H. M. PAINE.

STENCIL-PEN.

No. 192,626. Patented July 3, 1877.

Fig: 1.

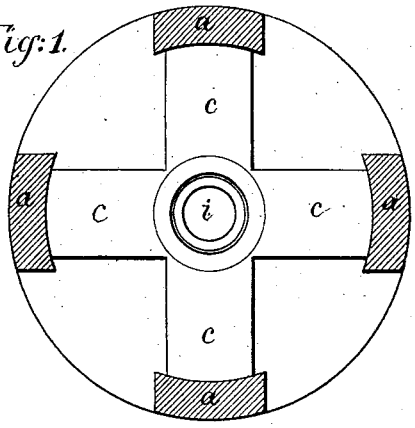

Fig: 2.

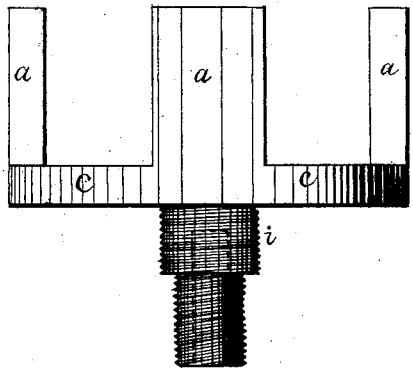

Fig: 3.

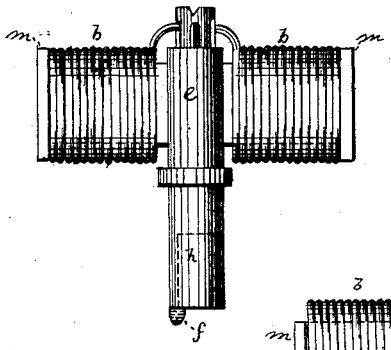

Fig: 4.

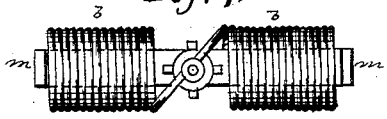

Fig: 5

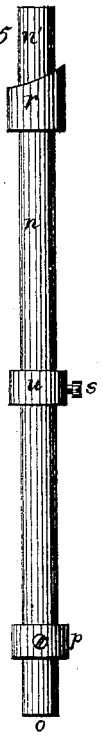

Fig: 6.

WITNESSES

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IMPROVEMENT IN STENCIL-PENS.

Specification forming part of Letters Patent No. 192,626, dated July 3, 1877; application filed March 13, 1877.

To all whom it may concern:

Be it known that I, HENRY MONROE PAINE, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Electro-Magnetic Stencil-Pens; and I do hereby declare that the following is a full, clear, and exact description thereof, 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 the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in stenciling-tools, the first of which is the mechanical construction and arrangement of an electro-magnetic motor operating a style; secondly, the method or *modus operandi* of reciprocating the said style.

Referring to the drawings, Figure 1 represents a plan view, partly in section, of the open frame-work surrounding the magnetic motor. Fig. 2 is an elevation of the same. Fig. 3 is a side view of the magnetic bar. Fig. 4 is a plan of said bar. Fig. 5 represents the style-bar; and Fig. 6 an elevation, partly in section, showing the combination of the Figs. 1, 2, 3, 4, and 5.

Similar letters of reference represent like parts in all the figures.

The frame referred to in Figs. 1 and 2 is fashioned of soft iron, and the armatures *a a a a*, which are a continuation of the frame-bars *c c c c*, may be of any even number.

The magnetic bar *b b* is fitted to a spindle, *e*, and on the lower end of the spindle is projected a toe, *f*. The center of the spindle is drilled out, as shown in dotted lines at *h*. The magnetic bar *b b* and spindle *e*, thus constructed, are arranged in position within the aforesaid soft-iron frame, under such conditions that the spindle *e* will move freely in the shank *i* of the frame, and the poles *m* of the magnetic bar *b b* will rotate closely between the armatures *a a a a*, which form an integral part of the said frame.

Fig. 5 is a style-bar, *n*, which receives and holds the marking-tool at *o* by means of a binding-collar, P. The upper end *n'* of the style-bar *n* is fitted loosely into the drilled end *h* of the spindle *e*, and a wave-cam, *r*, is permanently secured to the bar *n*.

When the above-described individual parts have been placed in position, as shown at Fig. 6, it will be seen that the toe *f* engages the cam *r* under conditions which compel the style-bar *n*, when prevented from rotating by the stop *s*, to reciprocate under and by the rotary movement of the magnetic bar *b b*.

The compensating spiral spring *t*, acting on a stop-collar, *u*, keeps the toe *f* and cam *r* in contact, while the binding center-screw *v* secures the whole combination in position.

The number of reciprocates of the style-bar *n*, as regards the revolutions of the magnet-bar, will be as the number of waves on the face of the cam *r*, which may be two or more.

Having described the individual parts of my invention, I would here state that its novelty consists in the construction of a stenciling style, *n*, operated by means of horizontally-revolving magnets, in combination with an open armature, forming an integral part of the frame-work surrounding and supporting said magnetic bars, for the purpose of operating the style *n* with wave-cam *r*, compensating-spring *t*, and stop *s*; therefore,

What I claim as my improvement is—

A hand stencil pen or style consisting of magnetic bars *b b*, revolving in an open armature-frame, Figs. 1 and 2, in combination with a cam, *r*, having two or more waves cast or otherwise secured upon the upper end of the bar *n*, within the circumference thereof, and toe *f*, stop *s*, spring *t*, all constructed, arranged, and operating, for stenciling purposes, upon paper or other thin substances, in the manner substantially as above set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HENRY MONROE PAINE.

Witnesses:

HORACE HARRIS,

OBA WOODRUFF.