M. L. STONE.

LOOM.

APPLICATION FILED SEPT. 20, 1909.

979,718. Patented Dec. 27, 1910.

Fig: 1.

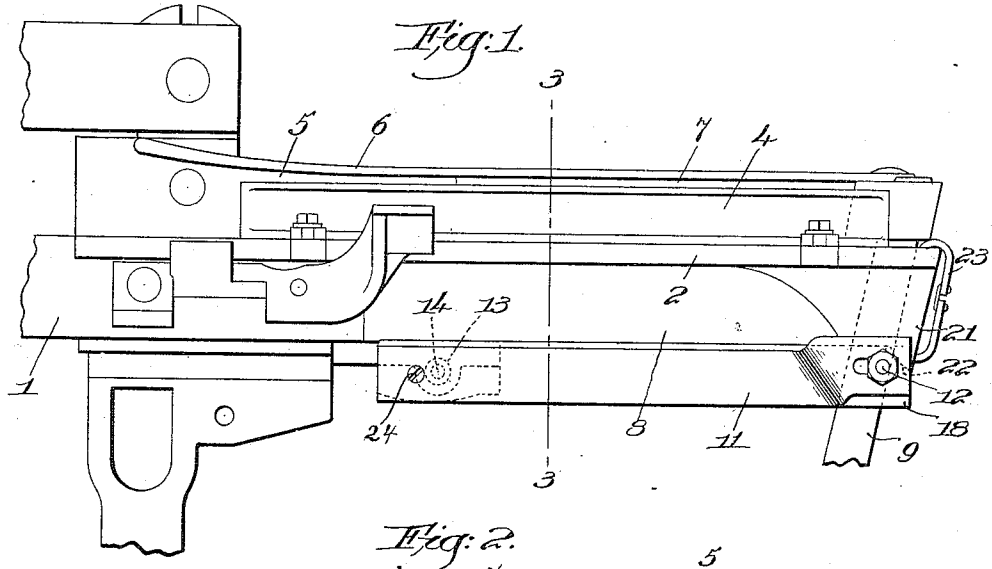


Fig: 2.

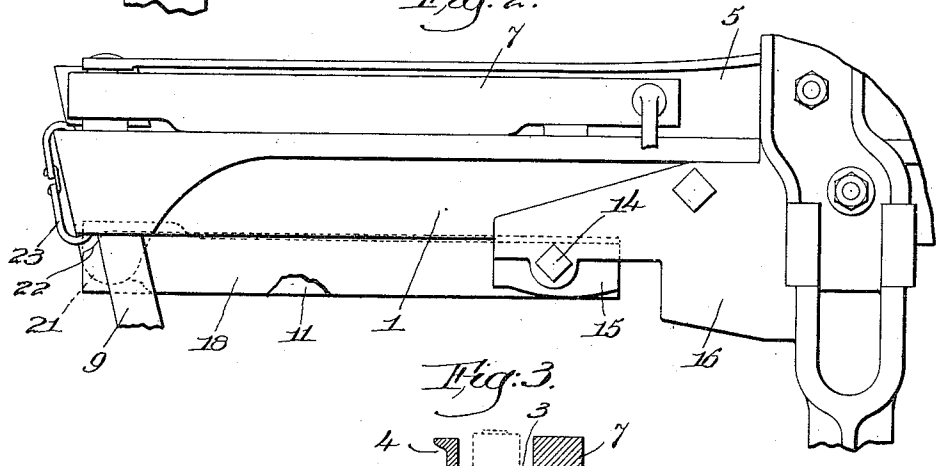


Fig: 3.

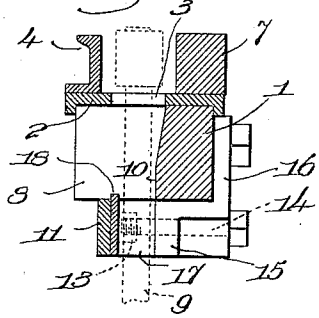
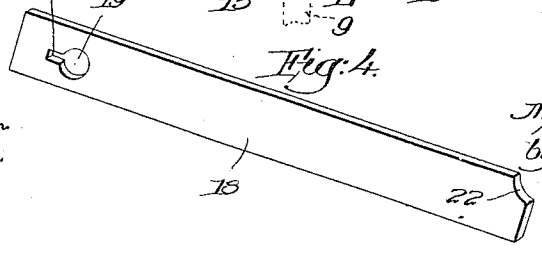


Fig: 4.



Witnesses,
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UNITED STATES PATENT OFFICE.

MELVIN L. STONE, OF LEWISTON, MAINE, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM.

979,718. Specification of Letters Patent. Patented Dec. 27, 1910.

Application filed September 20, 1909. Serial No. 518,540.

To all whom it may concern:

Be it known that I, MELVIN L. STONE, a citizen of the United States, and resident of Lewiston, county of Androscoggin, State of Maine, have invented an Improvement in Looms, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to looms, and more particularly to automatic looms of the Northrop type, such as forms the subject-matter of United States Patent No. 529,940 granted to J. H. Northrop November 27, 1894 wherein the spent bobbin is ejected or discharged from the shuttle-box, the bottom of the latter being slotted suitably therefor and the lay is cut away beneath the shuttle-box at the replenishing side of the loom, so that the discharged bobbin may have a free exit. In such looms the picker-stick at the replenishing side of the loom vibrates in the slot in the bottom of the shuttle-box and traverses the cut away part of the lay, being supported at its rear side by the adjacent part of the lay. A front guide is fixedly mounted on the lay below the cut away part, but there is an undesirable looseness or lateral play of the picker-stick at the replenishing side, the width of the slot in the box-bottom permitting the stick to sway forward during a part of its travel. At the opposite side of the loom this lateral play or looseness is not present, for the picker-stick is supported on both sides during its vibrational movement.

My present invention has for its object the production of means whereby the looseness referred to at the replenishing side is obviated, and a non-metallic wearing surface and guiding support is provided for the front side of the picker-stick.

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

Figure 1 is a front elevation of a portion of the lay and the shuttle-box thereon, at the replenishing side of an automatic loom of the specified type, with my invention applied thereto; Fig. 2 is a rear elevation of the parts shown in Fig. 1, the wearing member being partly broken out; Fig. 3 is a transverse section on the line 3—3, Fig. 1, looking toward the left; Fig. 4 is a perspective view of the wearing member, detached.

In the drawing, 1 is the lay, having the usual race-plate 2, longitudinally slotted at 3, Fig. 3, and forming the bottom of the shuttle-box at the replenishing side of the loom, the front plate 4, back-plate 5, cover-plate 6 of the shuttle-box, and the binder 7, being of usual construction. At the front and below the shuttle-box the lay is cut away at 8, for the discharge of the spent bobbin when ejected from the shuttle, and the picker-stick 9 traverses this cut away portion and the slot 3 in the box-bottom in its vibrational movement, the rear side of the picker-stick being supported by the adjacent part 10 of the lay, see Fig. 3. The usual front guide 11 is fixedly mounted on the lay below the cut away part 8, by means of a bolt 12 at its outer end, and at its inner end said guide has a rearwardly extended boss 13 which receives the threaded end of a bolt 14 extended forward from the abutment 15 on the wing 16 of the lay-sword. Between said abutment and the guide a block or cushion 17 of leather is mounted on the bolt 14 and clamped in position at the inner end of the picker-stick path, all as usual in looms of the Northrop type referred to.

The location of the front guide 11 permits an undesirable looseness or lateral play of the picker-stick as it vibrates, said guide being necessarily set forward by the location of the cushion 17 at its inner end, so that there is an undue clearance between the rear face of the guide and the front side of the picker-stick. To obviate this looseness in the movement of the picker-stick, and also to provide a desirable wearing surface therefor I provide a non-metallic wearing member 18, shown separately in Fig. 4, which member is a thin strip of hard wood, having at one end a circular aperture 19 and a slotted extension 20. Said wearing member is placed against the rear face of the guide 11, the boss 13 thereon entering the aperture 19, and the outer end of said member bears against the rear face of the part 21 of the lay casting, to the front face of which the guide is secured by the bolt 12, Fig. 1. The cushion 17 is then clamped between the abutment 15 and the wearing member 18, as shown in Fig. 3, the setting up of the bolt

14 holding said parts and the guide 11 securely in place, so that no fastening is required for the outer end of member 18, but the latter is preferably cut out at 22 to clear the back-stop strap 23 for the picker-stick.

To prevent any possible displacement of the wearing member by angular movement of the boss 13 I pass a positioning screw 24 through the guide 11 and into the slotted extension 20 of the aperture 19. As said screw is eccentric to the boss 13 it will be apparent that there can be no turning of the member 18 on the boss. The wearing member is thus interposed and fixedly held between the guide 11 and the picker-stick and parallel to the path of movement of the latter, filling up a large part of the clearance space while permitting all the requisite freedom of movement of the picker-stick, but serving as a support for the front side thereof as it vibrates.

By making the wearing member of wood I reduce very materially the wear on the picker-stick, as the wear of wood on wood is very slight, and as the picker-stick is supported both back and front its vibrational movement is steadied and it operates with much better effect upon the shuttle in the picking action.

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

In a loom, a lay and a shuttle-box thereon having a longitudinally slotted bottom, the lay being cut away beneath the box to permit the discharge of a bobbin from the shuttle, a picker-stick vibratable in the slot and through such cut away portion of the lay, a front guide for the picker-stick fixedly mounted on the lay below its cut away portion and having a rearwardly-extended boss at its inner end, and a wooden wearing member having an aperture to receive the boss and interposed and fixedly held between the front guide and the picker-stick in parallelism with the path of movement of and to support the picker-stick at the front of its path, to prevent lateral play in the vibrational movement thereof, said wearing strip throughout its length resting against the rear face of the guide and being fixed at all times relatively to such guide and to the picker-stick.

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

MELVIN L. STONE.

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