk with you that you do not want to take a chance either on quality or deliveries—that conditions are such that you must be guaranteed both."

"You are right," broke in Mr. Taylor. "The first volume, which will contain about twenty-one hundred pictures, must be in the hands of the printers in about four weeks. This means an average of five hundred and twenty-five cuts a week. Can you deliver that amount?"

"Yes, sir. My estimate reads any amount up to one thousand cuts a week."

"All right, come around at three-thirty this afternoon and we will have a contract ready for you. I am thoroughly convinced from your argument and my investigation that your concern is the only one entitled to the job. I feel from the way you talk that you know, while all the other fellows impressed me as guessing, and we can't take a chance."

\* \* \*

We'd never build aircastles if we had to pay taxes on them.

\* \* \*

"Isn't he lucky?" is usually exclaimed of the successful man, while what is meant is, "Wasn't he a hard worker?"

---

#### HELP WANTED

**WANTED**—By a San Francisco Engraving Co., At Halftone Photographer; one who understands color work. Must be strictly first-class operator. Permanent position; good wages. Address PHOTO-ENGRAVING ART, Richmond Hill, N. Y.

¶ This cut represents the **Standard Interchangeable Air-Brush** for the photo-engraver, fitted with lightning interchangeable glass jars or metal side cups all in one brush. Illustration shows the exact size of the instrument. It weighs only  $1\frac{1}{2}$  ounces.



All the main parts are on the outside of the shell, adjustable for high or low pressure. With one movement of the index finger and with a sweep of the hand it will go from a hair line to a broad spray. Any kind of colors may be used. 🌿 🌿

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For further information and prices address the Patentee and Manufacturer

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In answering please mention “The Photo-Engraving Art”

## Quality in the Negative



¶ The making of the photographic negative is not only the first but the most important step in the mechanical processes involved in photo-engraving. A chain is no stronger than its weakest link, and by the same reasoning you can't get the quality in your finished product unless you have it at the start. That means your lens must be right. With a

**Goerz “Process Dagor”**

you are insured of the necessary quality in the negative. It is specially designed to meet the demand which improved methods in half-tone and process work have created. It is *completely* corrected for stigmatism, is free from coma, axial and marginal spherical aberration. It is faster than ordinary process lenses, working at F. 7.7. The field of view covered sharply at full opening is 60 degrees. The lens is used by leading process workers throughout the country, and its every-day work is its best recommendation.

Especially suitable for three-color work.

Address dept. K for booklet describing the lens, also our liquid filters and mounted reversing prism for process workers. We would also be glad to send samples of work done with this lens.

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# 1909

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*The American Annual Review of the Engraving  
Printing and Allied Industries*

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Vol. 1, No. 7-8

May-June, 1909

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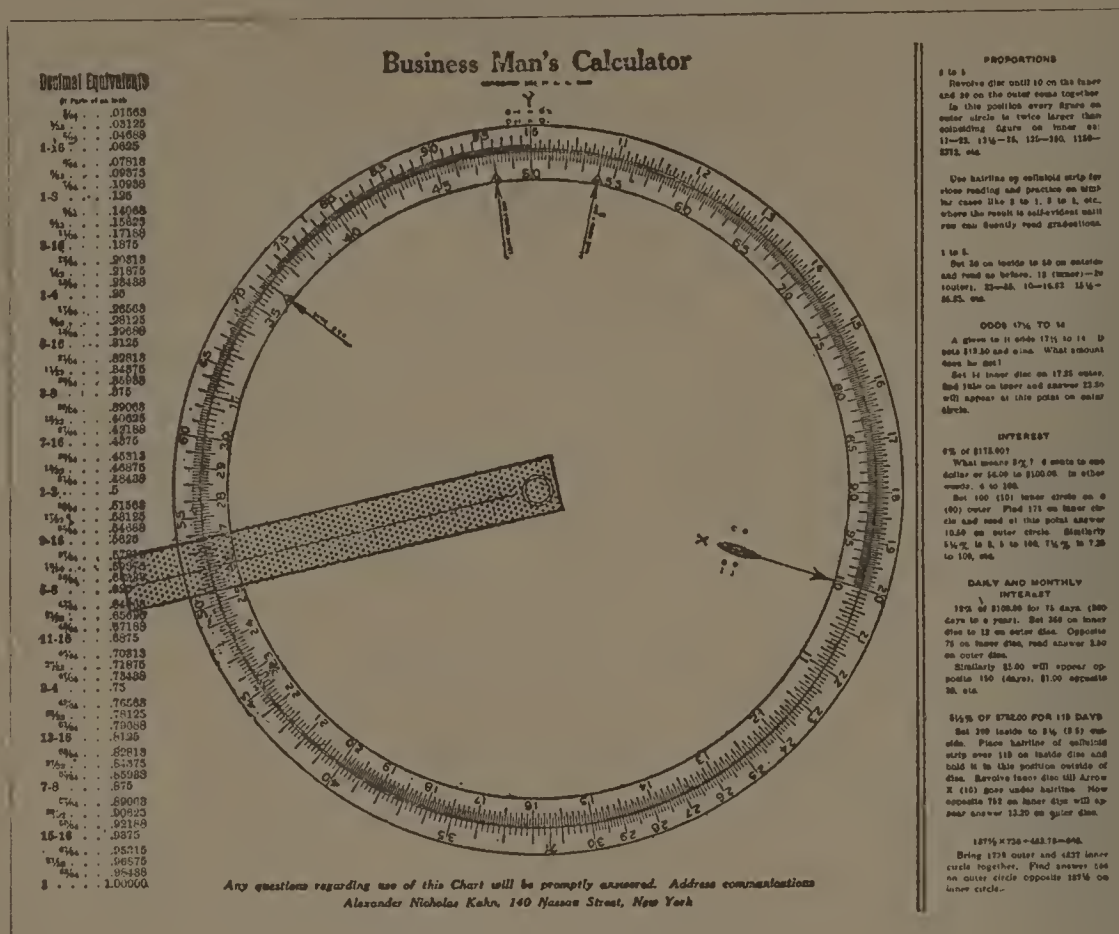
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What is the price of cuts of all possible sizes, price per inch being 14 1/2 cents?

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Sample Copy of the Bulletin Mailed Free



# Photo-Engraving Art

The Hillside Press, Publishers, Richmond Hill, N. Y.

Volume I

MAY-JUNE, 1909

Number 7-8

## CONTENTS

|   |     |
|---|-----|
| Frontispiece, A DUOTONE<br>By POWERS PHOTO-ENGRAVING Co.....              | 100 |
| COLOR AS APPLIED TO PRINTING<br>By H. G. MARATTA.....                     | 101 |
| THE PAYNETYPE "DIRECT" METHOD<br>By THE EDITOR.....                       | 104 |
| "PEN DRAWING"<br>By C. D. MAGINNIS.....                                   | 108 |
| GRAIN COLOR PLATES<br>By J. S. SUNDERLAND.....                            | 110 |
| THE "MUSKETEER"<br>By MEISSONIER.....                                     | 111 |
| EDITORIAL—ENERGY .....  | 114 |
| I. A. P. E. HAS DUTY INCREASED ON "VIEW CARDS"<br>By H. C. C. STYLES..... | 116 |
| "PERSPECTIVE"<br>By DORA MIRIAM NORTON.....                               | 117 |

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# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users of Photo-Engraving

VOL. I., No. 7-8.

MAY-JUNE, 1909

## COLOR AS APPLIED TO PRINTING

### A Short Summary of the Relationship of the Artist and Engraver to the Printer

*First of a Series of Articles on This Subject Written Specially for PHOTO-ENGRAVING ART*

By H. G. MARATTA

THE man who is called upon to match with printing inks the artist-designer's sketches made with oil, water color or other mediums has a hard task indeed and my sympathy. He is asked to match exactly with printing inks (an entirely different medium than that which the artist-designer uses for his sketches) a color, hue or tint from sketches or designs made with oil, water or other mediums, which very likely the artist himself could not match with pigments the same as he used on the original, at least without losing much time and much effort. If he approached anywhere near the original he would say: "That's near enough; I'll let it go at that." This is one of the reasons an artist dislikes copying his own pictures; it calls for too much time and patience. My observation has been that the more one knows about color the easier they are to satisfy. This will be explained later. The artist takes a little of this, a little of that pigment, mixes them up and tries them, changes by adding something else, and so on, until he gets that which he thinks good. He has an eye for color which guides him. This so-called "eye for color" is really an educated eye; one that has been trained by long experience and observation of nature. It is an accumulation of knowledge to be gained only by experience.

A proof is made on high grade paper, with high grade inks (whereas perhaps the job must be run on a cylinder press, on

poor paper, with cheap or inexpensive inks; of course, the engraver gets out his proof to look as good as possible to the customer, very often not considering the printer or how the printer's job is produced. He has had his own troubles. To match the artist's colors, the artist cannot, will not and does not tell him how he mixed the colors, nor does he give him a formula for any color, hue or tint used on the original. And why? Because he doesn't know how he mixed them himself. He takes some pleasure in saying, "He just mixed them, and that's all there is to it," and the engraver is expected to do the same. Some one must pay for the time lost during all this mixing, and still there is more mixing to be done. It is up to the pressman now. He is expected to match the inks used by the engraver on his proofs. The engraver now takes the same stand toward the pressman that the artist took toward him. He does not always tell the pressman how he mixed his inks, because, well, "he just mixed them," and he expects the pressman to do the same. Of course, the printer can only make "hay" when the wheels turn, and I have known presses to stand idle from half an hour to half a week waiting for an ink to be matched.

I heard of a pressman who tried to mix a match for a quarter of a pound of ink, and before he was aware of it he was running around a large slab with a knife, trying

to keep 50 pounds of ink from running on the floor. And still I know of other pressmen who are good mixers in many respects, but that is another story. The cause of all this delay and all this mixing lies with the artist in a great measure.

The doctor or chemist writes a prescription or formula that anyone may have filled correctly and intelligently by any druggist. The musician composes music and writes the symbols or formulae on paper that any other musician may understand and play, but the artist feels that he is a genius and is not expected to do things according to any laws or formulae, as that would destroy his individuality. It would make a mere machine of him. He thinks artists are born, not made. Well, they are not. Who ever heard of a child wonder among artists as we do of musicians? In music we have the scientific instrument and fundamental law based on mathematics, which the child may be taught and acquire at an early age. Go into the art gallery, stand in the middle of the room, and look around. You can point out the Carots, Daubignys, etc., and when these men were asked how they did it they replied "they mixed their colors with brains"; yet they must have formulae, otherwise their pictures would not look so much alike, and they kept their formulae under their hats.

The musician plays with sentiment and feeling. He plays upon an instrument that is scientifically adjusted, and because the instrument is scientifically adjusted and resembles others in construction is no reason why all musicians should play alike. Nor should all artists using the same palette paint alike. Hand the man a violin and tell him it is a great musical instrument. He will say, "I can't use it." This does not mean that the fault lies with the instrument. The tom-tom will be easier to play and more pleasing to him.

How does the artist work? He goes to the dealer and selects pigments that are prepared without regard to nature (the spectrum) or to each other, practically a tom-tom. If he has brains, he can mix or set his palette. The chemist working in his laboratory finds a mixture that makes a good pigment. It is placed upon the market; the artist buys. It may have no

more relation to the other colors on his palette than the note of a whistle would have to a violin. It may have great brilliancy and be beautiful by itself, but still not harmonize with any other known color for the reason of its being out of the scale; to use it intelligently it must be tuned by the artist.

The Maratta Law of Color is properly comparable with a scientifically adjusted instrument. The instrument is not music. It is only a scientific medium through which music may be produced. The Margo colors form an instrument in the hands of the artist, proofer and pressman whereby he can produce color harmony, intelligently, unerringly and quickly.

These pigments are the best for the purpose that can be made, and are very permanent. More brilliant pigments there are, such as the anilines, etc., some of which will not stand sunlight for a day. But only normal colors are used with the Margo Law; as color is relative, great brilliancy may be obtained by contrast.

Pigments are transparent or opaque. The difference between an opaque and a transparent ink lies in the source of the light. With transparent ink the light passes through the ink to the surface of the paper, which reflects it back through the ink to the eye. Thus, we see the color of the ink. For example: Place a piece of red glass over a small box, the inside of which has been painted white. The light passes through the glass to the inside of the box, where it is reflected back through the glass to the eye, and we see the color of the glass.

Now paint the inside of the box black, the light passing through the black is absorbed by the black and we cannot see the color of the glass. In this example the glass illustrates how inks will be affected by highly glazed or rough uneven surfaces, such as blotting paper, or printing inks on dark stock. Soft papers always print much darker, as they absorb the inks, and owing to the rough uneven surfaces diverge or scatter the rays in all directions, while the glazed or smooth paper reflects in parallel rays, like a mirror. This is easily illustrated by putting a drop of writing fluid on a blotter. It sinks in at once and

appears dark. A drop on a glazed paper may be spread over a large area and show a tint. Two pressmen at the same press, same ink, same stock, will obtain very different results owing to the amount of ink carried.

Opaque inks reflect from the surface of the pigments, or ink itself. The more opaque the pigment or ink, the less the stock will affect it. Smoke rising against a dark building will appear cool and opaque.

When it passes against the sky it appears warm and transparent. Cover inks on dark or light stock act in a similar manner.

The above also applies to wash drawings made with water colors, which are transparent, and opaque when mixed with white pigments, to produce the tints instead of depending upon the paper for transparency.

The next article will describe the solar spectrum in relation to colored pigments.

---

## HALF-TONES FOR OFFSET PRESSES

---

### The "Direct" Half-Tone Engraving is Easier to Make, Saves Transfer and Works Better

**S**UCH fine work is being done from half-tones on the offset press that some photo-engravers are beginning to make plates especially for that process.

The half-tone made for the offset press is an entirely different affair from the same kind of a plate made for the type press. In the first place it is made "direct," and therefore does not have to be reversed in transferring.

The photo-engraver, in making a half-tone plate for the type printer, reverses it in the process of preparation by stripping the film from the plate of the comard and turning it over and laying it back on the plate with the face down. Thus the lettering on the object reproduced comes out on the metal plate reversed, and when it comes on the printed sheet it appears, of course, properly.

In making a plate for an offset press this reversing process is omitted by the photo-engraver, as he wants the plate to come out "direct." The reversing is done naturally when the transferer puts down his transfer on the zinc plate. Thus the photo-engraver is not only enabled to make a plate for an offset press with less actual labor, but he also obviates the possibility of spoiling a negative in the process of stripping off the film and reversing it.

There is another feature, however, of this "direct" half-tone that will appeal strongly to the printer. The "direct" plate is bound to be sharper, cleaner and better than the one that has been stripped and reversed. Any photo-engraver will tell you that when he

has the making of a sketch from which half-tones are to be made, and wants a particularly sharp, clear plate, he has the sketch drawn "direct" and therefore does not have to strip the negative.

The ordinary half-tone when printed on an offset press is reversed twice before it appears on the printed page. The first time by the photo-engraver and then by the transferer. Both of these transactions can be saved by ordering the engraving made "direct." This is easier for the photo-engraver and, even to a greater extent, easier for the transferer. And, further than that, the work done from it is infinitely superior.—*The National Lithographer*.

---

### TO BLEACH COLORED PAPER

Line jobs on colored paper are a nuisance and often impossible to photograph, but this can be overcome by steeping the colored paper, say, brown paper, in a solution of chloride of lime. This bleaches the paper white. Give the paper a good wash to take away all traces of lime. If the job is in a hurry it can be placed on a piece of mounting board while wet and photographed in this manner, but it would be better to take away all superfluous water with blotting paper first.

---

No man can rightfully rate himself successful who has purchased his success at the cost of his conscience.



MR. ARTHUR PAYNE,

Inventor and patentee of the new "Direct Process."

Photographed direct on metal plate from ordinary portrait negative.

(From the Graphic Arts and Crafts Year Book, 1909.)

---

## THE PAYNETYPE "DIRECT" METHOD

By THE EDITOR

THE "Direct Process" of Photo-Engraving has received much attention and had considerable space devoted to it in both the Graphic Arts and Crafts Year Book, and the Penrose Pictorial Annual. Trade papers first expressed interest and then dismissed the matter with scant consideration. However, as it opens up probably the greatest possibilities in the development of process engraving in recent years, we do not condemn it as impossible, but rather see some practical ob-

jections which to us seem "practically" impossible to overcome.

The editor is in a position to appreciate the value of a perfected direct process of engraving to the newspapers and others who demand speed in the production of printing plates. After having read all the matter published to date regarding the Paynetype method he has come to the conclusion that unless in practice the process overcomes the following practical objections we will con-



tinue for a considerable time to make plates by the "indirect and imperfect but practical method" now in universal use.

For argument we will imagine that the press photographer is sent to cover a story of an automobile smash-up. He reaches the scene with his camera loaded with a screen and zinc "Direct Plates." Photographers from other papers are also on the scene with their 1-1000-of-a-second-cameras. They take a half dozen quick "snaps," while the "direct process" operator is adjusting his tripod. (This is absolutely necessary because he must make a time exposure of from five to twenty minutes.) If there is much of a crowd present he will have to be quite a diplomat in order to keep restless, rubber-necking humanity quiet and away from the front of his lens while making his time exposure. If the accident occurred in a sunny spot on the right side of the road (with the sun at the back of the camera) the operator may get a good re-

sult, but to be sure will, perhaps, deem it advisable to make two exposures.

As soon as he finishes his second exposure he rushes back to the office and develops his plates, only to find that one would have been a "dandy," only it is a trifle over-exposed. The other is a bit fogged and therefore cannot be used.

Now let us suppose the same thing happens to one of the other operators. He gets a "near dandy," being a bit over-exposed. He discovers this while developing, and can overcome a great deal of the difficulty by reducing. If he had time he could overcome it all, but time being a factor he must, perforce, slight it. He washes off the "tear-drops"; throws up a velox enlargement, jumps it into the art department, where the retoucher splashes in some contrast, putting in a light sky and here and there some contrasty blacks. The copy then goes to the gallery to be "rephotographed" on a prism



Rush Newspaper Halftone, Made in Twenty-five Minutes for the New York Evening Sun, by Powers Photo-Engraving Co., N. Y.

camera, etched, bevelled, and blocked in twenty minutes from the time it leaves the artist's hands.

We will imagine another condition. Our "direct process" man gets his time right, but not being able to get near enough to the object finds, when it is developed, that his plate is worthless. The foreground is well defined but the object of the story is so small and cut up by the coarse screen that it is useless for the purpose of illustration.

Again, we will imagine the same thing happens to the other fellow. Everything is lovely except the object is too small for practical use. The negative is crisp and clear, a Goerz Dagor having been used, and even on the object, small though it is, the detail is perfect. A four or five-time *velox* enlargement saves the day. This, of course, is impossible where the direct process is used, because there is nothing to enlarge but dots, and as the white space between the dots is enlarged in the same ratio, the result would simply be an extremely coarse screen. If the plate were enlarged four times lineal, the resultant would be approximately sixteen lines to the inch.

Certain papers use a method of casting half-tones into the stereotypes and printing from the original plates. This method was invented by S. H. Horgan. Sometimes as many as eight sets of plates are necessary where this method is in vogue, and of course there would be absolutely no opportunity to use the "direct method" for strictly news assignment work (and there is surely no excuse nor advantage in using it for anything else), because to make eight good plates it would always be necessary to expose for at least ten, allowing 25 per cent. for defective exposures or slip-ups. Twenty-five per cent. is a low percentage of spoilage, as the percentage is often as great when working in a gallery under the best of conditions. The silver bath is likely to go wrong, or the developer is likely to deteriorate, or the negatives to get slugged while turning, or the print on metal wash off because of any one of several different reasons which are appreciated by all practical men, and practical men are the ones most likely to be interested in any method which will tend to lessen labor or increase their profits.

The waste of metal and the consequent loss caused by defective exposures would be sure to be an additional economical objection to the universal adoption of the "direct method." In the case of the present method it is only necessary to repolish a sheet of metal with pumice stone in order to effect a saving and again prepare it for use.

The excessive cost of powdering, burning-in and etching each separate exposure, whether small or large, would multiply the expense to the producer, and all the saving now effected by putting a dozen or more small negatives on one large flat and etching them together would be lost, and in commercial shops prices would soar to such heights that only the very rich could afford to use the "direct method" plates.

Further it would be impossible to insert one or more half-tones into a line border or layout to embellish the half-tones as is now done on all newspapers. It would likewise be impossible to correct a proportion or make a change by cutting the negative as is often done to save re-drawing.

In condensed form the process is as follows: A polished metal plate is coated with a substratum of collodion, and on this the gelatin emulsion is coated just as in making dry plates. To get a positive half-tone image in the camera, the metal dry plate is exposed behind a half-tone screen to an ordinary negative of the subject to be engraved in half-tone. A glycin developer is used and the plate washed and fixed as is customary with a dry plate. The plate is then immersed for half a minute in the following bichromate solution, used at a temperature of 60° F.:

|                                    |            |
|------------------------------------|------------|
| Bichromate potassium crystals..... | ½ ounce    |
| Potash alum. crystals.....         | 12 grains  |
| Distilled water.....               | 12½ ounces |

The plate is then rinsed with water and developed like a carbon print in hot water of a temperature of about 120° F., first allowing the film to soak in the water for a minute or two and then assisting the removal of the soluble portions of the film with a camel's-hair brush or other means. The plate is then treated like an enamel-coated plate. It is put in a whirler, the surplus moisture driven off and the plate dried while whirling face down over a gas-

stove. When the plate is cool the collodion substratum is removed from the portion to be etched by a mixture of alcohol and ether on cotton wool. The plate is then ready to be etched in the usual manner with perchlorid of iron. When a negative image is

had on the metal plate, as when it is exposed to a positive copy, the inventor has adopted a reversing process by which he changes the negative image into a positive before he develops the gelatin as a carbon print.



#### CATALOGUE ILLUSTRATION

In shading, mechanical and decorative detail this illustration shows a style especially adapted to fine catalogue work.

Drawn and engraved for the Victor Talking Machine Co., by Gatchel & Manning, Philadelphia, Pa.



Illustration by Joseph Pennell. From "Pen Drawing."

## "PEN DRAWING"

An Interesting Treatise on the Art of Drawing with a Pen

By C. D. MAGINNIS

PEN DRAWING. An illustrated treatise, by C. D. Maginnis; 5¼x7½x5⁄8; 120 pp. Price, \$1.00. Bates & Guild, 42 Chauncy St., Boston, Mass.

**H**ERE is a book which the beginner and the more advanced student can read and derive much benefit from. It is written in an interestingly instructive manner, and the layman who would better appreciate and understand the beauty, latitude and technique of pen-drawing will, after reading this volume, enjoy more than ever the study of this delightful medium.

Style, of course, is individual, and no matter what master one attempts to imitate, one's own individuality will always be shown in some little knack or stroke.

This book is so thorough and still so short as not to be tiresome or heavy, and can be read through quickly and then re-read. There are numerous excellent illustrations by such masters as Vierge, Pennell, Railton, Goodhue, etc., etc., each one displaying a different technique and method of treatment; all good and worthy of careful study. The ambitious student would do well to make copies of as many as his time will allow, reading carefully the explanations and criticisms as he proceeds. This will aid materially in the development of a pleasing technique.

The great difficulty which confronts most students who would draw with a pen



The Photograph.

is that they are afraid of their medium. The harsh, black lines frighten them, and it is only after much hard work and painstaking study that they overcome their fear and get atmosphere and feeling into their work. As soon as the student can forget the medium and think only of the effect he is after, his technique and freedom will develop.

We quote below a portion of a chapter from "Pen Drawing," and show also a halftone of photograph depicting a street scene, and a pen-drawing from the same subject drawn by the author, C. D. Maginnis, which will serve to illustrate the comprehensive manner in which the subject is treated:

The photograph shows a street in Holland. In this case, the first thing we have to determine is where the interest of the subject centers. In such a perspective the salient point of the picture often lies in a foreground building; or, if the street be merely a setting for the representation of some incident, in a group of foreground figures. In either case the emphasis should be placed in the foreground, the distant vanishing lines of the street being rendered more or less vaguely. In the present subject, however, the converging sky and street lines are broken by the quaint clock-tower. This and the buildings underneath it appeal to us at once as the most

important elements of the picture. The nearer buildings present nothing intrinsically interesting, and therefore serve no better purpose than to lead the eye to the center of interest. Whatever actual values these intermediate buildings have that will hinder

their usefulness in this regard can, therefore, be changed or actually ignored without affecting the integrity of the sketch or causing any pangs of conscience.

The building on the extreme left shows very strong contrasts of color in the black shadow of the eaves and of the shop-front below. These contrasts, coming as they do at the edge of the picture, are bad. They would act like a showy frame on a delicate drawing, keeping the eye from the real subject. It may be objected, however, that it is natural that the contrasts should be stronger in

the foreground. Yes; but in looking straight at the Clock-tower one does not see any such dark shadow at the top of the very uninteresting building in the left foreground. The camera saw it, because the camera with its hundred eyes sees everything, and does not interest itself about any one thing in particular. Besides, if the keeper of the shop had the bad taste to paint it dark we are not bound to make a record of the fact; nor need we assume that it was done out of regard to the pictorial possibilities of the



Pen Drawing by C. D. Maginnis.

street. We decide, therefore, to render, as faithfully as we may, the values of the clock-tower and its immediate surroundings, and to disregard the discordant elements, and we have no hesitation in selecting for principal emphasis in our drawing the shadow under the projecting building. This dark accent will count brilliantly against the foreground and the walls of the buildings, which we will treat broadly as if white, ignoring the slight differences in value shown in the photograph. We retain, however, the literal values of the clock-tower and the buildings underneath it, and express as nearly as we can their interesting variations of texture. The buildings on the right are too black in the photograph, and these, as well as the shadow thrown across the street, we will considerably lighten. After some experiment, we find that the building

on the extreme left is a nuisance, and we omit it. Even then, the one with the balcony next to it requires to be toned down in its strong values, and so the shadows here are made much lighter, the walls being kept white. It will be found that anything like a strong emphasis of the projecting eaves of the building would detract from the effect of the tower, so that the shadow under the eaves is, therefore, made grayer than in the photograph, while that of the balcony below is made stronger than the shadow of the eaves, but is lightened at the edge of the drawing to throw the emphasis toward the center.

To add interest to the picture, and more especially to give life to the shadows, several figures are introduced. It will be noticed that the cart is inserted at the focal point of the drawing to better assist the perspective.

## GRAIN COLOR PLATES

By J. S. SUNDERLAND

(Reprinted from Penrose's Process Year Book)

HOW frequent are the remarks of artists as to their dislike of the general mechanical appearance of tri-color work with the mechanical engraved screen. There is certainly in many instances cause for these derogatory remarks, and much more so after having seen good subjects reproduced by the grain or Metzograph screens by Wheeler, there being more detail in the texture of the pictures, while a different character pervades the production generally. There are, however, some little difficulties to be overcome in order to produce good results, but the best way appears to be continual practice, thus surmounting the difficulties as they crop up, for one can rest assured that only patience and the desire to excel will bring about the satisfaction of achieving something really artistic, and any cut-throat attempt to produce fine-grain tri-color work at the so-much-per-square-foot rate will be somewhat disastrous to the engraving house itself. The process is rather to be recommended for the reproduction of pictures of such value as would be acceptable for framing, by so doing enabling the color-plate maker to specialize in

this particular direction. Whatever is done in making this class of color blocks, a few general hints may be acceptable to any one for the first time making the attempt.

The best way is to use positives for the three colors—this was done in the instance of the "Musketeer," which illustrates this

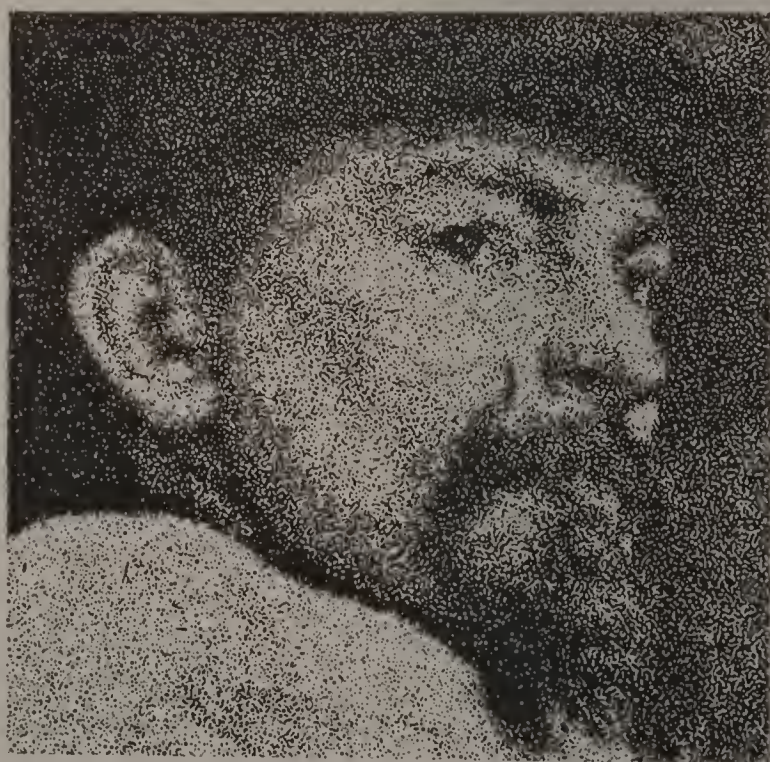


Fig. 1. Enlargement from Negative showing dot formation most suitable for color grain plates.



G. Newnes, Ltd., Studios,  
London, Eng.

*By Meissonier.*

### The Musketeer.

Reproduced with the Metzograph Screen.

*(Reprinted by permission from Penrose's Process Year Book.)*







Fig. 2. Enlargement from Negative showing wormy structure obtained by wrong exposure, unsuitable distance and too large stop.

article. The class of negative required is rather different from the ordinary half-tone in one or two details, as they should be much softer than ordinary color negatives, and obtained by a small stop with screen distance almost close, rather full exposure. Only the negative should be cleared with no cutting. It is rather difficult to explain the actual experiences one has with these grain screens, but once the definite factors are understood there is very little trouble. The close proximity of the screen to the negative plate, together with the small stop, has the effect of producing fine points all through the negative, instead of a wormy kind of structure, which on the etching produces a rough, chalky texture not by any means in favor of the Metzograph screen; but with proper methods a grain as fine as photogravure can be produced—in fact, is produced for intaglio work and being used. This close contact is the secret of the whole success of the Wheeler screens.

Having obtained a negative of a soft, rather thin character, by correct exposure with no cutting, the matter of the print on metal has to be taken into consideration. So far the best results have been obtained by slowing the fish-glue solution, also using only a thin film. The printing from the negative should be in a soft light, with rather long printing, as against the time given to a half-tone negative. Carefully

wash out the print and burn as usual. The etching is done in a still bath, face being turned down; only the care of a good etcher is able to determine the amount of time required for the etching, also it must be understood that in any subsequent etching, after the first bath, care has to be exercised in the ordinary way, but very little re-etching is possible in grain plates. This in itself goes to show the correct manner in which all the various stages of the process have to be taken. The enlargements accompanying this article are given to show the difference that can be made in the negatives, showing the correct and incorrect manner of making the same when the correct color negatives are made in such a character as Fig. 1, giving dots and not the wormy nature of enlargement Fig. 2. Very little fine etching is required, also good smooth results are obtained showing full amount of detail.

The last item is the method of printing fine grain color blocks. No doubt many printers would be unable to use them if instructions were not given. There is no difficulty if started in the proper way, which means obtaining good, flat impressions with little or no make-ready, and under any circumstances the irreducible minimum of the thinnest tissue. Although a few years ago there were difficulties with halftones, the first difficulties with color grain blocks will disappear in a similar manner by practice, with the result that there will be less criticism by artists with reference to the mechanical appearance of screen color work.

#### MUST PAY FOR MISUSE OF PICTURE

The \$3,000 verdict obtained by Felicite S. Riddle, an actress, against Bernard MacFadden, the "Beauty and Health" publisher, and Luther S. White, a photographer, for the unlawful use of her picture as part of a hair restorer advertisement, was upheld by the Appellate Division of the Supreme Court. White sought to have the judgment reversed on the ground that he had photographed the plaintiff at a special reduced price on the understanding that he was to have full property rights in the picture. But the Court held that under the statutes the written permission of the subject of a picture must be obtained. —*New York Sun*.

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

FRED J. WILLOCK.....EDITOR.

## THE HILLSIDE PRESS

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MAY-JUNE

## ENERGY

Be energetic!

Endeavor to accomplish something!

Don't wait for opportunity—make it!

The old theory that opportunity makes the man is exploded. The modern version reads that man makes the opportunity and then takes advantage of it.

Energy misapplied, however, is like a dog madly chasing its own tail. There is no doubt about the energy, but it is going to waste as it is being used to no purpose.

Many good jobs are lost through lack of energy in following them up.

If a customer writes for prices, treat the inquirer as though he was sitting beside you waiting for an answer in order to place the job.

Don't say: "Oh, he is shopping around and we cannot compete with So-and-So on price, but our engravings are

better," and then let it go at that; but *get busy*; figure out what you can do the job for and put all the energy you can into your answer in an endeavor to convince him. Follow it up, if possible, by sending your salesman to add his weight and *bring back the job*.

Don't say to yourself that "it is too small a job for us to handle." You never know what big job the customer might have up his sleeve or be in a position to swing your way. And above everything:

Don't lay the letter aside to be taken up later when you have more leisure. Owing to several always unexplainable causes the looked-for leisure may never come. Intentions never pay dividends—*actions count!*

In our last issue we published a rumor to the effect that Gill was negotiating for the control of the Electro-Light Engraving Co., New York. Mr. Wilson informs us, however, that the rumor was ridiculously untrue, and we are genuinely sorry if we have caused them any embarrassment.

## OPPORTUNITY

By WALTER MALONE

They do me wrong who say I come no more

When once I knock and fail to find you in;  
For every day I stand outside your door.

And bid you wake and rise to fight and  
win.

Wail not for precious chances passed away,

Weep not for golden ages on the wane;  
Each night I burn the records of the day,

At sunrise every soul is born again.

Laugh like a boy at splendors that have sped,

To vanished joys be blind and deaf and  
dumb;

My judgments seal the dead past with its  
dead,

But never bind a moment yet to come.

Though deep in mire, wring not your hands  
and weep,

I lend my arm to all who say: "I can."  
No shamefaced outcast ever sank so deep

But he might rise and be again a man.

—Inland Printer.

TRADE NOTES

Attention is called to the advertisement of John Royle & Sons, in another column. They offer to send a book, on the use and care of saws, to all who are interested.

\* \* \*

The Graphic Arts Company of Philadelphia, in another column, announces the fact that there are many Levy Blast Etching Machines now in successful use in the United States and Europe, and offer to send further information to engravers who would improve the quality and volume of their product.

\* \* \*

We direct special attention to our frontispiece, a duotone made by the Powers Photo-Engraving Co., N. Y., and also to our other insert, "The Musketeer," by Meissonier, which is a very fine specimen of three-color grain screen work by G. Newnes, Ltd., Studios, London, Eng.

\* \* \*

Bwana Tumbo is a jolly little caricature of the "Big Hunter," "The Best Boss of This Country We Ever Had." It is a disseminator of optimism and good cheer, and in our opinion is going to be the one "Best Seller."

\* \* \*

The Underwood Typewriter is another advertiser. Their billing system is something which all engravers who care for neatness and system should look into.

\* \* \*

Want to buy a printing plant? One that's making money? See the adv. on page 98.

\* \* \*

D. J. Bunce, in another column offers to send sample sheets of his "masking papers" to interested parties. This should be proof that he has the goods. A trial will convince.

\* \* \*

Windsor & Newton's Deck Palette for retouching and spotting is a joy to the artist and a positive source of delight to the photographer working from retouched copies.

\* \* \*

Luthin's negative and stripping collodion is making a hit with engravers. Luthin's is an old-established chemical house and backs up anything they sell.

\* \* \*

Unless detained by unavoidable circumstances the Editor expects to attend the Convention of the I. A. P. E. He is desirous of meeting personally, every member who attends.

HELP WANTED

High-Class Photo Engravers who can deliver. Write stating experience, habits, salary expected and where last employed. Box 12, Photo-Engraving Art.

WE WANT A  
**LIVE**  
 WIDE-AWAKE ADVERTISING  
**MAN**  
 TO REPRESENT US IN  
**CHICAGO**  
**SAN FRANCISCO**  
**BOSTON**  
**PHILADELPHIA**  
 AND ANYWHERE ELSE

¶ In fact, if you consider yourself a bright energetic fellow, old or young, and you can give us all or part of your time, you may interest us, and we may put you in the way of making a little extra money or even a steady income.

¶ Tell us about yourself and we will go into details.

**THE HILLSIDE PRESS**  
 PUBLISHERS  
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Artist's Cards

Under this heading we will print each month a number of artist's cards. Rates on application.

**PAUL PHILIP GOOLD**  
 GENERAL ILLUSTRATING  
 Specialist on Army and Navy Matters  
 Tel. 1630 River. 2314 BROADWAY, N. Y.

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 PHOTO-RETOUCHER ILLUSTRATOR  
 DESIGNER  
 Tel. 3120 Gram. 27 EAST 22d ST., N. Y.

**H. R. NORTHROP, DESIGNER**  
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## THE I. A. P. E. HAS DUTY INCREASED ON IMPORTED "VIEW CARDS"

By H. C. C. STYLES

President International Association of Photo-Engravers

FOR some months I have been at work on various matters incident to an increase in duty on souvenir post-cards which are now coming into this country from European countries, principally Germany, at the duty of five cents per pound, a rate which is so absurdly low that it amounts to no protection whatever. In considering this matter the Ways and Means Committee of the House of Representatives decided to raise the duty to ten cents a pound, and the bill passed the House with that rate. When it reached the Finance Committee of the United States Senate they put the rate back to seven cents a pound.

Realizing the necessity for prompt and decisive action, I called a conference to be held in Washington on Sunday, April 11th. This was attended by a number of representatives of the Post Card Manufacturers' Association and others largely concerned in an increase of duty. The matter was thoroughly considered at this meeting, and by appointment on the following morning, Monday, April 12th, we had a hearing before General Appraiser Sharretts, representing the Senate Finance Committee. This session lasted several hours on Monday and was followed by further hearings on Tuesday and Wednesday.

As an outcome of the matter Mr. Sharretts has recommended to the Senate Finance Committee that the import duty on view cards be increased to fifteen cents per pound and 25 per cent. ad valorem. It will be noticed that this is a very material increase over the present rate, and if carried in the Senate and adopted in conference with the House of Representatives and finally becomes a law it will closely approximate protection on the view card industry and will enable the American engravers to compete with the European establishments in the production of plates for post card printing.

You will note that I use the term "view cards." This is because the view card runs

are usually not in excess of five thousand, and, as a matter of fact, most of the runs are not over three thousand cards. Fancy post cards, such as comics, Christmas cards, etc., are usually produced in such large quantities that the American printers and lithographers are already able to compete with the German houses on this class of work, and for that reason we are not interested in asking Congress to give an increase of duty on other than the view-card feature.

As it is very likely there will be opposition to the very considerable increase in duty as above outlined, I earnestly urge that you will write to the Senators representing your State, pointing out to them as concisely and positively as possible the necessity for the adoption of this rate in the new tariff law. As a matter of patriotism alone there should be little difficulty in getting this rate established, as it is certainly humiliating to Americans when purchasing view post cards to find four-fifths of them bear the legend "Printed in Germany."

### THE MAN AND HIS JOB

I haven't much faith in the man who complains

Of the work he has chosen to do.  
He's lazy, or else he's deficient in brains,  
And, maybe, a hypocrite too.  
He's likely to cheat and he's likely to rob;  
Away with the man who finds fault with his job!

But give me the man with the sun in his face,

And the shadows all dancing behind,  
Who can meet his reverses with calmness and grace,

And never forgets to be kind;  
For whether he's wielding a scepter or swab,  
I have faith in the man who's in love with his job. —*Philadelphia Bulletin.*

## “PERSPECTIVE”

By DORA MIRIAM NORTON

Instructor in Perspective and Sketching, Pratt Institute, Brooklyn, N. Y.

PERSPECTIVE. Freehand perspective and sketching, by Dora Miriam Norton;  $7\frac{1}{4} \times 10\frac{1}{2} \times \frac{3}{4}$ ; 173 pp., 262 illustrations. Price, \$3.00. Published by the author, and for sale by The Hillside Press, Richmond Hill, N. Y.

“FREEHAND Perspective and Sketching,” principles and methods of expression in the pictorial representation of common objects, interiors, buildings and landscapes, by Dora Miriam Norton.

The above is the title and describes fully an instructive volume on perspective, that stumbling block of all beginners and many advanced students who have never given the matter proper attention.

Perspective is unquestionably the funda-

mental principle of all realistic pictorial representation, and to teach thoroughly these principles is the object of the book.

We present herewith several illustrations which will show how even in outline pencil sketches the art quality, combining composition or space relation, and carefully drawn objects can be made pictorially interesting.

The student, in commencing the study of perspective, must first learn that he must subordinate what he *knows* to what he *sees*. An illustration is given as follows:

“We know the top of a cylinder to be a circle, and therefore we tend mentally to see a circle, though it is just as truly a fact that the top can only appear to the eye as a circle



Arches from the Cloister of St. Paul's Without the Gates, at Rome.  
Specimen pencil illustration from "Perspective."



Finished Sketch of Group of Articles from Memory. From "Perspective."

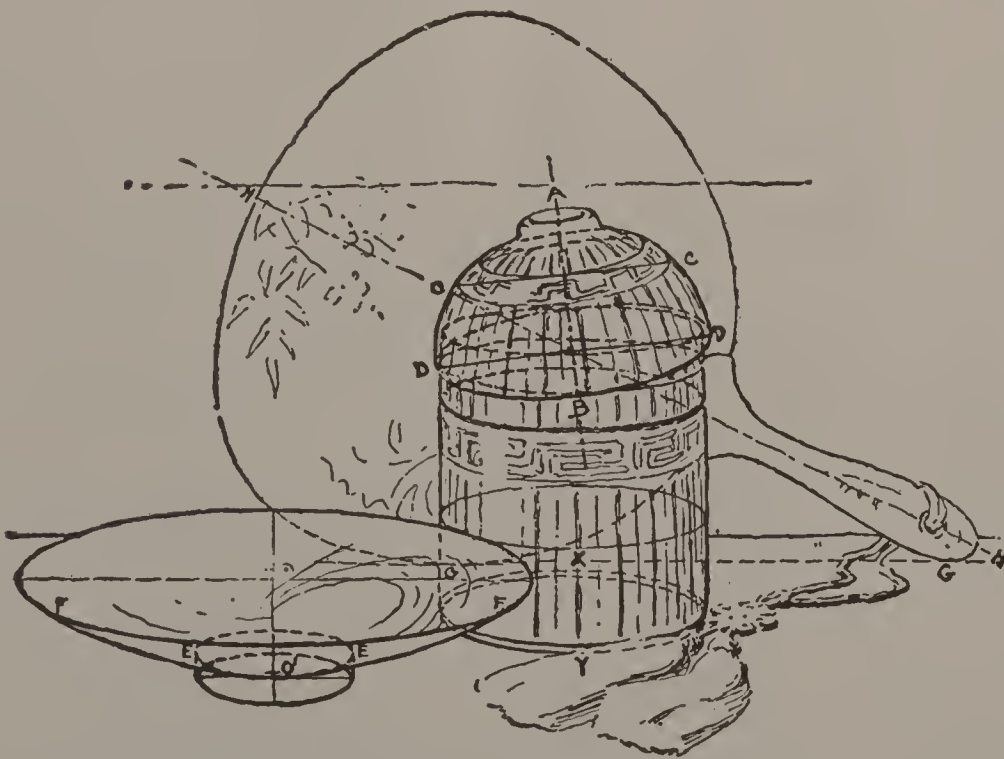
when the cylinder is held so as to lose sight of all other parts of it. Consequently the first aim and benefit in studying perspective is learning to see; that is, to know the image really presented to the eye."

This example illustrates the drawing of objects from invention or memory. The student may sketch this exercise as directed; then should invent or draw from

memory one of his own arrangement, making small trial sketches, and using the best of these in his final composition. Should his memory not be clear enough for this, it may be refreshed as often as necessary by study of the objects he chooses to draw, the only condition being that *the drawing be done without the object in view.*

In this exercise the Japanese luncheon-carrier is placed first. Its ellipses are sketched in full, whether entirely seen or not. The bowl shaped top, being slightly inclined, is drawn on a leaning axis. But it is perfectly symmetrical on this axis. This symmetry should be tested in the drawing by turning it to bring the axis vertical, when any error is easily detected.

It was desired to draw the flat dish as it would appear if touching the luncheon-carrier. Its height (x y) is therefore measured upon the front of that object from its lower edge, and an ellipse of the proper roundness drawn at that height. The top



Showing How the Above Sketch is Laid Out.

ellipse of the dish would touch the other object somewhere in this ellipse, and so was drawn tangential to it. To obtain the bottom ellipse of the dish, this same height, increased to allow for its slightly greater nearness to the eye, was measured downward from the dish top. But as the sides of the dish are flaring, this measuring was done from the estimated true middle of the top of the dish, giving O' for the true center of the lower ellipse. The foot is like a very short cylinder. The flaring sides of the dish are drawn tangentially from the rim (F,F) to the upper ellipse of the foot.

In drawing the ornament on the luncheon carrier the explanation in a previous chapter is recalled. On the cover the band of fret decoration appears narrowed at its front, and widest at the ends.

Note the foreshortening in its details, and how the lines of the fret express the curving form of the cover. It will be seen that the stripes on the object and some lines of the fret follow the profile lines.

The fan is purposely placed so that it is not foreshortened. Therefore the two points (G, G) at which it rests on the table appear, as they actually are, in a horizontal line. It also appears in its true shape, symmetrical on an axis passing through its handle (H, H). It is more easily drawn entire first, erasing later the part not needed.

"Perspective," in the opinion of the Editor, is the most complete and comprehensive volume yet published, and in its presentation of the methods and principles for the study of the subject unquestionably has no peer.

### REPAIRING BROKEN GLASS ARTICLES

Take a little ordinary fish glue enamel, apply it to the parts broken and then expose it to light; this will have the same effect as on a half-tone, making it watertight. It is better to do this immediately the article is broken because it will be perfectly free from grease and the enamel will hold better. If it is only cracked it can be done in the same way by letting the enamel flow into the crack.

Don't put success upon a pedestal so high as to be all but unattainable.



Illustrating a Group of Cylindrical Objects. From "Perspective."

## PHOTO-ENGRAVERS! ATTEND THE CONVENTION OF THE I. A. P. E.

It will be held at the Hotel Kaaterskill, Catskill Mountains, July 6th, 7th, and 8th.

**I**T has been definitely decided to hold the next convention of the International Association of Photo Engravers at the Hotel Kaaterskill, in the Catskill Mountains.

The dates on which the meetings will be held are July 6, 7 and 8, and, on account of the 4th of July coming on Sunday, and Monday being observed as a holiday, it will give the engravers and their families an opportunity to spend several days at the Kaaterskill Hotel, which is a truly delightful place.

At this convention a very large attendance is expected. The Secretary expects 200 people to attend, as a special program is being prepared and many interesting features will be presented to those attending.

The Secretary now has assurances from members in California, Colorado, Winnipeg and several distant points that they will attend the convention. Extraordinary interest is being evinced and we will feature it in our July issues.

### HE KNEW HIS FRIENDS

"Yes, sir," boasted the hotel proprietor, "that dog's the best rat-catchin' dog in the state."

Even as he spoke two big rats scurried across the office floor. The dog merely wrinkled his nose.

"Rat dog!" scoffed the traveling man. "Look at that, will you?"

"Huh!" snorted the landlord. "He knows *them*. But just you let a strange rat come in here once!"—*Everybody's Magazine*.

¶ This cut represents the **Standard Interchangeable Air-Brush** for the photo-engraver, fitted with lightning interchangeable glass jars or metal side cups all in one brush. Illustration shows the exact size of the instrument. It weighs only  $1\frac{1}{2}$  ounces.



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Remember Longfellow's words: "The talent of success is nothing more than doing what you can do well, and doing well whatever you do."

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The following hint may come in handy to the operator should he ever be unfortunate enough to drop an original in his iodine dish. Of course, as soon as the iodine touches the paper it is readily absorbed and turns the paper a dark brown and entirely spoils it. Take the original and pass it under the tap rapidly so as to remove any iodine remaining on the paper, but not enough to wet the paper through, and then let the fumes of ammonia pass over it for a minute or so and it will entirely remove all signs of iodine. Should the stain be caused by a finger mark, as is often caused when the operator has an iodine stain on his fingers, it will be unnecessary to wash the original—the ammonia fumes will be quite sufficient.

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has suffered annoyance and loss of time on account of the varying quality of different lots of dragons blood, even though purchased from the same supply house and at the same price. This is due to the fact that after being gathered and packed by natives throughout the country the gum is sent from India in the crude state. In this condition it contains foreign substances, difficult to detect or separate in the raw state, and being allowed to remain, when ground greatly impairs the quality of the powder. The Star Engravers' Supply Co., of New York, have made the elimination of these substances a study for years and claim that they now have arrived at a successful solution of the problem, and are ready to demonstrate the result to the engravers of the country. To newspaper etchers who value minutes this highly refined blood should be a great time saver.

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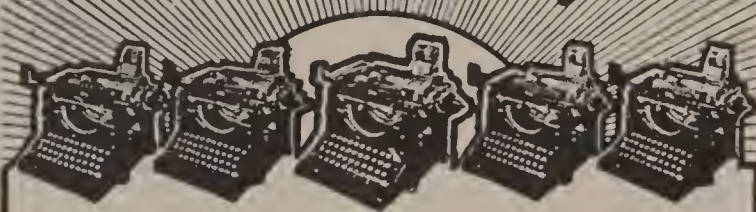
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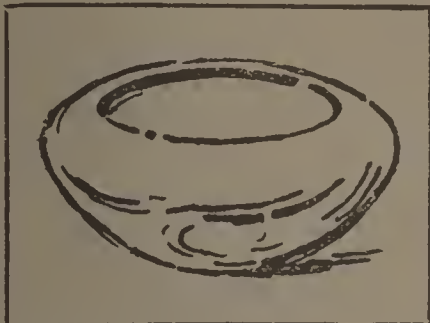
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Volume I

JULY-AUGUST, 1909

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## CONTENTS

|  |     |
|--|-----|
| Frontispiece, LUNCHEON AT ELKA PARK.....                   | 126 |
| COLOR AS APPLIED TO PRINTING—II.<br>By H. G. MARATTA.....  | 127 |
| EXHIBITS OF PROGRESSIVE SUPPLY MEN.....                    | 130 |
| CONVENTION OF THE I. A. P. E.....                          | 131 |
| A NEW THEORY FOR COLOR WORKERS<br>By F. DOGILBERT.....     | 135 |
| EDITORIAL—PROFIT .....                                     | 138 |
| SAMPLE ENGRAVING FROM THE CENTRAL ENGRAVING CO.....        | 140 |
| A COMPLETE COST-ACCOUNTING SYSTEM<br>By A. W. RATHBUN..... | 141 |
| SPECIMEN FROM BALTIMORE-MARYLAND ENGRAVING CO.....         | 143 |
| HINTS AND WRINKLES.....                                    | 144 |

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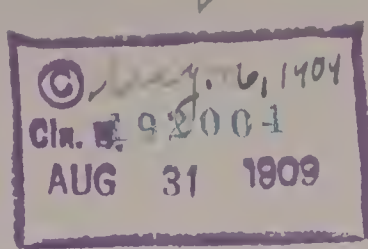
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# Photo-Engraving Art.

Published Monthly in the Interests of Makers and Users of Photo-Engraving

VOL. I., No. 9-10.

JULY-AUGUST, 1909

## COLOR AS APPLIED TO PRINTING

### The Solar Spectrum in Relation to Margo Pigments\*

*Second of a series of articles written especially for PHOTO-ENGRAVING ART*

By HARDESTY G. MARATTA

THE subject "Color" has puzzled the mind of man for many years. From among the numerous books on the subject, it is impossible to glean any information to help the student dealing with pigments. Pigments are color in the same sense only that a musical instrument is music. The instrument itself is not music, it is only a medium through which music may be produced. Sounds and noises are not music, nor are all the reds, yellows, blues, purples, orange and green pigments placed upon the market by the manufacturer, color. Sounds and pigments become musical or harmonious when they bear to each other certain fixed mathematical ratios. I do not think it improper to inform the artist or anyone using pigments, that too much thought must not be given to the scientific side of color if progress is to be made (i. e., light).

(It is often said that many good pictures have been painted without knowledge of laws. This may be true, as the artist after many years of constant study, practice and observation of nature, should be able to produce good work, even though he does not know how he accomplishes it. This has been called "feeling.") On the other hand, these studies should be encouraged, not to speak of the pleasure that must result to the artist from being able to speak with authority and know that his color be correct, whether one likes it or not, for color, like music, may be right and still not appeal to

all alike. Some prefer the circus, others the religious music. Some demand circus colors, others the more soothing tones of the gray or graver colors, which being refined really require education to enjoy. When the artist asked the circus man the color he should use on a poster, the reply was, "Any color, so long as it is red." This reply will hold good with the average advertising man. He knows the red, orange and yellow light are advancing colors. They symbolize a light and attract the eye. We all know how the red pleases (?) a bull. It affects mankind in a similar manner unconsciously. I dare say the time is near when the vicious-colored posters, labels, etc., now used for advertising purposes, will be treated as nuisances, and suppressed, as we now suppress a disagreeable odor or noise. Everybody now wants red, orange or yellow on their printed matter, because, as they say, "it stands out." The result is they, being all alike, not any, "stand out." They would stand out much more, however, and the eye would rest longer and with more pleasure if the quiet harmonious contrasts of the retiring gray hues were used as backgrounds with small areas of the advancing colors in strong contrast.

It is well to content ourselves with the information of our senses, by using the solar spectrum band upon which to base our investigations of reflected light and not light, for the painter and printer has

\* Copyright, 1909, by H. G. Maratta, N. Y.

to do with the former, not the latter. We would not make much progress in literature, mathematics, chemistry, or any of the sciences, if we did not use the alphabet, numbers, etc., intelligently, nor can we progress by disputing which of the colors of the spectrum band makes white light. As stated above, we must deal with pigments, and reflected light, not light itself.

The source of color is light, which is either natural or artificial. Natural light, derived from the sun, is termed "white" or "solar light," although daylight may be any color according to the hour of the day or atmospheric conditions. Artificial light is obtained by burning bodies, etc., and is usually colored light. Light is either direct or diffused. A rough surface will diffuse or scatter the rays. A polished surface will send pencils of light in parallel lines, such as a mirror. A polished ball will send pencils of light in all directions, some of which must reach the eye of the spectator, regardless of his position. This is termed the "highlight." When a ray of sunlight passes through a triangular shaped prism and is received upon a white screen, it is seen to consist of numerous rays of different colors, in the following order or sequence, red, orange, yellow, green, blue and purple. The limits of each color are not strongly defined in this band or spectrum. They pass from one to the other, making an imperceptible blend. There is a space where the red appears very red, then gradually runs into orange by blending with the extreme portion. Then with increasing proportions of the yellow until it reaches the pure yellow. From this pure yellow it gradually becomes greener by mixing with the extreme blue rays, which increases in green until we arrive at the pure green, which becomes blue green, then bluer and bluer until we reach the pure blue. Beyond the blue, the red is again approached, and mixing, produces the various purples, called lavender, violet, heliotropic, indigo, etc., which are purples, nevertheless. Either blue or red purples. On returning, or going backward to the green, which may be blue or yellow green, or to the orange which may partake of the yellow or red, passing again to the purples at the red end. The purple, the darkest color of this spec-

trum, appears on both ends, with yellow, the lightest contracted, and nearer to the red or warm end. While the blue, or cool end is pulled out, occupying more space than it should. This, I am led to believe, is due to the angles of the prism or the medium through which the light passes, as different mediums change the position of these colors. The wave lengths of the various colors of the spectrum have been measured, and may be found in many text books. They are of the utmost value in spectrum analysis. To the artist or artisan, or anyone dealing with pigments, all of this information is of little help to guide him in producing harmonious color relations.

As we are dealing with pigments, and not light, we must select pigments that are permanent, and will mix with each other without chemical reaction, selecting the brightest and purest to form a band in imitation of the solar spectrum. This is copying nature. It should be known that only the colors of the spectrum band are called "pure." Pigments are impure, that is, we call red red simply because it has more red molecules than yellow or blue. The yellow is called yellow, for the reason that it has more yellow molecules than blue and red. The blue has more blue than yellow or red. Thus each color contains all three of the colors. In order to get a standard red pigment, we must select a red that contains the same amount of yellow and blue. The yellow pigment must contain the same amount of blue and red. The blue, the same amount of red and yellow. This ribbon-like band, with its imperceptible blend from red through orange, yellow, green, blue to purple, must now be divided or cut up into a chromatic scale of twelve tones. It would be interesting as well as instructive to many to show the analogy between color and music. Color and music have no relation whatever, aside from their source, which is the same: Mathematics. We can properly compare the solar spectrum band with a plan of the monochord or stretched string.

We have three fundamental sounds in music called, the tonic, mediant and the dominant. The first may be any given sound, and the other two bearing certain proportional relation to it, as 1 to 2, 3 to 4, and 4 to 5.

Example.—Strike a stretched string 12 inches long, or a bell 12 inches in diameter; should it give 256 vibrations per second, and, say, correspond to middle C, a string or bell in every way the same, 6 inches in length or diameter, would be twice as acute and have double the number of vibrations per second, or as 1 is to 2. The same is true of an organ pipe. One 16 inches in length produces, if in every way alike, a sound which will be an octave away, or an octave higher from one 8 inches in length, the different octaves always running in the even multiples. There cannot exist a greater variety of sounds than that which is found between the tonic and its octave. We have a repetition over and over again in the different octaves of the same sounds, only higher or lower, more grave or more acute. (There cannot exist a greater variety of colors than those found in the spectrum band, like the octaves in music we have a repetition over and over again of the same colors, brought up to tints with white or a transparent base, lowered to the “hues” by darkness or by mixing mathematical proportions of the colors.) The octave is called the first homogeneous sound. The next sound, of a distinct character called the mediant, or third to the tonic, when the vibrations are as 4 to 5. The dominant is the third primitive sound, and occurs when the vibrations are to the tonic as 2 to 3. In other words, the three primary notes represent the beginning, the middle and the end, the trinity. These notes are not like the octave to the tonic, that is, the same sound more acute or grave, but are of a distinctive character relatively to it, and at the same time they combine with it in harmony to produce the most perfect consonance.

When an elastic body is put in a state of vibration, and produces a musical note, which we still call middle C, as this note dies away the other two notes, which make up the harmonic triad, are distinctively heard in succession, as the vibrations reach the relative proportional number referred to above. Color is to the eye as music is to the ear. By looking a moment at a patch of red, then at a white space, slowly the red fades away, and in its place appears the compliment, or a green composed of the two remaining colors. This is true of

all colors. The three primary sounds form the ground-work for all music, just as three primary colors form the foundation for all colors. I am using the musical analogy for the reason that all terms used in music are color terms. The chromatic scale really means color scale, and without scales in color and music little progress can be made.

Let us find how the chromatic scale is reached with the three notes in music. By taking the monochord or stretched string, and using it as a plan, we have a beginning and an end. If the beginning C is 256 vibrations, the octave C is 512, or a ratio of 2 to 1. The octave has double the number of vibrations.

|     |     |
|-----|-----|
| C   | C   |
| 256 | 512 |

The octave below 256 vibrations would be 128 vibrations. The octave below that would be 64, etc. Only when we have a beginning and an end can we have a middle.

|     |     |     |
|-----|-----|-----|
| C   | G   | C   |
| 256 | 384 | 512 |

The middle represents the note G, and its vibrations are equal to 256, plus 1/2 of 256, which is 128, the octave below; 256 plus 128 equals 384 vibrations, for the note G. By dividing the beginning and its middle and adding 64 or one-half of 128, we get the vibrations of the note E, that is, 64 plus 256 equals 320. Thus we have the first chord in music, C, E, G, C.

By dividing the C and E or adding one-half of 64 or 32 to the 256 vibrations, we reach the vibrations of the note D. The note B is also 32 vibrations from the end or the octave C. It will be seen that the line or plan has been divided into even multiples only, for the notes F and A the string must be divided into the odd multiples of 3. That is, 256 plus one-third of 256, which is 85 3-10 when added to the 256 equals, 341 3-10 the note F, 85 3-10 plus 341 3-10 approximates the vibrations of the note A, or 426 6-10.

|   |   |     |          |   |   |   |   |
|---|---|-----|----------|---|---|---|---|
| C | D | E   | F        | G | A | B | C |
|   |   | 320 | 341 3-10 |   |   |   |   |

This shows the difference in vibrations between E and F to be 21 3-10, which is 1-12 the scale or a chromatic full tone

(Continued on page 146.)



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## THIRTEENTH ANNUAL CONVENTION OF THE INTERNATIONAL ASSOCIATION OF PHOTO-ENGRAVERS

Held at the Hotel Kaaterskill, Catskill Mountains, July 6, 7, and 8, 1909

THE 13th Annual Convention of the International Association of Photo-Engravers held at the Hotel Kaaterskill, Catskill Mountains, July 6, 7 and 8th, will always be remembered by those who attended, more for its success socially than for any actual commercial benefit.

However, the members, who considered the Convention of sufficient importance to close down their desks and combine a few days' business with pleasure and a change of scene among the historical haunts of Rip Van Winkle, were more than repaid. The speakers whom President Stiles secured produced much food for thought, as was evidenced by the many questions asked each one and the lively discussion which followed their closing remarks.

Roll call showed 104 paid-up-members, which was over 200 per cent. increase over last year.

Minutes of 12th Annual Convention were read and accepted.

President's report, the most notable feature of which was the effecting of a raise in duty on "Made in Germany" view cards, to which President Stiles has successfully devoted much personal time and energy.

Secretary's report, in which he showed how his efforts were instrumental in in-

creasing the number of active paid-up members, and how the Secretary's Bulletin, after the first two numbers, was not only paying expenses, but also making a profit for the organization.

Treasurer's report showed the financial condition of the Association to be healthy, with a balance of several hundred dollars cash on hand. The Auditing Committee appointed by President Stiles O. K.'d the treasurer's report.

Reports of all officers were unanimously accepted as read.

Mr. W. T. G. Weymouth, President Typo Mercantile Agency, talked about "A New Draft System for Collecting Delinquent Accounts."

Mr. John Clyde Oswald, editor of "The American Printer," delivered an instructive address on "The Photo-Engraver and the Printer; From a Business Point of View."

Mr. Arthur Fruwirth discoursed learnedly on "Focusing Old and New," accompanying his talk with a demonstration of old and existing methods, using a model camera with a focusing scale and many charts to make clear each point as he proceeded. In our next issue we will print an illustrated article by Mr. Fruwirth.

Mr. Louis Edward Levy's topic, "Photo-



GEORGE BRIDGEN, *Secretary*,  
Toronto Engraving Company,  
Toronto, Ont.

Engraving: A Retrospect and a Look Ahead," was full of valuable and interesting historical data.

Mr. Will Bradley, Art Director "Collier's Weekly," in his talk on "Color and Design," handed the engravers present a hard nut to crack. Mr. Bradley, after going over the growth of "Collier's Weekly" and the demands of the presses, paper and inks, explained that as yet "Collier's" was unable to get the proper results from their color plates. He did not know the positive solution, and felt that it was up to the engravers to solve the problem.

We were fortunate enough to secure in full the address by Mr. N. S. Amstutz: "Science and Money in Photo-Engraving," and will print it in installments, as there is almost too much good matter contained in his address to warrant our using it all in one issue.

Mr. A. W. Rathbun, treasurer Inland-Walton Co., was called away before he could deliver his address on "A Complete Cost-Keeping System," and it devolved on the Secretary to read it to the Convention.

#### THE NEW OFFICERS

The new officers of the Association are as follows:

H. C. C. Stiles, Maurice Joyce Engraving Co., Washington, President.

Thomas Heath, Electric City Eng. Co., Buffalo, Vice-President.

George Brigden, Toronto Eng. Co., Toronto, Secretary.

John C. Bragdon, John C. Bragdon, Pittsburg, Treasurer.

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George Meinshausen,  
L. F. Eaton,  
Geo. H. Benedict.

#### STRAWRIDE TO TANNERSVILLE

THE seven hay wagons loaded with straw and piles of people which left the Hotel on the evening of July 6th for Tannersville, and over which genial "Doc" Bodenheim presided as chairman of the Entertainment Committee, was voted a huge success by all.

Starting from the Hotel at about 8.30 P. M., the way to Tannersville, six miles away, lead through tortuous winding roads, up hill and down dale. Here and there the rays from the lanterns attached to the wagons would cast a fleeting shadow through the trees on the hillside, and with but a slight stretch of the imagination it would be possible for one to conjure up the ghost of Old Rip Van Winkle stalking along to guard his historical territory from the intrusion of non-respecting mor-

tals. The bright moonlight lent added charm to the delightful ride.

A short stop was made at the Savoy Hotel, in Tannersville, for music and refreshments, after which the tired but happy "riders" were hauled back to the Kaaterskill, arriving there at 1.30 A. M.

Next day the Convention was an hour later than the schedule called for.

#### LUNCHEON AT ELKA PARK

ON July 7th, at noon, fifty-six people partook of the bounteous hospitality of Mr. Ferdinand Wesel, at his country place, Elka Park, eleven miles from the Kaaterskill Hotel. The typical German luncheon which he had served on the veranda of the club house of the park overlooking a beautiful valley with piles of blue mountains for a background was thoroughly enjoyed by all who participated. Mr. Stiles felt unequal to the task of thanking Mr. Wesel for his courtesy, and called on Mr. J. Clyde Oswald, who responded nobly. He said among other things: "that the engraver who had the good fortune to enjoy the hospitality of Mr. Wesel at his Elka Park place certainly should not begrudge his contribution to Mr. Wesel's prosperity when he saw the substantial and practical use to which Mr. Wesel put his profits."

Mr. Max Levy, of screen fame (and incidentally Philadelphia Real Estate operations) then made a few appreciative remarks. Mr. Louis Edward Levy, inventor of the Levy Acid Blast and other photo-engraving paraphernalia, followed his brother, and finally President Stiles was moved to add a few heartfelt words of thanks.

#### MR. MARATTA ON COLOR

ONE speaker who was added to President Stiles' list was Mr. H. G. Maratta, originator of the Chromatoscope chart, the use of which has done so much to raise the use of color in the graphic arts from the realm of guesswork and individual bad taste to positive knowledge and the ability to secure subtle harmonies or harmonious contrasts, without possibility of failure and with mathematical accuracy.

Mr. Maratta discoursed learnedly on the spectrum and its relation to practical commercial pigments (oil and water colors and printing inks). He explained how it was now possible for the artist to work in either oil or water color, and for the engraver to match the colors with Philip Ruxton's printing inks, and in turn for the printer to equal the results obtained by the engraver, the final result of the printed sample equaling the artist's original.

Mr. Maratta has kindly consented to write a series of articles for "Photo-Engraving



Art," and in another part of this issue is the second article dealing with the spectrum, substantially the same as the speech delivered by him at the Convention.



H. A. GATCHEL,  
Chairman Executive Committee,  
Gatchel & Manning, Phila-  
delphia, Pa.

### THE NEXT CONVENTION

In all probability the next convention of the I. A. P. E. will be held at Chicago, and we already have assurance that Buffalo will have a big delegation present. The Electric Eng. Co. is booming the convention among the other local engravers. Get together, men, and prevail upon your neighbor to accompany you to the convention next year. If you organize locally you will be astounded at the ease with which your association will grow.

#### Bissell College of Photo-Engraving, Endorsed by the I. A. P. E. Convention

The Association endorsed the Bissell College of Photo-Engraving at Effingham, Ill. Many instances were cited by those present where the teachings of the institution had grounded the student in the fundamentals so well that, with a little active experience, he soon developed into a practical man—much quicker, it was claimed, than if he had "picked up" his trade through an extended apprenticeship.

### SUPPLY MEN AT THE CONVENTION

#### Many New and Some Staple Articles Exhibited by Enterprising Photo-Engraving Supply Houses

MANY supply houses took advantage of the opportunity afforded by the convention to display new goods in the room where the meetings were held.

\* \* \*

Genial Charlie Mills, representing the F. Wesel Mfg. Co., of Brooklyn, had a large board, about 7x5 feet, covered with engravers' tools and accessories. In addition, he had some samples of the Dr. Albert process electrotypes and a new patent base showing an improved method of clamping cuts and electrotypes, for both flat-bed and rotary presses.

\* \* \*

The New York Engravers' Supply Co., of New York, whose name is too confining, because they are not only willing but anxious to supply engravers throughout the country, was represented by Harry Farquhar. He showed a new camera, a new style silver bath, and a strong printing frame which has some commendable points.

\* \* \*

The American Shading Machine Co., of Buffalo, was represented by Mr. W. C. Gay. This company, which is well-known as manufacturers of shading apparatus and mediums, have been successful in their endeavors to produce films which are unaffected by atmospheric changes and are more transparent

than the films heretofore produced. A very broad guarantee accompanies their new film. Another winner which this company handles is a film of extra large size—big enough to cover a whole newspaper page. The American Shading Machine Company does not rent or lease its apparatus, but sells it outright.

\* \* \*

Louis Edward and his son, Howard S. Levy, were on deck with many excellent samples of line and half-tone work done on the Levy Acid Blast Etching Machine. Among the samples was a specimen plate etched by the machine, which Jahn and Ollier, of Chicago, took over from the *Chicago Tribune*. The plate was a beautifully etched line flat, with no sign of a shoulder or undercut—so deeply was this flat etched that, except for jumping out the separate cuts, routing was unnecessary.

\* \* \*

Joseph Levy had a model of his improved process camera, without the telescoping stand, on exhibition.

The essential principle embodied in this camera is that the half-tone screen, instead of being held in the plate holder, is contained in the body of the camera, and by a very accurately constructed mechanism is moved into its proper position by means of a lever guided by a scale. This move-

ment is accomplished after the dark slide has been withdrawn and the screen with its carrier is moved to a position indicated by the scale, which position has been previously determined by focusing the screen upon the ground glass. The great advantage offered by this construction is the absence of the screen from the plate holder while the latter is being moved from camera to dark room, etc., the greater facility with which the screen may be cleaned, and the fact that the screen is visible to the operator at all times other than during exposure.

\* \* \*

"Doc" Bodenheim had "his" with him in the shape of many bottles of chemicals—not forgetting a sample of the famous "2,400 gallons of collodion which I sold on my last trip." It sounds like a ———, but then you all know the doctor.

\* \* \*

Mr. Max Levy had an improved circular screen for color work and a new style screen for the new Rembrandt Rotary Process. This screen differs from the ordinary one, in that the line is but one-third as wide as the space between the rulings and is transparent instead of opaque. On the regular screen the thickness of the lines and the distance between them is the same. In a future issue we will publish an explanation of the Rembrandt Rotary Process, which Mr. Levy says is destined to become the most rapid and economical method for the reproduction of artistically printed results.

\* \* \*

Mr. Herbert Royle distributed neat little router-bit holders, the use of which made it easy to hold the small bits so that they could be properly sharpened.

Mr. W. J. Lawrence, of the National Steel & Copper Plate Co., of Chicago, motored all the way from Chicago to New York. From there he took the train to the Kaaterskill. His wife and daughter accompanied him in his automobile.

\* \* \*

Mr. H. Fisher, of the Star Engravers' Supply Co., of New York, arrived a little late, "but got there just the same."

### COMPARING NEW YORK

Herbert M. Bingham, of the Bingham Bros. Roller Company, of New York, was heard telling this story to a few of his friends the other day:

"A New Yorker," Mr. Bingham said, "died and went to his eternal home. The man walked around growling, as most New Yorkers do, finding fault with everything and saying that he couldn't see that Heaven was much better than New York. 'Why, say,' he observed to a shade who happened to be near, 'this place is all undermined with dynamite just like New York, and when you're not being blown up you're being ground to death in some sulphurous subway or other. I don't see the use of coming to Heaven, anyway.' 'Excuse me, my dear boy,' said the shade to whom he was talking, 'you have made a slight mistake. This is not Heaven.'"—*Printing Trade Notes*.

Senator Kittredge, at the request of the I. P. E. U., has introduced a short bill into Congress providing that copyright shall not be granted in the United States to publications in which the illustrations are not printed from plates made in the United States.



Gorgeous view of the Catskill Mountains from the porch of Mr. Wesel's summer home at Elka Park.

A NEW THEORY FOR COLOR WORKERS

Trichromy Without Moire Effect by Using the Schultze Screen, 60°

By F. DOGILBERT, in "Le Procédé"

THE parallel that we propose to show between the ordinary cross-lined screen and the Schultze screen at 60° takes into account by the use of the latter new results which we have elsewhere practically tested.

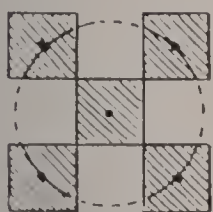


Fig. 1.

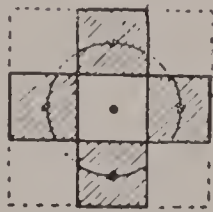


Fig. 2.

Fig. 1 represents the smallest group of elements of the screen image encircling one of these elements; we will call this, for convenience in explanation, a positive system; under the same conditions we will consider Fig. 2 as representing a negative system. Figs. 4 and 5 show us the arrangement of dots obtained by superposing the three screens inclined about 30° over each other, and rotating them around an axis either of a positive or negative system.

The normal use of three colors in poly-

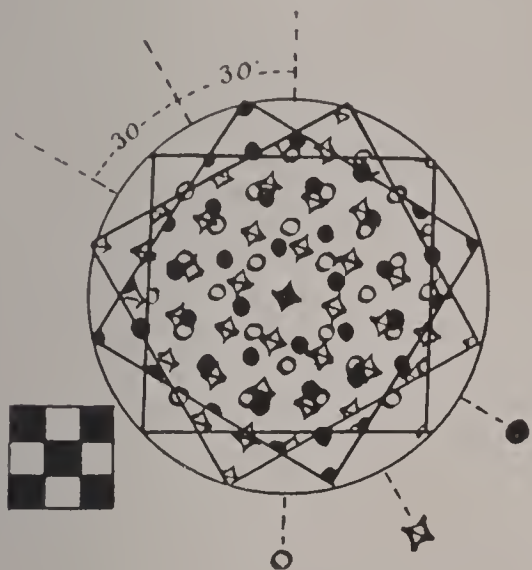


Fig. 3.

chrome printing demands a division of the circle into three or multiples of three for the respective positions of the different screens. The Schultze screen seems, by rights, best able to accommodate itself to this condition, since the image it gives, when used normally, has its dots in straight lines following three directions at 60°.

If we consider, as before, a positive system

of elements (Fig. 5) and a negative one (Fig. 6), we notice that the rays which join the centre of rotation to the centres of the elements are equal in both systems, while they are unequal in the case of the ordinary cross-lined screen. If we should superpose three blocks made by means of the Schultze screen after successive rotations at 60° around the centre of an element either positive or negative, all the elements would be superposed three by three, which would be an eminently defective arrangement; the proper and ideal distribution of colors should be

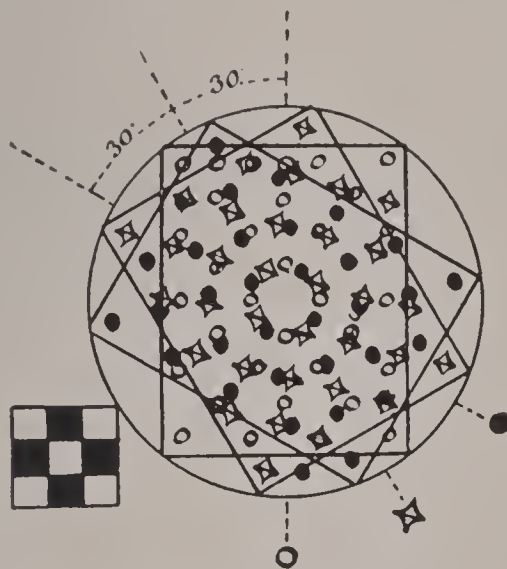


Fig. 4.

made by juxtaposition and not by superposition, the first arrangement always giving, by reason of the faint transparency of the pigments used, a duller tone than the second, which only combines the sensations transmitted separately by each color. If we make successive rotations by moving to a sufficient extent the centres of rotation of each screen we obtain the arrangement of dots shown in Fig. 7, in which the three centres are placed in evidence in the interior of a small common circle, and the movements by the overlapping of the three arbitrary circles which

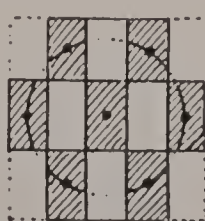


Fig. 5.

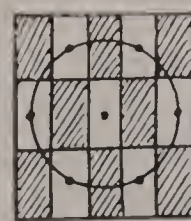


Fig. 6.

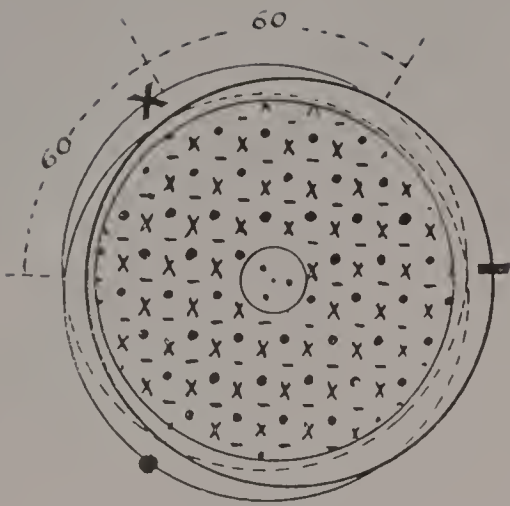


Fig. 7.

operation in the case of a rectangular screen; this being more practical and economical to use, we show below by means of movements which are most easily applicable to this case.

The importance of this shifting should, however, be again insisted upon as shown in Fig. 8, which groups in one part the three impressions obtained respectively by rotations in the indicated orientations with a special diaphragm, and in A shows the effect of the superposition of the three by three, while in B, thanks to the shifting, they are juxtaposition.

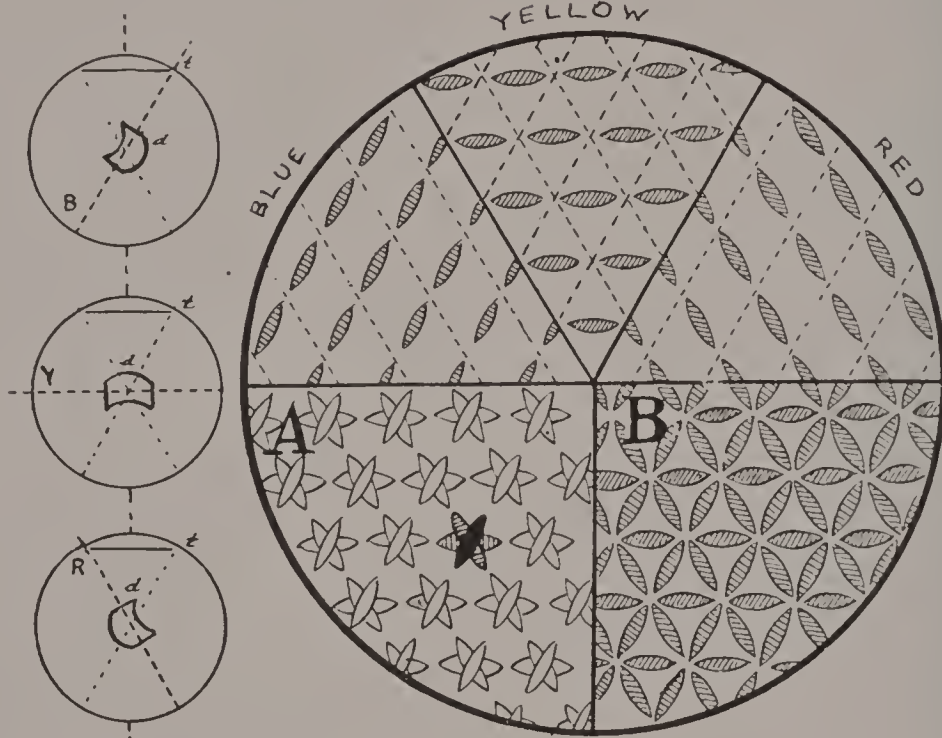


Fig. 8.

We see by Fig. 9 that it would be sufficient if we employ a vertical shift of equal amplitude for each of the screens in thirds of the distance which in one or other of the screens separates two such points as a and a'. Fig. 10 shows the distribution of dots resulting from this shifting. The use of such an arrangement jointly with the elongation of the dots of each screen image following a predominant direction would unhappily cause the vertical parasitic lines we are to consider in a certain measure as appearing to form a moiré pattern; this inconvenience can be avoided by using proper diaphragms

we have selected from each screen. Such an accentuation should be regulated once for all in the case of a circular screen, but should be worked out for each operation

and, when needed, by a very slight transverse shift made at the time of printing without any injury to the register, the extent of this shift being much less than the admissible error of register of the different forms, these different means permitting the distribution of the dots similar to that shown in Fig. 11.

We can also entirely abstain from all shifting of the screen during the negative-making for each monochrome on condition of doing this shift during the printing under the conditions indicated in Fig. 12. To give some idea of the smallness of this shifting let us point out that for a screen having sixty lines to the centimetre each of these shifts, vertical and horizontal, is less than one-tenth of a millimeter.

Fig. 13 shows one above another different shapes of dots obtained with the Schultze screen and using corresponding diaphragms; finally the last line shows the collection of dots resulting from these arrangements in the finished tri-color image. The profiles of diaphragms a to g are the result of exact geometric calculations and have nothing fancyful, although appearing so; the elongation of the dots following the predominant lines without affecting the result. The shapes presented by the inventor of the 60° screen, without being useless, do not fully satisfy the demands of three-color work.

The three shapes a, a' and a'' of diaphragms, giving the shape of dot yield the ideal distribution of the three colors shown in A; the shapes b to e give elongated dots which do not give the moiré by rotations at 60°; shapes f

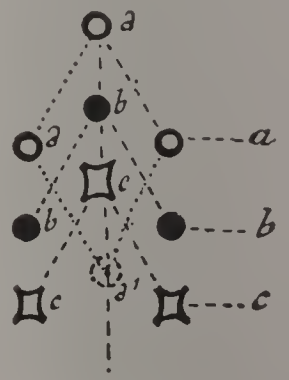


Fig. 9.

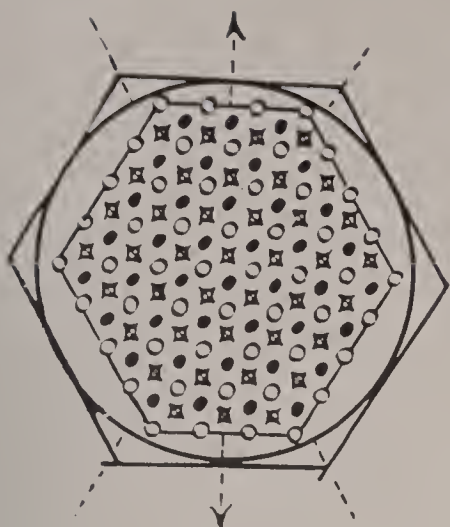


Fig. 10.

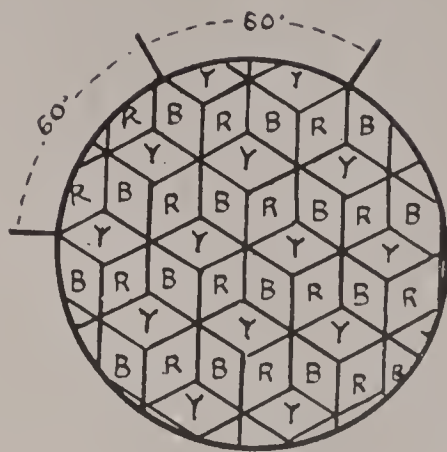


Fig. 11.

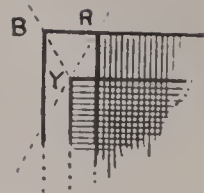


Fig. 12.

and g are the most advantageous, as they elongate the dots in the direction of one of the lines of the screen, but we have also obtained excellent results with shapes d and e.

To sum up, there is nothing to prevent using 60° screens for three-color printing, the advantages of using them, besides the

qualities belonging to these screens, being the absolute suppression of moiré and the possibility of working the whole set with a single screen, usable also for work in black, by simple rotation of the diaphragm and imperceptible shift of the form during the printing.—*The Process Engravers' Monthly.*

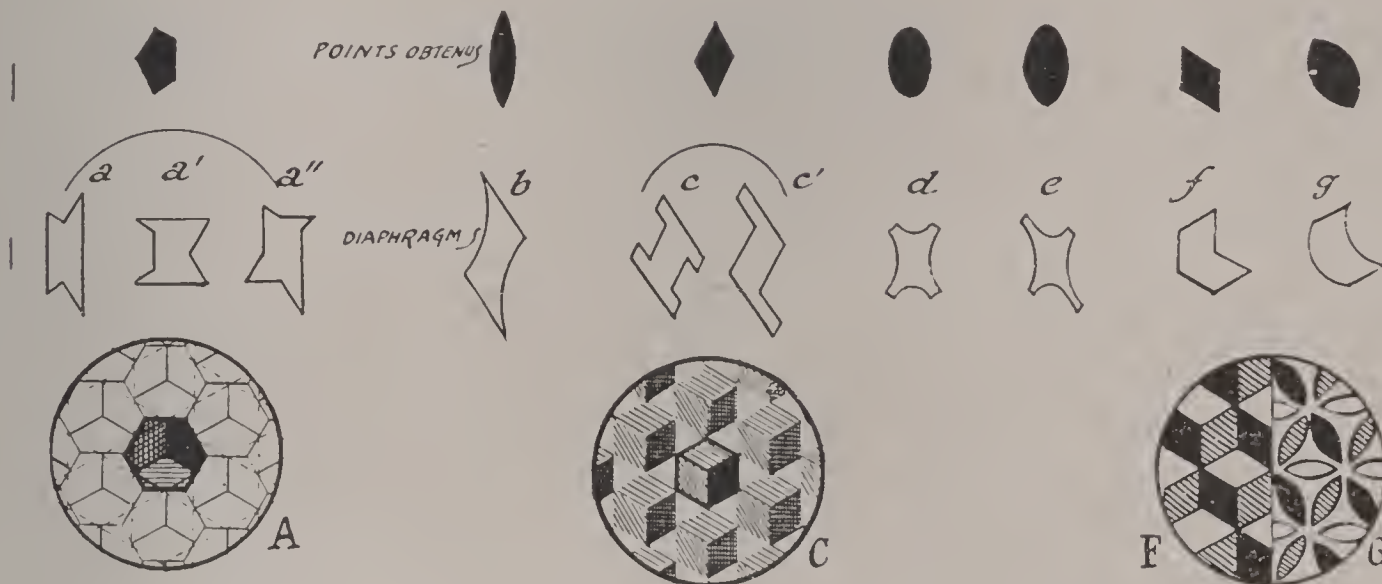


Fig. 13.

### PAYNETYPE BY ONE WHO HAS TRIED IT

To the Editor:—

In your interesting article on the Paynetype direct method of photo-engraving in the May-June number of PHOTO-ENGRAVING ART you present some objections to this new process on which we would agree, only that Mr. Payne was kind enough to forward me some of his plates, and I have tested them practically.

The value of Paynetype to the newspaper demanding rush news illustration is this: The news photographer will make his snapshots as at present, and develop them. Instead of throwing up a Velox enlargement, he will, from the wet negative, make his positive enlargement direct on a Paynetype zinc plate. Then, by simply developing, hardening, and

washing in hot water, his zinc plate is ready for etching.

Your space is too valuable to give an account of the great saving of time I find can be had with Paynetype; suffice it to say that I have prepared a half-tone in six operations for etching by this new invention which requires 34 operations by the usual methods.

Should any of your readers want to know more about this new engraving process, I will answer their queries if they send a stamp for reply to my home address, Box 181, Glen Ridge, N. J.

Sincerely yours,

S. H. HORGAN,

Editor, "Process Engraving," *Inland Printer.*

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

FRED J. WILLOCK.....EDITOR.

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JULY-AUGUST

## PROFIT

In his address to the Convention of the International Association of Photo-Engravers, Mr. N. S. Amstutz struck the keynote of success, of not only the engravers, but nearly every other business house where the "boss" comes into frequent close contact with his customers, and that is: "the false pride or modesty which makes one ashamed to admit that he is going to make a profit on your work."

The quicker you make up your mind that you *must* make a profit on every piece of work you handle, and *know* from previous records at what point in the price your profit begins, the quicker you will enjoy being in business for the pleasure of making money and stop working just for the joy of keeping busy paying your debts.

The engraving game is getting harder every day, and the houses which are

making a profit all down the line are the ones which will grow. The life of the indiscriminate "price-cutter" is measured only by his endurance and ability to take punishment. If he succeeds it is only because he is made of the stuff which was intended for better things, and if he hadn't got the wrong prospective when he started he would have been a more successful man with considerably less effort.

Photo-engraving is always made to order, and there is never an opportunity to have a misfit sale in order to recover cost of production on make-overs, as it would be only about once in a million that a wrong size cut of your machine would be available for my use. Therefore, it behooves you to demand explicit instructions as to size, style and screen, even if time is lost in getting the desired information.

More zinc plates are now being used in lithography than at any time in the history of the business, and they are giving universal satisfaction. As the sale of zinc plates goes up, the sale of stone naturally decreases. The printing surface of the future will be the metal plate.

The Margo Law of Color, invented by H. G. Maratta, consists essentially of pigments compounded and arranged in harmonious relationship to natural or spectrum color. Heretofore, as far back as modern knowledge extends, it has been the practice of manufacturers of prepared pigments, printing inks, dyes, etc., to compound and market their products without calculating the relationship to natural color, or each other. Philip Ruxton, Inc., 290 Broadway, New York, are the first to take up Mr. Maratta's ideas and manufacture printing inks, as well as oil and water colors for artists' use, and also the Chromatoscope Chart, according to the Maratta Law of Color. Mr. Maratta has consented to write a series of articles for PHOTO-ENGRAVING ART that should prove of great value not only to the engraver, proofer and pressmen, but to all students of color.

NOTES ABOUT ENGRAVERS

Photo-Chromotype Engraving Company, of Philadelphia, will shortly move into new quarters.

\* \* \*

F. A. Ringler, the New York engraver and electrotyper, is traveling in Europe during the summer months.

\* \* \*

The Marier Engraving Company, formerly of 215 Kearny street, is now located at 251 Kearney street, San Francisco.

\* \* \*

The Chicago office of the National Steel and Copper Plate Co., formerly at 102-110 West Jackson Boulevard, is now located in the Pontiac Building.

\* \* \*

The Jurgens Bros.' Company, engravers, of Chicago, have moved to 167 Adams street, being now located in the two top floors of a first-class new building.

\* \* \*

As soon as a satisfactory site can be secured the Alabama Engraving Company, of Birmingham, Ala., will install a new and complete plant, including stereotyping and machinery.

\* \* \*

The American Label Works, of Nashville, Tenn., have decided to manufacture everything necessary to their work, and have therefore added a complete photo-engraving plant.

\* \* \*

V. G. Hagopian purchased the Thorpe Engraving Company, of New York, and is putting new life and capital into the business. He has made a number of additions to the plant.

\* \* \*

The Manz Engraving Company have sent out a unique "Fans' Calendar," which is a beauty and is an effective advertisement. The Chicago playing days are shown in colors. The calendar covers the season only.

\* \* \*

The James Bayne Company, engravers and printers, of Grand Rapids, Mich., will enlarge their plant during the summer, by adding a story to the building now occupied as a pressroom. The company has been in its present quarters for the last nineteen years and has enlarged its plants annually with one exception. The company

is now filling orders for 600,000 three-color picture post cards, mostly scenic, which will be delivered within the next few months. It also has orders for 50,000 souvenir folders in colors for Chicago, 20,000 for Niagara Falls.


\* \* \*

Some few months ago, William G. Willman, paper dealer, New York, offered \$50 in prizes for the best ideas typographically displayed on samples of Continental Bond, emphasizing several features of that paper. Prizes have been awarded as follows: First prize, Mr. Charles N. Wheelwright, Richmond Hill, N. Y.; second prize, Mr. Walter B. Gress, of Hill Publishing Company, 505 Pearl street, New York; third prize, Thomson Printing Company, Philadelphia, Pa.; fourth prize, Globe Printing Company, 7 Dutch street, New York; fifth prize, Mr. John E. Stewart, Springfield, Mass.

# Artist's Cards

Under this heading we will print each month a number of artist's cards. Rates on application.

**CHARLES OGDEN**  
**PHOTO-RETOUCHING**  
OF THE HIGHEST GRADE  
**1004 CHESTNUT STREET,**  
PHILADELPHIA. PENNSYLVANIA.



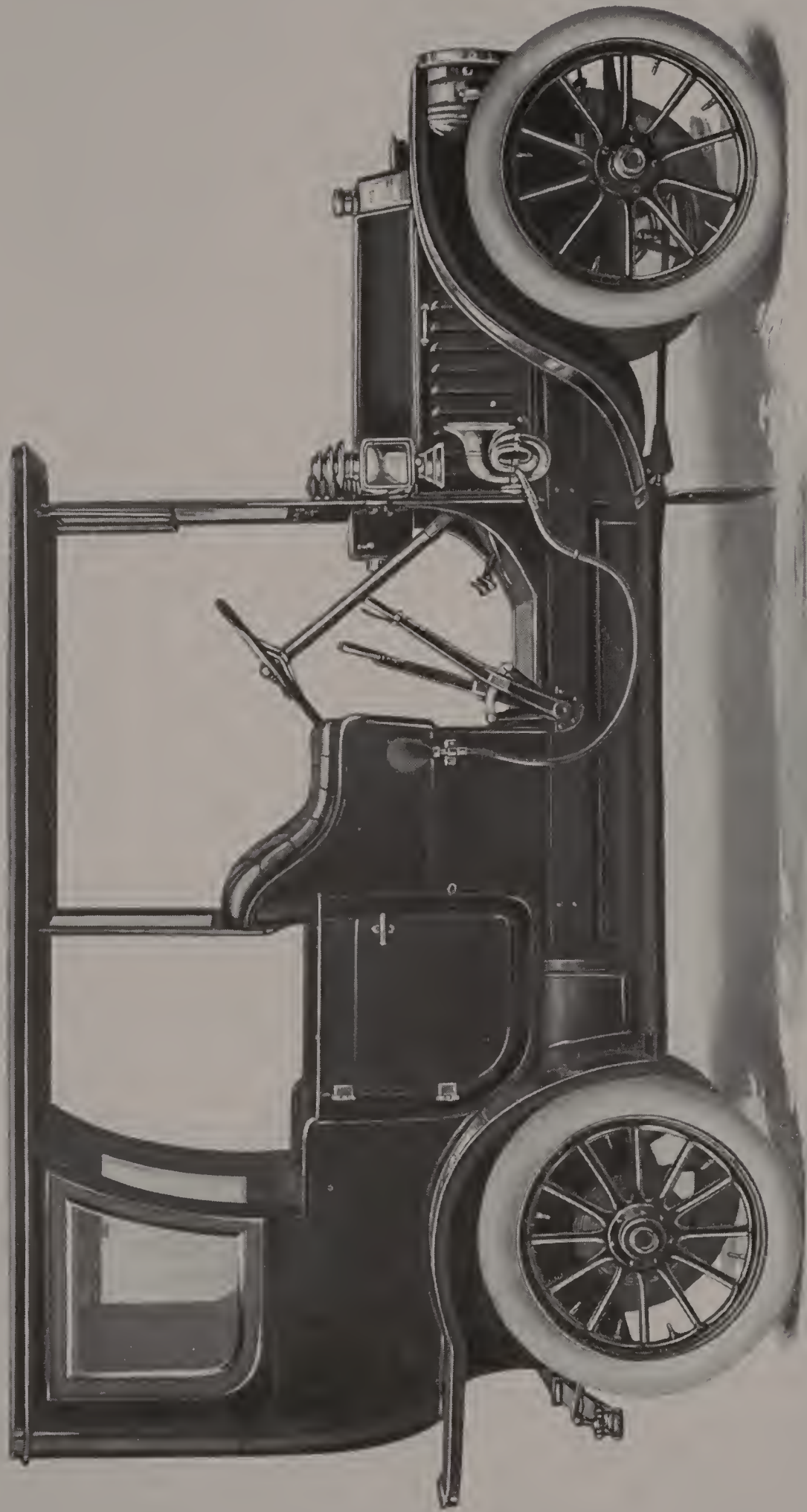
**To reach the port of results in ADVERTISING you must have a skilled ARTIST at the wheel**  
**GRANT WRIGHT**  
DESIGNER & ILLUSTRATOR  
Tribune Building New York

**PAUL PHILIP GOOLD**  
**GENERAL ILLUSTRATING**  
 Specialist on Army and Navy Matters  
 Tel. 1630 River. 2314 BROADWAY, N. Y.

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 DESIGNER  
 Tel. 3120 Gram. 27 EAST 22d ST., N. Y.

HELP WANTED

High-Class Photo Engravers who can deliver. Write stating experience, habits, salary expected and where last employed. Box 12, Photo-Engraving Art.



A nicely retouched and carefully finished automobile halftone from The Central Engraving Company, Cleveland, Ohio.



## A COMPLETE COST-KEEPING SYSTEM

Address Read to the Convention of the I. A. P. E.

By A. W. RATHBUN,

*Treasurer, Inland-Walton Company, Chicago*

THE subject assigned to me by your genial President is one that I am very much interested in, and one that for the past five years I have been trying to make a practical application of in both the printing and engraving business, but it is so large and has so many different divisions that it is only possible to consider it in a general way at this time.

When the subject of an accounting system was first suggested to one gentleman who opened up an engraving plant he doubted if such a thing could be attached to an engraving business—had never known of it being done and did not understand what there was to get the cost of, as he had always understood that if you paid out for labor, material and expenses four thousand dollars in a month and you sold forty-five hundred dollars' worth of engravings you must make five hundred dollars, and that was the only accounting system he had ever heard of in the engraving business. What kind of work was most profitable, what work, if any, was done at a loss, what proportion of a job was labor, what was material and shop costs, and what relation did the office and selling expenses bear to the finished product when it left the work rooms, all these were entirely unknown quantities and seemingly it was considered too much of a bother to try to find out what they were.

The great aim of those employed in *selling* engravings seems to be to get the order—if the solicitor can not get it at what he considers the price should be, then take it at or below your competitor's price, but get it anyway. If there is any question about a charge for extras on account of retouching, special outlining, etc., give the customer the benefit of the doubt, as otherwise you may lose the job, and if the price is a little low still the solicitor knows that his house has no means of getting at the exact cost of the finished job and it will help his total sales, upon the showing of which he expects a salary increase soon,

also keep the shop busy, and even if his house should lose a little on this particular job they will make it up on something else.

And now, gentlemen, to be perfectly honest with yourselves, how many of you have in your establishment an accounting system that will enable you to check up your solicitors' jobs so that you will know positively if you have made or lost money on each and every order?

To get at the proper selling price for your product the first thing necessary is to get at the *cost price*, not what you *guess* it cost, but what *the figures show it costs*. Hence the effort to find and put into use a proper cost accounting system.

Your President has attempted to flatter me by making the title of the subject assigned to me "A Complete Cost-Keeping System." Now, the system we use is not a perfect one, but it is the best one we have been able to find, and we are going to continue to use it until we can find a better one.

The different headings or branches of a system may be put under the following divisions: Labor, Material, Fixed Shop Charges and Office expenses. All productive labor can be charged against each job as it goes through the shop as one labor item, but we have seen fit to separate it as follows: Art, Photo, Printing, Half-tone, Line Etching and Finishing. These can be arrived at quite accurately by using a daily time report for each workman and transferring the figures to the job tickets the next day, the troublesome item here being the matter of idle time; and the question being: Should the price per hour charged on the job be increased over the amount paid to the workman to absorb the idle time that is unavoidable, or should the charge on the ticket represent the exact amount paid the workman and the idle time be absorbed in the percentage provided to cover cost of material and fixed charges?

Part of the materials can be correctly measured and charged on each job, but there is a proportion which cannot be so

charged, particularly the chemicals, inks, etc. We have been figuring a percentage to cover cost of materials in each department, together with the cost for fixed charges, which includes the proportion of Superintendents', Janitors' and Boys' Wages, also Depreciation on Equipment, Insurance on Equipment and sundry minor expenses, including oil, repairs, etc.

Having charged the job with the labor that belongs to it and a percentage on that labor to equal the cost of material and such other items as are enumerated in the preceding paragraph, and added them together, you have a total which represents the cost only. If it has been necessary to purchase items for a job, such as a drawing or a photograph taken outside or some printing done, these should be added to the shop cost.

Now you have an item to provide for, to wit: Overhead expenses, comprising Rent (also light, power and heat where same is not included in the rent), Delivery Charges, Advertising, Salaries of Officers, Solicitors and Office Help and incidental office expenses. The cost of the job as it leaves the work room is not the cost of the job to your *firm*. Each piece of work *must* bear its proportion of overhead expenses. I believe the percentage plan must be used for a proper solution of this—add to the shop cost of each job a percentage that will equal all of the overhead expense items. As an example, we will suppose that the labor for a month in an engraving plant is \$2,000, and the material used \$1,000, making the shop costs on the month's work \$3,000. The Rent, Office Salaries and Office Expenses for the month are \$750. This equals 25 per cent. of the shop cost of your product and makes it necessary to add 25 per cent. to the shop cost of each job to find the entire cost of the job. For instance, a job upon which the shop cost was \$40 would cost, with its proportion of office costs added, \$50. Now add to the \$50 what you think you should have as a profit for the risk of conducting a business, or if you are doing business "just for fun" sell it at \$50 or less.

Do not be misled by the idea that the percentages mentioned heretofore are items of profit, for if correct they are not, but

represent actual outlay of cash, for which you must have a return on the goods you sell. First find your cost and then add your profit, and it might be added that if you start out with the fixed idea that you must try to make a profit on each piece of work you handle, "The chase by the sheriff will always be a stern one."

As an example of the method of showing the costs by departments I submit the following examples:

| Example I                    |                        |         |        |
|------------------------------|------------------------|---------|--------|
| <i>Minimum Zinc Cut</i>      |                        |         |        |
| Art Dept.....                | Labor                  |         |        |
|                              | *D. & G.....           | 20%     |        |
| Photo Dept.....              | Labor .....            |         | .11    |
|                              | D. & G.....            | 70%     | .08    |
|                              |                        |         | .19    |
| Printing Dept....            | Material               |         |        |
|                              | Labor .....            |         | .12    |
|                              | D. & G.....            | 25%     | .03    |
|                              |                        |         | .15    |
| Half-tone Dept...            | Labor                  |         |        |
| Line Etcher.....             | Labor .....            |         | .08    |
|                              | D. & G.....            | 55%     | .04    |
|                              |                        |         | .12    |
| Finishers .....              | Fin. Labor..           |         | .42    |
|                              | D. & G.....            | 30%     | .12    |
| Outside Bills.....           |                        |         | .54    |
| Total Labor and Material.... |                        |         | \$1.00 |
|                              | Office Sundries.....   | 33 1-3% | .33    |
|                              | Express .....          |         |        |
|                              | Car Fare.....          |         |        |
|                              | General Expense.....   | 8%      | .08    |
|                              | Com. and Discount..... |         |        |
|                              |                        |         | .08    |
|                              | Total cost.....        |         | \$1.41 |
|                              | Gain .....             |         |        |
|                              | Loss .....             |         | .91    |
|                              |                        |         | .50    |
|                              | Amount of bill.....    |         | .50    |

| Example II                   |                        |         |         |
|------------------------------|------------------------|---------|---------|
| <i>3 Half-tones</i>          |                        |         |         |
| Art Dept.....                | Labor                  |         |         |
|                              | D. & G.....            | 20%     |         |
| Photo Dept.....              | Labor .....            |         | .77     |
|                              | D. & G.....            | 70%     | .54     |
|                              |                        |         | \$1.31  |
| Printing Dept....            | Material               |         |         |
|                              | Labor .....            |         | .33     |
|                              | D. & G.....            | 25%     | .08     |
|                              |                        |         | .41     |
| Half-tone Dept...            | Labor .....            |         | 1.06    |
|                              |                        | 90%     | .95     |
|                              |                        |         | 2.01    |
| Line Etcher.....             | Labor                  |         |         |
|                              | D. & G.....            | 55%     |         |
| Finishers .....              | Fin. Labor..           |         | .73     |
|                              | D. & G.....            | 30%     | .22     |
|                              |                        |         | .95     |
| Outside Bills.....           |                        |         | .95     |
| Total Labor and Material.... |                        |         | \$4.68  |
|                              | Office Sundries.....   | 33 1-3% | 1.56    |
|                              | Express .....          |         |         |
|                              | Car Fare.....          |         |         |
|                              | General Expense.....   | 8%      | .37     |
|                              | Com. and Discount..... |         |         |
|                              |                        |         | .37     |
|                              | Total cost.....        |         | \$6.61  |
|                              | Gain .....             |         | 4.49    |
|                              | Loss .....             |         |         |
|                              | Amount of Bill.....    |         | \$11.10 |

\* Depreciation and General Expense.

Were it possible to turn out work for a month and then add all costs together and divide them according to the amount of work delivered before sending bills to your customer, you would not need to use percentages, but as bills must be rendered promptly we must be governed by our experience in past months for a basis in getting at the expense of producing work.

One thing we have proven conclusively, and that is that the minimum cut idea, either half-tone or zinc, at the prevailing prices in our city, especially where run singly, are *always* losing jobs, and you can safely figure that you are losing on each one you deliver to a customer from 100 to 300 per cent.

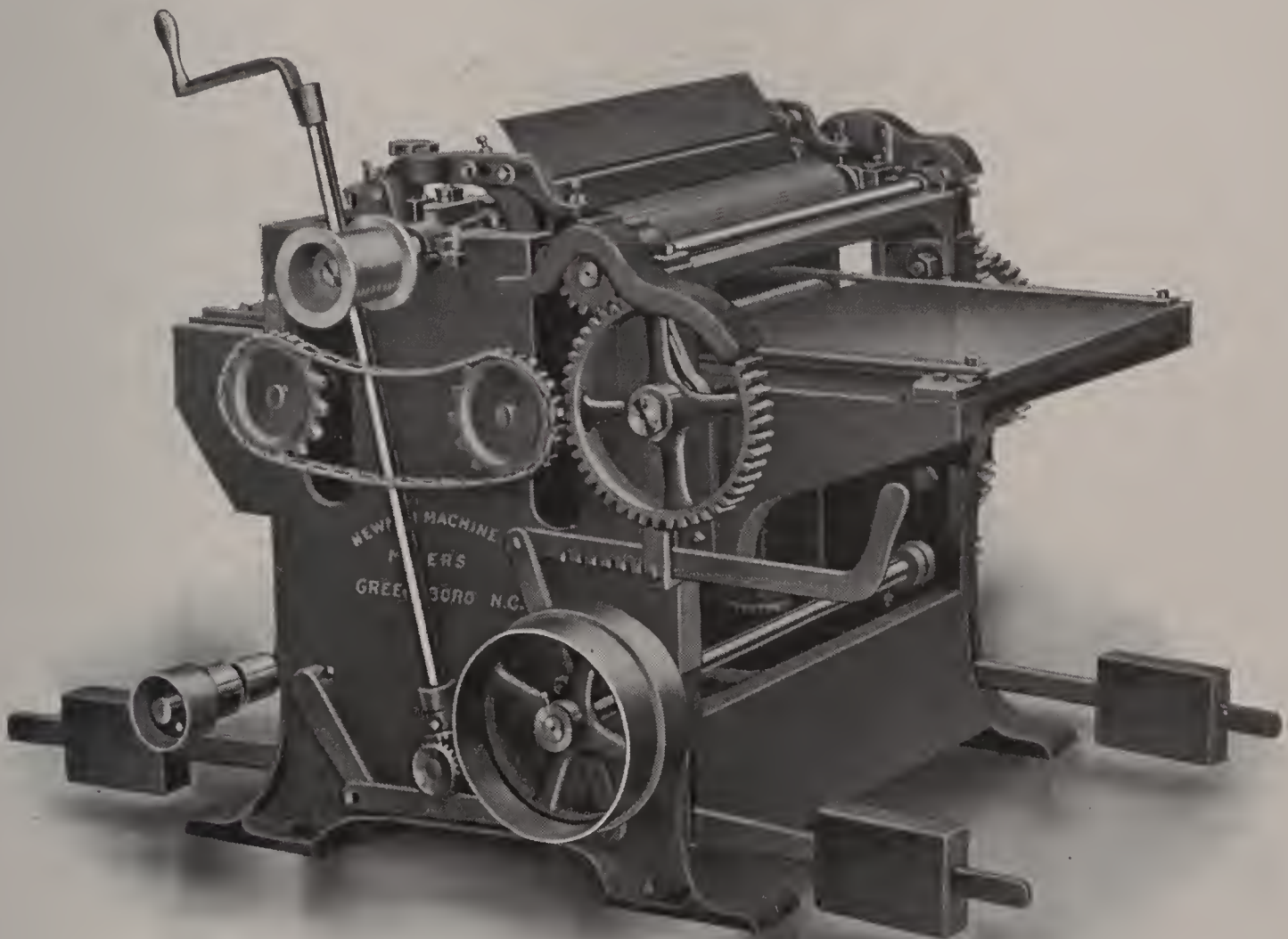
Do not make the mistake of expecting that by putting in a cost accounting system you are going to make more money than you are making now unless you use the knowledge you obtain from such a system to weed out the unprofitable work and raise your prices where they are too low.

One thing more, in conclusion, by way of caution: Do not attempt to run a cost accounting system that is not a part of the general bookkeeping department of your establishment, for it must be treated as a part of your general ledger accounts to make it authentic and reliable.

---

#### CONVENTION OF THE E. P. E. A. OF AMERICA

The Executive Committee of the Employing Photo-Engravers of America met in Detroit, Sunday, July 25th. From reports which have been received from the various members a large attendance is expected at the coming convention to be held August 20th and 21st. The headquarters will be the association rooms, top floor of the Stevens Building, Detroit, Mich. Elaborate arrangements have been made and an interesting and instructive program has been outlined. There will be a special entertainment committee to look after the welfare of the ladies.



Specimen Machinery Illustration from Baltimore-Maryland Engraving Co., Baltimore, Md.

## HINTS AND WRINKLES

From "PROCESS WORK"

**Over-Iodized Collodion**

Here is a very useful "wrinkle" for the operator. The collodion will often get over-iodized, and when it is in that state it is usually useless for tone work until it can be put right again. Take a strip of zinc and thoroughly clean it with pumice powder so as to remove all the dirt and oxides formed by its contact with the air. Then place it in the collodion and watch the result. After a few hours it will become apparent that it is absorbing the iodides, as the collodion will begin to assume that yellowish tint, which the operator is so glad to see

**Copying Tintypes**

Occasionally an operator may have an old tintype photo to reproduce (generally they want them enlarged somewhat) direct. If he carefully wipes same over with a little vaseline and takes same through an Aesculin screen, or 1 per cent. solution of quinine sulphate, as for Chinese white, he will find it reproduce with a very much better result. The vaseline brightens up the shadows and the filter eradicates a lot of the marks and stains usually found on same.

**To Reproduce a Very Flat Original**

If you told a good many operators to move one's screen during exposure they would be, the least to say, shocked at the idea. But here is a wrinkle where it can be done to advantage. If you have a very flat copy to reproduce put the screen away half as much again, viz., supposing it is one-eighth away proper, put it three-sixteenths away, and expose very short so as not to touch the half-tones, then place your screen in its proper place and expose for half-tones in the ordinary way, and when the plate is developed you will have a negative with plenty of pluck in it instead of the flat one you would have got in the ordinary way. A little practice and you will be surprised at the nice crisp negatives you get from a flat subject.

**Scum on Negatives**

Operators are very often troubled with a scum over their negatives. Especially is this the case when a negative has to be forced up. The hot weather is also responsible for this trouble oftentimes. To prevent this, try first a few drops of acid in the silver bath, but should that be found of no avail the operator will find that he can overcome the difficulty by putting a little Nelson's gelatine in the developer. Should

this fail, there must be something radically wrong, and as a last resource I suggest a few drops of potassium cyanide solution in the bath. Of course, it will turn a milky color at once, and must be filtered. This is the best way for clearing a thoroughly bad bath.

**Acid For Line Work**

With regard to "Lineop's" article in last month's "Process Work," I have never heard of operators washing their negatives 15 minutes. Now if he, after intensifying with lead, flows a little nitric acid (1 to 40) over his negatives he would not even have to wait three minutes, but just rinse the lead off and flow over the above, and when rinsed again it is ready for blackening.

**HE KNEW**

Teacher—You have named all the domestic animals save one. It has bristly hair, it is grimy, likes dirt, and is fond of mud. Well, Tom?

Tom (shamefacedly)—That's me.—*Cleveland Plain-Dealer.*

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(Continued from page 129.)

rather than the so-called half tone, as 21 3-10 is 1-12 of 256 the octave.

By counting the so-called half tones E-F and B-C as one each, we have—

C-D-EF-G-A-BC the harmonic number 6, the  
1 2 3 4 5 6 diatonic scale.

By placing sharps after C-D-F-G and A, we have the chromatic scale or the harmonic number 12. This harmonic number has been used by man perhaps before the Pyramids were built. All calculations on time, art, architecture and religion are based upon the odd and even in numbers, which comes about in a very natural way. Nothing can be more simple than to draw a circle with a forked stick or compass. Its diameter is approximately 1-3, its radius 1-6 of the circumference. By connecting the points of the division three, we arrive at the first geometrical form or triangle; by connecting the other three, we produce the star (may this have any connection with the star the three wise men saw?).

Again, a line drawn from the center through the points where the lines cross to the circumference divides the circle into

12. Originally there were six signs in the Zodiac, when it was found that the moon had twelve phases! Twelve signs were placed in the Zodiac, hence we have the 12 months, 12 hours, 12 tribes, 12 apostles, 12 kings, 12 sounds, etc. But this is another study, and has to do with the harmony of forms. It goes to show that harmony is to be found in numbers, and if music, architecture, chemistry, religion, etc., have used it to good advantage, I see a good reason for applying it to the selection of color harmonies, which will be taken up in the next article.

### GIVE THESE THEORIES A TRIAL

A house which is a prompt collector and shows its customers thereby that their accounts, which constitute its business, are watched, will command more respect than the careless house and will invariably be paid first.—*System.*

\* \* \*

By ability to collect is not meant the power to extract money from a refractory and unwilling debtor, but rather the ability to impress and train the debtor, willing or stubborn, in such a way that he will unconsciously get into the habit of paying promptly.—*System.*

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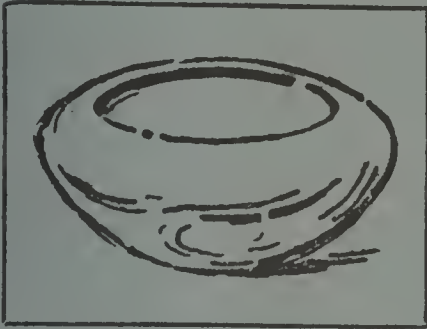
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# Photo-Engraving Art

The Hillside Press, Publishers, Richmond Hill, N. Y.

Volume 1

SEPTEMBER-OCTOBER, 1909

Number 11-12

## CONTENTS

|   |     |
|---|-----|
| Frontispiece, PEACE AND PLENTY.....                                   | 150 |
| SCIENCE AND MONEY IN PHOTO-ENGRAVING<br>By N. S. AMSTUTZ.....         | 151 |
| ROUTING OF THE POWERS PHOTO-ENGRAVING CO.....                         | 154 |
| HOW CUTS ARE MADE, THE PREPARATION OF COPY<br>By FRED J. WILLOCK..... | 155 |
| COLOR AS APPLIED TO PRINTING<br>By HARDESTY G. MARATTA.....           | 159 |
| EDITORIAL—ENTERPRISE .....  | 162 |
| FOCUSING, OLD AND NEW<br>By ARTHUR FRUWIRTH.....                      | 164 |
| E. P. E. A. OF A. CONVENTION.....                                     | 168 |

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# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users of Photo-Engraving

VOL. I., NO. 11—12.

SEPTEMBER-OCTOBER, 1909

## SCIENCE AND MONEY IN PHOTO-ENGRAVING

By N. S. AMSTUTZ

IN THREE PARTS—PART I.

**T**HIS craft has much to look back to on account of past achievements. However much the fundamental phases of the business have been practically recognized, there is a larger field in the future which will open to the widening touch of technical methods and the greater use of scientific procedure. This will lead the anticipation of your fondest hopes toward the realization of ethical, commercial, scientific and technical attainment.

It is well that one can individually or collectively, as in the capacity of this organization, lay claim to that striking motto of modern Germania, under which she proudly aims to be in the vanguard of the world's progress. "Vorwärts, immer vorwärts"—Onward, always onward.

The subject, "Science and Money in Photo-Engraving," is an all inclusive one, for it is impossible to consider any phase of the profession without encountering either a scientific or monetary question. It must be related to much or little science, or again to much or little money; thus it is apparent that whether more or less of one or the other is found in the daily exemplification of the business it is only a variation in degree and not one of classification.

There has come to be a serious misunderstanding as to the import of the words "science and scientific." The layman looks upon everything of this kind with a certain awe as being quite beyond his ken. In the first place he errs in considering science as relating only to theoretical aspects of a given subject. In the second place a still greater error is found in the assumption that only

centers of learning with elaborate appointments can or perforce are legalized by custom to be allowed to call themselves scientific and to stand for the only exemplification of science. Likewise there is a misconception of the monetary aspect of the matter, for the monetary value has not alone to do with what is called dollars and cents, pounds, shillings and pence, marks, pfennigs or francs and centimes, but with that higher phase of all effort, human interest.

Any proposition shorn of this element may for a time show much on the right side of the ledger, and may even in a semi-automatic manner continue to produce a tangible balance of profit, yet in spite of all the directing that pure and undiluted system may apply, if there is not the leaven of human interest, individual and collective, the whole movement will shortly become top-heavy and at no distant day crumble and fall, carrying with it the hopes of those who stood sponsors for its continuation.

This element of human interest is one of the most valuable assets that any business can possibly have. In fact it is so commonly considered a necessary qualification that its existence is generally assumed, but very seldom known. So much is made of the tangible that the subtle and all pervading touch of human interest is lost sight of in the rush of modern commercialism.

The fundamental aspect of this part of the question applies with equal strength to the proprietor and the craftsman, and when co-existent with both it must inevitably produce the very highest type of industrialism.

Its absence is found, in the case of the proprietor, to produce a driver, a mercenary who is bent on grinding out the last vestige of effort from those on whom the continuity of his enterprise inevitably depends, so as to add farthing on farthing of monetary gain regardless of the vital element of perpetuity. On the part of the craftsman its absence is found to develop the clock-watcher, the derelict who simply drifts, becoming a menace to all others who need to steer their ships of daily effort with continuous application through the seas of difficulties and problems of one kind or another with a steady helm and the rigging in the best order, so as to sail through the practical and technical difficulties with the satisfaction that "work well done" inevitably brings.

When this co-ordination of interest and a genuine loyalty of man to man exists, the proprietor may know that those on whom he depends for commercial success have the details of the business at heart, and conversely the craftsman will realize that his efforts are appreciated, and both will know that they are absolutely essential to each other in the making of a "going concern."

Reverting to the scientific aspect of things, let us look into the matter in detail and ask, what does science mean? What does it stand for. Primarily it stands for method, order, regularity, etc.

The highest authorities say that science in its most comprehensive sense only means *knowledge*, and in its ordinary sense means *knowledge reduced to a system* or, in short, *classified knowledge*. One may have bushels of information, but little knowledge, and no science, because the information is not available, cannot be used to any advantage, for as has been noted, classification is absent. This is the difference between being scientific and unscientific, hence a jumble of facts and materials simply stands for psychical and physical disorder.

As soon as order, method and definite arrangement is introduced the procedure becomes scientific because of these very steps and not through the exercise of some occult or mysterious influence having an inherently superior potentiality.

From this it will be seen that every phase of the production of illustrations must, and inherently is scientific to the extent that it

complies with these fundamentals, and there is no aspect of the craft, personal or impersonal, that does not come under this designation.

Let us at this point note that as "time is money" the conservation of mental and physical effort, if done systematically, must perforce be valuable in the twofold sense of science and money, from which is found the justification for selecting the title of this address.

In considering a concrete example let us in the first instance suppose that one is contemplating the establishing or expansion of a photo-engraving business, he must be scientific at the very outset if he has any hopes of making any money at all. He must consider in regular sequence:

- 1st. The demand for business in the proposed location—section of country, etc.
- 2d. The capacity of the plant for immediate use and allowance for future expansion.
- 3d. The required investment to put into effect the plans made.
- 4th. The selection of a staff to man the enterprise.
- 5th. The procurement of the necessary materials and supplies.
- 6th. The organization of the clerical details necessary to record the daily transactions.

Supplementary to this is found the necessity of arranging for the following:

- 1st. A proper compensation for daily supervision and the necessary administration.
- 2d. An adequate basis of compensation for the operative force.
- 3d. An efficient and economical administration of the materials and supplies department, also comprising the required power arrangements, light, sanitation, etc., etc.

From and through the proper co-relation of these divisions there must result:

- 1st. A reasonable interest return on the whole investment.
- 2d. An additional earning, at least 10 per cent., to cover depreciation of machinery, plant, etc.
- 3d. An additional earning to cover the retirement of the money invested within a given time.
- 4th. The establishment of a reserve or contingent fund to meet extraordinary exigencies.

The various divisions just listed show the different phases of every photo-engraving, or for that matter every business undertaking, and the list enables one to see just what must be provided for. In the main the details of all photo-engraving establishments are practically the same. Zinc must



be bought as well as copper. Wood, chemicals and apparatus, comprising cameras, arc lamps, lenses, screens, sensitizing baths, planers, edgers, bevelers, routers, proving presses, grinders, motors, etching troughs, heaters, etc., etc., must be procured. All of these and many minor matters are necessary before ever an engraving can be turned out.

The cost of all the features enumerated must be covered proportionately by the selling price of the engraving because of being ready to execute one or a thousand orders, and they cannot be overlooked even though the proportionate cost per order is obviously a largely varying one.

A correct handling of the details of accounting is a phase of the business that requires specialized scientific treatment.

There is just as much science in the careful analysis of costs of all kinds all the time, and the profits now and then, as there is in the consideration of the most complex problems in mechanics, electricity, chemistry or astronomy, for what is accounting without system, method or order? It comprises a definite relation of costs to profits, a detailed listing of various minor costs with respect to larger ones, and these in turn with the output or the business "turn-over," the relation of labor, the costs of chemicals, of supplies used in a given time to the total output. The administrative charges, the maintenance charges and the fixed charges to the annual total of all invoice items, etc. All of this is included in the office part of an undertaking, and in the main it is absolutely essential to know the subdivisions mentioned and in many cases recognize others as their need may arise from time to time.

A most valuable adjunct in this field is found in what may be called a "business barometer," which will show the features of any business in weekly, monthly, semi-annual, annual or other periods. The great importance of this plan is found in the fact that the *trend* of events is instantly shown and any given period can be immediately compared with any other in a moment and existing variations noted immediately, thus the manager can see graphically, day by day, how the business is proceeding. This "barometric" record is made up of total values supplied by the accounting depart-

ment, and as it deals with totals, the manager is not troubled with specific details until some decided trend in the graphic curve record just what part of any department requires attention.

As an accessory to modern accounting this method will show pictorially in the most conclusive manner the condition of any business that is "pictured" in the technic of graphic curves, its great value lies in the fact that the relation of all the factors, or as many as are desired, are seen at once. The trend of events is foretold in the most positive "language."

This is the kind of information that the busy man needs and wants—something on which he can prognosticate future eventualities with a fair margin of probability.

If he wants to see the future in the light of the present and the past, under the assumption that existing conditions will remain the same, he can with great definiteness foretell what their continuation will bring forth in one, two or three months, or even a whole year in advance.

One of the managerial advantages of this method lies in the fact that the broad general relation of the various items are shown without the laborous use of exacting minutiae of details. It is quite remarkable how pointedly the information is given so as to be recognized at a glance. The rapidity and compactness of the method should commend itself to the busy proprietor who desires to know the "lay of the land" with respect to his business.

The purely physical record may be expressed in any desired nomenclature so that the photo-engraver may use square inches, or pounds of copper and zinc; ounces, grains or grams of the more expensive chemicals. Gallons of etching solutions, etc., and the time when made up so that if co-ordinately a record of the specific gravities are marked alongside of the square inch output it will at once be apparent how much the output changes with the weakening of the baths, etc. Numerous other interrelated factors can be readily ascertained if marked day by day. When the trend of events is unfavorable it is time enough to make specific inquiries and consider detailed items of daily procedure.

(To be continued.)



*Photo by Charles Kanaian.*

Outing of the Powers Photo-Engraving Company, N. Y., at Seacliff, L. I., August 22, 1909.

## HOW CUTS ARE MADE

First of a Series of Articles in Which There Will Be Much Valuable Information for the One Who Buys and Uses Engravings

By FRED J. WILLOCK

### The Preparation of Copy for Reproduction

THE preparation of copy for reproduction by the photo-engraving process is a subject about which one could write volumes and then only a small portion would have been said. There are, however, certain salient points that come up every day which if thoroughly understood would be of great assistance to the buyer of the product as well as to the producer.

In this series of articles the writer will deal only with subjects which are to be reproduced for printing in one color. Later on he will take up the preparation of copy and the making of plates for color work in two or more colors by the halftone and zinc processes.

RETOUCHING—Just because an artist calls himself a retoucher it does not make him one. Too much stress cannot be placed upon the necessity of the retoucher knowing the photographic tonal values of colors. It is a common mistake for an inexperienced retoucher (?) to put pure white paint on a photo which has a decidedly red or yellowish tone. The proper procedure would be to mix a little red or yellow with the white as the copy might require, so that the whole photo will have the proper color tonal value. Then and only then is it possible for the photographic operator to expose for the highlights and the details which appear in the darks or shadow parts of the original.

When pure white is placed alongside of the dark red of a solio print the result is that it "flashes" up on the negative, and if the

operator exposes for the detail, the white will be so over exposed that the negative will be useless.

There is one fact which must not be overlooked and with which apparently but few artists are acquainted, and that is that the photographer is exposing for the *lights* in a picture, and when the contrasts are too severe and not properly graduated in tonal values it is impossible to make satisfactory negatives. We will treat more fully on this matter when we take up the making of halftone and line negatives in a succeeding article.

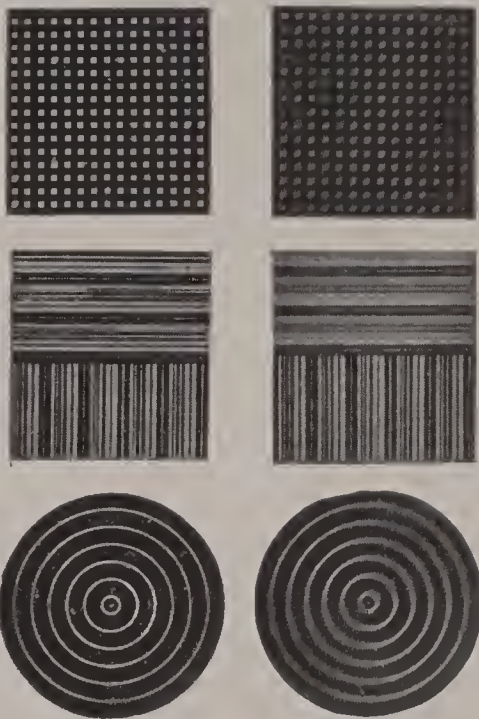
Very little retouching of the right kind will do more to assist toward the production of snappy, brilliant plates than an excessive amount of "just retouching." It would be well to add, perhaps, that it is not "how much?" but how little, and how well. The retoucher should realize—and all

really good ones do—that he is only the "first assistant" and not the "whole show."

The possibilities of the scope of retouching are shown in figures 1, 2 and 3. Figure 1 is a photograph of a bathroom in an unfinished building. The contractors were anxious to effect a sale before the apartments were completed, so the bath tub and basin—the only two parts which had been delivered by the plumbers—were arranged in a vacant room in about the position they were to occupy in the bathroom. The artist was then given a plan of the bathroom and some fixture catalogues, Fig. 2, which



FRED J. WILLOCK.



Courtesy Bausch & Lomb Op. Co.

The right half represents the marginal portion of a so-called test chart, an assemblage of lines and circles, taken with a Rectilinear lens; the left the same taken with an anastigmat. The blurring is due to the astigmatism of the Rectilinear lens.

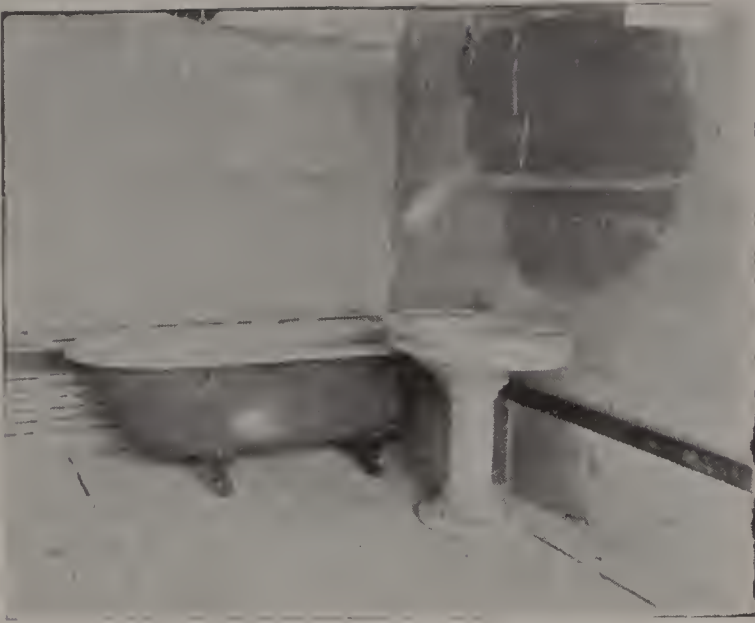


Fig. 1.

We are indebted to the Powers Photo-Eng. Co., N. Y., for the loan of the plates on this page.



Fig. 3.

In figures 4 and 5 are shown two photographs of the same machine. One is in focus, and the other not only out of focus, but distorted. These two latter faults are common ones when an amateur photographer, usually a friend, with a folding camera, equipped with a rectilinear or even a single meniscus lens, is called in by the economical customer to take the pictures of his machine in order to "save money."

The customer usually effects the saving on the first cost, but it is odds that if he uses the photos taken by the amateur it will cost many times as much to retouch and produce satisfactory results as it would have cost in the first place had he delegated an experienced commercial photographer with his "lens for every purpose" to do the job.

Part of every commercial photographer's equipment is an assortment of wide angle and long and short focus lenses. Some photographers have an assortment of as many as twenty lenses.

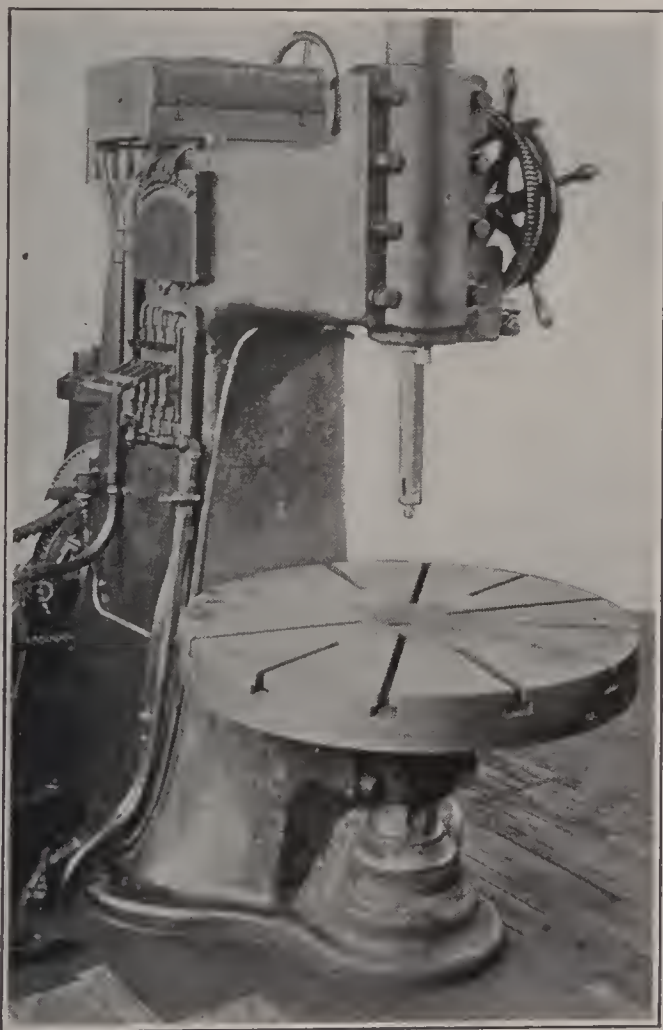
When taking photographs which are to be used for reproduction by the halftone



Fig. 2.

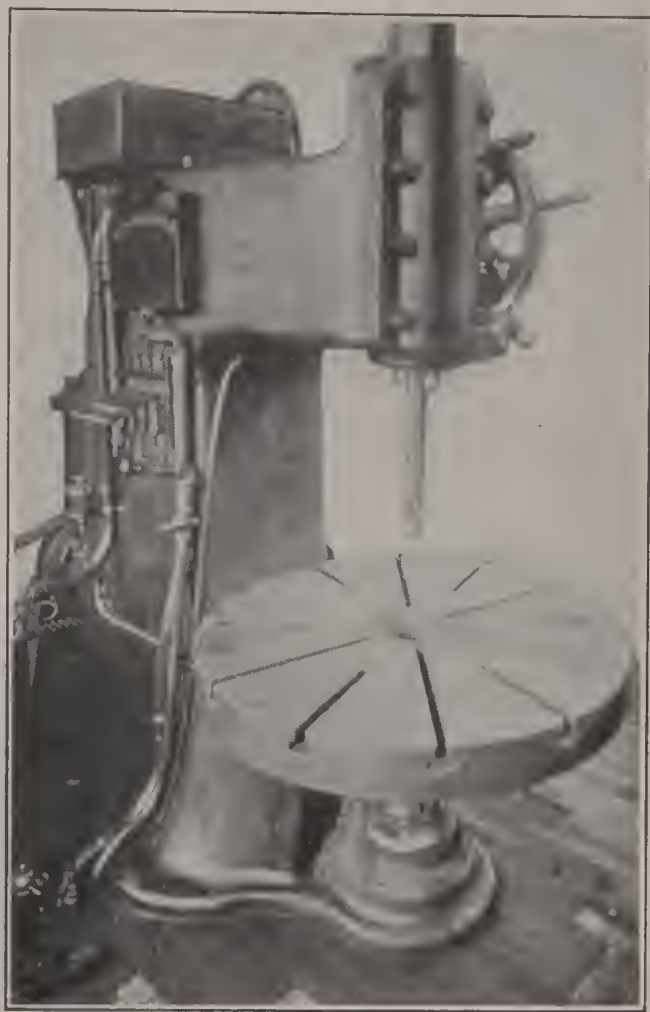
process for commercial purposes it cannot be too heavily emphasized that it is necessary that the work be done by a photographer who understands his business. By this is meant one who makes negatives that are sharp and in which the detail is well defined and the parts all in perfect perspective. Once these details have been properly taken care of and a good print made from the resultant negative the necessity for excessive retouching is reduced to a minimum. The cost of a good commercial photograph varies, but it is usually somewhere between three and five dollars. Occasionally, if the subject is a difficult one or at a great distance from the studio, a photographer may charge more for an order of one. Usually on three or more there is a pro-rata reduction on all after the first one, which is usually considered the minimum charge.

Many inexcusable (?) errors are made by engravers' photographers when copies are marked with percentage reductions, such as "1-3 off" or "1/4 reduction" or "2-3 size," "one col.," "two cols.," etc. In a majority of cases the operator misconstrues the



*Courtesy Gatchel & Manning, Phila.*

Fig. 4. An unretouched photo showing a drilling machine in focus and perfect perspective.



*Courtesy Gatchel & Manning, Phila.*

Fig. 5. This shows the same machine distorted and out of focus.

marking, and when a copy is marked 1-3 off, the customer will be chagrined to receive a cut 1-3 the size.

Many customers, who under ordinary circumstances display average intelligence when dealing with engravers, do not seem to realize that the "one column" might mean anything from 1 5/8" to 5" or more. They seem to forget that the engraver has many customers who are publishing periodicals and that the width of the columns of the different publications are as varied as the whims of the publishers will allow.

In the writer's opinion there is only one proper way to mark a copy, and that is to designate as plainly as possible the actual inches, width or height and the amount to be included in the dimensions marked. If a copy is to come within a certain proportion it should be so marked. When a copy is marked as Fig. 7, the usual procedure is to bring it "within" if the proportions do not allow of the reduction. An example will illustrate: A photo 8 x 10 is marked to be reduced to 3 1/2 x 5. Reducing the height to 5 in. will make the width 4 in. The photographer following instructions will reduce the width to 3 1/2 in. and ignore

the height marking entirely. The result is that the proportions will be "within" the specified size and will come  $3\frac{1}{2} \times 4\frac{3}{8}$  in. If on the contrary the customer had marked his copy  $3\frac{1}{2} \times 5$  and had added "crop to fit," the photographer would have taken the full height or 5 in. and cut enough off each side to make the proper width. No photographer will take the liberty to crop a picture unless he has had instructions to do so, and if both height and width are indicated unless the copy is in proportion the "within" rule holds good.

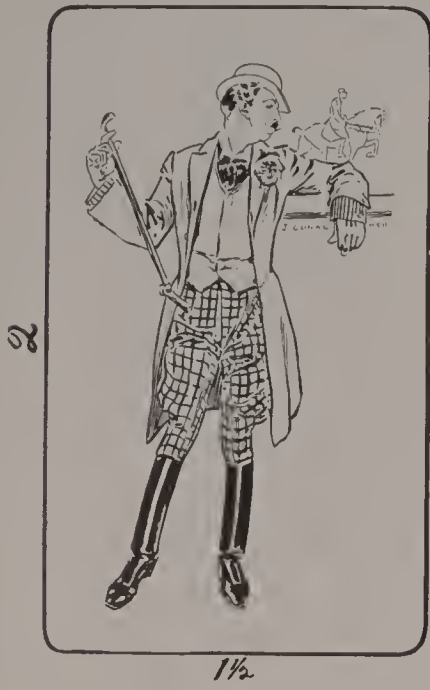


Fig. 7.

"same size." It is easy to imagine the customer's feeling if the copy is  $8 \times 10$  in., and the cut desired  $2 \times 2\frac{1}{2}$  in. Marking the copy 2 in. wide would have saved time and money for the engraver and customer.

Fig. 8 shows a common form of marking copy, which is often the cause of consider-



Fig. 9.

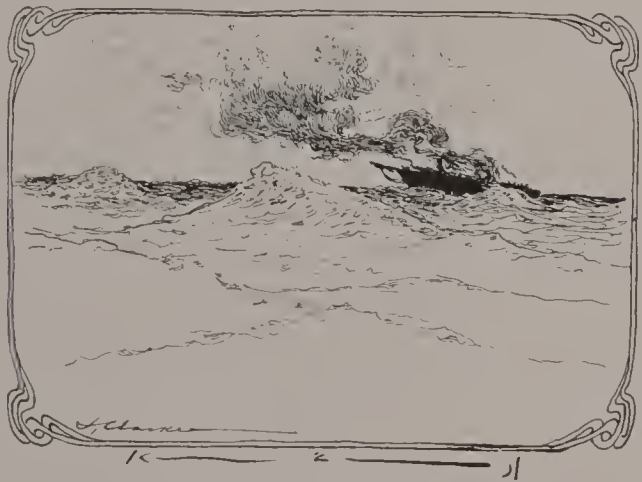


Fig. 8.

Often a customer will send an original photograph or drawing and a sample, with instructions to "make a cut same size as sample," and as often the sample is lost or misplaced and the cut is delivered the

able trouble, as it leaves the desired size in doubt. The proper way to mark it would be as is shown in Figs. 6 and 9. In Fig. 6 it will be seen that the crop marks indicate the exact portion intended to be included in the measurement; they are decisive and leave no room for doubt in the mind of the photographer. If a copy is marked as Fig. 9 the operator measures on the extreme width of the drawing; not on the margin of the paper. The whole of the picture is included in the reduction or enlargement.



Fig. 6.

## COLOR AS APPLIED TO PRINTING

### Music in Its Relation to Color Harmony\*

Third of a series of articles written especially for PHOTO-ENGRAVING ART

By HARDESTY G. MARATTA

IT was shown in the last article the simple manner in which the chromatic and diatonic scales are produced in music, by the odd and even multiples in numbers.

Diagram No. 1 shows the keyboard of a piano with music symbols; the letters repre-

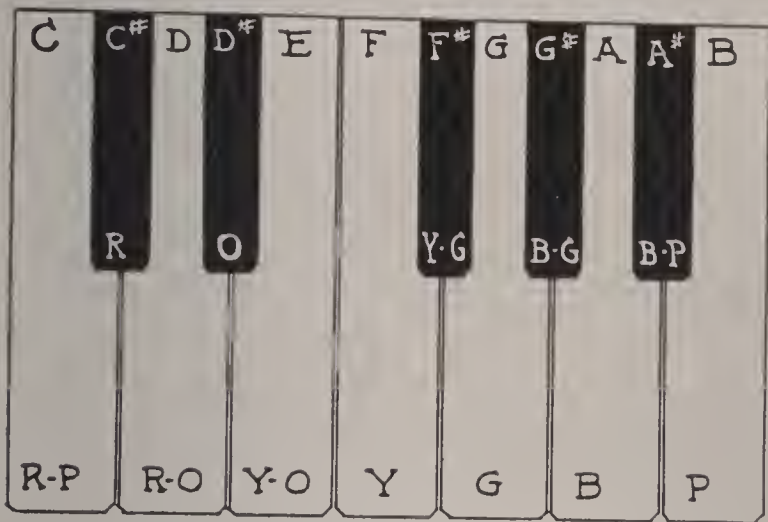


Diagram I.

sent the colors of the chromatic scale of pigments.

Any chord or triad selected from the music scales will also be a chord or triad in colors.

Those not understanding music will find diagrams No. 2 and No. 3 of great assistance in selecting both music and color chords.

Many musicians there are that can pro-

duce a chord on an instrument, yet are unable to tell why it is a chord. We cannot compare the artist with this musician. The artist may produce many agreeable color harmonies by so-called feeling, which is really accumulated knowledge. While the musician has a scientifically tuned instrument, the artist must adjust or tune his instrument each time he uses same, by mixing on the palette (Whistler said, "Get your color right on the palette and it will be right on the canvas") not according to any law, but entirely by his eye and past experience. He knows that cobalt blue and yellow ochre makes a distant gray-green, or cobalt and light red makes an agreeable distant purple, etc. These formulæ the artist accumulates by experience, and they are limited. With the use of the Margo pigments, he may quickly and unerringly find any distant color, grey, hue, tint, etc., and know exactly how he got it, so that he may repeat the same note again and again at any time. With the Margo pigments, which form an instrument in the hands of the artist, any color, hue, or tint may be selected as a keynote, and all the other colors, hues and tints that go with it in harmony, melody or contrast may be readily found. As in music, its position in

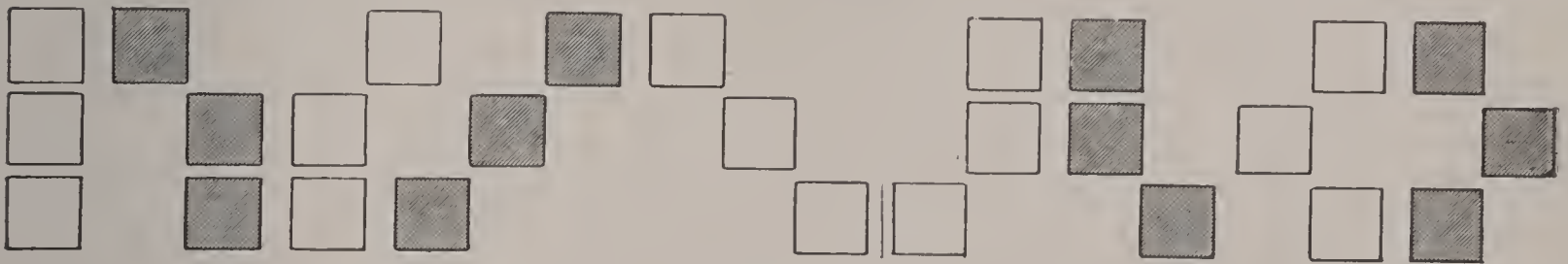


Diagram II.

|               |                |                |               |                |             |                |              |                |               |               |                |
|---------------|----------------|----------------|---------------|----------------|-------------|----------------|--------------|----------------|---------------|---------------|----------------|
| C<br>RED-P.   | C#<br>RED      | D<br>RED-O.    | D#<br>ORANGE  | E<br>YELL-O.   | F<br>YELLOW | F#<br>YELL-GR. | G<br>GREEN   | G#<br>BLUE-GR. | A<br>BLUE     | A#<br>B-PURP. | B<br>PURPLE    |
| E<br>YELL-OR. | F<br>YELLOW    | F#<br>YELL-GR. | G<br>GREEN    | G#<br>BLUE-GR. | A<br>BLUE   | A#<br>BLUE-P.  | B<br>PURPLE  | C<br>RED-P.    | C#<br>RED     | D<br>RED-O.   | D#<br>ORANGE   |
| G<br>GREEN    | G#<br>BLUE-GR. | A<br>BLUE      | A#<br>BLUE-P. | B<br>PURPLE    | C<br>RED-P. | C#<br>RED      | D<br>RED-OR. | D#<br>ORANGE   | E<br>YELL-OR. | F<br>YELLOW   | F#<br>YELL-GR. |

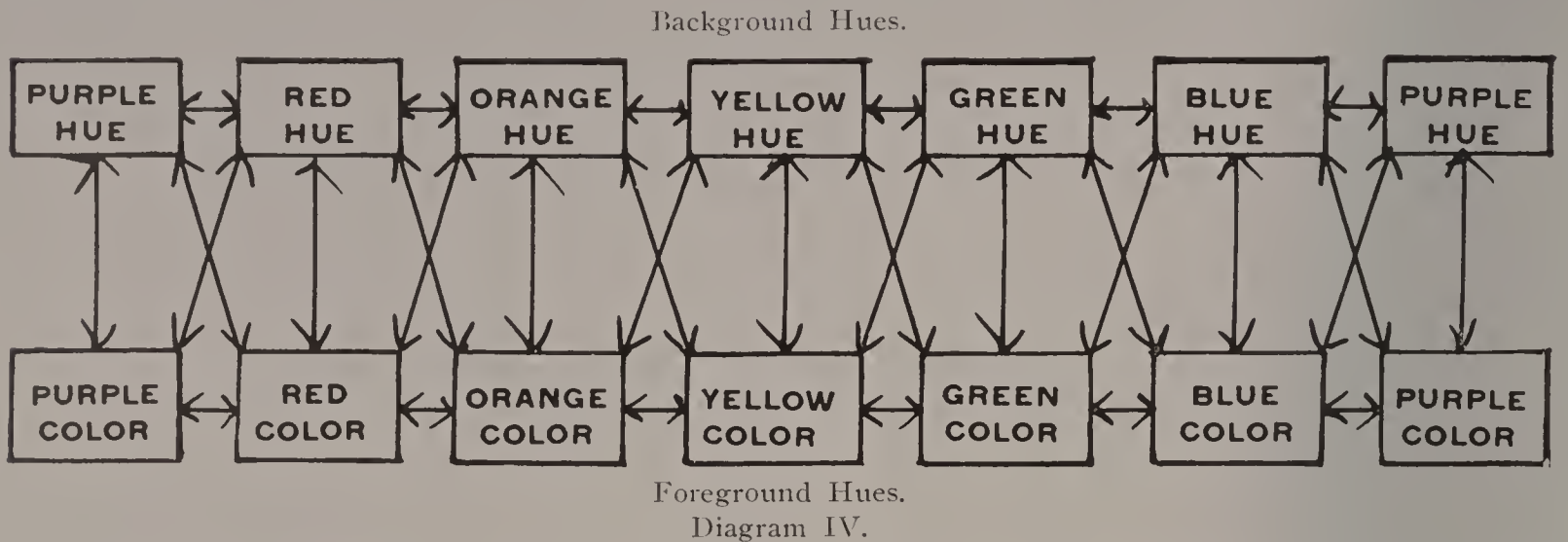
Diagram III.

\* Copyright, 1909, by H. G. Maratta, N. Y.

the scales being known, it is an easy matter to find that which follows.

To illustrate color harmonies without the use of pigments is most difficult. The chromatoscope chart illustrates the harmony, contrasts melodies, chords, etc., in a very simple manner.

The diagram No. 4 foreground colors, represent the six standard pigments. The strongest contrasts are every fourth. As red and green, orange and blue, yellow and purple. We may sharp or flat these contrasts as in music, which is selecting the tone on either side of the complement, as shown in



This chart is published at present for the use of printers. It is a scientific arrangement of colors that will enable a novice to select harmonious color combinations, it being so arranged that every seventh color is a complement, also showing the warm and cool colors, hues and tints on either side of the complement. (The chart is in three sections which fold, size 15 x 27 inches.) One has only to select the color, hue or tint he wishes to run on the press, and the complements, contrasts, harmonies, chord melodies, etc., are found at once. The harmonies are reached by going from colors to hues or hues to hues.

The printer selecting a two-color combination for colored stock has only to pass the stock over the chart until the color of the stock it most resembles is found; from this he learns the color, hue or tint of the stock, which is the keynote and is treated as one of the colors of the combination, it being a matter of choice whether a harmony, melody or contrast is selected.

Water and oil pigments for the artist and designer, and printing inks for the printer are all matched and numbered the same as the numbers on the chart. The advantage of this arrangement is this: Should the artist use the paints on his sketch, and marks the number of the same on his sketches, the proofer and printer can match this same color with the same number in Margo Printing Inks. Thus saving much time in mixing.

diagram No. 5, which is a warm or cool contrast.

It will be seen there are three greens to put in contrast with red, i. e., green the strongest contrast, or yellow-green on the warm side and blue-green on the cool side. Or the reverse, we have three reds to contrast the green. As red is itself the compliment or strongest contrast, or red-purple on the cool and red-orange on the warm side, the color on either side of the complimentary will be more harmonious, for the reason of it being a little more closely related, each color, however, being a contrast of more or less degree.

As we have three contrasts or compliments to any selected color of the twelve chromatic tones, likewise we have three triads that may be used as primaries, taking the place of red, yellow and blue. For example, we may say red, yellow and blue, or change the blue end to the warm blue-purple or the cool blue-green. The following will illustrate:

| <i>Reds</i> | <i>Yellows</i> | <i>Blues</i> |
|-------------|----------------|--------------|
| Red-purple  | Yellow-orange  | Blue-green   |
| Red         | Yellow         | Blue         |
| Red-orange  | Yellow-green   | Blue-purple  |

| R-P | R  | RO | O  | YO | Y | YG | G | B-G | B | B-P | P |
|-----|----|----|----|----|---|----|---|-----|---|-----|---|
| C   | C* | D  | D* | E  | F | F* | G | G*  | A | A*  | B |
| 1   |    | 2  |    | 3  | 4 |    | 5 |     | 6 |     | 7 |

Diagram V.

Any one of the reds may be used as a primary with any one of the yellows and blues. This is all the printer using the three-



color process can do, that is, make the red more purple or orange, the yellow more orange or green, and the blue more green or purple. (The artist will be amply repaid for any thought devoted to the above, as these primaries produce secondaries, tertiaries and quaternaries that are very beautiful scales. With the use of the Maratta Margo pigments the 12 chromatic tones may be measured very accurately.)

Diagram No. 6 illustrates the six standard pigments in the scale of sequence, also the scale from light to white through yellow, orange, red purple, black to darkness on the warm side, and from light to white through yellow, green, blue, purple, black to darkness on the cool side.

Those six standard pigments do not produce the most pleasing color harmonies; they only produce harmonies of contrast. By using small areas of one color with larger

dium, or lowered to the hues, grave or grey tones (still retaining the same relation to the standard colors that the notes of one octave bear to another), by mixing mathematical proportions of the colors and again making tints from them.

Diagram No. 4 shows the foreground colors, also the background or distant hues. By placing a red letter or ornament on the hue or tint of green, a much more refined and pleasing contrast is produced than when the red is placed upon the green color, or the reverse, that is, the green color may be placed on the red hue or a tint of the same.

Should a green letter be placed upon a ground of green hue or tint, a more pleasing harmony is produced, the green color making the green hue or tint appear as its compliment. Any of the colors placed upon a ground of a hue, or tint of a hue, will have the same effect. Or a color may be

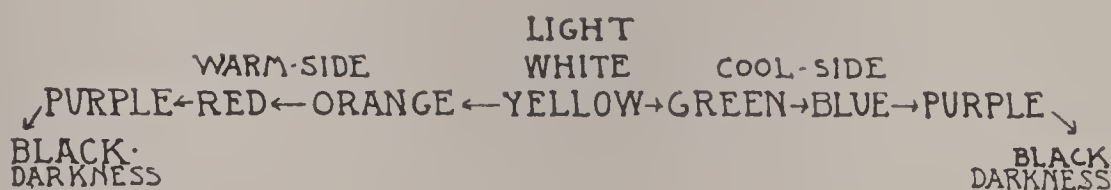


Diagram VI.

areas of other colors, together with black and white, as an initial letter or small ornament with text, etc.

The most powerful, beautiful and harmonious color combinations are produced when standard colors are placed in juxtaposition to the hues or greys. It may be well to state that a grey may partake of any color, therefore it is well in speaking of a grey to always specify the color of the grey, which may be any of the chromatic scale, as red-grey, yellow-grey, blue-purple-grey, etc. (Browns are greys of the warm side of the scale.)

As stated in a previous article, "There cannot exist a greater variety of sounds than those which are found between the tonic and its octave. We have a repetition over and over again in the different octaves of the same sounds, only higher or lower, more grave or acute."

The same is true of color. There cannot exist a greater variety of colors than those found in the spectrum band. Like the octaves in music, we have a repetition over and over again of the same colors, brought up to tints with white or a transparent me-

placed upon a ground of the adjoining hue or tint of either side, and a little of the color may be added to the hue if a stronger contrast is desired.

Gold, silver, white and black should be treated as neutral; they will go with any color.

A gold ornament or letter on a color ground may be outlined with black; the black will partake of the compliment of the ground color, thus producing a harmony by simultaneous contrast. A color placed upon a gold ground may be outlined with a hue of the same. Monochromatic harmonies are letters or ornaments placed upon a ground made up of tints of the same color as the letter or ornaments are made from. A little of the hue may be used to grey the tints if desired.

When the word color is used in these articles it refers to the saturated Margo pigments; the hues are the same colors reduced by mixing mathematical proportions.

The chromatic chart shows the unlimited possibilities. The next article will describe how in a natural way the hues are produced from the colors.

# Photo-Engraving Art

Published Monthly in the Interests of Makers and Users  
of Photo-Engraving

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FRED J. WILLOCK.....EDITOR.

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SEPTEMBER-OCTOBER.

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## ENTERPRISE

Be enterprising. Look into every-  
thing new.

If a new dragons blood, negative  
or stripping collodion, or plate wash  
is offered by some wide-awake chem-  
ical house. If a new lens is offered  
by an optical house, or a new machine  
or a new theory is advanced by some  
ambitious worker, give them each a  
trial.

Go at every attempt at an improve-  
ment enthusiastically. Don't fret  
over the actual or possible losses  
which you sustain. Seven times out  
of ten you will be benefited. Every  
new and successful solution to an old  
problem, either from an economic or  
physical standpoint, is a step forward,  
and if you *see it first* you get just that  
much lead on your less ambitious  
competitors, as your enterprise or cir-  
cumstances will permit.

There isn't a detail of the photo-  
engraving business to-day but what  
can be vastly improved. The busi-  
ness is so new it is hardly out of the  
experimental stage.

Some concerns have been in the  
business since its inception, and are  
just about where they were when  
they started, except that they are get-  
ting less money for their product  
than ever before. Others have been  
in the business only a few years, and  
are alive to every improvement and  
are making appreciable strides.  
They are getting the same price per  
square inch as the older firms, but,  
owing to the fact that their plants  
are equipped with more up-to-date  
machinery, better lenses and newer  
materials, they can produce their  
work at a fraction of what it costs  
older and more conservative con-  
cerns, and consequently they are  
making money.



Out in San Francisco the I. P. E. U. and  
the newspapers had a skirmish which  
has been all straightened out. The dove  
of peace is once more flying over the  
scene and a two-year working agree-  
ment has been executed. The trouble  
originated between the Union and the  
San Francisco newspapers. There was  
a jurisdictional question involved  
between the two unions, the I. T. U.  
and the I. P. E. U., as to which should  
block the cuts in the newspaper offices,  
and also with respect to the use of the  
Rause blocks, which is a patent block-  
ing arrangement. The commercial shops  
were in no wise concerned in the mat-  
ter until the men refused to make ad-  
vertising cuts for the customers of  
the commercial shops for use in the  
newspapers. Nothing was said about  
illustrative news cuts. When the men  
refused to do the work as ordered they  
were discharged for insubordination.  
Each commercial shop acted independ-  
ently. The Union charged the employ-  
ers with a conspiracy to lock them out.  
During this time the employers and the  
employees were negotiating a new work-  
ing agreement, and the matter was  
finally sifted down to three points of  
difference. The employers claim to have  
won out on every point involved.

NOTES ABOUT ENGRAVERS

The Manz Engraving Co., Chicago, Ill., has gone through the last two years without realizing there was any depression, judging from the report of Treasurer Bersbach on the volume of business done.

\* \* \*

McKenzie Engraving Co., formerly of 72 Bedford street, Boston, and W. F. Nickerson & Co., have consolidated under the name of the McKenzie Engraving Co., and are now installed in their new building.

\* \* \*

Lyman C. Hershey, well known in the photo-engraving business, has purchased the controlling interest in the Manhattan Photo-Engraving Co., of 251-253 William street, New York, and is the managing director.

\* \* \*

The engraving house of Jahn & Ollier, of Chicago, has opened a branch office on Good Block in Des Moines, Iowa. C. G. Brown, formerly of the Star Engraving Co., is in charge. The plate work is done in Chicago.

\* \* \*

The Star Engraving Co., of Des Moines, Ia., had an early morning fire recently, which was discovered in time to prevent the complete destruction of its plant. The electrotyping department suffered the greatest loss, but the company is now doing its usual business.

\* \* \*

The Sterling Engraving Co.'s employees held an outing on August 14. The affair was very successful, and the good feeling which runs through all the departments of this splendid engraving house was accentuated. The company's offices and plant is located at 200 William street, New York City.

\* \* \*

The I. P. E. U. reports that the past year has been productive of many good results. The membership has been materially increased. It is claimed that there are now 197 I. P. E. U. labels in use. That the finances are in a healthy condition is shown by a balance of nearly \$40,000 in the treasury.

\* \* \*

The employees of the F. A. Ringler Co.,

the well-known engraving and electrotyping firm of New York, enjoyed an outing and games at New Dorp, S. I., on Saturday, August 14. An elaborate luncheon and dinner were served and games indulged. W. Bissell was chairman of the day's committee.


\* \* \*

The Scranton Photo-Engraving & Electrotype Co., of Scranton, Pa., has just had a full equipment installed under the supervision of C. S. Mills, of the F. Wesel Mfg. Co., of Brooklyn. Charles Gamewell, formerly Superintendent of the Printing Department of the International Text Book Company, is president. Gustavus Meyers, formerly in charge of the Photo-Engraving department of the "Courier-News," has direct charge of the mechanical details of the new company.

# Artist's Cards

Under this heading we will print each month a number of artist's cards. Rates on application.

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 DESIGNER  
 Tel. 3120 Gram. 27 EAST 22d ST., N. Y.

FOCUSING, OLD AND NEW

Being a Short Summary of the Scale Method

By ARTHUR FRUWIRTH

THE problem of Automatic Focusing has tempted several investigators, and two patents have been granted, one to Mr. Koenigs, professor on the Sorbonne in Paris, in 1900, based on the principle of the well known pantograph, the other to T. Carpenter, of Paris, based on the application of a right angle lever in 1897. These two as well as other systems, devised by G. Frecot, have the same defects in common: They cannot be attached to existing ca-

a model of perfection, have nearly mathematical correctness. The focusing scale is prepared by reducing 12" to all sizes at an interval of 1/4", and marking the foci in accordance with the indici of the reduction chart.

My own experiments complete this short sketch of history. In 1899 I completed my first system, and since that time the ground glass has lost its job with me. The system was published in Anthony's American An-

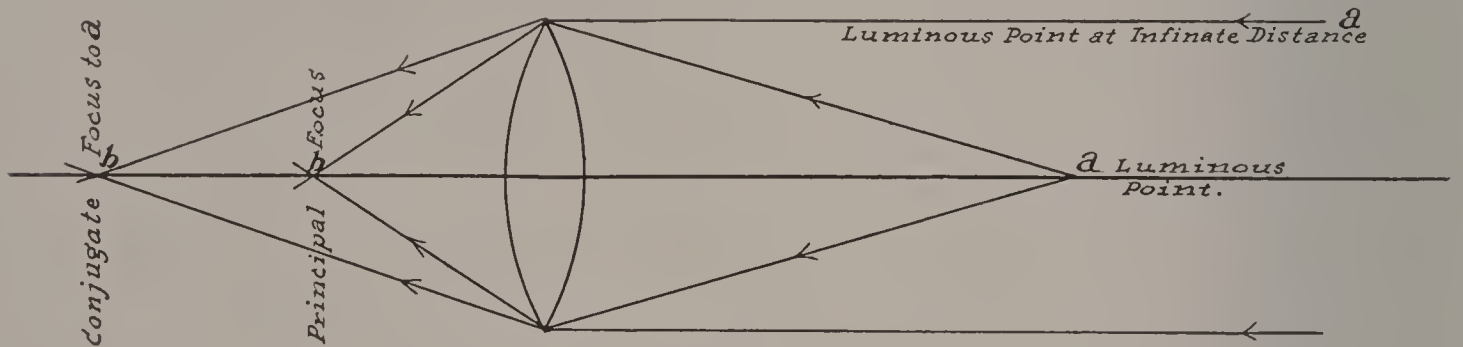


Fig. 1.

meras, need a ground-glass for measuring the sizes, and easily get out of order.

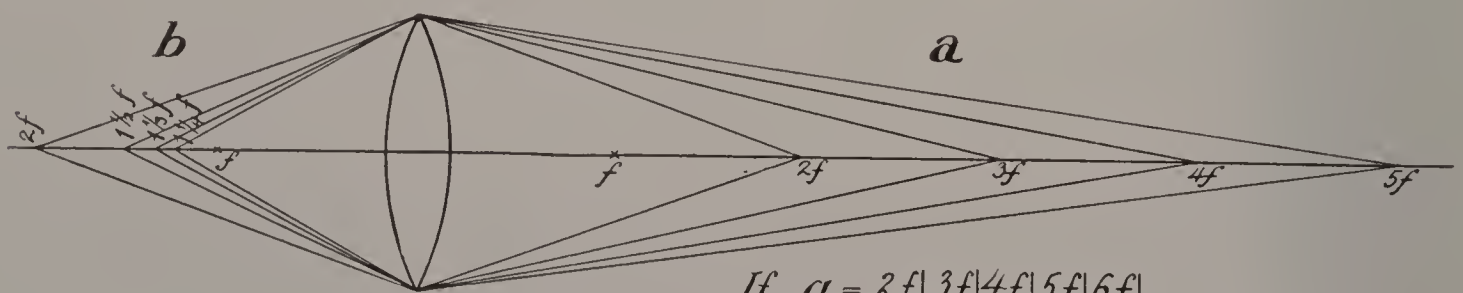
Focusing by means of scales is much older, the most universal, though rudimentary, example being the snapshot camera with its focusing scale. A long step in the right direction has been made by the Penrose people of London.

It is to the credit of an American, Mr. Benedict, of Chicago, to have solved the problem of automatic focusing as far as is ever possible without the introduction of mathematical calculations. His system is thoroughly practical, and the readings taken from his large Reduction Chart, which is

nual. In 1904 I gave the scales a still more precise form and superseded the Reduction Meter by the Tables of Reduction and Enlargement.

My system is based on the following mathematical calculations: Light diverging from one point will after transmission through the lens converge to another point. These two points are called Conjugate Foci. If the luminous point is at an infinite distance, its conjugate focus becomes the Principal or Equivalent Focus of the lens, that is, the nearest distance from the lens at which a sharp image is formed, Fig. 1.

Principal focus and conjugate foci bear a



$$\text{If } \begin{array}{c} a = 2f \ | \ 3f \ | \ 4f \ | \ 5f \ | \ 6f \ | \\ b = 2f \ | \ 1\frac{1}{2}f \ | \ 1\frac{1}{3}f \ | \ 1\frac{1}{5}f \ | \end{array}$$

Fig. 2.

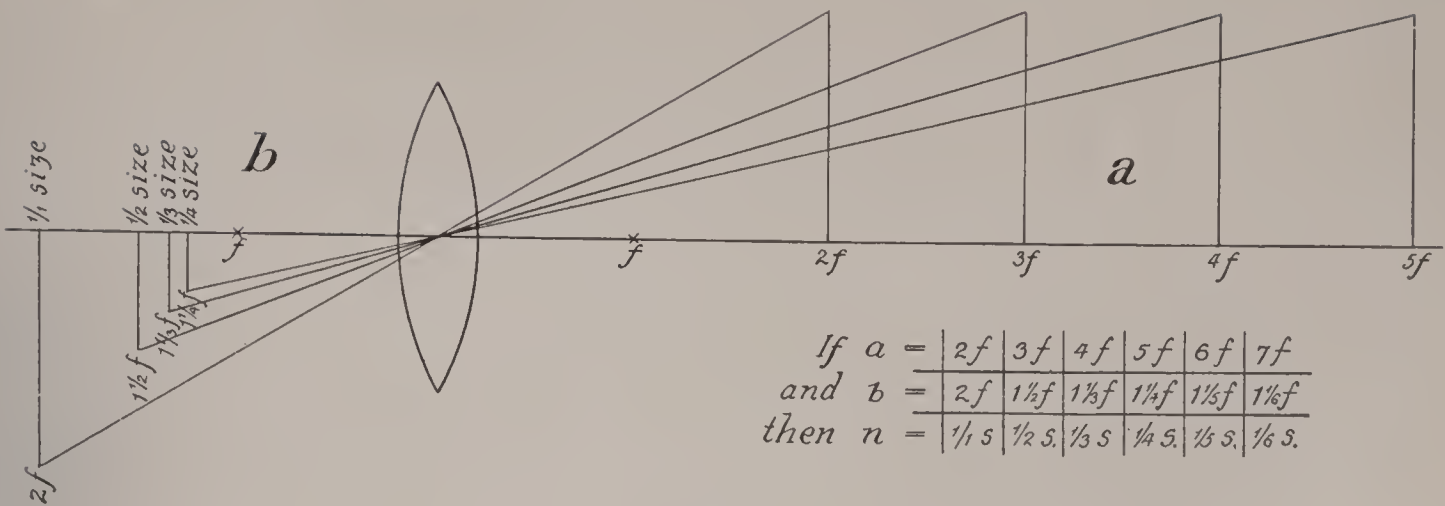


Fig. 3.

definite relation to one another, expressed by the equation

$$\text{Equation 1.) } \frac{1}{f} = \frac{1}{a} + \frac{1}{b}$$

where  $f =$  equivalent focus,  
 $a =$  distance of luminous point } from lens.  
 $b =$  distance of image

Fig. 2 will show some of the more characteristic positions of  $a$  and  $b$ , which form the foundation of my Automatic System.

Substituting for the luminous point an object of definite size the relation between  $a$ ,  $b$ ,  $f$  and the size of object and its image is expressed by the equations

$$\text{Equation 2.) } a = \left( \frac{m}{n} + 1 \right) \cdot f.$$

$$\text{Equation 3.) } b = \left( \frac{n}{m} + 1 \right) \cdot f.$$

where  $a =$  distance of object } from lens.  
 $b =$  distance of image  
 $f =$  equivalent focus.  
 $m =$  size of object.  
 $n =$  size of image.

Fig. 3 shows the same positions of  $a$  and  $b$

as in Fig. 2, but in addition the sizes of image  $n$  for these positions.

In order to fill the space between 1-1,  $\frac{1}{2}$ , 1-3,  $\frac{1}{4}$ , etc., size, and to arrive at a systematic focusing scale, we have to consider

$n$   
 value —. It expresses the ratio between  
 $m$

object and image. By using a uniform denominator = 100, we express this ratio in parts of 100 or per cents. For instance copy-size 10" to be reduced to 6" becomes a 60 per cent. reduction, copysize 7½" reduced to 4½" is also a 60 per cent. reduction, and so forth. My tables have the function of transforming common fractions into percentic values and thus arriving at a systematic base for the focusing scales. These are calculated by means of the above equations and constructed for a presupposed focal length of an imaginary lens of 60 cm. for all ratios at an interval of 1-10 per cent.,

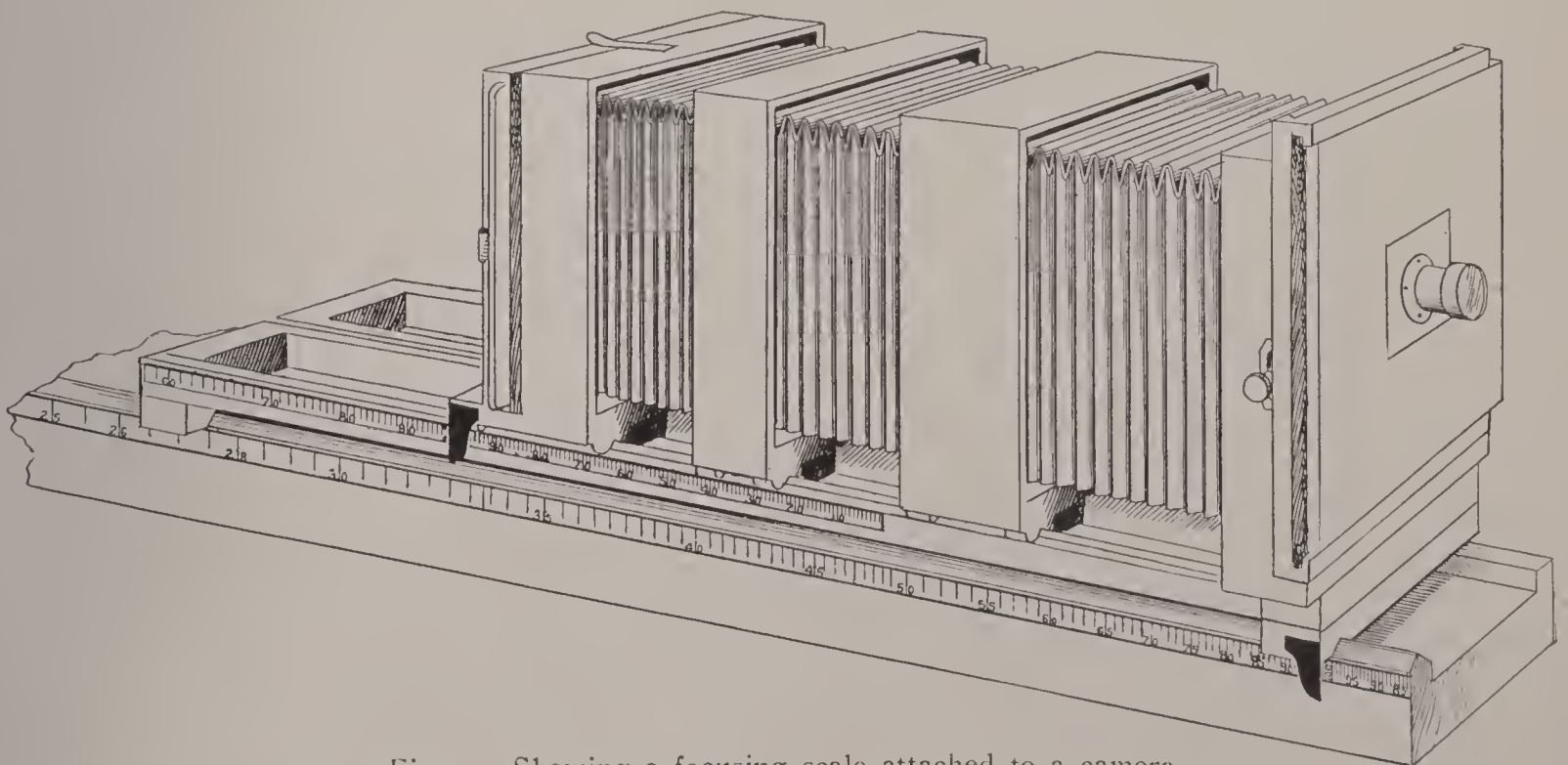


Fig. 4. Showing a focusing scale attached to a camera.

3

Focusing Chart, Fig. 5 a reproduction of page 3 of the tables showing the general disposition and giving all ratios of reduction for copysizes from 3" to 3 7/8".

In order to get the proper working scales for practical work on the camera it is necessary to reproduce the Focusing Chart in a manner that one strip of the scales is of a length equal to the equivalent focus of the lens. The equivalent focus of the lens is established by taking 2 foci, one at natural size and one at 1/2 or 1-3 or 1/4 size, as these foci are separated by exactly the length of the equivalent focus. A perfect outfit, a specially constructed focusing screen, a focusing microscope and some very smart focusing and measuring are required for the work. The scale negative is finely printed on metal, the scales are sawed apart, finished and attached to the camera in proper position and rotation. A specially designed scale adapter makes the work of adjusting the scales to any camera perfectly automatic, thus eliminating the chances of faulty attachment. Two indicators for the positions of the camera and of the sensitive plate finish the installation of automatic focusing. The percentic ratio indici are looked up in the tables, and on these indici of the scales camera and ground glass are set—an operation of a few seconds.

Enlargements require neither extra tables nor a specially calculated focusing scale. A second set of the scales is prepared from the chart negative and attached to the camera in reversed order of the reduction scales, while the ratios of enlargement are read from the tables exactly like reductions with copy and negative size interchanging places. An example will clear the maker: 3" enlarged to 4" becomes 4" reduced to 3", or ratio 75 per cent. of the enlarging scale.

All matters of proportion between height and width of copies, grouping of several copies in a given space, combination and insertion jobs are settled by the tables without ever going back to the ground glass. Sizes and definition of negatives are perfect, no copy will escape which can be bunched with another one. Objects of considerable thickness, like books, paintings, are scale-focused with the same ease. In eight out of ten cases even real objects need no ground glass.

| 3    | 1 8 | 1 4  | 3 8  |       | 1 2  | 5 8  | 3 4  | 7 8  |
|------|-----|------|------|-------|------|------|------|------|
| 33.3 | 32  | 30.8 | 29.6 | 1     | 28.6 | 27.6 | 26.7 | 25.8 |
| 35.4 | 34  | 32.7 | 31.5 | 1 16  | 30.4 | 29.3 | 28.3 | 27.4 |
| 37.5 | 36  | 34.6 | 33.2 | 1 8   | 32.1 | 31   | 30   | 29   |
| 39.6 | 38  | 36.5 | 35.2 | 3 16  | 33.9 | 32.8 | 31.7 | 30.6 |
| 41.7 | 40  | 38.5 | 37   | 1 4   | 35.7 | 34.5 | 33.3 | 32.3 |
| 43.7 | 42  | 40.4 | 38.9 | 5 16  | 37.5 | 36.2 | 35   | 33.9 |
| 45.8 | 44  | 42.3 | 40.7 | 3 8   | 39.3 | 37.9 | 36.7 | 35.5 |
| 47.9 | 46  | 44.2 | 42.6 | 7 16  | 41.1 | 39.6 | 38.3 | 37.1 |
| 50   | 48  | 46.1 | 44.4 | 1 2   | 42.9 | 41.4 | 40   | 38.7 |
| 52.1 | 50  | 48.1 | 46.3 | 9 16  | 44.6 | 43.1 | 41.7 | 40.3 |
| 54.2 | 52  | 50   | 48.1 | 5 8   | 46.4 | 44.8 | 43.3 | 41.9 |
| 56.2 | 54  | 51.9 | 50   | 11 16 | 48.2 | 46.5 | 45   | 43.5 |
| 58.3 | 56  | 53.8 | 51.8 | 3 4   | 50   | 48.3 | 46.7 | 45.2 |
| 60.4 | 58  | 55.8 | 53.7 | 13 16 | 51.8 | 50   | 48.3 | 46.8 |
| 62.5 | 60  | 57.7 | 55.5 | 7 8   | 53.6 | 51.7 | 50   | 48.4 |
| 64.6 | 62  | 59.6 | 57.4 | 15 16 | 55.4 | 53.4 | 51.7 | 50   |
| 66.7 | 64  | 61.5 | 59.3 | 2     | 57.1 | 55.2 | 53.3 | 51.6 |
| 68.7 | 66  | 63.5 | 61.1 | 1 16  | 58.9 | 56.9 | 55   | 53.2 |
| 70.8 | 68  | 65.4 | 63   | 1 8   | 60.7 | 58.6 | 56.7 | 54.8 |
| 72.9 | 70  | 67.3 | 64.8 | 3 16  | 62.5 | 60.3 | 58.3 | 56.4 |
| 75   | 72  | 69.2 | 66.7 | 1 4   | 64.3 | 62.1 | 60   | 58.1 |
| 77.1 | 74  | 71.1 | 68.5 | 5 16  | 66.1 | 63.8 | 61.7 | 59.7 |
| 79.2 | 76  | 73.1 | 70.4 | 3 8   | 67.9 | 65.5 | 63.3 | 61.3 |
| 81.2 | 78  | 75   | 72.2 | 7 16  | 69.6 | 67.2 | 65   | 62.9 |
| 83.3 | 80  | 76.9 | 74.1 | 1 2   | 71.4 | 69   | 66.7 | 64.5 |
| 85.4 | 82  | 78.8 | 75.9 | 9 16  | 73.2 | 70.7 | 68.3 | 66.1 |
| 87.5 | 84  | 80.8 | 77.8 | 5 8   | 75   | 72.4 | 70   | 67.7 |
| 89.6 | 86  | 82.7 | 79.6 | 11 16 | 76.8 | 74.1 | 71.7 | 69.3 |
| 91.7 | 88  | 84.6 | 81.8 | 3 4   | 78.6 | 75.9 | 73.2 | 71   |
| 93.7 | 90  | 86.5 | 83.3 | 13 16 | 80.4 | 77.6 | 75   | 72.6 |
| 95.8 | 92  | 88.5 | 85.2 | 7 8   | 82.1 | 79.3 | 76.7 | 74.2 |
| 97.9 | 94  | 90.4 | 87   | 15 16 | 83.9 | 81   | 78.2 | 75.8 |
| 100  | 96  | 92.3 | 88.9 | 3     | 85.7 | 82.8 | 80   | 77.4 |
|      | 98  | 94.2 | 90.7 | 1 16  | 87.5 | 84.5 | 81.7 | 79   |
|      | 100 | 96.1 | 92.6 | 1 8   | 89.3 | 86.2 | 83.3 | 80.6 |
|      |     | 98.1 | 94.4 | 3 16  | 91.1 | 87.9 | 85   | 82.3 |
|      |     | 100  | 96.3 | 1 4   | 92.9 | 89.6 | 86.7 | 83.9 |
|      |     |      | 98.5 | 5 16  | 94.6 | 91.4 | 88.3 | 85.5 |
|      |     |      | 100  | 3 8   | 96.4 | 93.1 | 90   | 87.1 |
|      |     |      |      | 7 16  | 98.2 | 94.8 | 91.7 | 88.7 |
|      |     |      |      | 1 2   | 100  | 96.5 | 93.3 | 90.3 |
|      |     |      |      | 9 16  |      | 98.3 | 95   | 91.9 |
|      |     |      |      | 5 8   |      | 100  | 96.7 | 93.5 |
|      |     |      |      | 11 16 |      |      | 98.3 | 95.2 |
|      |     |      |      | 3 4   |      |      | 100  | 96.8 |
|      |     |      |      | 13 16 |      |      |      | 98.4 |
|      |     |      |      | 7 8   |      |      |      | 100  |
|      |     |      |      | 15 16 |      |      |      |      |

Fig. 5. Table showing all ratios of reduction from 3" to 3 7/8".

conforming to the indici of the tables. Fig. 6 is a much reduced reproduction of the

Scales to the System of Automatic Focusing

By A. FRUWIRTH

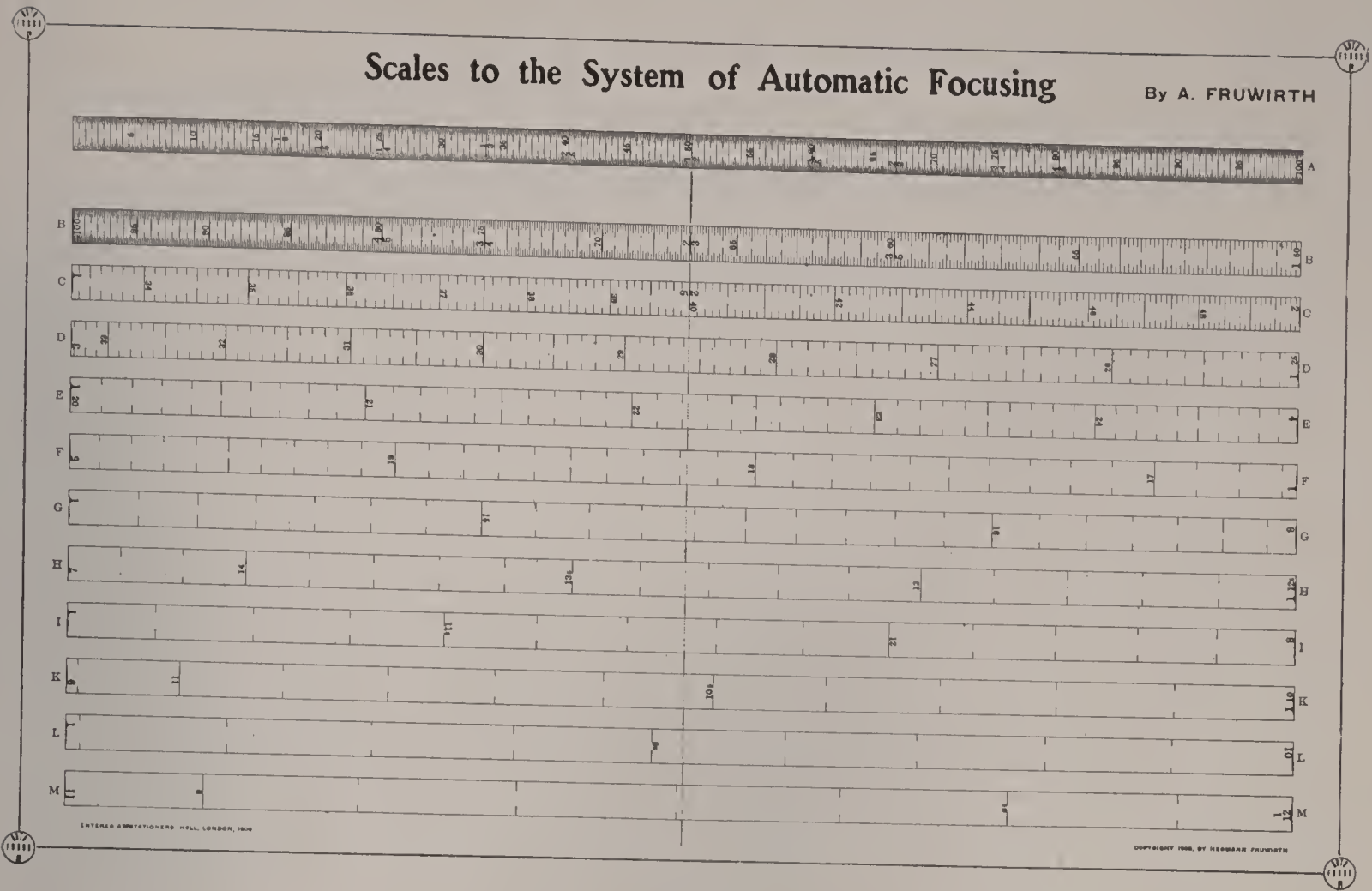


Fig. 6.

With an average output of 100 half-tone negatives a week and four to five minutes to the exposure the arc lamps burn no longer than six to eight hours from Monday till Saturday. Linework with exposures from one-half to one minute, even if the output of negatives be trebled, is all exposed in one-half hour per day.

Teaching the principles underlying good typography by the most efficient methods, it is given to students for less than actual cost, being endowed by the International Typographical Union, which offers the course as one of its contributions to greater industrial efficiency. Anyone interested can obtain further information by addressing the I. T. U. Commission at 120 Sherman Street, Chicago, Ill.

I. T. U. COURSE IN TYPOGRAPHY

We received, too late for notice in our last issue, a fine sample of printing from the I. T. U. Correspondence Course of Instruction in Printing. This school is conducted by the Inland Printer Technical School under the direction of the I. T. U. Commission on Supplemental Trade Educa-

WELL NAMED

In a recent trial of a "bootlegger" in Western Kentucky a witness testified that he had purchased some "squirrel" whisky from the defendant.

"Squirrel whisky?" questioned the court.  
 "Yes, you know: that kind that makes you talk nutty and want to climb trees."

PHOTO-ENGRAVERS



AFTER THE FIRST "BITE"

WILLIAM KORN'S LITHOGRAPHIC CRAYON PAPER PENCILS are of a chemical nature which resist acids, and are used to protect those parts of the half-tone plate which have sufficient depth. The Crayon is a valuable aid to the photo-engraver, as it enables him to produce softness and variation in tints.

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A. J. VAN LEYEN,  
*Treasurer.*

## CONVENTION OF THE EMPLOYING PHOTO-ENGRAVERS ASSOCIATION OF AMERICA

Fourth Annual Convention, Held at Detroit, Aug. 20-21, 1909

THE Fourth Annual Convention of the Employing Photo-Engravers' Association of America was held at Detroit, Mich., August 20th and 21st. The convention was well attended.

The opening session was called to order at 10 A. M. Friday, August 20th, 1909, President James A. Pierce presiding.

J. J. Whirl, secretary, in his report stated that the E. P. E. A. of A. had been weighed in the balance and not found wanting. He spoke of the good fight its members waged against the tyranny of the Czar-like walking delegate and the great sacrifice made in order to maintain their business manhood, and dwelt at some length upon the work of the local Detroit associations of manufacturers, builders, and others, in the establishment of the open shop, and attributed their success to the fair treatment accorded their workmen. He stated that men in search of work, whether union or non-union, apply voluntarily at the labor bureau of the association, knowing that they are in good hands and that no discrimination is made on account of their affiliation or non-affiliation with any society. Mr.

Whirl handled without gloves some employers of labor he had come in contact with, whose actions paralleled in a certain degree the arbitrary and inconsistent methods adopted by many union organizations.

Mr. Whirl acknowledged the ethical question of the ideal relationship between employer and employee to be beyond him, and stated he has long since thrown up his hands at the theoretical side of the matter and devoted himself only to the practical end. The workman has a God-given right to work for any employer that he wants to who will give him a position, and to work for any wage that his judgment and the exigencies of the case make him accept, and that the workman also has the right to refuse to work in any shop or for any employer. The employer has the same divine right to hire,

or refuse to hire, any man and to discharge any employee whom he believes it to be to the best interests of his business not to have in his employ. There are many outside issues to be considered, but they are matters of policy and judgment on both sides, rather than questions of right and wrong, and in no way alter the inalienable and absolute right of an employer to live and pay wages



H. G. BOGART,  
*Chairman.*



SAM OHNSTEIN.



L. F. EATON.

*Members of the Executive Committee.*



to any man he choose, or of a workman to work for and receive wages from any boss as his pleasure dictates.

As to the work of the Labor Bureau, the Secretary described it as an effort to fit round pegs into round holes and square pegs into square. If this is done well and the fit found for each peg, the wheels go round and peace and happiness reign—each peg a perfect fit, there are no crevices left for the walking delegate to insert his wedge of discontent.

In the human family the most despicable one is the coward and "quitter." When you decided to open your shops you went into what you knew would be a long and trying struggle; it would be an insult to believe that you went into it blindly or without consideration, or with the feeling that you were starting upon a joy-ride. Undoubtedly conditions forced you to fight and left you no alternative. The fight is over and your shops are open, and I believe, from what I have learned in my short connection with you, that they will stay open. Naturally, there are scars and some wounds left. Possibly, at times, these wounds are painful, but remember what you suffered under old conditions. Were not the wounds daily then, and were they ever allowed a minute's time to heal? Ask yourself this, gentlemen, and if you find even one of your members who you fear may show the white feather, save him from himself for his very manhood's sake, and do not let him brand himself a "quitter."

In the E. P. E. A. of A. you have an association that can be a power in the industrial affairs of the whole business world, and in which you should feel the utmost pride. You have been to battle and return victorious. Whether or not you reap the fruits of your victory will depend upon yourselves. To maintain your position you must never sleep. The price of peace with you is constant watchfulness, strict adherence to and activity in your association, and an unyielding determination never to allow the business world

to point you out as men who started out to accomplish a reform and failed.

The Executive Committee and the Treasurer submitted their reports, which were approved.

The election of officers was taken up at the afternoon session and resulted in the unanimous election of the following:

OFFICERS.

James A. Pierce, Mathews-Northrup Works, Buffalo, N. Y., President.

H. H. Macnamara, Grip Limited, Toronto, Ont., Vice-President.

A. J. Van Leyen, Van Leyen & Hensler, Detroit, Mich., Treasurer.

John J. Whirl, Stevens Building, Detroit, Mich., Secretary.

EXECUTIVE COMMITTEE.

H. G. Bogart, Central Engraving Co., Cleveland, O., Chairman.

L. F. Eaton, Peninsular Engraving Co., Detroit, Mich.

Sam Ohnstein, Crescent Engraving Co., Chicago, Ill.

Mr. F. W. Gage, of Battle Creek, presented an excellent paper upon the subject of "Extended Education of Apprentices," and made a number of suggestions which were referred to a special committee.

A great amount of routine business was transacted and the convention adjourned on Saturday, August 21st, 1909.

While the delegates were attending the meetings their ladies were royally entertained by the local ladies with automobile rides around the city, Belle Isle, Palmer Park, luncheon at the Detroit Golf Club and theatre parties.

The Convention in all its phases was a most successful and enjoyable one, and the E. P. E. A. of A. begins its new associational year with the best of harmony and good feeling, and bright prospects for still greater achievements and firmer establishment of the open shop in the Photo-Engraving industry.

The following attended the convention:

| MEMBER.                                 | ADDRESS.               | REPRESENTATIVE.      |
|---|------------------------|----------------------|
| The Jas. Bayne Co.....                  | Grand Rapids, Mich.... | Grant Goodrich.      |
| The Buffalo Engraving Co.....           | Buffalo, N. Y.....     | H. K. Perry.         |
| Central Engraving Co.....               | Cleveland, O.....      | H. C. Bogart.        |
| Clegg, Goesser & McFee.....             | Cincinnati, O.....     | Geo. Meinshausen.    |
| Crescent Engraving Co.....              | Chicago, Ill.....      | Sam Ohnstein.        |
| R. R. Donnelly & Sons Co.....           | Chicago, Ill.....      | W. Stewart.          |
| Eclipse Electrotype & Engraving Co..... | Cleveland, O.....      | Frank H. Clark.      |
| The Gage Printing Co.....               | Battle Creek, Mich.... | Fred W. Gage.        |
| Grip Limited.....                       | Toronto, Ont.....      | H. H. Macnamara.     |
| Jahn & Olier Engraving Co.....          | Chicago, Ill.....      | Adolph Jahn.         |
| J. L. Jones Engraving Co.....           | Toronto, Ont.....      | J. L. Jones.         |
| Mathews-Northrup Works.....             | Buffalo, N. Y.....     | Jas. A. Pierce.      |
| Peninsular Engraving Co.....            | Detroit, Mich.....     | Levi F. Eaton.       |
| Seeman & Peters Ptg. Co.....            | Saginaw, Mich.....     | Chas. H. Peters, Jr. |
| The S. & O. Engraving Co.....           | Akron, O.....          | Jas. W. Meeker.      |
| Messrs. Van Leyen & Hensler.....        | Detroit, Mich.....     | W. C. Hensler.       |
| Messrs. Van Leyen & Hensler.....        | Detroit, Mich.....     | A. J. Van Leyen.     |
| Electro Gravure Engraving Co.....       | Detroit, Mich.....     | Oscar A. Netschke.   |

### THE NOBLE ROTARY PEN

A fine sample of the work of the newly invented Automatic Rotary Pen is here shown. The pen in a broad sense is a free-hand drawing pen, its construction and



operation being such as to lend itself perfectly to the free movements of the hand and arm. The ink is admitted into the pen proper from the reservoir automatically, and for this reason a line of any length or direction may be made with a continuous whole-arm movement; and this insures at once regularity of curve and absolute precision and evenness of line, so essential in all fine work. The width of the line is regulated by the thumb-screw on the side of the pen. When in operation the pen follows the movement of the hand in such a position that a perfect line always results. The mechanism for regulating the flow of ink is quickly adjusted to suit the character of the work. While it is utterly out of the question to show here anything like a complete set of specimens of the work of the



instrument, enough is shown to give some idea of its possibilities, and to aid persons interested in drawing, designing, illustrating, etc., to make a reasonably correct estimate as to its adaptability to their particular class of work, and meet their individual requirements.

### MANUFACTURERS' NOTES

The monthly calendar of the American Steel and Copper Plate Co., of New York, printed in colors and embossed with the name of the company issuing it is a beautiful sample of high-grade printing and embossing, and a credit to the firm.

\* \* \*

The Star Engravers' Supply Co., N. Y., is sending out through the mails a circular which is quite unique in that it is delivered without being stamped. It is gotten up in the form of a telegram, and carries the simile to the limit, not omitting the "un-

repeated message" clause, and calling attention to the fact that "There is no method of making friends equal to the method of making good."

\* \* \*

O. C. Wold, manufacturer of air brushes, Chicago, is placing on the market an ingenious apparatus called the Stencigraph. It is designed primarily for use by the makers of showcards, the air-brush varieties of showcards being much in demand at this time.

\* \* \*

Martin P. Higgins, ex-president of the International Pressmens' Union, is sales manager at Boston for Philip Ruxton, Inc., printing ink makers, while William J. Webb, ex-secretary-treasurer of the same organization, is on the sales force of the American Ink Co., of New York.

\* \* \*

A photo-engravers' shoot-board with square and beveling planes has just been placed on the market by the F. Wesel Mfg. Co., of Brooklyn. The beveling plane has a graduated cut, ingenious and effective. The same firm also announce a rotary shoot-board which slices off the blocks at the rate of a "mile-a-minute." Several are in use. It is a wonderful chipmaker and a complete cure for that tired feeling which comes from using the ordinary hand shoot-board.

## D. J. BUNCE

482 GRANT ST.  
BUFFALO, N. Y.

Manufacturer of all kinds of

# Masking Papers

SEND FOR SAMPLE  
SHEETS AND PRICES

WE CAN SAVE  
YOU MONEY

**“A Saw Out Of Condition  
is practically worthless.”**



**I**T wastes time and material and is a danger to the user.

Don't take any chances with it. If it cannot be put into good condition again, get another and without delay.

Our Saw Book lists a line of Saws you should look up.

WRITE FOR A COPY

**John Royle & Sons, Paterson, N. J., U. S. A.**

Makers of Photo-Engravers' Machinery

*Use Cutters that Cut—the kind that Royle makes*

**WINSOR & NEWTON'S**

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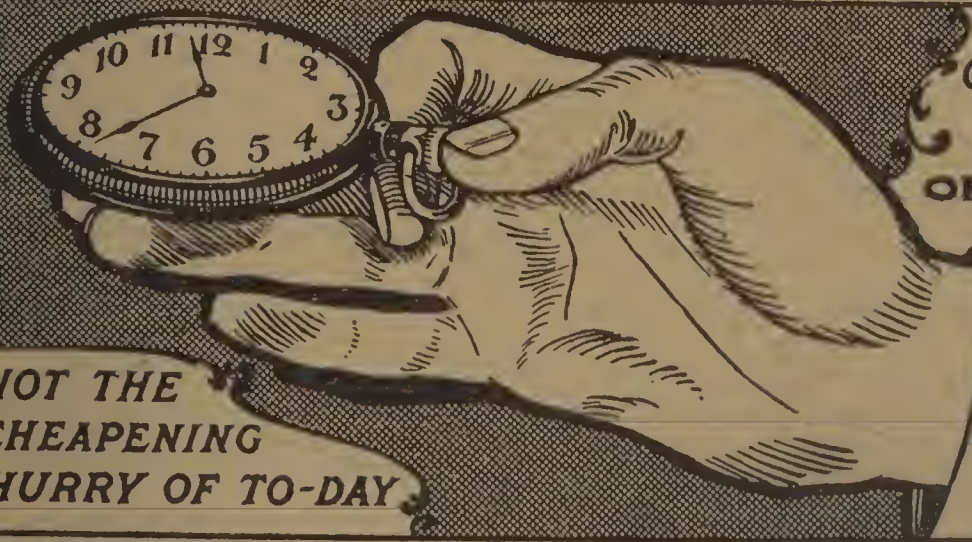
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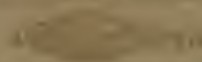
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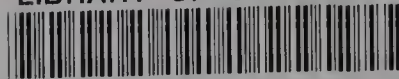
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