

J. B. & E. H. DAUDELIN.
HAND THREADING SHUTTLE.
APPLICATION FILED JAN. 12, 1911.

1,048,662.

Patented Dec. 31, 1912.

FIG. 1

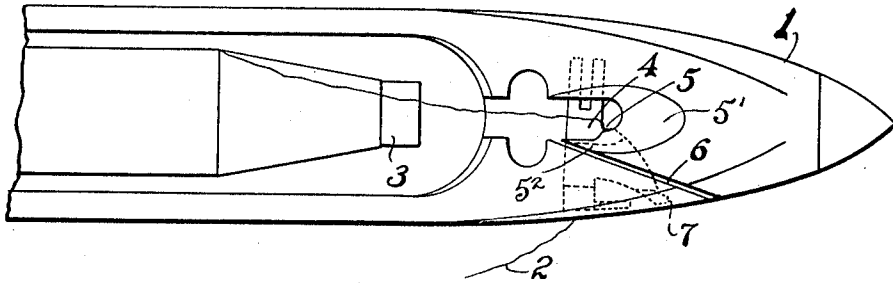


FIG. 2

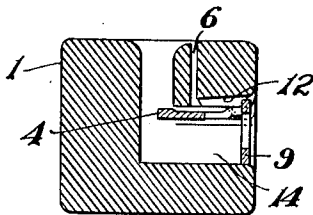
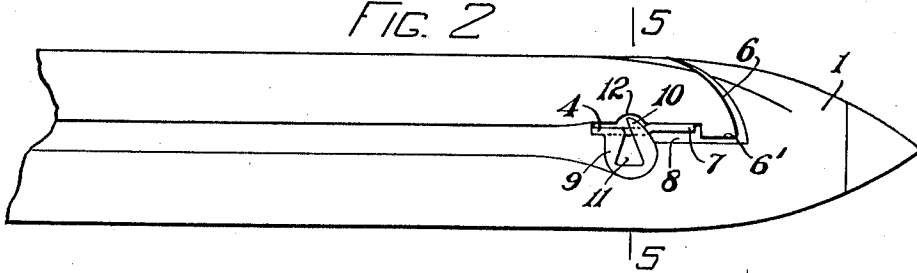


FIG. 5

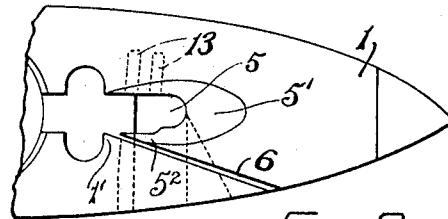


FIG. 3

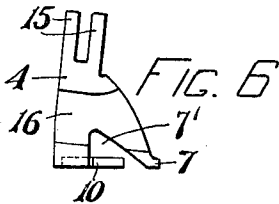


FIG. 6

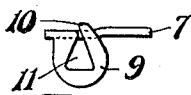


FIG. 7

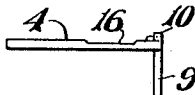


FIG. 8

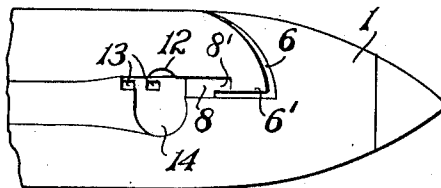


FIG. 4

WITNESSES

A. T. Palmer
R. B. Ellms.

INVENTORS

Jean B. Daudelin
Eusebe H. Daudelin.

BY

Ellis Spear

ATTY.

UNITED STATES PATENT OFFICE.

JEAN BAPTISTE DAUDELIN AND EUSEBE H. DAUDELIN, OF FALL RIVER,
MASSACHUSETTS.

HAND-THREADING SHUTTLE.

1,048,662.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed January 12, 1911. Serial No. 602,221.

To all whom it may concern:

Be it known that we, JEAN BAPTISTE DAUDELIN and EUSEBE H. DAUDELIN, citizens of the United States, residing at Fall River, county of Bristol, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Hand-Threading Shuttles, of which the following is a specification.

Our present invention relates to certain improvements in the development of the so called hand threading shuttle, and particularly to the guarding of the thread within the threading eye in such a manner that it may be easily lodged therein but that when once lodged it may not be dislodged or the shuttle unthreaded accidentally while the shuttle is running in the loom. This general feature, together with various other improvements in the form, construction and arrangement of the parts, constitutes the subject matter of this invention which we will more fully describe in the specification which follows.

In the drawings which form a part of the invention like reference numerals are employed to indicate corresponding parts and in the drawings Figure 1 is a plan view of the threading end of a shuttle constructed in accordance with our invention. Fig. 2 is a side view of the same. Fig. 3 is a view corresponding to Fig. 1, but with the plate removed. Fig. 4 is a view corresponding to Fig. 2, but also showing the plate removed. Fig. 5 is a section on the line 5-5, Fig. 2. Fig. 6 is a plan view of our improved plate. Fig. 7 is a side view of the same, and Fig. 8 an edge view looking from the side nearest the bobbin chamber.

The shuttle body 1 is provided with the ordinary bobbin recess, in which the bobbin 3 is located and from which the thread 2 is drawn.

A transverse eye 14 extends from a central point laterally, according to whether the shuttle is to be right or left handed.

A threading slot 6 is cut diagonally across the end of the shuttle, beginning just at the rear of the threading eye, and connects with a rearwardly extending slot 8 which leads back into an eye 14.

Between the main body of the slot 8 and the downwardly disposed threading slot 6 there is left a point 6' which is recessed out at 8' to receive the forward tip 7 of a trans-

verse plate 4. This plate 4, as will be seen in Fig. 6, has a substantially straight rear edge, but, has its forward edge sloped up to the point 7. Back of the point 7 it is recessed out, as indicated at 7', to receive the point 10 of a hook 9 which is formed on the outer end of the shuttle.

On the opposite end the plate 4 is provided with a pair of pins 15 which are adapted to be driven into holes 13 for maintaining the plate in position within the shuttle.

The plate is slightly channeled, as indicated at 16, to assure a proper channel for the thread between its upper surface and the upper wall of the slot 8. This plate may be preferably made in one piece from flat stock with the hook 9 bent up at right angles. On the upper side of the eye 14 we gouge out a channel 12 extending back to the vertical threading slot 6. The point 10 extends up within this recess 12, thus, while permitting the thread to freely pass over, it acts as a hooked guard to prevent the escape of the thread.

When the plate 4 is assembled within the shuttle, as will be seen by reference to Fig. 1, the lower end of the incline on the forward edge of the plate lies just at the edge of the opening 5. This opening 5, when the plate 4 is in place, constitutes the only directly exposed portion of the threading passages in the shuttle. The edges of the opening 5 are beveled down, as at 5', so that the lip 5² formed on the inner end of the slot 6, lies behind the shoulder 1' and at the same time is lower than the upper surface of the shuttle. This guards the point 5² against damage and keeps it from being split off in running in the loom.

In threading our shuttle, the thread 2 is first drawn directly forward and downward through the slot 6. Upon reaching the bottom of the slot 6 it comes into contact with the channel 16 of the plate 4. Upon the rearward motion of the thread, after passing the point 6', it runs back along the incline of the forward edge of the plate 4 at the same time that it enters the recess 7' at the outer end of the plate. By the time the thread is lodged in the opening 5 at the base of the incline of the forward edge, it comes into contact with the front side of the hook 6 and, riding over the tip 10 through the groove 12, it finally lands in the eye 11,

so that it draws directly through the opening 5, out through the eye 14, inside of the inclosure 11 of the hook 9. In this position it is perfectly free to run and is, nevertheless, safely guarded against any dethreading action.

Various modifications may, of course, be made in the form of the plate and in the arrangement of the threading channels, all without departing from the spirit of our invention if within the limit of the appended claims.

What we, therefore, claim and desire to secure by Letters Patent is:—

1. In a shuttle of the class described having a bobbin chamber including a delivery eye, a transverse threading passage leading therefrom and a vertical threading slot cut down across said passage, a plate set across the intersection of said slot and passage with one edge crossing said intersection and having a spaced passage between its upper face and the shuttle body extending from said intersection back to the bobbin chamber, there being a free space below said plate for the travel of the thread back to the said delivery eye.

2. In a shuttle of the class described having a bobbin chamber including a delivery eye, a transverse threading passage leading therefrom and a vertical threading slot cut down across said passage, a plate set across the intersection of said slot and passage with one edge crossing said intersection and having a spaced passage between its upper face and the shuttle body extending from said intersection back to the bobbin chamber, there being a free space below said plate for the travel of the thread back to the said delivery eye and means for preventing the escape of the thread from the threading eye.

3. In a shuttle of the class described having a bobbin chamber including a delivery eye, a transverse threading passage leading therefrom and a vertical threading slot cut down diagonally across said passage, a plate set across the intersection of said slot and passage with one edge crossing said intersection and having a spaced passage between its upper face and the shuttle body extending from said intersection back to the bobbin chamber, there being a free space below said plate for the travel of the thread back to the said delivery eye and a hook having an upturned point formed on said plate and bent down to encircle the mouth of said delivery eye for preventing the escape of the thread from said eye.

4. In a shuttle of the class described having a bobbin chamber, a transverse delivery opening including a delivery eye leading therefrom and a threading slot leading into said delivery opening, a plate set transversely in said delivery opening and having its forward edge extending from said bob-

bin chamber to the outer end of said delivery slot, said plate having a passage between its upper surface and the upper wall of the transverse recess and extending said slot to said bobbin chamber and said plate having, on its lower side, a passage between its lower face and the lower wall of the said transverse recess and extending from said bobbin chamber to the outside of the shuttle body, and a depending hook formed integral with said plate and bent down at right angles thereto and inclosing said delivery eye, the point of said hook extending upwardly into a transverse groove in the upper wall of said delivery eye.

5. In a shuttle of the class described having a bobbin chamber, a transverse delivery opening including a delivery eye leading therefrom and a threading slot leading into said delivery opening and forming a point therewith, a plate set transversely in said delivery opening and having its forward edge extending from said bobbin chamber behind said point of said delivery slot so as to be covered by the same, said plate having a passage between its upper surface and the upper wall of the transverse recess and extending from said slot to said bobbin chamber and said plate having, on its lower side, a passage between its lower face and the lower wall of the said transverse recess and extending from said bobbin chamber to the outside of the shuttle body, and a depending hook formed integral with said plate and bent down at right angles thereto and inclosing a triangular space having its base in the line of travel of the shuttle, the point of said hook extending upwardly into a transverse groove in the upper wall of said delivery eye.

6. In a shuttle of the class described having a bobbin chamber, a transverse delivery opening and a threading slot leading into said delivery opening, a longitudinally disposed plate set in said delivery opening and having a downwardly disposed hook having its tip upturned and disposed within a recess in the edge of said plate.

7. In a shuttle of the class described having a bobbin chamber, a transverse delivery opening and a threading slot leading into said delivery opening, a longitudinally disposed plate set in said delivery opening and having a downwardly disposed hook having its tip upturned and disposed within a recess in the edge of said plate, said shuttle having a groove on the upper wall of said delivery eye to receive the point of said hook.

8. In a shuttle of the class described having a bobbin chamber and a delivery eye, a transverse threading passage leading from said eye and a threading slot cut down across said passage, a plate set in said passage and having its free edge inclined and extending across said slot, said plate having a spaced

passage formed between its upper surface and the shuttle body and there being a free space in said transverse slot below said slot for the travel of the thread back into the delivery eye.

9. In a shuttle of the class described having a bobbin chamber, a delivery eye and a transverse threading passage intersecting said eye, a vertical threading slot cut down across said passage, a plate set against the upper wall of said transverse threading passage and having a portion projecting beyond said delivery eye, said projecting portion having a guiding edge extending back adjacent to said bobbin chamber to guide the thread in it after it has passed the point back into the transverse plane of the delivery eye.

10. In a shuttle of the class described having a bobbin chamber, a delivery eye, a transverse threading passage leading from said eye and a threading slot cut down across said passage, a plate set against the upper wall of said passage and having a notch on its forward edge exposed in said bobbin chamber, said plate having a portion projecting beyond said delivery eye, said

projecting portion having a guiding edge extending back to said notch exposed in the bobbin chamber to guide the thread in it after it has passed the point back into the transverse plane of the delivery eye.

11. In a shuttle of the class described having a bobbin chamber, a delivery eye, a transverse threading passage leading from said eye and a threading slot cut down across said passage, a plate set against the upper wall of said passage and a notch on the forward edge of said plate and exposed in said bobbin chamber, a forwardly turned hook on the side of said plate having a covered point and disposed in said delivery eye, said plate being advanced in a forwardly projecting point beyond said delivery eye and having an inclined guiding edge extending from said forwardly projecting point to said notch.

In testimony whereof, we affix our signatures in presence of two witnesses.

JEAN BAPTISTE DAUDELIN.

EUSEBE H. DAUDELIN.

Witnesses:

GEO. T. DESJARDIN,

FRANÇOIS X. LE BARRY.