No. 671,720. Patented Apr. 9, 1901.

S. A. DUDLEY.

LOOM SHUTTLE.

(Application filed Aug. 24, 1900.)

(No Model.)

Fig. 1.

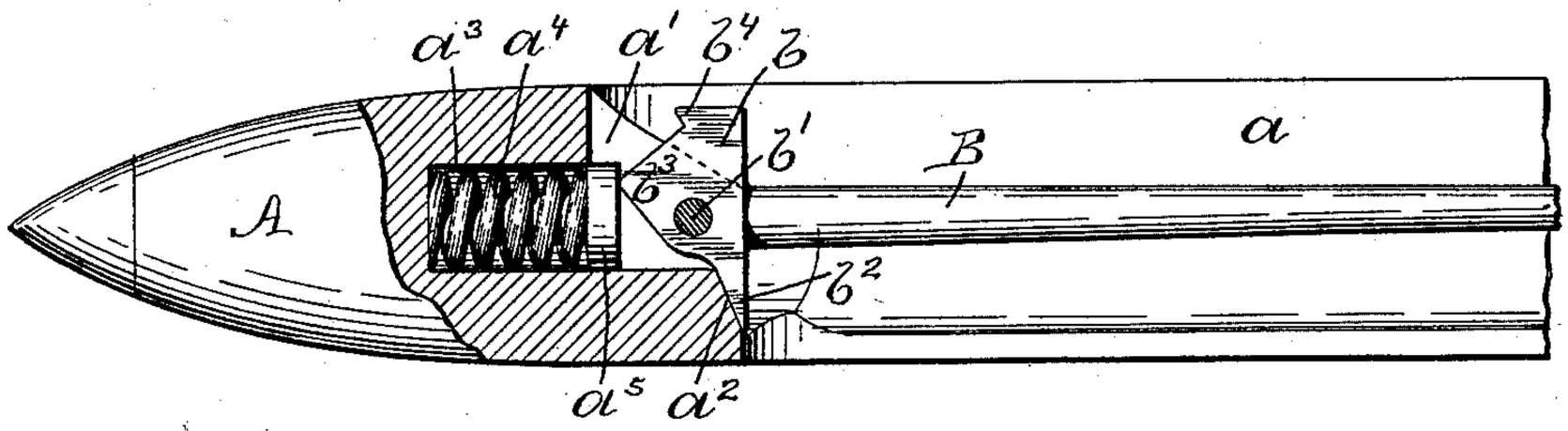


Fig. 2.

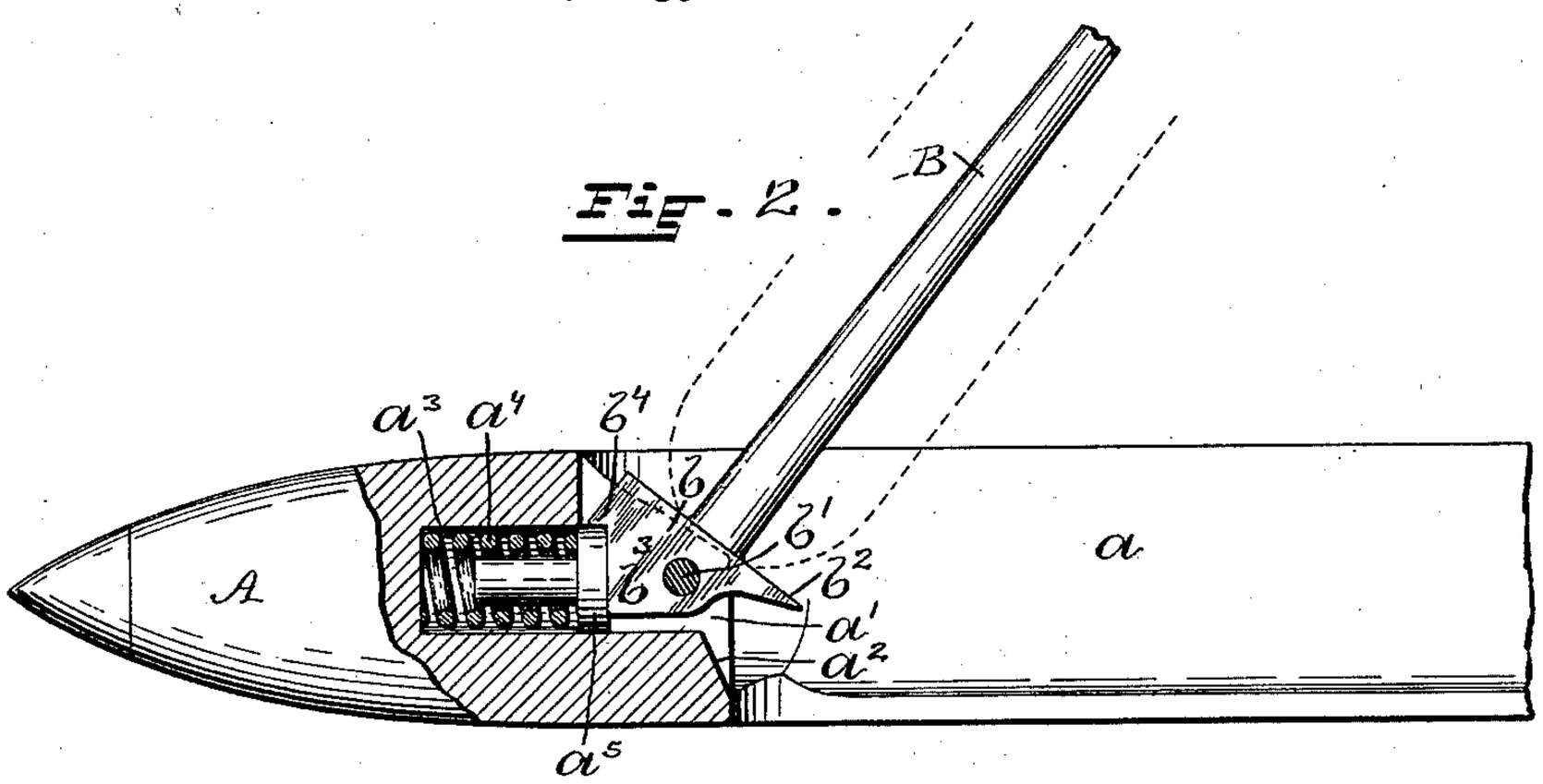
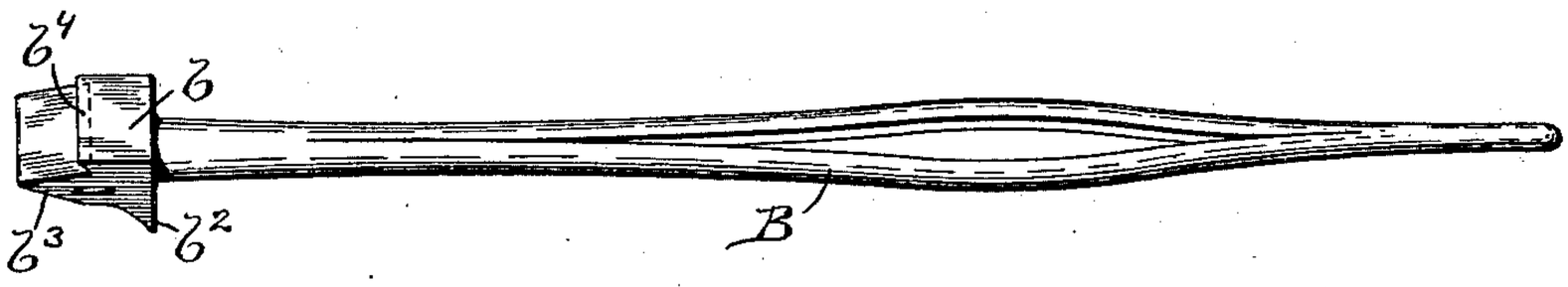


Fig. 3.



WITNESSES:

A. E. Hagerty.

Chas. H. Luther Jr

INVENTOR:

Sumner A. Dudley

by Joseph A. Miller & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SUMNER A. DUDLEY, OF TAUNTON, MASSACHUSETTS.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 671,720, dated April 9, 1901.

Application filed August 24, 1900. Serial No. 27,918. (No model.)

To all whom it may concern:

Be it known that I, SUMNER A. DUDLEY, a citizen of the United States, and a resident of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Loom-Shuttles, of which the following is a specification.

This invention has reference to an improvement in loom-shuttles having split spindles on which the cop of filling-yarn is supported; and it consists in the peculiar construction and combination of the spindle-base and the spring-support, whereby the cop may be placed over the spindle close to the base, as will be more fully set forth hereinafter.

When using filling-yarn spun on the bare spindle or on quills usual in mule-spun yarn, the cop of filling-yarn requires to be supported on the shuttle-spindle the whole length of the cop, and it is desirable to place the end of the cop close to the base of the spindle.

With the usual construction of the head of the shuttle in which the spindle is secured and with the usual flat spring by which the spindle is held in the required positions the cop cannot be conveniently placed into the desired position without injuring and entangling the yarn near the end of the cop.

The object of this invention is to construct the base of the spindle and the parts coöperating therewith so that the cop may be placed against the base of the spindle and the whole length of the spindle be used to support the cop.

Figure 1 is a side view of part of my improved loom-shuttle, partly in section, showing the spindle in the lowered working position. Fig. 2 is a side view, partly in section, showing the spindle in the raised position. Fig. 3 is a perspective view of the spindle.

In the drawings, A indicates the head of the shuttle, in which the base of the spindle is pivotally secured. The shuttle has the usual cavity *a* for the reception of the filling. In my improved shuttle I extend the upper part of the cavity *a* to a point beyond the pivot of the spindle, so that the cop can be placed on the spindle against or close to the base, as is indicated in broken lines in Fig. 2.

B indicates the spindle, the base *b* of which is inserted into the vertical groove a' and pivoted on the pin b', extending transversely through the shuttle-body. The base *b* has the downward-extending toe b^2, which when the spindle is in the normal operative position (shown in Fig. 1) bears against the shoulder a^2. The heel b^3 of the base is formed by two intersecting planes to form a practically rectangular point. The lower of the two planes connects by a curve with the toe b^2, while the other plane extends from the point of the heel to the shoulder b^4.

In the cylindrical cavity a^3 the coiled spring a^4 is placed. The button or disk a^5, provided with a post, bears on the coiled spring.

When the spindle is in the raised position, (shown in Fig. 2,) the shoulder b^4 of the base of the spindle bears on the peripheral surface of the disk a^5, which is forced by the coiled spring against the now vertical plane of the heel and holds the spindle firmly in the raised position. The cop may be placed on the spindle with one end against the base, as is indicated in broken lines.

When the spindle is in the normal operative position, (shown in broken lines,) the coiled spring a^4 forces the disk a^5 against the heel b^3 and exerts a pressure on the base above the pivotal pin b', thereby holding the toe b^2 firmly against the shoulder a^2 and the spindle in the operative position.

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

1. A loom-shuttle having a spindle provided with a base pivotally secured in the shuttle, the base having a heel formed by the intersection of two planes, a spring-pressed button contacting with the said heel, a toe adapted to bear against a shoulder on the shuttle-body and a shoulder formed to bear on the spring-pressed button, and a cavity in the shuttle extending in part beyond the pivot of the spindle, as described.

2. In a loom-shuttle, the combination with the body of the shuttle and the spring-pressed button in the body, of the spindle B having the base *b* pivotally secured in the groove a', the toe b^2, the heel b^3 and the shoulder b^4 on the base, and the cavity *a* extending in part beyond the pivotal pin *b;* as described.

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

SUMNER A. DUDLEY.

Witnesses:

J. A. MILLER, Jr.,

A. E. HAGERTY.