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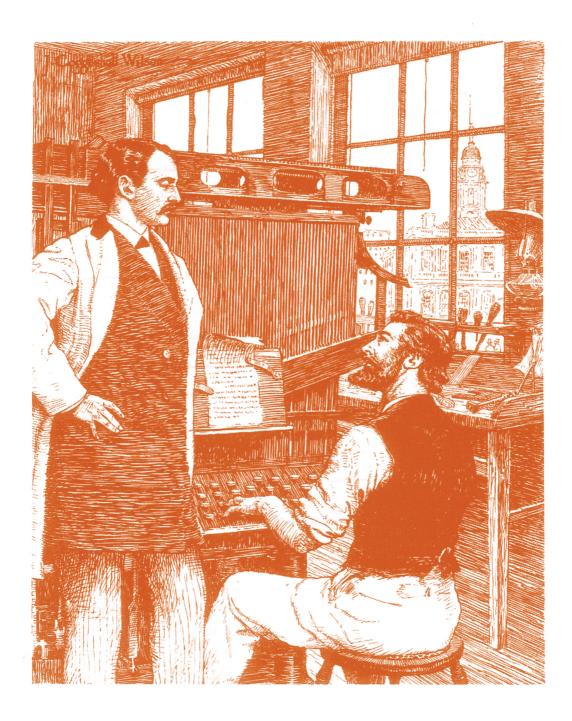
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LEARN ABOUT LEARN ABOUT

THE PICA
POLE!

HIGHLIGHTING THE VANDERCOCK



Ottmar Mergenthaler, (a German immigrant working in Baltimore) demonstrates the Blower Linotype, the first line-casting keyboard typesetter, to Editor Whitelaw Reid, 1886.



Precision Cylinder Proof Press

(Examples: Vandercook, and imitations such as the Challenge 15MP and the Reprex)

"Originally an improvement on the simple galley press, the first Vandercook press was designed in 1908, and gave rise to an increasingly more sophisticated series of precision presses that lasted into the offset era. The most popular models, the #3, #4, Universal, and SP series were designed for reproduction proofing of metal type to make masters for photo-offset printing, and for testing ink, paper, color, etc. These presses are the gold standard for high-quality modern letterpress work, particularly for computer-generated material printed from photopolymer plates, and are what most 'professional' letterpress art printers and private presses use. Since Vandercooks were not designed for production-quantity runs, these large, heavy presses are best for runs in hundreds of impressions.

So, if you want the highest quality for short runs or large sheets, and have space and a lot of money, spring for the Vandercook."

Check out *fiveroses.org* for more great information on presses!



Letterpress Vocabulary.

bed - the flat surface on which the type is place for printing.

Boxcar base - gridded metal plate onto which you print photopolymer plates.

brass - thin space, 1 point thick, used for kerning type.

Also called coppers or thins.

cabinet (Type Cabinet, Stand) – the support for dustless cases, with a tilted top for one or two cases.

case (type case) – drawer—but don't ever call it a drawer—with compartments ("boxes") for storage of type. The original design has a lip at the front; later dustless cases were designed without a lip and in a tighter-fitting stand to keep dust and debris out of the cases.

composing stick – shallow, adjustable tray in which type is set or arranged before it is locked into the chase.

copper – thin space ½ point thick, used for kerning type. Se also "brass."

display fonts - sized approx. 16pt and over.

distribute – the term for returning type to the case after printing. In England, they "diss" type. You can diss your type if you prefer it that way.

Just don't create any hard feelings.

em - one square unit of your point size.

 $en - \frac{1}{2}$ unit of your point size.

family – an entire family of type (ex. Regular, medium, italic, bold, etc.).

font - in letterpress, refers to the set of type, not the actual design of it.

form – type and/or cuts, plus spacing material, assembled and locked in a chase ready for printing.

furniture – hardwood or metal blocks in specific lengths and widths [measured in picas], used to fill in the space around the type on the bed.

galley (galley tray) – metal (steel or brass) tray on which to store set type or forms. *grain* – the direction of the paper fibers, try not to work against them.

grippers – on a cylinder press, round pieces operated by a foot pedal that grab the paper. They release only when the press is taken all the way to the end of the bed.

hell box – a case where random type was thrown to be sorted later.

kerning – a component of letterspacing, used to remedy problems between letter pairs. *leading* – space between lines of type.

lead sandwich - handset type between strips of lead, not easily digested.

letterspace – the space between individual letters.

ligature – a combination of letters to form one piece. Fonts usually come with ff, fi, ffl, fi, ffi, and may have others for style (such as ct or st) or for other languages (such as ae or ce).

make-ready – any packing used to adjust impression and printing through the control of pressure, therefore making the impression more even.

More informally, the act to of making sure all parts of the form print evenly.

nick – the indention on the top side of type used to identify the correct orientation in the composing stick.

ornament – a small decorative element cast into type metal like type. They can be intended for solo use or in a line to make a border. Some com in multiple parts to create a two or three-color image.

packing paper – that is stacked behind the top sheet or tympan to achieve the desired amount of pressure.

pica – 12 points; 6 picas to the inch. Sometimes referred to as "line," in reference to wood type. Unit of measure for line length.

pied type – unsorted type, usually as a result of its having spilled or dumped (its best to avoid this).

point – 72 points to the inch; 12 to the pica. Unit of measure for type.

punch - used to stamp an impression of the letterform into a softer brass matrix.

quads – non-printing units of metal used to create space between text characters.

quoin – sliding wedges or expansion units that lock type and furniture into place. *quoin key* – tool to tighten and loosen quoins.

reglet - small furniture.

rreu – Right Reading Emulsion Up. The kind of film you are requesting to make a photopolymer plate.

sans serif – without serifs (more modern). Frutiger is an example of a sans serif typeface.

serif – the terminating lines at the top and bottom of letters. They aid your eye in reading along the lines of type. Baskerville is an example of a serif-ed typeface.

shoulder – the sloping edge of the printing surface on your type, look for crisp tight shoulders as opposed to rounded curved over used ones.

slug – strip of spacing material 6 points thick and greater.

sort – a letter or character that is one element of a typeface.

text – text sizes are those about 14 points or smaller.

tympan paper – the stiff (yellow) paper that is used atop packing on the press. It covers the packing and makeready and also allows the image to be printed and then wiped off, leaving a ghost image that can be used for registration. typeface – the design of the characters.

type high – press bed printing height. In the US and England, .918 inches. Continental Europe uses taller type, but foundries there will often plane it down for American and English printers.

type mold – used for casting the individual letters.

work and turn - efficient maneuver during printing process to maximize paper use.

Tips For:

Hand-setting Type: Use a composing stick, keep your set your type from left to right, nicks up, and don't over think it. Take care of letterspacing with coppers or thins. There is an art to the proper way of making a lockup. But keep in mind, there is also the mindset of making something that simply works. All depends on how much you care about the old-time masters laughing at you. Tie it off with fine twine. You'll likely have to print it to see how spacing stands and see what needs to be tweaked before you are happy. Use a galley tray to help transport your form to the press bed.

Ink & Paper: Oil, metallic, and rubber-based inks are all used for letterpress. It is important to be cognizant of the ink's texture as well being aware of its color as it appears smeared on your paper. The color of the ink on the plate will most likely not look the same as how it sits on your paper stock. Using your finger, smear a dab of the ink on the paper, and look at the lightest area. This is the most reliable indication of how it will print. As for the texture, compare a long ink vs. short ink. Test the runniness of the ink by holding your spatula upside down. You can add magnesium carbonate (chalk) to make it thicker/tackier, and linseed oil to loosen. Keep in mind you do not need to mix copious amounts. Inks for letterpress go a very long way. You can store unused ink in small sealable containers or wrap it up in a freezer-wrap package. Try experimenting on different papers. Get lots of free samples!

Some papers to look at:

Crane Lettra (specifically designed for letterpress printing), Reich, Neenah, Mohawk, Wausau, French, Eames, Savoy, Gmund Paper, Gruppo Cordenons, Environment, Oxford, Stonehenge, Rives BFK, Arches, Strathmore, Plike, chip board, and Twin Rocker (handmade).

File Preparation:

- Keep film sizes in mind when setting up file size (consider cost and print efficiency).
- 2-up, 4-up, 8-up, etc. number of copies you can fit to one page/plate/print
- Leave .75" on top (and bottom in the case of a work and turn) of paper for the dead-bar-zone
- Set crop marks and make sure they are at least 1/8th of an inch off final image area
- Bearer bars strips on the plate/film that run along the sides of your image to help the rollers maintain a consistent level as they ink the form
- Make strokes .5 or thicker
- If you're using two or more colors, set crops, then copy image and separate colors.
 Turn colors to 100 percent black once separated
- Outline all fonts or include font when sending to printer
- Bitmap pixel-based images
- Final file needs to be Press Quality pdf
- File Name for Film Maker: Mark file with your name, document dimensions, and RREU (right reading, emulsion up is the kind of film you're requesting)



William Morris, trademark for the Kelmscott Press, 1892.

Plate Making: You can either outsource your plates and have them made for you (Boxcar is a good choice: boxcarpress.com) or make your own. Make sure you get the plastic-backed plates if you're using a Boxcar base (metal-backed plates require a magnetic base). The two acceptable plates for the Vandercook are KF95 and 94FL. The 94FLs are less expensive; the advantage of the KF95s is that they hold finer lines and details, and are easier to see through. Overall, it's not a big difference. Plates are sold online at Boxcar, which stocks A4 size and larger sizes that you can cut down. These plates are photo-sensitive until exposed. Do not remove them from their packaging outside of the darkroom. If you have access to a plate maker, here are some tips on how to gain control over making your own successful plate:

- 1. Warm Up Allow your plate maker machine to warm up.
- 2. Plate/Film Exposure Remember: emulsion to emulsion kiss (e → e). The peeled plastic side is the emulsion side, the non-shiny side. Place plate emulsion side up with the film (rreu) on top so that it reads backwards. Vacuum seal and unroll the kreene over the top of the plate and film (wait until you have a tight suction). Expose the plate for 6 to 6 ½ minutes. Use 6 min. for thinner finer lines and 6 ½ min. for flatter broader imagery. Set the timer, wait, and look alive.
- 3. Rinse stick your plate shiny side down to the rinse-platform for it to be scrubbed/rinsed. Make sure the water level is flush with the brushes, so that the scrubber-bristles will be able to make contact with your plate. Set the timer for 10 minutes. Pay attention to its progress and don't breathe too deeply. Rinse and repeat if necessary. No it doesn't need conditioner.
- 4. Dry Bumpy side up, let the plate bake for 10 minutes or till water is evaporated.
- 5. Sticky Back Tape Trim your plate and apply sticky back tape on backs of your plate(s). Now, you're ready to print! Store plates after use in sealed plastic bag to help preserve the plate.

Um, that wasn't sposed to happen:

*spaghetti-ized lines _ when the plate-maker jellies your plate to the point where your p's sag, l's droop, and your lines go south, it may mean you didn't expose it for long enough then washed it too long (under exposure + over-washing). Once this has happened, it's hard to save the plate.

Printing on a Vandercook.

Registration: Requires you finding the center of the dead-bar (on the press bed) and center mark by the grippers. You can find the center of your paper by measuring or folding it, and adjust the paper tab to the correct distance so that your paper will line up with the center mark on the bed. Place your plate on the center of the boxcar base or handset-form on the center of the press bed so that it will line up correctly on your paper. You can make minor adjustments to alignment and straightness by putzing with the grippers and/or paper tab. Moving an entire plate isn't as desirable.

Trip vs. Print Mode: A trip is a run of the rollers over the plate/type increasing the amount of ink on them without printing on your paper/tympan. You may wish to trip the press every second run to gain greater ink coverage on your paper. Print mode allows the paper to make contact with the plate/form.

Checking/Adjusting Roller Heights: Use the "lollipop tool" (roller-setting gauge), and check your back roller and front roller separately. The ink gauge should read between a nickel and dime thickness. If you look sexual shoving the tool in and out, while making sure to keep the handle parallel with the bed of the press, then you are doing it right. To adjust the roller height (on a No. 4) in the event of an uneven or undesirable ink coverage, you will need to play with the three screws on either side of the rollers. The middle screw acts upon both flanking screws, one for each front and back roller. If the roller is too high, screwing the flanking screws to the right, lowers it. If the roller is too low, screwing to the left raises it. Don't forget to tighten the middle back up again. With fine type, you may need to raise the rollers a bit more. For other models, visit the Vanderblog!

Make-Ready: If parts of your type/plate aren't printing properly, or if you wish to have a part debossed more than other areas, then you will need to adjust your make-ready. You can add packing to the tympan and/or slip thin sheets of paper under problematic wood/metal type that aren't type high.

Sending it Through: It is best to orient your paper so that it is securely held by as many grippers as possible, as well a long enough sheet so that you can hold it with your hand as long as possible. If it is too long, however, you run the possibility of the paper fishtailing and your type/plate will not print as planed/aligned. Should the lever feel peculiarly hard to turn, do not complete the revolution: You most likely will crush the metal, crack wood, or destroy your plate. This means you have too much packing or your rollers are way too low.

White-ink Facial: If a prior job has left your press with traces of darker undesirable ink color, even after it has been "cleaned," you might try inking your press with white ink, running it, then cleaning it again. This'll help clear it of ink "impurities."

Cleaning: Wipe plates and type with a rag (no chemical is necessary). You can clean the press using a VOC solvent. Do not drop your rollers on the ground when you take them off. It is loud and not good.