

No. 663,656.

Patented Dec. 11, 1900.

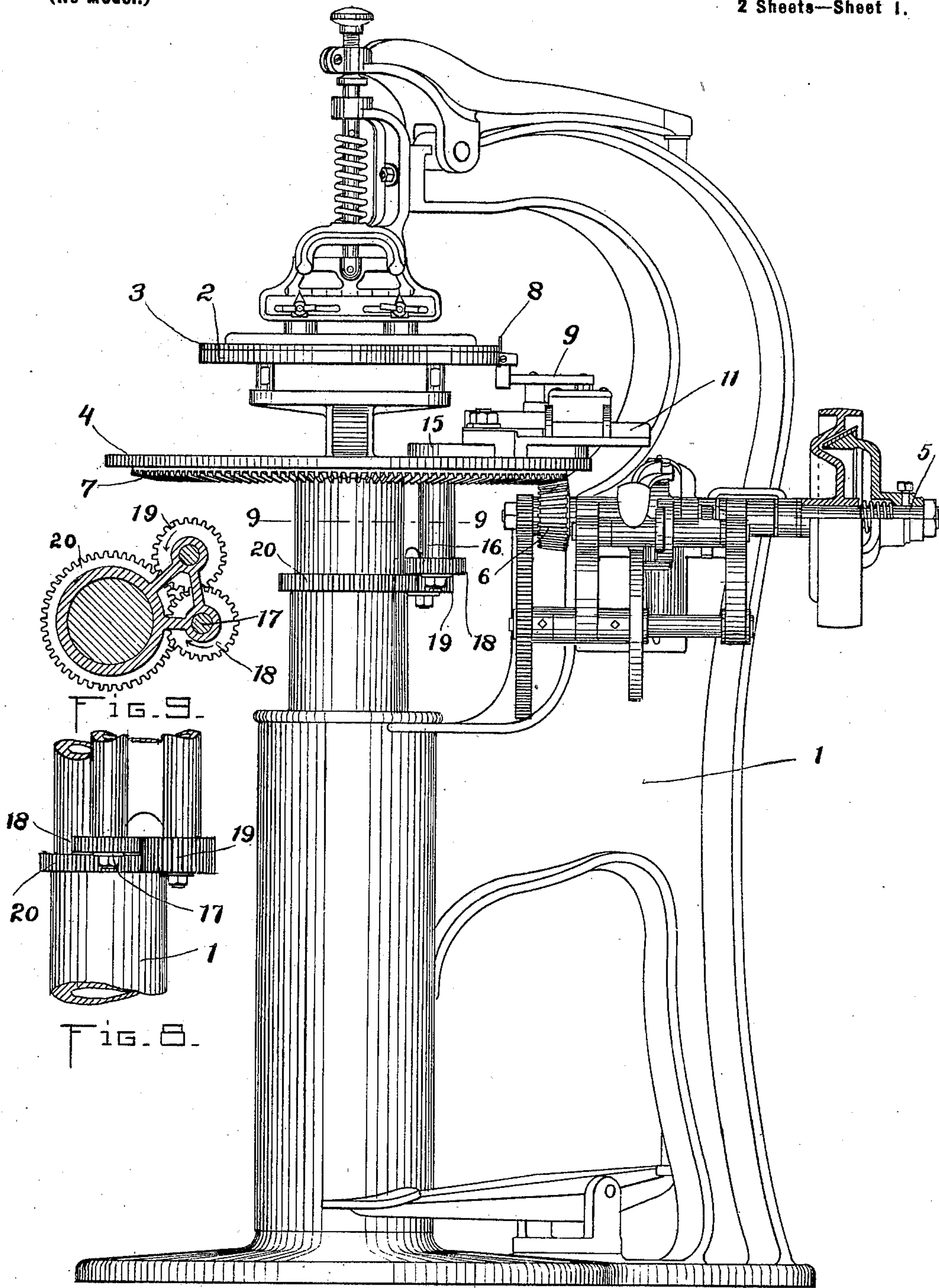
G. JULIAN.

SOLE ROUNDING MACHINE.

(Application filed Apr. 12, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Fig. 1.

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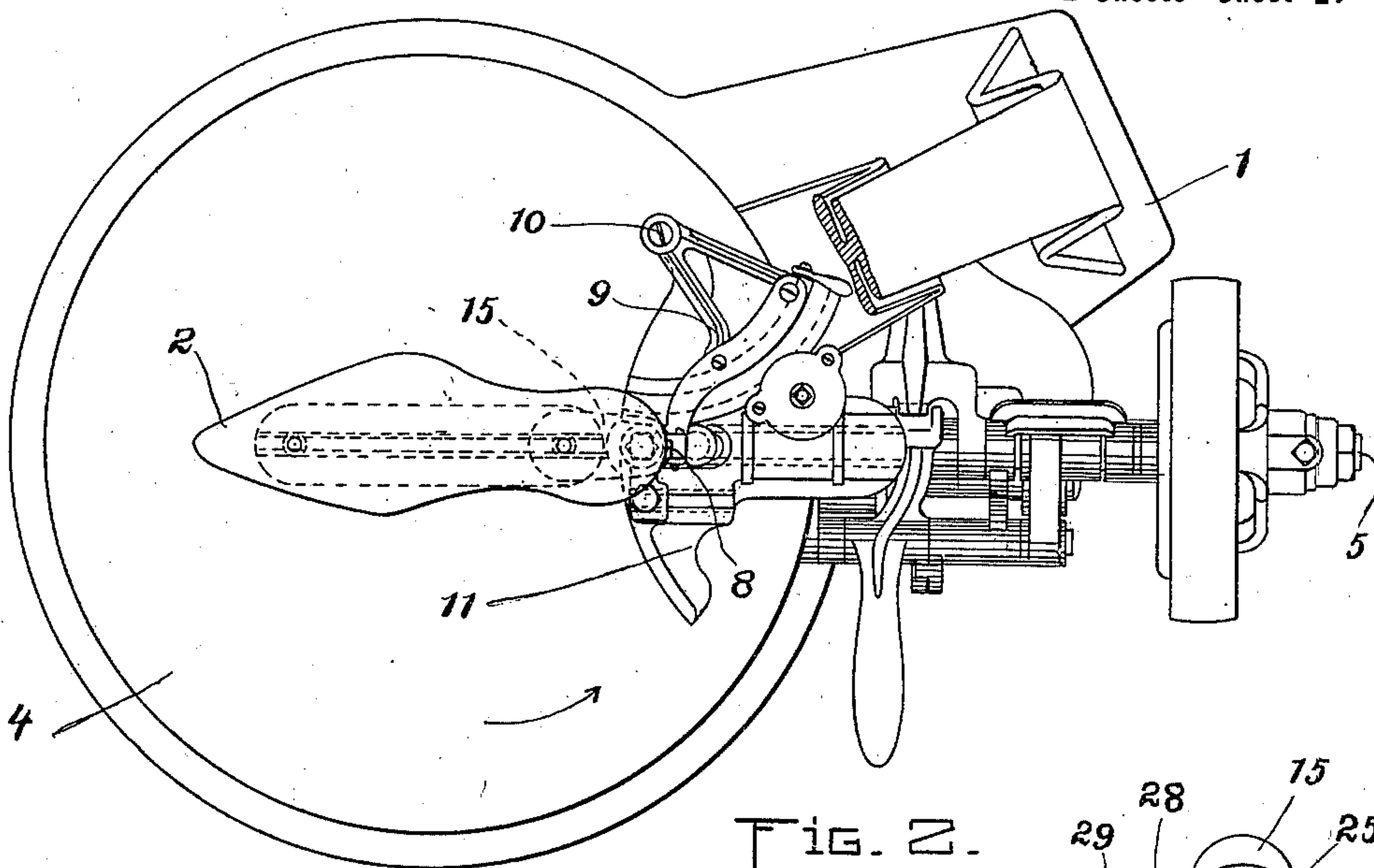


Fig. 2.

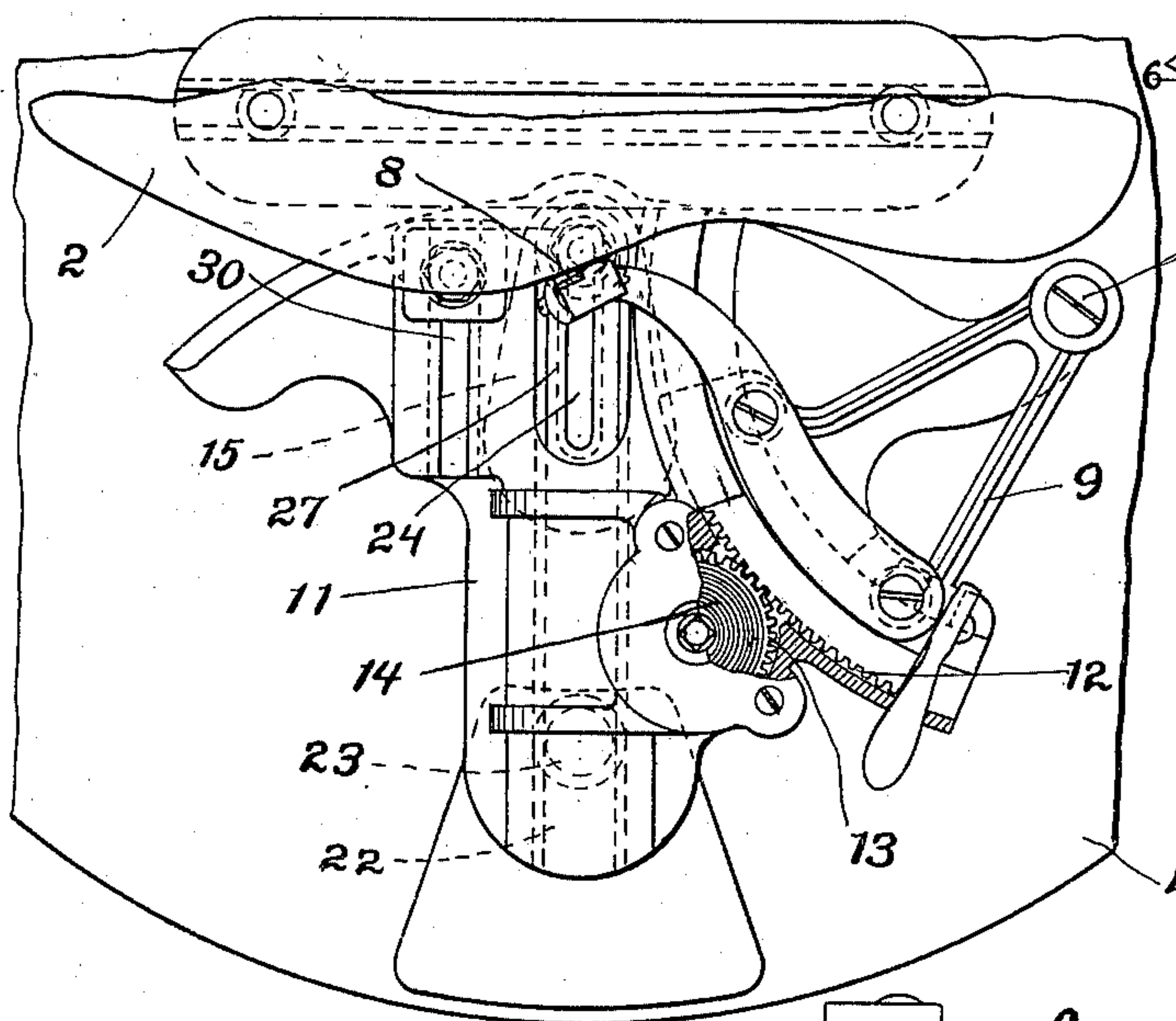


Fig. 3.

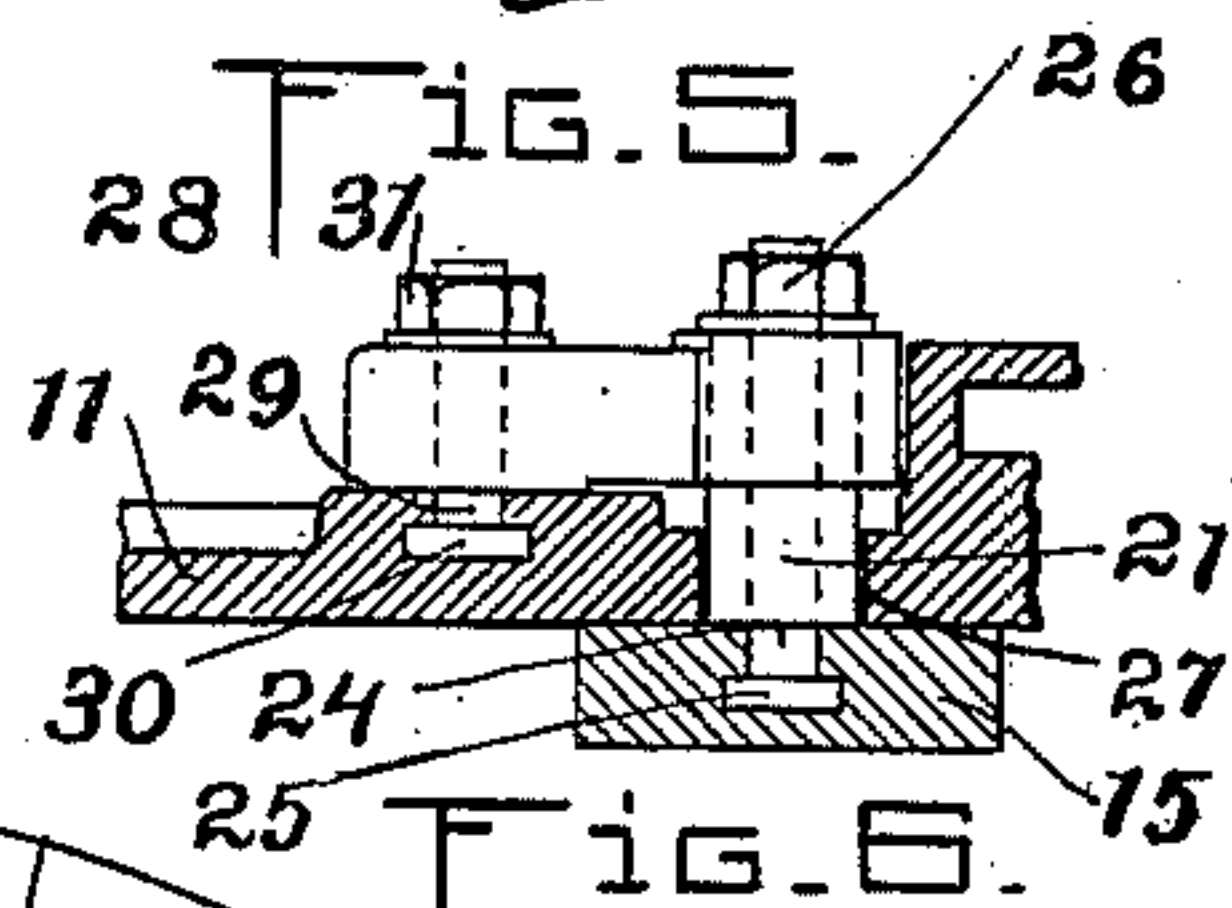
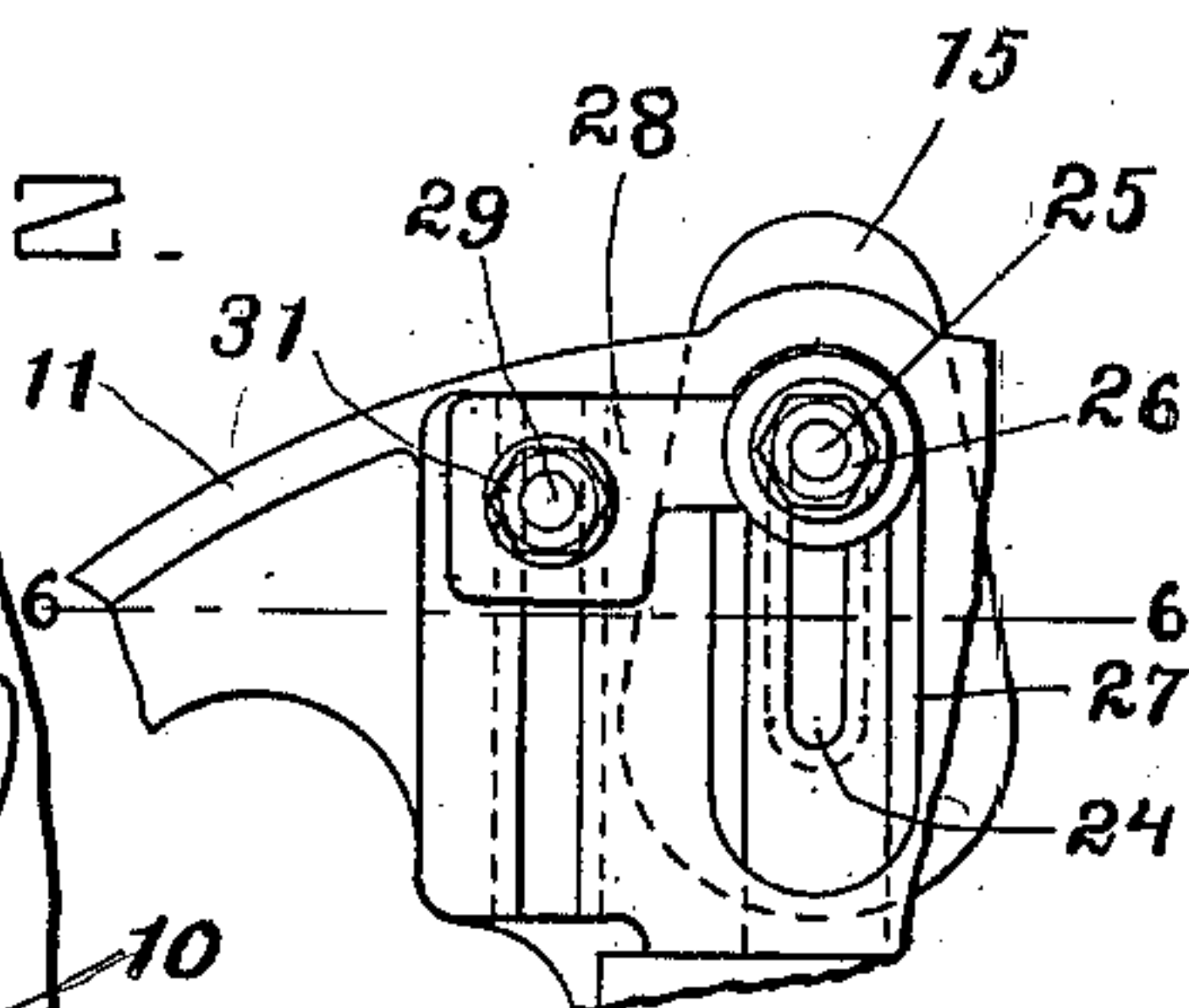


Fig. 6.

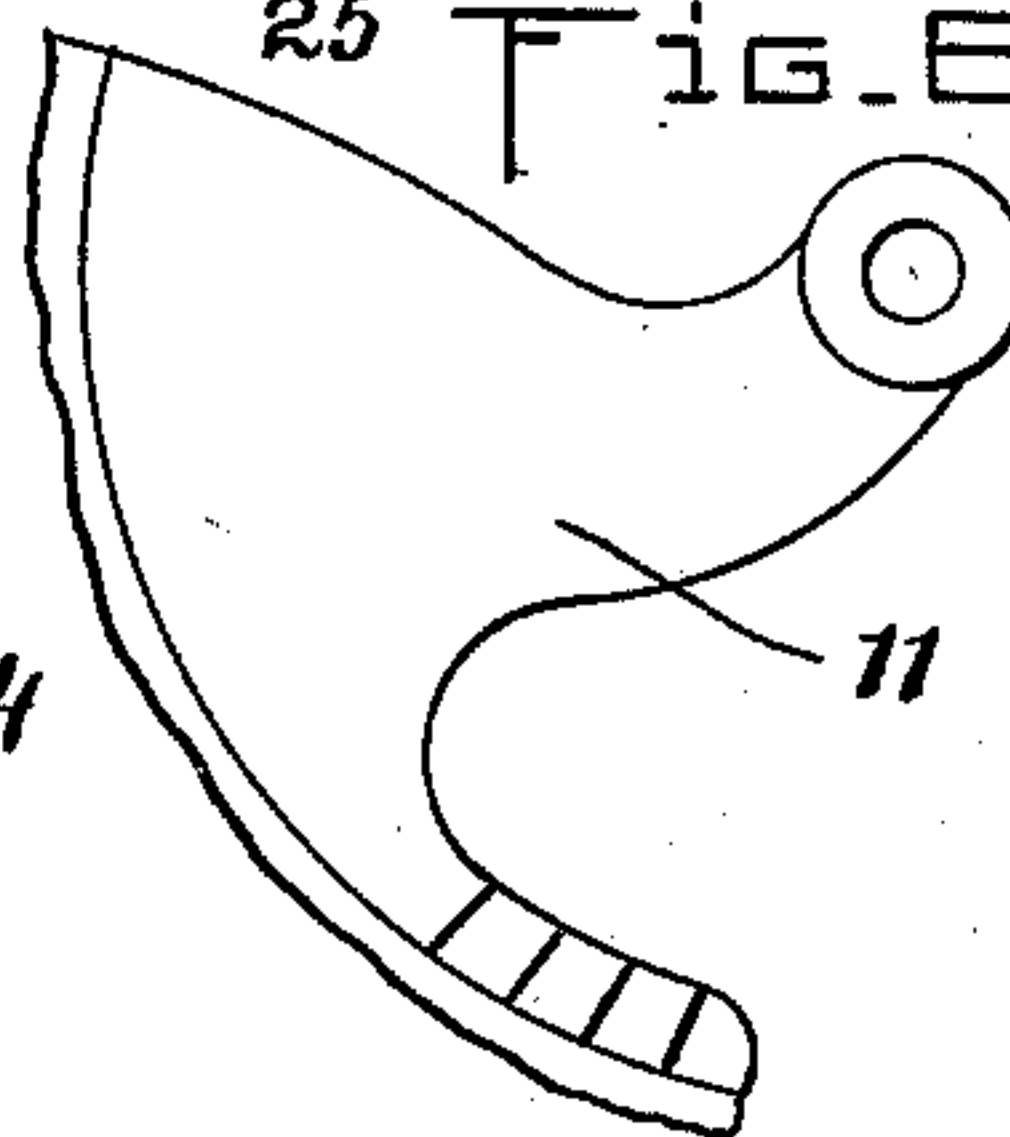


Fig. 7.

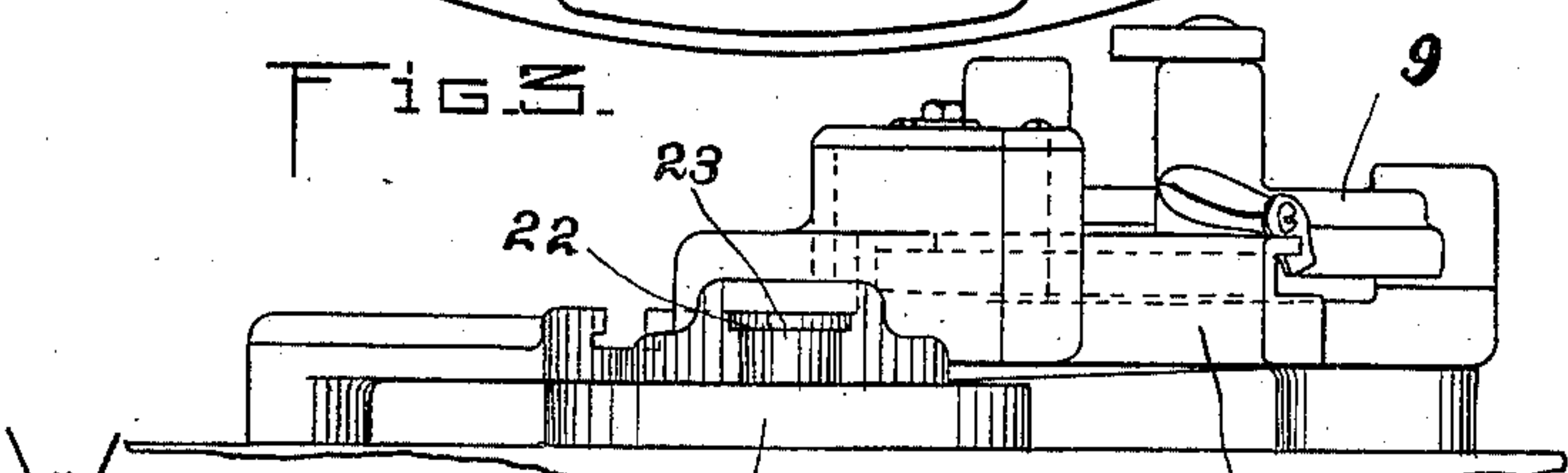


Fig. 4.

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UNITED STATES PATENT OFFICE.

GIDEON JULIAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GEORGE H. P. FLAGG, OF SAME PLACE.

SOLE-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 663,656, dated December 11, 1900.

Application filed April 12, 1900. Serial No. 12,527. (No model.)

To all whom it may concern:

Be it known that I, GIDEON JULIAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sole-Rounding Machines, of which the following is a specification.

This invention relates to sole-rounding machines employing a sole-holder and knife mounted for a relative rotary or circumscribing movement, the machine having provisions whereby the movement of the knife is accelerated along the sides of the sole and retarded around the ends.

The invention has for its object to provide an adjustment, avoiding the necessity of interchanging the knife-supporting parts when soles of different sizes are operated upon.

Of the accompanying drawings, Figure 1 represents a side elevation of a sole-rounding machine constructed in accordance with my invention. Fig. 2 represents a plan view. Fig. 3 represents a partial plan view, enlarged and partly in section, showing the parts in a different position. Fig. 4 represents a side elevation of the parts shown in Fig. 3. Fig. 5 represents a plan view showing the adjustment of the wrist-pin. Fig. 6 represents a section on line 6 6 of Fig. 5. Fig. 7 represents a plan view of part of the knife-carrier. Fig. 8 represents a side elevation of the gearing for actuating the crank. Fig. 9 represents a section on line 9 9 of Fig. 1, showing said gearing.

The same reference characters indicate the same parts in all the figures.

In the drawings, 1 designates the frame of the machine, supporting at its upper end in a fixed position a sole holder or clamp 2, upon which the sole 3 to be rounded is clamped, and 4 designates a table mounted to rotate beneath the sole-holder 2 and constituting a support for the rounding-knife mechanism.

5 is a driving-shaft mounted in suitable bearings and having a bevel-gear 6, meshing with a bevel-gear 7 on the under side of the table 4, whereby said table is rotated, the rotation being in the direction of the arrow shown in Fig. 2.

8 represents the rounding-knife, the same being mounted upon a holder 9, which is piv-

oted at 10 to a carrier 11 and is yieldingly oscillated in the direction of the sole-holder by means of suitable mechanism, shown in Fig. 3 as consisting of a gear-segment 12 on the knife-holder and a coacting pinion 13, journaled on the carrier 11 and rotated by a spring 14.

It has been common heretofore to mount the carrier 11 pivotally upon the table 4 and to employ a crank connected by a link with said carrier to accelerate the movement of the rounding-knife along the sides of the sole-holder and to retard the knife in rounding the ends. My improvements are embodied in the following mechanism: 15 is a crank journaled in a vertical bearing-sleeve 16 on the table 4 and having at the lower end of its shaft 17 a spur-gear 18, meshing with an idler-gear 19 of equal diameter, which is carried in a bearing attached to the bearing-sleeve 16. The gear 19 meshes with a fixed gear 20 on the frame 1, the said gear 20 being centralized on the axis of rotation of the table 4 and being of twice the diameter of the gears 18 19. The crank 15 therefore completes two rotations to one of the table 4. The crank 15 is attached directly by a wrist-pin 21 to the inner end of the carrier 11, and the latter has a sliding connection by means of a groove 22 with a fulcrum or pivot stud 23 on the table 4. Fig. 3 represents the positions of the parts when the rounding-knife is traveling along the side of the sole. When in this position, the end of crank 15 is moving in the same direction as the table, and the rounding-knife is therefore accelerated in its movement, the movement of the table being regular and uniform. When the rounding-knife reaches the end of the sole, as represented in Fig. 2, the end of crank 15 is moving in the opposite direction to the table, and said rounding-knife is therefore retarded in its movement around the end of the sole. The wrist-pin 21 is made adjustable on the crank 15 and also on the carrier 11, so as to change the position of the carrier when soles of different sizes are operated upon. For this purpose the crank 15 has a radial T-slot 24 formed on its upper side, and the wrist-pin 21 has a headed stem 25, adapted to be clamped in said slot by means of a nut 26, the wrist-pin

being thereby capable of being fixed at different adjustments radially on the crank. The wrist-pin passes through a slot 27, formed in the carrier 11 and elongated radially thereof or in the direction of the fulcrum-stud 23. Above the surface of carrier 11 is a block or holder 28, in which the wrist-pin 21 is mounted, said block having a headed bolt or stem 29, operating in a T-slot 30, formed in the carrier, said bolt having a clamping-nut 31. The wrist-pin may thereby be fixed at different adjustments radially of the carrier 11. The effect of the described adjustments of the wrist-pin is as follows: Supposing the parts to be in the positions represented in Fig. 3, with the wrist-pin at its outermost adjustment on both crank 15 and carrier 11, it is evident that by loosening the nuts 26 and 31 the wrist-pin may be moved radially inward on both the crank and carrier without affecting the position of the carrier. Therefore when the rounding-knife is operating in the middle of either side of the sole 3 the carrier will have the same position with respect to the sole as it had when the wrist-pin was at its outermost adjustment. When, however, the rounding-knife reaches the end of the sole, as represented in Fig. 2, the carrier will occupy a position farther inward or nearer to the sole than formerly, both on account of the adjustment of the wrist-pin radially toward the axis of the crank and on account of its adjustment radially toward the fulcrum of the carrier. It is evident that the carrier when the parts are in the position represented in Fig. 3 at the side of the sole can by a proper positioning of the wrist-pin be given a slight inward adjustment, which will amount to a large inward adjustment when the parts reach the positions represented in Fig. 2 at the end of the sole. The reason for this dual adjustment is apparent when it is considered that different sizes of sole vary in their length more than they do in their width—that is, supposing the sole of a smaller size than the one represented in the drawings to be fixed in the sole-holder the inward movement required of the rounding-knife to reach the edge of the sole will be greater at the ends than at the sides. The described wrist-pin adjustment provides for this difference and avoids the necessity of interchanging any of the parts connected with the rounding-knife when a different-sized sole is to be operated upon.

I claim—

1. In a sole-rounding machine, a sole-holder and a support mounted for relative rotary movement, a carrier having a pivotal or fulcrum connection with said support and slidingly mounted with respect to its fulcrum, a

rounding-knife movably mounted on the carrier and yieldingly actuated thereon in the direction of the sole-support, a crank journaled on said support, and a direct wrist connection between said crank and the carrier.

2. In a sole-rounding machine, a sole-holder and a support mounted for relative rotary movement, a carrier having a pivotal or fulcrum connection with said support and slidingly mounted with respect to its fulcrum, a rounding-knife movably mounted on the carrier and yieldingly actuated thereon in the direction of the sole-support, a crank journaled on said support, a wrist-pin directly connecting the crank to the carrier, and means to adjust said wrist-pin radially on the crank.

3. In a sole-rounding machine, a sole-holder and a support mounted for relative rotary movement, a carrier having a pivotal or fulcrum connection with said support and slidingly mounted with respect to its fulcrum, a rounding-knife movably mounted on the carrier and yieldingly actuated thereon in the direction of the sole-support, a crank journaled on said support, a wrist-pin directly connecting the crank to the carrier, and means to adjust said wrist-pin radially on the carrier.

4. In a sole-rounding machine, a sole-holder and a support mounted for relative rotary movement, a carrier having a pivotal or fulcrum connection with said support and slidingly mounted with respect to its fulcrum, a rounding-knife movably mounted on the carrier and yieldingly actuated thereon in the direction of the sole-support, a crank journaled on said support, a wrist-pin directly connecting the crank to the carrier, means to adjust said wrist-pin radially on the crank, and means to adjust it radially on the carrier.

5. In a sole-rounding machine, a sole-holder and a support mounted for relative rotary movement, a carrier having a pivotal or fulcrum connection with said support and slidingly mounted with respect to its fulcrum, a rounding-knife movably mounted on the carrier and yieldingly actuated thereon in the direction of the sole-support, a crank journaled on said support and having a gear, a gear centralized on the axis of relative rotation of the sole-holder and the said support and fixed with respect to the sole-holder, an idler-gear interposed between the last said gear and the gear on the crank, and a direct wrist connection between the crank and carrier.

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

GIDEON JULIAN.

Witnesses:

G. W. MEALEY,
C. F. BROWN.