

No. 646,614.

Patented Apr. 3, 1900.

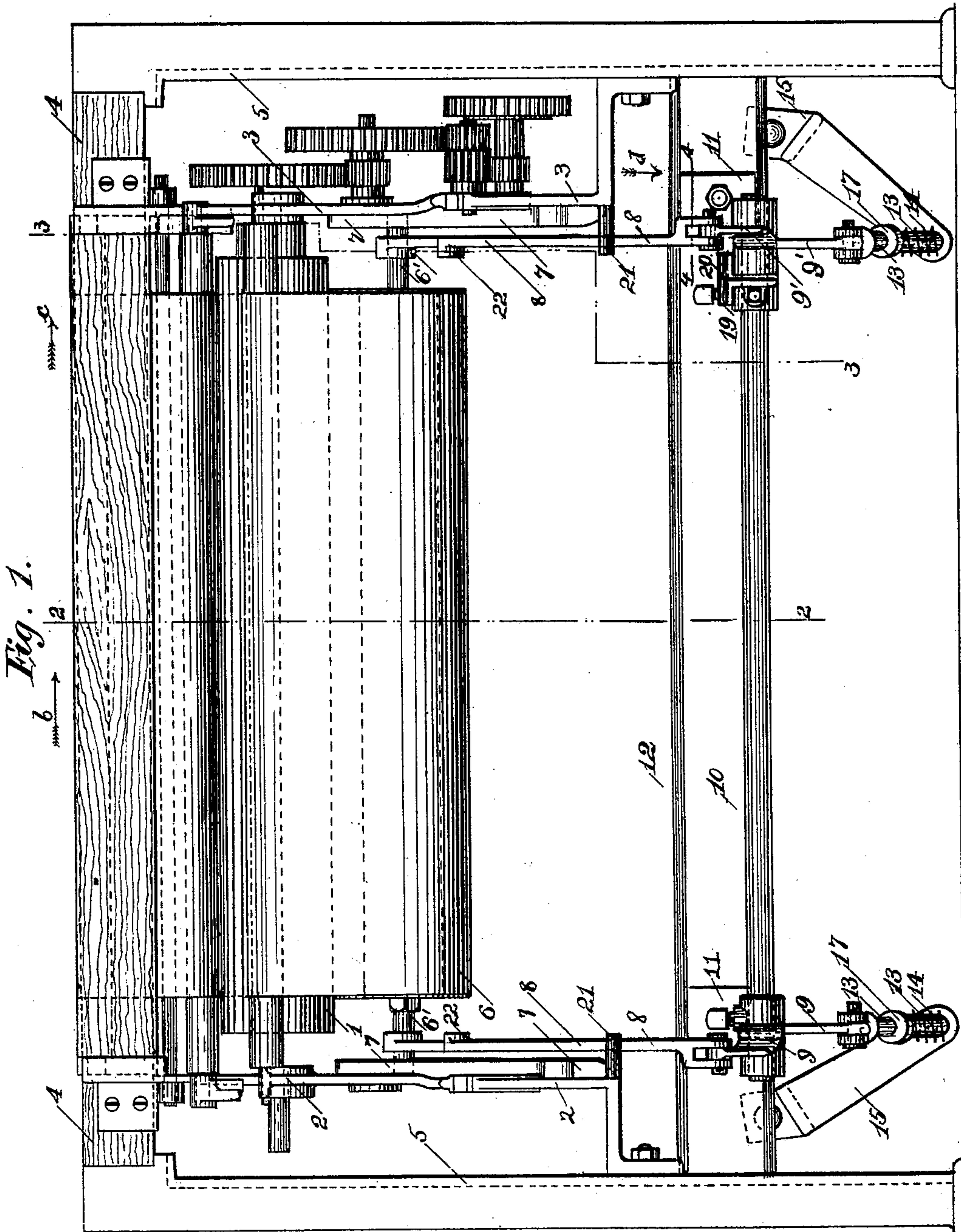
H. WYMAN.

TAKE-UP MECHANISM FOR LOOMS.

(Application filed Jan. 22, 1900.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES.

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INVENTOR

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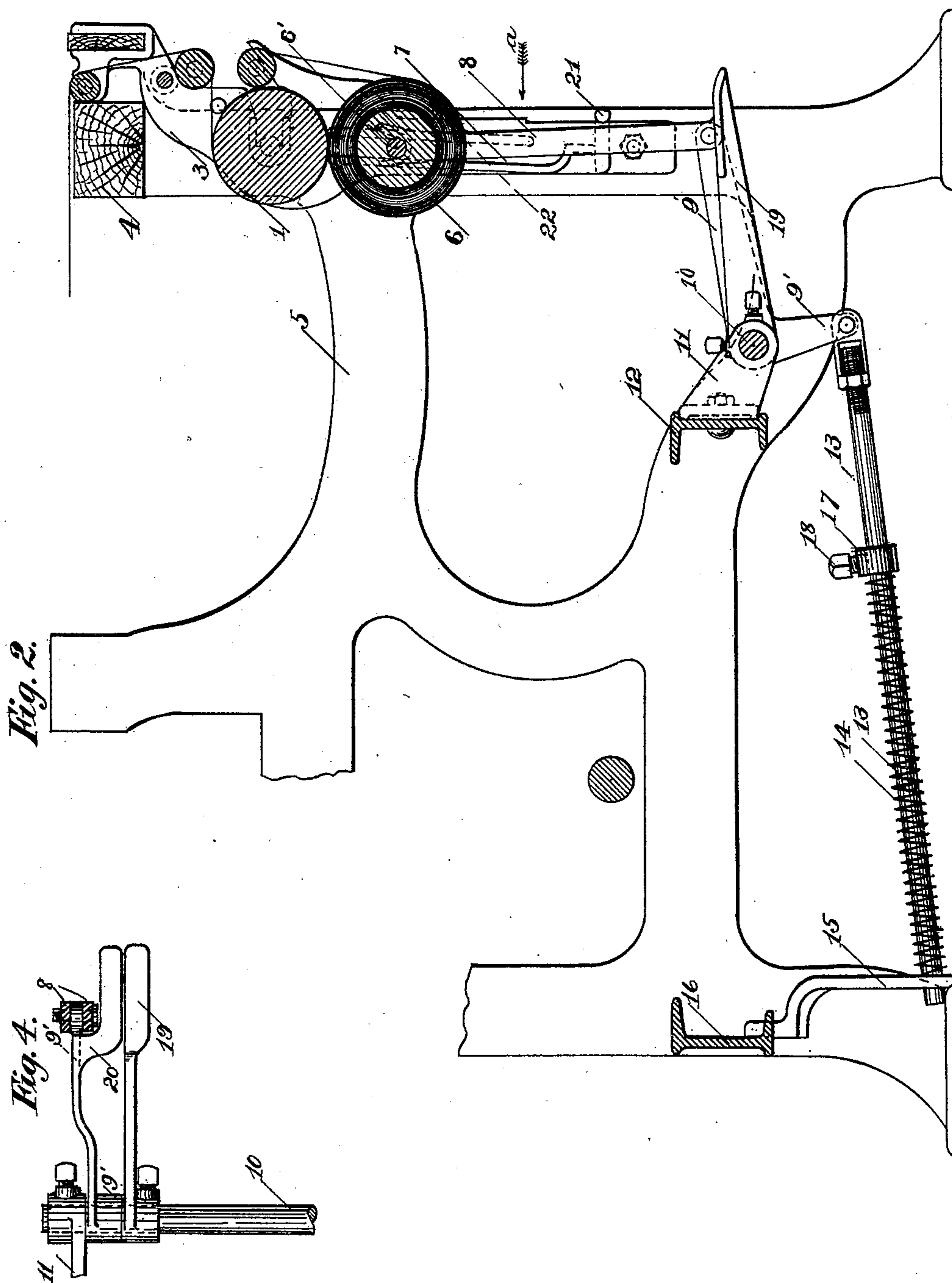
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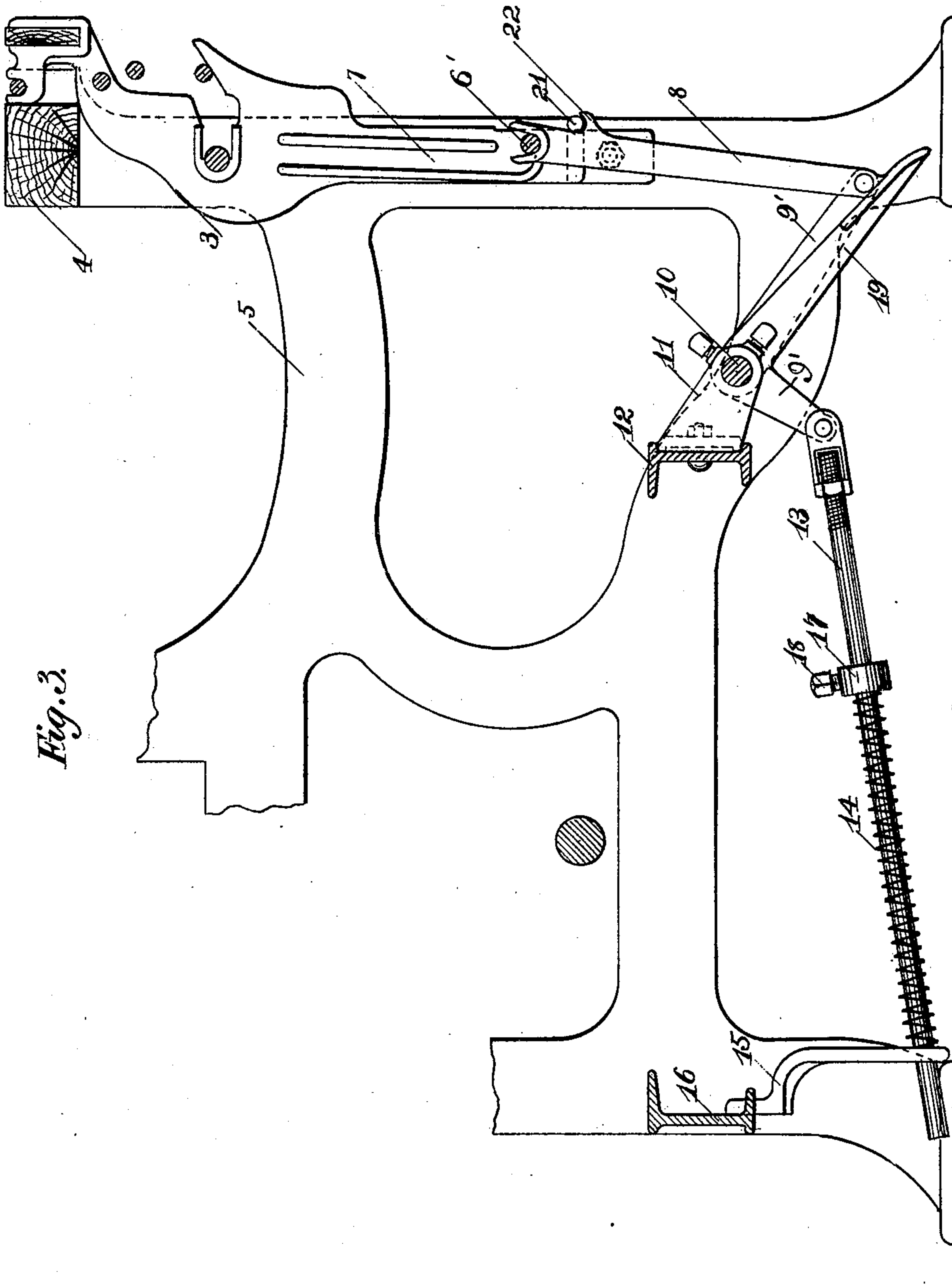


Fig. 3.

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UNITED STATES PATENT OFFICE.

HORACE WYMAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE CROMPTON & KNOWLES LOOM WORKS, OF SAME PLACE.

TAKE-UP MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 646,614, dated April 3, 1900.

Application filed January 22, 1900. Serial No. 2,266. (No model.)

To all whom it may concern:

Be it known that I, HORACE WYMAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Take-Up Mechanism for Looms, of which the following is a specification.

My invention relates to take-up mechanism for looms and to that class of take-up mechanisms in which the winding-up roll for the woven cloth is pressed upward and yieldingly held against the take-up roll by springs or their equivalent.

The object of my invention is to improve upon this class of take-up mechanisms and provide improved mechanism for releasing the winding-up roll from contact with the take-up roll to remove the winding-up roll from the loom or to release one end only of the winding-up roll to adjust the edge of the cloth at that end of the roll.

My invention consists in certain novel features of construction of my take-up mechanism, as will be hereinafter fully described.

Referring to the drawings, Figure 1 is a front view of a take-up mechanism with my improvements applied thereto looking in the direction of arrow *a*, Fig. 2. Fig. 2 is a vertical section taken at a point indicated by line 2 2, Fig. 1, looking in the direction of arrow *b*, same figure. Fig. 3 is a vertical section taken at line 3 3, Fig. 1, looking in the direction of arrow *c* and corresponds to Fig. 2, but shows the opposite position of the winding-up-roll-releasing mechanism. The winding-up roll, the take-up roll, and other rolls are not shown in this figure. Fig. 4 is a sectional plan view taken at line 4 4, Fig. 1, looking in the direction of arrow *d* and showing the foot-treadles of the releasing mechanism at the right-hand end of the take-up mechanism shown in Fig. 1.

In the accompanying drawings, the winding-up roll, take-up roll, and other rolls are operated by a system of gears (shown at the right in Fig. 1) in the ordinary and well-known way, and therefore the operation does not need to be described herein.

The take-up roll 1 is supported at its ends in bearings on stands 2 and 3, attached to the

breast-beam 4 and loom side 5 in the ordinary way. The winding-up roll 6 extends below the take-up roll 1 and has a journal 6' at each end thereof, which extends into the fixed vertical guideways 7 on the stands 2 and 3. The guideways 7 are open at their lower front edge to allow the removal of the journals 6' and the taking out of the winding-up roll 6, as shown in Fig. 3.

The winding-up roll 6 is supported by the vertically-moving arms or supports 8, one at each end of the winding-up roll. The upper end of each support 8 is recessed or grooved to receive the journals 6' on the ends of the winding-up roll 6. The lower end of each support 8 is pivotally connected to one arm of angle-levers 9 and 9'. The angle-lever 9 is in this instance fast on the shaft 10 and the angle-lever 9' loose thereon. The shaft 10 is loosely mounted at each end in stands 11, secured to the cross-girth 12 of the loom. The other arm of each angle-lever 9 and 9' is connected to a rod 13, provided with an adjustable spring 14 and loosely mounted at its inner end in a stand or bracket 15, attached to the back girth 16 of the loom to have a sliding motion therein. The springs 14 bear at one end against the stand 15 and at the other end against an adjusting nut or collar 17, secured on the rod 13 by a set-screw 18, and act to yieldingly hold the winding-up roll 6 in its upper position and pressed against the take-up roll 1 through the angle-levers 9 and 9' and vertically-moving support 8. The shaft 10 has fast upon it at one end—in this instance the right-hand end, as shown in Fig. 1—a foot-treadle 19, projecting toward the front of the loom. Beside the treadle 19 and integral with the angle-lever 9', which is loosely mounted on shaft 10, is a second foot-treadle 20. When the treadle 19 is pressed down by the foot of the attendant, it will rock the shaft 10 and move down the front end of the angle-lever 9 at the left-hand end of the loom and with it the support 8 of the winding-up roll 6 at that end of the loom. When the treadle-lever 20, integral with the angle-lever 9', loose on the shaft 10, is moved down, the angle-lever 9' will also be moved down with it and the support 8 at the right-hand end of the winding-up roll 6 to release said end from the

take-up roll 1. If the two treadles 19 and 20 are moved down together, angle-levers 9 and 9' will be operated and both ends of the winding-up roll 6 will be lowered simultaneously.

5 The stands 2 and 3 are each provided with a projection 21, against which the support 8 will rest when in its lowest position and with the journals 6' of the winding-up roll 6 at the opening in the guideways 7, as shown in Fig. 10 3, preparatory to the removing of the winding-up roll 6 from the loom.

When the supports 8 are in their lowest position, as above described, they are retained there against the pressure of the springs 14 15 by the lugs 22 thereon engaging with the projections 21. When the foot of the attendant depresses the levers 19 and 20 and moves back the winding-up roll 6, so that its journals 6' will enter the vertical portion of the guide- 20 ways 7, the lugs 22 will be disengaged from the projections 21 and the springs 14 through intermediate connections will act to raise the winding-up roll 6 into yielding contact with the take-up roll 1 and hold it there, as shown 25 in Fig. 2.

The advantages of my improvements will be readily appreciated by those skilled in the art. By my construction I am enabled to lower independently either end of the wind- 30 ing-up roll from one side of the loom, or I may lower both ends of the winding-up roll simultaneously from the same side of the loom. It will be understood that the details of the construction of my improvements may 35 be varied somewhat, if desired. In case it is not desired to lower each end of the winding-up roll independently, but to lower both ends simultaneously, only one treadle may be used, and in such case angle-lever 9' will be 40 fast on the shaft 10. By having two springs 14, one for each end of the winding-up roll, I obtain a greater and more uniform pressure against the take-up roll.

Having thus described my invention, what I claim as new, and desire to secure by Letters 45 Patent, is—

1. In the take-up mechanism of a loom, the combination with fixed vertical guideways on the stands of the take-up mechanism, into which the journals on the winding-up roll ex- 50 tend and move, and the winding-up roll, of vertically-moving supports for said journals, and means for yieldingly holding said supports, and for depressing them independently, or together, to lower the winding-up 55 roll, substantially as shown and described.

2. In the take-up mechanism of a loom, the combination with fixed vertical guideways on the stands of the take-up mechanism, into which the journals on the winding-up roll ex- 60 tend and move, and the winding-up roll, of vertically-moving supports for said journals, and means for lowering the supports to release the winding-up roll, consisting of a treadle on a shaft, levers or arms connected 65 with said shaft, and with the supports, substantially as shown and described.

3. In the take-up mechanism of a loom, the combination with fixed vertical guideways on the stands of the take-up mechanism, into 70 which the journals on the winding-up roll extend and move, and the winding-up roll, of vertically-moving supports for said journals, and means for yieldingly holding said supports, consisting of a lever or arm connected 75 to the lower end of each support, and mounted on a shaft, and said shaft, and a second lever or arm, and a rod connected therewith, and a spring on said rod to actuate the same, and a treadle fast on the said shaft to rotate 80 the same against the action of the spring, substantially as shown and described.

HORACE WYMAN.

Witnesses:

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