(No Model.)

S. J. TILEY.

CROCHET NEEDLE MACHINE.

No. 307,505. Patented Nov. 4, 1884.

Fig 1

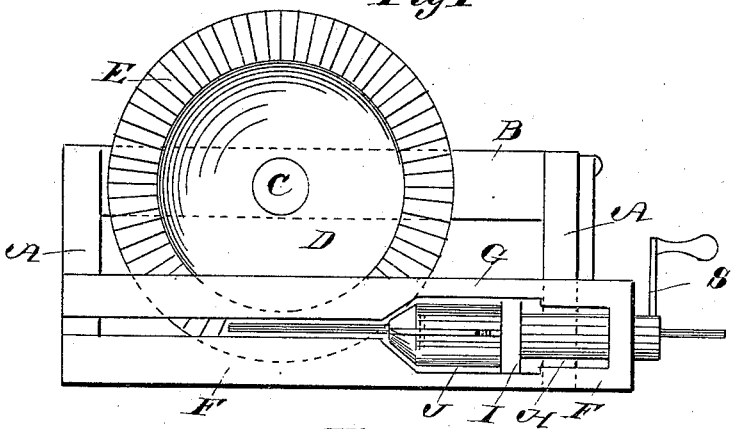

Fig 2

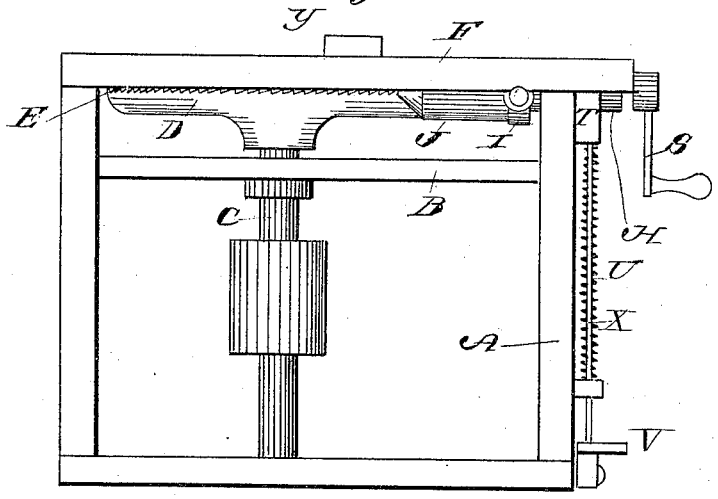

Fig 3.

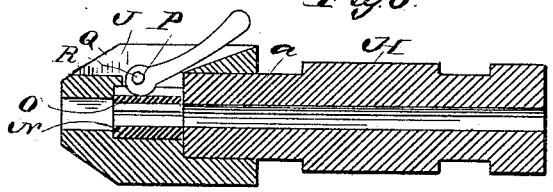

Fig 4.

Witnesses
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CROCHET-NEEDLE MACHINE.

SPECIFICATION forming part of Letters Patent No. 307,505, dated November 4, 1884.

Application filed July 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, STILLMAN J. TILEY, a citizen of the United States, residing at Essex, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Machines for Finishing Bones for Crochet-Needles and Rounding the same, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a certain new and useful machine for reducing and finishing bones for crochet-needles and the like, and has for its object to furnish such a machine which shall greatly facilitate the reduction and finishing of said bones, and at the same time do better work than has heretofore been done by hand, and at a much less cost; and with these ends in view my invention consists in certain details of construction and combinations of elements, which will be hereinafter set forth in the specification, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my improvement with a bone in position to be operated upon; Fig. 2, an elevation of the same, showing the pulley by which power is transmitted to the grinding-wheel; Fig. 3, a detail central longitudinal section of the mandrel, showing the means of clamping the bone, and Fig. 4 a detail view of the hand-block.

Similar letters denote like parts in the several figures of the drawings.

A is the frame, of any convenient construction, having the cross-stay B, in which is journaled the upper portion of the shaft C, the lower end of said shaft being journaled in the frame A. On the shaft C is secured the belt-pulley, which receives its motion from the power or other shaft, which may be in convenient proximity. The wheel or disk D is secured to the extreme upper end of the shaft C, and revolves therewith. The upper side of this disk is hollowed out in the center, leaving a raised rim, E, of about one-sixth of its diameter, which is serrated or toothed, as clearly shown in the drawings.

Secured to the two sides of the frame A, and extending across the top thereof, are two strips, F G, separated by a space in which moves the mandrel H, said mandrel being journaled in the rocking block I, which in turn is pivotally secured to the under side of the strips F G, for the purpose presently explained. The mandrel H has a central passage throughout its length. The inner end of the mandrel is turned down or made somewhat smaller at *a*, and enters a corresponding recess in the nose-piece J, through which is an opening sufficiently large to receive the clamp-blocks N O, the latter of which is flattened on the top and adapted to be operated on by the clamp P. Said clamp is pivoted in the recess Q by means of pivot R. The function of this clamp will be hereinafter explained.

T is a block held in contact with the mandrel by the coil-spring U, said block being withdrawn from contact with the mandrel by depressing the treadle V through the rod X. By this means a continued and varied pressure may be exerted upon the mandrel, which tends to press the bone against the grinding-surface.

Y is a hand-block, grooved at the bottom, so as to partially embrace and bear upon the bone with the required pressure while the latter is being reduced.

From the foregoing description the operation of my improvement, as hereinafter set forth, will be obviously as follows: The square bone as it comes from the saw is run through the mandrel and nose-piece until the inner end projects sufficiently to be operated upon by the serrations on the disk when the clamp P is carried on the clamp-block O, causing the clamp-blocks to firmly grip the bone. The mandrel is now caused to rotate by means of the crank S, and the bone, being held in greater or less contact with the serrations of the disk by the operator, will be rapidly and evenly reduced to the required size and shape. The bone is operated on through its length by turning it end for end when one end has been fin-

ished. Heretofore these bones have been reduced and finished by hand, which is necessarily slow, tedious, and consequently expensive. By the use of my improvement I am enabled to produce a much superior article at a very small cost.

Having thus fully described my invention, what I claim as new and useful is—

1. In a machine for reducing and finishing bone for crochet-needles and the like, the mandrel H, journaled in the rocking block I, whereby said mandrel may be given an axial rotation, and at the same time a downward movement, in combination with the clamp-blocks N O and the clamp P, as specified.

2. The herein-described combination of the disk D, mandrel H, mounted in the rocking block I, clamp-blocks N O, clamp P, crank S, and the spring-actuated block adapted to elevate the rear end of the mandrel, thereby depressing the forward end, and a foot-treadle for relieving the pressure of said block on the mandrel, all combined and operated as described.

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

STILLMAN J. TILEY.

Witnesses:

LUCIUS P. DEMING,

THOMAS M. COX.