3/25/80

WHAT TO PRINT AND HOW TO PRINT IT

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The
Printer's HELPER

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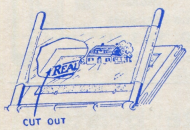
Single orders of $20 or more keep the Helper coming for at least a year.

Numbering Machine Work

Every printer has jobs offered him that require numbering—such as tickets, checks, etc. There are two ways of handling such work—using a hand numbering machine after the rest of the printing is done, or putting a typographic machine in the chase with the form and running both together.

For the printer with a good size press, the last named is the only practical way, and for hand presses down to and including the 5 x 8 it is also advisable. However, in machines smaller than the 5 x 8 the use of the numbering machine in the form itself poses a roller problem which will appear as we describe it in connection with the other presses. To change figures automatically the machine must have some kind of plunger which is operated by the impression squeeze of the press, and this is usually supplied by the "No" which precedes the figures. This No. is slightly higher than the figures, which are regular type height. Every time the press makes an impression, the No. plunger is



A Frisket Used With a Cut (Can be Used For Numbering Machine Too)

pushed down and the number changes, the plunger being above type height at all times except at the moment the impression is made. This means that when the rollers pass over the form, they must be soft enough to squash down over the No, and ink the figures. If the rollers are too hard, or too small in diameter, they will fail to do this, and the numbering machine figures will not be properly inked.

It follows, therefore, that good soft rollers are needed on a numbering machine job. If they are not, and the form can be arranged so that it is practicable, a slot can be cut in the rollers at the point where they hit the No., so as to get them down on the type. If the No. still inks enough to make a partial impression, it can be eliminated entirely by a paper frisket pasted or glued on one of the grippers, which will get between the No. and the stock you are printing, and take the inked impression.

When a numbering machine is put in the form, care should be taken to avoid unnecessary squeeze in the lockup. Before you put it in, work the machine by hand to make sure it operates freely. After it is locked in the chase, try it again, and if it seems to bind, let up on the squeeze or make sure it is not being racked or twisted.

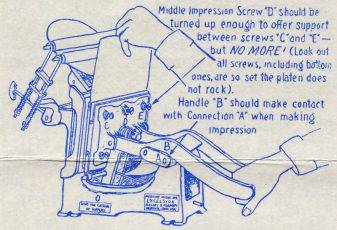
Numbering work is good business, and there is no reason why you shouldn't share it. Full instructions go with each machine.

Get the Best Impression with the Least Amount of Work

Every so often we find that a press user is not making use of the toggle action on his press to give good, and even, impression.

The action is simple enough, and easy to use, but difficult to explain in one syllable words. It will not be so hard, however, if you refer to the appended picture.

The letter A on this picture is on the little wafer-shaped piece of metal which is the connection between the handle and the body of the press. When you push down



Some Good Advice

the handle to make an impression the connection moves from its vertical position to the horizontal, and, if you do it right, it will exactly line up with the handle, as indicated by the arrow, and at the same time if you get it down where it belongs, the handle will hit the top of the connection at the point marked B.

This is the point of maximum leverage and impression. You can get a tremendous squeeze this way. You can also be sure that each impression will be the same, because the handle and platen will go no further.

The amount of impression you obtain by turning up the impression screws should not be so great that you cannot push your handle down as described. The smaller the form you are printing, the less effort it will take you to do this; large forms will take more. The arrangement and number of impression screws varies on different presses, but be sure when you turn them up not to leave one end of your platen suspended without support. It should rest on all screws, and where there are center ones such as D in the picture, they should be brought up to offer support between the outside ones.

You can, if you wish, put more or less pressboard on your platen, in place of turning up the impression screws, but above all, use makeready (underlay and overlay) as described in the Printer's Guide and other places, to take care of low spots. You'll get better results with less squeeze. If part of the form prints, it's clearly unnecessary and undesirable to give more squeeze to the whole job. Be selective. Put it where it is necessary through makeready.

If you do this, you can get your handle down on the connection with a minimum amount of pressure, and each impression will be exactly like every other.

Refresh Your Memory Once in A While

The expression "He has forgotten more than so-and-so will ever know about it," aside from the usual implication that somebody doesn't know as much as he thinks he does, should serve as a reminder that it is indeed possible and probable that the more experienced person has forgotten a few facts which would help him if they were brought back to memory.

Your knowledge of printing may have been picked up in any number of ways. You possibly have been at it for years, or your experience may be only a matter of months. If in the beginning you read over the Printer's Guide or some similar book, the chances are that the essentials — things you HAD to know, and use almost every time you do a job—stuck in your mind, whereas the other facts made more or less impression, and some were forgotten. If, in the light of the experience you have had, you will go over the Guide again, you will be surprised at the helps you will find—clearer to you now that you can concentrate on them instead of the points which you had to become well grounded on at first.

A second time is not enough, either. Make it a habit to go over the Guide, and such copies of The Helper as you own, periodically. When you are handling a rush job it isn't always convenient to rummage through your papers to find the answer to a problem, or to lo-

(*Continued on page two*)

Printed on Kelsey Enameled-60 paper, with Kelsey Many Purpose Blue Ink.

(Continued from page one)

cate that shortcut which you read about one time, but which you can't recollect the details of. The Kelsey Printing Course, if you own it, and keep it in a loose leaf book, is an ideal refresher and reference work.

From our own experience, we'll gamble that you will not spend five minutes reviewing your printing literature before you find one or more pieces of information which will help you right now or in the immediate future. Further than that, some of the statements made which didn't mean much to you at first will take on new significance in the light of your enlarged acquaintance with printing.

You remember the story of the farmer, who when he was reproached for not going to a lecture on scientific farming methods, replied that he didn't farm half as well as he already knew how to, so why bother? No printer is able to take that attitude and do a really satisfactory business, and it may even be stated without much fear of contradiction that doing as well as he knows is not good enough if he can learn to do better.

Printers of forty and fifty years' experience repeatedly tell of the assistance they receive from the Guide, the Helper, and the Course. Those of us who can't claim any such record of service will also find that we are not too old or too highly educated to learn—or relearn.

The Right Length for Leads and Slugs

We often have questions and discussions with readers about the proper length for cut leads and slugs.

When you buy cut leads and slugs, that is, leads or slugs in less than the regular two foot lengths, you will ordinarily find them a little bit under the stated size. This is done for the very good reason that if your column width measurement of type is, say, 15 picas, you will have difficulty in locking up the form tightly if the leads are the exact length. The type will squeeze together ever so little, but the leads won't and there must be opportunity to pinch the type lines without the leads preventing it.

This tolerance varies among different supply houses, and among printers themselves, all the way from one ten thousandth of an inch, to one tenth of a point for each pica of length, that is, in the latter case, a 20 pica lead would be two points under the actual 20 pica measurement. There doesn't seem to be any standard, but all authorities agree that even the merest trifle oversize cannot be tolerated.

THE PRINTER'S DICTIONARY

Run In—To reset matter which has been set in display type in the same kind as the body matter, or to eliminate a paragraph (set the same matter so as to run in with the previous paragraph).

Run Over—To carry over words from one line to the next, spacing them out and running the matter along, until it is absorbed, either by closer spacing, or the intervening of a paragraph.

S

Safety Paper—Paper treated and watermarked in various ways to make alteration easily detected. Used mostly for bank checks.

S. and S. C.—Abbreviation for "sized and supercalendered" paper. S. and S. C. is better than S. and C. (Sized and calendered) or M. F. (Machine Finished) but not as good as enamelled or coated paper.

Scoring—The use of cutting or scoring rule to produce a mark or depression in paper or card so that it will fold or bend without breaking or wrinking. Some printers also employ the term when referring to creasing rule.

Script Type—Type whose face is made in imitation of writing. Used mostly for formal announcements.

Script Type for Wedding

Secondary Color—A color made by mixing two of the primary colors (red, yellow, blue) in any proportion.

Series—One style of type in its various sizes. A type family consists of several series having characteristics in common. See definition of family.

Serif—Small projections at the ends and corners of letters. Sans serif and the so-called Gothic types (except the plate Gothics) have no serifs. Most other styles do. (This STYLE has serifs. **This has none.**)

Set—The making up of lines of type for printing; the width of type (left to right or right to left dimensions).

Set Close—To set with thin spaces.

Set Solid—Set without leads or other spacing between the lines. (Solid matter)

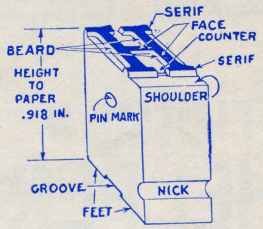
Shade—Technically speaking, a shade is made by adding black to a color. Probably many printers use the word indiscriminately, when making lighter tints, darker shades, or mixing two colors together if it doesn't materially alter the original colors.

Shank—The body of the type on which the face or character is set.

Shooting Stick—An instrument for tightening up quoins. Very rarely used nowadays, when metal quoins are the rule, and wooden quoins more or less a thing of the past.

Short And—The character (&), otherwise called an ampersand.

Short Run—A job of few impressions as contrasting with a long run—one running into a large amount.



Parts of printing type

Shoulder—The top of the body of type, between the face and the sides.

Side Heads—Words in caps or heavier face than the body, at the side or indented in a paragraph. This ABC is set with sideheads.

Signature—Each section of a book which is printed on a single sheet is called a signature. The number of signatures depends on the size of the pages, the size of the sheets and the number of pages.

WITH OUR READERS

One Printer's Cost System

From J. S. Clarke:

This is my way of figuring costs. Others may find it useful. Labor cost should be determined, so that a standard figure per hour can be used. I include cleanup and inkup in press time. Here are my estimated costs.

1. Cost of paper stock, shipping and cutting to size.
2. Cost of any materials which are required for this job only.
3. Time required for composition, lock-up and distribution.
4. Presswork, ink-up and clean-up time.
5. All other estimated time, including the following:

   For raised printing, add 35% to press time.

   Perforating or punching holes, add 20% to press time.

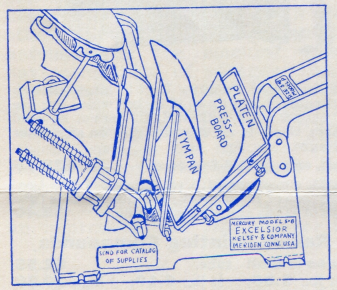
   Stapling, add 10% to 20% to press time cost (less for large booklets).

   Padding, add 5% to 10% to press time cost.

   Overhead expense (heat, light, rent, etc.) 10% and up depending on job.

Markup for profit from 15% on cheap work to 25% on printing requiring extra care, and stock of extra quality.

Editor's Note—Cost systems and selling prices are controversial subjects. We make no recommendations but pass them along for you to read and judge and try if you wish.



Tympan Paper and Pressboard

The correct names and position of tympan paper and pressboard are known to most of our readers, but we recently made this picture for some of our instructional material and thought at least a few would like to see it. Incidentally a hard tympan (one or two sheets of paper and a sheet of pressboard) is desirable. Start from that, and if you have to add more, you can. Try makeready before you begin to load on the impression and the tympan padding.

Protecting Rollers from Perforating or Cutting Rule

Perforating or cutting rule has to project up above the type form to do its work, the only alternative being to force the paper down on the rule. The objection to the first method is that the face of the rule cuts the rollers as well as the paper. The use of an old pair on such work will save your good ones.

Some printers grind or file off the bottom of the rule, to make it slightly under type high. The rule, when put in the press, is then too low to hurt the rollers, but will not cut or perforate unless the tympan is built up where the rule hits, so that it will force the paper down against the rule. A piece of one point brass or copper put under the tympan (platen) padding will give the desired results, and will also assure good clear perforations. This raising strip should be glued down, and narrow enough so that it will not be in the way of the rest of the form. The perforating rule and the brass act as two parts of a die in this operation. If paper or cardboard are used as the other half of the die, they cut too easily and do not make such sharp work.

If you don't want to grind or file the bottom of the rule you can underlay all of the type form except the rule itself with cardboard. This will push the form up above the rule, and you can then proceed as described.

A couple of extra spring tongue gauge pins up close to the point where the paper makes contact with the rule will, if the tongues are out far enough, help to pull the paper away from the rule after the impression.

The methods we have described are suitable for use with either steel cutting or perforating rule. When brass perforating rule is used, lead or copper should be used under the tympan.

There is nothing about either perforating or cutting which should bother any printer. After one job, you will handle the succeeding ones with confidence.

What Happens To Old Ink

Occasionally a reader will tell us that he has some quite old ink which does not work very well and he wants to know whether anything can be done about it.

Considering the cost of new ink, we do not feel that the effort necessary to make the old ink workable is very well expended. To understand why requires a little information on the properties of inks. Roughly speaking, inks consist of color (or pigment) and the varnish or binder which may be called the vehicle by which the color is transferred and held to the paper. The pigments run all the way from lampblack in the black inks to dyes and colors from mineral, vegetable and animal sources (hence the wide variation in weight and amount in a pound of different colors which sometimes makes people who have not weighed a purchase, think that they have been cheated on the quantity.) The "varnish" may come from linseed oil, rosin oil, china oil, or plenty of others.

Have you ever tried to use a floor varnish which is quite old? The stuff may seem to be all right, but after you get it on, it stays sticky for days, perhaps indefinitely. The volatile or light parts of the varnish evaporated long before you used it, leaving the heavier, slow drying parts, so that when you put it on, there is very little left to "dry." The same thing happens to old ink. The evaporation out of the dryer not only makes drying the ink difficult, but it often spoils the appearance of it on the paper.

Drying out of the oil makes the inks, which should be removed before using ink from a can.

old ink is to keep it for handbills

Probably, if you do not want to discard it, the best way to use an and other work not requiring a really good job. Reducing compound may then make it workable enough for that purpose. The time consumed trying to get a really good job on quality work with old ink can be used to better advantage in other ways.

Keep your ink tightly closed, so as to prevent oxidation and evaporation. The cap can be kept on ink in tubes, and ink in cans may be protected by keeping the top covered with water. If you are careful in this way, you will not waste much ink, unless you use it very seldom, indeed.

THE KELSEY MAN

Comments On ONE HUNDRED YEARS

As some of our readers have perhaps noticed, the Kelsey Company has entered its one hundred and eighth year of business.

This may or may not be of any significance, depending upon circumstances. In the case of some firms, it simply means that they have weathered wars and depressions, but are almost dead, and don't know it yet. Nearly everybody can recall one or two examples of such.

We are glad to report that the Kelsey Company has no reason to feel itself in that class. It has been operated on the conviction that a limited business, given close personal attention by all those in it can do a better job for its customers and be a source of more satisfaction to those who participate in it than a much larger one, always trying to expand and hence losing the personal touch.

This philosophy has not prevented our making changes and improvements in our line which we felt would make it more useful, complete or attractive. In the same way, factory equipment and machinery has been renewed and replaced with more up-to-date units as fast as they came on the market. Without such labor-saving moves, the gradual transition from the 59 hour work week of 1872 to the 40 hours of 1980 would have been impossible.

We're sorry we haven't room here to give you the early historical details. Everybody knows that in those days we had to get along without telephone, United Parcel, typewriters, addressing and dictating machines, etc. But how many stop to think, or realize, that, lacking electric power, every firm, no matter how small, had to own a steam engine power plant, and every piece of equipment which could not be operated by hand or foot was of necessity, so placed in the factory that it could be operated with a belt from shafting, and this shafting ran clear back down to the steam engine on the ground floor? And how many realize that it was a time when toilet facilities were strictly the rugged outdoor variety, with a wooden trough for washing up; anyone wishing hot water had to draw off a pail from the steam boiler; and the illumination was strictly by gas, which couldn't have been as good as a 15 watt bulb? That wages were from 10 cents an hour up, with a machinist getting 25 cents? And the head of the business making all of $25 a week? High cost of living or not, would you like to go back to 1872?

However, all that is behind us, and we are looking forward instead of back. The many friends we have made over the years, and the many we have with us now, are a constant source of pleasure and satisfaction. We regret that the exigencies of time do not enable us to answer at greater length the mighty fine letters we receive from you.

Number of Leads To a Pound

The following table gives the approximate number of leads of a given size, per pound. It will be handy if you need a large quantity of one size, and wish to order them already cut.

Length	1 point	2 point	6 point
4 pica	390	195	65
5 "	312	156	52
6 "	260	130	44
7 "	222	111	36
8 "	195	97	32
9 "	173	87	28
10 "	156	78	26
11 "	142	71	23
12 "	130	65	22
13 "	120	60	20
14 "	111	55	18
15 "	104	52	17
16 "	97	48	16
17 "	92	45	15
18 "	87	43	14
19 "	82	41	13
20 "	78	39	13
22 "	71	35	11
24 "	65	32	10
30 "	52	26	8

Cutting Heavy Rule

Lead and rule cutters are made to handle brass rule up to six points in thickness, and it is just as well not to use them for cutting type or composition rule any thicker. To cut heavier rule is to strain the cutter and perhaps make it impossible to cut the smaller sizes accurately.

Larger shops use metal saws, and if you have access to one, or can rig one up, you'll find it a great convenience, as well as a producer of better work. Remember that in cutting you must allow a little extra for the part which will be turned to sawdust, which will be the width of the saw, plus whatever "set" or bend there may be to the teeth which cut their path through the metal.

Any kind of a metal saw will do, but small teeth are preferable. If you are going out to find one, here are a few more suggestions:

The teeth should have a slight set, and be about 1/16 of an inch thick. The saw will work best if it is reinforced on each side by a thicker disc to prevent it from bending. Teeth that are slightly thicker at the cutting edge also give the equivalent of the ordinary set, and work well. A hollow ground saw is preferable.

For a really good job, rub the cut ends over a fine file after sawing.

LINOLEUM PRINTING BLOCKS

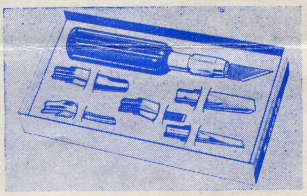
Smooth Surface for Easy Drawing of Design

Linoleum blocks are best grade ⅛-inch linoleum, mounted slightly under type high on non-warping pressed wood blocks.

Size	One	Six	Dozen
2x3 inches	**.85**	**3.20**	**4.95**
3x4 "	**1.25**	**4.60**	**7.05**
4x6 "	**1.90**	**7.00**	**10.75**
6x8 "	**3.50**	**12.90**	**19.90**
9x12 "	**7.00**	**25.90**	**39.85**

Assortment, consists of: two size 2x3 blocks; and one each of sizes 3x4, 4x6, and 6x8. **7.95**

X-Acto Linoleum Cutting Tools



Set of 6 Tools, (knife, U-shaped gouges and V-shaped veiners) with plastic tool handle, (blade locks in handle) - - - **$5.15**

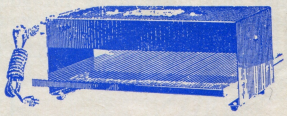
Cutting Knife, (with handle), **2.05**
(Same handle used with knife or tools.)

Hand Roller, 5½ inch, with handle, **10.55**

Rubber Roller, 4 in. 1 in. diam. #49, **3.95**

Rubber Roller, 4 in. 1¼ in. diam. #51, **4.25**

Raised Printing Unit



This Raised Printing Unit is large enough to handle sheets up to 12 inches wide. For use on 110-120 volts A.C. or D.C. Cannot be used where there is no electricity or on any other voltages.

Unit, only, with 6-foot cord, - **$39.75**

Outfit, consisting of: Unit (as above) plus 4-oz. tube each of Bond Black, Red, Blue inks; a tube each of Gloss and Dull compounds, **53.40**

Raised Printing Compounds

Gloss or **Dull** tube, **$2.55**
¼ lb., **3.65;** ½ lb., **6.10;** 1 lb., **10.20**

Use Bond Black or Many Purpose colored inks with Gloss or Dull compounds.

Bronze or Aluminum tube, **$3.20**
¼ lb., **4.55;** ½ lb., **7.60;** 1 lb., **12.65**

Yellow Ink, for bronze or aluminum comp.
4 oz. tube, **$3.30** 1 pound, **7.00**

Combination
Label Holder—Drawer Pull

Same as supplied with new cabinet-front type cases. White card covered with celluloid strip for identification of type in case—can easily be read from standing position.

1.15 each, per dozen, 11.40