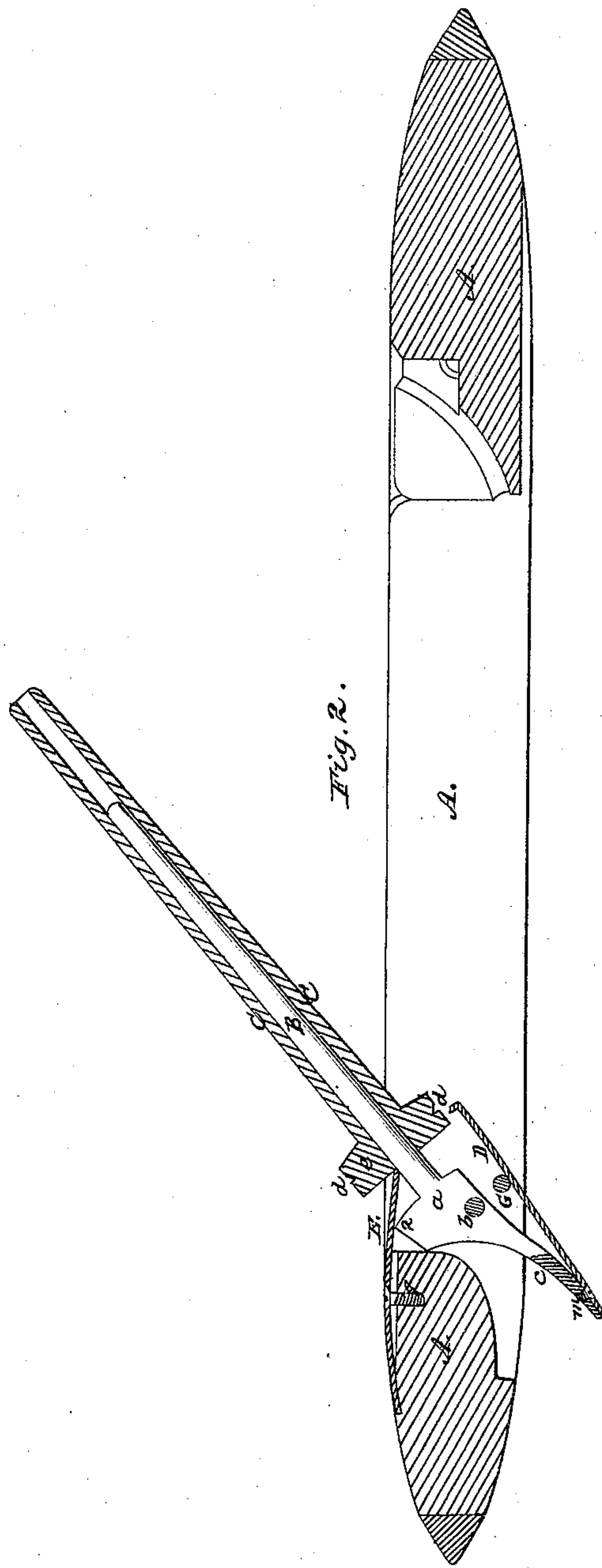
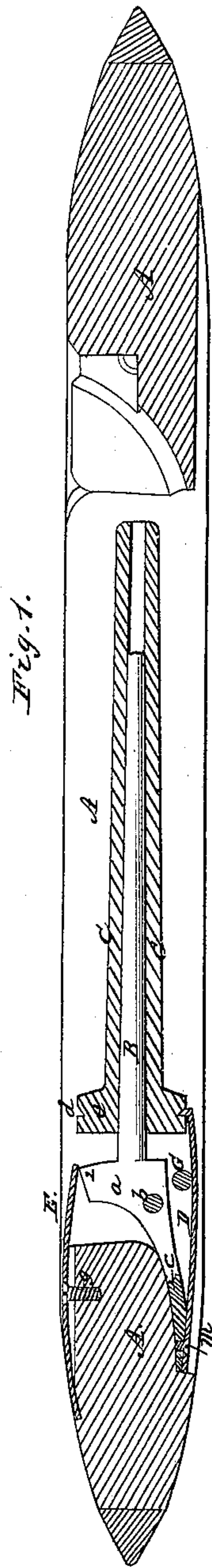


W. Wilder.
Loom Shuttle.

No. 3,877.

Patented Aug. 16, 1864.



Witnesses.
Henry H. Hild
Eliza D. Dodge.

Inventor.
Warren Wilder
By his Attorney.
Thos H. Dodge

UNITED STATES PATENT OFFICE.

WARREN WILDER, OF WILKINSONVILLE, MASSACHUSETTS.

IMPROVEMENT IN SHUTTLES FOR LOOMS.

Specification forming part of Letters Patent No. 43,877, dated August 16, 1864.

To all whom it may concern :

Be it known that I, WARREN WILDER, of Wilkinsonville, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shuttles for Looms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal, vertical, section through said shuttle; Fig. 2 represents a similar section through the shuttle, showing the spindle in an elevated position on which it is set when the bobbin is applied to or removed from it.

My invention relates to the combination of a spring-plate with the head of the spindle, whereby the latter is held in its proper position while the shuttle is in operation, and which permits of the spindle being turned for the purpose of applying to or removing from it the bobbin.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the shuttle. B represents the spindle, and C the bobbin. The head *a* of the spindle turns on a pivot, *b*, and is extended to the rear, as shown at *c*, said end or heel resting firmly upon the shuttle-wood. A spring-catch, D, is secured to the heel *c* by means of screw *m*, and its end extends into the groove *d* of the bobbin-head *e* and keeps the bobbin in its position on the spindles when the shuttle is in operation.

The spindle-head *a* is extended above, as shown at 2, and a spring-plate, E, which is secured to the shuttle by means of screw *g*, presses upon the upper part of the spindle-head at 2, which latter is thus kept perfectly rigid when the spindle is down in the shuttle. The spring E does not rest in its entire length on the shuttle-wood but only near its outer end, while the inner end presses upon the spindle-head. This leaves a space between

the spring E and the shuttle-wood, and by adjusting the screw *g* the tension of the spring is regulated.

G represents a pin, which is passed through the shuttle-wood between the spring-catch D and the heel *c*. In turning the spindle up to remove the bobbin it is turned on the pivot *b*. This causes the pin G to press on the catch D, which is thus pushed out of the groove *d* of the bobbin-head, so as to release the latter. Meanwhile, the point 2 of the spindle-head passes under the spring E until the end of said spring comes in contact with the spindle B, and the motion of the latter is arrested and the several parts assume the positions represented in Fig. 2.

This arrangement is a great improvement on those used heretofore, on account of the simplicity of its construction and because all the parts are on the outside of the shuttle and can be adjusted thereon without taking the shuttle to pieces. Besides, the adjustability of the spring E presents a great advantage over those devices where springs are used on the inner parts of the shuttle to obtain a similar result.

This shuttle can also be used for weaving from cops by simply removing the spring-catch D, which holds the bobbin, while all the other parts remain in the same arrangement as above described.

Having thus fully described the nature of my invention, what I claim herein as new, and desire to secure by Letters Patent, is—

1. The combination of the spindle-head *a* with the heel *c*, upper extension, 2, spring-plate E, pivot G, spring-catch D, when constructed and arranged as herein described.

2. The combination of the top spring, E, with the extended head 2 and projecting heel *c* of the spindle-head, substantially as and for the purposes described.

WARREN WILDER.

Witnesses:

THOMAS H. DODGE,
J. HENRY HILL.