

H. M. BROWN.
 LOOM SHUTTLE.
 APPLICATION FILED JUNE 19, 1908.

967,606.

Patented Aug. 16, 1910.

Fig. 1.

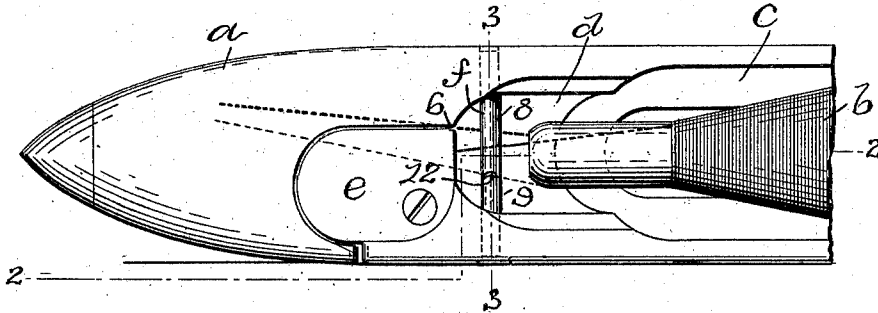


Fig. 2.

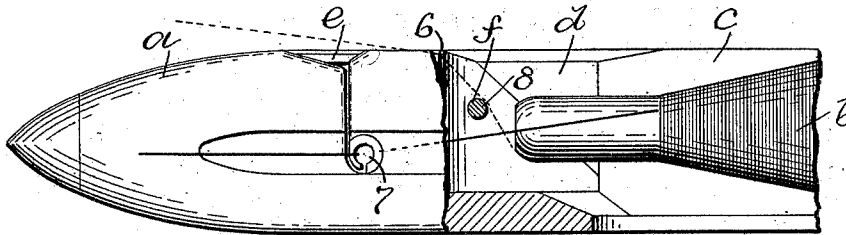
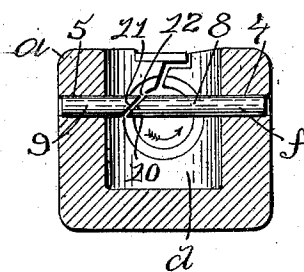


Fig. 3.



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LOOM-SHUTTLE.

967,606.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed June 19, 1908. Serial No. 439,345.

To all whom it may concern:

Be it known that I, HENRY MARTIN BROWN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Loom-Shuttles, of which the following is a specification.

This invention has reference to an improvement in shuttles and more particularly to an improvement in hand threading loom shuttles.

In threading loom shuttles by hand the thread is first pulled from the bobbin over the hand threading mechanism. As usually constructed the threading mechanism requires that the thread be depressed between the end of the bobbin and the threading mechanism so as to bring the thread into the threading mechanism. In weaving, particularly in high speed looms, the thread balloons at the end of the bobbin in the shuttle, thereby forming a slack thread between the end of the bobbin and the threading mechanism and this slack thread is liable to and is at times on the back throw of the shuttle, thrown out of the shuttle in the form of a loop, which on the next throw of the shuttle, is drawn through the threading mechanism and forms an imperfection in the cloth.

The object of my invention is to provide a hand threading loom shuttle with a simple, durable and inexpensive device adapted to automatically depress the thread into a position to enter the threading mechanism, thereby obviating the necessity of depressing the thread by hand, also the said device being placed between the end of the bobbin and the threading mechanism prevents the excessive ballooning of the thread and acts as a tension device on the thread.

My invention consists in the peculiar and novel construction of an auxiliary threading device adapted to be applied to any form of hand threading loom shuttle to facilitate the threading of the shuttle, to prevent excessive ballooning of the thread in the shuttle and to act as a tension device on the thread, said auxiliary threading device having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a top plan view of the thread delivery end of a hand threading loom shuttle provided with my improved auxiliary threading device. Fig. 2 is a longitudinal

sectional view through the delivery end of the shuttle, taken on line 2 2 of Fig. 1, and Fig. 3 is a transverse sectional view through the shuttle taken on line 3 3 of Fig. 1.

In the drawings, *a* indicates the thread delivery end of a loom shuttle, *b* the bobbin, *c* the bobbin cavity, *d* the throat, *e* the hand threading mechanism which may be any one of the usual constructions, and *f* the auxiliary threading device located in the throat intermediate the end of the bobbin *b* and the threading mechanism *e*. The shuttle has the transverse holes 4 and 5 extending through the side walls on a line with each other into the throat *d* and preferably centrally between the end of the bobbin *b* and the threading mechanism *e* and slightly above the center line of the bobbin. The threading mechanism *e* has the entrance opening 6 for the thread which is manipulated by hand through the threading mechanism *e* to bring the thread out of the eye 7 in the side of the shuttle.

The auxiliary threading device *f* consists of a round pin 8 having a beveled end 10, and a round pin 9 having a beveled end 11. The pin 8 is driven through the hole 4 in the side of the shuttle into the throat *d* in a position to bring the face of the beveled end 10 upward and adjacent the delivery eye side of the shuttle and the pin 9 is driven through the hole 5 in the delivery eye side of the shuttle into the throat *d* in a position to bring the face of the beveled end 11 downward and over the beveled end of the pin 8, thereby forming an off center inclined slit 12 between the beveled ends of the pins, which extends downward toward the delivery eye side of the shuttle, as shown in Figs. 1 and 3.

In the operation of my improved auxiliary threading device the thread in threading the shuttle by hand is pulled off the end of the bobbin over the auxiliary threading device *f* and over the threading mechanism *e*, as shown in light broken lines in Figs. 1 and 2. The thread as it is pulled from the bobbin whips around the end of the bobbin in the direction of the arrow shown in Fig. 3 and catches in the slit 12 in the auxiliary threading device *f* and passes downward through the slit to the underside of the pin 8. The thread is now depressed or forced downward by the pin 8 in the throat *d* and into the entrance opening 6 of the threading

mechanism *e*, as shown in heavy dotted lines in Fig. 1, from which point the thread is easily and quickly manipulated through the threading mechanism and out of the delivery eye 7 to thread the shuttle. The auxiliary threading device being placed between the end of the bobbin *b* and the threading mechanism *e* with the thread under the same prevents excessive ballooning of the thread, thereby eliminating the liability of loops or knots forming in the thread and also exerts a slight friction or tension on the thread.

It is evident that the pin 9 in the auxiliary threading device *f* may be dispensed with and that the construction of the auxiliary threading device may be varied within wide limits without materially affecting the spirit of my invention.

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

1. In a hand threading loom shuttle, a guide eye, an auxiliary threading device consisting of a pin having a beveled end driven transversely through the wall of the shuttle in a position to bring the face of the beveled end upward and beyond the center line of the shuttle and intermediate the

end of the bobbin and the guide eye, and a pin having a beveled end driven through the opposite wall of the shuttle in a position to bring the beveled end over the beveled end of the first pin and form a slit between the ends of the pins extending downward at an angle from the center line of the shuttle.

2. The combination with a hand threading loom shuttle having a bobbin cavity *c*, a throat *d*, and a threading mechanism *e*, of an auxiliary threading device *f* consisting of a pin 8 having a beveled end driven through the side of the shuttle into the throat *d*, and a pin 9 having a beveled end driven through the opposite wall of the shuttle into the throat *d* in a position for the beveled end 11 to overlap the beveled end 10 on the pin 8 and form an inclined slit between the beveled ends of the pins, as described.

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

H. MARTIN BROWN.

Witnesses:

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WM. G. HODGES.