

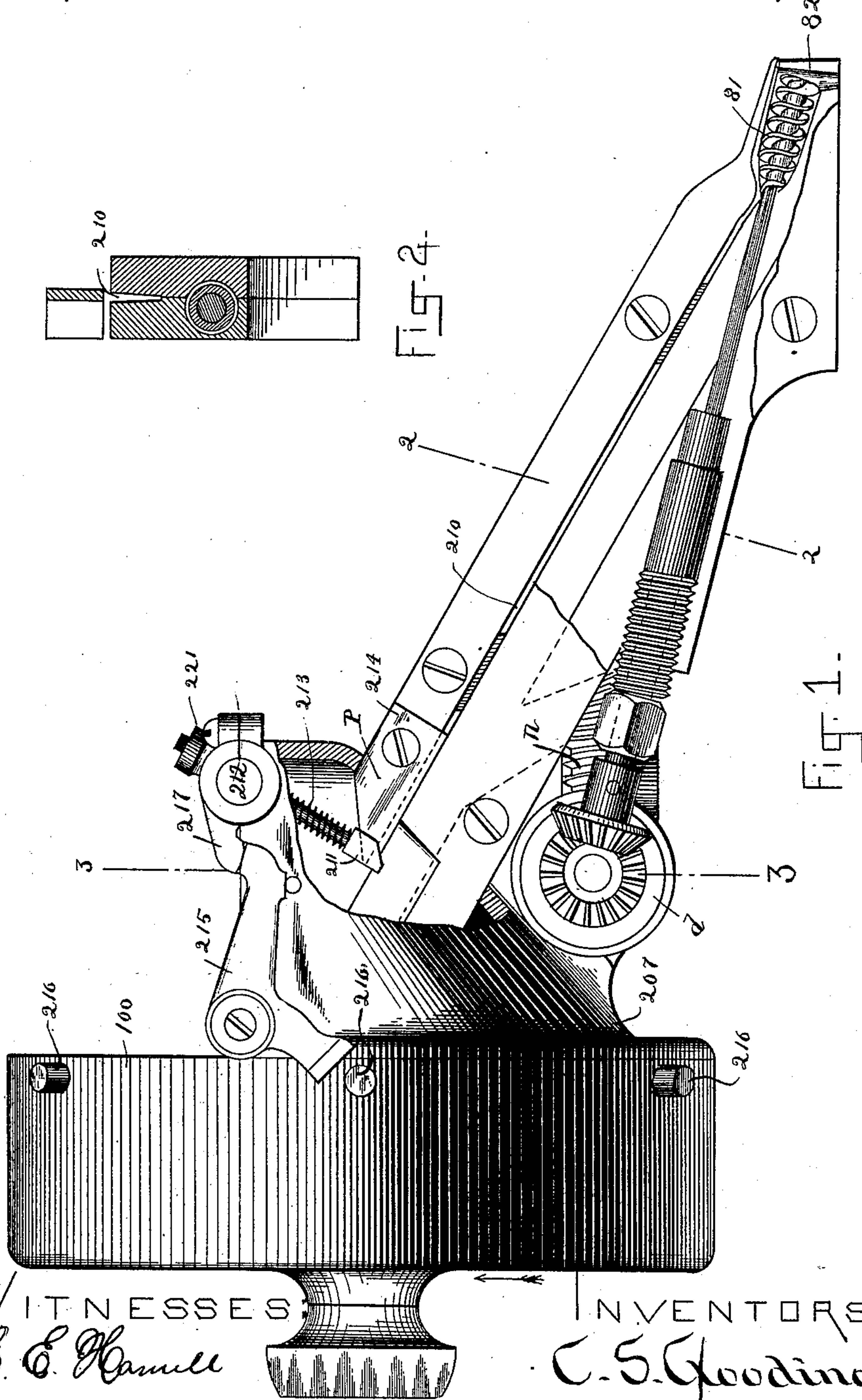
(No Model.)

5 Sheets—Sheet 1.

C. S. GOODING & S. W. LADD.
PEGGING MACHINE.

No. 423,921.

Patented Mar. 25, 1890.



WITNESSES:
E. C. Hamill
Jas. A. Miller.

INVENTORS:
C. S. Gooding,
S. W. Ladd.
by: C. B. Tuttle
Atty.

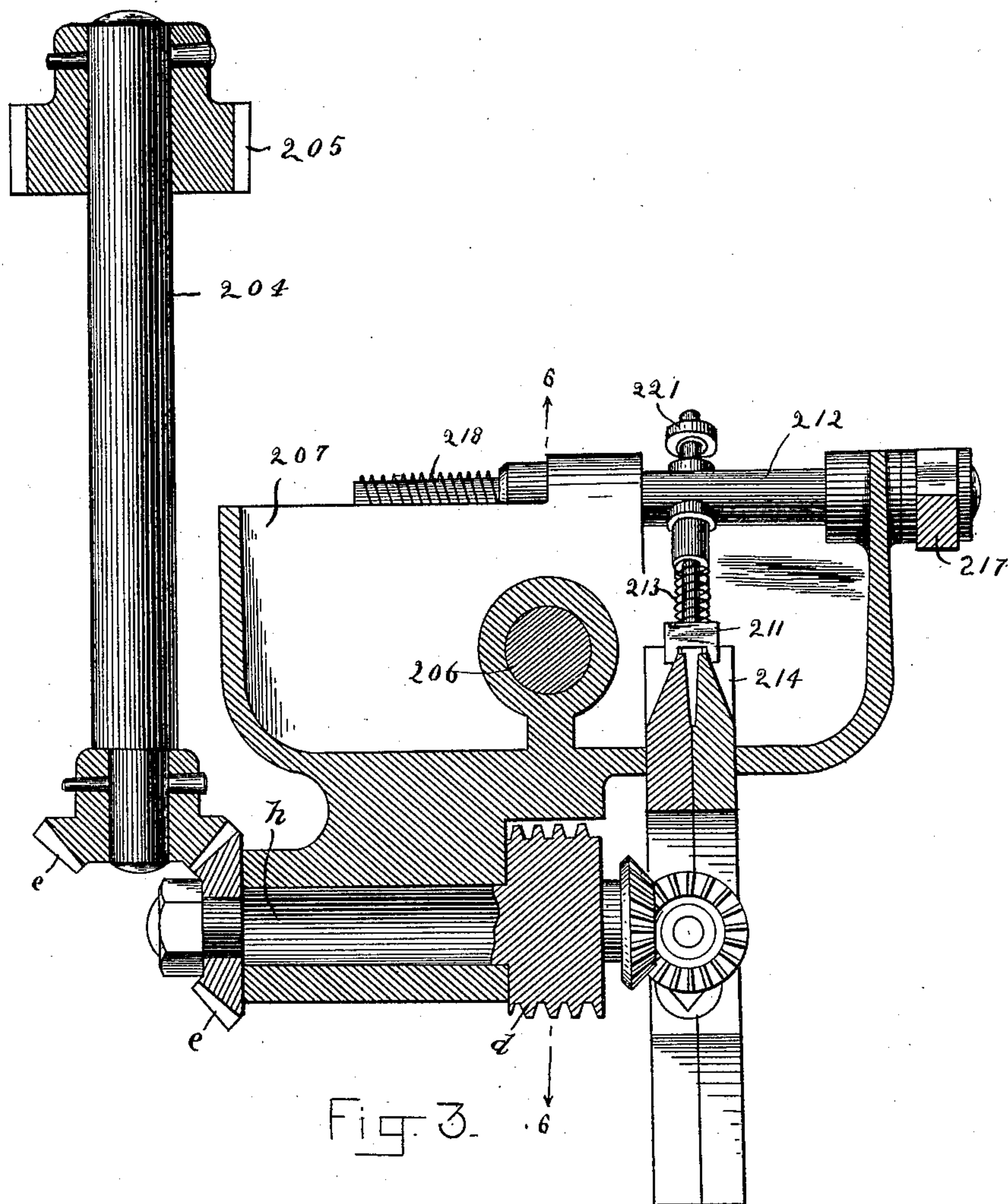
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(No Model.)

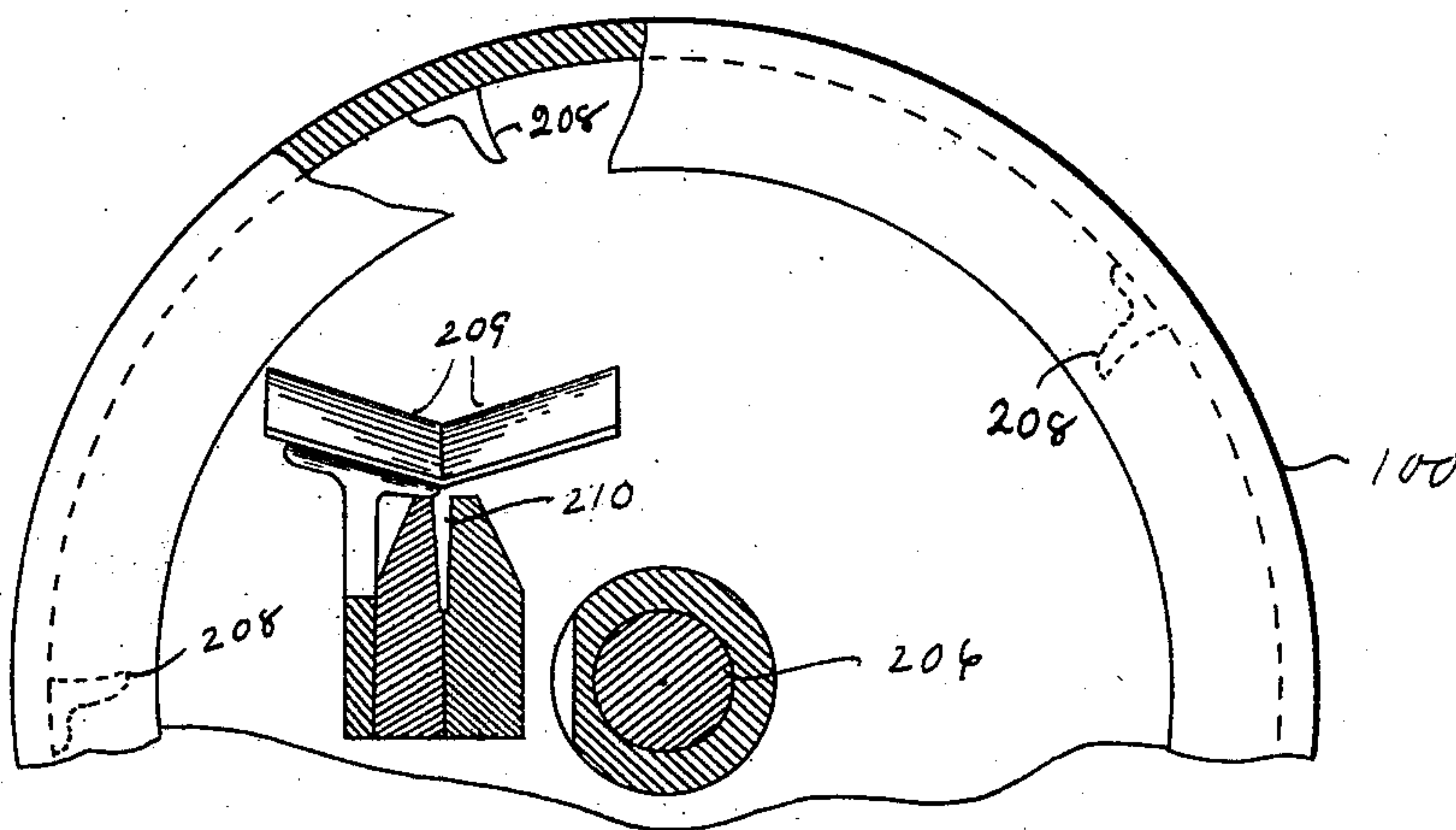
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Fig. 4.



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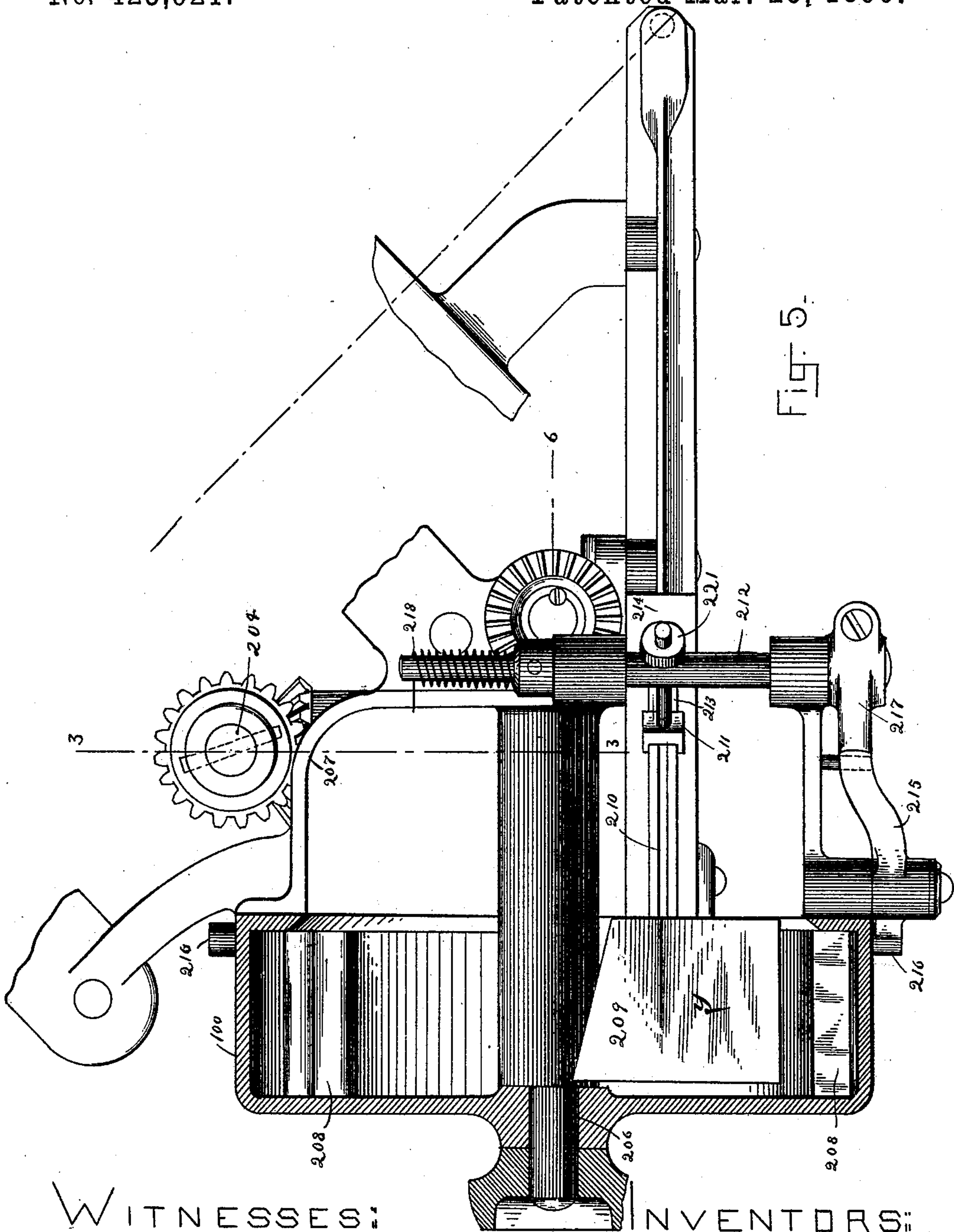
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5 Sheets—Sheet 4.

Patented Mar. 25, 1890.



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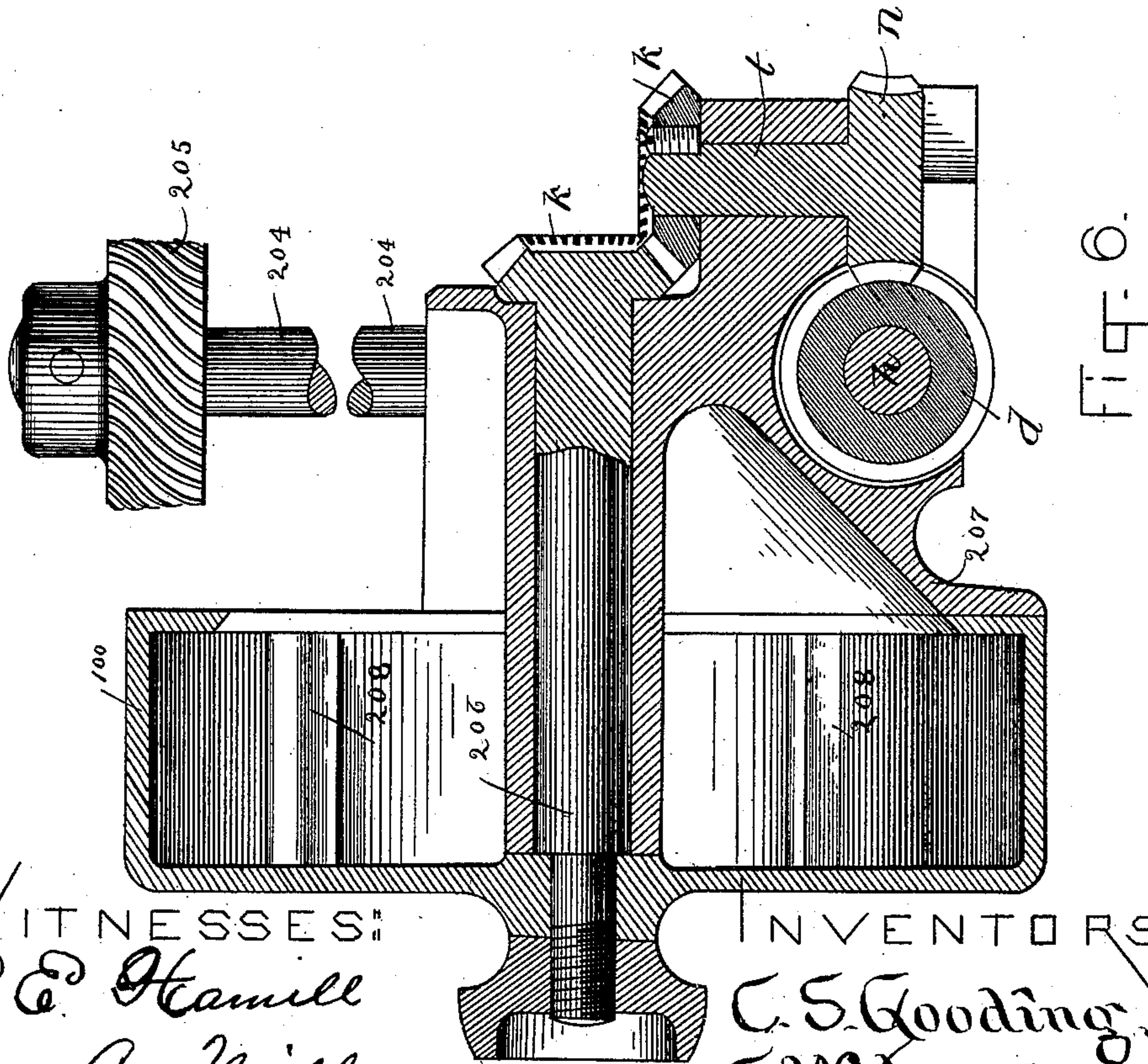
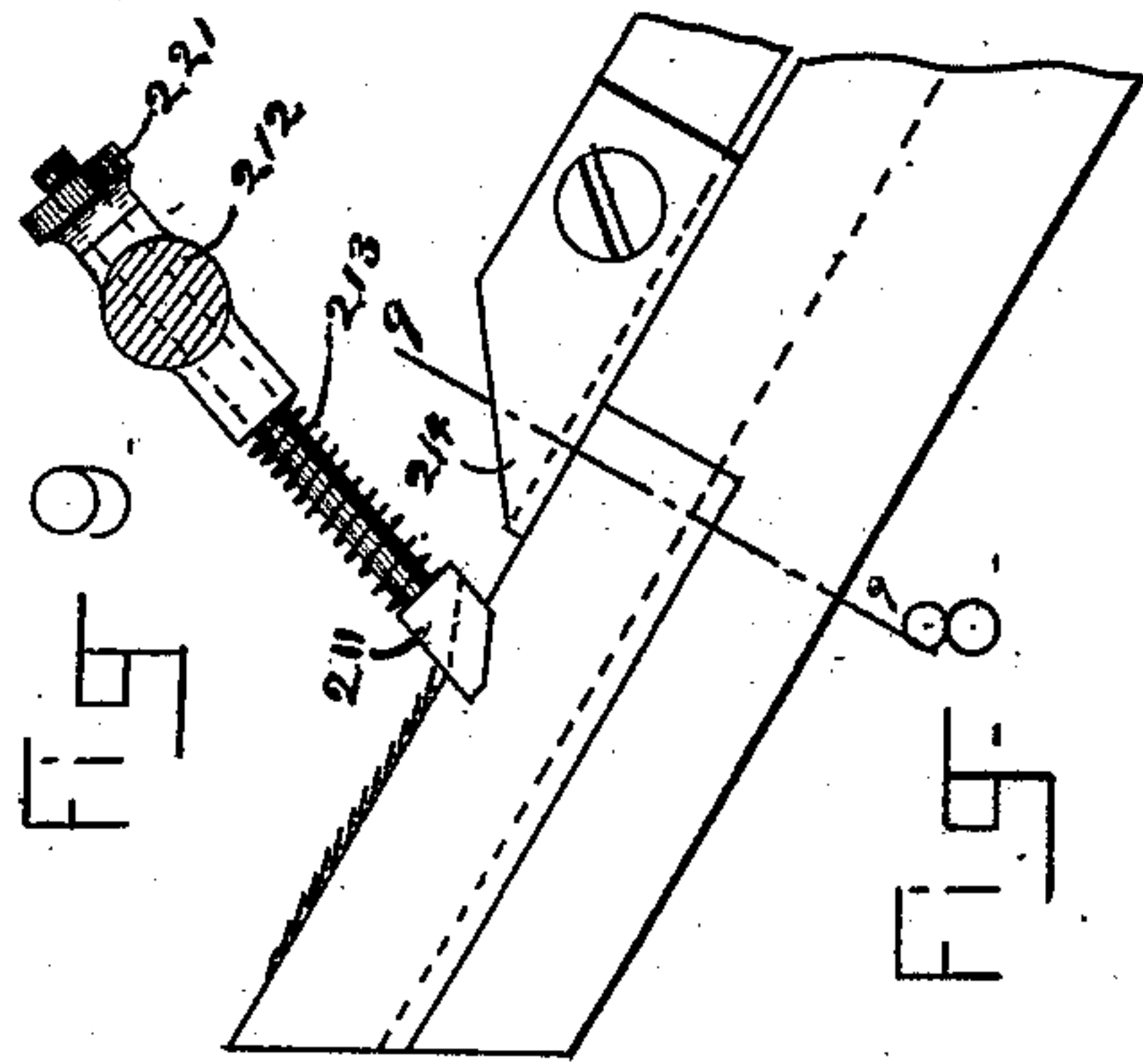
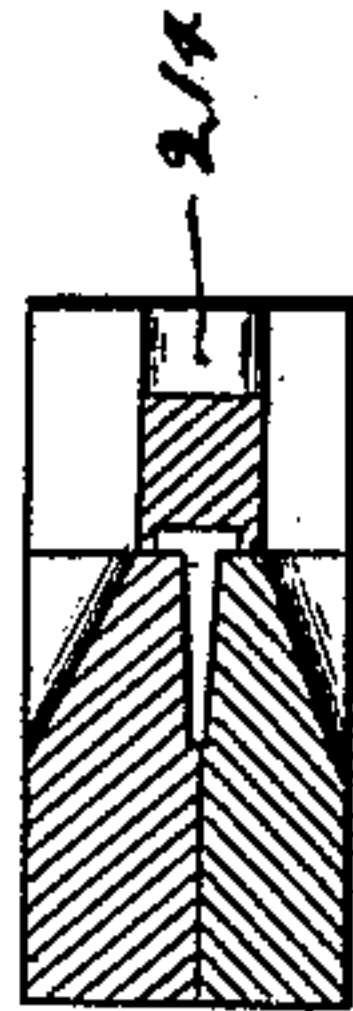
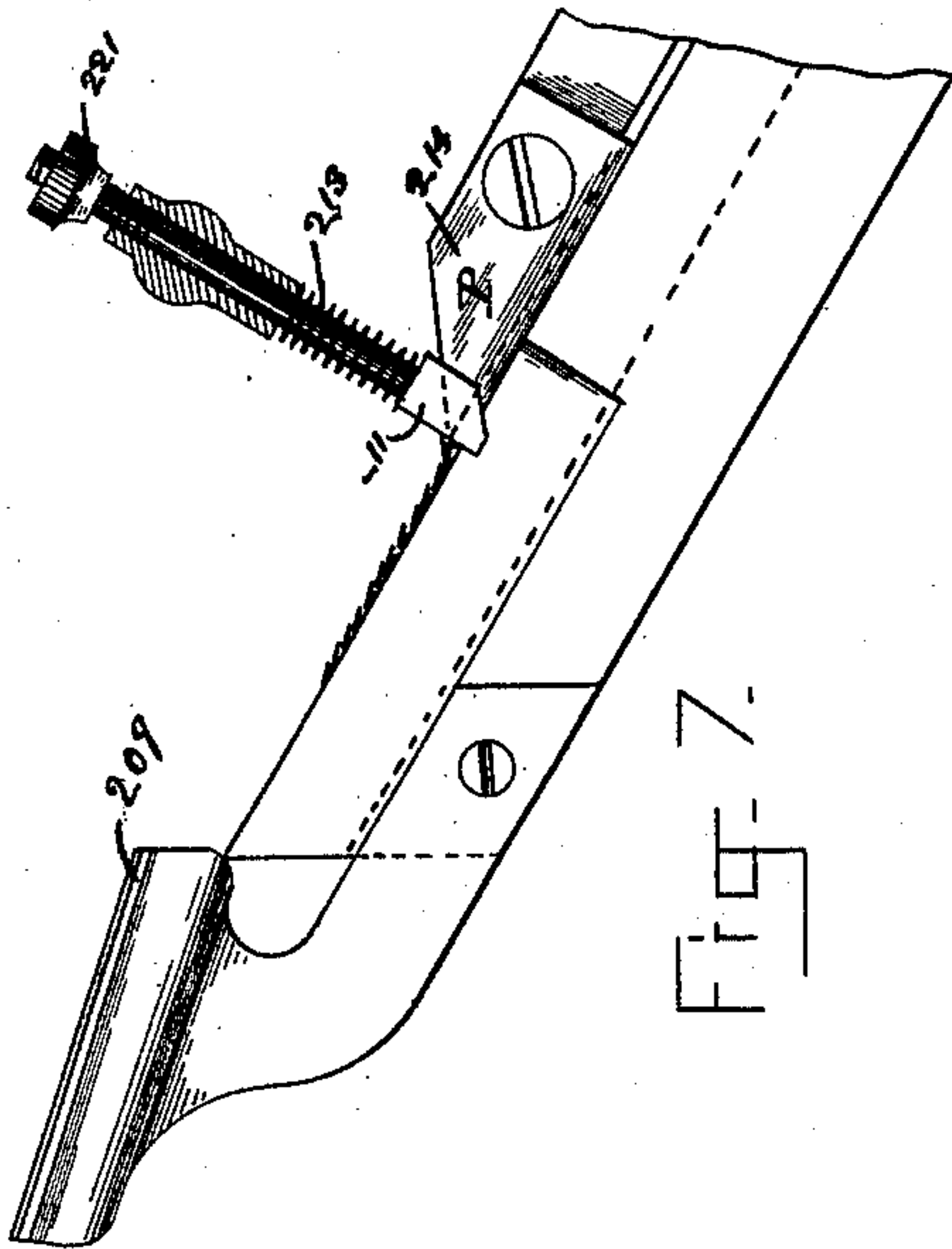
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UNITED STATES PATENT OFFICE.

CHARLES S. GOODING, OF BROOKLINE, AND SHERMAN W. LADD, OF
SOMERVILLE, MASSACHUSETTS.

PEGGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 423,921, dated March 25, 1890.

Application filed November 19, 1888. Serial No. 291,262. (No model.)

To all whom it may concern:

Be it known that we, CHARLES S. GOODING, of Brookline, county of Norfolk, and SHERMAN W. LADD, of Somerville, county of Middlesex, and Commonwealth of Massachusetts, have invented certain improvements in mechanism for separating and distributing tacks, nails, screws, buttons, and other articles adapted to be suspended by their heads or enlarged portions, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to mechanism for separating and distributing tacks and nails and other articles—such as buttons, eyelets, rivets, screws, &c.—that have heads or enlarged portions whereby to be suspended, as hereinafter more fully explained and described.

The invention is now employed by us as a component part of a lasting-machine for the purpose of separating and distributing tacks. Said lasting-machine forms the subject-matter of a separate application for Letters Patent to be filed in the United States Patent Office simultaneously with this application, Serial No. 291,263. In that application this invention is shown in connection with a tack-driving mechanism, and reference thereto may be had for a description of its use in connection with such mechanism.

Referring to the drawings, Figure 1 is a side elevation representing a mechanism embodying this invention, and specifically designed for separating and distributing tacks. Fig. 2 is a section thereof on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1, looking toward the right. Fig. 4 is a view on the same line, looking toward the left. Fig. 5 is a plan view of Fig. 1 with the tack disk or pot made in section, the top thereof being removed to permit looking into the same. Fig. 6 is a section on line 6 6, Fig. 3, looking toward the left. Figs. 7, 8, and 9 are details to be referred to and described hereinafter.

The shaft 204 is provided with a spiral gear 205, that meshes with a similar gear on the main driving-shaft, from which power is transmitted to revolve the shaft 204. The motion of said shaft is transmitted to the shaft 206 through intermediate mechanism

composed of the gears *e e*, shaft *h*, gear *d*, (see Fig. 3,) worm *n*, shaft *t*, and gears *k k*, (see Fig. 6,) the effect being to revolve the disk or case 100, which is mounted to turn on the shaft 206. Said disk or pot is open at one side closely adjacent to and turns in sliding contact with the basin 207, which opens at its rear end into the pot. The tacks are placed in bulk in the basin 207 and pass down its inclined faces into the disk or pot 100 and are lifted by ribs 208 on the pot to a point above the pan 209. Said pan is provided with inclined faces (see Fig. 4) converging to a point above the raceway in the chute or channel block H. The tacks falling from the ribs strike into the pan 209 and slide down its faces *y y* to the raceway-groove 210, and are suspended in the raceway with their points downward and their heads bearing upon the edges of the channel-block along the raceway. The tacks in passing down the inclines of the pan are naturally brought in line with the raceway-groove and slide onto the same, point or head forward, in either of which cases they hang suspended in the raceway. Tacks which do not strike in the raceway pass over the sides thereof and fall into the basin, and thence to the pot below, to be again lifted and dashed into the pan, as before. Obviously some of the tacks may be improperly suspended in the raceway and tend to obstruct the downward progress of other tacks. These improperly-suspended tacks must be either lifted from the raceway or adjusted and properly suspended to pass downward with the others. On the channel-block is a bridge 214, which overhangs the raceway. This bridge obstructs the downward progress of all tacks not properly suspended in the raceway—that is to say, in other words, a tack must be down upon the channel-block, its head bearing closely on the surface of the block, its point in the raceway, in order to pass under the bridge, and once under the bridge it is no longer liable to displacement. Above the bridge is a tripper-arm 211. This tripper is supported in the rock-shaft 211. Its bottom end bears upon the channel-block above the raceway-groove, and its end is preferably grooved to receive the edges of the channel-block, as shown in Figs. 3 and 5. The trip-

per permits vertical movement against the spiral spring 213, which is arranged about the shank of the tripper-arm, as shown, and operates to hold it down upon the channel-block. The vertical movement of the tripper against said spring allows it to be reciprocated along the raceway-block and also to be brought against the inclined end of the bridge 214, as shown in Figs. 1 and 3. To this end an intermittent rocking movement is imparted to the shaft 212, which carries the tripper, by the revolving pot 100 through intermediate mechanism composed of the bell-crank lever 215, which engages stops 216 on the pot, and an arm 217 on the shaft 212 for giving movement to the shaft in one direction, and a spring 218 for returning the shaft or moving it in the opposite direction. The rearward movement stops the tripper on the incline of the bridge, as shown in Fig. 7. By reference to said Fig. 7 it will be observed that a tack is represented as improperly suspended in the raceway and impeding the downward progress of other tacks. The tripper is engaging and about to move upward along the raceway to agitate and readjust the tacks improperly lodged in the raceway. To this end the tripper, after leaving the bridge, is depressed by the spring 213 into contact with the channel-block and is moved upward along the channel-block, carrying before it the tacks. The tripper is then withdrawn quickly onto the bridge and the tacks are allowed to slide downward along the raceway. In many cases the tacks will have been adjusted by a single movement of the tripper so as to pass under the bridge; but a second or third movement thereof will in all cases accomplish the result desired. To this end the tripper is moved forward regularly at intervals, its action being harmless and of course useless, except when tacks are in condition for adjustment thereby. After passing the bridge the tacks gravitate downward to a distributing device consisting of the worm or screw-headed shaft 81, whereby they are separated and drop one by one into the driver-tube 82 or other receptacle. To this end said screw-shaft is continuously revolved by a suitable mechanism—as, for instance, by means of shafts 204 *h* and gears *e* *d*, as shown.

In operating the machine the pot or disk

100 is revolved continuously, and the tacks are lifted thereby above and dashed into the pan 209, and slide thence into the raceway, as before described.

We have described this invention and represented the same by the drawings as embodied in a mechanism for distributing tacks; but we would not be understood thereby as limiting ourselves to a mechanism for manipulating tacks only. Such mechanical variations in the mechanism as any ordinary mechanic skilled in the art would be able to make with the exercise of ordinary mechanical skill will adapt the mechanism herein shown and described to distribute and separate other articles capable of being suspended by their heads or other enlarged portions, substantially as herein set forth.

We claim—

1. In a device for feeding nails, the combination of the chute, a shaft journaled transversely above the chute, and a reciprocating spring-actuated tripper-arm carried thereby and arranged at an angle thereto to swing longitudinally over and along the chute, substantially as described.

2. In a device for feeding nails, the combination of the chute, a shaft, a tripper-arm, and a spring engaging with the shaft and with the tripper-arm, substantially as described.

3. In a device for feeding nails, the combination of the chute, a shaft, and an adjustable tripper-arm arranged to swing over and above the chute, substantially as described.

4. In a device for feeding nails, the combination of the chute, a rock-shaft, a tripper-arm operated thereby, the upper end of which is screw-threaded, and an adjusting-nut engaging with the screw-threaded portion, substantially as described.

5. In a device for feeding nails, the combination of the chute, a spring-actuated shaft, a tripper-arm, and a revolving disk having projections for rocking the shaft positively in one direction, substantially as described.

Signed at Boston, Massachusetts, this 15th day of November, A. D. 1888.

CHAS. S. GOODING.
SHERMAN W. LADD.

Witnesses:

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C. B. TUTTLE.