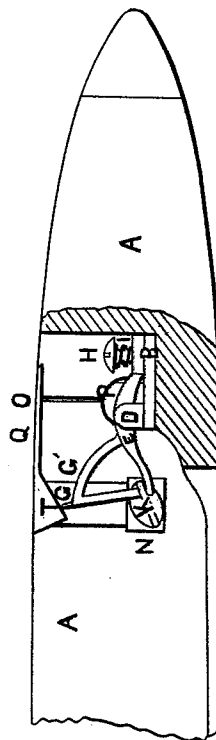


LOOM-SHUTTLE.

Patented March 21, 1876.

Fig 2



Inventor.
Marcel J. Ligari
By Albert M. Moore,
His Attorney.

UNITED STATES PATENT OFFICE.

MARCEL S. LÉGARÉ, OF LOWELL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO ALEXIS L. FECTEAU; SAID FECTEAU ASSIGNOR TO OCTAVE P. ROMAIN, OF SAME PLACE.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. 175,117, dated March 21, 1876; application filed December 22, 1875.

To all whom it may concern :

Be it known that I, MARCEL S. LÉGARÉ, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain Improvements in Loom-Shuttles, of which the following is a specification :

My invention relates to tension devices, and also to self-threading devices, for loom-shuttles; and consists in the improvements hereinafter described.

The accompanying drawings represent my invention, Figure 1 being a plan of the delivery-end of a shuttle to which my improvements are applied, and Fig. 2 a side view of the same, having a part of the shuttle broken away.

A is the body of the shuttle. Within a recess, the shape of which is shown in the drawings, is a horizontal plate, B, secured by screws C C' to the bottom of the recess. Cast upon said plate B are two standards, D, between which is hung, near its middle point, the lever E. The end of said lever nearest the spindle F has a fork, the tines of which, G G', are nearly at a right angle to said end of said lever, the tine G' being curved back into said lever. The other end of said lever E has a hole, through which a cap-screw, H, is screwed into the plate B. A spiral spring, I, around said cap-screw, between the head of said cap-screw and the top of the lever, presses the end of the lever down on the plate B. By turning the screw H the compression of the spring may be increased or diminished. A forked weight, K, embraces the fork of the lever E, the tine L of said weight being bent away from the spindle F, as shown in Fig. 1. The weight K turns upon a stud, M, which is screwed through the side of the shuttle and through a nut, N, the part which projects through the nut having no screw-thread. The position of the lever is such as to keep the weight upon the stud.

The line J represents the thread passing through the tension device, under the tine L of the forked weight K, between the tines G G' of the lever E, over the short tine L' of

said weight, and out of the eye P of the shuttle. The heavy bent tine L rests upon the thread J, and presses it upon the lever, so that a sudden pull of the thread, caused by the blow of the picker on the shuttle, is felt gradually, because the weight is lifted and the fork of the lever depressed before the thread begins to unwind from the spindle, and when the shuttle stops the falling of the weight stops the thread from unwinding. The spring may be applied directly to the weight without a lever.

The shuttle is threaded through a slot, O, cut from the top of the shuttle into the eye P. A plate, Q, of the form shown, is secured by a screw, R, and is flush with the top of the shuttle, and against the wood between said slot O and the chamber of the shuttle. The side and end of the plate Q nearest the eye P is curved away from the wood, so that the thread cannot fail of passing between the plate and the inner end of the slot. The corner of the plate Q nearest the chamber of the shuttle is bent down at T, to cover the tine G. The corner T and the side of the plate Q nearest the lever E on one side, and the curved tine G' on the other, serve to guide the thread through the tension device.

The threading device above described takes the place of those self-threading devices in which a round cap, wholly covering the recess, is supported upon a brass or other metallic post. The brass post gets worn out in a few months, and the recess beneath the cap gets filled with lint from the filling, and from the felt or flannel used for a tension, and has to be cleaned every day or two, depending on the nature of the filling. In order to remove the lint the cap must be removed by taking out a screw, and driving out the post which supports the cap.

The tension device above described is much better than the flannel and felt commonly used, as the flannel and felt last but a few days, cost a great deal, and do not so well accomplish the result.

My tension device does not make lint, makes

a better selvage on the cloth, and prevents "kinking" of the filling, which the flannel and felt do not, and the lever and weight, being made of steel, last as long as the rest of the shuttle.

I claim as my invention—

1. The combination of the forked lever E, spring I, and forked weight K, as and for the purpose specified.

2. The combination of the plate Q, bent at

T, as described, and the tine G, as and for the purpose specified.

3. The combination of the plate Q' and the tine G' of the lever L, as and for the purpose specified.

MARCEL S. LÉGARÉ.

Witnesses:

ALBERT M. MOORE,
IRVING S. PORTER.