



# UNITED STATES PATENT OFFICE.

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## CHECKING DEVICE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 654,921, dated July 31, 1900.

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*To all whom it may concern:*

Be it known that I, ORREN A. SAWYER, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Checking Devices for Looms, of which the following is a specification.

This invention has relation to looms, and particularly to devices for checking the outward or return movement of the picker-sticks; and it has for its object to provide certain improvements therein, whereby the shuttle may have a yielding body to strike against at the end of its travel.

The invention comprehends a checking device which permits the free inward stroke of the stick and retards the outward movement thereof; and it consists of certain features of novelty in the construction and arrangement of parts thereof, as illustrated upon the drawings, described in the following specification, and particularized in the claims hereunto appended.

Referring to said drawings, Figure 1 represents a portion of the lay of a loom equipped with my invention. Fig. 2 represents a horizontal section on the line 2 2 of Fig. 1.

Similar reference characters indicate similar parts or features wherever they occur.

Referring again to said drawings, *a* indicates a picker-stick which is fulcrumed at *a'* in the arm *a<sup>2</sup>*, projecting from the sword *a<sup>3</sup>* of the lathe. The picker-stick is reciprocated in the usual way by an arm *b*, actuated by any suitable mechanism and connected to the said stick by the connection *b'*, there being a returning-spring *b<sup>2</sup>* and strap *b<sup>3</sup>* connected to the lower shorter end of the stick.

Secured to the bar *d* of the standard *d'* is a bracket *d<sup>2</sup>*, having a laterally-projecting stud *d<sup>3</sup>*, flanged at its inner and outer ends. A flexible strap *e*, of leather or other suitable material, is secured at one end to the picker-stick *a* and at the other end to a helical spring *e'*, said spring being attached to a hook *e<sup>2</sup>*, projecting from the cross-brace *d*. The strap passes from the spring entirely around the friction member or stud *d<sup>3</sup>* to the picker-stick, and the coils of the strap on the stud are prevented from overlapping by a pin *d<sup>4</sup>*. The spring is comparatively light, though strong

enough to take up the strap when the picker-stick is making its inward stroke and to cause the strap to bind on the friction member *d<sup>3</sup>* when the stick is returning to original position. When the stick moves inward, the coil around the stud expands and there is practically no friction engagement between them, so that the spring takes up the slack in the strap very rapidly. On the contrary, the outward movement of the picker-stick is retarded by the frictional contact of the strap with the stud. When the shuttle reaches the end of its travel, it strikes against the slowly-moving and yielding picker-stick and is stopped gradually. This prevents the breaking of the filling and lessens the chance of the shuttle rebounding and being out of place for the next pick, and, moreover, it prolongs the life of the picker-stick by preventing its rapid wear.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. In a loom, the combination with a picker-stick, of a device for checking the return movement of said stick, the same comprising a non-rotary friction member, a strap frictionally engaged with said member, and having one end connected to the picker-stick, and a spring connecting the other end of said strap with a relatively-stationary part of the loom.

2. In a loom, the combination with a picker-stick, of a device for checking the return movement of said stick, the same comprising a friction member which is non-rotary with respect to the said stick, a strap frictionally engaging said member and adapted to slip therearound when the stick moves outward, and a spring for taking the slack in the strap when the stick moves inward.

In testimony whereof I have affixed my signature in presence of two witnesses.

ORREN A. SAWYER.

Witnesses:

JOHN A. GATELY,  
NATHAN D. PRATT.