

C. O. Crosby.
Polishing Needles.

N^o 105,312.

Patented Jul. 12, 1870.

Fig: 1

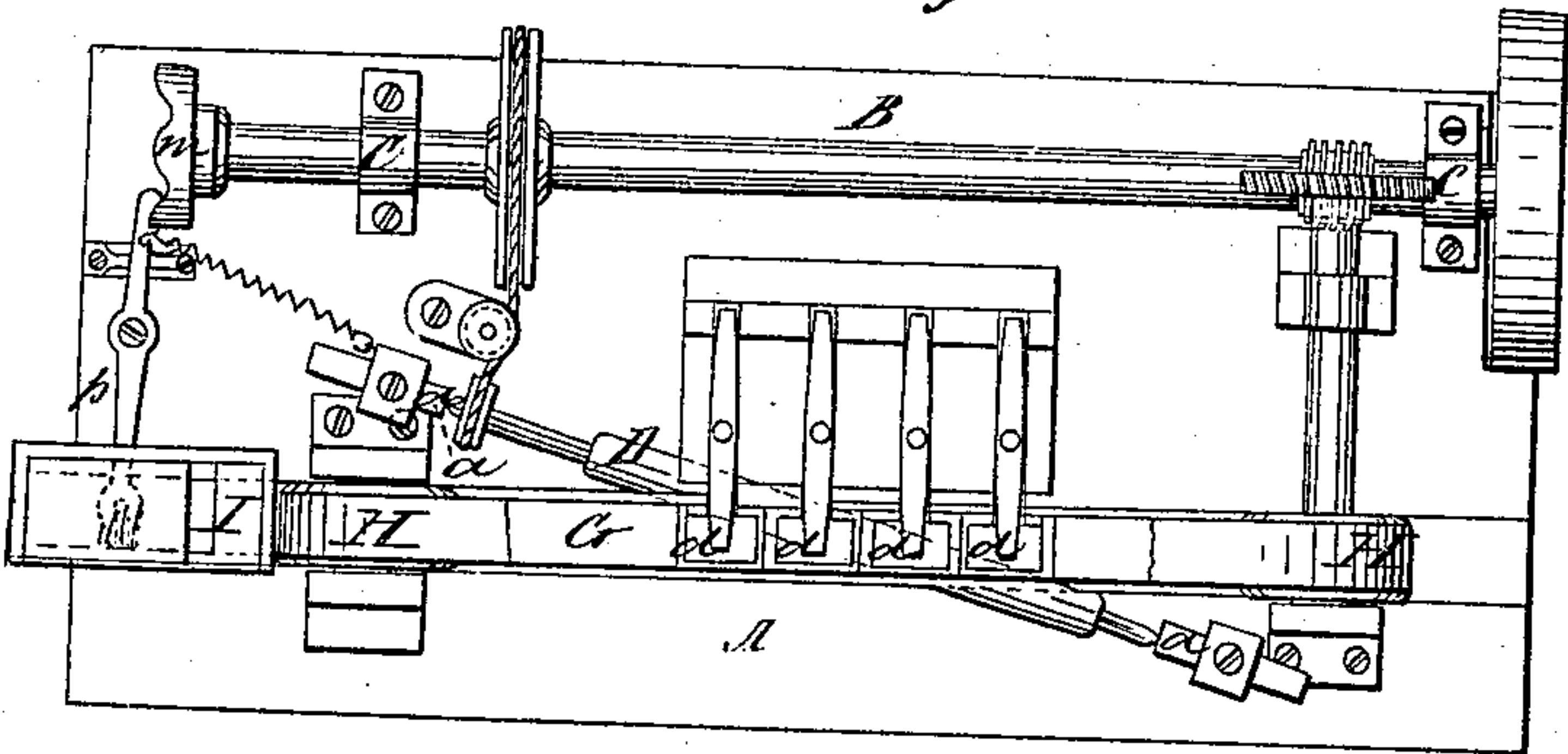


Fig: 2

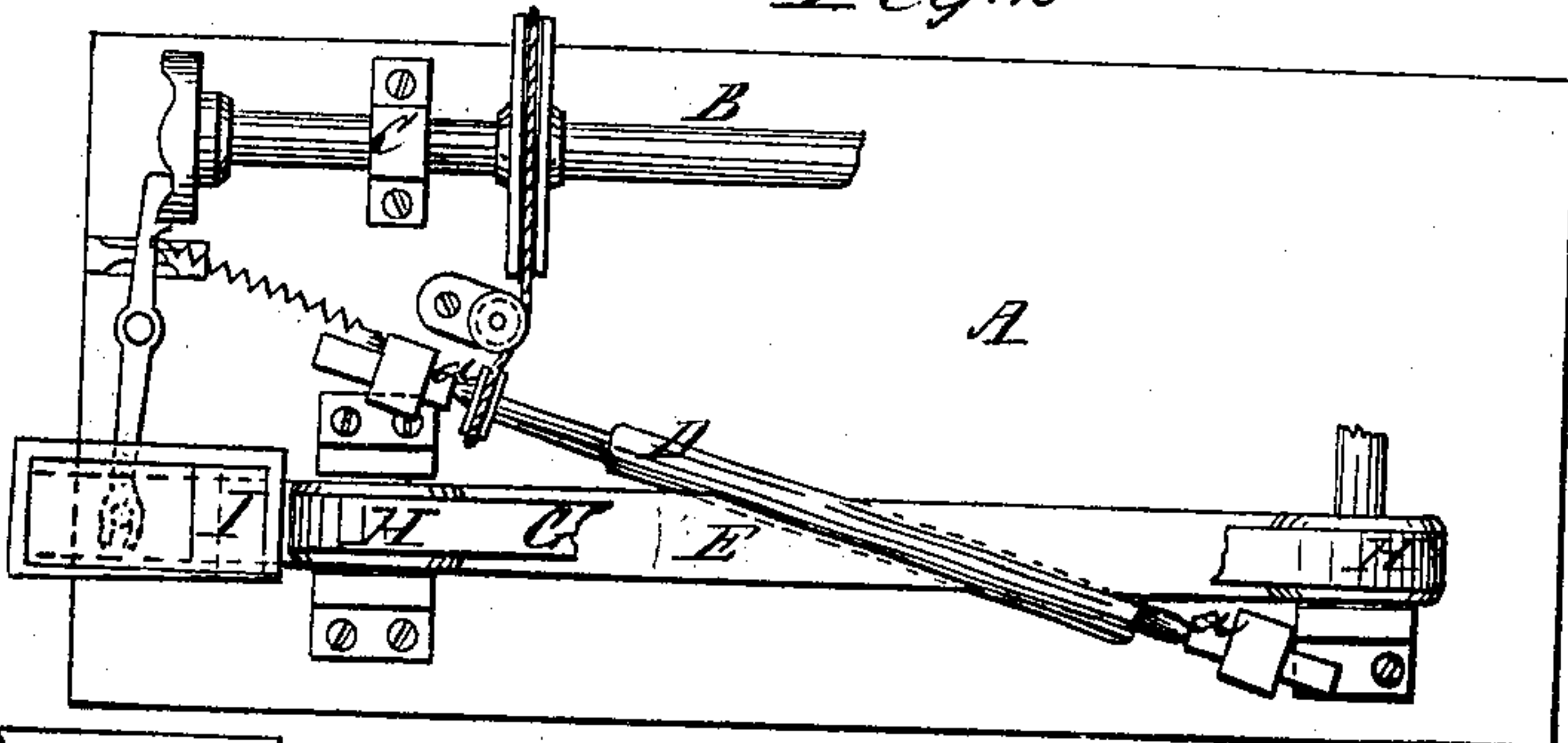


Fig: 3

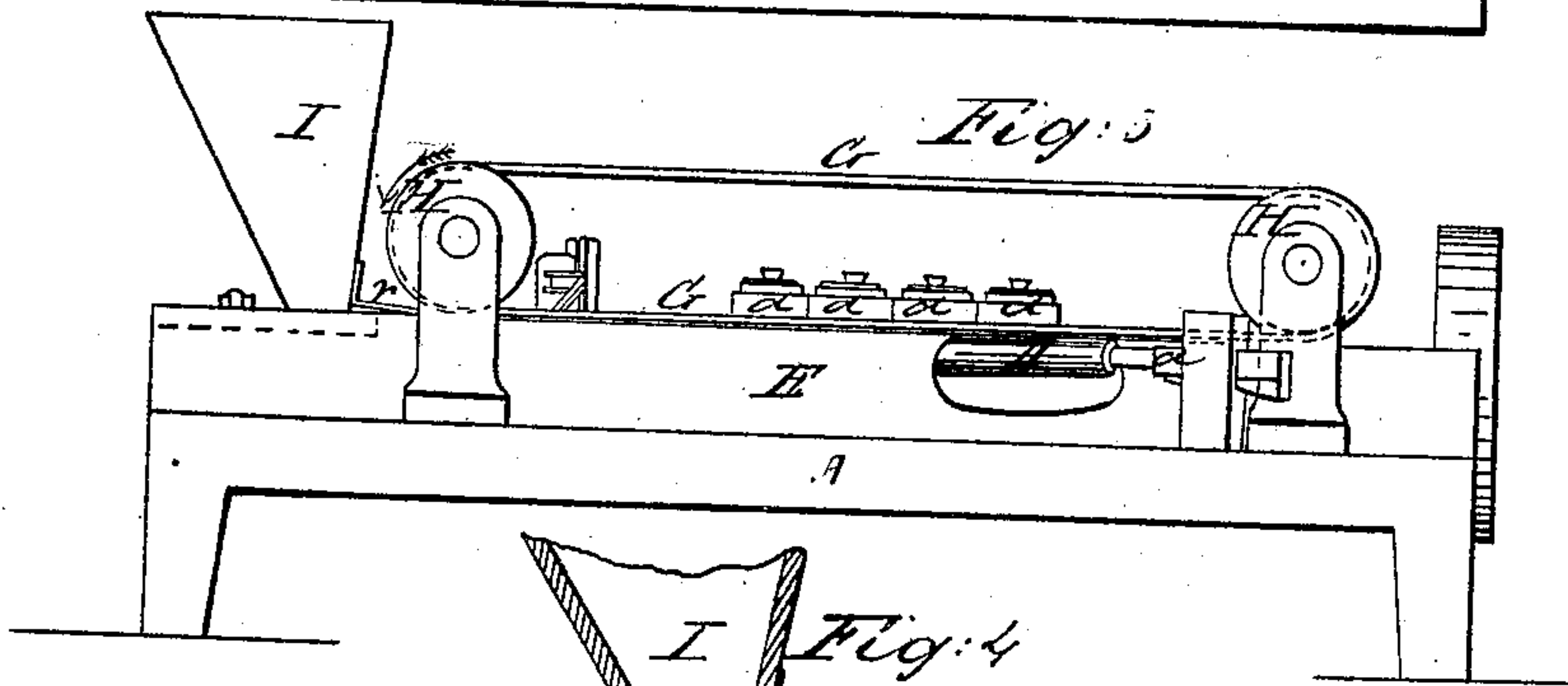
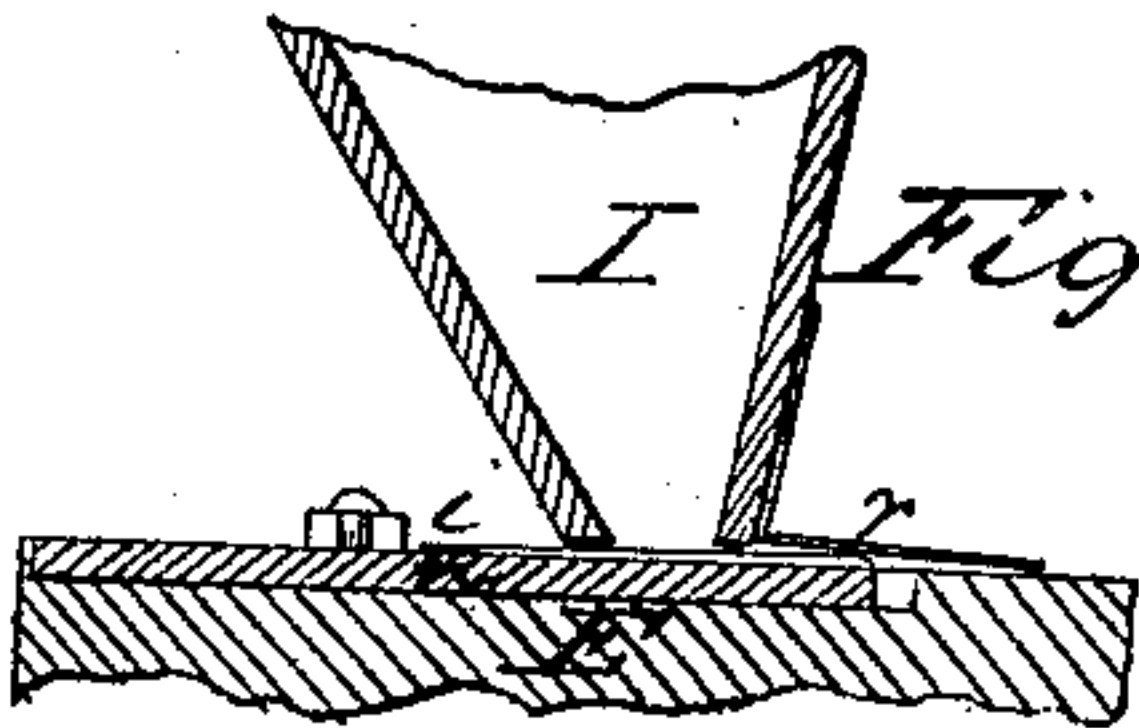


Fig: 4



Witnesses
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CHAUNCY O. CROSBY, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 105,312, dated July 12, 1870.

IMPROVEMENT IN MACHINES FOR POLISHING NEEDLES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, CHAUNCY O. CROSBY, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Machine for Polishing Needles; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1, a top view;

Figure 2, a top view, a portion of the machine removed to show the polishing-cylinder.

Figure 3, a front view; and in

Figure 4, a section through the hopper.

This invention relates to an improvement in machinery for polishing common sewing-needles after they have been tempered; and

The invention consists in the arrangement of a diagonal polishing-cylinder with a carrying device, which causes the needles to revolve as they are passed over the said cylinder, so that the diagonal position of the cylinder will cause it to operate upon the whole or a considerable portion of the length of the needle.

To enable others to construct and use my improvement, I will fully describe the same as illustrated in the accompanying drawings.

A is the bed-plate.

B, the driving-shaft, arranged to revolve in suitable bearings, C.

D is the polishing cylinder, arranged diagonally on the bed-plate, as seen in figs. 1 and 2, supported in bearings *a*, and caused to revolve rapidly by the application of power thereto from the driving-shaft, or otherwise, the said shaft being arranged so that its upper surface will lie in line with the surface of a bed, E, running longitudinally across the bed-plate, as denoted in fig. 2.

Above the bed-plate an endless band, G, is arranged, upon pulleys, H, to which a slow movement is given, and on the belt, over the open space through the bed E, are arranged pressure-pads *d*, to bear upon the band at that point, and in immediate connection with the carrying band G, a hopper, I, is arranged, to receive the needles in bulk, and provided with a mechanism for delivering the needles to the said band and table E, and when the needles are so delivered, the band traversing in the direction denoted by the arrow in fig. 3 carries the needles along with it by rolling the needles between it and the table E, and, thus rolling, the needles are carried along over the diagonal polish-

ing-cylinder D, pressed down by the pads *d*, so that the said cylinder, revolving rapidly, acts upon the needle upon nearly or quite its entire length, the inner end of the polishing-cylinder striking the needle first, and, as the needle progresses, touching and polishing the needle upon its entire surface until it passes from the polishing-cylinder, and is delivered from the machine.

In the hopper I, I show a feed, which, while peculiarly adapted to this machine, is alike adapted to machines for similar purposes.

Beneath the hopper I on the table E is arranged a slide, *n*, operated by a cam, *m*, on the shaft B, through a lever, *p*. The upper surface of the slide is covered with some soft material, or material of a flexible nature, and the mouth of the hopper is broad, so as to permit several needles to lie upon the surface of the slide. The rear edge of the hopper lies so closely upon the slide that the needles cannot pass out upon that side; and upon the other edge of the hopper a spring plate, *r*, is arranged; extending to the band G.

To the slide *n* a rapid vibratory movement is given, and as it advances each time it rolls from the hopper one or more needles under the spring *r*; the plate returning cannot return the needle; consequently each advance of the slide carries more needles, forcing them out constantly from beneath the spring to the band G, where they are taken and carried along, as before described.

Having fully described my invention,

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

1. The arrangement of the polishing-cylinder D obliquely across the table and underneath the band G, as described, for the purpose of grinding or polishing the needle throughout its entire length, as the latter is rolled along by the action of the band upon it.

2. In combination with the hopper and table, the slide *n*, covered or coated on its upper surface with leather or similar material, and constituting the bottom of the hopper, the spring plate *r*, and mechanism to impart to the slide a reciprocating movement, the said slide being designed to force the needles out one by one from the bottom of the hopper, by the friction of its covered surface against the needles, as set forth.

C. O. CROSBY.

Witnesses:

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J. H. SHUMWAY.