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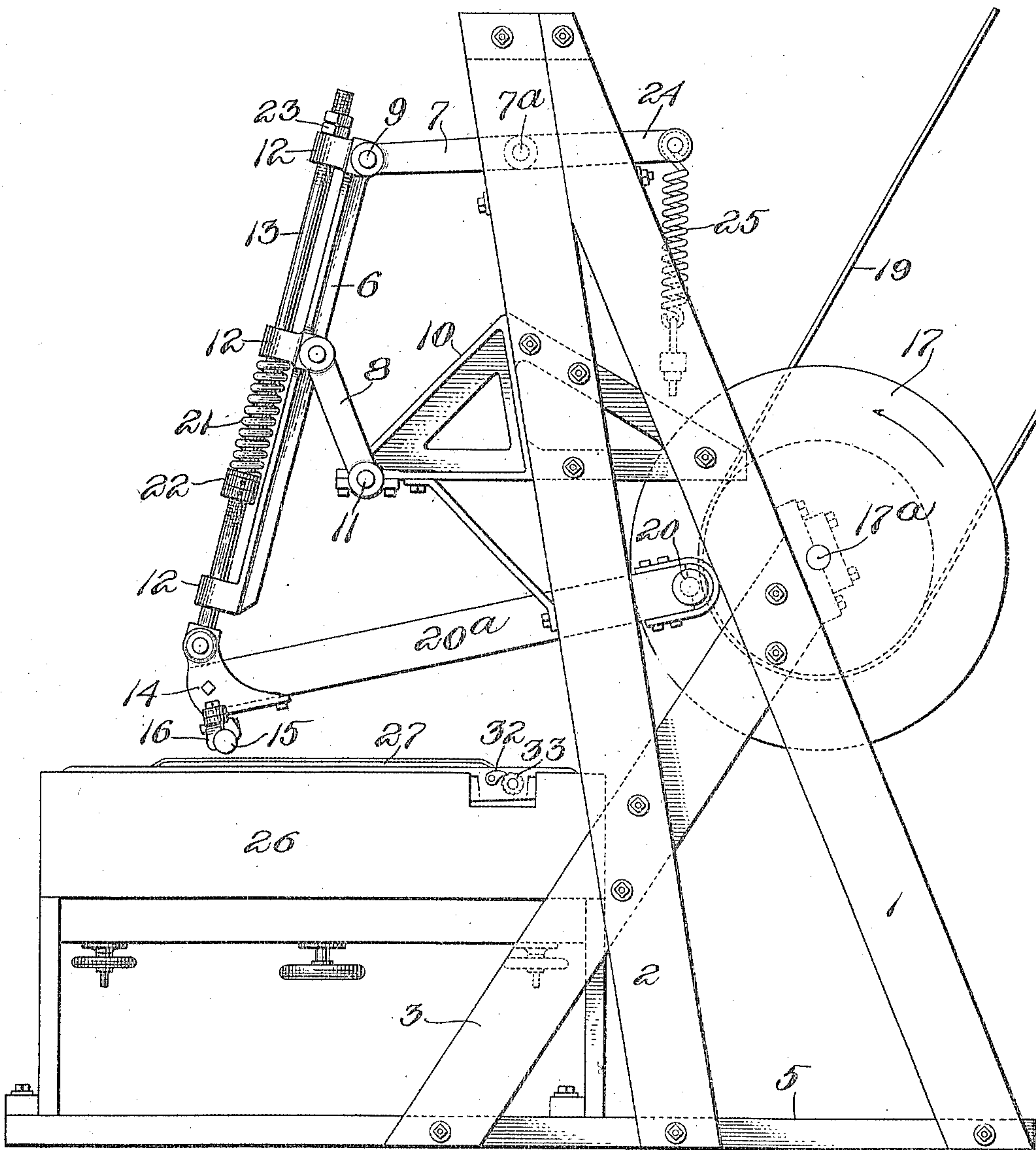
PATENTED APR. 10, 1906.

B. & G. McKEEN.  
GLAZING OR ROLLING MACHINE.

APPLICATION FILED SEPT. 28, 1905.

3 SHEETS—SHEET 1.

*Fig. 1.*



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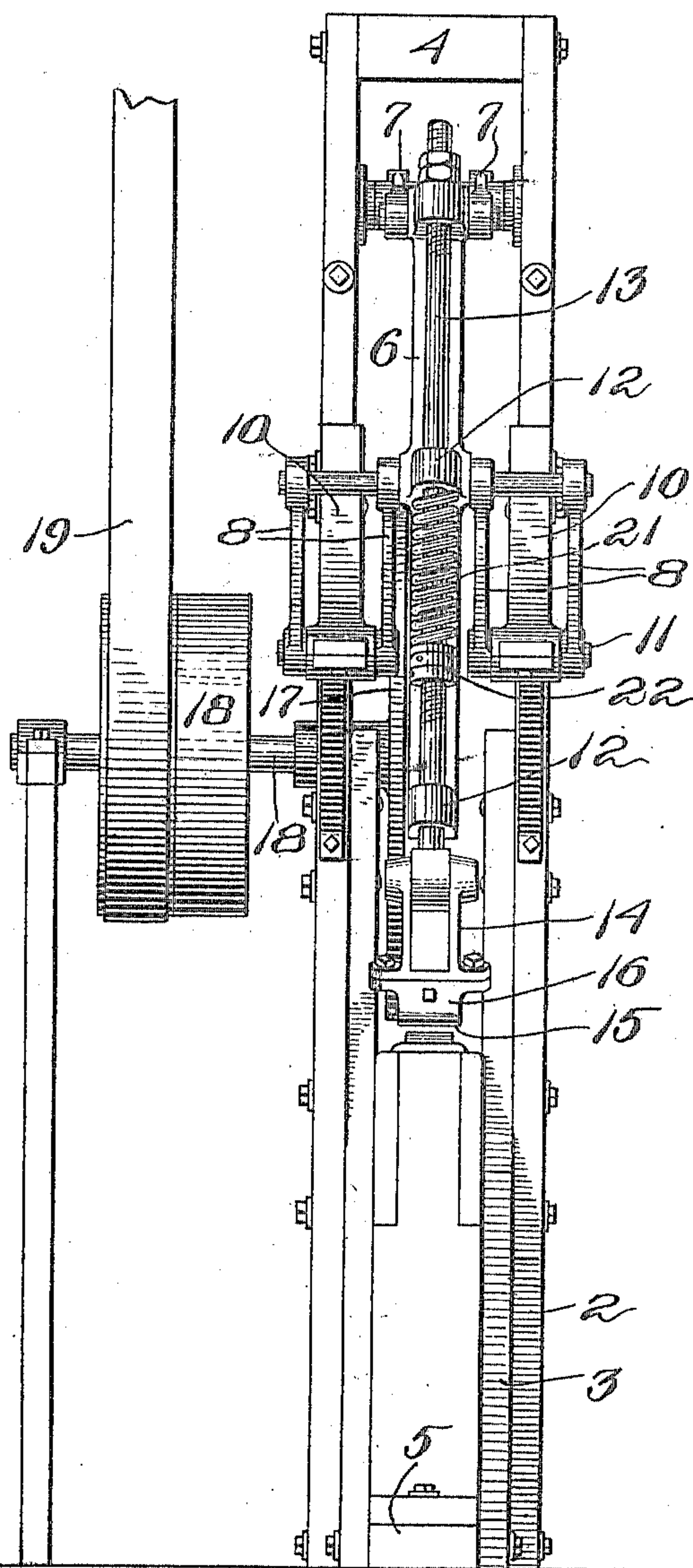
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3 SHEETS—SHEET 2.

Fig. 2.



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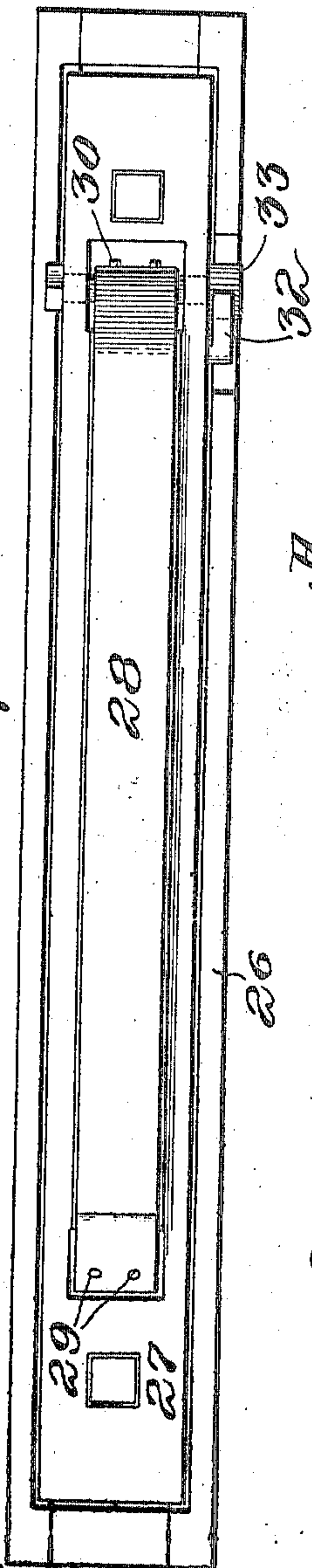
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3 SHEETS—SHEET 3.

Fig. 5.



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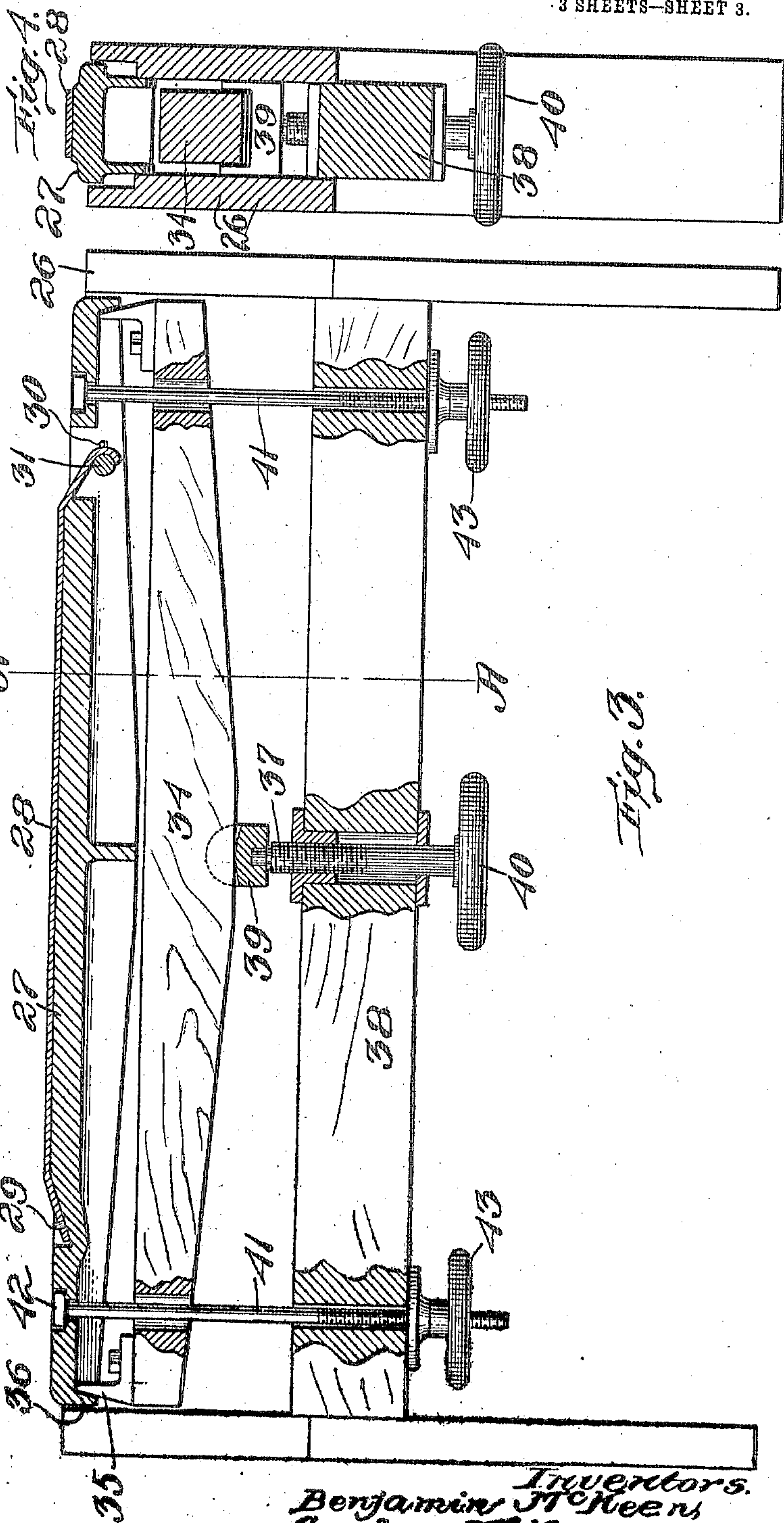


Fig. 3.

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# UNITED STATES PATENT OFFICE.

BENJAMIN McKEEN AND GORDON McKEEN, OF PEABODY, MASSACHUSETTS.

## GLAZING OR ROLLING MACHINE.

No. 817,507.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed September 28, 1905. Serial No. 280,468.

*To all whom it may concern:*

Be it known that we, BENJAMIN McKEEN and GORDON McKEEN, citizens of the United States, and residents of Peabody, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Glazing or Rolling Machines, of which the following is a specification.

Our invention relates to glazing or rolling machines, and particularly to machines for glazing, rolling, pebbling, glassing, or setting out skins and leather.

The object of our invention is to provide certain improvements in machines of this character whereby the efficiency of such machines may be increased, the work performed by them be made more uniform and perfect, and the power required to actuate them be economized.

Our invention and our improvements consist in the novel features and combinations hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, which illustrate one embodiment of our invention and improvements, Figure 1 is a side elevation of a machine of the aforesaid character containing one form of our invention. Fig. 2 is a front elevation of the machine shown in Fig. 1. Fig. 3 is a vertical longitudinal section, partly in elevation, of the work-bed forming part of said machine. Fig. 4 is a vertical cross-section of said work-bed, taken on line A A of Fig. 3; and Fig. 5 is a plan view of said work-bed.

The frame of the machine, which supports the moving parts, is made up of a pair of upright structures each composed of the bars or timbers 1, 2, and 3, rigidly joined together by bolts, as shown, and united by the bar 4 at the tops and by the other parts hereinafter described. The frame is mounted upon a suitable base 5, resting upon the floor. Mounted upon the frame is a reciprocating tool-carrier which carries an agate, roller, or other tool or worker of the form desired to operate upon the surface of the skin or hide. This reciprocating tool-carrier in the form shown comprises an oscillating pendulum 6, connected with the frame by links 7 and 8. Links 7 are journaled at one end to the frame and are pivotally connected at their outer ends with the top of the pendulum at 9. The pivot 9 constitutes the center of suspension of the

pendulum. Links 8 are pivoted at one end to the pendulum 6 below the point 9 and at the other end to a bracket 10, mounted upon and forming part of the frame. Said links and pivotal points are so organized and arranged that as the pendulum oscillates from left to right in Fig. 1 and back again the center of suspension 9 is caused to move substantially vertically upon a short arc of the circle described by link 7 as a radius about the center 7<sup>a</sup> under the influence of links 8, which describe an arc of a circle about the center 11. As the pendulum approaches its central position the tendency of the lower end to approach the work-bed is practically offset by the upward movement of the center of suspension of the pendulum, with the result that the lower end of the pendulum moves forward and back substantially a straight path.

The pendulum 6 is provided with lugs 12, bored to provide a slideway, and mounted to slide therein is the plunger 13. Journaled to the lower end of the plunger is a head-piece or tool-holder 14. The tool or worker to be used upon the leather may be secured to the head-piece in any well-known manner. In the drawings I have shown the agate 15, held by the jaws 16. It is to be understood, however, that any other form of tool or worker may be substituted, if desired.

The actuating means by which the tool-carrier is reciprocated consists of the crank-wheel 17, mounted on shaft 17<sup>a</sup>, driven by pulley and belt 18 and 19 of usual construction. A crank-pin 20 upon wheel 17 is connected by crank-shaft 20<sup>a</sup> with the head-piece or tool-holder 14, to which the crank-shaft is rigidly secured. The crank-wheel is driven in the direction of the arrow, Fig. 1. The result is that the toggle-joint, made up of the pendulum proper and the head-piece 14, is caused to straighten as the crank-shaft moves downward and the pendulum approaches its middle position moving from left to right, and said toggle-joint is caused again to shorten as the crank-shaft moves upward until the pendulum reaches its middle position upon its return stroke from right to left in Fig. 1. Thus it will be seen that in its operative stroke (from left to right) the tool will be held in engagement with the work, the straightening of said toggle-joint assisting to compensate for the lifting of the pendulum by the links 8, and that during the re-



turn stroke of the pendulum the tool or worker will be lifted out of engagement with the work.

A coil-spring 21 surrounds the plunger 13 and abuts at one end against one of the lugs 12 and at the other end against an adjustable collar or nut 22, threaded onto the plunger. By screwing the collar up or down the compression of the spring can be adjusted. The nut 23 at the top of plunger 13 forms an adjustable stop to limit the downward movement of the plunger. The tool or worker is thus yieldingly urged toward the work-bed, and any irregularities in the material being operated upon or defection of the tool from a straight path is compensated for by the spring without the danger of injuring the work, which would result if the tool were rigidly instead of yieldingly held.

One of the links 7 is provided with an extension of lever-arm 24. A coil-spring 25 under tension connects the lever-arm 24 with the frame of the machine. This spring acting through the lever-arm 24 and link 7 tends to urge the center of suspension of the pendulum to its highest position, and consequently to urge the pendulum toward its central position and exerts its greatest stress when the pendulum is at its extreme positions of oscillation. Spring 25 assists to retract the pendulum from either of its extreme positions, and its use greatly economizes power and contributes to the smooth running of the machine.

Referring now to the work-bed, a suitable frame 26 supports the work-bed proper. The work-bed comprises a platen 27, preferably cast in metal, upon which the leather 28 to be operated is stretched, one end being perforated and slipped over studs 29, fixed to the platen, and the other end being also perforated and slipped over studs 30 upon a roller 31, journaled in the platen. By turning the roller the leather may be stretched to the desired tension, where it is held by the pawl and ratchet 32 and 33, Fig. 1. The platen 27 is supported at either end by a stiff spring-beam 34, made of ash or other suitable resilient material. Bearing-points are provided between the spring 34 and the platen by the upturned lugs 35 on the spring, engaged by the downturned lips 36 of the platen. The spring and platen are supported by the screw 37, located centrally of the spring and threaded into cross-bar 38 of the frame 26. A bearing-block 39, provided with a socket, is engaged by the end of screw 37, which has

a handle 40, by which to turn it. The screw 37 lifts or lowers the work-bed bodily to adjust it to any desired height to cooperate with the tool or worker of the machine. Provision is also made for an angular adjustment of the work-bed, whereby it may be tilted into the desired plane. This consists of the rods or bolts 41, headed at 42 in the platen and passing through the platen, spring-beam 34, and cross-bar 38, below which they are provided with the adjustment screw-heads 43, threaded onto the rods. By manipulating the screw-heads 43 the work-bed may be angularly adjusted with great nicety, the spring 34 tilting upon the supporting-screw 37 as a center. As the rods 41 fit loosely within the cross-bar 38 they do not interfere with the yielding of spring-beam 34 when the pressure of the tool is exerted upon the platen.

What we claim is—

1. In a machine of the character described, the combination with the frame, work-bed, oscillating pendulum and links connecting the pendulum with the frame, of a slideway upon the pendulum, a plunger mounted to slide in the slideway, a coil-spring surrounding the plunger abutting at one end against a shoulder rigid with the pendulum and at the other end against an adjustable collar on the plunger and normally urging the plunger toward the work-bed, a tool-holder or head-piece pivoted at the end of the plunger, and actuating means comprising a crank and a crank-shaft journaled at one end on the crank and rigidly secured at the other end to the head-piece.

2. In a machine of the character described, the combination with the frame, work-bed, oscillating pendulum and links connecting the pendulum with the frame, of lugs upon the pendulum provided with apertures adapted to receive a sliding plunger, a plunger mounted to slide in said lugs, a spring urging the plunger toward the work-bed, a head-piece adapted to hold a tool or worker pivoted at the lower end of the plunger, a crank-shaft rigidly secured at one end to the head-piece, a crank to which said crank-shaft is journaled at its other end, and means to actuate the crank.

Signed by us at Peabody, Massachusetts, this 22d day of September, 1905.

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Witnesses:

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