M. GOULET.

LOOM SHUTTLE.

APPLICATION FILED APR. 27, 1910.

999,447. **Patented Aug. 1, 1911.**

Fig. 1.

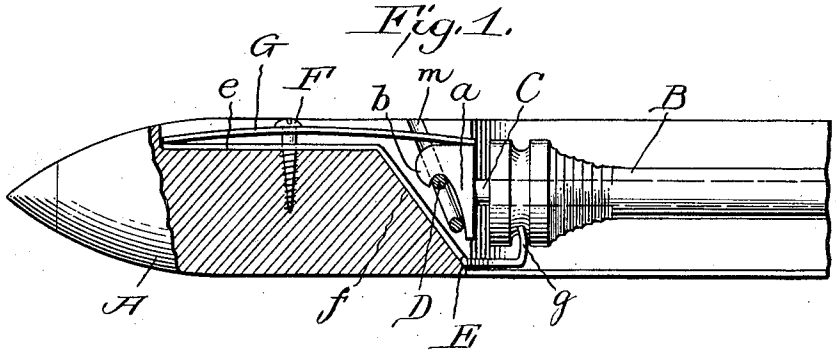

Fig. 2.

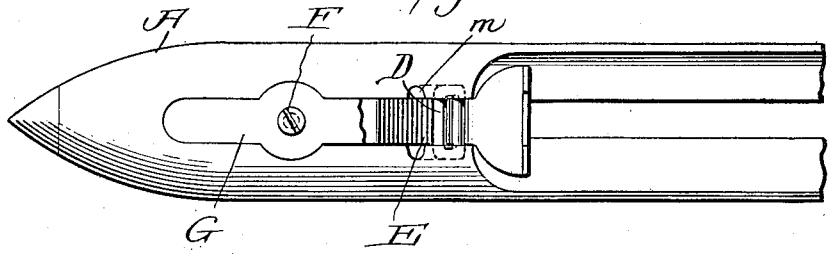

Fig. 3.

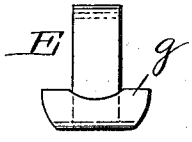

Fig. 4.

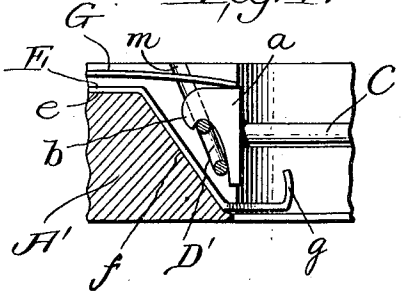

Fig. 5.

Inventor

M. Goulet,

Witnesses

Oliver W. Holmes

N. C. Healy

By James L. Norris & Co.,

Attorney

UNITED STATES PATENT OFFICE.

MOSES GOULET, OF NORTHBRIDGE, MASSACHUSETTS.

LOOM-SHUTTLE.

999,447. Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed April 27, 1910. Serial No. 557,992.

To all whom it may concern:

Be it known that I, MOSES GOULET, citizen of the United States, residing at Northbridge, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Loom-Shuttles, of which the following is a specification.

My present invention has to do with loom shuttles; and it aims to provide a shuttle constructed in such manner that either a "cop" cotton bobbin or a small silk bobbin can be used to advantage therein without any alteration whatever in the parts of the shuttle.

The novelty, utility and practical advantages of the several parts of the shuttle will be fully understood from the following description and claim when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a longitudinal vertical section of so much of a shuttle as is necessary to illustrate my invention; the spindle supporter being shown in elevation. Fig. 2 is a plan view of the same, with the bobbin and spindle removed, and the spring plate partly broken away. Fig. 3 is an elevation of the forward end of the bobbin supporter. Fig. 4 is a detail view showing the spindle supporter in vertical section. Fig. 5 is a detail view of the spindle-supporter.

Referring by letter to the said drawings, A is a shuttle body which is recessed to the slight extent illustrated to receive the parts of my improvements, but is not appreciably weakened.

B is a circumferentially grooved bobbin.

C is a spindle having a head *a* on which is a hook *b*, and D′ is the spindle-supporter. The spindle supporter D′ is formed by an open loop which is dropped in grooves *m* formed in the inner sides of the side walls of the recess in the shuttle body A. The upper transverse bar of the said open loop serves for the engagement of the hook on the spindle head, while the lower transverse bar of the loop forms a rest for the lower portion of the spindle head and holds the same away from the bobbin support, hereinafter described, with a view to preventing wear. It will also be here noted that the manner described of supporting the spindle permits of the same being expeditiously and easily removed and as readily replaced, when occasion demands.

E is the bobbin support. This comprises a shank which rests against the horizontal wall *e* and the inclined wall *f* of the recess in the shuttle body and is connected to said body through the medium of the screw F, and a claw *g* which rises from the forwardly-extended and unsupported portion of the shank, and is shaped as best shown in Figs. 2 and 3 in order to receive the circumferentially-grooved portion of the bobbin B. Because of this provision the bobbin is obviously held against slipping off the spindle and is also held against undue endwise movement on the spindle while the shuttle is in operation in a loom.

G is a spring plate. This plate is superposed on the horizontal portion of the shank of the bobbin support E, and secured in position by the screw F, and it serves to exert downward pressure on the spindle head and thereby yieldingly retain the same in the working position shown.

It will be gathered from the foregoing that the bobbin, which is preferably for silk yarn, may be placed on the spindle C in the usual manner. Then when the spindle and the bobbin thereon are moved to the position shown in Fig. 1, the circumferential groove in the bobbin base will assume a position in the holding claw of the bobbin-support E, whereupon the bobbin will be held firmly and securely and will be prevented from vibrating laterally. This will be appreciated as an important advantage when it is borne in mind that the tendency of such vibrations which are common in the use of silk shuttles extant, is to disturb and impair the tension of the silk or cotton yarn and make poor weaving. It will also be gathered that a cotton bobbin can be used with the same advantages as a silk bobbin.

In addition to the practical advantages hereinbefore ascribed to my novel shuttle, it will be noted that the construction as a whole is simple and well adapted to withstand the usage to which shuttle adjuncts are ordinarily subjected; and it will also be noted that all of the parts are applied in such manner that the shuttle body is not materially weakened, and that the bobbin and spindle may be moved together to the position in which the bobbin can be readily removed, and that when desired the spindle also can be expeditiously and easily removed from the shuttle body without the assistance of implements. It will further be noted

that there are no transverse pins employed and hence no liability of a pin working out and causing damage during the use of the shuttle.

While I show a hook on the spindle head I do not desire to be understood as confining myself to the use of the same, inasmuch as the head may be supported by the upper bar of the spindle supporter in any manner consonant with the purpose of my invention.

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

In a loom shuttle, the combination of a shuttle body having a recess provided with a horizontal wall and a wall extending downward from the inner end of the horizontal wall and also having grooves in the inner sides of the side walls of the inner portion of said recess, a bobbin support having a shank resting against the said walls of the recess in the shuttle body and extending forward from the downwardly extending wall, at a point above and adjacent the bottom of the shuttle body, and also having an upstanding claw on said forwardly extended portion of the shank, an open-loop-spindle-supporter dropped in the said grooves and having upper and lower transverse bars; the lower bar being in a plane parallel to and back of the plane in which the upper bar is located, a spindle having a head which bears against the lower transverse bar and is supported by the upper transverse bar, a spring plate disposed above the shank of the bobbin support and bearing at its inner end on the spindle head, and a screw extending through said spring plate and the shank of the bobbin support and into the shuttle body below the horizontal portion of the recess.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MOSES GOULET.

Witnesses:
EVELYN W. SPAULDING,
EDGAR L. SPAULDING.