

W. EDSON.

Stop-Mechanisms in Looms.

No. 139,560.

Patented June 3, 1873.

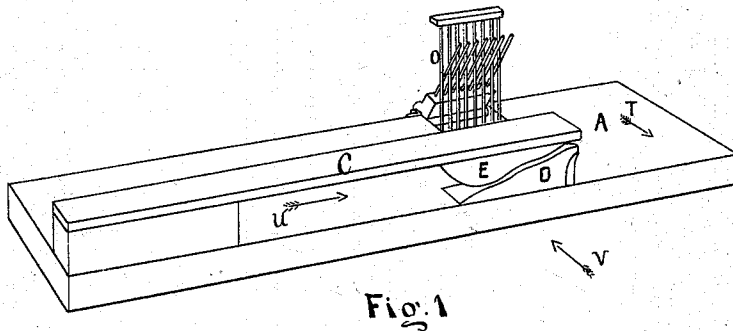


Fig. 1

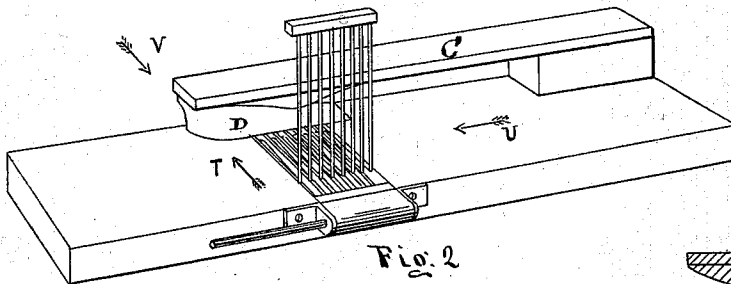


Fig. 2

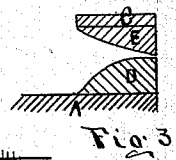


Fig. 3.

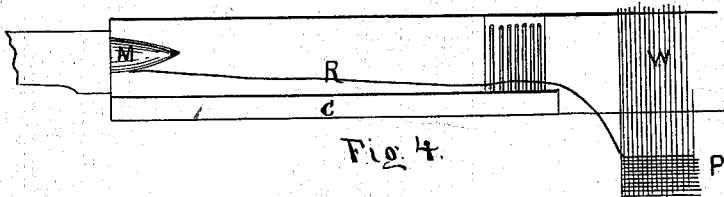


Fig. 4.

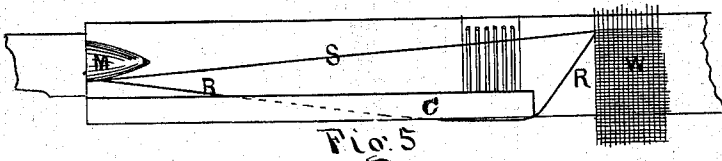


Fig. 5

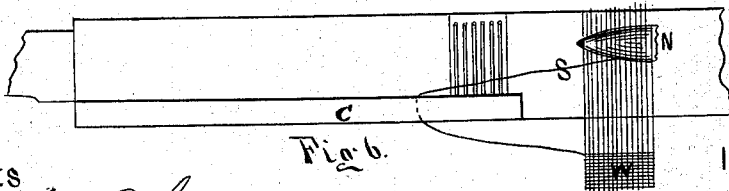


Fig. 6.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM EDSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN STOP-MOTION COMPANY, OF SAME PLACE.

IMPROVEMENT IN STOP-MECHANISMS IN LOOMS.

Specification forming part of Letters Patent No. **139,560**, dated June 3, 1873; application filed April 30, 1873.

To all whom it may concern:

Be it known that I, WILLIAM EDSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Detector-Guard for Looms, of which the following is a specification:

This invention applies to drop-box looms, provided with weft-detectors, in which there is a liability of the weft-threads (which are already incorporated in the cloth and are still connected, direct from the nearest selvage to the shuttle) falling back upon the lay and so engaging with the detector as to interfere with its action. The object of this invention is to prevent this falling back of the threads.

Figure 1 is a perspective view of a part of the lay of a loom showing my invention, and an ordinary detector, looking from the front of the loom. Fig. 2 is a view of the same, looking from the back of the loom. Fig. 3 is a cross-section through the guard. Figs. 4, 5, and 6 serve to illustrate the action of the weft-thread in relation to the detector and guard.

A represents the lay of a loom and O a comb-weft detector made in any of the desirable ways. C is an arm extending from the shuttle-box toward the center of the lay, and attached directly to the shuttle-box or to the end of the lay by any suitable device. To the end of this arm, and extending below it, I attach the guard-piece E, Figs. 1, 2, and 3, made to act as a supplement to the lower guard-piece D; also, fastened to the lay, the two pieces E and D being placed so as not to touch each other, but yet to act in conjunction to allow of the free passage of the weft-

thread, when it approaches it from the direction indicated by the arrows T and U; but to resist the thread when it approaches from the direction indicated by the arrow V, Figs. 1 and 2. To accomplish this result the guard-pieces E and D may be made in a great variety of forms, it being necessary only that they bear a certain co-relation to each other, as shown.

The office of the guard may be explained as follows: If we suppose the lay to be retreating, as in Fig. 4, then the beaten-up thread R, extending from the shuttle M to the selvage of the cloth P, must pass through the guard, which it will be free to do, as can be seen by inspection of Figs. 1, 2, and 3. If we suppose the lay, Fig. 5, to be beating up, the thread R having passed the guard at the previous retreating stroke, and the thread S, if not broken, resting across the detector, then the guard performs its office of preventing the thread R from falling back onto the detector and interfering with its action. In Fig. 6 is shown the thread S after it has been beaten up, and the shuttle M to which it is attached is on its flight across the lay; in this case, the guard will allow the thread to pass freely through.

I claim as my invention—

The guard, composed of the parts C, E, and D, or their equivalents, arranged to operate in conjunction with the lay, substantially as described, and for the purpose set forth.

WILLIAM EDSON.

Witnesses:

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JOHN J. HALEY.