(No Model.)

R. THOMPSON.

MACHINE FOR SWAGING NEEDLE BLANKS.

No. 249,268. Patented Nov. 8, 1881.

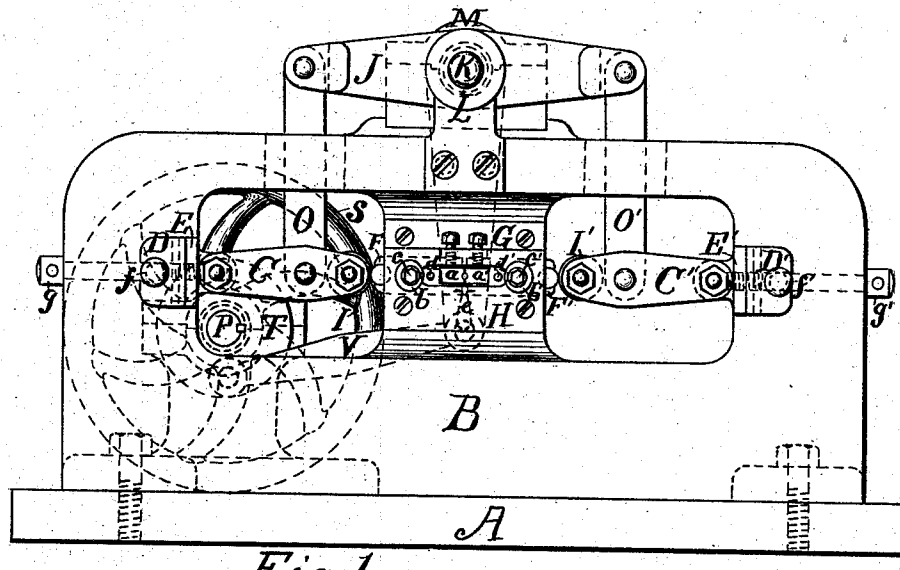


Fig. 1.

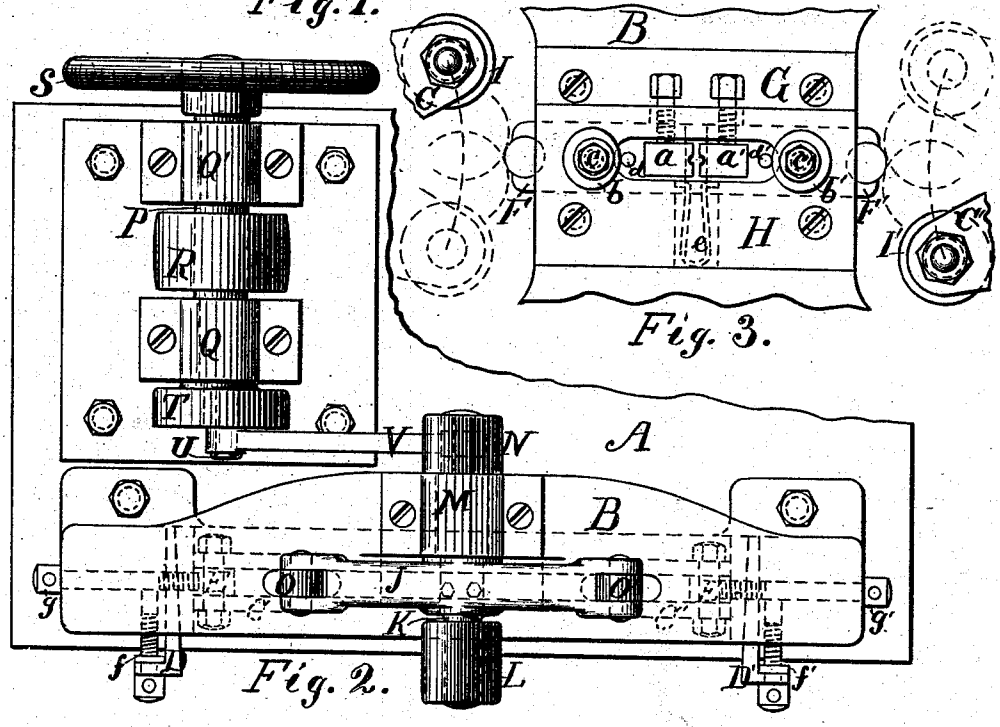


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

ROSEWELL THOMPSON, OF BRIDGEPORT, CONNECTICUT.

MACHINE FOR SWAGING NEEDLE-BLANKS.

SPECIFICATION forming part of Letters Patent No. 249,268, dated November 8, 1881.

Application filed March 9, 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 certain Improvements in Machines for Swaging Sewing-Machine-Needle Blanks and Similar Articles, of which the following is a specification with reference to the accompanying drawings.

This invention relates to improvements upon the machine for which Letters Patent were granted to me November 30, 1880; and it consists in constructing the frame which receives and supports some of the working parts in such a form and manner as to insure greater rigidity and strength, and therefore to be more able to resist the strain it is subjected to during the operation of swaging the blanks than is the machine above referred to.

It consists, also, in the manner of adjusting the oscillating levers which operate the swaging-dies; in the peculiar devices which regulate the opening of said dies, and in the driving mechanism for operating the machine, all of which will herein be fully explained and described.

In the accompanying drawings, Figure 1 is a front elevation of my improved machine. Fig. 2 is plan of the same, with the portion of the bed having no mechanism upon it broken away, so as to leave space for Fig. 3, which is an enlarged view of the swaging-dies and devices connected therewith.

Similar letters of reference indicate corresponding parts.

A is the bed of the machine, which is mounted upon legs of sufficient height to bring the swaging-dies about three feet from the floor.

B is the frame, constructed with openings to receive and allow space for the movement of the oscillating levers C C′ during the operation of swaging the needle-blanks, and with seats at the outer sides to receive the tapering adjusting-keys D D′ and lever-joint bearings E E′, the portion of the frame between the openings having a seat for the reception of the swaging-die slides F F′, said slides being retained in position by means of the angle-plate G and cover-plate H.

I I′ are rolls fitted to revolve freely upon pins in the ends of levers C C′.

J is a double oscillating lever rigidly secured to the rock-shaft K, said shaft being fitted to swing freely in bearings L M, to which shaft motion is imparted by means of lever N, which is secured to the back end, the form and length of said lever being shown in broken lines, Fig. 1.

O O′ are bars which connect lever J with levers C C′.

P is the driving-shaft, fitted to revolve freely in bearings Q Q′. R is the pulley for imparting motion to the same.

S is a balance-wheel secured to the end of the driving-shaft, the other end having the face-plate T secured to it, and into said face-plate is inserted a pin, U, at some distance from the center of motion. V is a pitman, fitted at one end to turn freely upon said pin, the other end being fitted to swing upon a pin in the bottom end of lever N.

a a′ are the swaging-dies, fitted to seats in the inner ends of slides F F′.

b b′ are eccentric plates, fitted to turn freely upon the body of screw-bolts *c c′*, when desired, but which are rigidly secured to the cover-plate H by same bolts when adjusted to their proper position.

d d′ are pins inserted into the slides F F′.

e is a U-shaped spring, the ends of which press against the inner ends of said slides.

f f′ are screws for adjusting the position of the keys D D′, and *g g′* are bolts for retaining the lever-joint bearings E E′ in position after the adjustment of the same by keys D D′.

The machine may be put in practical operation by revolving the driving-shaft P in either direction. An oscillating motion is then imparted to lever N through the pitman V, which communicates an oscillating motion to lever J through the shaft K, then to levers C C′ through bars O O′, the extreme motion of the ends of said levers being shown in Fig. 3, the swaging-dies being closed only when the levers are in the position shown in Fig. 1.

The amount of opening or separation between the swaging-dies during the swaging operation is regulated by means of the eccentric plates *b b′* and pins *d d′*, the latter being forced against the eccentric edges of the former by means of the U-shaped spring *e*.

Having thus fully described my improvements upon the machine herein specified, I desire to secure by Letters Patent—

1. The eccentric plates *b b'* and pins *d d'*, in combination with cover-plate H, slides F F', spring *e*, levers C C', and swaging-dies *a a'*, for the purpose of regulating the amount of opening of said dies between the swaging operations, substantially as shown and described.

2. The tapering adjusting-keys D D', in combination with the frame B, screws *f f'*, lever-joint bearings E E', oscillating levers C C', and swaging-dies *a a'*, constructed substantially as shown and described, for the purpose of regulating the positions of said joint-bearings and levers, with respect to the swaging-dies, for the object set forth.

ROSEWELL THOMPSON.

Witnesses:
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