O. JANELLE.

AUTOMATIC FILLING REPLENISHING LOOM.

APPLICATION FILED OCT. 19, 1909.

951,949. Patented Mar. 15, 1910.

Fig: 1.

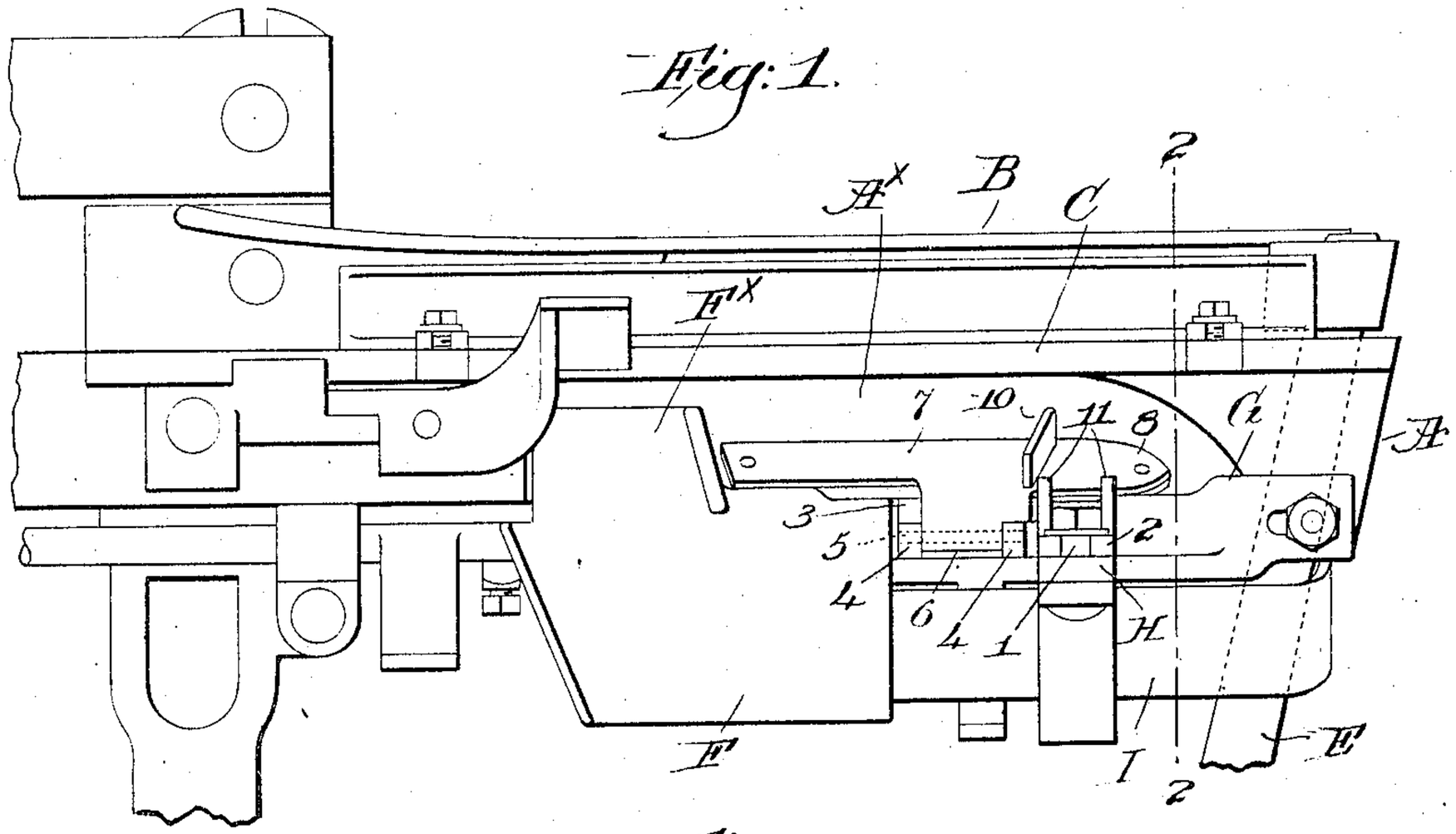


Fig: 2.

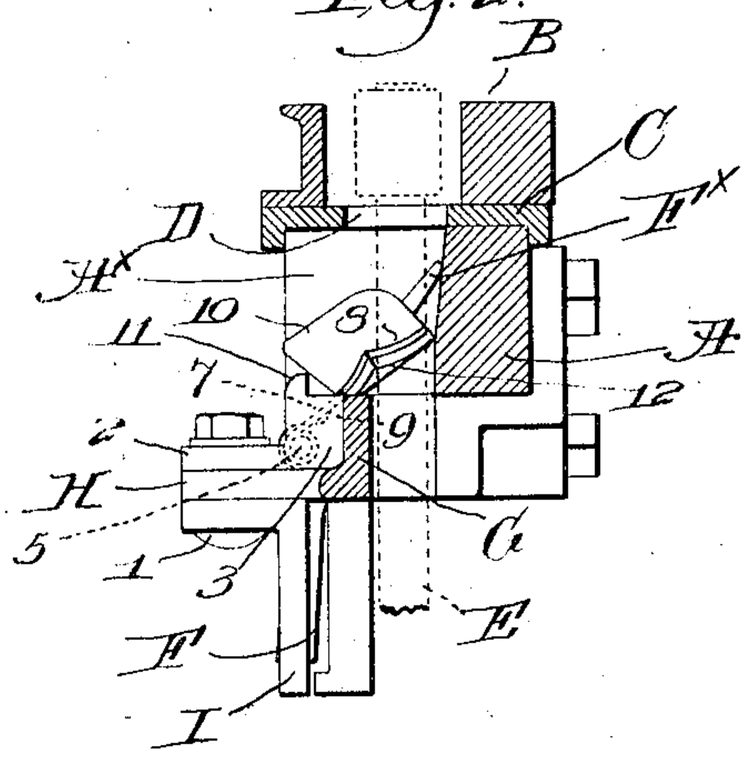
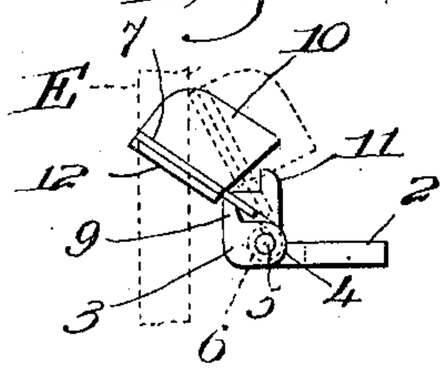


Fig: 3.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC FILLING-REPLENISHING LOOM.

951,949. Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed October 19, 1909. Serial No. 523,489.

To all whom it may concern:

Be it known that I, OSCAR JANELLE, a citizen of the United States, and resident of Manchester, county of Hillsboro, State of New Hampshire, have invented an Improvement in Automatic Filling-Replenishing Looms, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

Looms of the "Northrop" type, in which the working shuttle is provided automatically with a fresh filling-carrier or bobbin when the filling needs to be replenished, are so constructed that the incoming, fresh bobbin ejects the spent bobbin from the bottom of the shuttle and through a slot in the bottom of the shuttle-box in which slot the picker-stick oscillates. To guide the ejected bobbin into a suitable receptacle the cut away or slotted part of the lay has been provided with an inclined chute having a part thereof upwardly extended beyond and crossing the inner end of the path of the picker-stick, substantially as shown and described in United States Patent No. 596,448, granted to J. H. Northrop December 28, 1897. Between the guide-chute and the outer end of the slot the picker-stick oscillates, and as filling-replenishment is effected when the picker-stick is at the outer end of its stroke there is an open or exposed portion of the slot between the stick and the chute when a bobbin will drop into such exposed part of the slot and jam the picker-stick on its next inward stroke, causing more or less damage.

My present invention has for its object the production of means to guard or substantially cover the part of the slot referred to when the picker-stick is at the outer end of its stroke, so that when a change or replenishment of filling is effected the ejected bobbin cannot enter the slot. I have so arranged the guard that it is engaged by and moved out of the path of the picker-stick on the inward stroke of the latter and released shortly before the stick completes its outward stroke, so that the guard returns automatically to its protective position. At such time the slot guard or protector is inclined downward and forward, so that if the tip of an ejected bobbin strikes it it will be directed forward in the general direction determined by the guide chute.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a front elevation of one end of the lay of a loom, at the replenishing side, with the shuttle-box thereon and the guide-chute, one embodiment of my present invention being illustrated in connection therewith, the picker-stick being shown at the outer end of its stroke; Fig. 2 is a transverse section on the line 2—2, Fig. 1, looking toward the left; Fig. 3 is an inner end elevation of the movable guard, shown by dotted lines in position to permit the passage of the picker-stick.

The lay A, the shuttle-box B thereon at the replenishing side of the loom, the race-plate C longitudinally slotted at D for the picker-stick E and to permit the discharge of an ejected bobbin through the bottom of the shuttle, the cut-away or slotted part A^x of the lay below the slot D, and the guide-chute F fixedly secured to the front of the lay below the slot and having a part F^x upwardly extended beyond and crossing the inner end of the path of the picker-stick, may be and are all substantially as in the Northrop patent hereinbefore referred to, and operate as therein set forth. The casting G, rigidly attached to the lay and which serves as a support for the chute F, has a forward shelf or projection H, in practice sustaining a guide for the picker check-strap I, Fig. 1, substantially as in said patent, and upon this projection H I secure, by a bolt 1, the slotted foot 2 of a bracket 3 having parallel, forwardly extended ears 4 for a pivot-pin 5, upon which pin is fulcrumed the hub 6 of the slot guard or protector. Herein the guard is shown as an elongated piece of plate-metal 7, secured to or forming a part of the hub 6, and extended inward near the edge of the upwardly extended part F^x of the chute, the guard being curved downward and forward along its upper edge, as at 8, at its outer end, to cross the path of the picker-stick when the guard is in the position shown in Figs. 1 and 2, and in full lines Fig. 3. When the picker-stick is at the outer end of its stroke, Fig. 1, it is at some distance from the cam portion 8 of the guard, the latter then resting upon the upturned back 9 of the bracket 3, see full lines Fig. 3, and covers or protects the picker-stick slot beyond the part F^x of the

chute F. Should an ejected bobbin drop onto the inclined guard 7 it will be thrown forward away from the lay, and into a suitable receptacle, not shown, a diagonal, upright ledge 10 on the guard preventing endwise movement of the bobbin toward the end of the lay. When the picker-stick swings inward it engages the cam 8 and presses the guard 7 forward, the latter rocking on its fulcrum 5, and the picker-stick sweeps along behind the guard, holding the latter out of the way until on its outward stroke the picker-stick leaves the guard, which drops back of its own weight into guarding position. Stops 11 on the front of the bracket 3 limit forward movement of the guard, so that it cannot swing over its fulcrum.

In order to reduce wear between the picker-stick and the guard I prefer to back the latter with a facing 12 of leather, rawhide, or other suitable material.

The dotted line position of the guard in Fig. 3 is that assumed when engaged and swung forward by the picker-stick, and as will be manifest such position is maintained during the major portion of the movement of the picker-stick.

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

1. The combination, in a loom having a lay longitudinally slotted for the passage of a filling-carrier ejected from the shuttle, a picker-stick reciprocating in the slot, and a guide-chute beyond and crossing the inner end of the picker-stick path, of means governed by the yicker-stick to prevent the passage of an ejected filling-carrier through the slot between the chute and picker-stick when the latter is at the outer end of its stroke.

2. The combination, in a loom having a lay longitudinally slotted for the passage of a filling-carrier ejected from the shuttle, a picker-stick reciprocating in the slot, and a guide-chute beyond and crossing the inner end of the picker-stick path, of a movable guard to close the slot beyond the chute when the picker-stick is at the outer end of its stroke, the picker-stick coöperating with the guard to temporarily move it out of the path of the stick.

3. The combination, in a loom having a lay longitudinally slotted for the passage of a filling-carrier ejected from the shuttle, a picker-stick reciprocating in the slot, and a guide-chute beyond and crossing the inner end of the picker-stick path, of a swinging guard pivotally mounted on the lay and extending laterally from the chute, to protect the exposed part of the slot from the entrance of a filling-carrier, a cam on the guard to coöperate intermittingly with the picker-stick and move the guard forward out of the path of the picker-stick, and means to limit swinging movement of the guard.

4. In a loom, a longitudinally-slotted lay, the picker-stick movable therein, and a fixed guide-chute on the lay and extended upward and across the inner end of the path of the picker-stick, combined with a guard pivoted on the lay and adapted to prevent the entrance of an ejected filling-carrier into the slot beyond the chute, and a cam on the guard to coöperate intermittingly with the picker-stick and effect movement of the guard out of the path of the picker-stick.

5. In a loom, a lay provided with a shuttle-box having a longitudinally-slotted bottom for the discharge of a filling-carrier ejected from the shuttle, said lay being slotted below the shuttle-box, a picker-stick movable in the slot, an inclined slot-protecting member fixed on the lay at the inner end of and crossing the path of the picker-stick, a movable slot-protecting member pivoted on the lay to guard the slot beyond the fixed member, the movable member entering the major part of the picker-stick path when the stick is at the outer end of its stroke, a stop to retain said movable member in inclined position at such time, means on the movable member to intermittingly coöperate with the picker-stick and effect movement of the said member out of the path of the picker-stick.

6. In a loom, a lay provided with a shuttle-box having a longitudinally-slotted bottom for the discharge of a filling-carrier ejected from the shuttle, said lay being slotted below the shuttle-box, a picker-stick movable in the slot, an inclined slot-protecting member fixed on the lay at the inner end of and crossing the path of the picker-stick, and automatically-movable means to protect the slot beyond said member when the picker-stick is at the outer end of its stroke and to move out of the path of the picker-stick on its inward stroke.

7. In a loom, a lay slotted for the discharge of a filling-carrier when ejected from the shuttle, a picker-stick movable in the slotted part of the lay, a guide-chute for the ejected filling-carrier, extended beyond and crossing the inner end of the path of the picker-stick, and means to prevent the passage of an ejected filling-carrier into the slot beyond the guide-chute.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

OSCAR JANELLE.

Witnesses:
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