(No Model.)

S. M. HAMBLIN.

LOOM SHUTTLE.

No. 501,781. Patented July 18, 1893.

Fig. 1.

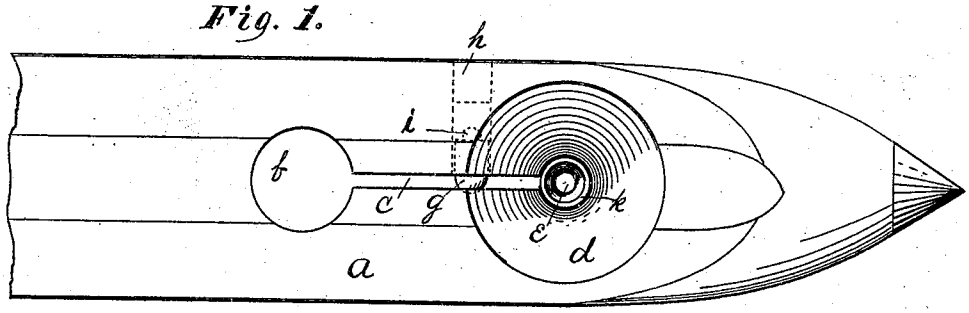


Fig. 2.

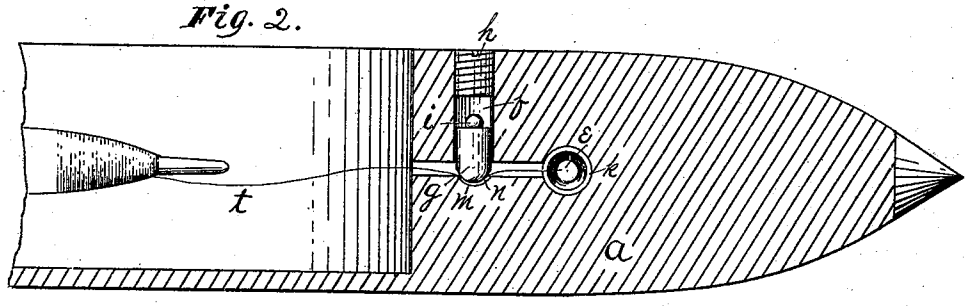


Fig. 3.

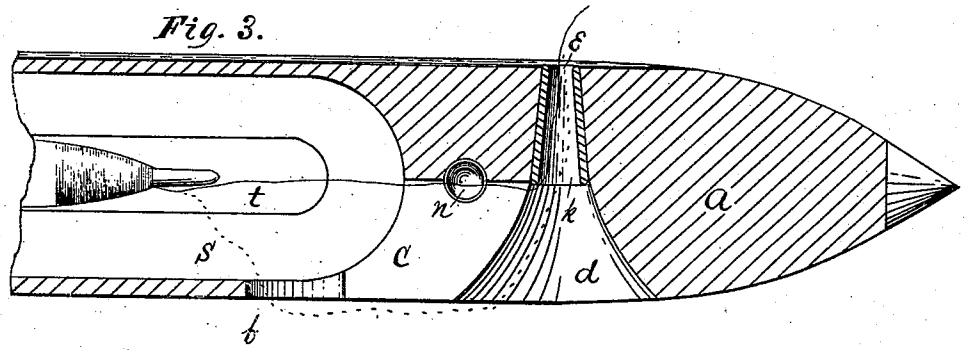


Fig. 4.



Witnesses
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LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 501,781, dated July 18, 1893.

Application filed February 20, 1893. Serial No. 462,994. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN M. HAMBLIN, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Loom-Shuttles, of which the following is a specification.

My invention relates to that particular kind of loom shuttles, in which the head of the shuttle body is provided with a horizontal opening therethrough, in line and continuous with the delivery eye, said opening being connected by a horizontal tread way in line with the shuttle spindle, with an opening in the side of the spindle cavity, adapted to have the thread from the bobbin, passed therethrough.

The object of my invention, is to provide such a shuttle, with means, whereby any desired degree of tension may be exerted on the thread from the bobbin, as it is being drawn through the delivery eye.

The accompanying drawings illustrate my invention, in which—

Figure 1, represents a view of the back side of the head of a shuttle body provided with my improvements, showing the same, in dotted lines. Fig. 2. represents a view of the same in perpendicular longitudinal section, through the center, showing the tension device in full. Fig. 3. represents a view of the shuttle head, in horizontal, longitudinal section through the center, and Fig. 4. represents a view in perpendicular section, of the weight which produces the tension.

Similar letters refer to similar parts in the several views.

a, represents the head of a shuttle body, having an opening *b*, in the side of the spindle cavity, of a sufficient size to readily admit of putting the thread from the bobbin through it by the fingers.

d, is a funnel shaped opening in the side of the shuttle head *a*, opposite to, and in line with the delivery eye, reaching to and connecting with the bushing of the delivery eye, and of a size to readily admit the thumb and index finger of the operative.

k, is a tapering tube or bushing, with its small or outside end, forming the delivery eye of the shuttle, and its large end, meeting and coinciding with the inner end of the opening *d;* as clearly shown in Fig. 3.

c, represents a horizontal thread way connecting the openings *b*. and *d*, and reaching to the central line of the shuttle.

f, is a perpendicular opening in the top of the shuttle head, just in rear of the inner end of the tube *k*, and extending to the bottom of the thread way *c*, where it ends in a concavity *m*, in which, is preferably secured, a bit of felt *n*.

g, is a weight, composed of porcelain, wood or other suitable material, having straight sides, fitting loosely in the opening *f*, and having its lower end *l*, slightly rounded, and its upper end *o*, concaved.

h, is a screw-plug adapted to be removed from the opening *f*, when desired; and serves to retain the weight *g*. in the opening *f*.

In operation, the thread *t*, from the bobbin is carried through the opening *b*, and then put through the opening *d*, and the tapered tube *k*, in the direction of the dotted line *s*, by the fingers of the operative, and when pulled through, draws into the thread way *c*, and under the rounded end of the weight *g;* and as the shuttle passes back and forth in the loom, a constant and even pressure or tension, is exerted on the thread by said weight. When it is desired to give a greater tension to the thread than the weight *g*. would produce, the screw plug *h*, is removed, and a ball *i*, of the required weight, is placed on the concaved end *o*, of the weight *g*, and the plug *h*, replaced.

If a less degree of tension is desired, the weight *g*. is removed, and replaced with a lighter one.

I claim—

In a loom shuttle, the combination of the body having a horizontal opening in the side of its head, in line with, and connecting with the delivery eye; and having a horizontal thread way, in line with the spindle, connecting said opening with an opening in the side of the spindle cavity, adapted to have the thread from the bobbin, passed therethrough; and having a perpendicular opening in the top of said shuttle head, connecting with said

thread way, in the track of the thread from the bobbin; a weight, having straight sides and a slightly rounded bottom, loosely inclosed in said perpendicular opening, and adapted to rest on and give tension to said thread by its gravity, when said thread is being drawn from the bobbin through the delivery eye of the shuttle; and a removable screw plug in the top of said perpendicular opening, whereby the inclosed weight may be increased or diminished, and the tension regulated, substantially as shown and described.

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Witnesses:
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