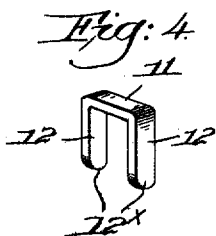
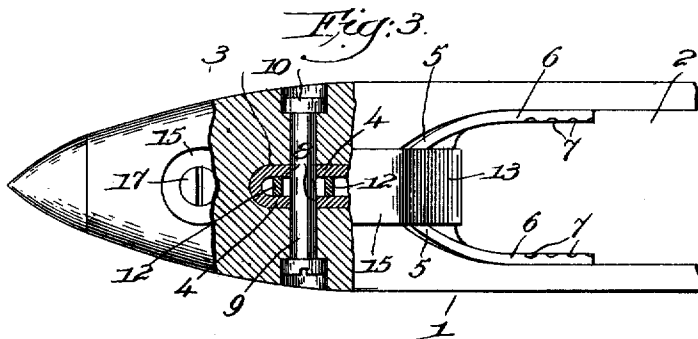
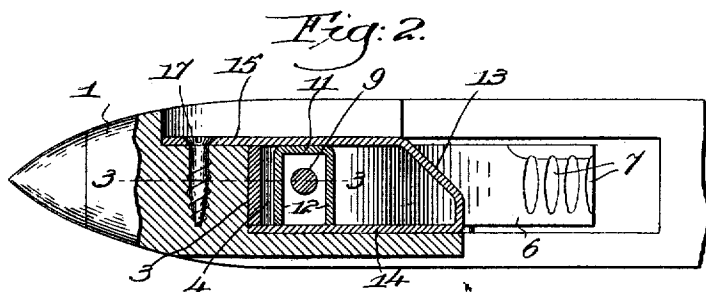
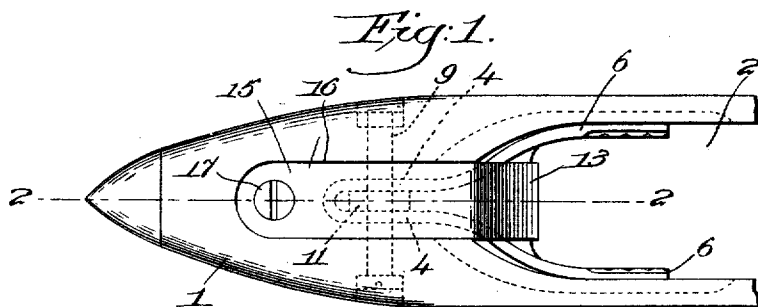


E. S. STIMPSON.
 LOOM SHUTTLE.
 APPLICATION FILED NOV. 17, 1910.

996,296.

Patented June 27, 1911.



Witnesses,
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UNITED STATES PATENT OFFICE.

EDWARD S. STIMPSON, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM-SHUTTLE.

996,296.

Specification of Letters Patent. Patented June 27, 1911.

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To all whom it may concern:

Be it known that I, EDWARD S. STIMPSON, a citizen of the United States, and resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Loom-Shuttles, 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 shuttles used in looms wherein a bobbin is inserted automatically in the working shuttle, and it has for its particular object the production of certain novel and improved features in the means for holding the bobbin in position when inserted in the shuttle.

In United States Patent No. 906,390 granted to Cuniff and Cookson December 8, 1908 the bobbin-holding jaws are formed of a relatively thin strip of spring-metal, folded or bent upon itself between its ends and then out-turned to form the jaws, the folded parts of the strip being inserted in a recess in the shuttle-body at the end of the bobbin-receiving opening. The folded parts or jaw bases are drilled to form opposite holes for the passage of a retaining bolt, and a block of metal having a bolt-hole therein is pushed in between the jaw bases, to separate them and hold them firmly seated in close contact with the side walls of the recess.

In practice it has been found difficult to assemble the parts readily and quickly, and particularly to position the spreader with its bolt-hole in alinement with the bolt-holes in the jaw bases, because of the bur or roughness formed on the inner face of one or both jaw bases by drilling the holes therein. The bur catches on the spreader and makes it difficult to properly position it, and it also prevents a close, firm contact between the adjacent faces of the spreader and the jaw bases.

In my present invention I have devised a novel form of spreader, so constructed and arranged that the troubles hereinbefore referred to have been eliminated.

The various 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 top plan view of the bobbin-holding end of a loom-shuttle embodying my

present invention; Fig. 2 is a part longitudinal section thereof on the line 2-2, Fig. 1; Fig. 3 is a view similar to Fig. 1 but with some of the parts in section on the line 3-3, Fig. 2; Fig. 4 is a perspective view of the spreader, detached.

The shuttle-body 1 has a usual bobbin-receiving opening 2, and at one end thereof a longitudinal recess 3 is formed in the shuttle-body, to receive the jaw bases 4, formed by folding or bending a strip of spring-metal upon itself between its ends, the bases being bent outward at 5, and then extended nearly in parallelism to form the holding jaws 6, grooved on their inner faces at 7, all substantially as in the patent referred to. Each base has a hole 8 drilled therein for the reception of the usual transverse retaining bolt 9, headed at one end and at its other end provided with a retaining nut 10.

In the present invention the spreader is substantially U-shaped or staple-like, comprising a head 11 and parallel legs 12 extended at right angles therefrom, as clearly shown in Fig. 4, the thickness of the spreader being such that it can be pushed in between the jaw bases 4 to press them firmly against the side walls of the recess 3. The retaining bolt passes through the spreader between its legs 12, and the space or clearance between such legs is of a width considerably greater than the diameter of the bolt-holes 8, as clearly shown in Fig. 3. By this arrangement I obviate any engagement with or interference by a bur which may be present on the inner face of a jaw base, for the leg portions of the spreader are well clear of such bur and the spreader can be pushed in without any particular or special care so long as it straddles the bolt.

Obviously the time required to carefully aline the bolt-holes in the jaw bases with a corresponding bolt-hole in the spreader is altogether eliminated, whereas in the structure shown in the patent referred to this alining required considerable time and skill to effect, and not infrequently was greatly interfered with by the presence of a bur.

To facilitate the insertion of the spreader between the jaw bases I round the lower ends of the legs 12, as at 12*, Fig. 4, the convex surfaces thus presented operating with a wedging action to press the bases apart as the spreader is pushed or driven into place between them.

A bobbin guide is interposed between the jaws 6, consisting of an inclined metal plate 13 bent backward at its lower end at 14, Fig. 2, and extended under the jaw bases and spreader along the bottom of the recess 3, the upper end of the guide being also bent backward at 15 over the tops of the jaw bases and spreader and seated in a recess 16 in the shuttle-body, a screw 17 holding the guide in place. The guide shown herein is substantially as in United States Patent No. 538,507 granted to Draper April 30, 1895.

The spreader and jaws may be first assembled and inserted in the shuttle, which is the procedure most frequently adopted when the spreader has a bolt-hole, after which the guide is positioned in the shuttle, or the jaw bases can first be inserted in the recess 3 and then the spreader is forced into place, and should the spreader become slightly displaced in assembling the parts in either mode of procedure there will be no difficulty in inserting the retaining bolt 9, for it is only necessary to properly seat the jaw bases 4 in the recess 3 to bring the bolt-holes 8 opposite the hole bored in the shuttle-wood for the bolt. With a spreader having a bolt-hole any displacement of the spreader, no matter if very slight, would prevent the passage of the bolt, as will be apparent, even were no burs present on the jaw bases, and hence the usual practice is to insert the

spreader before placing the jaws in the shuttle. It is preferable, however, to insert the spreader after the jaws are placed in the shuttle, for then the spreader forces the jaw bases firmly against the sides of the recess 3 and this preferable mode of assembling can be adopted with my novel form of spreader.

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

A loom-shuttle having a bobbin-receiving opening and a longitudinal recess at one end thereof, opposed holding jaws formed by the free ends of a strip of spring-metal folded between its ends and seated in the recess, said folded portions having opposite bolt-holes, a substantially U-shaped spreader inserted between the folded portions of the strip, and a retaining bolt extended through the bolt-holes and the clearance in the spreader, the width of the clearance being materially greater than the diameter of the bolt-holes to obviate any catching of the bolt on the spreader.

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

EDWARD S. STIMPSON.

Witnesses:

C. W. PECKHAM,
E. D. OSGOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."