(No Model.)

A. F. SHEPARDSON.

STOPPING MECHANISM FOR LAP MACHINES.

No. 458,133. Patented Aug. 18, 1891.

Fig. 1.

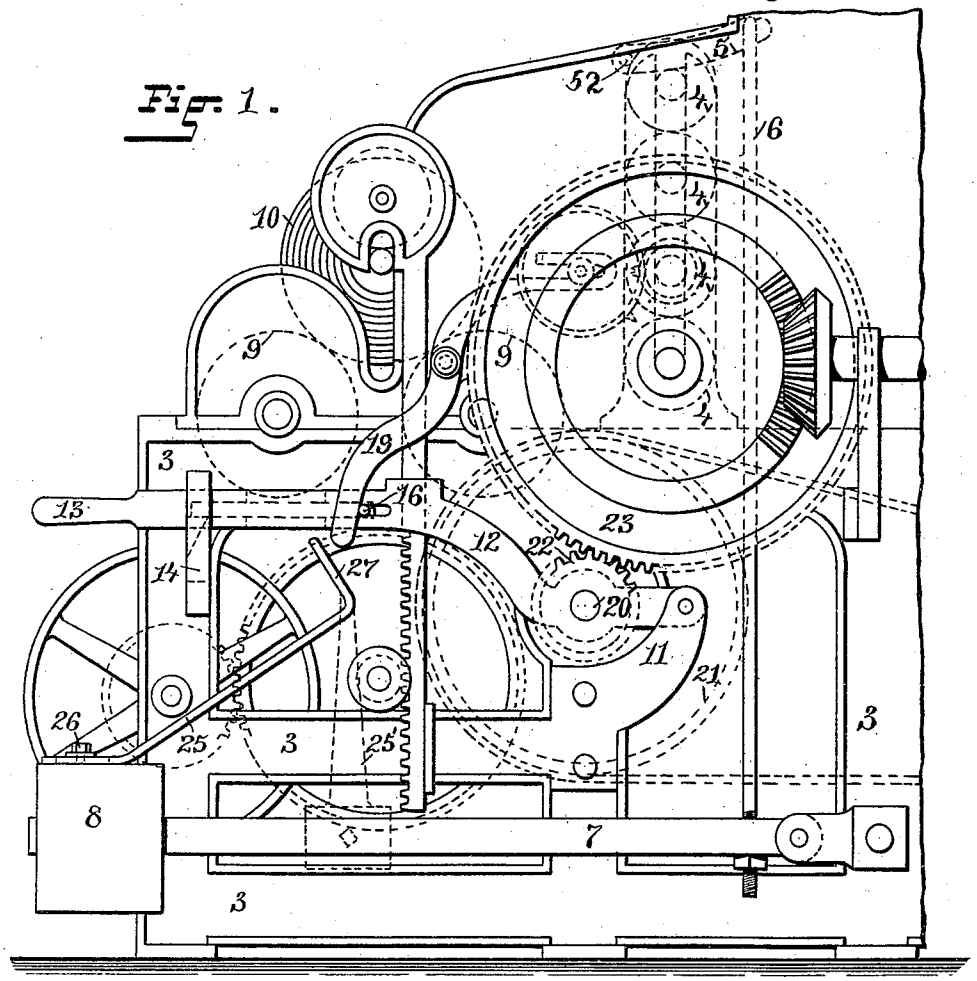
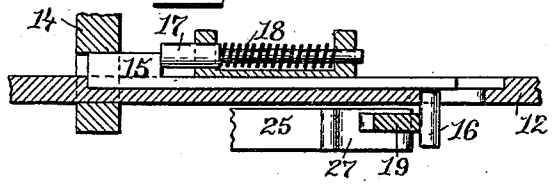


Fig. 2.



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ALBERT F. SHEPARDSON, OF MOOSUP, CONNECTICUT, ASSIGNOR OF ONE-HALF TO FLOYD CRANSKA, OF SAME PLACE.

STOPPING MECHANISM FOR LAP-MACHINES.

SPECIFICATION forming part of Letters Patent No. 458,133, dated August 18, 1891.

Application filed February 5, 1891. Serial No. 380,301. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. SHEPARDSON, of Moosup, in the county of Windham and State of Connecticut, have invented a new and useful Improvement in Stopping Mechanism for Lap-Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to a knock-off attachment for lap-machines, by means of which the machine is automatically stopped when lumps or foreign matter are contained in the lap.

The object of the invention is to prevent excessive lumps or foreign substances passing into the lap and also to prevent injury to the driving-gears of the lap-machine.

The invention consists in providing the weighted arm or arms connected with the compresser-rolls with an arm adapted to knock off the latch supporting the hinged arm in which the driving-shaft is journaled, as will be more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a side view of the lap-rolling end of a lap-machine, parts of the machine being indicated in broken lines. Fig. 2 is a horizontal sectional view of the latch and part of the pivoted arm.

In the drawings, the number 3 indicates the side frame of the machine; 4, the calender-rolls by which the lap is compressed; 5, the lever pivoted at 52 in the frame, bearing on the uppermost calender-roll and connected by the rod 6 with the hinged lever 7, on which the weight 8 is placed, by which the calender-rolls are pressed against the lap as it passes between the calender-rolls.

9 9 are the rolls supporting the lap-roll 10.

11 is a bracket in which the arm 12 is hinged. The forward end of the arm 12 is usually provided with the handle 13. The arm 12 is supported near the handle in the bracket 14 by means of the bolt 15, provided with the pin 16, which extends through a slot in the arm 12. The bolt 15 is held in place by the push-pin 17, which is surrounded by the coiled spring 18. The stop-arm 19 bears against the pin 16, and is used to automatically stop the machine when the required quantity of lap has been formed into a lap-roll. The driving-shaft 20 is journaled in the arm 12. The driving-shaft 20 is provided with the belt-pulley 21 and the gear 22, which gear meshes with the gear 23, secured to the shaft of the lower calender-roll.

In a lap-machine thus or similarly organized when excessive lumps of cotton are formed in the lap and when stones, pieces of iron, wood, or other substances are carried with the fiber, the lap in passing through between the two upper calender-rolls separates these rolls more than when the usual lap is passing between the same and the excessive lumps or the harder foreign substances which cannot pass between the rolls tear and separate the lap. At times such excessive lumps or the foreign substances stop the calender-rolls from turning, and then the driving-gear 22 is liable to tear off the teeth on the gear 23. It is therefore necessary, when the above-described excessive lumps or foreign matter are presented to the calender-rolls, to stop the machine and remove the obstructing matter. To do this quickly and automatically, I secure to the weight 8 or to the hinged lever 7 an arm or knock-off so formed and adjusted that when the hinged lever 7 is raised to an abnormal height the said arm or knock-off will come in contact with either the arm 19 or the pin 16, and by moving the bolt 15 will detach the arm 12 and allow the same to descend and thus disengage the gear 22 from the gear 23, thereby arresting the rotation of the calender-rolls.

In Fig. 1 I have shown the arm 25 secured to the weight 8 by the bolt 26. For the purpose of adjustment the portion of the arm bearing on the weight 8 is slotted, and the bolt extending through the slot and the nut bearing on the upper surface of the arm form the well-known method of securing parts adjustably to each other. The opposite end 27 of the arm 25 is bent at, or nearly at, right angles, so that when the weight 8 and the free end of the hinged lever 7 are raised the part 27 of the arm 25 will move the lower end of the arm 19 and with it the pin 16 and bolt 15, so as to disengage the same and permit the arm 12 to descend.

It will be obvious to any one skilled in the

art that the arm 25 may be secured to the lever 7 and that any one of the well-known means of adjustment may be used. To indicate one of the methods that can be used I have indicated in broken lines the arm 25′, provided at its lower end with a sleeve and a set-screw.

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

1. In a lap-machine, the combination, with the calender-rolls and the latch-bolt, the arm 12, supported by the latch-bolt, the bracket 11, on which said arm is pivoted, the driving-shaft 20, journaled in said arm, the gear 22, carried by said shaft, and the gear 23 in engagement with said gear 22, of the arm 25 and mechanism intermediate the said arm 25 and the calender-rolls, as described.

2. In a lap-machine, the combination, with a latch, an arm 12, supported by said latch, a driving-shaft 20, having a geared end journaled in said arm, and the weighted lever 7, of an arm operated by the lever 7, arranged to operate the latch to stop the machine when the calender-rolls are separated beyond a predetermined distance, as described.

3. The combination, with the gear 22, the shaft 20, carrying said gear, the hinged arm 12, in which said shaft is journaled, and the latch by which the arm 12 is supported, of a knock-off arm, a lever 7, carrying the said arm, the calender-rolls, and mechanism intermediate the lever 7 and calender-rolls, as and for the purpose described.

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