

(No Model.)

T. J. BENNETT.

SCOTOGRAPH OR WRITING MACHINE FOR USE OF THE BLIND.

No. 553,504.

Patented Jan. 28, 1896.

Fig. 1.

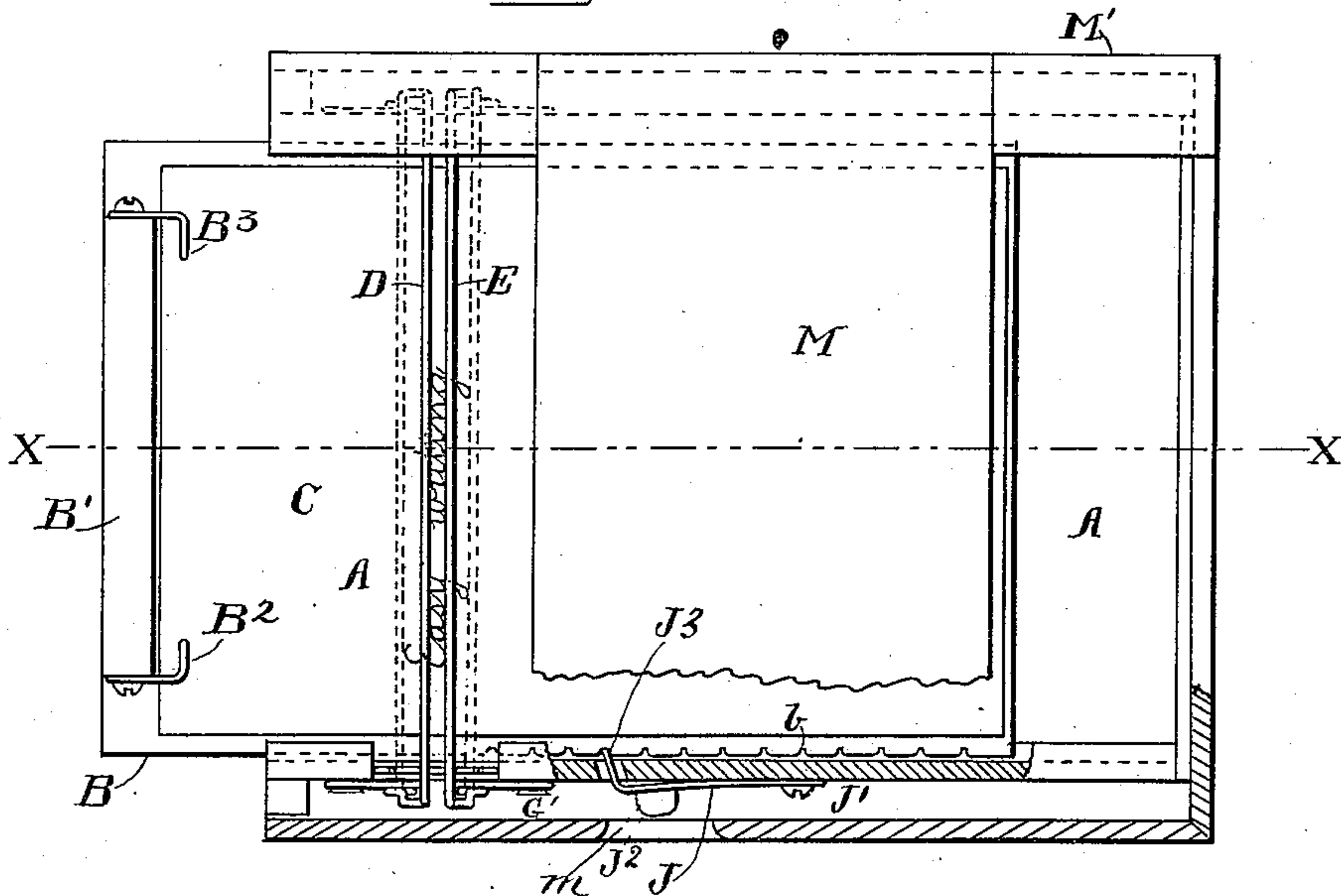


Fig. 2.

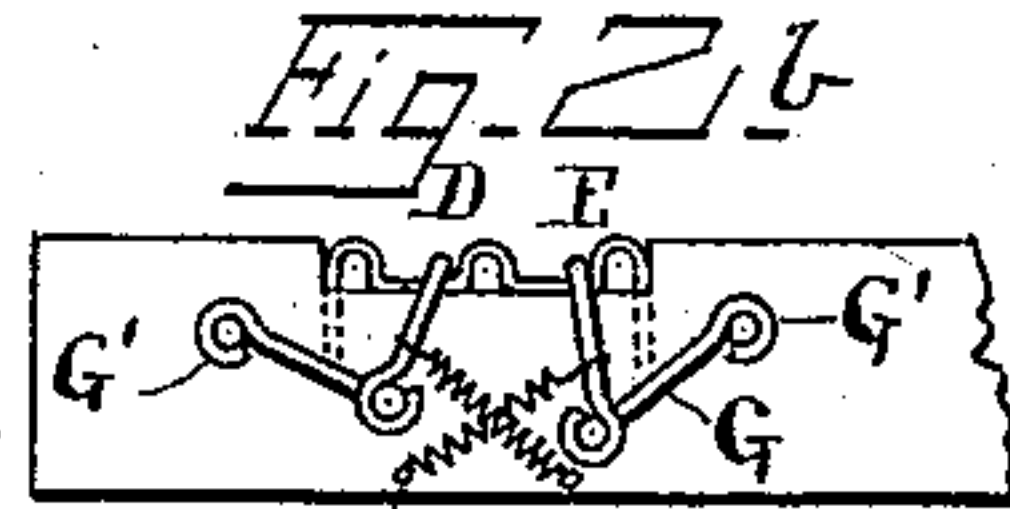
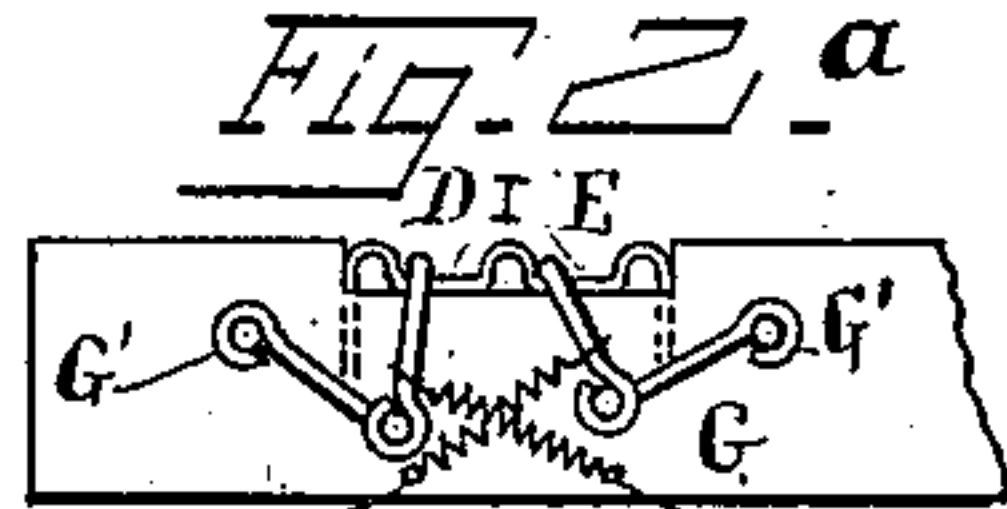
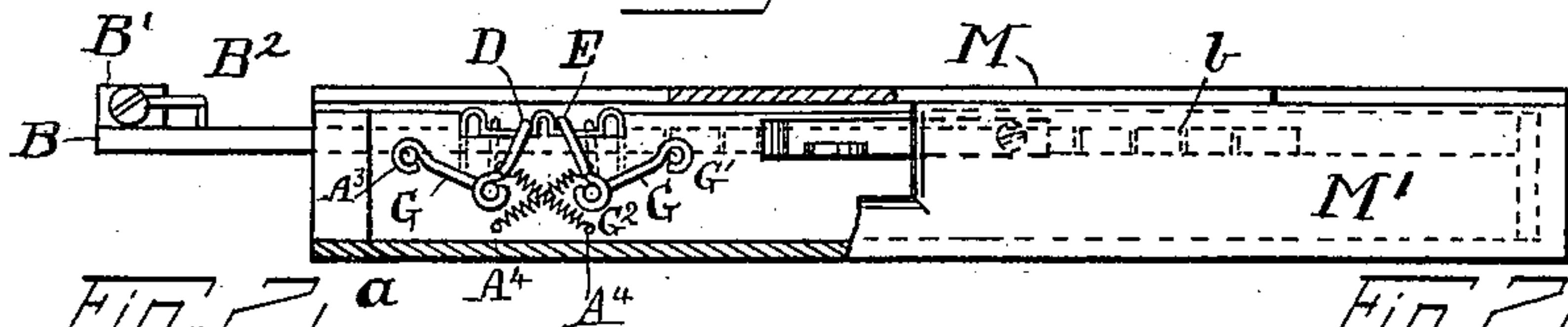
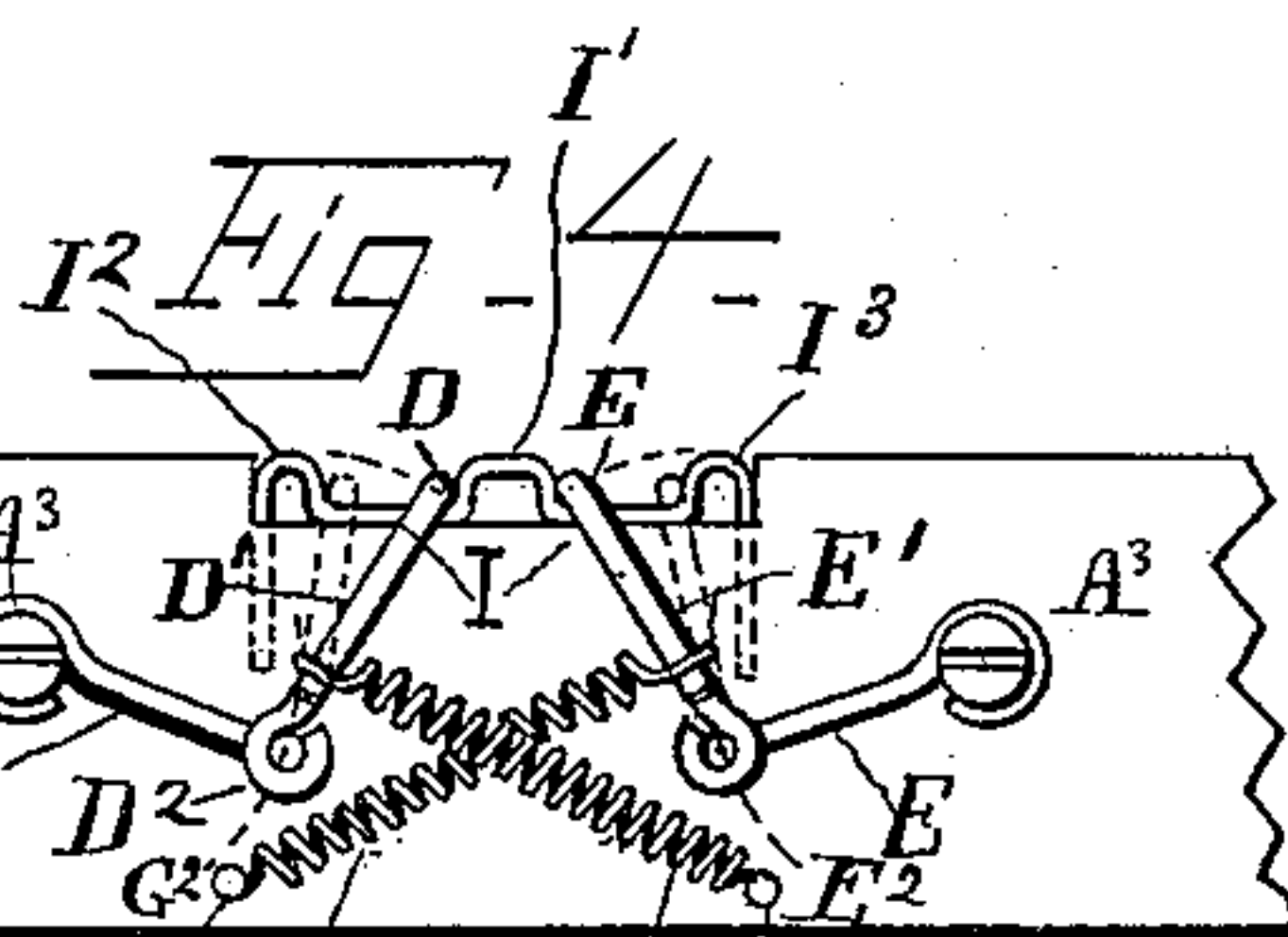
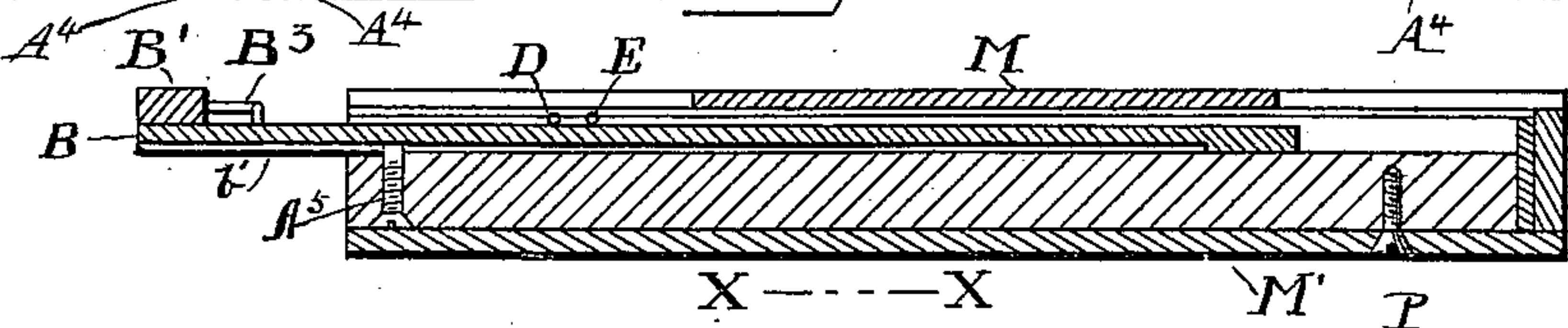


Fig. 3.



Witnesses  
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By his Attorneys  
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# UNITED STATES PATENT OFFICE.

THOMAS J. BENNETT, OF LYON'S PLAIN, CONNECTICUT.

## SCOTOGRAPH OR WRITING-MACHINE FOR USE OF THE BLIND.

SPECIFICATION forming part of Letters Patent No. 553,504, dated January 28, 1896.

Application filed April 4, 1895. Serial No. 544,369. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. BENNETT, a citizen of the United States, residing at Lyon's Plain, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Writing-Machines for the Use of the Blind, of which the following is a specification.

It is common in such work to use a frame strung with wires, like a harp. There have been machines in which only two guides served and the paper was moved upward relatively thereto after each line was written. My machine, which is small and portable, belongs to that class. Each guide is bent downward or cranked at each end equally, and these cranks are each supported on a link, one on each side, which is free to rise and sink. Each guide is sufficiently rigid torsionally to insure that it shall maintain a parallel motion as it swings on its crank-arms, and the rising and sinking by the action of the links allows it to rest fairly and gently on the surface of the paper and to conform to various thicknesses or varying number of sheets of paper or other material which is being written on. The yielding of each guide to allow the forming of the top or bottom of a long letter and the prompt return of each to its place to again limit the size of the small portions or bodies of the letters are determined by springs, of which I employ two on each side. A spring-controlled dog, engaging in notches in one edge of the slide, determines the proper spacing of the lines apart.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a plan view with the slide partially moved upward, a part being broken away and put in horizontal section. Fig. 2 is a corresponding side elevation, a portion of the casing at the left being broken away to show the mechanism. Fig. 3 is a central longitudinal vertical section, and Fig. 4 is a side elevation of the mechanism of the guides on a larger scale. Figs. 2<sup>a</sup> and 2<sup>b</sup> represent the mechanism on a similar scale to that in Fig. 2, but showing it in different conditions. Fig. 2<sup>a</sup> shows the upper guide moved away

in opposition to the tension of its spring to allow the formation of the top of a long letter, and Fig. 2<sup>b</sup> shows the lower guide similarly moved to allow the formation of the bottom of a long letter.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is what I term the "body" of the machine. It may be a board of well-seasoned pine, of the proper width, and provided on the right and left sides with a ridge and an overhanging lip, which are continuous from end to end of the body, except as at the points hereinafter explained. The ridges and lips thus form a groove on each side, which receives the edges of a slide B, which may be a thinner board, preferably of hard wood, well seasoned and perfectly smooth on its upper surface to receive and properly support the paper C. It will be understood that this slide rests on the surface of the body and is capable only of longitudinal motion in the side grooves. The upper edge of the slide is equipped with a transverse ridge B', on each end of which are wire clamps or dogs B<sup>2</sup> B<sup>3</sup>, which can be pressed down upon and into the paper to hold it firmly. Shallow holes in the body receive the ends of these clamps when they are pressed through the paper.

D and E are the important members of the mechanism, which serve as guides for the pencil of the writer. The main portion of each is straight and extends across the face of the paper, resting gently thereon. Near each end each guide is cranked downward, and after being offset inward a little toward the body of the machine it is extended farther downward and the extreme end is formed in a ring of just sufficient diameter to receive an angular portion G<sup>2</sup> formed on the end of a link G, the other end of which link is formed in an eye or ring G' and turns on a pin A<sup>3</sup> set in the side of the body A. To the offset in each crank D' and E' is attached a contractile spiral spring H, which is extended obliquely downward and secured to a pin A<sup>4</sup> set in the side of the body.

The ridges and the lips on the body A are cut away for a little distance at points where the writing is to be effected, and in these



notches are set metal gages I I, one on each side, each formed with three substantial square stops I' I<sup>2</sup> I<sup>3</sup>, the stop I' being at the mid-length and the stops I<sup>2</sup> I<sup>3</sup> at the upper and lower ends, respectively. The terminal of each of these wires is extended downward, and, being driven into corresponding holes formed in the ridges A' at the side of the body A, holds the stops firmly and permanently in position. The spaces between the central stop I' and the end stops I<sup>2</sup> I<sup>3</sup>, respectively, determine the extent to which the guides D and E may yield, each being pressed outward from contact with the center stop I' until it strikes the outer stop I<sup>2</sup> or I<sup>3</sup>, as the case may be, and being drawn inward again by the force of its spring H when the force of the writer impressed through the pencil is relaxed.

The obliquity of the springs H causes them to pull downward with just sufficient force to keep the guides pressed gently on the paper. The yielding of the springs H and of the links G allows the guides to rise and to accommodate any thickness of paper. The stops I', I<sup>2</sup>, and I<sup>3</sup> should be high enough to allow a proper range of thickness of the paper, or of variations in the number of the sheets of paper, or of the postal cards or other material which is introduced to receive the writing.

M is a hand-support extending across over the paper C and out of contact therewith. It forms the upper member of a casing M M', &c., which is in the form of an extended box of proper size to receive the body A of the machine and inclose and protect it. The body A is secured in the casing M M' by a screw P inserted through the bottom.

It is not necessary to withdraw the slide B entirely from the case A in order to remove the paper and insert more. It is sufficient to draw it nearly out. A longitudinal groove b' in the under side of the slide receives the point of a screw A<sup>5</sup> set in the body. (See Fig. 3.) This screw thus engaged in the groove prevents the slide from being entirely withdrawn, but it allows the required motion for use. One edge of the slide B is equipped with notches b, which are evenly spaced to receive the ends of a bent spring J, which is held by a screw J' and may be operated by a handle J<sup>2</sup>, a sufficient aperture m being provided in the side of the casing to allow this handle to be reached. In writing a page the operator moves the slide outward with his left hand as each line is completed to the extent of one notch. The inclination of the spring and the form of the notch will allow this movement without requiring the spring to be touched; but when the slide is to be returned inward the operator should seize the handle J<sup>2</sup> and hold the spring out of engagement while the slide is pushed inward.

Modifications may be made without depart-

ing from the principle or sacrificing the advantages of the invention.

Instead of wires the parts may be made of sheet metal or other material. I prefer that the exterior casing M M' be of rose-wood or other hard and fine wood.

I claim as my invention—

1. In a writing machine, the combination with a slide and clamp carried in a suitable body or supporting means, of two straight guides D, E, extending across the body, with provisions as the notches b and the spring J, confining means J' and handle J<sup>2</sup>, for aiding to control the movement of said slide, all arranged for joint operation substantially as herein specified.

2. In a writing machine, the combination with a slide and clamp carried in a suitable body or supporting means, of two straight guides D, E, extending across the body, with springs H urging them together, and stops I' for limiting their inward movement, all arranged for joint operation, substantially as herein specified.

3. In a writing machine, the combination with a slide and clamp carried in a suitable body or supporting means, of two straight guides D, E, extending across the body, with springs H urging them together, and stops I' for limiting their inward movement, and links G turning on pivots A<sup>3</sup>, A<sup>3</sup>, for allowing the guides to rise and sink and to move apart and together, maintaining parallel positions, as herein specified.

4. In a writing machine, the combination with a slide and clamp carried in a suitable body or supporting means, of two straight guides D, E, extending across the body, with springs H urging them together, and stops I' for limiting their inward movement, and links G turning on pivots A<sup>3</sup>, A<sup>3</sup>, for allowing the guides to rise and sink and to move apart and together, maintaining parallel positions, and the stops I<sup>2</sup>, I<sup>3</sup>, limiting the extent to which the guides may be moved outward or apart, as herein specified.

5. In a writing machine, the combination with a slide and clamp carried in a suitable body or supporting means, of two straight guides D, E, extending across the body, with springs H urging them together, stops I' for limiting their inward movement, stops I<sup>2</sup>, I<sup>3</sup>, for limiting their outward movements, an outer case M' inclosing the whole and a hand support M forming a portion of such outer case, all arranged for joint operation substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

THOMAS J. BENNETT.

Witnesses:

JAMES M. TULLY,  
M. F. BOYLE.