

machine makes lines of dots over the whole of the *land* portion of the map; the dots are very faint, and very close together, so as to form a sort of tinted ground; the machine is said to make two thousand dots in a minute; and, by a beautiful contrivance, it reverses its action whenever it encounters the deeper lines which mark a boundary between land and sea.

Another novel kind of printing is a combination of typography and lithography. Part of a page is set up with ordinary moveable types; an impression from them is transferred to a lithographic stone; the remainder of the design or page is filled in by drawing on the stone with the usual material; and the stone is then prepared for printing in the usual lithographic method. This double system is intended for application in bordered, tabular, or ornamental printing; and it seems to be capable of useful extension—since the precision of type-printing may be combined with the artistic grace of lithography. Another kind of litho-typography, of French invention, is a peculiar mode of etching upon stone, so as to leave a printing surface raised considerably above the general level of the stone.

There were specimens exhibited of a new art, to which the embarrassingly-learned name of *panëiconographic* printing was applied. It seems to be an attempt to combine the excellencies of all kinds of engraving, by producing plates in which the design, though always raised or in relieve, has sometimes the characteristics of one style, sometimes of another. The French exhibitor of the specimens, in his catalogue-description, says that this panëiconographic art has the power of "reproducing on every kind of metal (whether engraved or in relief) any lithographic, autographic, or typographic print, any drawing in pencil or in stump, any engraving on wood, steel, or copper, whether produced by aquafortis or by the graver, in such manner as to be able to print these reproductions by means of the typographic press." The typographical or common printing-press is so much more expeditious in its operations than the copper-plate or the lithographic press, that it would be a valuable improvement if all the various kinds of engraving really could be reproduced by such means—whether or not we give a hard Greek name to the process which ensures this result.

The Denmark section, which was not very large or important, contained, nevertheless, a specimen of a new art, which the exhibitor, M. Schöler, calls *stylography*. It is said to be a method whereby a copper-plate can be engraved without the aid either of the graver or the etching-acid; and M. Schöler exhibited an engraving in all the various stages of progress. In the first place a smooth metallic surface is prepared; on this surface an even layer of black composition is cast; on this composition a thin coat of silver is applied; on this silver the artist sketches his design with a sharp-pointed instrument, cutting deep enough to expose the black composition beneath; from this black and white picture (for such it certainly is, the black lines of the design being visible through a silvery ground) a copper cast is taken by the electrotype process; and from this cast a second cast is produced by the same process, which becomes of course a copy of the silvered composition model. From the copper cast last produced impressions may be taken by the ordinary copper-plate press. This is one of many modes of applying electro-deposition to the production of engraved plates; but it must require very careful manipulation to produce by these means a plate flat and perfect enough to meet the exigencies of a press.

Bank-note requirements, as is well known, have led to many curious and valuable inventions, in respect both to paper and printing. There is Messrs. Perkins