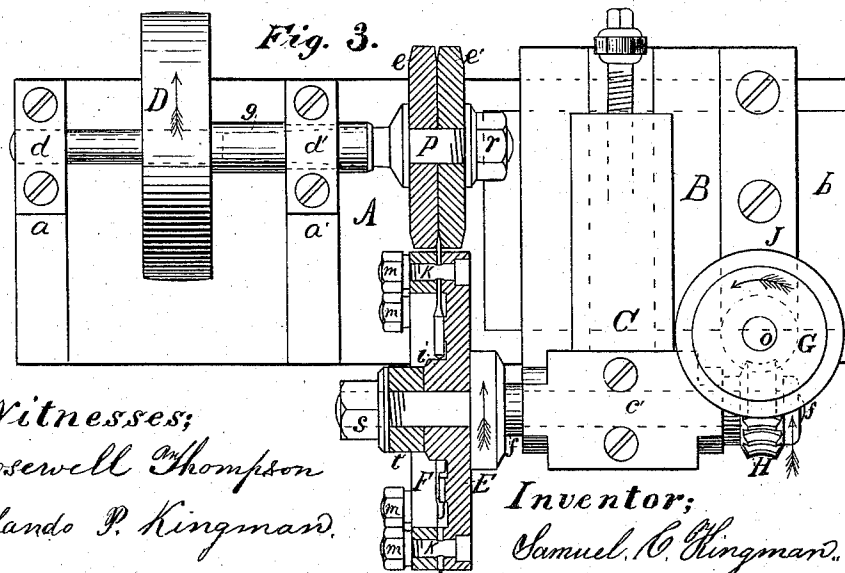
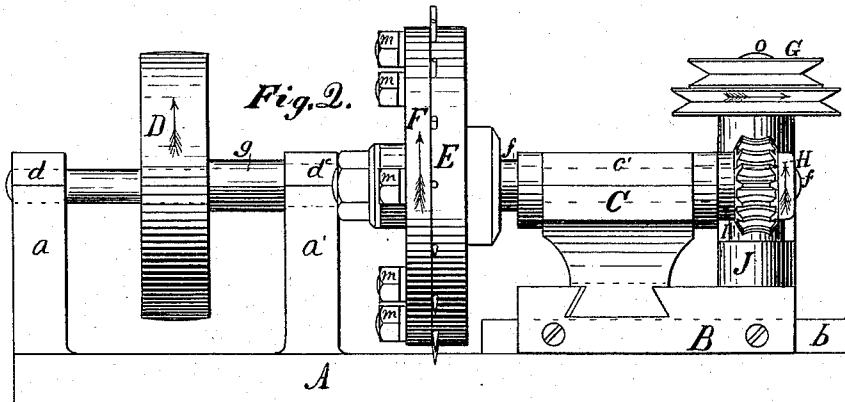
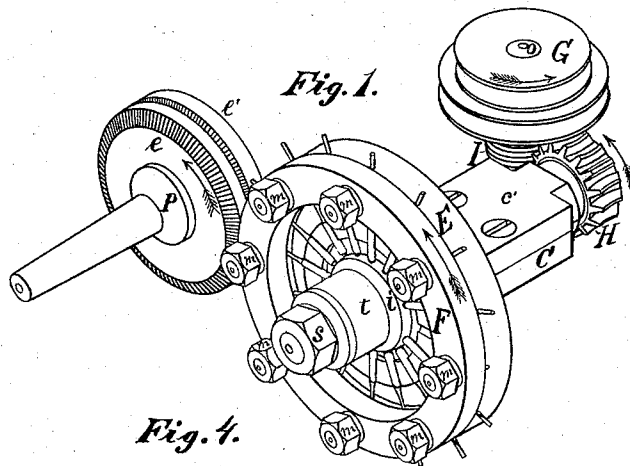


Machines for Pointing Leather-Sewing Needles.

Patented Dec. 8, 1874.



Witnesses;
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IMPROVEMENT IN MACHINES FOR POINTING LEATHER-SEWING NEEDLES.

Specification forming part of Letters Patent No. 157,451, dated December 8, 1874; application filed November 10, 1874.

To all whom it may concern:

Be it known that I, SAMUEL C. KINGMAN, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Machine for Pointing Sewing-Machine Needles; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making a part of this specification.

Similar letters of reference indicate corresponding parts.

In the manufacture of sewing-machine needles it is the usual custom to make a flat wedge-shaped point upon all needles used in sewing leather and similar material, the cutting-edge being made in various positions with respect to the groove in the blade of the same—some diagonally with the groove, some in the same plane, and others at right angles with the same; and the usual manner of making these points has been to grind them upon an emery-wheel after the groove has been made in the blade, thus depending entirely upon the judgment and skill of the operator for the quality of work produced.

The object of my invention is to make the flat points upon the blades of the needles in such a manner as to insure greater accuracy and uniformity in the shape of the points than can be obtained by hand labor, and at the same time enable me to adopt a system which shall insure perfect geometrical and mechanical accuracy in the position of the point with respect to the groove, for, as the points are perfectly uniform in shape and size, they can be used as an accurate point to gage from in grooving the blade of the needle by making a stop or gage for the grooving-machine, corresponding in shape and size to the point made upon the needle, and securing the same in the grooving-machine in such a manner as to hold the wedge-shaped point at any angle required with respect to the grooving-cutters, thus insuring a uniformity in the relative positions of the grooves and points, which cannot be obtained by grinding the points upon the blades by hand after the grooves have been made.

To enable others skilled in the art to make

and use my invention, I will now describe the construction and operation of the same, with reference to the accompanying drawings.

Figure 1 is a perspective view of the working parts of my improved machine. Fig. 2 is a front elevation, and Fig. 3 is a plan, of the same. Fig. 4 is an enlarged view of a finished flat diagonally-pointed needle.

A is the bed of the machine, constructed with two upright bearings, *a a'*, to receive the spindle *g*, and with an extension, *b*. B is a slide, constructed to fit bearing *b*, but so as to slide freely, in order to be moved and secured in any required position upon the same. C is a slide, constructed to fit the beveled groove in B, but so as to slide freely and be secured in any required position in the same. A bearing is made at the front end of the slide C, to receive the horizontal spindle *f*. D is the driving-pulley, rigidly secured to the spindle *g*. E is a circular plate, constructed with a series of grooves upon one side, corresponding in size to the blades and shanks of the needles to be pointed. *i* is a hub on the circular plate E, and is made long enough to project beyond the plane of the needles, to serve as a gage for the ends of the shanks, thus insuring the perfectly concentric position of all the needles from the center of the circular plate, to which they are secured. F is a ring, corresponding in diameter to the circular plate E, and serves as a clamp, to rigidly secure the needles to the plate E. K K are bolts passing through plate E and ring F. *m m* are nuts fitted to the bolts K K, and serve to secure the needles firmly between the plate E and ring F. H is a gear secured rigidly to the end of the spindle *f*. I is an endless screw, which works in the gear H, and is driven by the pulley G. J is a bearing for the endless screw-spindle *o*, and is secured to the slide B. *e e'* are circular files, having beveled corners, corresponding in angle to the point required on the needles to be filed. *p* is an arbor, constructed with a taper shank, which is fitted to a tapering hole in the center of the spindle *g*. The circular files *e e'* are fitted to the other end of the arbor *p*, and secured to the same by means of the nut *r*. *s* is a nut, which secures the circular plate E to the end of the spindle *f*. *t* is a washer, to be

used to fill the space between the nut *s* and hub *i*. *e'* is a cap fitted over the bearing *C* and spindle *f*. *d d'* are caps fitted over the bearings *a a'* and spindle *g*.

I will now proceed to describe the practical operation of my improved machine; with reference to the accompanying drawings.

It is to be understood that two of the circular plates *E* and rings *F*, with the accompanying bolts and nuts, are to be made, but only one of them to be attached to the machine at the same time, to enable the operator to fill one plate with needles while the other is in operation on the machine; and, as the time occupied in filling one plate is about the same as that consumed in filing the points by the machine, nearly a continuous filing operation is going on by the machine, the lost time being only that occupied in changing the plates. Thus the work is accomplished with rapidity, as well as with accuracy and uniformity.

In filling the plate *E* enough needles are left out on one side to allow the same to pass the edge of the circular file *e* in changing the plates, for the points of the needles are to pass between the circular files *e e'*, as clearly shown in Fig. 3. The plate, after being secured to

the spindle *f*, is now made to revolve in the direction indicated by the arrow drawn upon the same, which is driven by the pulley *G* and intermediate endless screw *I* and gear *H*. The circular files are supposed to revolve in the same direction as indicated by the arrow drawn upon the same, which causes the faces of the files and circular plate to run in opposite directions, thus filing flat points upon the ends of the needles in passing between the circular revolving files, corresponding in shape and size to the angle made upon the cutting beveled edges of the files. Thus a large quantity of needles can be rapidly and accurately pointed to any bevel required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the plate *E*, ring-clamp *F*, series of grooves, bolts *K K*, hub *i*, and revolving circular files *e e'*, constructed substantially as and for the purpose set forth.

SAMUEL C. KINGMAN.

Witnesses:

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ORLANDO P. KINGMAN.