

No. 795,764.

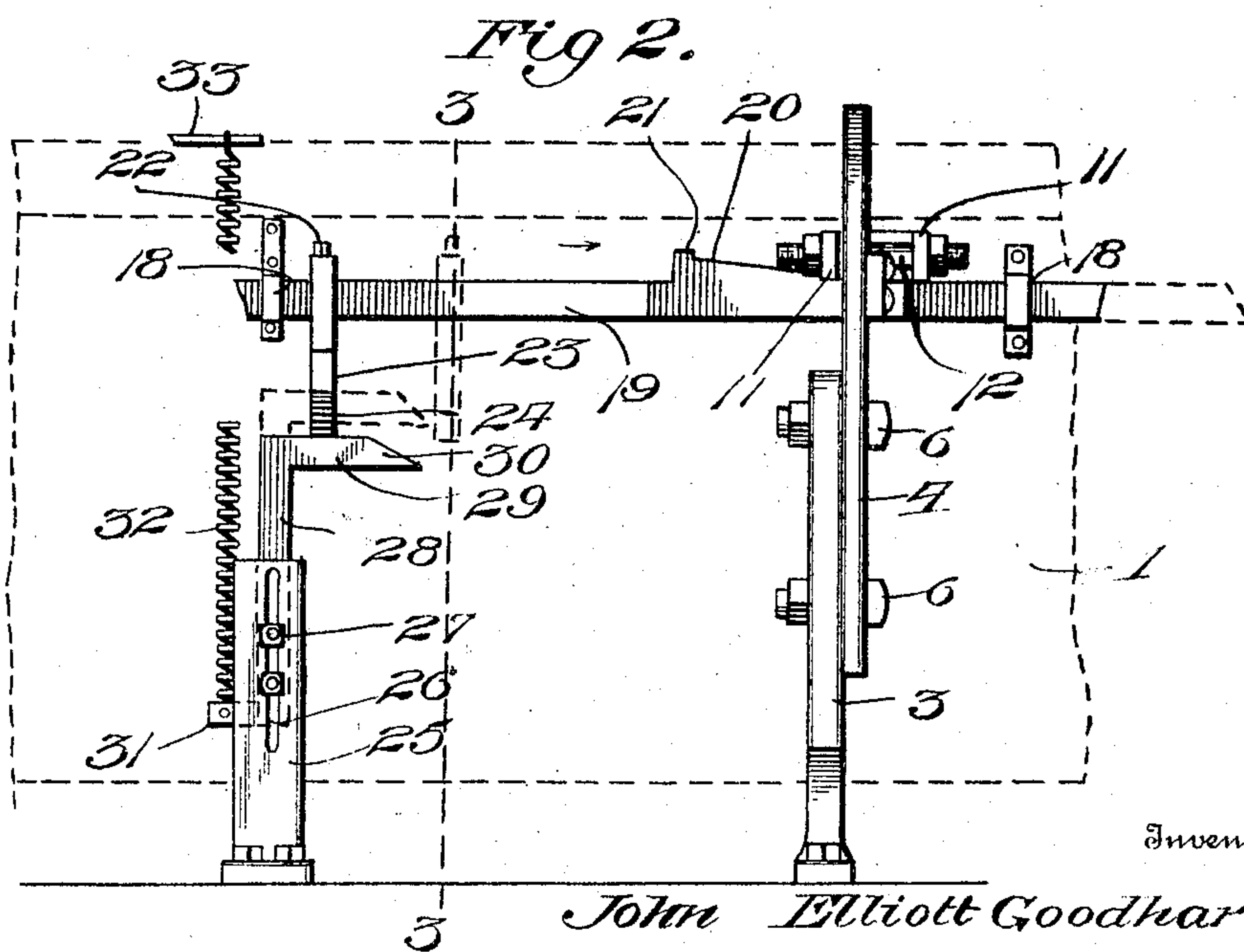
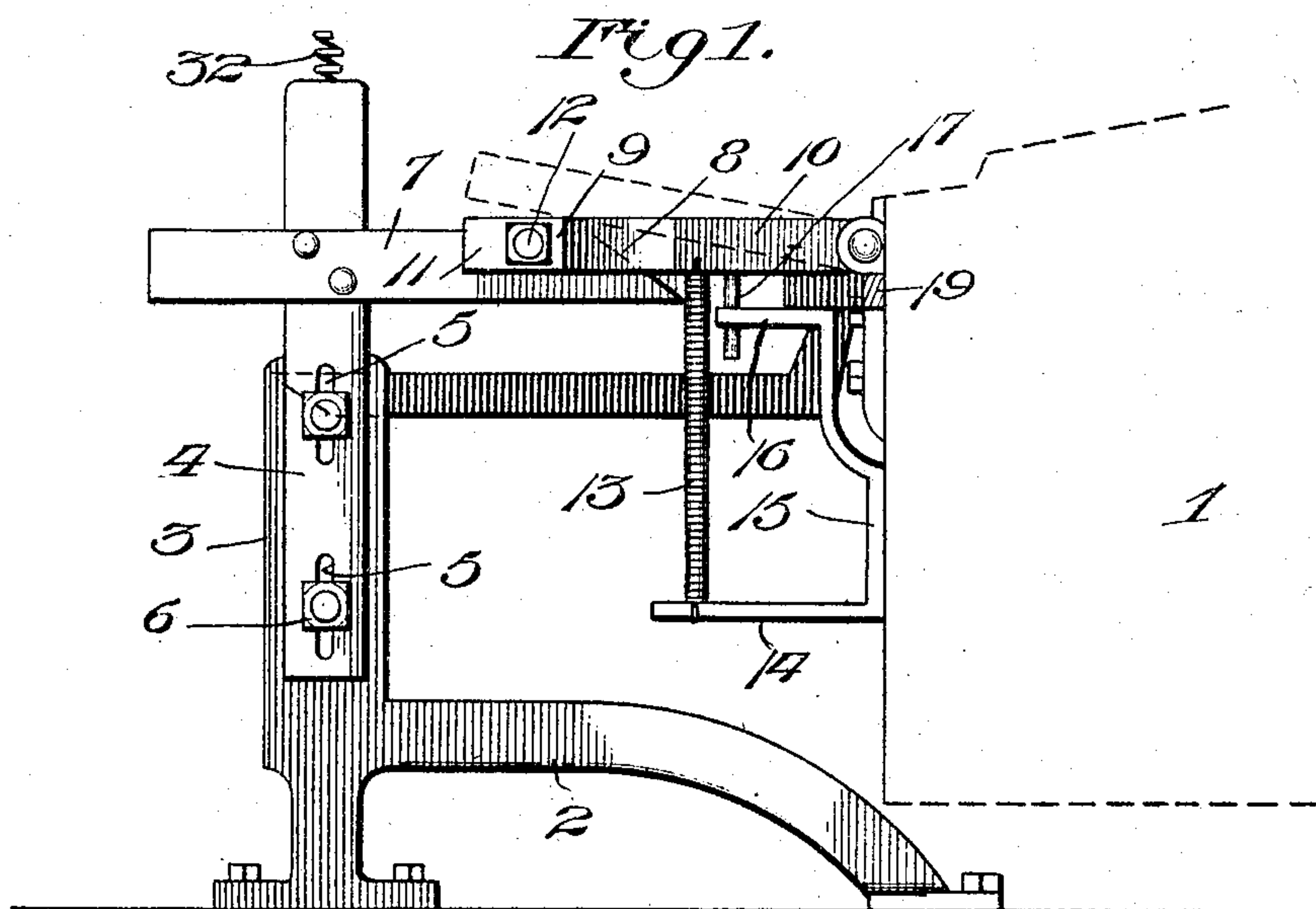
PATENTED JULY 25, 1905.

J. E. GOODHARDT.

STOP MOTION FOR SPINNING MACHINES.

APPLICATION FILED OCT. 1, 1904.

2 SHEETS--SHEET 1.



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Fig 3.

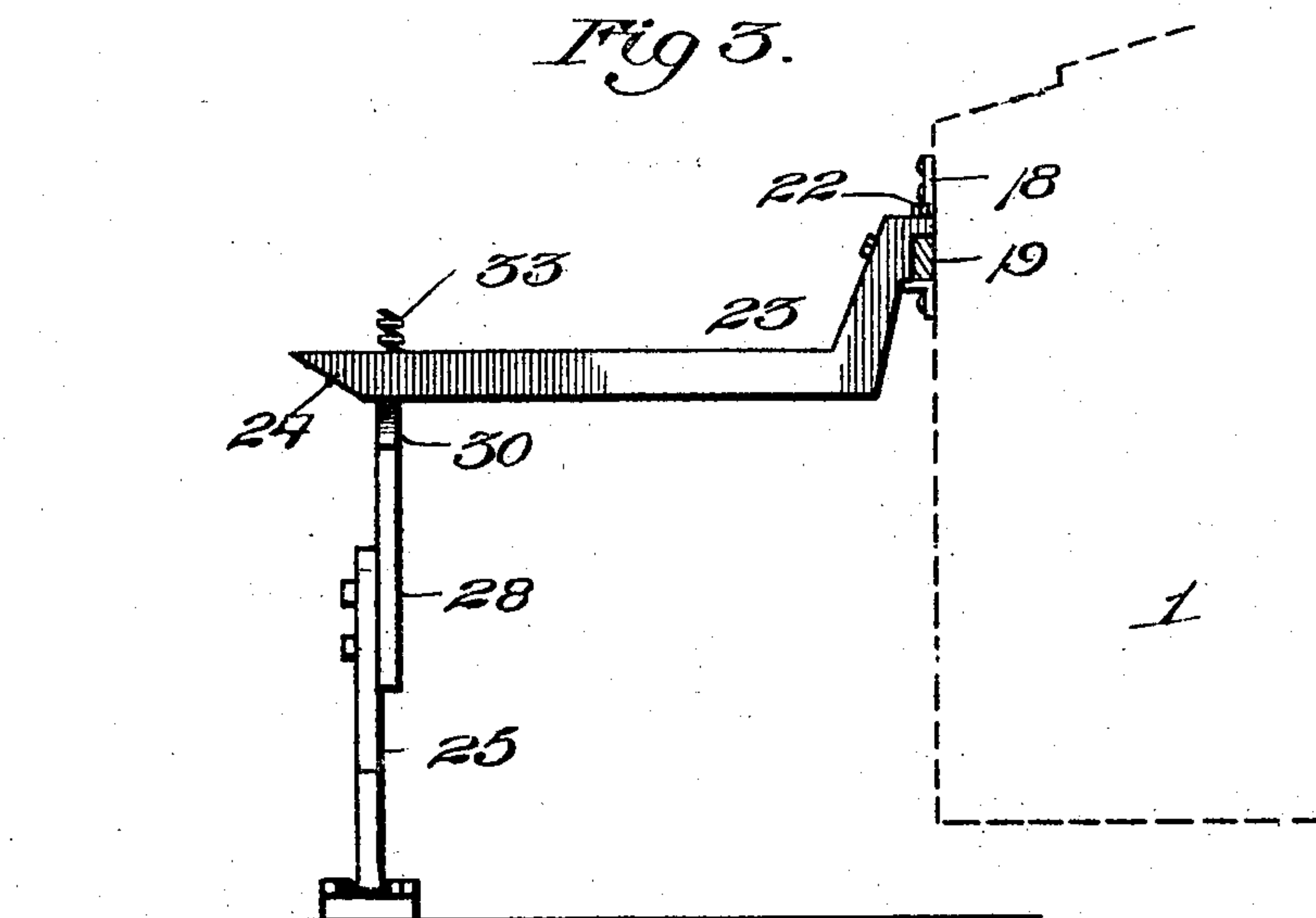


Fig 4.

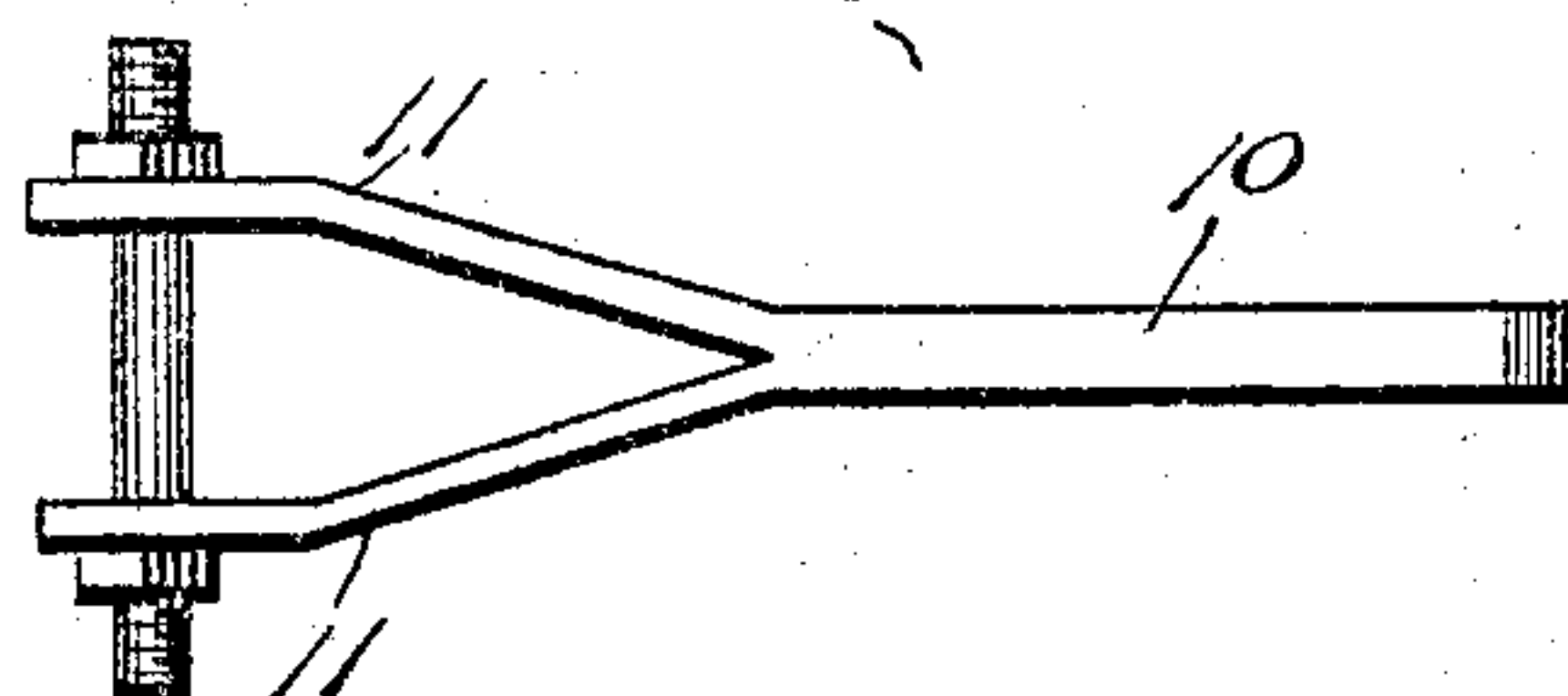


Fig 5.



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# UNITED STATES PATENT OFFICE.

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## STOP-MOTION FOR SPINNING-MACHINES.

No. 795,764.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed October 1, 1904. Serial No. 226,803.

*To all whom it may concern:*

Be it known that I, JOHN ELLIOTT GOODHARDT, a citizen of the United States, residing at Rensselaer, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Spinning-Machines, of which the following is a specification.

This invention relates to spinning-machines, and especially to an improved device controlled by the stop-rod for automatically locking and preventing rebound of the spinning-mule carriage when the stop-rod is adjusted for stopping the machine.

A further object of the invention is to provide an improved safety mechanism which when the carriage is locked as above mentioned will lock the belt-shifting mechanism against movement, to thereby obviate liability of the belt accidentally shifting to position for starting the carriage while the latter is in locked position.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of my improved mechanism and showing the carriage in locked position. Fig. 2 is a rear elevation of the same. Fig. 3 is a sectional elevation taken on the line 3 3 of Fig. 2 and viewed in the direction of the arrow. Fig. 4 is a detail plan view of the carriage-locking lever. Fig. 5 is a detail plan view of a portion of the lever-releasing member or slide.

Referring to the drawings, 1 designates the spinning-mule carriage, which is conventionally shown herein by dotted lines and may be of the usual or any appropriate construction.

Bolted or otherwise attached to the floor and at a point adjacent the rear end of the carriage 1 when at the terminal of its rearward movement is a support 2, having an upright portion or standard 3, to which is attached a vertically-adjustable upright member or slide 4, provided with longitudinal slots or bolts 6, by means of which said slide is attached to the standard 3. The slide 4 carries a horizontal forwardly-projecting arm or keeper 7, having its frontend downwardly and forwardly inclined or beveled, as at 8, and provided adjacent to said end with a seat

or recess 9, while upon the carriage 1 is pivoted to swing in a vertical plane a bifurcated latching member or lever 10, between the spaced arms 11 of which there is extended a transverse bolt 12, constituting an engaging portion designed to seat within the recess 9 when the carriage is in locked position, as more fully hereinafter explained, the latching member being automatically moved to locking position by means of a normally contracted spring 13, attached at one end to the lever and at the other end to the arm 14 of a bracket 15, bolted to the carriage and having a second arm 16, through which is threaded an adjustable member or bolt 17, designed to bear beneath and limit the downward movement of the lever.

Sustained by suitable clips or bearings 18 upon the carriage 1 is a longitudinally-slidable tripping member or bar 19, connected with and operable by the stop-rod (not shown) and provided at a point adjacent the lever 10 with an upwardly-inclined or cam portion 20, adapted to move beneath the lever 10 for maintaining the latter in elevated or inactive position while the carriage is in operation, said cam 20 being provided at its highest point with a shoulder or stop 21, which contacts with the lever to limit movement of the bar 19.

In practice when the stop-rod, which is of the usual construction and operable in the ordinary manner for stopping the carriage 1, is in normal position the bar 18, connected with said rod, will be moved in the direction of the arrow in Fig. 2, thus causing the cam 20 to seat beneath the lever 10 and maintain the latter in elevated or inactive position, as shown by dotted lines in Fig. 1, whereby the carriage will be free to travel back and forth without hindrance by the latch. When, however, it is desired to stop the carriage for any purpose, and the stop-rod is set accordingly, the tripping member or bar 19 will be moved to the position illustrated in Fig. 2, thus permitting the spring 13 to move the lever 10 to and maintain it in the position shown by full lines in Fig. 1, whereby when the carriage reaches the terminal of its rearward movement the engaging portion or bolt 11 will contact with the beveled end 8 of the keeper, and thus be caused to ride upward upon the latter and automatically engage the seat 9 for locking the carriage against further move-



ment until the stop-rod is again actuated to start the machine and actuates the tripping member 19 for disengaging the lever.

Mounted upon the bar 19 and held adjustably thereon by means of a set-bolt 22 is a rearwardly - projecting locking member or arm 23, having its rear end upwardly and rearwardly beveled or inclined, as at 24, while to the floor is bolted or otherwise attached a vertical guide or standard 25, having a longitudinal slot or way 26 for the reception of transverse bolts 27, by means of which a vertically-movable bar or member 28 is slidably engaged with the standard 25, this member 28 being provided at its upper end with a horizontal portion or arm 29, having its outer end downwardly and outwardly inclined, as at 30, and at its lower end with a projecting portion or arm 31, to which is attached one end of a tension-spring 32, the other end of which engages a member 33, connected with and operable for actuating the belt-shifting mechanism.

In practice when the operating-belt (not shown) of the machine is in engagement with the fixed pulley for driving the mechanism the bar 28 will stand in position as indicated by dotted lines in Fig. 2 and the locking member 23 will occupy the dotted-line position indicated in said figure and out of alignment with the arm 29. When, however, the stop-rod is actuated, as above described, for stopping the machine, the arm 23 will be moved to the full-line position indicated in Fig. 2, and upon the carriage reaching the terminal of its rearward movement the arm 23 will simultaneously with the engagement of lever 10 for locking the carriage ride upon the arm 29 and depress the bar 28, thereby through the medium of spring 32 and member 33 locking the belt-shifting mechanism with the belt in inoperative position, it being apparent that as the bar 19 is again moved for disengaging the lever 10 the arm 23 will also be moved to non-engagement with the bar 28.

From the foregoing it is apparent that I produce a simple inexpensive device by which the carriage 1 may be locked at any time desired during the operation of the machine and one wherein this locking operation will be instantaneous, thereby preventing rebounding of the carriage, and, furthermore, a mechanism in which the belt-shifting mechanism will be simultaneously locked to obviate liability of the belt accidentally moving to active driving position while the carriage is locked. In attaining these ends it is to be understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a device of the class described, a longitudinally-reciprocatory carriage, a support,

a keeper carried by one of the parts, a movable latch member carried by the other part for engagement with the keeper, means for moving the latch automatically to engaging position, and means for positively and normally maintaining the latch in non-engaging position.

2. In a device of the class described, a longitudinally-reciprocatory carriage, a support, a keeper carried by one of said parts, a movable latch carried by the other part and adapted for engagement with the keeper, a spring for moving the latch automatically to engaging position, and means for positively and normally maintaining the latch in non-engaging position.

3. In a device of the class described, a longitudinally-reciprocatory carriage, a support, a keeper carried by and adjustably connected with the support, a latch pivoted to the carriage and adapted for engagement with the keeper, means for moving the latch automatically to engaging position, and means for positively and normally maintaining the latch in non-engaging position.

4. In a device of the class described, a longitudinally - movable carriage, a support, a keeper carried by the support, a pivoted latch carried by the carriage and adapted for engagement with the keeper, means for moving the latch automatically to engaging position, and a longitudinally-movable tripping member having a cam portion to act upon and maintain the latch normally in non-engaging position.

5. In a device of the class described, a longitudinally - movable carriage, a support, a keeper carried by the support, a pivoted latch carried by the carriage and adapted for automatic engagement with the keeper, and a longitudinally-slidable bar having a cam portion designed to act upon and maintain the latch normally in non-engaging position.

6. In a device of the class described, a longitudinally - movable carriage, a support, a keeper carried by the support, a pivoted latch carried by the carriage, a spring for moving the latch to engaging position, an adjustable member for limiting the engaging movement of the latch, and a longitudinally-movable bar having a cam portion to act upon and maintain the latch normally in non-engaging position.

7. In a device of the class described, a longitudinally - movable carriage, a support, a keeper carried by one of the parts, a movable latch carried by the other and adapted for engagement with the keeper to lock the carriage against movement, said latch being normally maintained in non-engaging position, a movable member connected with and operable for controlling a belt-shifter, and means for simultaneously releasing the latch and locking the member to prevent shifting of the belt.

8. In a device of the class described, a lon-

gitudinally - movable carriage, a support, a keeper carried by one of the parts, a movable latch carried by the other and adapted for engagement with the keeper to lock the carriage against movement, a movable member connected with and operable for locking a belt-shifting mechanism, a longitudinally-movable bar carrying means for maintaining the latch normally in non-engaging position, and a device carried by the bar and adapted upon

movement of the latter for releasing the latch to operate the member for locking the belt-shifter.

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

JOHN ELLIOTT GOODHARDT.

Witnesses:

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WILLIAM I. SMITH.