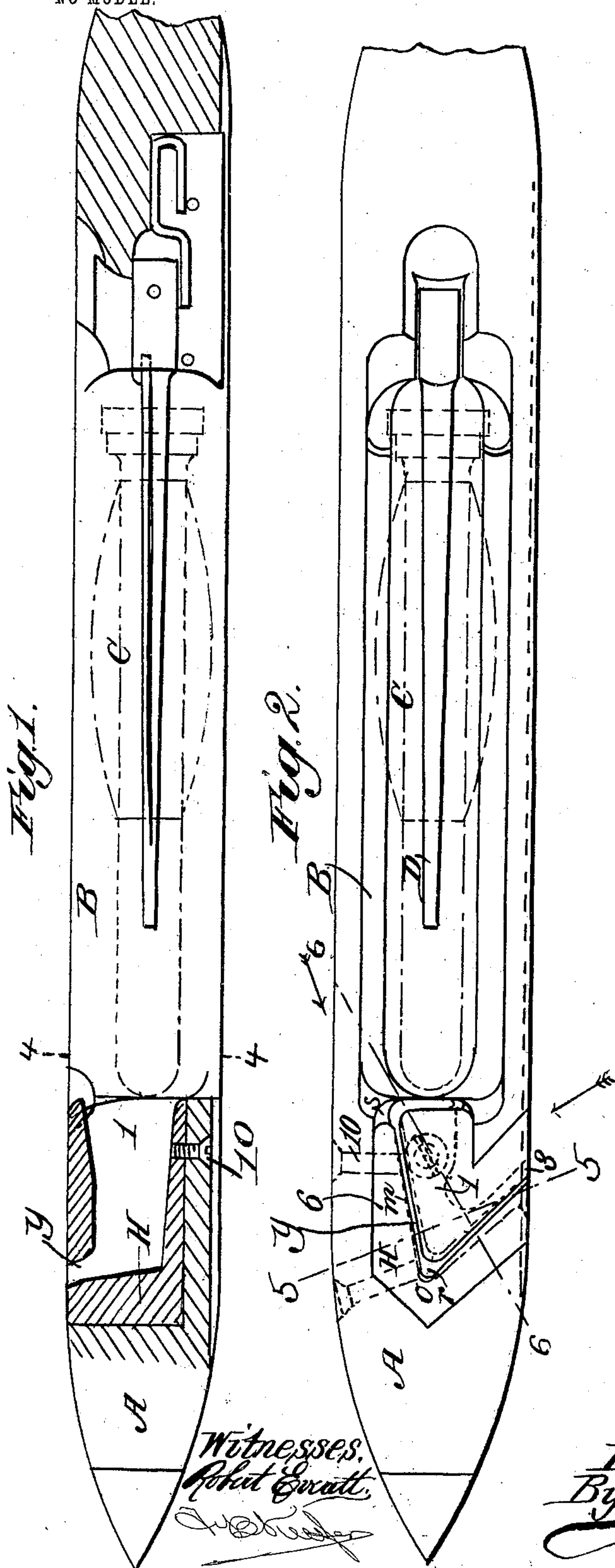


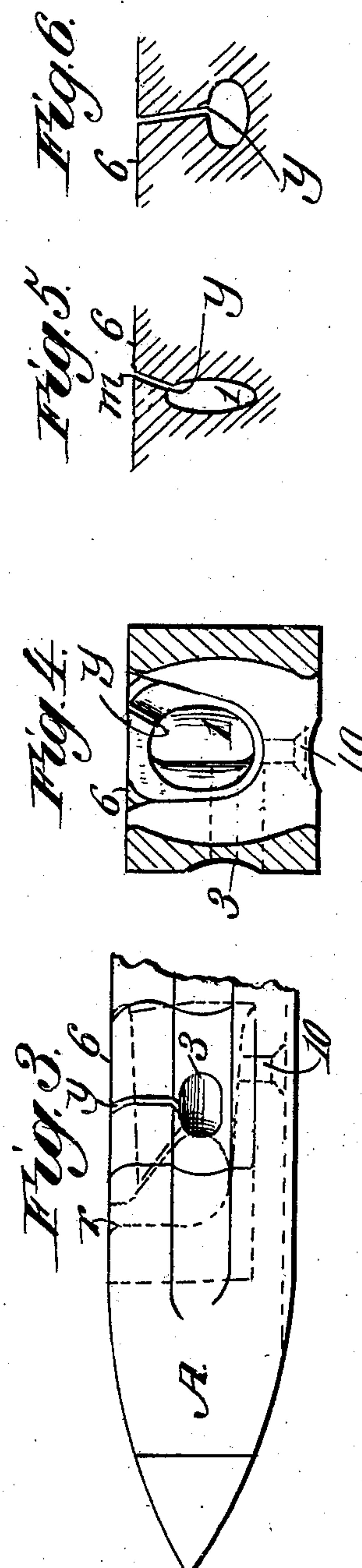
E. G. FERREIRA.
SHUTTLE FOR WEAVERS' LOOMS.

APPLICATION FILED JULY 26, 1902.

NO MODEL.



Witnesses.
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UNITED STATES PATENT OFFICE.

EDUARDO GOMES FERREIRA, OF RIO JANEIRO, BRAZIL.

SHUTTLE FOR WEAVERS' LOOMS.

SPECIFICATION forming part of Letters Patent No. 736,079, dated August 11, 1903.

Application filed July 26, 1902. Serial No. 117,162. (No model.)

To all whom it may concern:

Be it known that I, EDUARDO GOMES FERREIRA, manufacturer, a citizen of the Republic of Brazil, residing at 83^A Rua Primeiro de Marco, Rio de Janeiro, Brazil, have invented certain new and useful Improvements in Shuttles for Weavers' Looms, of which the following is a specification.

This invention relates to shuttles for weavers' looms; and the object of the invention is to provide a simple device of this character which can be easily threaded and from which the thread can be easily drawn during the weaving operation.

The invention is clearly shown in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a longitudinal sectional elevation of a shuttle including my invention. Fig. 2 is a plan view of the same. Fig. 3 is an elevation of the head of the shuttle, taken from that side in which the eye thereof appears. Fig. 4 is a transverse section taken in the line 4 4, Fig. 1; and Figs. 5 and 6 are similar views taken in the lines 5 5 and 6 6, respectively, Fig. 2.

Like characters refer to like parts in the several figures.

The numeral 1 indicates a channel or bore in head A of the shuttle, which is shown as being of approximately V-shaped form, the branches of which converge toward the head of the shuttle and are located at opposite sides, respectively, of the axis thereof. One of the branches of the channel or bore, or what might be considered the inner one, opens into and leads from the chamber B, in which the bobbin C is removably mounted upon the usual spindle. The other branch of the channel or bore opens in the side of the shuttle at 3 to form an eye from which the weft of yarn or thread is drawn from the bobbin by way of the approximately V-shaped channel or passage alluded to. A threading passage or slit *y* opens, respectively, into the channel or passage 1 and the top of the shuttle, it being of a shape to agree with that of said passage or bore, and the point at which the branches of said passage or slit converge is shown at O. It will be seen that the walls of the inner branch *m* of the slit *y* are acute with respect

to the top 6 of the shuttle, while at the inner end of the branch end of said passage or slit said walls are at an acute angle with respect to said top and gradually merge into a right angle to said top, such latter disposition of the walls being at the eye 3. The entering end of the slit or passage *y* is widened, as shown at *s*, and such branches where they converge are also widened, as at *r*, in order to facilitate the introduction of the thread or yarn into the bore or channel 1. The channel and threading-passage may, if desired, be formed in a separate piece H, which can be conveniently secured in the head of the shuttle by means of screws 10, the part H being made of some light metal, such as aluminium.

While it is not essential that the forward walls of the slit should be disposed in the manner indicated, it is essential that the rear walls thereof should be.

In use a portion of the thread is drawn from the bobbin C and the leading end thereof is placed in the upper portion of the slit *y*. By grasping the free end of the yarn and pulling the same downward into the eye 3 the inclined walls of the slit *y* will automatically and rapidly guide the thread or yarn into the channel or passage 1.

Having described the invention, what I claim is—

A shuttle having an approximately V-shaped channel at one end thereof, the branches of which converge toward the head of said shuttle, one of said branches opening into the side of the shuttle to form an eye, and a similarly-shaped threading-passage opening into the channel and top of the shuttle respectively, the rear wall of the inner branch of said slit being at an acute angle with respect to the top of said shuttle and the corresponding wall of the other branch of said slit being initially at an acute angle with respect to said top and merging gradually into a right angle relatively to said top.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDUARDO GOMES FERREIRA.

Witnesses:

PAUL LECLERC,
S. H. BUTCHER.