

(Model.)

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

No. 599,861.

Patented Mar. 1, 1898.

Fig. 1.

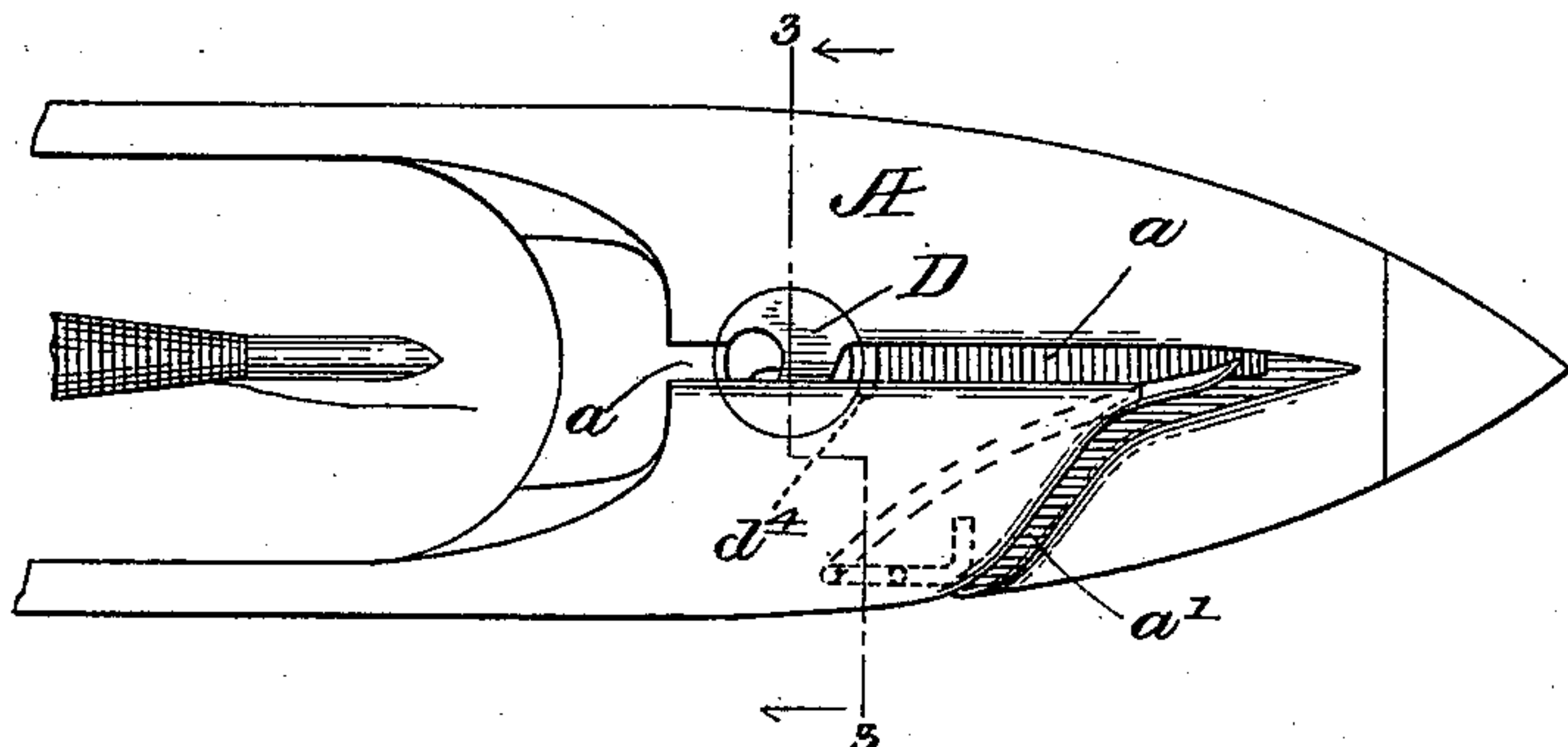


Fig. 2.

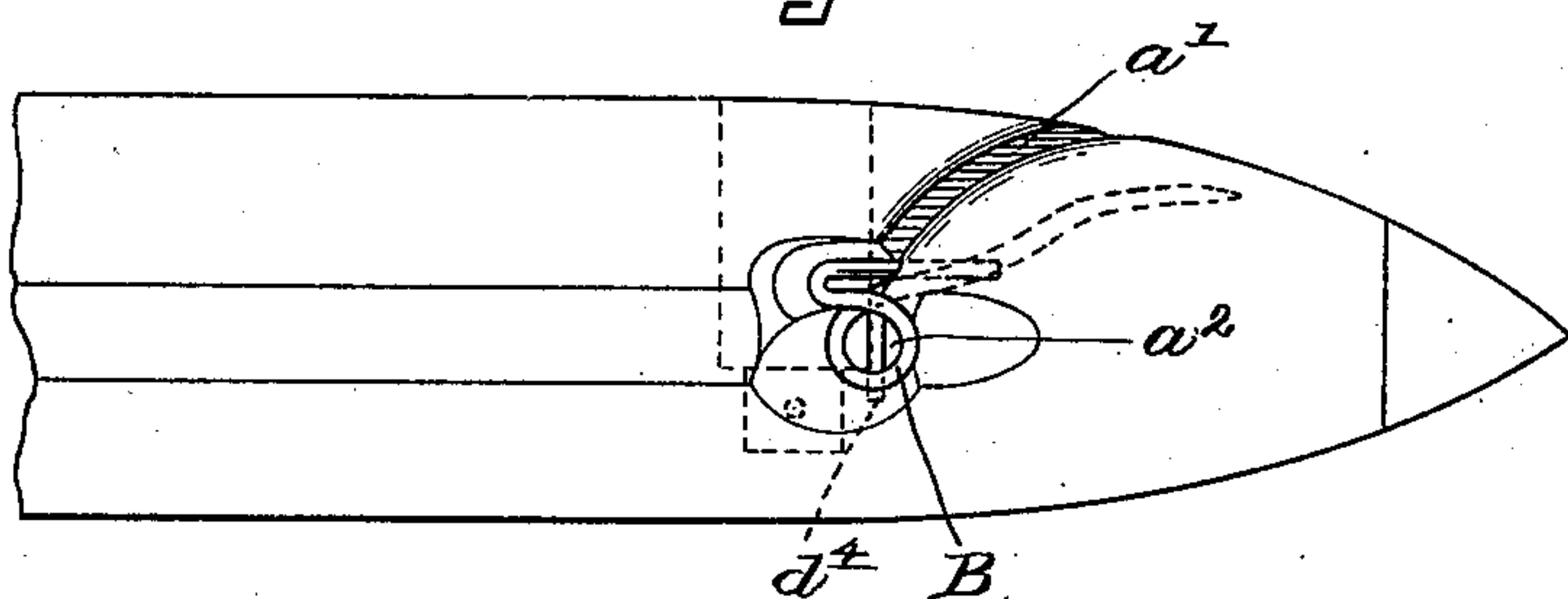


Fig. 3.

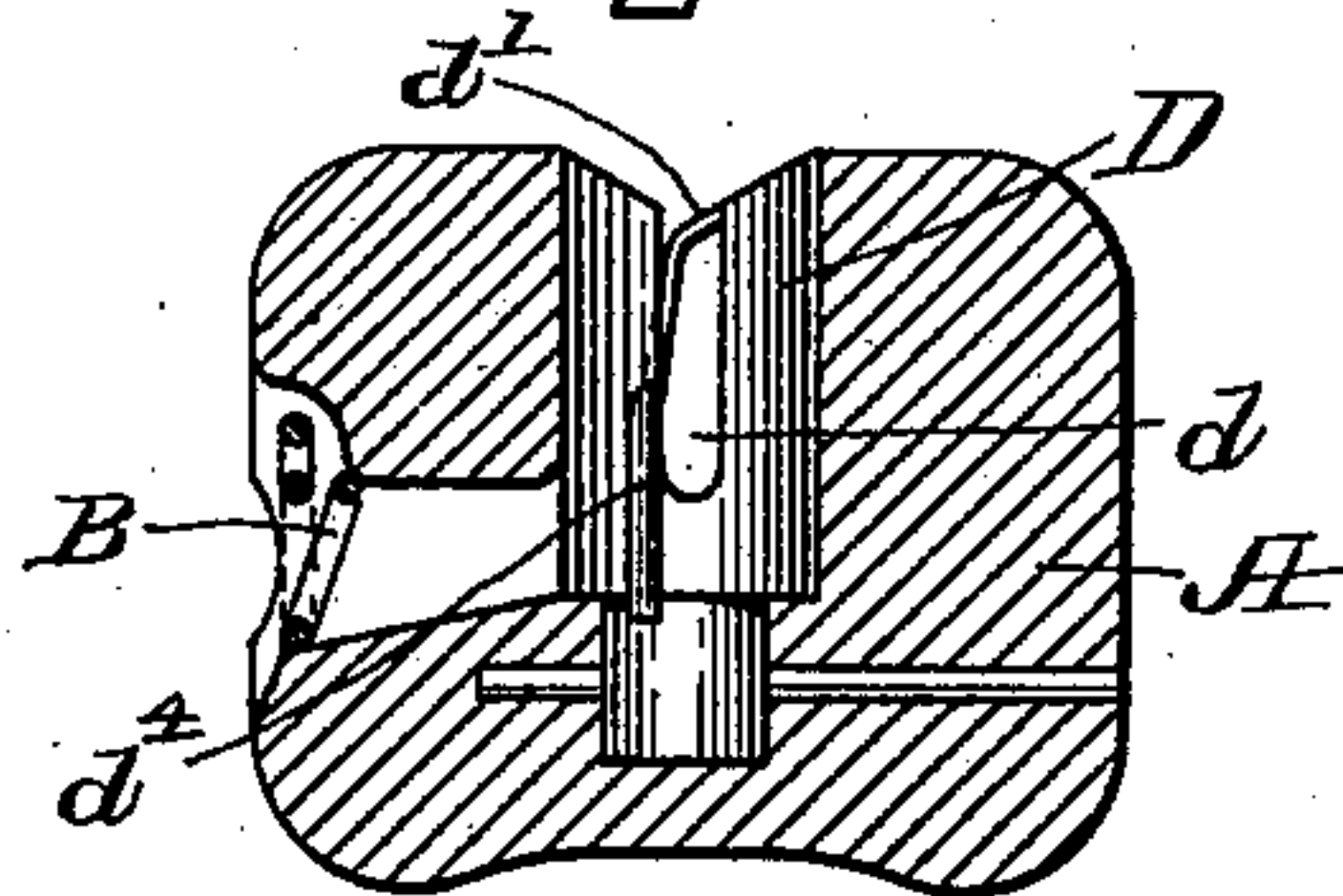


Fig. 4.

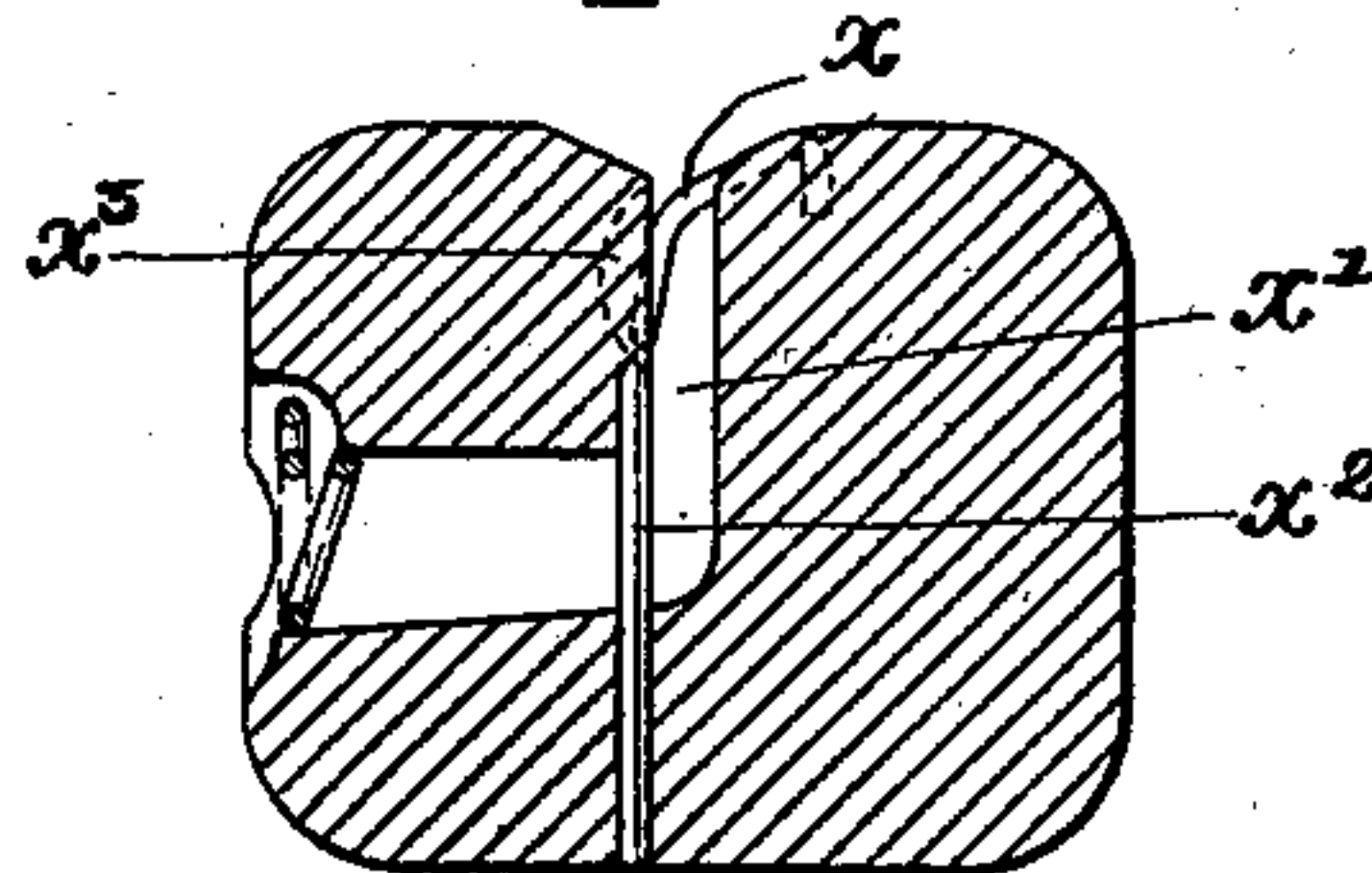


Fig. 5.

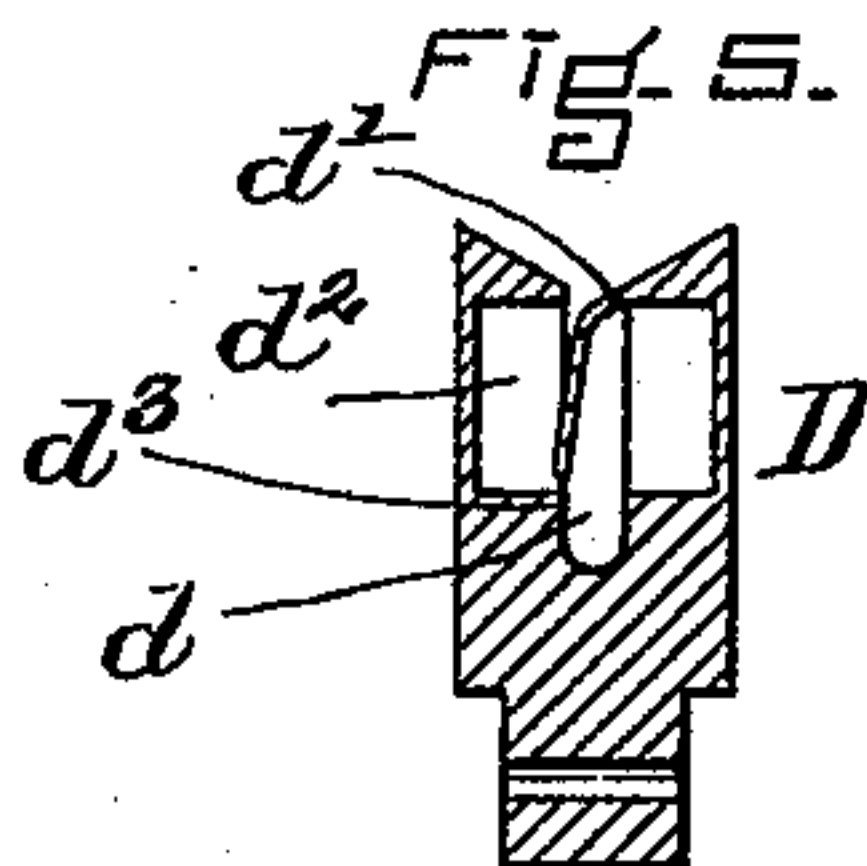


Fig. 6.

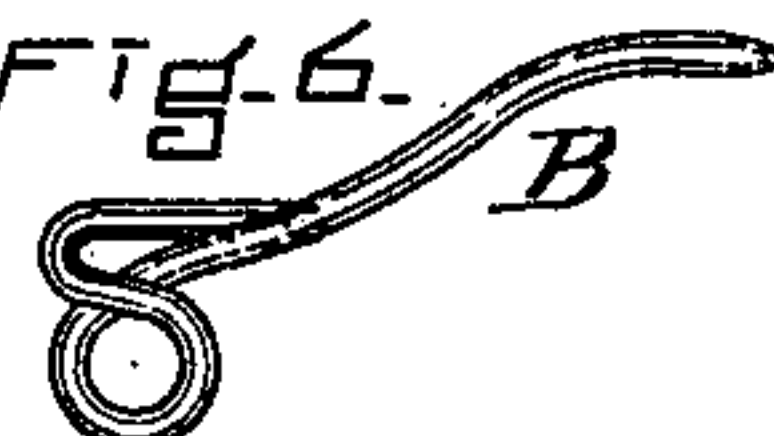
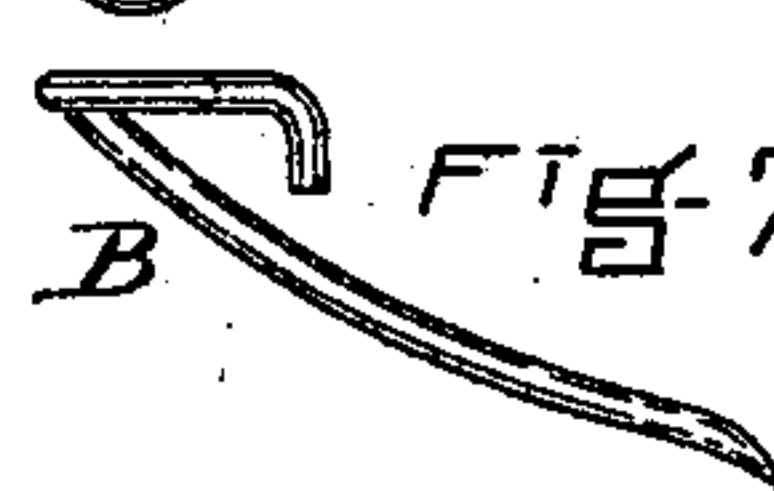


Fig. 7.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## SELF-THREADING SHUTTLE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 599,861, dated March 1, 1898.

Application filed July 6, 1896. Serial No. 598,167. (Model.)

*To all whom it may concern:*

Be it known that I, JOSEPH HERBERT NASON, a citizen of the United States of America, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Self-Threading Shuttles for Looms, of which the following is a specification.

Referring to the accompanying drawings, Figure 1 is a top plan view, Fig. 2 a side view, and Fig. 3 a cross-sectional view on line 3 3 of Fig. 1, of a shuttle embodying my invention. Figs. 4 and 5 show modifications. Figs. 6 and 7 are details of a form of feeding-pin.

The object of my invention is to produce a self-threading shuttle which is automatically threaded while the shuttle is in motion.

One feature of my invention is a thread-keeper, and in its preferred form consists of a block having a thread-passage, a downwardly-inclined finger crossing said space, and a guard for the free end of the finger.

In the drawings shuttle-body A is formed with a bobbin-space and a straight thread-passage  $a$  in front of this space to, in this instance, an open lateral thread-passage  $a'$ , which communicates with delivery-eye  $a^2$ . The shuttle is provided with a feeding-pin B, which both alone and in certain combinations forms the subject-matter of my application, Serial No. 598,166, of even date, and in the present application this pin is shown as slanting upwardly from the delivery-eye nearly across the straight thread-passage, a wall of which overhangs the free end of the guiding-pin.

D is my new thread-keeper, and in the preferred embodiment of my invention is a block formed with a thread-passage  $d$  and a finger  $d'$ , which extends downwardly across passage  $d$  into recess  $d^2$  on the opposite side of passage  $d$ . Keeper D being fixed in the shuttle in any suitable manner—for example, by a cross-pin through the sides of the shuttle and the body of thread-keeper, with its thread-passage  $d$  in line with thread-passage  $a$ —the thread from the bobbin or cop is passed downwardly on finger  $d'$ , over the end of the finger, and into and across the thread-passage  $d$ , whence it is carried to the delivery-eye. As the free end of the finger  $d'$  is guarded by the recess

$d^2$  the thread cannot jump out of the thread-passage  $d$ . It is preferable that the free end of the finger should actually project into the recess  $d^2$ ; but if the free end be in line with the wall  $d^3$  just below the recess the thread will not jump past the free end of the finger, but on moving upwardly will follow along the under side of the finger and be kept in the thread-passage. Preferably a thread-bearing  $d^4$  of hard metal is fixed on the side of the keeper just at the outer side of the thread-passage  $d$ , so that the thread to the delivery-eye will not wear the softer metal preferably used for making the body of the keeper. The advantages of my keeper are simplicity, cheapness, and lightness, as well as entire practicability. By its use an automatic "self-threading" shuttle having a straight thread-passage between the bobbin-space and feeding-pin may be provided for use in the Northrop (see United States Letters Patent No. 454,810 to Northrop and No. 462,919 to Draper and Northrop) and similar looms by employment of the old lateral thread-passage into the delivery-eye. Such a lateral thread-passage into the delivery-eye is shown in Thompson's United States Letters Patent No. 319,866, of June 9, 1885, Nolan's patent, No. 323,438, of August 4, 1885, and Goddu's patent, No. 344,369, of June 29, 1886, these patents showing varying forms of such lateral slot intersecting the delivery-eye.

In Fig. 4, showing a modification, all the metal portion of the keeper excepting the finger and thread-bearing are dispensed with. Finger  $x$  in this case is fixed at one side of the thread-passage  $x'$  and extends downwardly across the thread-passage just into a recess  $x^3$  on the face of the opposite wall of the thread-passage  $x'$ . A suitable thread-bearing  $x^2$  is formed between the fingers and delivery-eye by a pin fixed in the path of the thread.

What I claim is—

The combination of a shuttle-body having a thread-passage located in front of its bobbin-space and whose walls are made integral with the shuttle-body itself, and provided with a delivery-eye and a lateral thread-passage connecting said thread-passage with the delivery-eye; a feeding-pin slanting upwardly from

the delivery-eye nearly across the thread-  
passage a wall of which overhangs the free  
end of the guiding-pin, with a finger fixed at  
one side of the said thread-passage and ex-  
5 tending downwardly across said thread-pas-  
sage and a guard for the free end of the finger.  
In testimony whereof I have signed my

name to this specification, in the presence of  
two subscribing witnesses, on this 16th day of  
June, A. D. 1896.

JOSEPH HERBERT NASON.

Witnesses:

EDWARD S. BEACH,  
H. M. HEWES.