

J. JOHNSTON.

LOOM SHUTTLE.

APPLICATION FILED MAY 13, 1908.

907,368.

Patented Dec. 22, 1908.

FIG. 1.

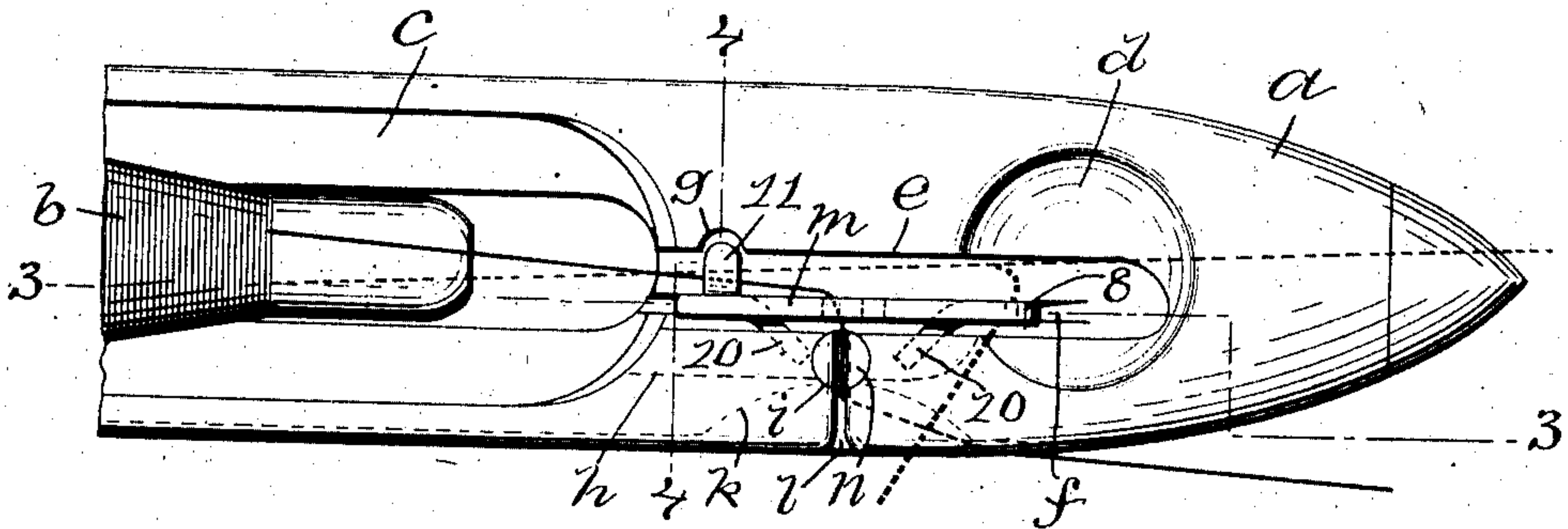


FIG. 2.

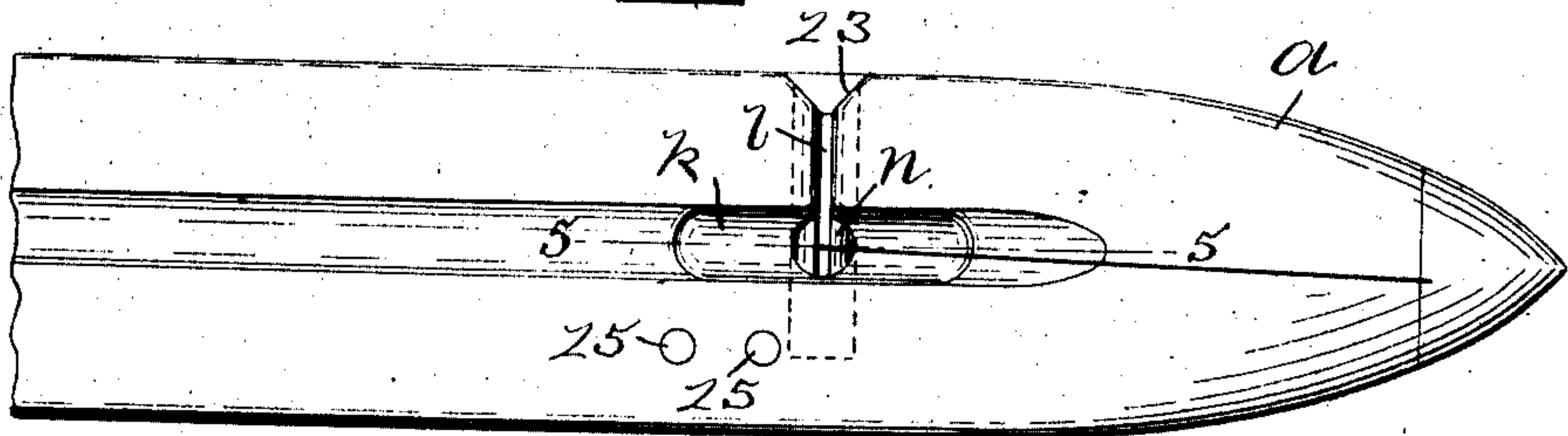


FIG. 3.

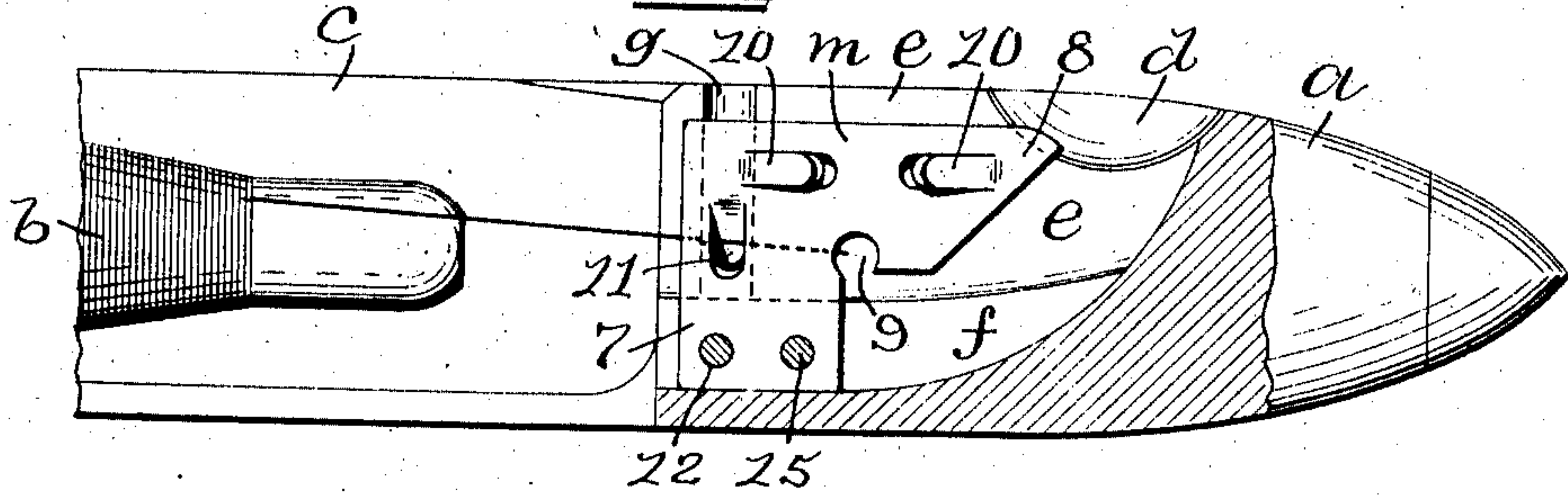


FIG. 4.

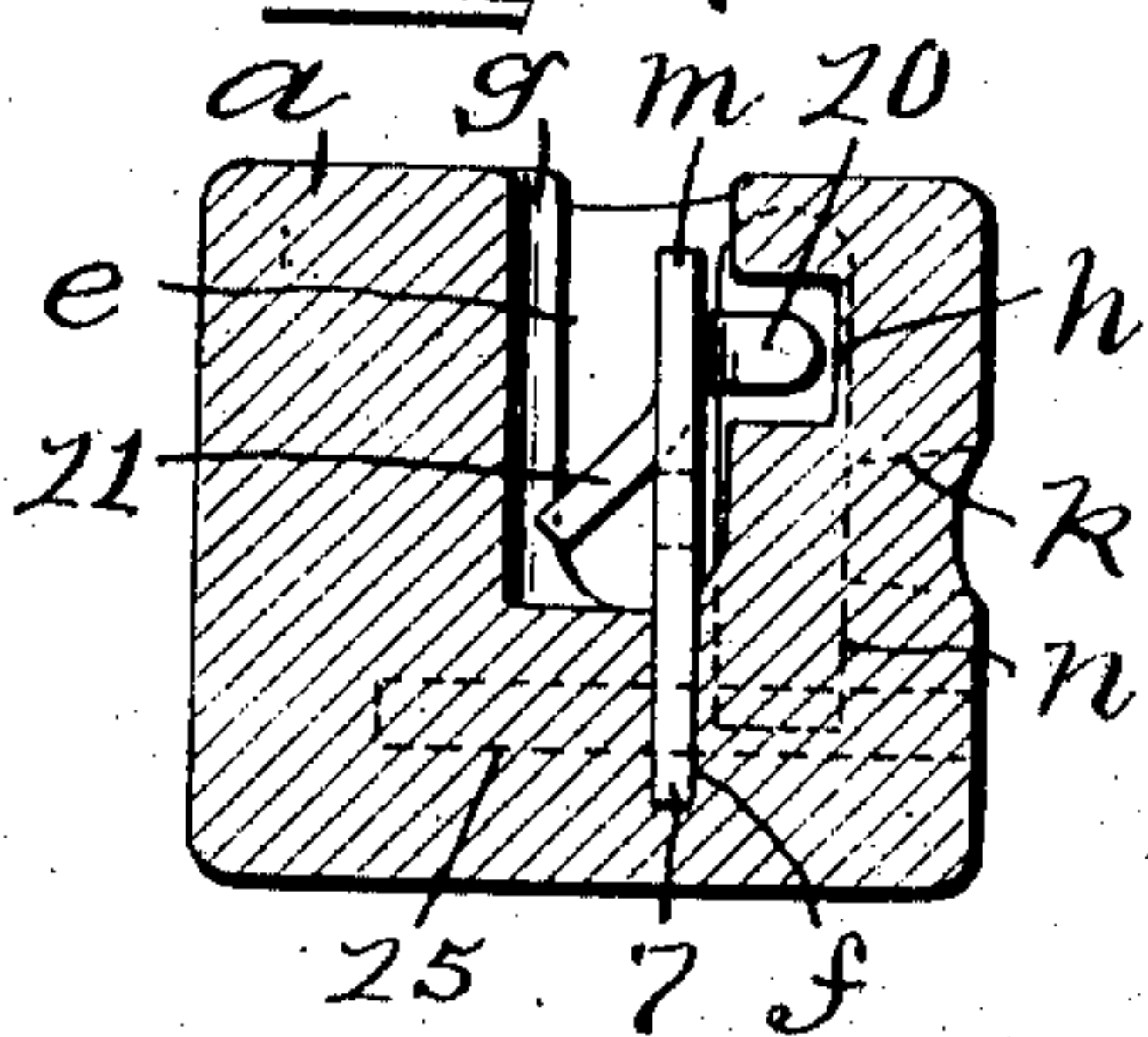


FIG. 5.

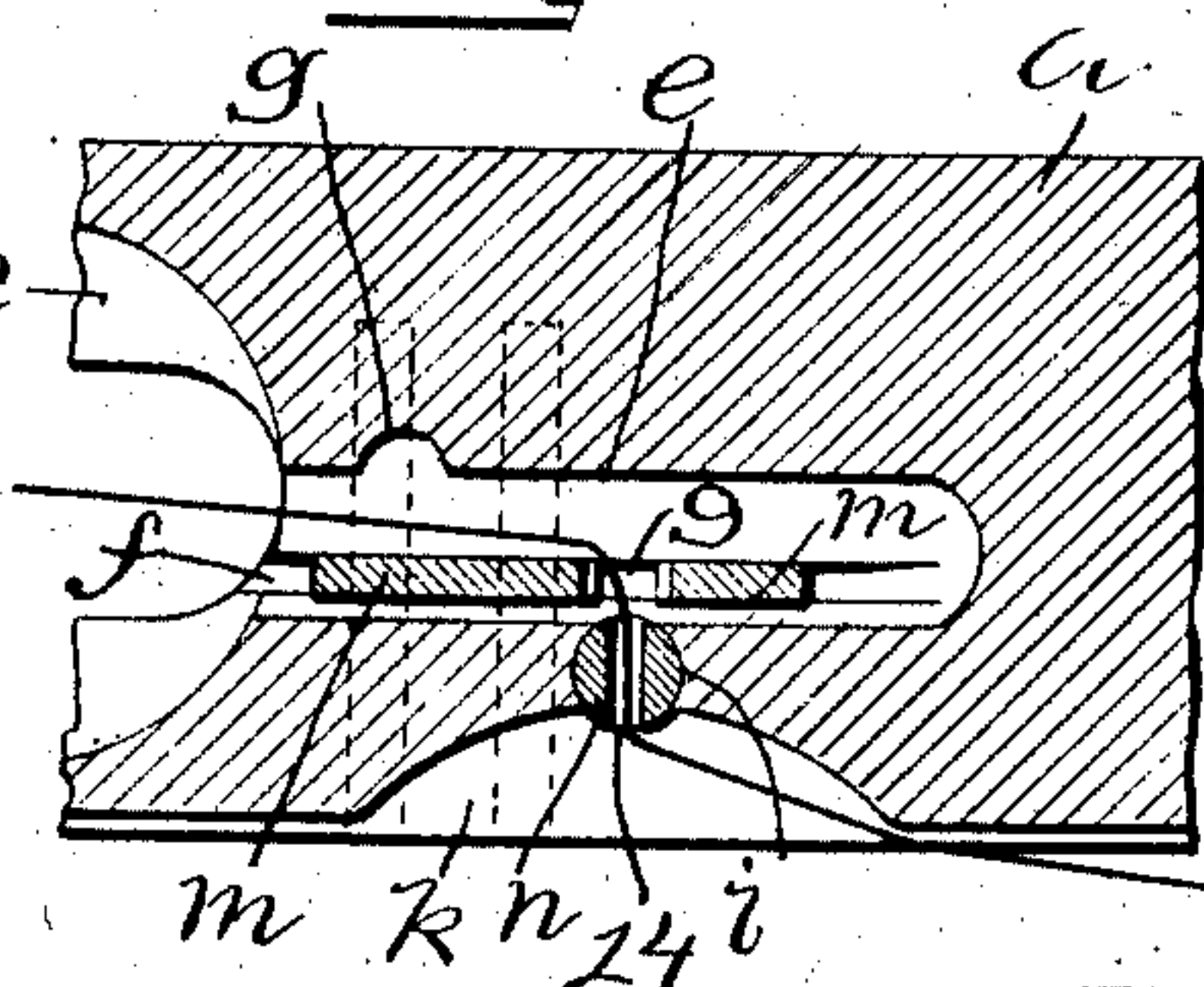
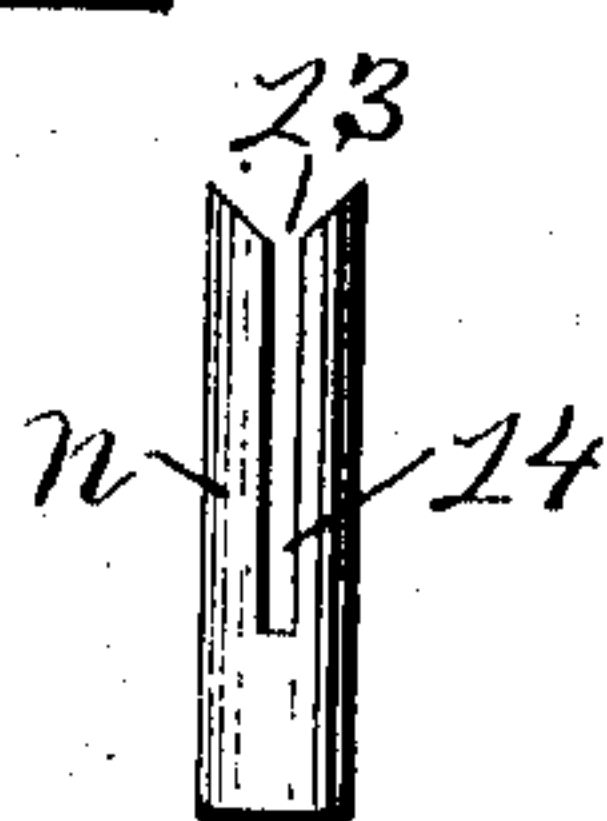


FIG. 6.



WITNESSES:

Ada C. Hagerty  
Chas. H. Luther

INVENTOR:

John Johnston  
Joseph H. Miller  
ATTORNEY



# UNITED STATES PATENT OFFICE.

JOHN JOHNSTON, OF WOONSOCKET, RHODE ISLAND.

## LOOM-SHUTTLE.

No. 907,368.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed May 13, 1908. Serial No. 432,592.

*To all whom it may concern:*

Be it known that I, JOHN JOHNSTON, a citizen of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, 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 shuttles and more particularly to an improvement in hand threading loom shuttles.

The object of my invention is to improve the construction of a loom shuttle whereby the shuttle is provided with a hand threading device of a simple and durable construction adapted to facilitate the threading of the shuttle by hand without suction.

My invention consists in the peculiar and novel construction of the delivery end of a loom shuttle and mechanism for guiding the thread to the delivery eye in threading the shuttle by hand, as will be more fully set forth hereinafter and claimed.

Figure 1 is a top plan view of the thread delivery end of my improved loom shuttle. Fig. 2 is a side view of the delivery end of the shuttle, looking at the delivery eye side. Fig. 3 is a longitudinal sectional view through the delivery end of the shuttle taken on line 3 3 of Fig. 1. Fig. 4 is a transverse sectional view through the shuttle taken on line 4 4 of Fig. 1. Fig. 5 is a longitudinal detail sectional view through the threading mechanism of the shuttle, taken on line 5 5 of Fig. 2, and Fig. 6 is a side view of the split pin forming the guide eye of the shuttle.

In the drawings, *a* indicates the thread delivery end of a loom shuttle, *b* the bobbin, *c* the bobbin cavity, *d* a circular depression in the top of the shuttle adjacent the end of the shuttle, *e* a vertical slot extending lengthwise from the shuttle cavity *c* into the depression *d* and out through the top of the shuttle, *f* a vertical slit extending longitudinally in the bottom of the slot *e*, *g* a vertical groove in the side of the slot *e* adjacent the bobbin cavity *c*, *h* a longitudinal groove in the eye side of the slot *e*, *i* a round vertical hole extending from the top of the shuttle downwards and intersecting the slot *e* and the groove *h*, *k* a curved longitudinal recess in the eye side of the shuttle intersecting the vertical hole *i*, *l* a transverse slit extending in from the top and side of the shuttle and intersecting the vertical hole *i* and the

curved recess *k*, *m* a threading plate and *n* a split pin forming the guide eye of the shuttle.

The threading plate *m* is constructed preferably of sheet metal with dies shaped to form a flat body having a base 7, a pointed arm 8 forming an extension of the top, a central circular opening 9 at the intersection of the arm 8 with the base 7, two tongues 10 10 extending out from the face of the plate at an angle toward each other on a horizontal line adjacent the top, a tongue 11 extending downwardly at an angle from the back of the plate, and two holes 12 12 in the base 7, as shown in Figs. 3 and 4.

The split pin *n* has the V-shaped upper end 13 and the longitudinal slit 14 extending from the V-shaped end downwards, as shown in Fig. 6.

In operative position the threading plate *m* is placed in the depression *d*, and the base 7 forced into the slit *f* in a position to bring the end of the pointed arm 8 into the depression *d*, the tongues 10 10 into the horizontal groove *h*, the tongues 11 into the vertical groove *g*, and the opening 9 on a line with the vertical hole *i* in the shuttle and secured by pins 15 15 driven into the shuttle through the holes 12 12 in the plate *m*. The split pin *n* is now driven downwards into the vertical hole *i* in a position for the slit 14 in the pin to coincide with the slit *l* in the shuttle, as shown in Figs. 1 and 2.

In threading up the shuttle the thread is carried from the bobbin *b* through the slot *e*, as shown in light broken lines in Fig. 1, then pressed into the depression *d* and brought under the pointed arm 8 of the threading plate *m*, as shown in heavy dotted lines, then into the space between the threading plate *m* and the wall of the slot *e* through the horizontal groove *h* by the tongue 10 on the arm 8 and under the arm 8, and then through the slit *l* in the shuttle, which brings the thread under the tongue 11 on the plate *m* and out through the opening 9 in the plate *m*, the slit 14 in the pin *n* and the recess *k* in the shuttle, as shown in Figs. 1, 2 and 5. The thread is now prevented from returning by the tongues 10 10 and 11 on the threading plate *m*.

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

1. A shuttle body formed to have a depression in the top of the delivery eye end, a



longitudinal slot extending from the bobbin cavity to the depression and out through the top, a longitudinal slit in the bottom of the slot, a vertical groove in the side of the slot, a longitudinal groove in the side of the slot, a recess in the side of the shuttle, a transverse slit extending from the top of the shuttle downwards and intersecting the longitudinal groove and the recess, a vertical hole extending downwards from the top of the shuttle and intersecting the longitudinal groove, the recess and the transverse slit, a threading plate having a base, a pointed arm, a central opening, and tongues on the front and back of the plate, means for securing the base of the threading plate in the longitudinal slit in the shuttle in a position to bring the end of the pointed arm in the recess in the top of the shuttle, two of the tongues in the longitudinal groove in the shuttle and one tongue in the vertical groove in the shuttle, and a split pin in the vertical hole in the shuttle forming the guide eye of the shuttle.

2. The combination with a shuttle body

having a thread delivery end *a*, a bobbin cavity *c*, a circular depression *d* in the top, a vertical slot *e* extending from the bobbin cavity *c* into the depression *d*, and out through the top of the shuttle, a slit *f* in the bottom of the slot *e*, a vertical groove *g* in the side of the slot *e*, a longitudinal groove *h* in the side of the slot *e*, a vertical hole *i* extending from the top of the shuttle downwards, a recess *k* in the side, and a transverse slit *l*, of a threading plate *m* having a base 7, a pointed arm 8, a central opening 9, two tongues 10 on the face of the plate, a tongue 11 on the back of the plate, and a split pin *n* having a V-shaped end 13 and a slit 14 forming the guide eye of the shuttle, as described.

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

JOHN JOHNSTON.

Witnesses:

ADA E. HAGERTY,  
J. A. MILLER.