

(No Model.)

J. H. ANTHONY.
SEWING MACHINE SHUTTLE.

No. 302,971.

Patented Aug. 5, 1884.

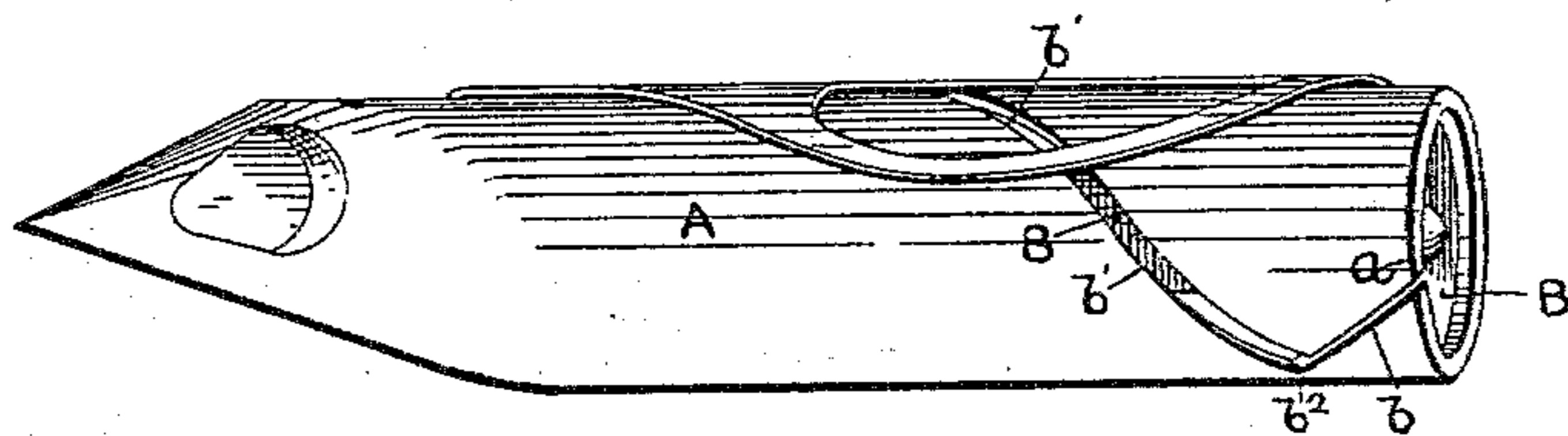


FIG. 1.

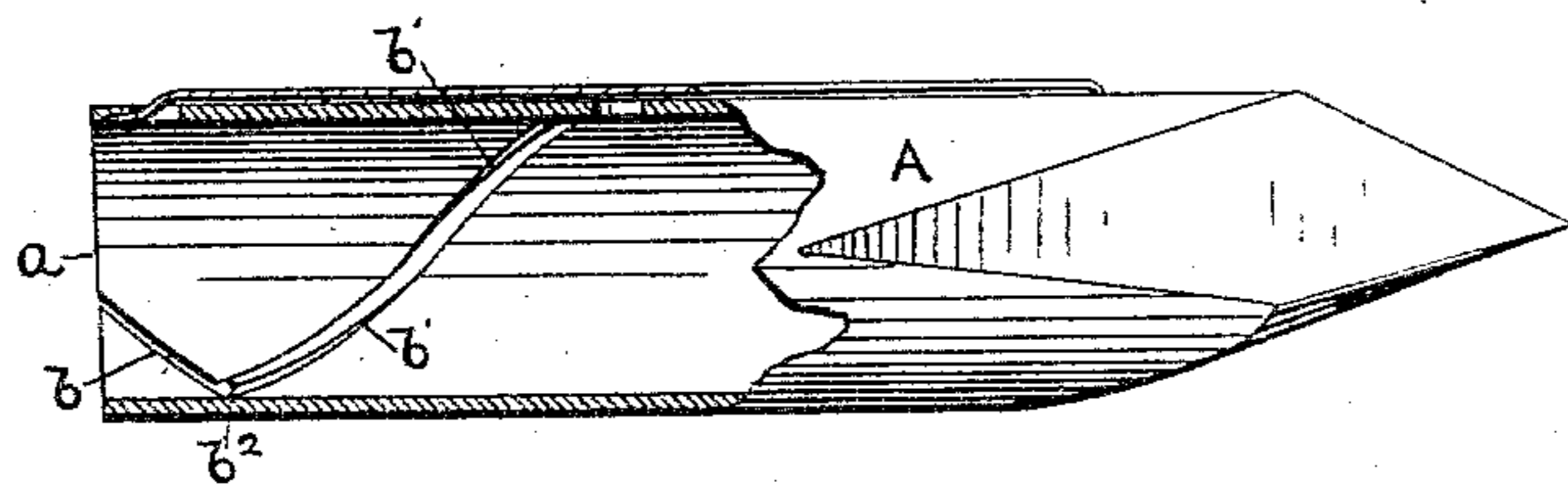


FIG. 2.

WITNESSES.

W. H. Thurston.
S. J. Murphy.

INVENTOR.

James H. Anthony.

UNITED STATES PATENT OFFICE.

JAMES H. ANTHONY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
HOUSEHOLD SEWING MACHINE COMPANY, OF SAME PLACE.

SEWING-MACHINE SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 302,971, dated August 5, 1884.

Application filed March 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. ANTHONY, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Sewing-Machine Shuttles; and I hereby declare that the following specification, taken in connection with the accompanying drawings, forming a part of the same, is a full, clear, and exact description thereof.

This invention relates to a sewing-machine shuttle having an open rear end, and a self-threading slot extending from the heel of the shuttle toward the point thereof, for the purpose of quickly and easily introducing the thread.

Before my invention, shuttles having self-threading slots which are open at the heel of the shuttle have been constructed, as far as I am aware, so that the self-threading slot has had an upward and forward direction from the heel of the shuttle toward the point. In the use of such shuttles considerable annoyance and loss of time have resulted from the breakage of the upper thread, due to the entrance into said slot of the loop in the upper thread while it was being drawn up to form a stitch.

The object of this invention is to give to the rear portion of the self-threading slot such an inclination with relation to the face of the heel of the shuttle as will allow the loop in the upper thread to free itself from said slot should the thread enter the slot as it is drawn upward to form the stitch.

To this end the invention consists in giving the self-threading slot a downward and forward inclination from the heel of the shuttle, and in continuing the slot in an upward and forward direction, the point at which the change of direction takes place being located at such a distance from or with such relation to the point where the thread is delivered from the shuttle as to prevent the loop of the upper thread from drawing the slack of the shuttle-thread into the rear portion of the slot during the passage of the shuttle through said loop.

Referring to the drawings, Figure 1 represents a perspective view of a shuttle embody-

ing my invention with the bobbin in place. Fig. 2 shows a side view and partial section of the same with the bobbin removed, the lower edge in both figures indicating the bottom or lower side of the shuttle.

A is the shuttle-case, which has a central bore adapted to receive a bobbin, B, which bobbin is intended to revolve on its heads in said bore in a well-known manner. The self-threading slot *b b'* extends from the heel *a* of the shuttle toward the point thereof. The part *b* of said slot has a downward and forward direction from the heel *a*, and the part *b'* of the slot has an upward and forward direction from its junction with the part *b*. The point *b²* of such junction, or the point where the slot changes in direction, is intended to be located at such a distance from or with such relation to the point where the thread is delivered from the shuttle as to prevent the loop of the upper thread from drawing the slack of the shuttle-thread into the rear portion or part *b* of the slot during the passage of the shuttle through said loop. In a shuttle having such a slot all danger of the upper thread being broken by entering the slot is avoided, as is likewise the breakage of the shuttle-thread by being drawn into the slot by the loop in the upper thread while the shuttle is passing through said loop.

Although I have shown the two parts *b b'* of the slot as meeting at a sharp angle, *b²*, yet the two parts of the slot may be joined by a curved portion, as will be readily understood.

It is obvious that my invention, which consists of the shuttle provided with the inclined open-ended slot, may be used with any kind of tension device, provided only that the tension-spring, in case one be used, be so applied as not to close the end of the slot, which is designed to be open at all times, so as to permit the bobbin-thread to be drawn in through said open end of the slot.

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

1. A shuttle having a self-threading slot which shall at all times be left open to permit the bobbin-thread to be drawn therein, said slot extending from the heel of the shuttle downward and forward, substantially as de-

scribed, whereby the needle-thread is prevented from being broken by catching in the open end of said slot, as set forth.

2. A shuttle having a self-threading slot
5 open at the rear end, extending downward and forward from the heel of the shuttle, and continuing in an upward and forward direction, the point where the direction of the slot

changes being located as described with relation to the point where the shuttle-thread is delivered, substantially as set forth.

JAMES H. ANTHONY.

Witnesses:

W. H. THURSTON,
S. J. MURPHY.