

E. F. Burrows,

Loom Shuttle.

No. 102,368.

Patented Apr. 26, 1870.

Fig. 1.

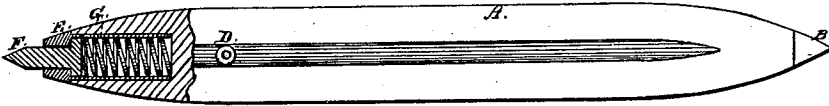
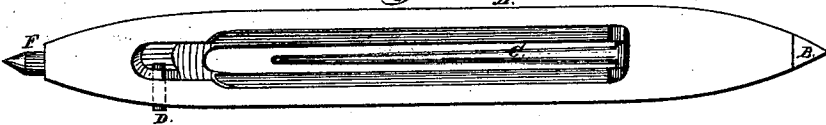


Fig. 2.



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Letters Patent No. 102,368, dated April 26, 1870.

IMPROVEMENT IN SHUTTLE FOR LOOM.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDMUND F. BURROWS, of Mystic River, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Weaver's Shuttles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making a part of this specification, in which—

Figure I is a plan view of a shuttle, a portion of one of its ends being cut away to show my invention.

Figure II is a side elevation, showing the spindle upon which the bobbin is placed, the tube through which the thread passes, and the yielding point at the end of the shuttle.

Corresponding letters refer to corresponding parts in each figure.

In shuttles as heretofore constructed, great difficulties have been found to exist from the fact that upon the application thereto of the force required to carry the shuttle from one shuttle-box to the other, a sudden and very injurious jar has been imparted to it, in many instances sufficient to throw the yarn used as "filling" from the bobbin or spindle upon which it had been placed, thus causing serious delays and imperfect work.

My invention is designed to remove the objectionable feature above alluded to, or to provide a remedy therefor; and, to this end,

It consists in providing a weaver's shuttle with a metallic point, which receives the blow or shock from the picker which is required to carry such shuttle through the warp of the web to be woven, said point resting at its inner end or rear portion upon a spring or some elastic substance, so as to relieve the shuttle to a considerable extent from the jarring effect caused by the impact of the picker.

And the invention further consists in the construction, combination, and arrangement of the parts of which it is composed, as will be more fully set forth hereinafter.

To enable others skilled in the art to make the same, I submit a more definite description.

A, in the drawings, refers to a shuttle, which may be of any approved construction, it being provided with the usual spindle C for the reception of the bobbin, and with a spring for holding said bobbin in its position.

This shuttle is also provided with the usual tube D, through which the yarn or thread passes from the bobbin.

The above-named parts may all be of any approved or usual construction, but, as they constitute no part

of this invention, they need not be more particularly described here.

B refers to a metallic point, which is of the usual construction, but which differs from mine in that it is rigidly attached to the shuttle, and has no movement independent thereof, and consequently cannot yield to the impact of the picker.

E refers to a metal tube or cylinder, which may be of brass or steel or any other suitable material, and may be provided with a screw-thread upon its outer surface for securing it to the wood portion of the shuttle, or it may be secured thereto by having a hole drilled in it and a pin inserted through the wood, or in any other suitable manner.

This cylinder is to be inserted into a recess or cavity formed in the wood of the shuttle, as shown in fig. 1, it being provided with a recess in its rear end for the reception of a spring or some elastic substance, and with a smaller aperture at its outer end through which to pass the point or piston soon to be described.

F refers to a metal point, which is to take the place of the fixed points usually used, but which is in this case made and arranged so as to have a motion independent to some extent of the other parts of the shuttle, for which purpose it is provided upon its inner end with an enlargement, which may be termed a piston, and which moves freely in the larger portion of the bore of cylinder E.

The outer portion of this piston is so reduced in diameter as to fit snugly, and yet work freely in the smaller bore of the cylinder, this portion serving as a guide to the piston, while its extreme outer end is pointed in the usual manner.

G refers to a spring, which is placed in the cylinder E, as shown in fig. 1.

This spring may consist of a piece of coiled wire, as shown, or it may consist of rubber, or any other elastic or yielding material, its office being to receive the impact of the picker, and transmit the force thus received gradually to the other portion of the shuttle, and thus relieve it from the injurious concussion and jar caused by giving it its sudden motion.

I have shown my improvement as attached to only one end of the shuttle, but I contemplate its use upon both ends.

I do not, therefore, desire to be understood as limiting its application to one or to both ends of the shuttle; neither do I wish to be understood as limiting myself to any particular form or kind of a spring, or to the material of which such spring may be made, as I regard my invention as covering any and all known forms of springs.

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

1. A weaver's shuttle, having at its end or ends a point or piston, the movement of which is independent to the extent described, of the body of the shuttle, substantially as and for the purpose set forth.

2. A shuttle-point which receives the impact from the picker or other motion-imparting device, the inner end of which comes in contact with a spring or other yielding substance, substantially as and for the purpose set forth.

3. The combination and the arrangement of the cylinder E, piston or point F, and spring G, substantially as and for the purpose set forth.

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

EDMUND F. BURROWS.

Witnesses:

J. LARKIN,

E. G. CUNDALL.