Clough & Baldwin.

Shuttle.

No. 82,090. Patented Sept. 15, 1868.

Fig. 2.

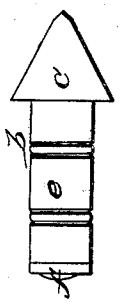
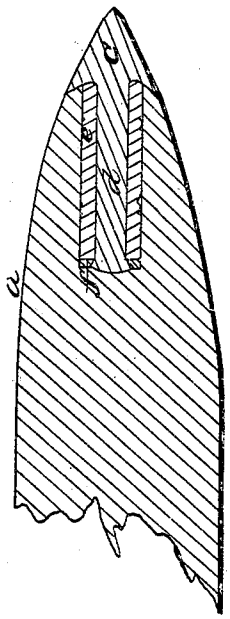


Fig. 1.



Witnesses:

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Letters Patent No. 82,090, *dated September* 15, 1868.

IMPROVEMENT IN SHUTTLES.

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

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that we, NATHAN CLOUGH, of Lowell, in the county of Middlesex, and Commonwealth of Massachusetts, and JAMES BALDWIN, of Manchester, in the county of Hillsborough, and State of New Hampshire, have made an invention of a new and useful Mode of Applying the Tips of Weavers' Shuttles; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, and in which—

Figure 1 is a vertical section of a portion of a shuttle containing our improvement,

Figure 2 being an elevation of the tip, with its appendage, previous to insertion within the shuttle.

This invention relates to means for more securely confining the tip of a shuttle thereto than has heretofore been accomplished, and consists in enclosing the shank of the tip with a thimble or cylinder of wood, and riveting or otherwise securely fixing it thereto, the whole being subsequently driven into a hole in the end of the shuttle, as hereinafter explained.

In the drawings above referred to, *a* denotes the body of an ordinary weaver's shuttle, or a portion thereof. In carrying out our invention, we constrct the tip, shown at *b* in the drawings, substantially in the ordinary manner, that is, as composed of a tapering or conical head, *c*, and a cylindrical shank, *d*, and we envelop the said shank *d* in a plug or cylinder, *e*, of wood, the shank being preferably a straight cylinder, and driven tightly into the thimble, and subsequently upset or riveted thereto, as shown at *f* in the drawings.

The cylinder of wood containing the tip, as described, is then covered with glue or cement, and driven tightly into a hole, *g*, bored axially in the end of the shuttle.

We have contemplated scoring or grooving the periphery of the plug or cylinder, as shown at *h h* in the drawings, the object of these scores being to carry a greater quantity of glue into the hole and over the plug than would be the case were the surface of the plug smooth.

From the above description, it will be seen that as the shank *d* is securely riveted to the wooden plug, it cannot be detached therefrom. As the wooden plug, in turn, is glued and driven tightly into the end of the shuttle, it also becomes immovably secured therein.

It will be obvious that in the above construction of parts, the shank of the tip is practically riveted to the shuttle-body, the practical value and security of which will be appreciated, as distinguished from the old mode of driving the shank directly into the body of the shuttle, without the interposed wooden peg.

What we claim as new, and desire to secure by Letters Patent, is—

A shuttle, having its tip-shank riveted to the wooden plug, and the plug secured in the shuttle, as herein described.

NATHAN CLOUGH,
JAMES BALDWIN.

Witnesses:
FRED. CURTIS,
EDW'D GRIFFITH.