(No Model.)

# R. THOMPSON.

## MACHINE FOR POINTING SEWING MACHINE NEEDLES.

No. 248,120. Patented Oct. 11, 1881.

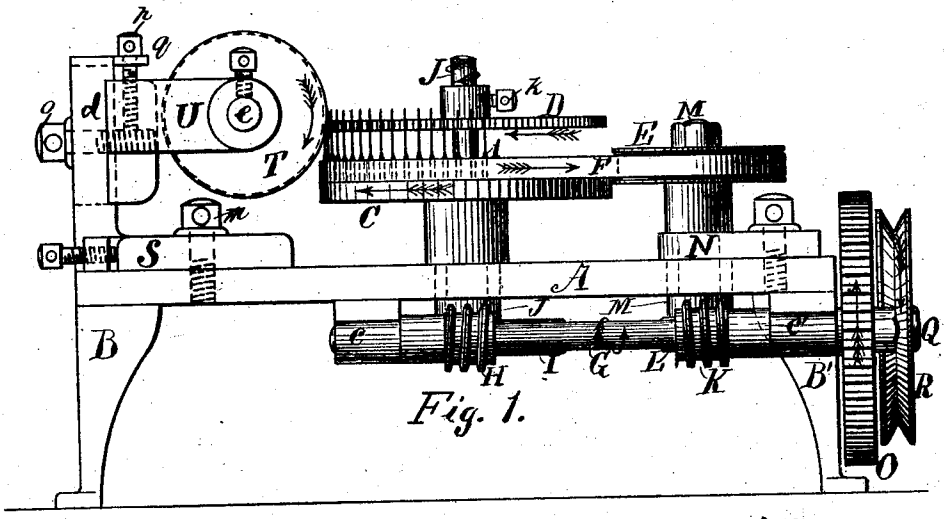


Fig. 1.

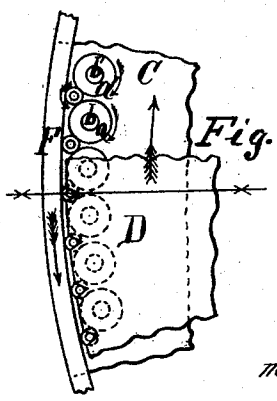


Fig. 3.

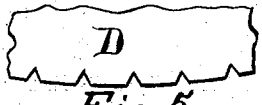


Fig. 5.

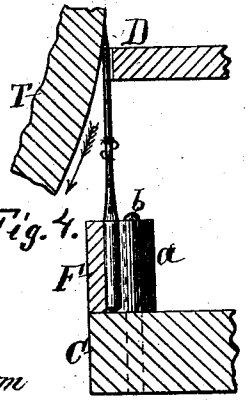


Fig. 4.

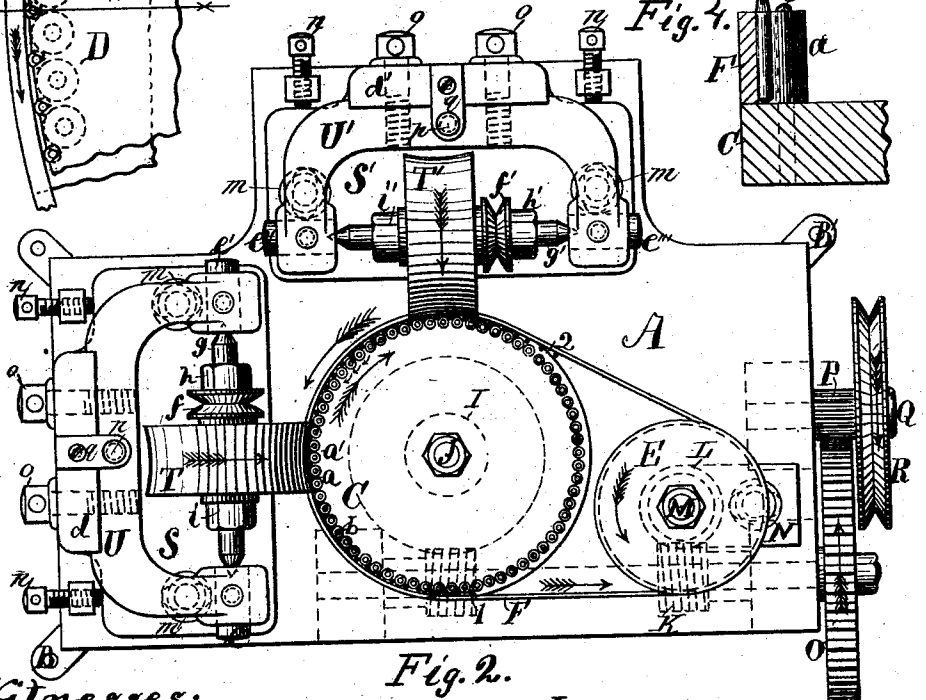


Fig. 2.

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# UNITED STATES PATENT OFFICE.

ROSEWELL THOMPSON, OF BRIDGEPORT, CONNECTICUT.

## MACHINE FOR POINTING SEWING-MACHINE NEEDLES.

SPECIFICATION forming part of Letters Patent No. 248,120, dated October 11, 1881.

Application filed February 26, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, ROSEWELL THOMPSON, of the city of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Machine for Pointing Sewing-Machine Needles, of which the following is a specification with reference to the accompanying drawings.

The object of my invention is to rapidly and accurately form the points upon the ends of sewing-machine-needle blanks. This I accomplish by applying and combining certain mechanical devices and movements in a machine in such a manner as to perfectly control and automatically revolve the ends of the blanks while passing the face of the grinding-wheel, all of which will herein be fully explained and described.

In the accompanying drawings, Figure 1 is a front elevation of my improved machine with the back, grinding-wheel, and stand removed, so as to more clearly show the mechanism directly in front. Fig. 2 is a plan of the same with back, grinding-wheel, and stand in their proper position, but with the point-rest plate removed. Fig. 3 is an enlarged view of a portion of the mechanism which controls and revolves the needle-blanks during the operation of grinding the points. Fig. 4 is a sectional elevation of Fig. 3, through the line *x x*, with the addition of a section of the grinding-wheel, so as to clearly show the relative position of the face of the same with respect to the needle-blank and controlling mechanism. Fig. 5 is a portion of the point-rest plate, clearly showing the form of the notches in which the blades of the needle-blanks revolve during the operation of grinding the points.

Similar letters of reference indicate corresponding parts.

A is the bed, and B B′ are the legs, of the machine.

C is the revolving table.

D is the point-rest plate, which revolves in unison with the table.

E is a pulley, which revolves in an opposite direction to the table and rest-plate.

*a a′* are friction-rolls, fitted to revolve freely upon pins *b b*, inserted into the table.

F is a belt passing around the series of friction-rolls upon the top of the table, and to which motion is imparted by means of revolving pulley E.

G is a shaft, fitted to revolve freely in bearings *c c′*, upon the under side of the table.

H is a left-hand worm secured to said shaft, and which imparts motion to the table C through the worm wheel I and vertical shaft J.

K is a right-hand worm, also secured to shaft G, and which imparts motion to pulley E through worm-wheel L and vertical shaft M.

N is an adjustable bearing for vertical shaft M, so that the belt F may be made tight when desired.

O is a gear secured to the end of shaft G.

P is a pinion which imparts motion to said gear, and which is fitted to revolve freely upon a stud, Q, in the side of the bed.

R is a pulley, which is secured to the hub of pinion P.

S S′ are the stands for the grinding-wheels T T′.

U U′ are frames secured to the vertical portion *d d′* of said stands, and to the ends of which are fitted the grinding-wheel bearings *e e′ e″ e‴*, which receive the conical points of the grinding-wheel spindles *g g′*.

*f f′* are pulleys, secured to the grinding-wheel spindles by means of the nuts *h h′*. The grinding-wheels are secured to the spindles by means of the nuts *i i′*. The two grinding-wheel stands, and mechanism connected therewith, are identical in design and construction. The back grinding-wheel is made of a finer grade of emery than the side wheel, which does the first grinding, so as to perfectly finish the points of the needles.

The stands are by the screws *n n* horizontally adjustable upon the bed A, so as to compensate for the wearing away of the face of the grinding-wheels, and the bearing-frames are vertically adjustable by screws *p p* upon the portion *d d′* of said stands, to accommodate the various lengths of needle-blanks to be ground. The point-rest plate D is also adjustable upon the vertical shaft J by the set-screw *k* for the latter-mentioned purpose.

The machine is put in practical operation by imparting motion to the grinding-wheels and pulley R in the directions indicated by the arrows, the latter causing all the moving parts to revolve, as indicated by the arrows drawn

upon or near the same. The operator now inserts the shank of a needle-blank between the belt F and friction-rolls *a a'*, at about the point 1. (Shown in Figs. 1 and 2.) The blank now commences to revolve in consequence of the friction of the moving belt upon the shank, and continues to revolve as it is moved toward and past the face of the grinding-wheels until it arrives at about the point 2, Fig. 2, when the open belt allows it to fall off the table into a pan placed to receive it. The operator continues to insert the shanks of unground blanks in the place above specified while the previously-inserted blanks are being operated upon by the grinding-wheels, thus keeping the working side of the table full, as shown in Fig. 2, and grinding the points upon a large number of blanks in a given time.

When the faces of the grinding-wheels T T' become worn away by use the operator loosens the screw-bolts *m m*, which secure the stands S S' to the bed of the machine, and then turns the screws *n n* in such a direction as to force said stands and all parts attached thereto toward the revolving table C, and when the faces of the grinding-wheels are in the desired position with respect to the needle-blanks said stands are again secured to the bed by screwing bolts *m m* firmly down upon the base of the stands, and, as the latter-mentioned bolts pass through oblong slots in said base, this manner of adjustment may be repeated until the diameter of the grinding-wheels is much less than appears in the drawings.

When it is desired to raise or lower the grinding-wheels for any reason the bolts *o o*, which pass through oblong slots in the upright portion *d d'* of the stands, are loosened, and the screw *p*, which passes through the bar *q* upon the top of said upright portion, and into the frame U, is turned in such a direction as to raise or lower said frame as required by the operator. The same is then firmly secured to the upright portion *d d'* of the stands by means of bolts *o o*.

The frame which supports the grinding-wheel being made of heavy metal, it will fall as low as the head of the screw *p* will allow it to when the bolts *o o* are unloosed, but is raised by turning said screw into the frame.

What I claim as my invention is—

1. In a machine for pointing sewing-machine needles, the revolving table C and series of friction-rolls *a a'*, in combination with the grinding-wheel T and belt F, constructed and arranged to operate substantially as shown and described, for the object set forth.

2. The notched point-rest plate D, in combination with the table C, friction-rolls *a a'*, belt F, and grinding-wheel T, constructed and arranged to operate substantially as shown and described, for the object set forth.

3. The combination of the revolving table C, series of rolls *a a'*, point-rest plate D, belt F, pulley E, grinding-wheel T, and driving mechanism, all constructed and arranged to operate substantially as shown and described, for the object set forth.

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Witnesses:

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