(No Model.)

H. T. SHIPLEY.

TUFTING IMPLEMENT.

No. 468,288. Patented Feb. 2, 1892.

Fig. 1.

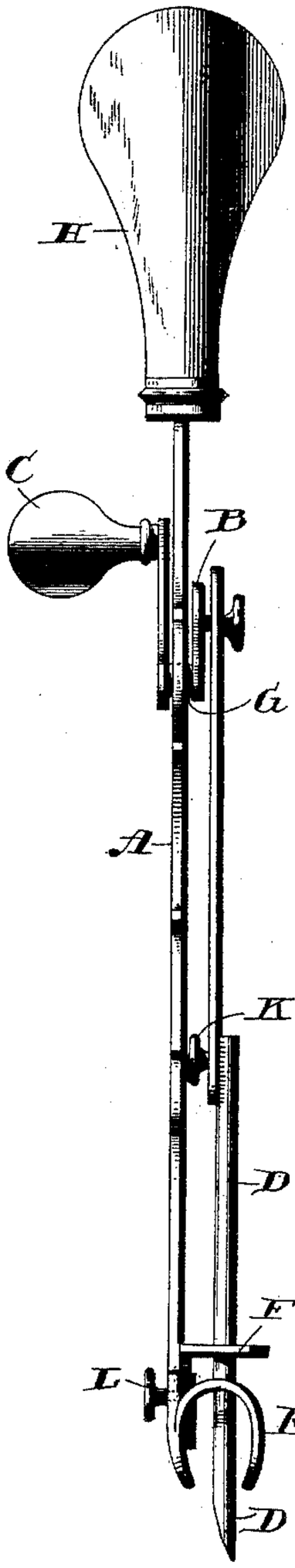


Fig. 2.

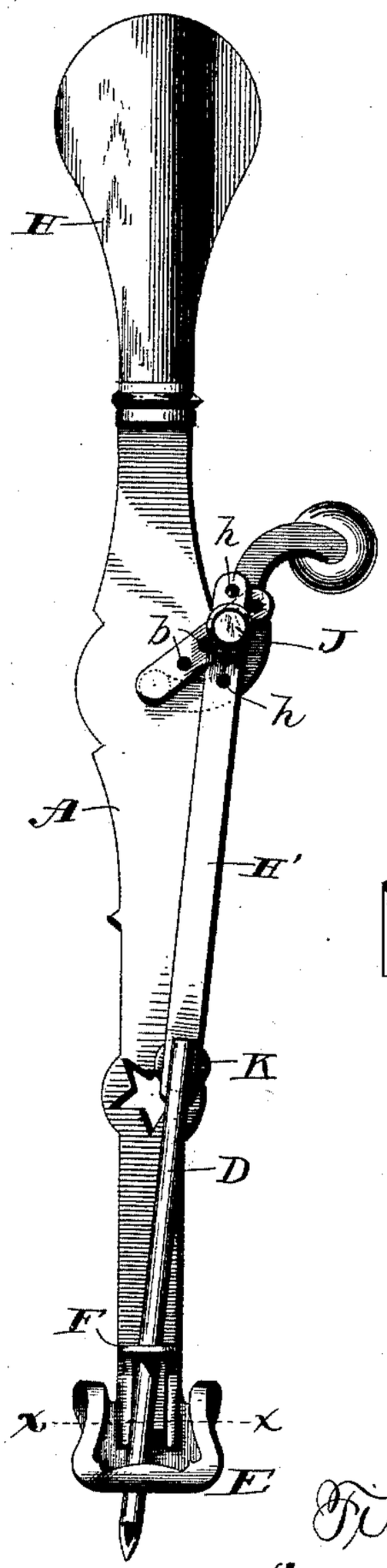


Fig. 3.

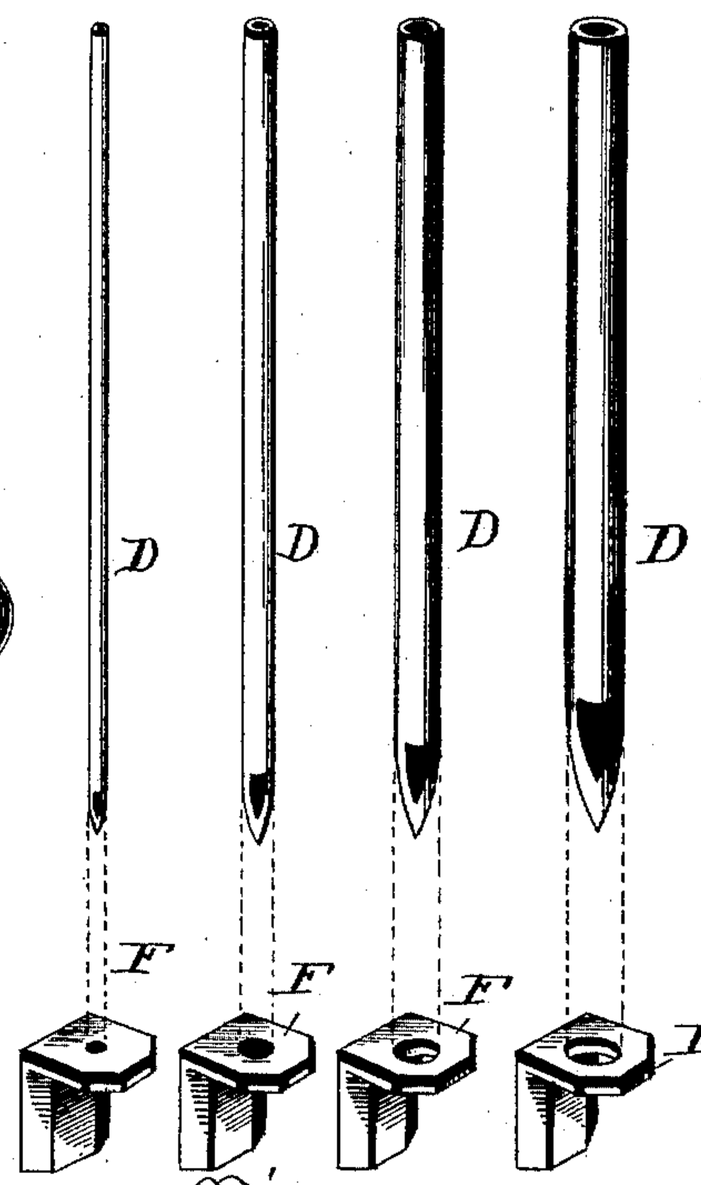


Fig. 4

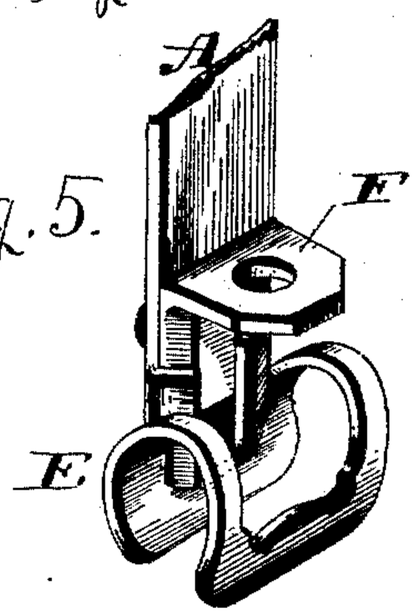
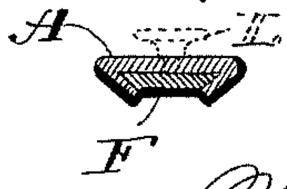


Fig. 5.

Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY THOMAS SHIPLEY, OF WOOSTER, ASSIGNOR OF THREE-FOURTHS TO CHAS. H. TRUSCOTT, OF CLEVELAND, AND CARROLL D. BARNES, OF BURTON, OHIO.

TUFTING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 468,288, dated February 2, 1892.

Application filed September 14, 1891. Serial No. 405,656. (No model.)

To all whom it may concern:

Be it known that I, HENRY THOMAS SHIPLEY, a citizen of the United States, residing at Wooster, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Devices for Tufting Fabrics; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 new and useful improvements in tufting-machines for embroidering fabrics.

The invention has for its object to vary the stroke of the needle to regulate the length of the loop; also to insure a firm fastening of the thread in the fabric, the latter being obtained by the peculiar shape of the needle-point.

A further object of the invention is to generally improve upon this class of machines and to increase their efficiency and usefulness.

To these ends and to such others as the invention may pertain the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1 is a front or edge view of a tufting-machine embodying my improvements. Fig. 2 is a side view of the machine. Fig. 3 shows a series of needles of graduated sizes. Fig. 4 shows a series of needle-guides of varying size. Fig. 5 is a detail perspective view of the lower end of the machine, showing the presser-foot and the needle-guide. Fig. 6 is a cross-section on the line *x x* of Fig. 2.

Reference now being had to the details of the drawings by letter, A represents a stock, which is preferably constructed of metal to obtain the required lightness and the strength necessary to support the operating parts. Wood or any other material of suitable rigidity may answer the purpose equally well. The stock is provided at one end with the handle H and at the other end with the presser-foot E, which in edge view is horseshoe-shaped, the open end being down. The presser-foot is an open or a skeleton frame, as shown most clearly in Fig. 5, to give clearance for the needle and the needle-guide F and at the same time prevent weighting the machine. The short shaft G, journaled in the stock near the handle end, is provided at its ends with the crank C and with the arm B, the latter having a series of openings *b*. The pitman H, provided with the needle at its lower end and having a series of openings *h* at its upper end, is adjustably connected with the arm B by means of the thumb-screw J, which passes through corresponding openings *b* and *h* of the arm and pitman.

The needle D is secured to the lower end of the pitman H in any desirable manner, as by the thumb-screw K. The needles are cylindrical in form and provided in graduated sizes, as shown in Fig. 3, and have their points tapering from the sides and the rear, the front side of the needle from the point to the heel or butt being in the same straight line.

The needle-guides F are of graduated sizes, the eye in each being of a size to coincide with a needle of corresponding graduation, so that the needle will have no lateral play which would cause a variation in the length of stitches. The guide is adjustable on the stock, being held in the located position by the binding-screw L and guided in its movements by a dovetailed joint, which is most clearly represented in Fig. 6. The needle rocks or tilts in the guide. Hence its position on the stock determines the length of the stitch. The length of the loop is controlled by the throw of the needle, which is effected by the adjustment of the pitman with reference to the arm B.

It may be well to remark that the length of the stitch can be regulated by bringing the point of connection of the pitman with the arm B nearer to or farther from the shaft G.

In operation the needle is threaded in the usual manner and the machine applied to the

fabric in the ordinary manner, the tufting being effected by operating the crank C, which imparts a twofold motion to the needle—a rocking and a longitudinal movement. The rocking motion feeds the machine over the work and the longitudinal motion carries the thread through the fabric.

What I claim to be new, and desire to secure by Letters Patent, is—

In a tufting-machine, the combination, with the stock and the shaft G, having arm B, of the needle and the pitman carrying the needle, having adjustable connection with the said arm B, said connection consisting of removable thumb-screw, and the arm and pitman each having a plurality of holes, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY THOMAS SHIPLEY.

Witnesses:
BENJAMIN EASON,
SAMUEL B. EASON.