

No. 881,144.

PATENTED MAR. 10, 1908.

F. OTT.
STOP MOTION.

APPLICATION FILED APR. 10, 1907.

2 SHEETS—SHEET 1.

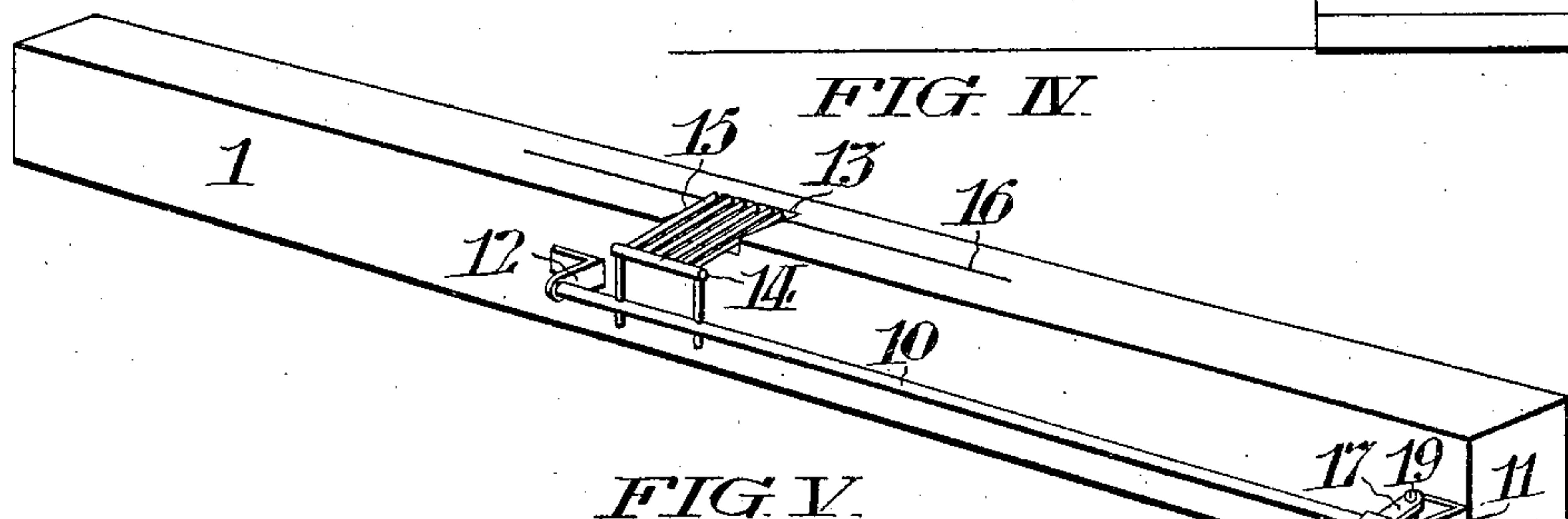
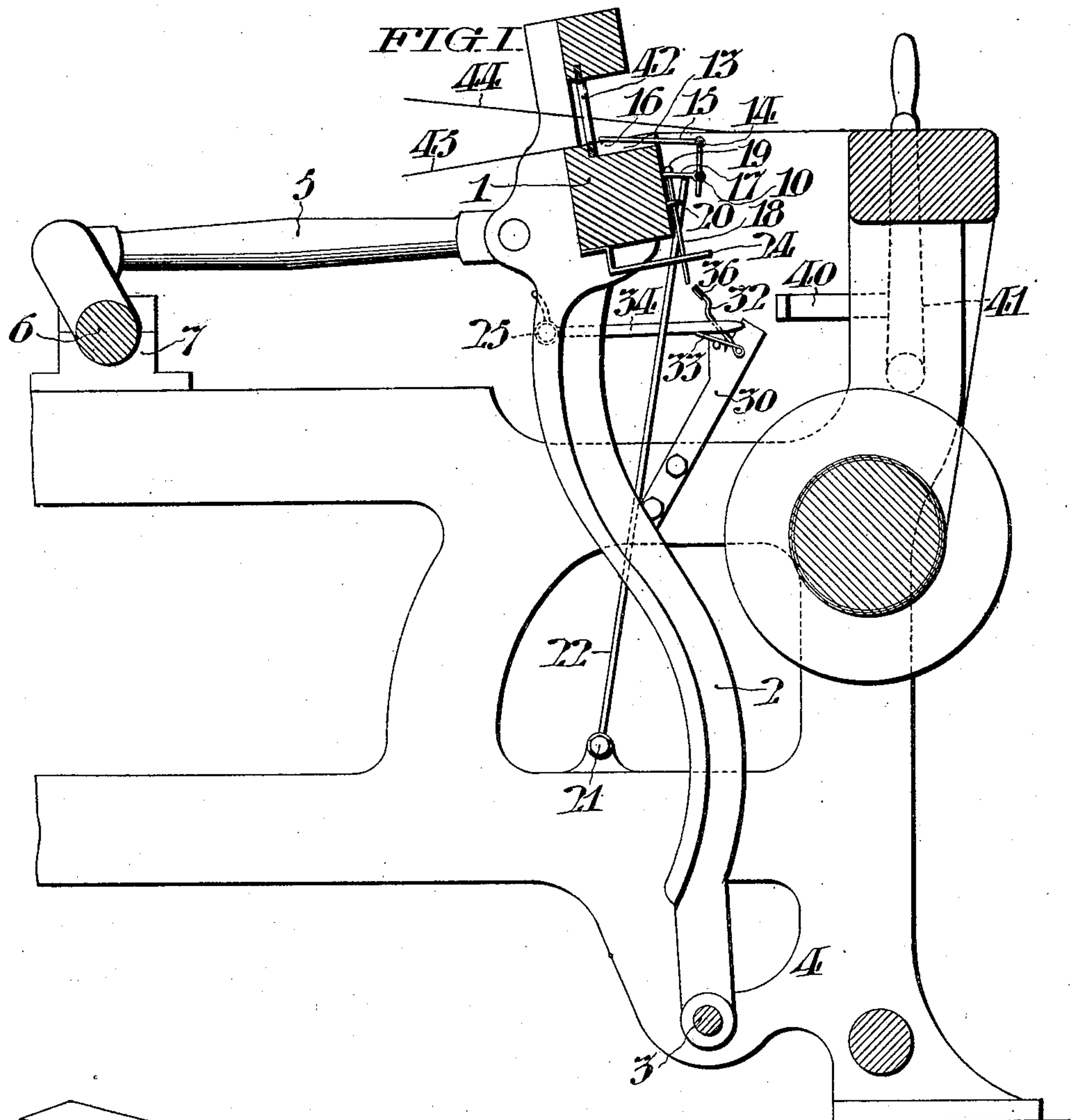
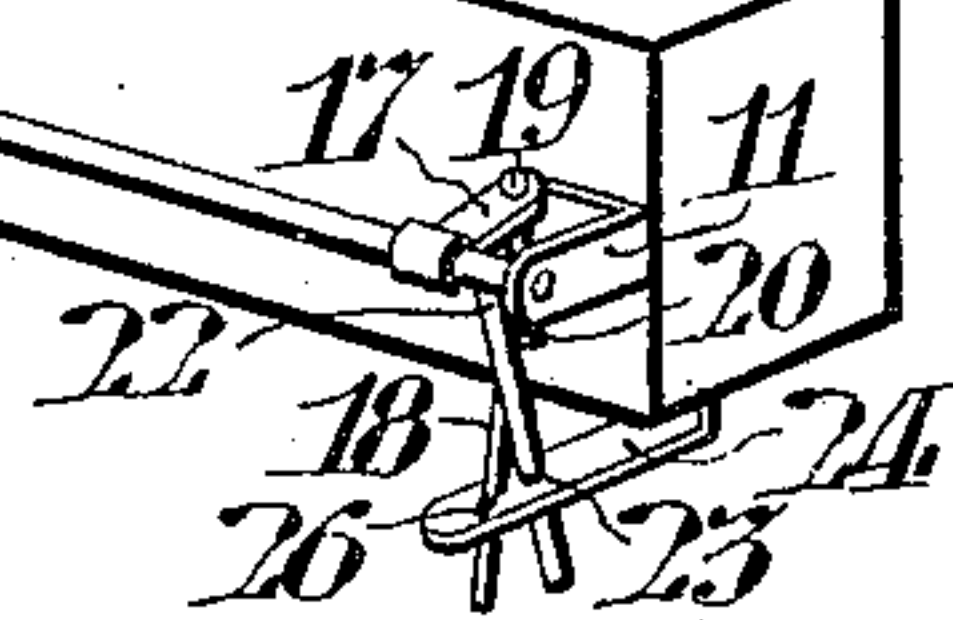
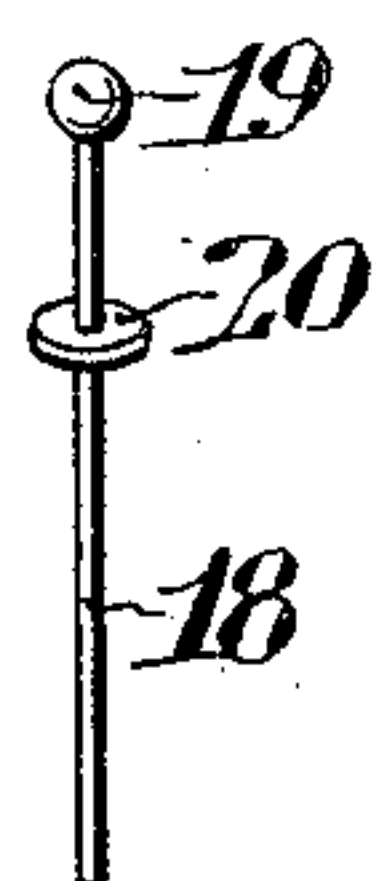


FIG. V



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2 SHEETS—SHEET 2.

FIG. II.

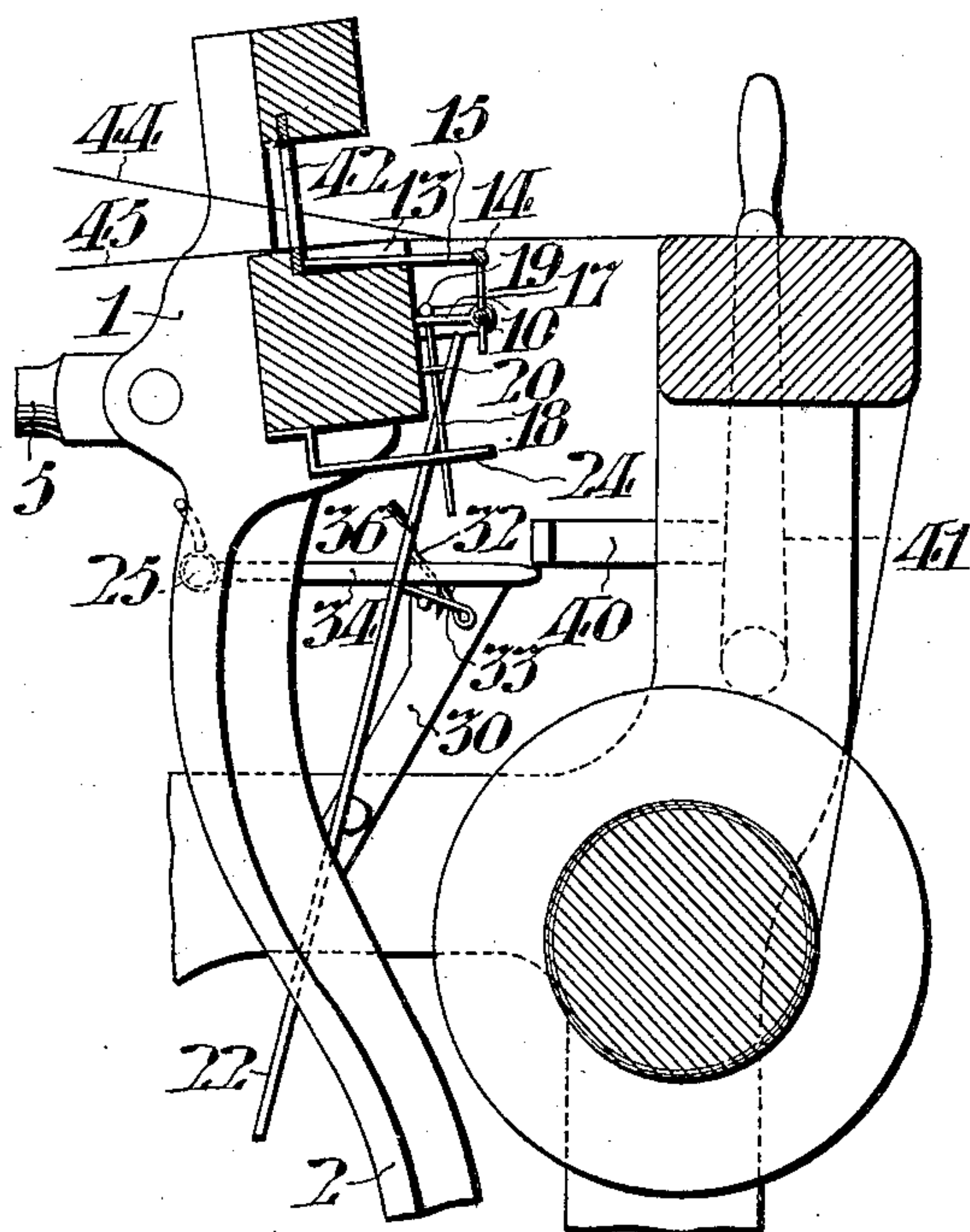
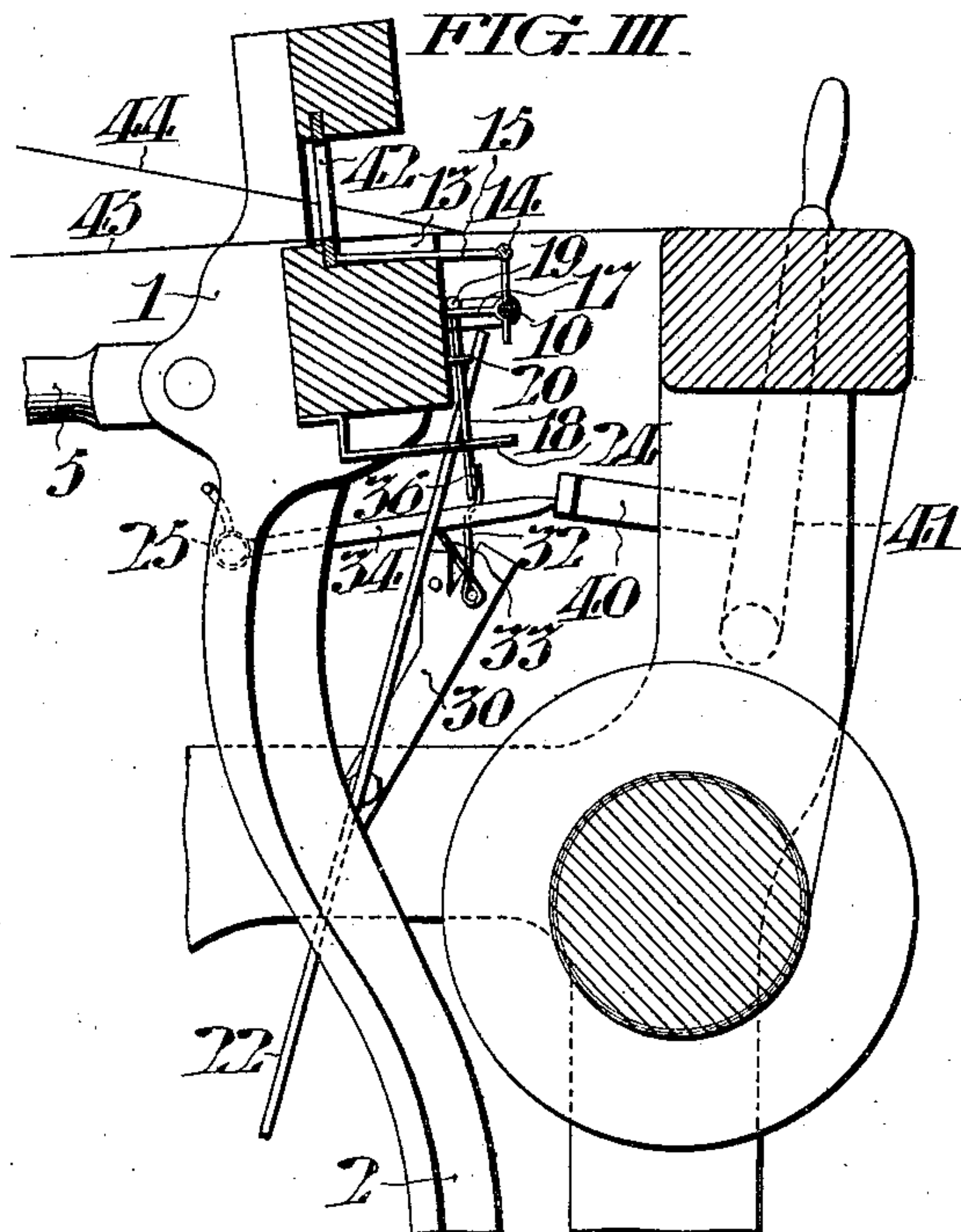


FIG. III.



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UNITED STATES PATENT OFFICE.

FREDERICK OTT, OF SOUTH BETHLEHEM, PENNSYLVANIA.

STOP-MOTION.

No. 881,144.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed April 10, 1907. Serial No. 367,390.

To all whom it may concern:

Be it known that I, FREDERICK OTT, of South Bethlehem, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Stop-Motions, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in stop motions for looms and has for its object the provision of means for stopping the loom upon the breaking or the failure of the filling.

In its present embodiment it comprises a filling detector in proximity to the shed and operatively related to mechanism by which the loom may be stopped when the lay arrives in its foremost position in the operation of beating the filling.

A further object of my invention is to locate the operative parts near one side of the loom where they are free from the web of cloth and accessible at all times for adjustment or repair.

In the accompanying drawings, Figure I, is a vertical section through a loom showing my invention applied thereto. In this figure the lay has started to move forward and the tripping finger is shown raised, to clear the lever which raises the shipper operating lever. Fig. II, is a similar section showing the filling detector disengaged from the filling and the lay retreating. Fig. III, is a similar section showing the position of the filling detector and tripping mechanism when there has been a failure or break in the filling and the loom is being stopped. Fig. IV, is a perspective view showing the detector and a portion of the operating mechanism. Fig. V, is a detail perspective view of the tripping finger.

In said figures:—the lay 1, is mounted upon swords 2, pivoted at 3, to each side frame 4, of the loom; said lay is moved back and forth by the links 5, operatively related to the crank shaft 6, journaled in bearings 7, mounted upon the side frames 4.

At the front of the lay below the level of the web of cloth being manufactured, a rod 10, is rotatably mounted in brackets 11, 12, secured to the front face of said lay. Mounted upon this rod so as to be approximately in the middle of the lay is the filling detector, shown in this instance as a fork 4, having tines or fingers 15, adapted to rest upon the filling 16, or pass into the recess 13, upon the lay. Obviously, any other suitable form of

detector may be employed without departing from my invention. At one end of the rod 10, an arm 17, is clamped and through a hole at the free end of said arm a tripping finger 18, is passed. Said finger 18, is provided at its upper end with an enlargement 19, which prevents the finger from dropping through said hole yet allowing it to move freely therethrough. Upon said finger is fastened a collar 20, for a purpose to be hereinafter set forth.

Pivoted to one of the side frames 4, at the point 21, is a rod 22, which passes freely through a hole 23, in a bracket 24, secured to the under side of the lay. Said bracket is also provided with a slot 26, through which the finger 18, passes. Bolted to one of the side frames is an arm 30, in the upper end of which is pivotally mounted the substantially V-shaped wire lever having arms 32, and 33. The lower arm 33, of this lever normally supports the free end of the lever or dagger 34, which is pivoted at 25, to the sword 2, said free end sliding over said arm 33, but passing under the arm 40, secured to the stopping lever 41. The upper arm 32, is provided with a plate 36, adapted to be engaged by the lower end of the tripping finger 18.

Mounted upon the lay in the ordinary manner are the reeds 42, through which the warp threads 44, and 45, pass. The operation of the device is as follows: When the lay is in its extreme position toward the left, as viewed in Fig. I, the shuttle passes through the shed, leaving the filling 16, in the position shown in said figure. Thereupon, the fingers 15, of the fork 14, move downwardly and rest upon the filling if it is intact. The fingers remain upon the filling until the tripping finger 18, has passed the upper end of arm 32, whereupon, they are freed from said filling and fall into the recess 13, on the lay where they are below the web of cloth 43, being manufactured (as shown in Fig. II). Should the filling 16, be broken when the fork fingers 15, move downwardly as the lay is moving toward the right to beat the filling, said fingers will immediately fall into the recess 13, as shown in Fig. III. The rod 10, would be rotated and the tripping finger 18, lowered so that its lower end would engage the plate 36, on arm 32, and tilt said arm together with arm 33. As the arm 33, is tilted upwardly, the free end of lever 34, is raised, and when the lay continues in its forward motion, this end of the lever strikes the

arm 40, and moves the lever 41, to stop the loom.

In order to prevent the tripping finger 18, from engaging the plate 36, at each backward movement of the lay, I secure a collar 20, upon said finger, which rubs against the rod 22. As the rod 22, oscillates toward the left it raises the collar 20, and with it the finger 18, which is free to move through the slot 26, in the bracket 24.

Having thus described my invention, I claim:

1. In a loom, the combination of a lay; a rod rotatably mounted on said lay; a filling detector mounted upon said rod; means for rotating said rod to tilt said detector above the raceway of said lay; a finger mounted upon said rod; a lever operatively related to said finger; and a dagger having one end supported by said lever.

2. In a loom, the combination of a lay; a rod rotatably mounted on said lay; a filling detector mounted upon said rod; means for rotating said rod to tilt said detector above the raceway of said lay, said means being located at one side of the loom; a finger mounted upon said rod; a two-armed lever operatively related to said finger; a dagger having one end supported by one arm of said lever, the other arm of said lever being arranged to be engaged by said finger upon breakage or failure of the filling.

3. In a loom, the combination of a lay; a

rod rotatably mounted on said lay; a filling detector mounted upon said rod; a rod pivotally mounted below said lay and operatively related to said filling detector to tilt the latter above the raceway of said lay; a slidably mounted finger carried by said lay; a lever operatively related to said finger; a dagger having one end supported by said lever; and means for sliding said finger to clear said lever when the lay is moving backward, said lever being arranged to be engaged by said finger to raise said dagger upon breakage or failure of the filling.

4. In a loom, the combination of a lay; a filling detector pivotally mounted on said lay; a slidably mounted finger operatively related to said detector; means for tilting said detector to enable the shuttle to traverse its race-way; a lever operatively related to said finger; a dagger having one end supported by said lever; means for sliding said finger to clear said lever when the lay is moving backward, said lever being arranged to be engaged by said finger to raise said dagger upon breakage or failure of the filling.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania this fifth day of April 1907.

FREDERICK OTT.

Witnesses:

WILLIAM J. SPERL,
JAMES H. BELL.