(No Model.)

L. GODDU.

LOOM SHUTTLE.

No. 344,369. Patented June 29, 1886.

Fig: 1.

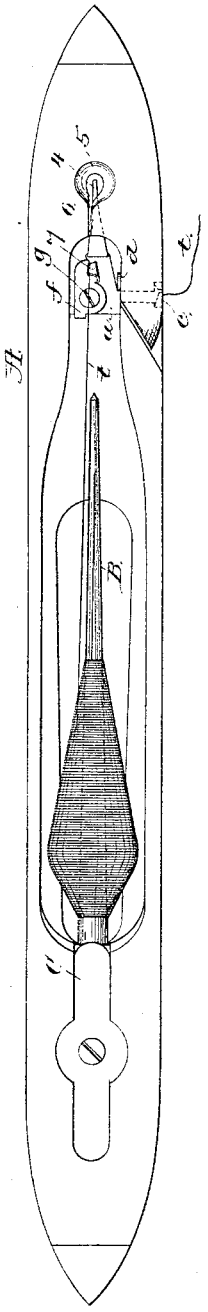


Fig: 2.

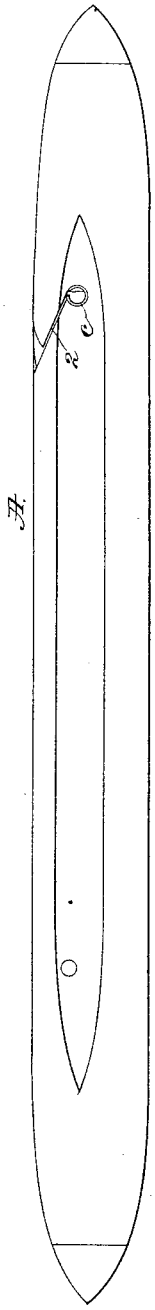


Fig: 4.

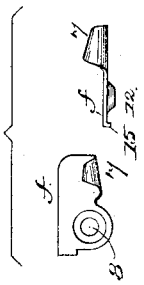
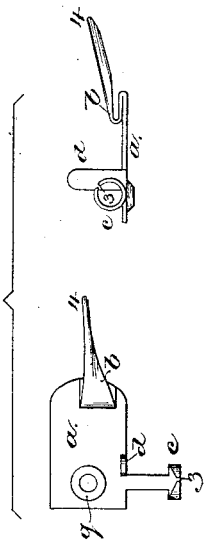


Fig: 3



Witnesses.
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John F. C. Brinkerhoff

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UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF WINCHESTER, MASSACHUSETTS.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 344,369, dated June 29, 1886.

Application filed December 12, 1884. Serial No. 150,171. (No model.)

To all whom it may concern:

Be it known that I, LOUIS GODDU, of Winchester, county of Middlesex, State of Massachusetts, have invented an Improvement in Loom-Shuttles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is embodied in a shuttle of the class known as "self-threading;" and it consists, more especially, of improvements in the tension-regulating mechanism for the thread, and in the device for guiding and delivering the thread from the shuttle, as will be described, and specifically pointed out in the claims.

Figure 1 is a top view of a shuttle embodying my invention; Fig. 2, a side view thereof; Fig. 3, a top view and side elevation of the plate containing the drawing-off post and the delivery-eye, and Fig. 4 similar views of the movable member of the tension-regulating device.

The body A of the shuttle, spindle B, and spring C are and may be as usual. The shuttle-body, in front of the spindle-point, is cut away to receive the plate *a*, which, as shown, has integral with it the drawing-off post *b*, the thread-delivery eye *c*, and the guard *d*. The side wall of the shuttle, as best shown in Fig. 2, is bored to receive the delivery-eye *c*, and a diagonal slot, 2, is cut from the top edge of the shuttle-wall downwardly and forwardly into the hole for the eye, to thus permit the shuttle-thread to be inserted laterally into the said hole and into the delivery-eye *c* through the open space 3, the said eye forming a metal lining for the hole in the shuttle-body, the open part 3 of the eye coinciding, substantially, with or being in communication with the diagonal slot 2 in the shuttle-body.

I do not herein claim the shuttle-spindle and the shuttle-body provided with a thread opening or eye, and slotted diagonally to intersect the said opening, and a drawing-off hook or stud located substantially in line with the longitudinal center of the spindle, combined with a slotted guide-eye arranged in the said opening to receive the shuttle-thread led into the said slot, the same forming the subject-matter of my application No. 116,383, filed January 3, 1884. The guard *d* rests against the inner wall of the shuttle-body, at one side of the hole referred to, as in Fig. 1, and serves as a guard against which the shuttle or filling thread *t* bears, thus obviating the cutting of the thread into the wood. The post *b* is bent up from the plate *a* substantially in line with the axis of the spindle B, and the thread passes from the cop, or it may be bobbin, about the post preparatory to leaving the shuttle, the thread being drawn from the cop or bobbin about the said post. The post is made hook shape, to form a space to receive the thread and retain it substantially in line with the axis of the spindle; and to facilitate the introduction of the thread into the hooked part of the said post I have extended the point 4 of the post forward and upward into a chamber or space formed in the body of the shuttle near its point, the free end of the said point terminating in a depression or countersink, 5, made in the top side of the shuttle-body, a slot, 6, leading from the said depression into the open central space of the shuttle-body, where is located the main part of the plate *a*. A loop of thread, *t*, laid in the depression 5 may be caught under the point 4 of the post, and, by means of the slot 6, the thread may be readily introduced into the hook of the post. The part of the post against which the thread *t* bears as it is drawn from the shuttle in weaving may be more or less rounded and of greater or less width.

To vary the extent of the tension on the thread *t*, I have provided the shuttle with a movable plate, *f*, provided with a slotted or open eye, 7, formed, preferably, integral with the said plate, and I have provided the plate *f* with a hole to receive the same screw, *g*, which is employed to hold the plate *a* in place, the metal about the hole in the plate *f* being struck up to form a conical teat, 12, to enter a conical depression, 9, in the plate *a*, the said teat entering the said depression, and serving as a center for the plate *f* on the plate *a*. Adjustment of the eye-like end 7 of the plate *f* in the arc of a circle, which, it will be obvious, is admissible, owing to the construction of the parts as described, enables the shuttle or filling thread to be folded more or less about the post *b*. The more the thread is bent about the edge of the said post the greater the tension, and vice versa, and consequently by the adjustment of the plate *f* about its center the tension on the thread *t* may be modified as desired.

The shoulder or lug 15 on the plate *f* serves to determine its extreme position.

I claim—

1. The plate *a*, having integral with it the thread-delivery eye *c*, the guard *d*, and the drawing-off post *b*, the latter having the extension 4, combined with the shuttle-body having the chamber 5 and channel 6 and the delivery opening or eye, substantially as and for the purpose described.

2. The shuttle-body provided with a hole at one side and slitted at 2, to intersect said hole, combined with the plate *a*, provided with the connected open delivery-eye, which serves as a lining for the said hole, and having a thread-post, *b*, provided with a hook, as shown and described.

3. The shuttle-body provided with a hole at one side and slitted at 2, to intersect said hole, combined with the plate *a*, provided with the connected open delivery-eye, which serves as a lining for the said hole, having a thread-post, *b*, provided with a hook, and a guard, *d*, as shown and described.

4. The plate *a*, provided with the hooked post, combined with the shuttle-body having a depression, 5, and a slot, 6, whereby the shuttle-thread may be inserted into the hook of the post, and the adjustable tension-plate *f*, provided with an eye, 7, to operate substantially as described.

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

LOUIS GODDU.

Witnesses:

G. W. GREGORY,

B. J. NOYES.