

R. N. ALLEN.

SHUTTLE.

APPLICATION FILED SEPT. 16, 1911.

1,033,516.

Patented July 23, 1912.

Fig. 1.

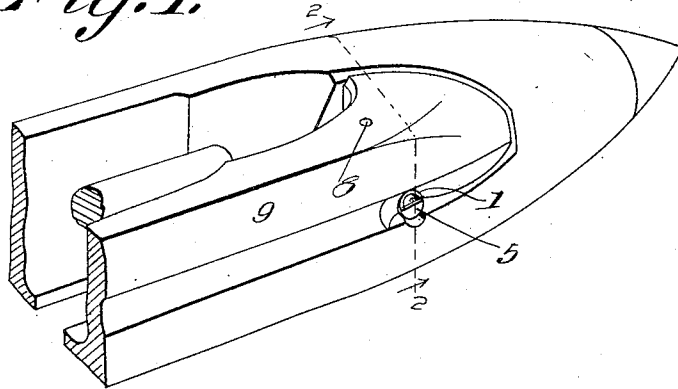


Fig. 4.

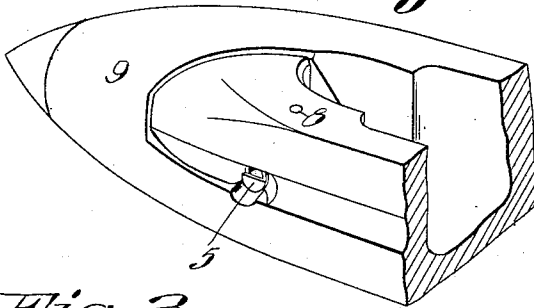


Fig. 2.

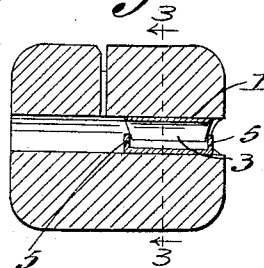


Fig. 3.

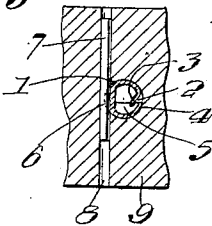


Fig. 5.

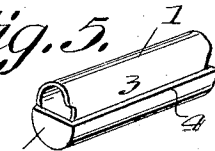


Fig. 6.

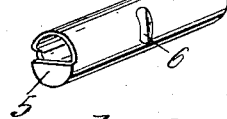


Fig. 7.

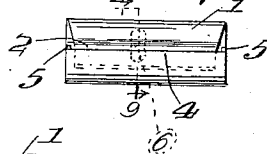


Fig. 9.

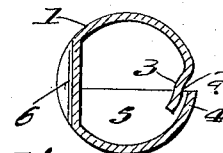
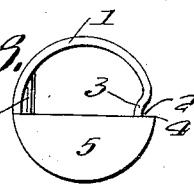


Fig. 8.



WITNESSES

Ada E. Harty
Emmett Smith

INVENTOR

Robert N. Allen
Joseph A. Miller
Attorney

UNITED STATES PATENT OFFICE.

ROBERT N. ALLEN, OF METHUEN, MASSACHUSETTS, ASSIGNOR TO U. S. BOBBIN & SHUTTLE CO., OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF NEW JERSEY.

SHUTTLE.

1,033,516.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed September 16, 1911. Serial No. 649,730.

To all whom it may concern:

Be it known that I, ROBERT N. ALLEN, a citizen of the United States, residing at Methuen, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Shuttles, of which the following is a specification.

This invention pertains to certain new and useful improvements in shuttles and relates more particularly to an improved hand threading eye for the shuttle.

The primary object of the invention is to provide a hand threading eye which may be readily used for either right or left hand shuttles, and to also simplify, improve and increase the durability of the threading eyes.

Further and other objects will later appear and manifest themselves.

In the drawings, Figure 1 is a fragmentary perspective view of a shuttle having the present invention applied thereto. Fig. 2 is a section taken on the line 2—2 of Fig. 1. Fig. 3 is a section taken on the line 3—3 of Fig. 2. Fig. 4 is a view similar to Fig. 1, showing the invention applied to a left hand shuttle. Fig. 5 is a perspective view of the eye in detached position. Fig. 6 is a similar view of the rear side of the eye. Fig. 7 is a front elevation of the eye. Fig. 8 is an enlarged end elevation, and Fig. 9 is an enlarged sectional view taken on the line 9—9 of Fig. 7.

In proceeding according to the present invention, the eye 1 is formed to have a substantial cylindrical shape, the same being constructed of a sheet of metal which is given a circular cross section, as depicted in Fig. 9 of the drawings. The eye is in the form, however, of an incomplete circle, whereby a thread slot 2 which extends longitudinally of the eye is provided. An end 3 of the material from which the eye is formed is projected or extended so as to be disposed below and in overlapping relation to the free end 4 of the opposite edge of the material from which the eye is formed or made. By this extension or projection of a portion of the eye over the thread slot thereof, it will be obvious that the thread will be effectively held from becoming accidentally disengaged from the eye. Each end of the eye is closed by means of a wall

5, which walls are in the form of a segment, and have their upper faces extending flush with the top edge of the wall 4. The wall 3 is cut-away at its ends so that the free end portion of the same is of less length than that of the wall 4, as depicted in Figs. 2, 5 and 7 of the drawings. The back wall of the eye is provided with a concave or socketed portion 6 which extends at right angles to the longitudinal axis of the eye, for the purpose of receiving a securing pin 7, which is driven in a transverse opening 8, provided therefor in the shuttle 9, whereby the eye is held in position in the shuttle.

In operation the thread is moved downwardly to enter the thread slot 2, same being passed under the free edge of the wall 3, and having portions thereof seating on the upper edges of the end walls 5 of the eye 1, as will be obvious. The thread will be normally held by the end walls 5, above the thread slot 2, and also above the free edge of the wall 3, which latter the thread must of necessity pass, prior to its being capable of leaving the slot 2, which is apparent from the inspection of the drawings.

Furthermore, as seen in Figs. 1 and 4, of the drawings the eye may be used either with a left or right hand shuttle, owing to the fact that the ends of the eye are identical duplicates of each other. The eye is simple and economical in construction and can be readily positioned.

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

1. In a shuttle, an eye formed in the shape of an incomplete circle, the end walls of which eye are disposed so that the upper wall overlaps the lower wall to form a thread passage, a segmental plate at each end of said eye, the upper edge of each plate extending above said passage, the upper wall of the eye having its ends reduced or cut-away so as to permit the upper wall to be received between said end plates, and a concave pin seat extending transversely across the back of said eye.

2. An eye for shuttles formed in the shape of a cylinder which in cross section is in the form of an incomplete circle, the upper wall of the eye overlapping the lower wall thereof, and a member at each end of

the cylinder, each member having one end
connected to the lower wall and its opposite
end connected to the rear wall of the cyl-
inder, the upper faces of the members ex-
5 tending substantially flush with the free
edge of the lower wall.

In testimony whereof I have signed my

name to this specification in the presence
of two subscribing witnesses.

ROBERT N. ALLEN.

Witnesses:

GRACE M. DENNETT,
ALBION G. PEIRCE.

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