

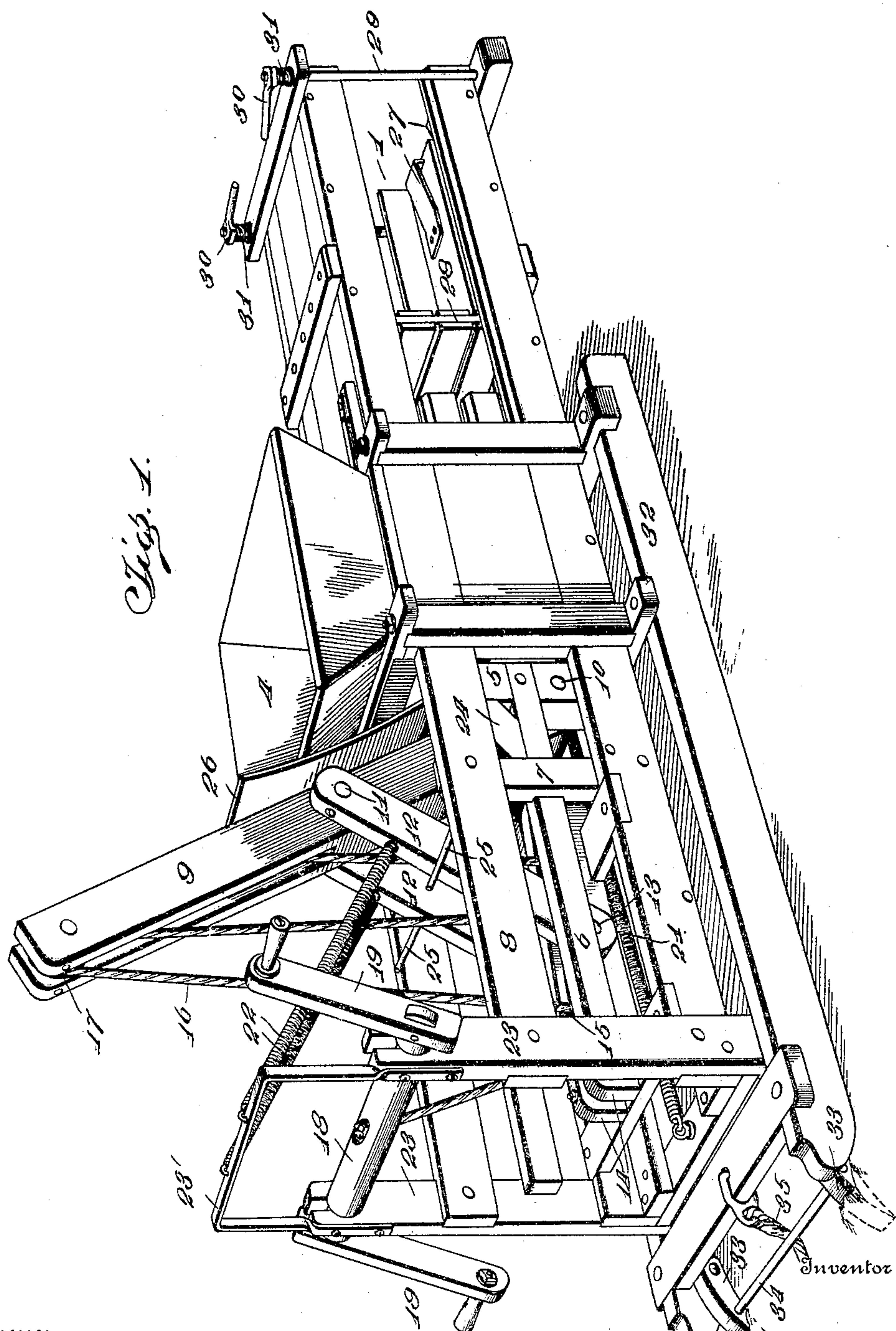
No. 824,599.

PATENTED JUNE 26, 1906.

J. J. STOPPLE.
BALING PRESS.

APPLICATION FILED NOV. 4, 1903.

4 SHEETS—SHEET 1.



Witnesses

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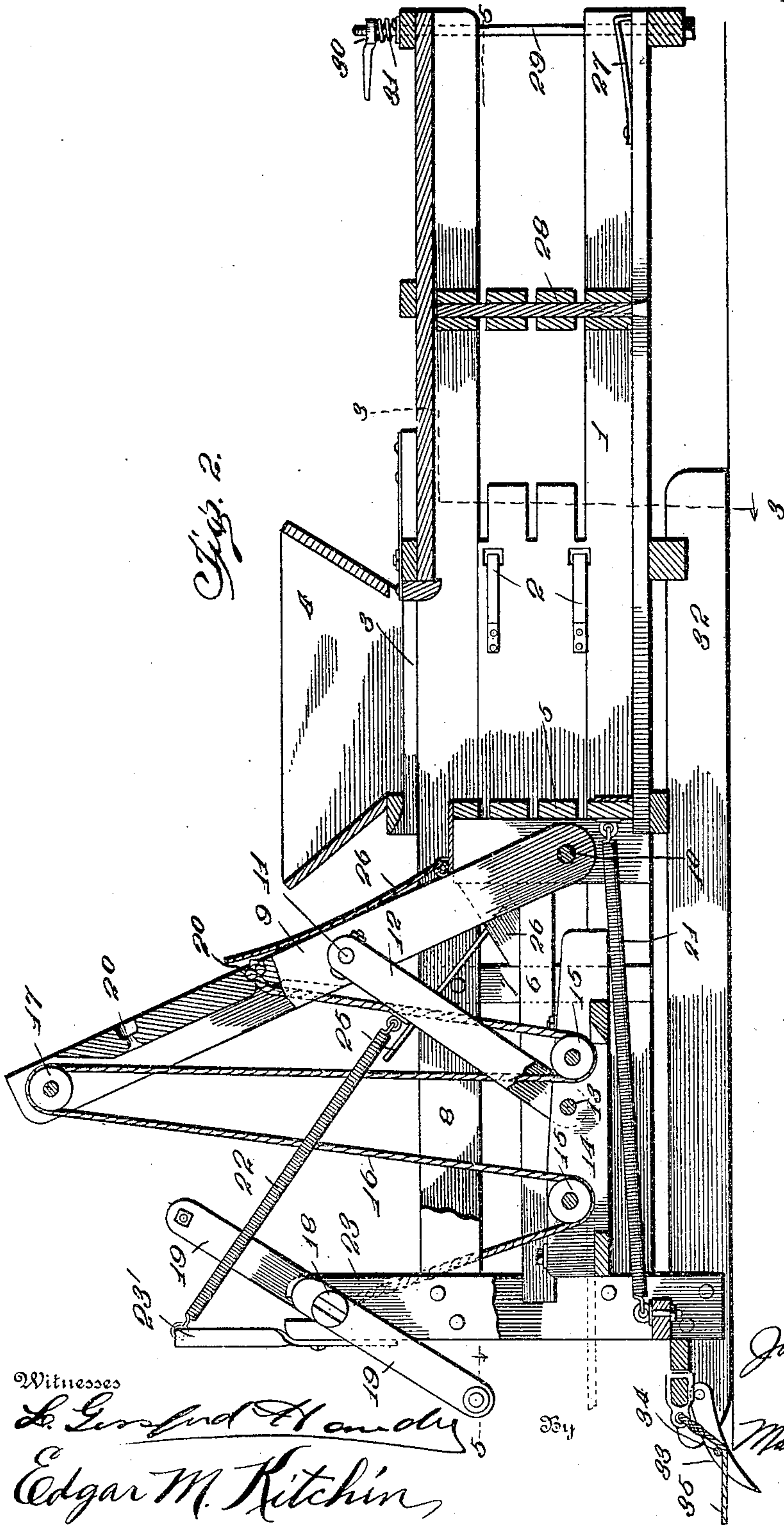
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4 SHEETS—SHEET 2.



Witnesses

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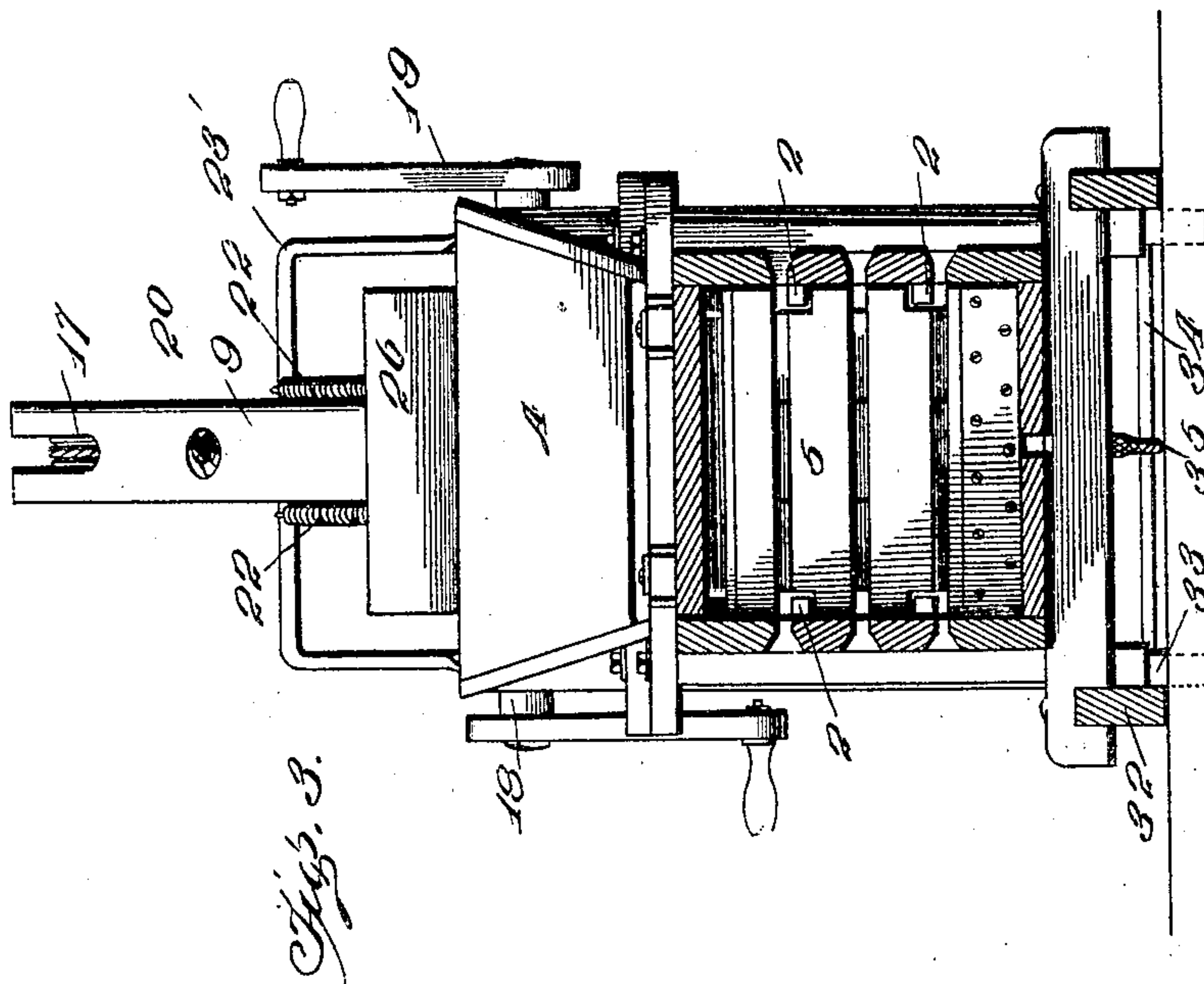
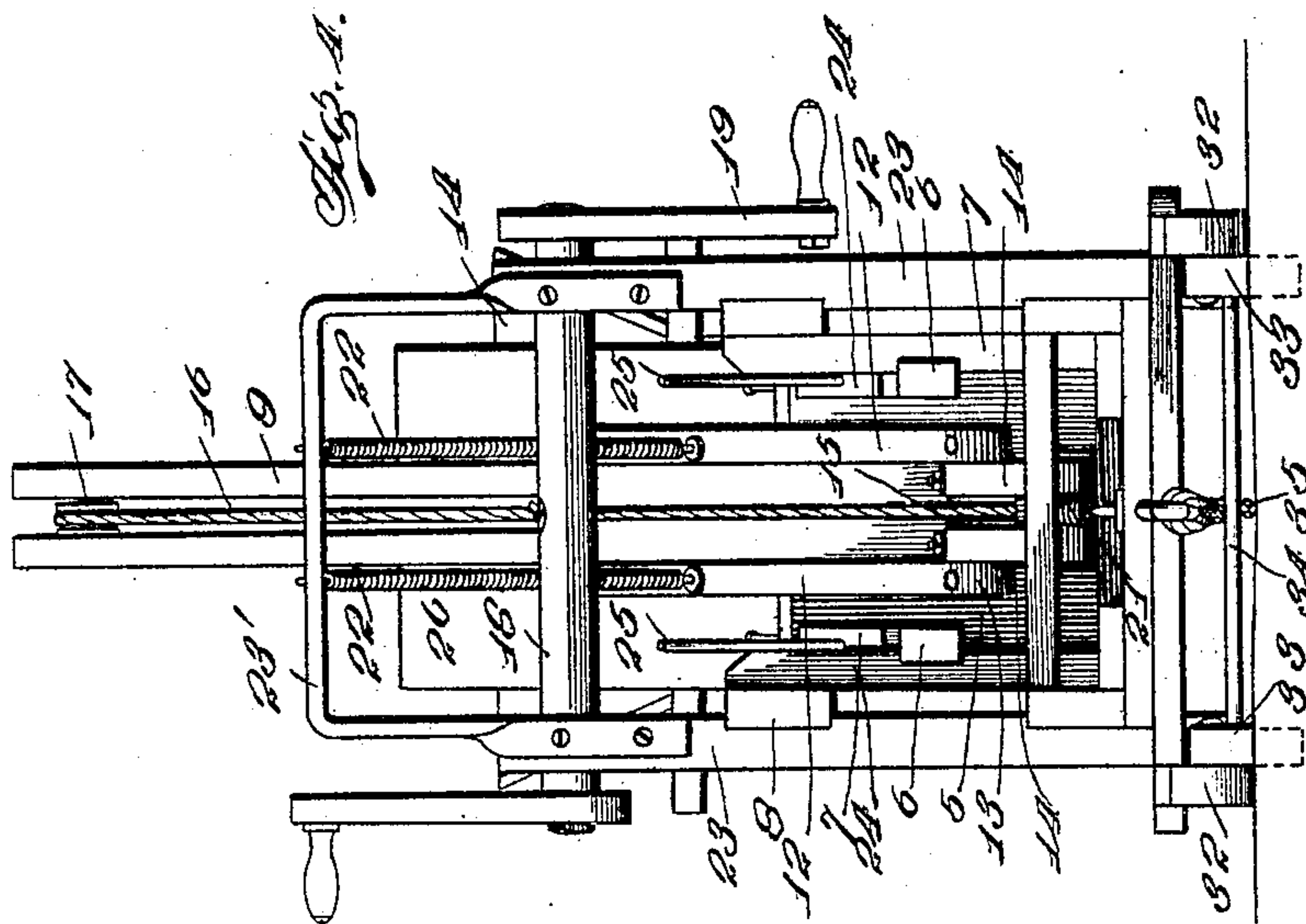
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

Fig. 5.

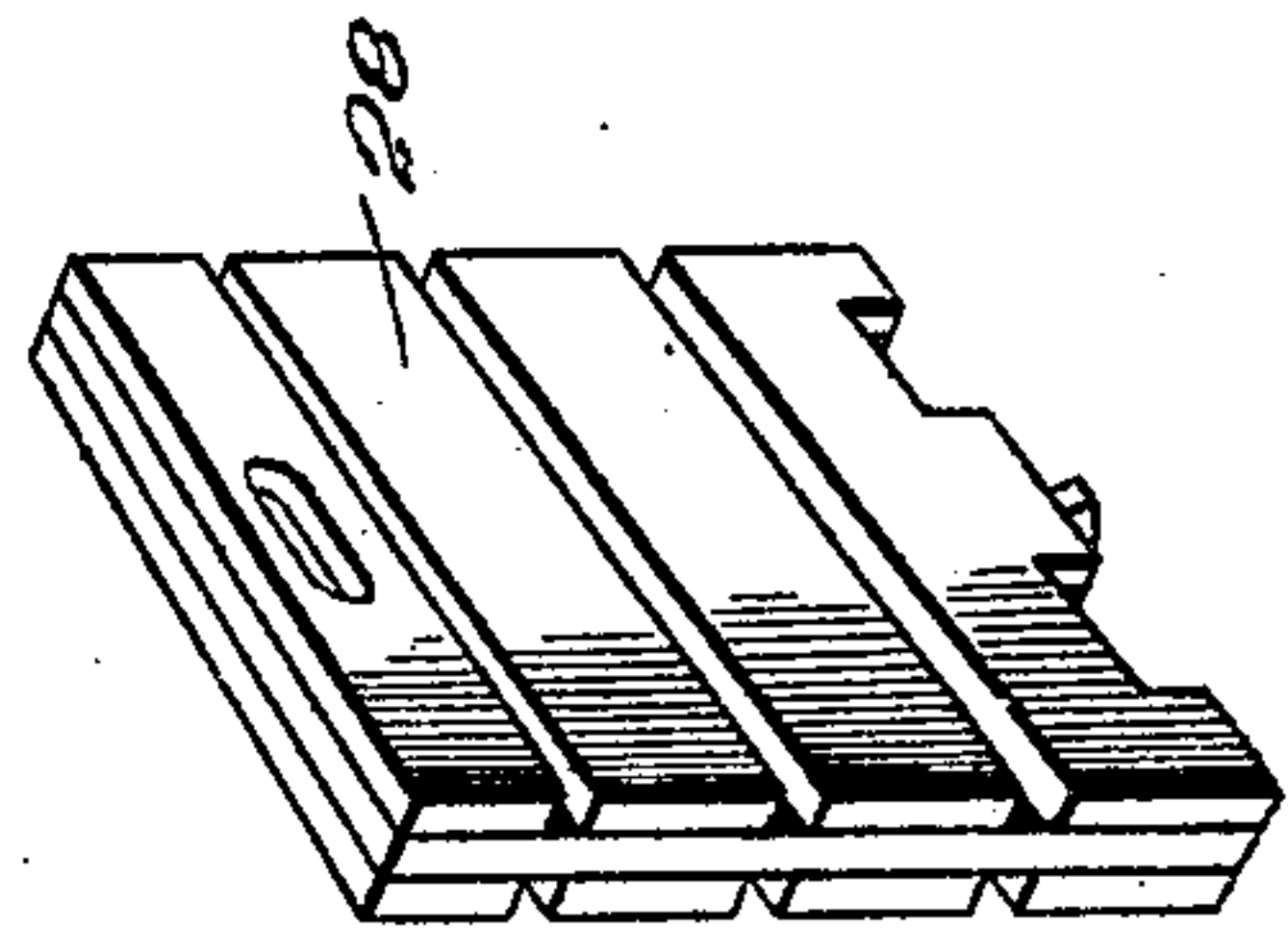
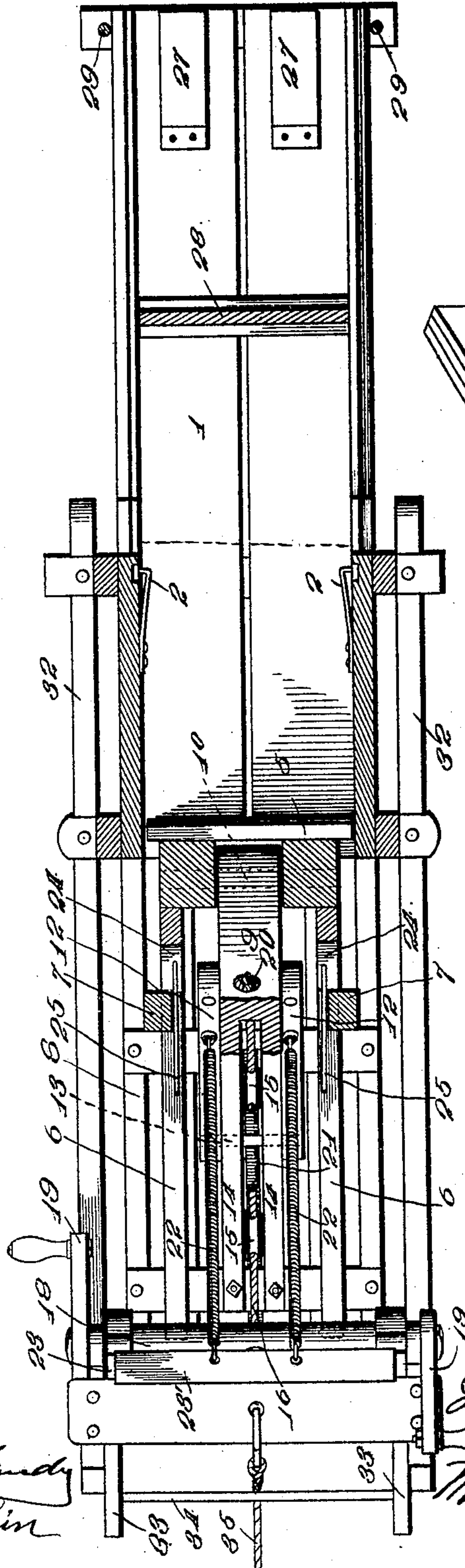


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN J. STOPPLE, OF DALLAS, TEXAS.

BALING-PRESS.

No. 824,599.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed November 4, 1903. Serial No. 179,832.

To all whom it may concern:

Be it known that I, JOHN J. STOPPLE, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Baling - Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in baling-presses; and the object in view is the provision of means for facilitating either manual or power compression. In carrying out this object I contemplate assembling, in combination with a compression-chamber, elements for compressing material within said chamber, hand-operated means for actuating said compression means, and also power-operated means for actuating the same.

The invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of a baling-press embodying the features of the present invention. Fig. 2 represents a longitudinal vertical central section taken through the same. Fig. 3 represents a transverse vertical section through the same, taken on the plane of line 3 3 of Fig. 2. Fig. 4 represents an end elevation of the same. Fig. 5 represents a longitudinal horizontal section taken on the plane of line 5 5 of Fig. 2. Fig. 6 represents a detail perspective view of one of the partition blocks or heads.

In the present art it has been found desirable to adapt a press for operation either by any suitable power means or manually, and I attain this desirable result by the elements disclosed in the accompanying drawings, in which—

1 indicates a compression-chamber provided on the side walls with suitable spring-detents 2 2 and being provided with any suitable feed-aperture 3, surrounded by a feed-hopper 4. A plunger 5 of any preferred construction is arranged to reciprocate within the chamber 1 and is guided in its movement by rearwardly-extending guide-bars 6 6, limited in their stroke against lateral play by engagement with guiding - notches formed in vertical standards 7 7, forming part of a framework 8, projecting rearwardly from the

compression-chamber 1. A plunger-operating lever 9 pivotally engages the plunger 5, as at 10, below the center of said plunger, said lever being fulcrumed, as at 11, intermediate its length, pivotally mounted links 12 12 constituting the fulcra. The links 12 are pivoted at their lower end, as at 13, to plates 14 14, arranged parallel to each other centrally of the framework 8 and secured to transverse beams thereof. Rotatably mounted between the plates 14 are drums or pulleys 15 15, about which is passed a suitable cable 16, said cable having its forward end attached to the lever 9 and being laced about one of the pulleys 15 and about a pulley 17, carried by the upper end of lever 9, about the other pulley 15 and attached at its rear end to a windlass 18, said windlass being designed to be manually actuated by cranks 19 19. The forward end of the cable 16 may be caused to engage the lever 9 in any preferred manner with the understanding that said end of the cable may be adjusted longitudinally of the lever, whereby the leverage may be increased or decreased relative to the nearness of said end to the fulcrum-point 11. I have shown for the sake of illustration one means of adjustable attachment which consists simply of apertures 20 20 for the reception of the end of cable 16, formed in the lever 9. Said cable is designed to be passed through either of the apertures 20 and secured in place by tying or otherwise, as desired. As seen in dotted lines in Fig. 2, the cable 16 need not be attached to the windlass 18, but may be extended in the rear of the press and connected to any suitable power device or provided with hitching mechanism for facilitating the use of a draft-animal.

A spring 21 is connected to the head 5 at one end at the middle of the lower edge of said head, and said spring is connected at the opposite end to the rear end of frame 8, whereby in operation said head will be automatically retracted after a forward stroke. I have found that in operation when the lever 9 is lowered to a horizontal plane—that is, to the plane of pivot 10—the spring 21 is required to pull directly against the pivots 10 and 11, which being on the same horizontal plane are at a dead-center relative to each other, whereby the pressure of the spring produces no result until the lever 9 is started in its upward movement. I have therefore provided springs 22 22, connected to the links 12 and extended to cross-bar 23', carried by

vertical standards 23 23, projecting from the frame 8 for initially lifting the lever 9 and assisting in retracting the plunger 5. It will be seen that the arrangement of the bar 23' is such as to make possible the positioning of springs 22 for their full length in the vertical planes of the links 12 longitudinally of the framework 8.

Suitable braces or stays 24 24 extend from the upper edge of the rear portion of plunger 5 to the guide-bars 6, and each stay 24 carries a spring-rod 25, projecting upwardly and rearwardly therefrom and adapted in operation to receive and support the free rear end of a gate 26, pivoted to the plunger 5 and adapted to close the aperture 3 during the movement of said plunger past said aperture.

At the rear end of the compression-chamber 1 are arranged suitable spring-detents 27 27, designed in operation to engage a finished bale and retard the discharge thereof for producing a resistance for the next succeeding bale. The upper and lower walls of the chamber 1 are spaced apart for the greater portion of their length and have their front ends free to be compressed slightly toward each other, which compression is designed to be accomplished through stay-rods 29 29, extending through said walls and projecting above the same, and being provided with suitable hand-operated nuts 30, engaging springs 31. These nuts are adjusted for increasing or decreasing the transverse area of the compression-chamber for causing the same to fit snugly suitable partition-blocks or heads 28, said heads being provided with suitable notches for permitting the same to be moved over the detents 27.

The present improved press is susceptible of and designed for continuous operation—that is to say, the plunger 5 during the operation of the press may be continuously reciprocated, the material to be baled being placed within the hopper 4 and falling in front of the plunger and being directed thereby against a head 28, inserted within the compression-chamber 1. The plunger 5 is reciprocated by the vertical swinging of the lever 9, which lever is caused to descend by movement of the cable 16 either manually or by power-operated means, the links 12 causing the downward movement of the lever 9 to impart a forward movement to the plunger. The forward movement of the plunger presses each successive charge beyond the detents 2, which detents serve to prevent back pressure, one of the blocks or heads 28 being positioned prior to the starting of the operation just in front of the detents 2 for forming an abutting wall for the charges being compressed. The block 28 recedes under the pressure of the compressed charge, and succeeding charges move said block along the compression-chamber 3 until a predetermined number of charges have

been compressed, whereupon a second block 28 is inserted in front of the material within the compression-chamber, which constitutes a finished bale. As the operation of the plunger continues and further charges are introduced and compressed against the second block 28 the finished bale is forced longitudinally of the compression-chamber into position for being tied out in the usual manner, said tying-out operation being accomplished during the movement of the bale and without necessitating the stopping of the operation of the press. The finished bale coming in contact with the detents 27 affords considerable resistance for the next succeeding bale being compressed and permits the desired compression of the second bale. As the first bale is being discharged from the press the block 28 in front of the same is of course discharged and may be placed in front of the second bale for forming an abutting wall for a third bale, and the operation continues as above set forth.

In order to facilitate the movement of the present improved press from place to place about the field, I preferably mount the same upon suitable sled-runners 32, to the end of each of which is pivoted a suitable brake-pin 33, curved downwardly and provided with a penetrating-point. A rod 34 connects the pins 33, and while the press is in operation the said pins are pressed into the ground in order to prevent movement of the press while the lever 9 is being depressed by power mechanism or by a draft-animal. When it is desired to move the press from one place to another, it is only necessary to hitch a draft-animal to a suitable cable 35, connected to one of the cross-bars of framework 8 and passed beneath the bar 34. It will be seen that as soon as the cable 35 is drawn taut the penetrating-points of the pin 33 will be lifted out of the ground by the pressure of said cable 35 against the rod 34, and said pins will be retained in a raised condition as long as the device is being drawn.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a baling-press, the combination with a framework, a compression-chamber formed in said framework, a plunger operating in said compression-chamber, of links pivoted at their lower ends upon said framework, a lever pivoted at its lower end to said plunger and fulcrumed upon the upper ends of said links, a yoke carried by said framework above said links, springs connecting said yoke and links, each spring secured at one end to said yoke and at its opposite end to a link contiguous to the upper end thereof, the springs being spaced apart for permitting the lever to pass between the same when movement is imparted to said lever for actuating the plunger.

2. In a baling-press, the combination with a framework, a compression-chamber formed in said framework, a plunger operating in said chamber, of a pair of parallel links pivoted at their lower ends upon said framework, a lever pivotally connected at its lower end to said plunger and positioned between and pivotally connected to said links at their upper ends, an inverted, substantially U-shaped yoke carried by said frame, a pair of parallel springs connecting said yoke and links, each of said springs secured at its upper or outer end to said yoke and at its opposite end to a link and contiguous to said lever, the lever adapted to pass between said springs when movement is imparted thereto for actuating said plunger.

3. In a baling-press, the combination with a framework provided with parallel sled-runners, a compression-chamber formed in said framework, a plunger operating in said chamber, means for reciprocating said plunger within said chamber, of a downwardly-curved brake-pin pivotally mounted upon each of said sled-runners contiguous to the front end of the same, a horizontal rod connecting said brake-pins, a cable secured at one end to said framework and normally positioned under said rod intermediate said brake-pins, said cable adapted to lift said

brake-pins out of or from engagement with the ground when said cable is drawn taut.

4. In a baling-press, the combination with a framework, a compression-chamber formed in said framework, a plunger operating in said compression-chamber, of links pivoted at their lower ends upon said framework, a lever pivoted at its lower end to said plunger and fulcrumed upon the upper ends of said links, a yoke carried by said framework above said links, springs connecting said yoke and links, each spring secured at one end to said yoke and at its opposite end to a link contiguous to the upper end thereof, power-conveying means engaging said lever and adjustable longitudinally of the lever for altering the degree of leverage, and means for supplying power to said power-conveying means from any of a plurality of sources, the springs being spaced apart for permitting the lever to pass between the same when movement is imparted to said lever for actuating the plunger.

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

JOHN J. STOPPLE.

Witnesses:

W. W. STOPPLE,
M. L. ROBERTSON.