

Paper Dampening for the Hobby Printer

by Alan Brignull – *Small Printer*, July 1991

To achieve a solid, even impression when printing letterpress, the whole surface of the type face must contact the paper. To do this, one must either use smooth paper and a perfectly plane forme (the so-called ‘kiss’ impression) or use enough pressure when printing to flatten the irregularities in the rough paper surface (‘bottoming’) and counteract any unevenness in the type.

Hobby printers are often using worn type, and small presses which are not capable of exerting enough pressure to crush the surface of the paper with any but the smallest of formes. They frequently also have the ambition to print larger jobs than their machine was really designed for, and the result is a weak patchy impression. The only way out seems to be to slap on more and more ink until the irregularities are drowned out, but this leads to excessive ‘squash’ around the edges of the type, filled-in counters, slow drying and probably set-off as well. We all know the awful splodgy look of the over-inked Adana!

A better way for the printer who is more interested in a perfect job than speed is to soften the paper by dampening it, as they did in the good old days of Caxton & Co.

Throughout the first few centuries of printing in Europe, nearly all paper was dampened before printing. This was because the wooden press was capable of only limited pressure, and because hand-made paper is naturally rough-surfaced. Dampening softens the paper so it ‘moulds’ around the type, and makes it more receptive to ink, allowing less to be used on the type. The resulting impression is sharp, solid and three-dimensional; everything which the connoisseur of fine letterpress printing looks for. Type designs from the days of dampened paper were made with this ‘moulding’ effect in mind, which is why photoset Caslon Old Face printed litho on art paper looks so wishy-washy.

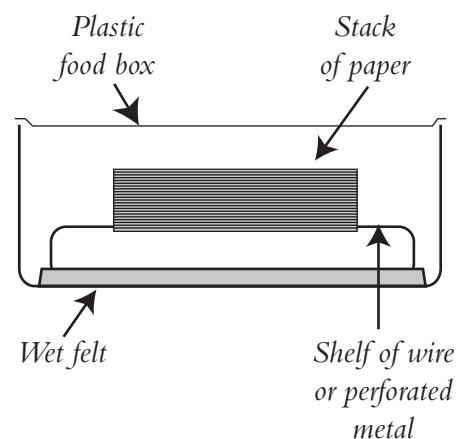
With the introduction of thin smooth machine-made paper and more powerful presses made of iron, in the early nineteenth century, it was found that you could print the paper without dampening, with the consequent increase in speed, productivity, profits etc. Commercial letterpress was soon almost all ‘dry’, though fine printers and artists continued with

dampening. The practise is also still relevant to today’s hobby printer, who faces many of the same limitations as the printers of centuries past.

The traditional method is described in detail by Joseph Moxon in his *Mechanick Exercises on the Whole Art of Printing*, published in 1683; the workman took the dry paper and dipped it, a quire at a time, in a vat of water. The stack was then pressed overnight to allow the moisture to permeate the whole pile evenly. Moxon calls this process ‘wetting’, but the paper as it is used is not noticeably wet, just limper and softer than when dry. After printing, the sheets were hung up on lines like washing, as may be seen in many of the old engravings and woodcuts of printshops.

I have tried this method, and it works, but machine-made paper has to be dried out much more carefully, gradually over a period of several days, if it is not to cockle permanently and look like something you’ve retrieved from the gutter. This was probably not so much of a problem with thick hand-made paper, but I was inspired to find a better way.

The method which I finally arrived at makes use of a large plastic box with a lid, of the Tupperware sort. The exact size depends on how big a pile of what size paper you want to put in it. At the bottom of the box is a layer of thick absorbent material, such as felt, and about an inch above this a shelf made of galvanised expanded metal. Readers will no doubt be able to improvise with materials of their own, but obviously it must be rust-proof.



Paper Damping for the Hobby Printer

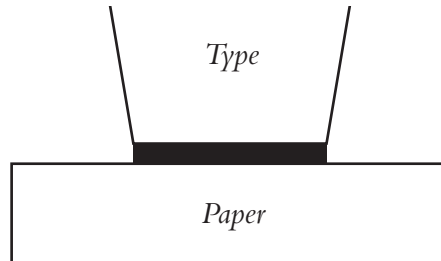
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About a day before printing, wet the felt well with water and place the paper on the shelf. Put the lid on and leave it to reach equilibrium – the time required will depend on the temperature (in a warm place the atmosphere in the box will become more humid) and the amount of paper being treated. If there is a lot of paper, it may be advisable to ‘cut’ the pile like a pack of cards after a while, to allow the centre to absorb moisture.

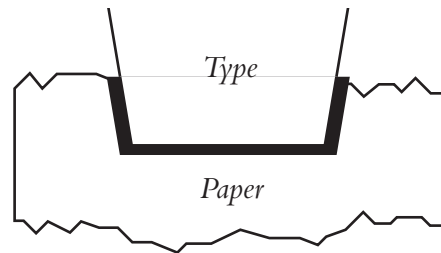
You should find that the ‘humidifier’ paper prints noticeably better, with less ink on the rollers. Because of this thinner ink film, it dries quicker and there is less danger of set-off. Note, however, that paper stretches appreciably when damp, so it is probably not advisable to try close-register multicolour work at first. Also, if you are going to back the sheet up, return it to the box while the first impression dries. If you let the paper dry out it will shrink again and you will not be able to register the other side.

Allow the paper to dry out gradually, maybe under light pressure (once you’re certain the ink is dry!) and you should have no trouble with cockling. Thick good-quality paper is less trouble in this respect, but then you wouldn’t go to all this trouble for a job on this cheap paper anyway. For really thick paper, and to speed things up a bit, I have tried spraying the sheets with the very fine spray from a plant mister before placing them in the box to reach equilibrium.

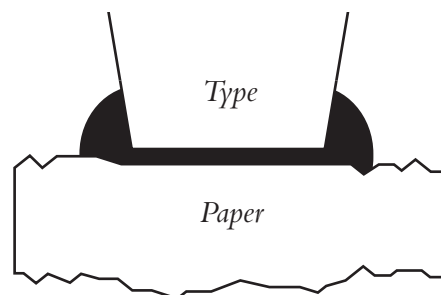
At it most successful, printing on damped paper is a joy. Your puny little 8x5 suddenly produces printing to be proud of; it’s well worth some experimentation to get the method right. Above all, don’t be impatient; this is not the technique for your modern business printer, all rush and deadlines. With damping and drying times, a single sheet takes about a week. Caxton never described himself as an Instant Printer!



*The modern ideal.
Perfect type, smooth paper –
the ‘kiss’ impression*



*The old way – damped paper moulds
around and counteracts irregularities
in paper and type*



*The kitchen printer’s solution
Bung a bit more ink on*