(No Model.)

P. M. CABELL.

METHOD OF AND DEVICE FOR FINE STENCILING.

No. 594,322. Patented Nov. 23, 1897.

Fig. 1.

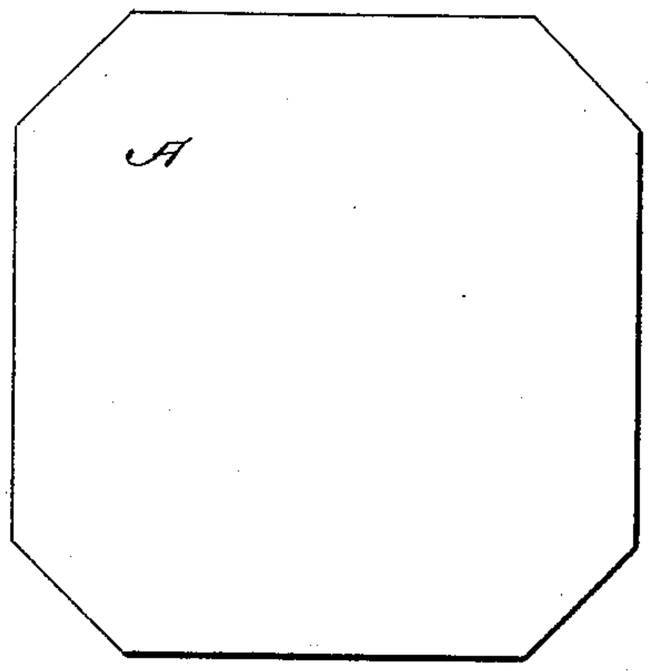

Fig. 2.

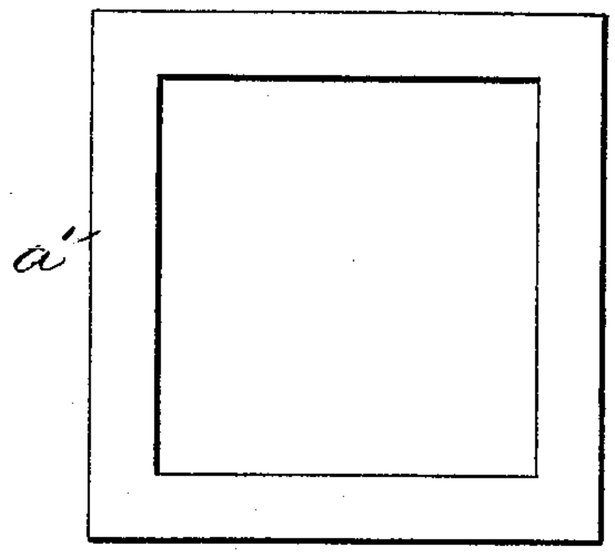

Fig. 3.

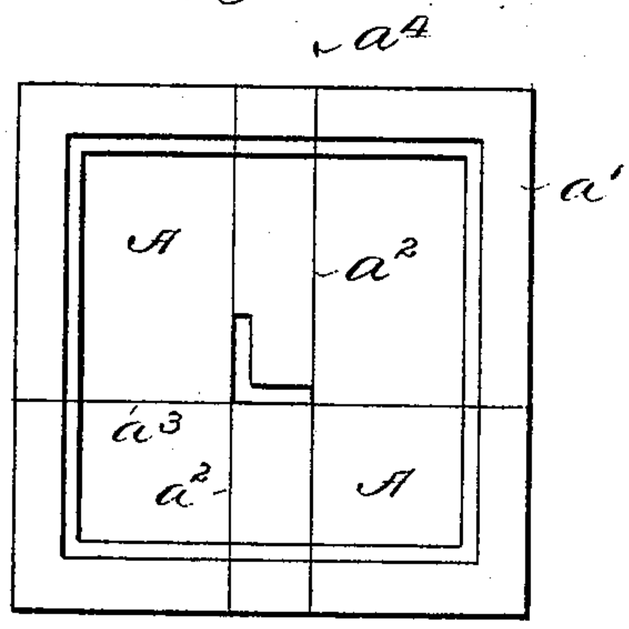

Fig. 4.

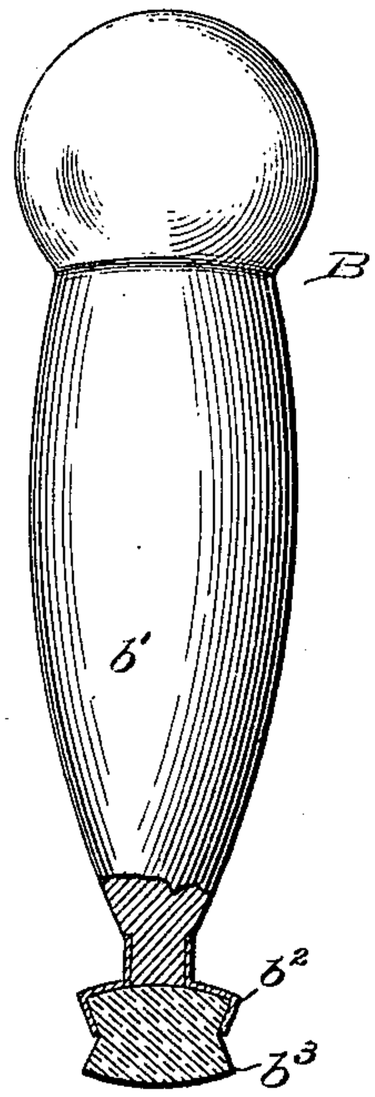

Fig. 5.

Fig. 6.

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METHOD OF AND DEVICE FOR FINE STENCILING.

SPECIFICATION forming part of Letters Patent No. 594,322, dated November 23, 1897.

Application filed December 26, 1896. Serial No. 617,081. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MASON CABELL, of Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Methods of and Devices for Fine Stenciling; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has for its object the production of novel methods and means of fine, delicate, and artistic results in stenciling, suitable, among other purposes, for decorative and ornamental lettering, &c., of maps, drawings, charts, &c., and for stenciling intricate tracery, tendrils, vines, and similar work on metal, glass, paper, &c., as will presently be more particularly set forth.

In practicing my invention I avoid the use of bristles or brushes of any kind, nor in any instance do I employ any brushing or sweeping movement of the ink-laying implement, and the coloring-matter is put on by successive actions, thus precluding the possibility of depositing too much ink in any given portion of the design and also permitting the intensifying of the color at will.

Figure 1 represents a plate or sheet of very thin metal in which the stencil-pattern is to be cut out; Fig. 2, a metal frame for strengthening the borders or edges of this plate for preserving its integrity and increasing its rigidity; Fig. 3, the plate with its frame as applied thereto; Fig. 4, a printing or tamping stick, showing the composition attached to or inserted therein; Fig. 5, the composition shown alone and detached; Fig. 6, one of the endless varieties of ornamental patterns which can be delicately and artistically printed by my improved method and device.

I employ an extremely thin metal in the plate A, so that when the printing or tamping stick B, hereinafter described, is applied to it by direct pressure the plate may be forced down upon and held firmly and closely against the material on which the imprint is to be made, thus absolutely preventing the spread of the coloring-matter beneath the edges of the openings in the plate, thereby insuring a clear and perfect outline in the imprint. In order to avoid damage to the plate from handling due to its thinness, I strengthen and reinforce it by a frame *a*, which stiffens the metal and protects it against stretching and "buckling." By such reinforcement, moreover, the plate is held level and true as to its under side and lies flat on the material that is to receive the imprint.

A novel and essential feature of my stencil or tamping plate consists of some visible marks or indications on the same (see a^2) for the purpose of designating by their distance from each other and without the need of a previously-prepared separate scale to serve as a guide for each special letter of any one alphabet the exact width of the letter cut through the plate. These marks may be in the form of slots, lines, dots, punctures, impressions, or any other style of indication, either on the edges or face of the plate, which will accurately show the exact width of the letter, so that any desired space may be left between any two adjacent letters.

The only line a draftsman needs to draw in using my method is the single straight or curved guide along which the lettering is to be done. All the careful and time-consuming work of "laying out" the "scaled helplines" for designing and spacing the letters is absolutely dispensed with, thus saving practically all of the time and great cost of hand-lettering.

The printing-stick B is also of novel construction. Its handle *b* is made of a shape convenient for use by the hand or otherwise and adapted for the tamp-inking pressures upon the plate, by which the ink is successively laid on. Its inking end (see b^2) is so formed as to firmly hold some compressible or elastic material and capable of being pressed through the opening in the stencil-plate, (preferably similar to the composition used in printers' rollers,) said material being squeezed into a cavity in the end of the tamping-stick that enlarges inwardly, it being held there by its own compressed volume and elasticity. This ink-depositing material is so shaped as to permit of being reversed in the cavity, so that when one end of it wears away

by frequent use the other end may be employed by simply removing it from the cavity, turning it end for end, and replacing it again.

In any event the operation of printing by my invention consists of a direct tamping pressure upon the plate by the composition that carries the coloring-matter, and during the moment of this contact or pressure the plate is forcibly held against the paper or other receptive material with such closeness and steadiness that it is impossible for any coloring-matter to be spread beneath the plate beyond the edges of the openings forming the designs to be imprinted.

Very thin metal can be employed in my process and with considerable reduction of the customary number of connecting "ties" or "bridges" without injuriously affecting the wearing life of the plate and which used by my method is practically indestructible.

Any desired strength of shade can be given to the imprints by varying the force of the tamp-inking pressures given by the composition in the stick, taken in connection with using more or less coloring-matter.

With my invention very stiff and pasty as well as waterproof inks, somewhat similar to what are now commonly known as "proofing-inks" in daily use by engravers, &c., may be employed.

By the aid of my invention a number of draftsmen may letter on the same map and secure absolute uniformity of work.

While the best results are attained by using a tamping-stick made of the composition before mentioned, yet very good work can be accomplished by using other materials. It is essential, however, that the material used for the tip of the stick be capable of being pressed through the opening of a stencil-plate and be such that the coloring-matter will adhere thereto—such, for instance, as buckskin, felt, or any other compressible material or composition.

With my invention cheap and unskilled labor proves competent to do the most expert work with great saving of time.

By the phrase "tamping" or "tamp-inking" employed in this specification I mean the impact and momentary pressure of the color-carrying device, which serves to press through the stencil-pattern and upon the paper or material receiving the imprint the requisite coloring-matter.

I claim—

1. The described improvement in the art of stenciling, which consists in applying and working in the coloring-matter through the openings in the stencil-plate, by successive tamping pressures of a compressible or elastic material carrying the coloring-matter.

2. A tamping-stick for stenciling, consisting of a holder and a color-applying tip formed of some elastic or compressible substance to which the coloring-matter to be applied will adhere.

3. A stencil or tamping plate in which the pattern to be printed is cut, and on which by visible indications the exact width of the letter or pattern is shown.

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