

(No Model.)

J. B. DAUDELIN.

SELF THREADING SHUTTLE FOR LOOMS.

No. 388,540.

Patented Aug. 28, 1888.

Fig. 1.

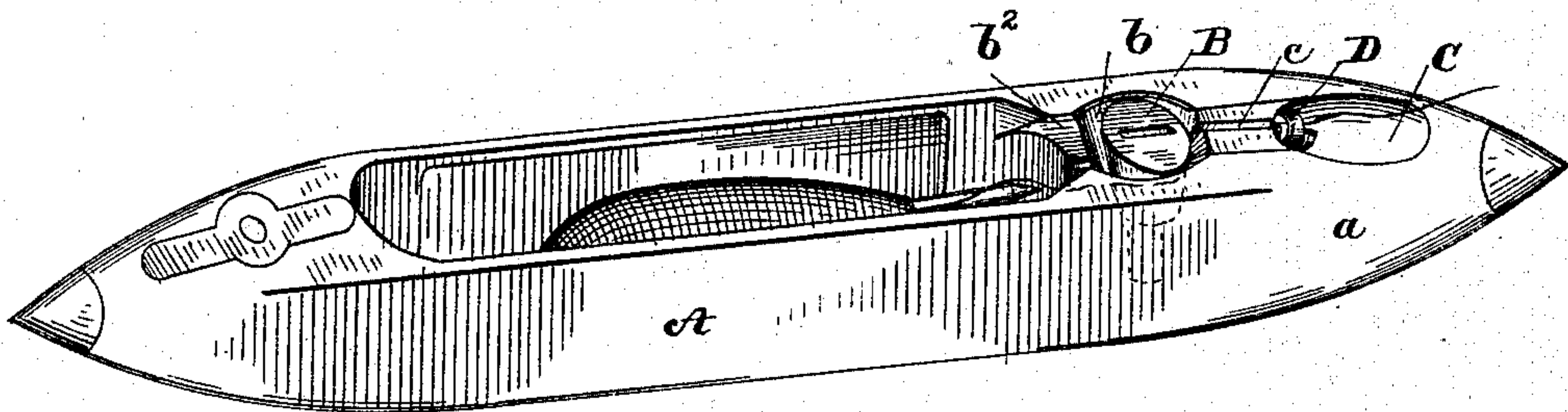


Fig. 2.

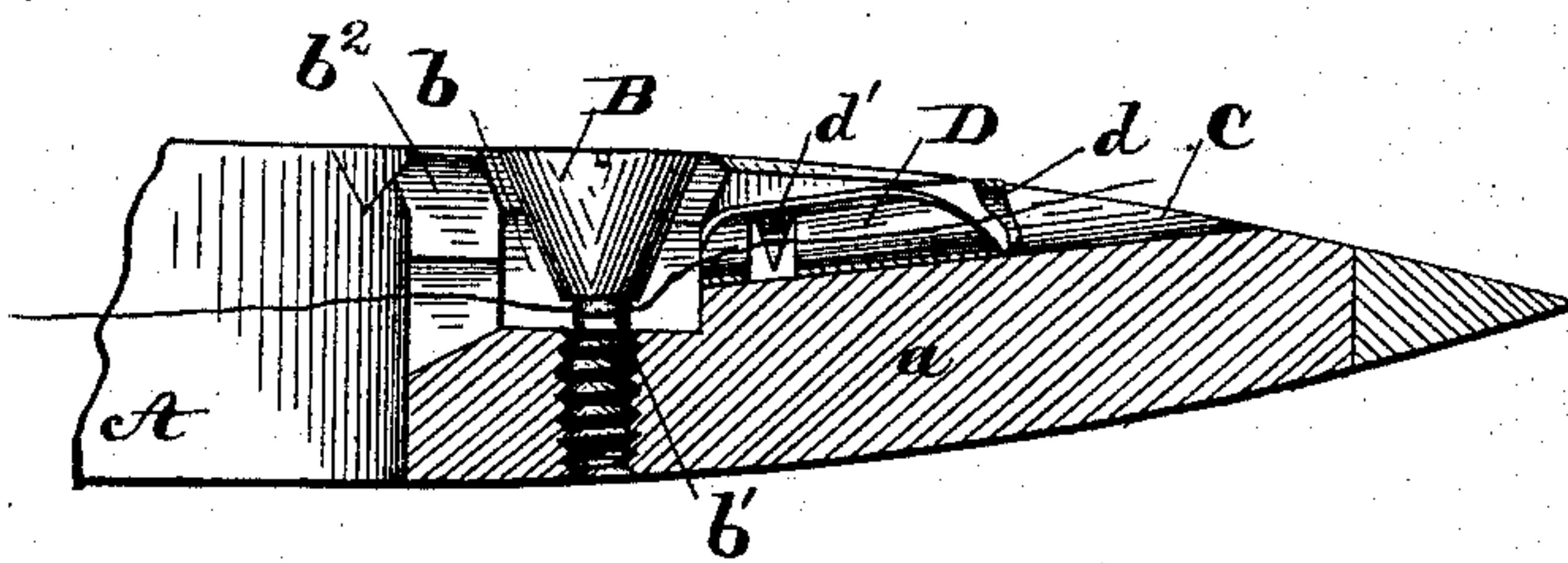


Fig. 3.

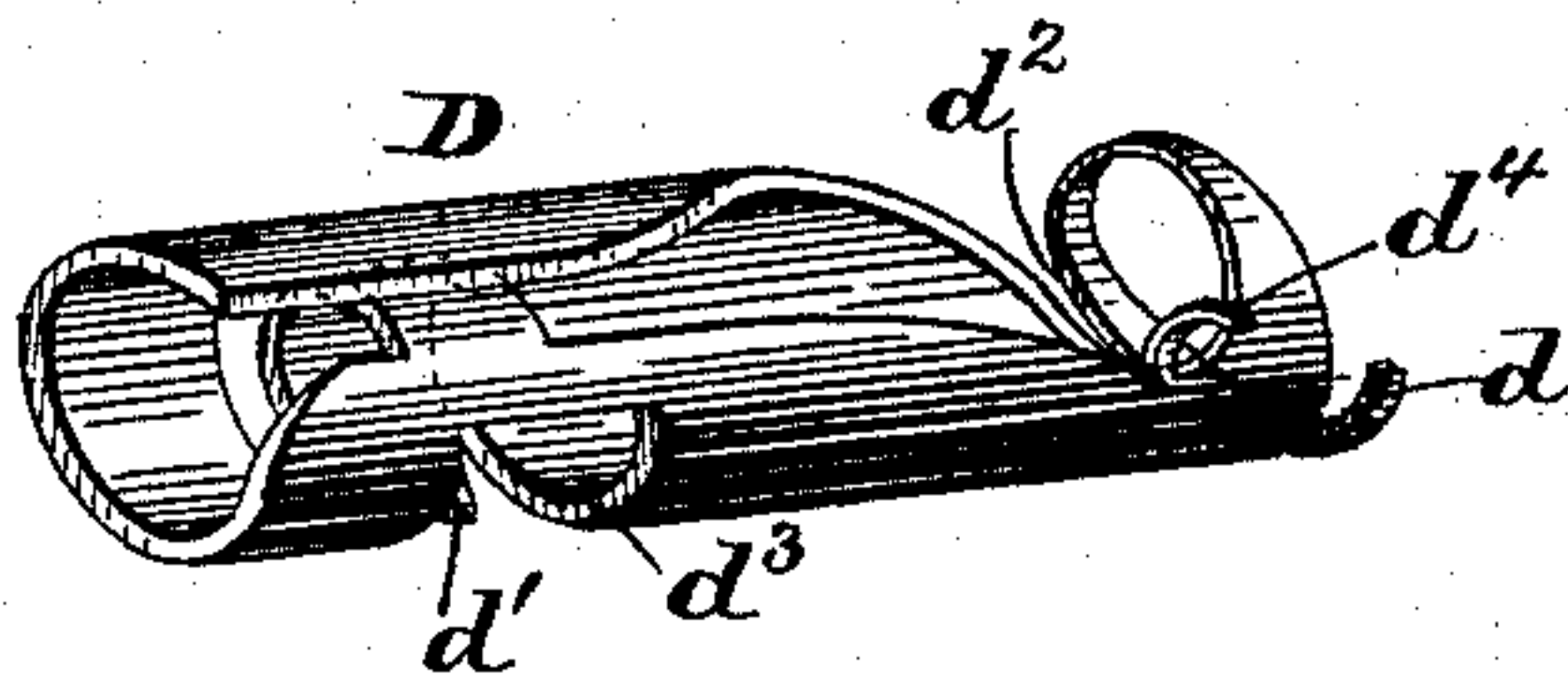
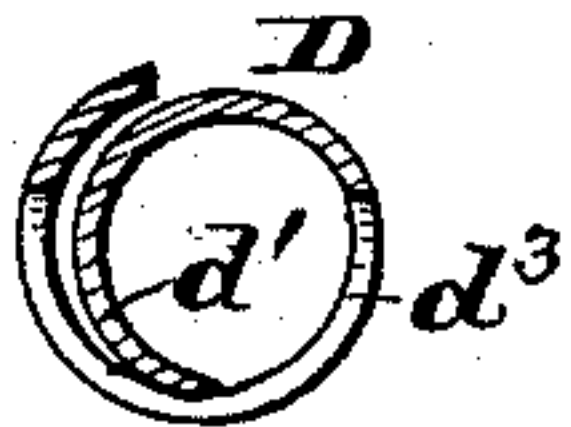


Fig. 4.



Witnesses.

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JEAN BAPTISTE DAUDELIN, OF FALL RIVER, MASSACHUSETTS.

SELF-THREADING SHUTTLE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 388,540, dated August 28, 1888.

Application filed March 19, 1888. Serial No. 267,689. (No model.)

To all whom it may concern:

Be it known that I, JEAN BAPTISTE DAUDELIN, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Self-Threading Shuttles for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in self-threading loom-shuttles; and it consists in certain peculiar features of construction and combination, as will be hereinafter more fully described.

I have illustrated my invention in the accompanying drawings, which form a part of this application, and said invention is fully disclosed in the following specification and claims.

In the drawings, Figure 1 is a perspective view of a loom-shuttle with my invention embodied therein. Fig. 2 is an enlarged sectional view of a part of the same. Figs. 3 and 4 are enlarged views of one of my thread-guiding devices.

A is the shuttle-body, provided with spindle and spindle-retaining spring, all of any preferred construction. The front end of the shuttle-body is provided a short distance from the end of the spindle-recess with a circular recess, *b*, which receives the thread-post B. The thread-post is preferably formed with a tapering head attached to the stem *b'*, which is of slightly-smaller diameter than the smallest part of the head, and is screw-threaded at its lower end. The head at its smallest point being a little larger than the stem, a shoulder is thus provided which serves to prevent the thread from rising over the thread-post when once it is in position. The portion of the shuttle-body which separates the spindle-recess from the recess *b* is provided with a slot extending from a point somewhat below the end of the spindle to the upper face of the shuttle-body. This slot is of uniform or nearly uniform width for a portion of its length, but the upper portion diverges rapidly, forming inclined sides *b²* adjacent to the inclined surface of the thread-post. This incline serves to

direct the thread beneath the inclined head of the thread-post.

In the forward portion of the shuttle end is the recess C, one end of which is connected with the recess *b* by a cylindrical passage in which is placed the thread-guide D. This cylindrical passage is provided with a threading-slit, *c*, which is in direct communication with the passage throughout its length.

The thread-guide D consists of a cylindrical piece of metal or other suitable material adapted to fit snugly in the passage of the shuttle, and has its upper edges a little distance apart, to correspond to the threading-slit *c*. The outer end of the thread-guide is provided with the curved projection *d*, which extends from the upper side of the guide, over, down, and back, conforming to the contour of the curved sides of the guide, and forming the slot *d²* between the main body of the guide and the lower part of the projection. The under side of the thread-guide is cut away, forming the rectangular slot *d³*, and one of the upper edges is provided with the curved projection *d'*, which curves over and downwardly, as shown in Fig. 4. A small projection, *d⁴*, is also provided to prevent the guide from slipping too far into the passage in the shuttle-body.

The operation of the devices is as follows: The thread is drawn forward from the spindle until it rests upon one of the inclined surfaces *b²* of the slot, which will cause the thread to be carried under the head of the thread-post. As the thread is drawn along the inclined surface of the post, it will be carried downward and will reach a point below the shoulder, which will prevent it from rising. The thread will then enter the threading-slit, and as it falls upon the upper surface of the projection *d* of the thread-guide will pass over it and into the slot *d²* and pass over the end of the projection *d'*. As the thread enters the threading-slit, its tension will force it over the upper surface of the projection *d'* of the guide, and as soon as it passes from beneath the end of said projection it cannot by any possibility return or leave the thread-guide, as the point of the projection *d'* lies in the same plane as the bottom of the guide, or slightly below the same. In Fig. 2 is shown the course of the thread when it lies loosely in the guiding de-

vices; but when drawn tight the thread extends in an almost direct line from the spindle past the stem of the thread-post and through the thread-guide D, and when once the shuttle has been threaded no accident can displace the thread. The straight discharge-passage insures the full delivery of the thread without strain and with little liability of breakage.

It will be seen that the recess C, which forms the delivery-eye of the shuttle, is located centrally of the upper face of the end of the same, and the shuttle may be placed in the loom with either side toward the reed.

What I claim, and desire to secure by Letters Patent, is—

1. A shuttle having a delivery eye substantially in line with the spindle, a substantially-straight delivery-passage leading from the spindle-recess to the said eye, and a threading-slit communicating with said passage, substantially as described.

2. A shuttle-thread guide consisting of a tubular metal shell having an opening along its upper side for the admission of the thread, and provided with the slit d^3 and a projection, d' , substantially as described.

3. The combination, with a shuttle having a recess, C, forward of the point of the spindle, a delivery-passage leading to said recess, and a threading slit communicating with said pas-

sage, of a thread-guide located in said delivery-passage, consisting of a tubular shell having an opening along its upper side for the admission of the thread, and the spiral projection d at its outer end, the said spiral projection being located in the recess C, substantially as described.

4. The combination, with a shuttle-body having recesses b and C forward of the point of the spindle, a threading-slot leading to the recess b , and the threading slit c , of the threading-post B in the recess b , and a thread guide between recesses b and C, having a longitudinal opening to admit the thread, and the spiral projection d , substantially as described.

5. The combination, with a shuttle body having recesses b and C forward of the point of the spindle, a threading slot leading to the recess b , and the threading-slit c , of the threading-post B in the recess b , and a thread-guide between recesses b and C, having a longitudinal opening to admit the thread, the slot d^3 , and projection d' , substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JEAN BAPTISTE DAUDELIN.

Witnesses:

JOSEPH H. BURON,
GEORGES T. DESJARDINS.