

(No Model.)

2 Sheets—Sheet 1.

J. H. NASON.
SELF THREADING SHUTTLE FOR LOOMS.

No. 528,550.

Patented Nov. 6, 1894.

Fig. 1.

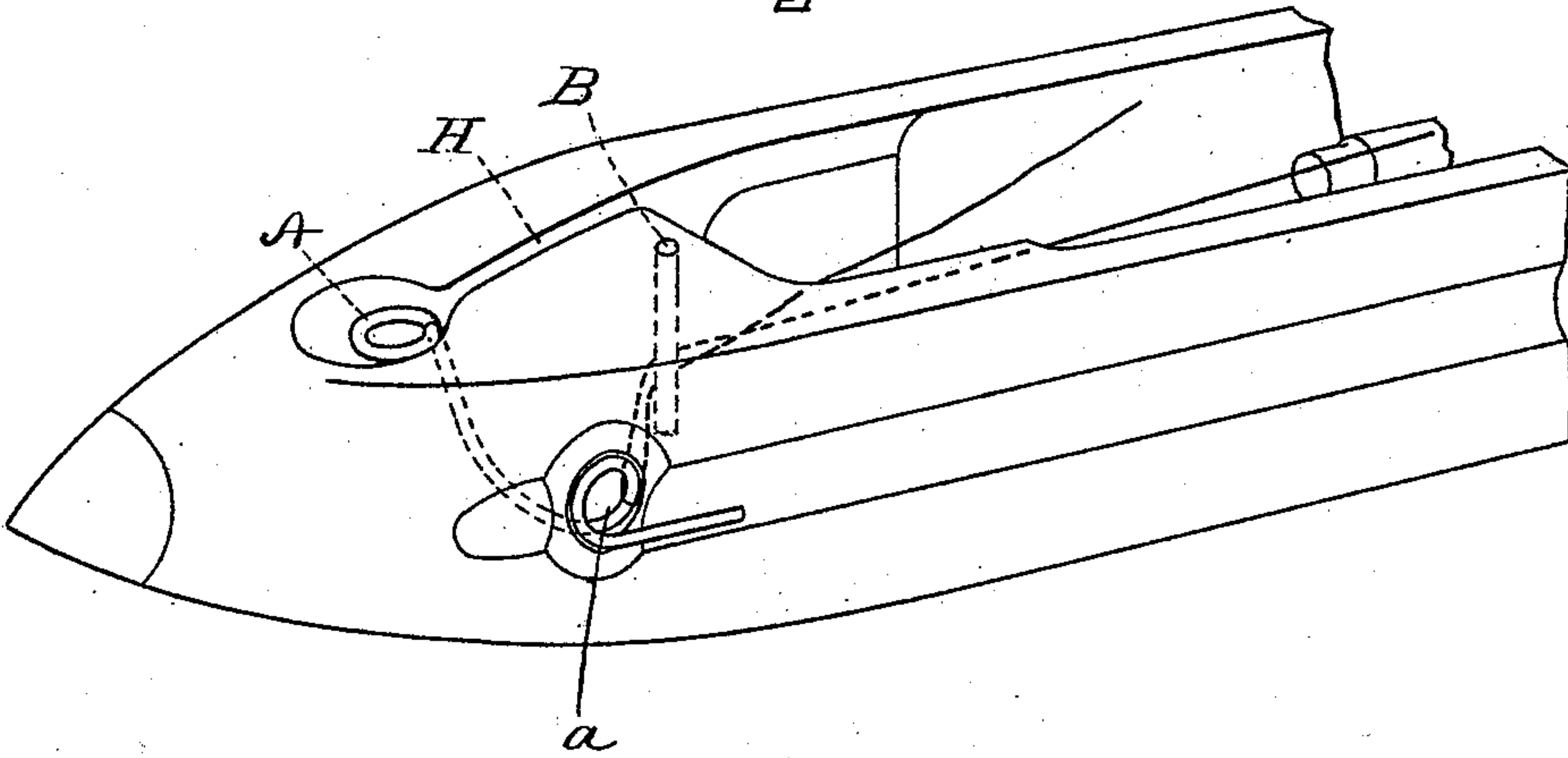


Fig. 2.

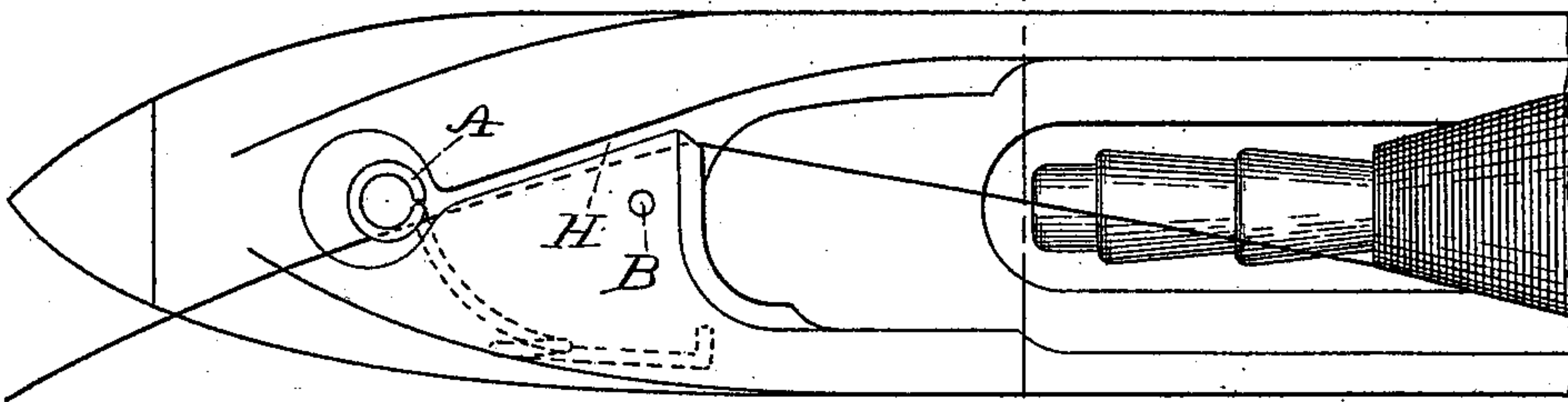


Fig. 3.

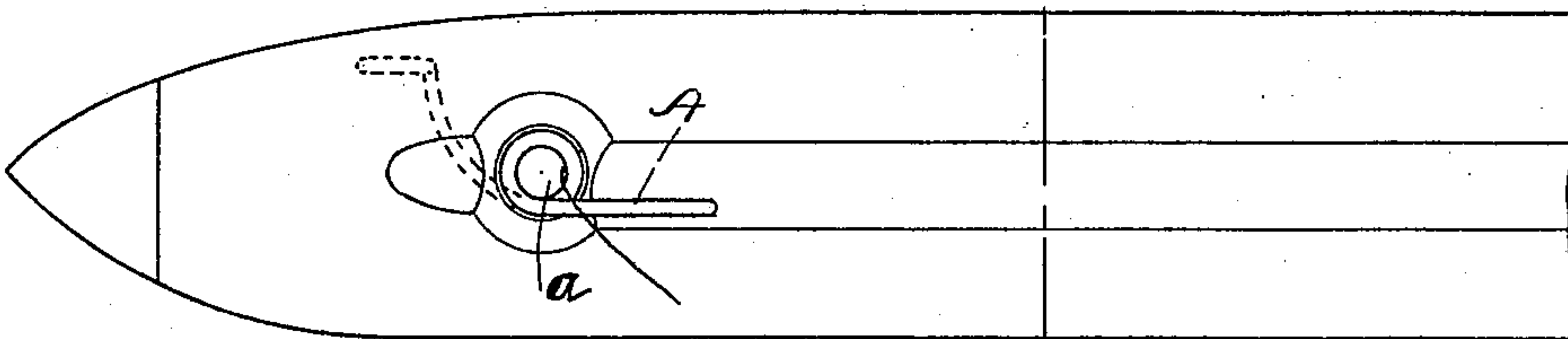
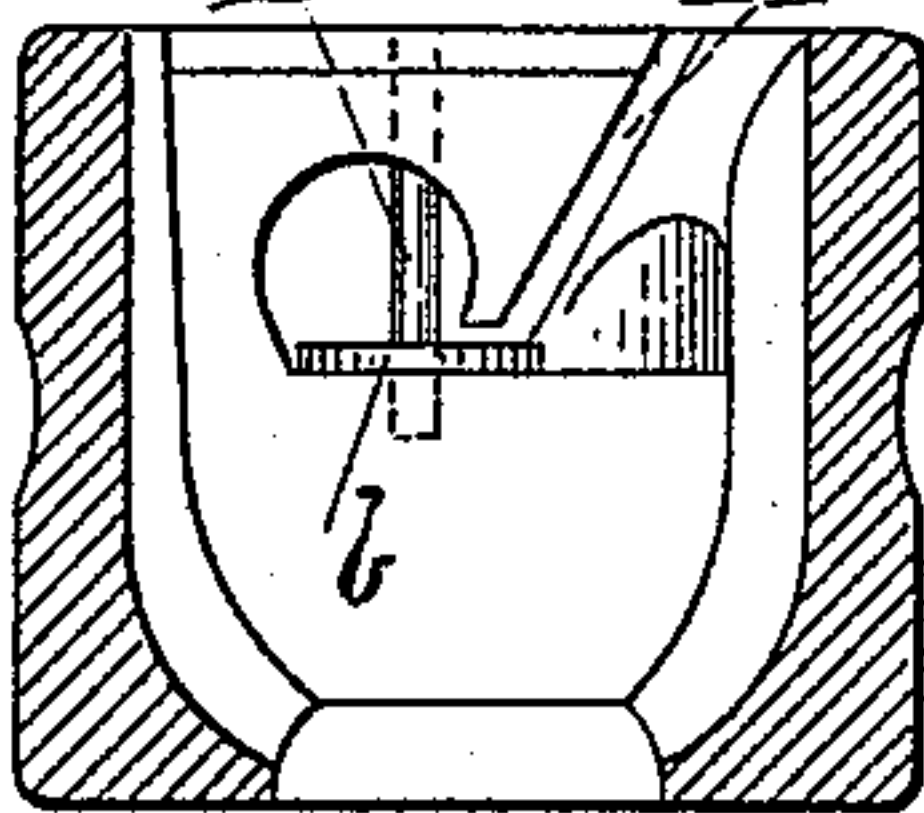


Fig. 4.



WITNESSES.
Jonathan Kelley
John R. Snow

INVENTOR.
Joseph Herbert Nason
by J. L. Maynard
att

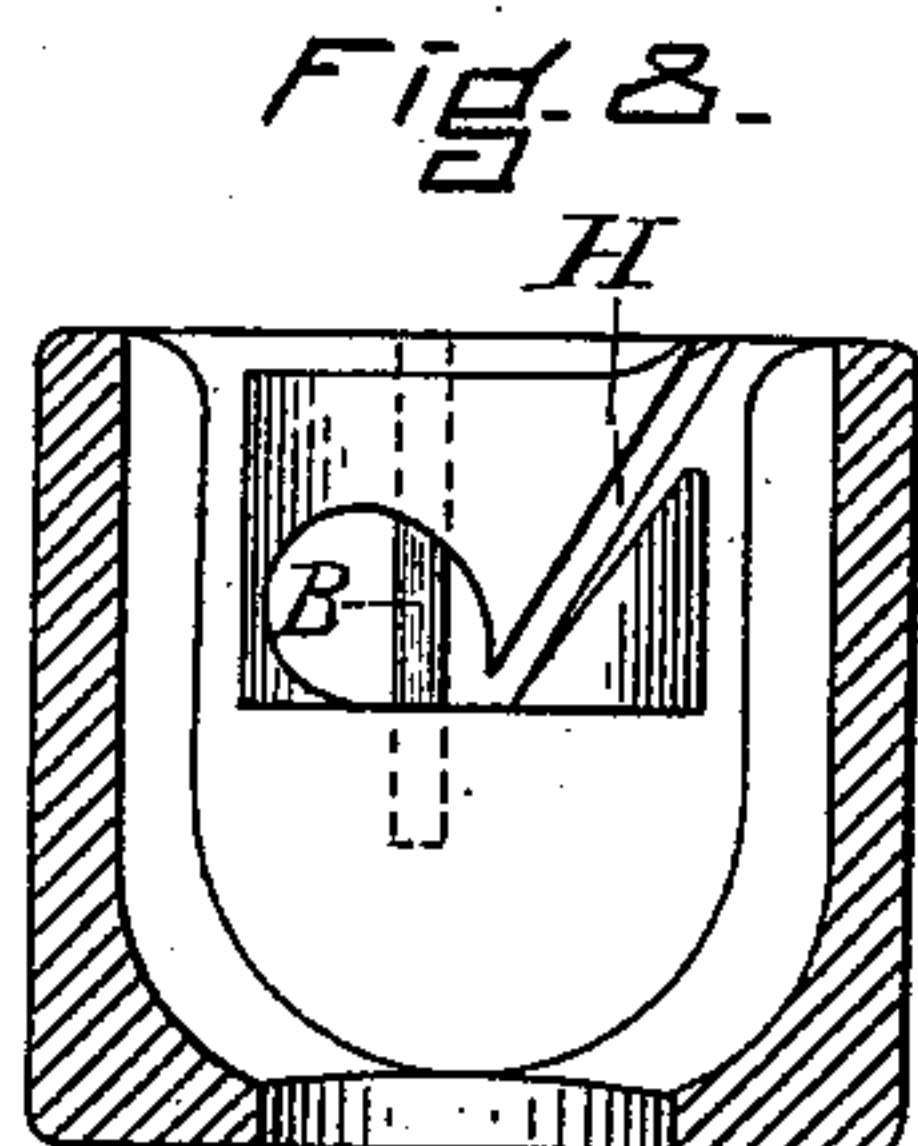
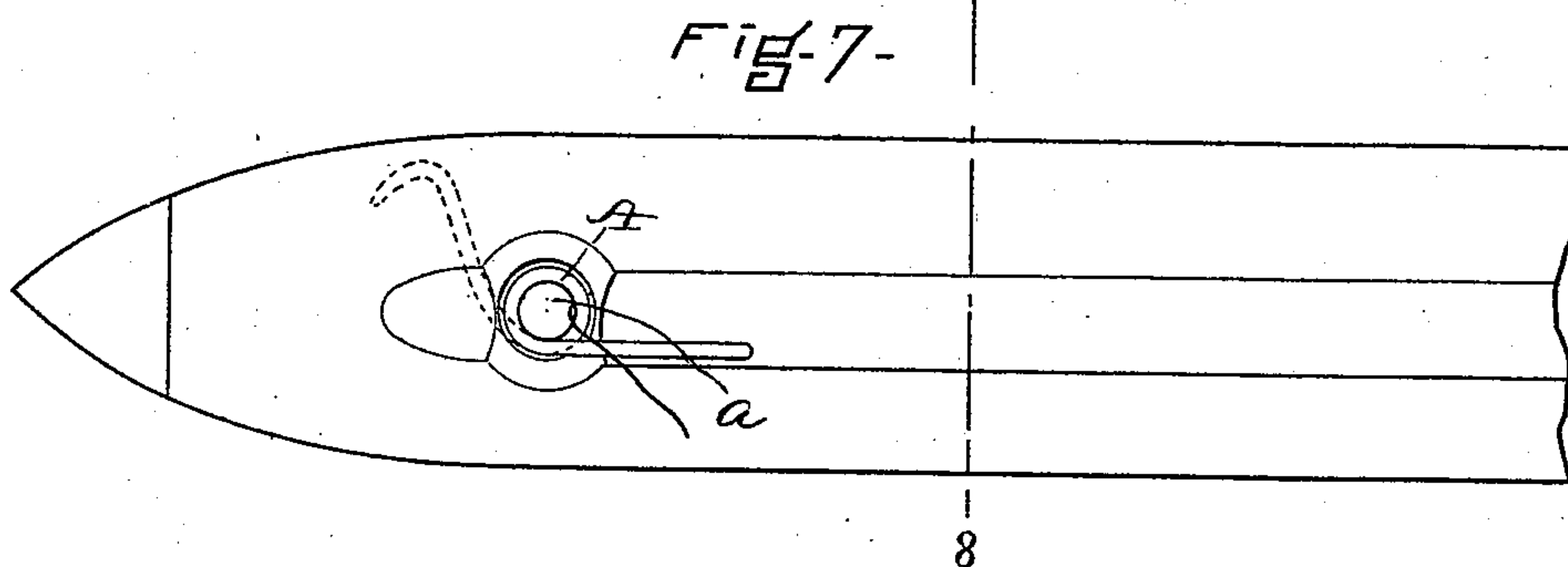
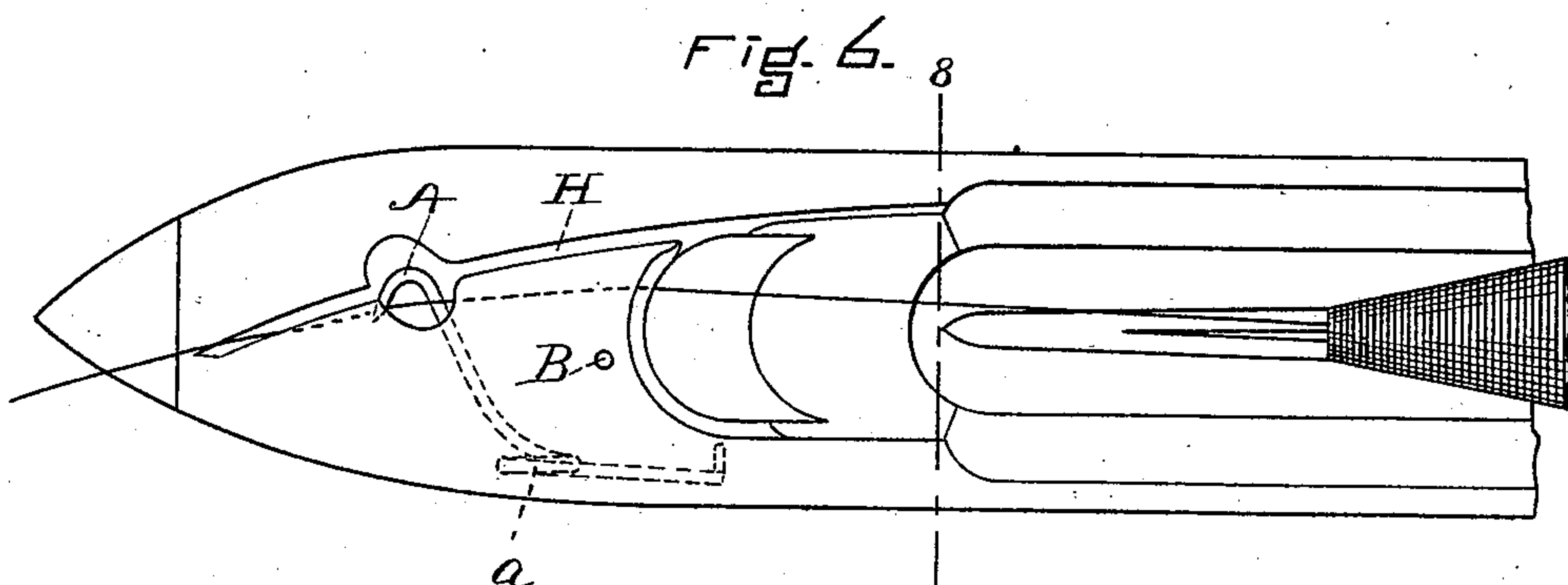
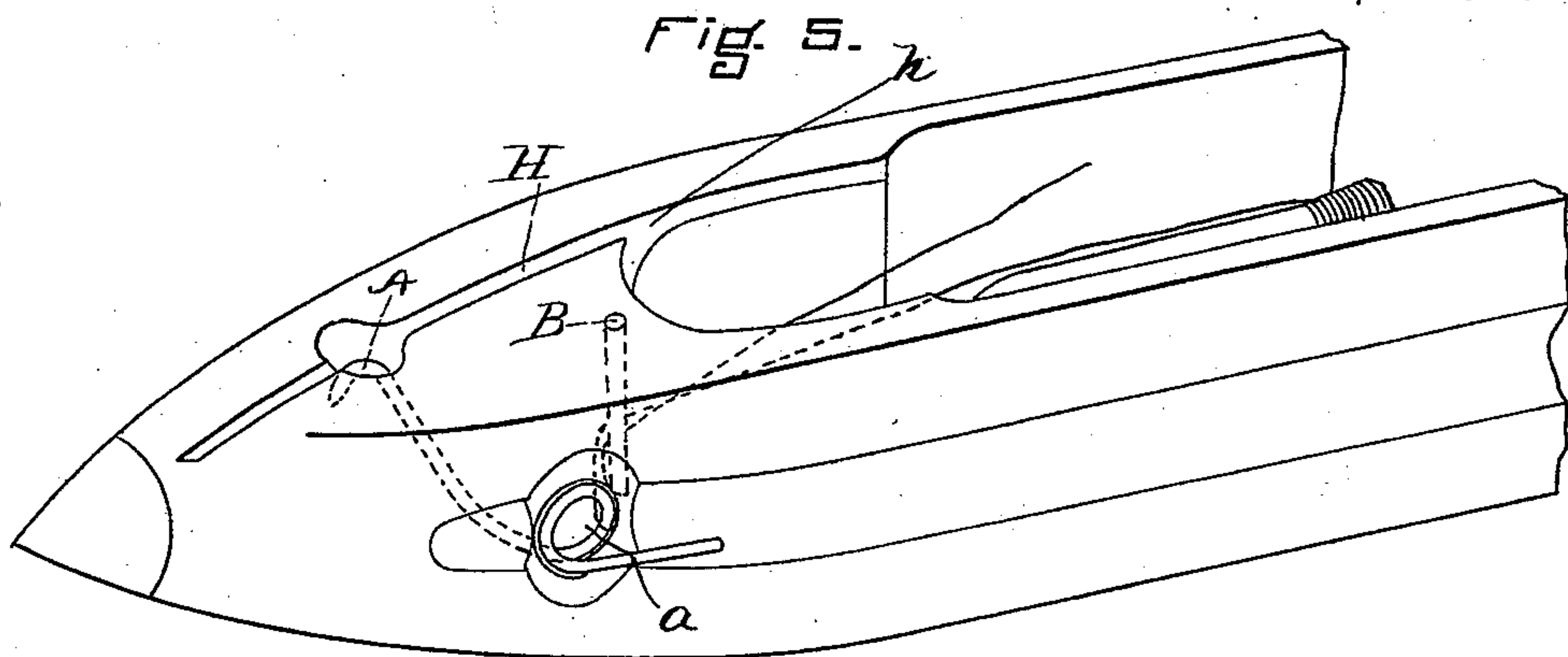
(No Model.)

2 Sheets—Sheet 2.

J. H. NASON.
SELF THREADING SHUTTLE FOR LOOMS.

No. 528,550.

Patented Nov. 6, 1894.



WITNESSES.
Mathew Teiley
John R. Snow.

INVENTOR.
Joseph Herbert Nason
J. E. Maynard
Atty

UNITED STATES PATENT OFFICE.

JOSEPH HERBERT NASON, OF SOMERVILLE, ASSIGNOR OF ONE-HALF TO
HENRY M. HEWES, OF BOSTON, MASSACHUSETTS.

SELF-THREADING SHUTTLE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 528,550, dated November 6, 1894.

Application filed November 7, 1893. Serial No. 490,327. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HERBERT NASON, of Somerville, in the county of Middlesex and State of Massachusetts, have invented an Improved Self-Threading Shuttle for Looms, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view, in perspective, of the front end of one of my improved shuttles. Fig. 2 is a plan, and Fig. 3 an elevation of the same, and Fig. 4 a cross section, on lines 4—4 of Figs. 2 and 3. Figs. 5, 6, 7, and 8 are like views of another style of my improved shuttle, the cross-section being on lines 8—8 of Figs. 6 and 7.

My present invention is an improvement on the shuttles shown in my Patents No. 452,614, dated May 19, 1891, and No. 494,879, dated April 4, 1893, and consists in a peculiar slanting groove by which the thread is guided to the feeding pin, and also in the combination of a guide pin and a thread passage with a groove slanted inward from top to bottom; as will now be more fully explained.

In the drawings A is the feeding pin preferably in one piece with the eye, *a*, as in my Patent No. 494,879, and the thread from the bobbin must be passed about that pin and thereby guided into the eye, as in that patent; but in that patent the thread was led from the bobbin through a vertical groove along the middle line of the shuttle, so that the operator was compelled to take pains to deflect the thread to one side of the feeding pin and then pull it across that pin, while in my present shuttle the groove H is at its front end at the middle line of the shuttle but the mouth of the groove H slants away from that line as shown in Figs. 2 and 6, and the walls of the groove also slant inward from top to bottom, as plainly shown in Figs. 4 and 8; and it is this groove, doubly slanted, as above described, which constitutes the main feature of my invention. With such a groove the thread will when led from the bobbin and along the groove as shown in Figs. 2 and 6, be brought into proper relation with the feeding pin A; and while this is a practical advantage of some consequence, because it makes it easier for the workman to bring the

thread into proper relation with the feeding pin A, it also facilitates the slipping of the thread down the feeding pin to cause a bight in the eye, *a*, as clearly shown in Figs. 1 and 5. The slanting of this groove inward also enables a guide pin B to be used in the thread passage, and obviates a defect in the shuttles of my former patents; which defect is that the slack thread sometimes caught on the guiding pin; this being practically impossible when the groove H is slanted inward as shown, especially when the guide pin B is used with that groove, so slanted.

The two styles of shuttles shown are the same in all material respects, except that in the style shown in Figs. 5 to 8 the doubly slanted groove H is continued beyond the recess for the feeding pin A. This is preferred in some mills; but it is of little importance which style of groove be used. The upper end of the feeding pin is formed with a hook in Figs. 5 to 8, and with a ring in Figs. 1 to 4, but either answers well, except that where the groove H does not extend beyond the feeding pin the ring at the upper end is the better form.

In either form, to thread the shuttle the thread is led from the bobbin through groove H, and it is thereby brought to the proper side of the feeding pin A, (see Figs. 2 and 6) and the free end of the thread is then pulled sideways, to form a bight about the feeding pin, and then back through the groove H, to cause it to follow down the feeding pin A, and form the bight through the eye *a*, as clearly shown in Figs. 1 and 4. This bight is then caught by a wiping motion of the fingers and the free end of the thread pulled through the eye as shown in Figs. 3 and 7. The whole operation is performed rapidly and with certainty by reason of the relation of the doubly slanted groove H to the feeding pin A.

When the shuttle is in use the thread extends from the bobbin through the space between the guide pin B and that part of the shuttle body marked *h*, which forms the inner wall of groove H, and thence out of the eye *a*.

The angle formed in the thread by the guide pin B, serves as a slight tension, and this tension may be increased in the usual way by a

fibrous washer *b*, as shown in Fig. 4, or otherwise as will be fully understood without description.

What I claim as my invention is—

- 5 1. In a self threading shuttle the combination of a delivering eye; a feeding pin slanting upward from the eye for guiding a bight of thread into it; and a groove in the top wall of the shuttle disposed with its front end at
10 the middle line of the shuttle and its rear end to one side thereof, forming a diagonal groove with relation to the middle line, said groove also slanting inward from top to bottom; all substantially as described.

2. In a self threading shuttle the combination of a delivering eye; a feeding pin; a groove in the top wall of the shuttle disposed with its front end at the middle line of the shuttle and its rear end to one side thereof, forming a diagonal groove with relation to
20 the middle line, said groove also slanting inward from top to bottom; and a guide pin near the inner end of that groove, all substantially as described.

JOSEPH HERBERT NASON.

Witnesses:

JOHN R. SNOW,
O. R. MITCHELL.