

UNITED STATES PATENT OFFICE.

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LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 702,672, dated June 17, 1902.

Application filed August 24, 1901. Serial No. 73,182. (No model.)

To all whom it may concern:

Be it known that I, IRA F. PECK, a citizen of the United States, residing at Warwick, in the county of Kent, State of Rhode Island, have invented a certain new and useful Improvement in Loom-Shuttles, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has relation more especially to what are termed "hand-threading" or "self-threading" loom-shuttles; and it consists more particularly in an improved means of mounting the threading-plate in connection with a shuttle-body and in an improved construction of parts, all as I will now proceed to explain with reference to the accompanying drawings, in which latter I have illustrated an embodiment of the invention.

In the drawings, Figure 1 is a plan view of portion of the length of a shuttle having the said embodiment of the invention applied thereto. Fig. 2 is a view thereof in side elevation. Fig. 3 is a view in longitudinal section on the vertical plane indicated by the dotted line 3 3 in Fig. 1, looking in the direction indicated by the arrows in the latter figure near the ends of the said line. Fig. 4 is a view in transverse section on the vertical plane indicated by the dotted line 4 4 in Fig. 1 looking in the direction indicated by the arrows adjacent the ends of the said line.

Having reference to the drawings, 1 designates the body of a loom-shuttle, and 2 the yarn-receiving cavity thereof, 3 being a bobbin carrying a yarn-load 4 and located within the cavity 2, as usual in practice.

5 is the usual delivery eye or educt in the side of the shuttle-body 1, it communicating with the threading-chamber 111, and 6 is the usual yarn-passage leading forward from the yarn-receiving cavity 2 and communicating, as usual, with the said threading-chamber 111, 7 being the slit which leads downwardly from the top of the shuttle-body and intersects the said yarn-passage 6, while 8 is the similar slit which intersects the delivery eye or educt 5.

9 is the threading-plate, it being located as heretofore at the upper side of the shuttle-body in juxtaposition to the threading-slits 7 and 8. This threading-plate may be in prac-

tice of any approved form and construction. Herein it is shown formed, as heretofore in some instances, with a horn 91, having the free extremity thereof shielded beneath an overhang 11, with which the forward portion of the shuttle-body, near the tip end thereof, is provided. In carrying my invention into effect the threading-plate 9 is formed or provided with a depending tubular boss or sleeve 92, (see more especially Fig. 3,) which preferably is screw-threaded interiorly.

10 is a tubular stud which is fitted to a vertical hole through the shuttle-body, as shown in Fig. 3, the lower end of this stud having a head or flange 10, preferably furnished with holes 101 101 to receive suitable pins or projections on a wrench or the like appliance for enabling the tubular stud 10 to be turned, the upper portion of the tubular stud, which extends upward through the threading-chamber at 111, preferably being screw-threaded exteriorly. The upper portion of the tubular stud 10 is entered within the depending tubular boss or sleeve 92 of the threading-plate 9, the parts being screwed together in the illustrated embodiment of the invention, so as thereby to secure the threading-plate in position upon the shuttle-body. The depending tubular boss or sleeve forms, with the tubular stud 10, an elongated joint, thereby giving strength and stability. For the purpose of preventing any possible loosening between the threading-plate and tubular stud 10 the upper end of the tubular stud, it being proportioned in length to project upward sufficiently for the purpose, is expanded or riveted, as shown in Fig. 3. To protect the expanded or riveted upper end of the tubular stud 10 from catching against warp-threads or the like during use, the threading-plate is countersunk, as shown, around the upper end of the opening through the tubular boss or sleeve to receive the expanded or headed-down portion of the tubular stud 10. In some cases the expanding or riveting of the upper end of the tubular stud may be relied upon wholly to fasten the parts in place and properly unite them, and the screw-threading of the tubular stud and depending sleeve may be dispensed with.

As shown in the drawings, the tubular stud 10 and depending tubular boss or sleeve 2 occupy in the threading-chamber 111 the position of the usual post around which the yarn changes its direction in leading to the delivery eye or educt 5. This enables them to be utilized for the purpose of said post. Preferably the fixed sleeve 92 is surrounded by a second sleeve 12, composed of any suitable material, which material may vary in character, according as it is desired to provide for withstanding the cutting effects of the issuing yarn or to create any required degree of tension therein. The sleeve 12 may be held without capacity for rotation, or it may be permitted to be rotated by hand from time to time to present new surfaces to the yarn as wear of the sleeve 12 takes place or even may be fitted with sufficient looseness to enable shifting thereof to occur during use without manual intervention.

I claim as my invention—

1. In a loom-shuttle, in combination, a shuttle-body having open yarn-passages, a threading-plate having a depending sleeve, and a tubular stud entering the said sleeve and having the entering end thereof expanded to thereby secure the threading-plate to the shuttle-body, the said sleeve forming with said tubular stud an elongated joint, thereby giving strength and stability, substantially as described.

2. In a loom-shuttle, in combination, the shuttle-body having the open yarn-passages, the threading-plate having the screw-threaded depending sleeve, and the tubular stud entering the said sleeve and screw-threaded to engage therewith, the said stud having its

entering end expanded to secure the parts against loosening, substantially as described.

3. In a loom-shuttle, in combination, a shuttle-body having open yarn-passages, a threading-plate having a depending sleeve, a tubular stud entering the said sleeve and having the entering end thereof expanded to thereby secure the threading-plate to the shuttle-body, and the sleeve 12 surrounding the said depending sleeve, substantially as described.

4. In a loom-shuttle, in combination, the shuttle-body having the open yarn-passages, the threading-plate having the screw-threaded depending sleeve, the tubular stud entering the said sleeve and screw-threaded to engage therewith, the said stud having its entering end expanded to secure the parts against loosening, and the sleeve 12 surrounding the said depending sleeve, substantially as described.

5. In a loom-shuttle, in combination, a shuttle-body having open yarn-passages, a threading-plate having a depending screw-threaded sleeve, a stud in screw-threaded engagement with the said sleeve and forming therewith an elongated joint giving strength and stability, and a second sleeve as 12 surrounding the said parts, the yarn making contact with the sleeve 12 in its path as it issues from the shuttle, substantially as described.

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

IRA F. PECK.

Witnesses:

CHAS. F. RANDALL,

WILLIAM A. COPELAND.