

(No Model.)

T. E. NORMAN.
SHUTTLE BINDER FOR LOOMS.

No. 505,574.

Patented Sept. 26, 1893.

Fig. 1.

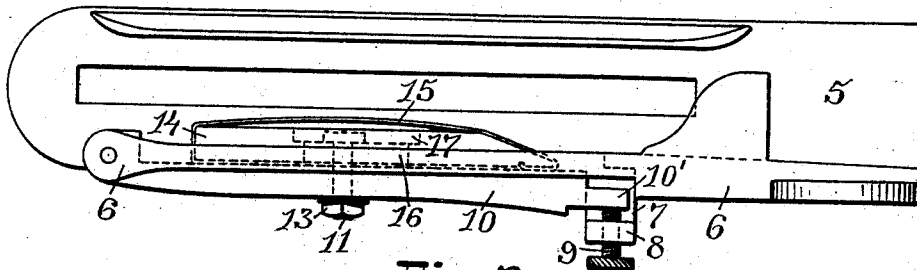


Fig. 2.

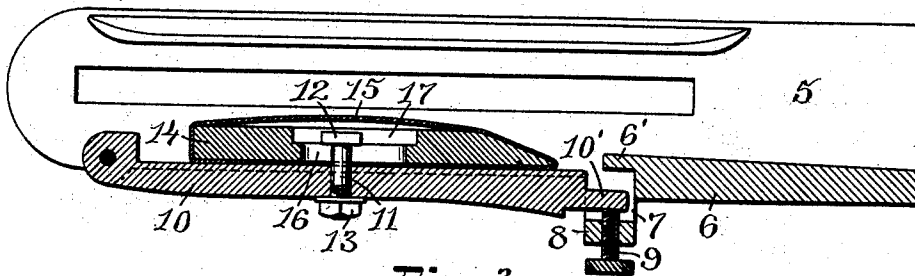
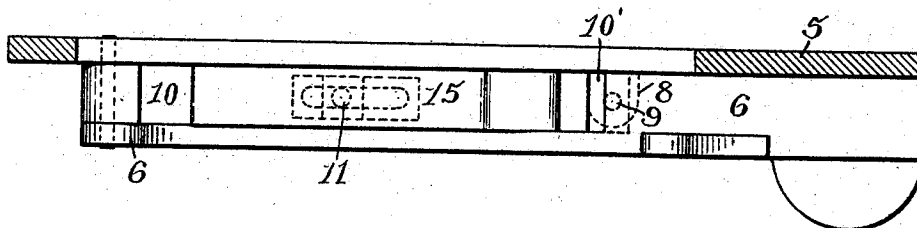


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS E. NORMAN, OF FALL RIVER, MASSACHUSETTS.

SHUTTLE-BINDER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 505,574, dated September 26, 1893.

Application filed May 18, 1893. Serial No. 474,652. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. NORMAN, of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Shuttle-Binders for Looms; 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 improvements in devices for frictionally holding shuttles in the shuttle-boxes of looms.

The object of the invention is to so construct a shuttle-binder that an increased frictional contact may be exerted thereby on the shuttle without obstructing the movement of the shuttle into or out of the box.

Another object of the invention is to produce a shuttle-binder the swell of which is adjustable in order to bring the same to bear on the shuttle in different portions of the shuttle-box.

The invention consists in the peculiar construction of the swell and the binder-arm and their novel combination with each other and with the shuttle-box.

Figure 1 represents a plan view of a shuttle-box provided with the improved binder. Fig. 2 represents a top view of the same, partly in section, to more clearly indicate the improved construction. Fig. 3 represents a vertical, longitudinal sectional inverted view of the same looking toward the inner surface of the swell.

Similar numbers of reference designate corresponding parts throughout.

In the drawings 5 indicates the slotted-bottom of a shuttle-box, and 6 is the back of the same, a portion of this back being cut away to leave a sufficient opening through which the binder-arm and swell are free to vibrate. Extending rearwardly from the bottom 5 of the shuttle-box and at the forward portion of the same is the bracket 7 which may be furnished with the perforated-stud 8 carrying the adjustable-stop 9 to limit the outward movement of the binder-arm, the forward, or inward, movement of the same being limited by the reduced-portion 6' of the back 6. The binder-arm 10 is pivoted between the rear

portion of the back 6 and the bottom 5. The arm is perforated about midway of its length and the forward end has a reduced portion 10'. Through the perforation of the arm extends the bolt 11 having a square end 12 at its inner end and secured at the back of the binder-arm by the nut 13. The swell 14 has a tapering, forward end and is provided with a metallic-shield, or spring-belly, 15 the main portion of which is somewhat separated from the inner surface of the swell while the ends of the same are bent to closely fit the ends of the swell to which they are secured. At its central portion the swell is furnished with a slot 16 having an enlarged-portion 17, the shank of the bolt extending through the slot, and the square head of the bolt resting in the enlarged portion of the slot. By the loosening of the nut 13 the swell may be moved along the binder-arm for the length of the slot 16, and by tightening the nut the swell will be securely clamped to the binder-arm, thus allowing the swell to be adjusted in the best position to bear on the shuttle when it enters the box, the spring-belly of the swell tending to more securely hold the shuttle in place.

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

The combination with a shuttle-box, having the back 6 furnished with the reduced-portion 6', the bracket 7 having the perforated stud 8, and the screw 9 carried by the stud and forming an adjustable stop for limiting the backward movement of the binder-arm, of the binder-arm 10, pivoted in the opening of the back 6, perforated near the middle and having the forward reduced end 10', the bolt 11 extending through the perforation of the binder-arm and having a square head and a securing-nut, and the swell 14 provided with the spring metallic bearing-surface 15 and having the slot 16 with the enlarged portion 17 in which the head of the bolt 11 is engaged, as and for the purpose described.

In witness whereof I have hereunto set my hand.

THOMAS E. NORMAN.

Witnesses:

M. F. BLIGH,
J. A. MILLER, Jr.