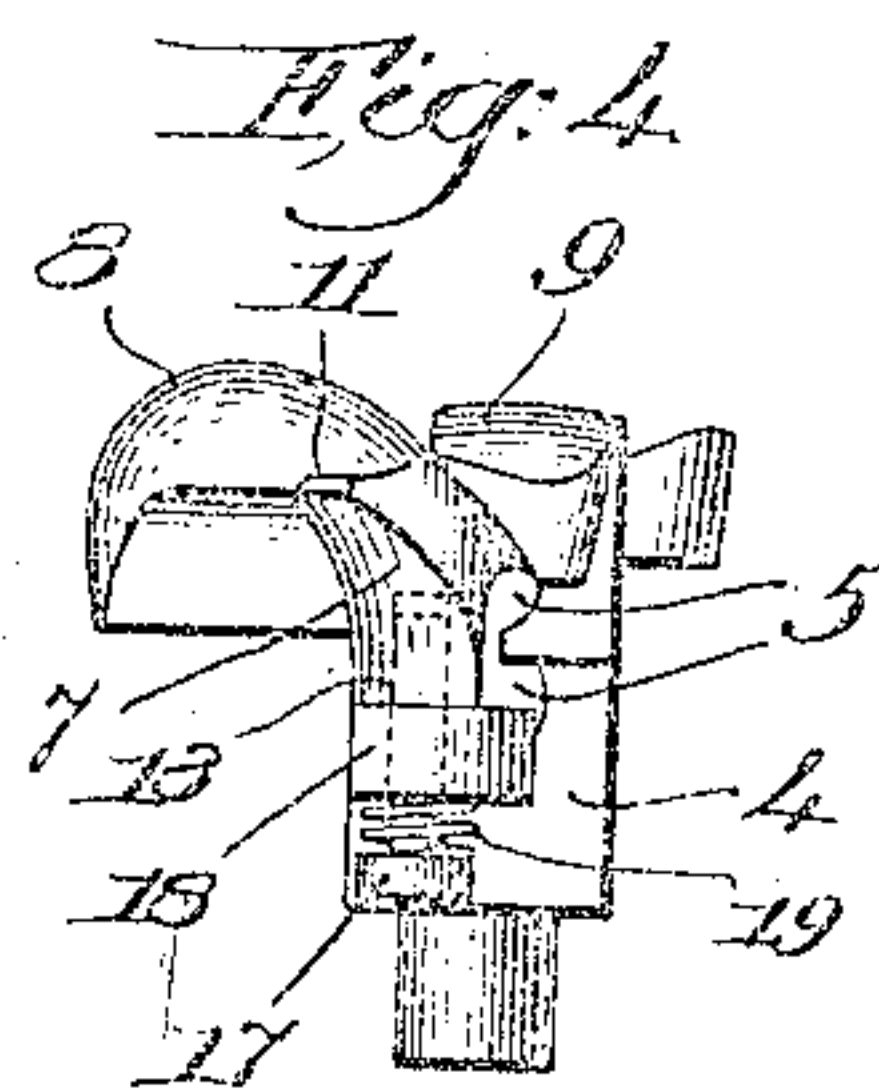
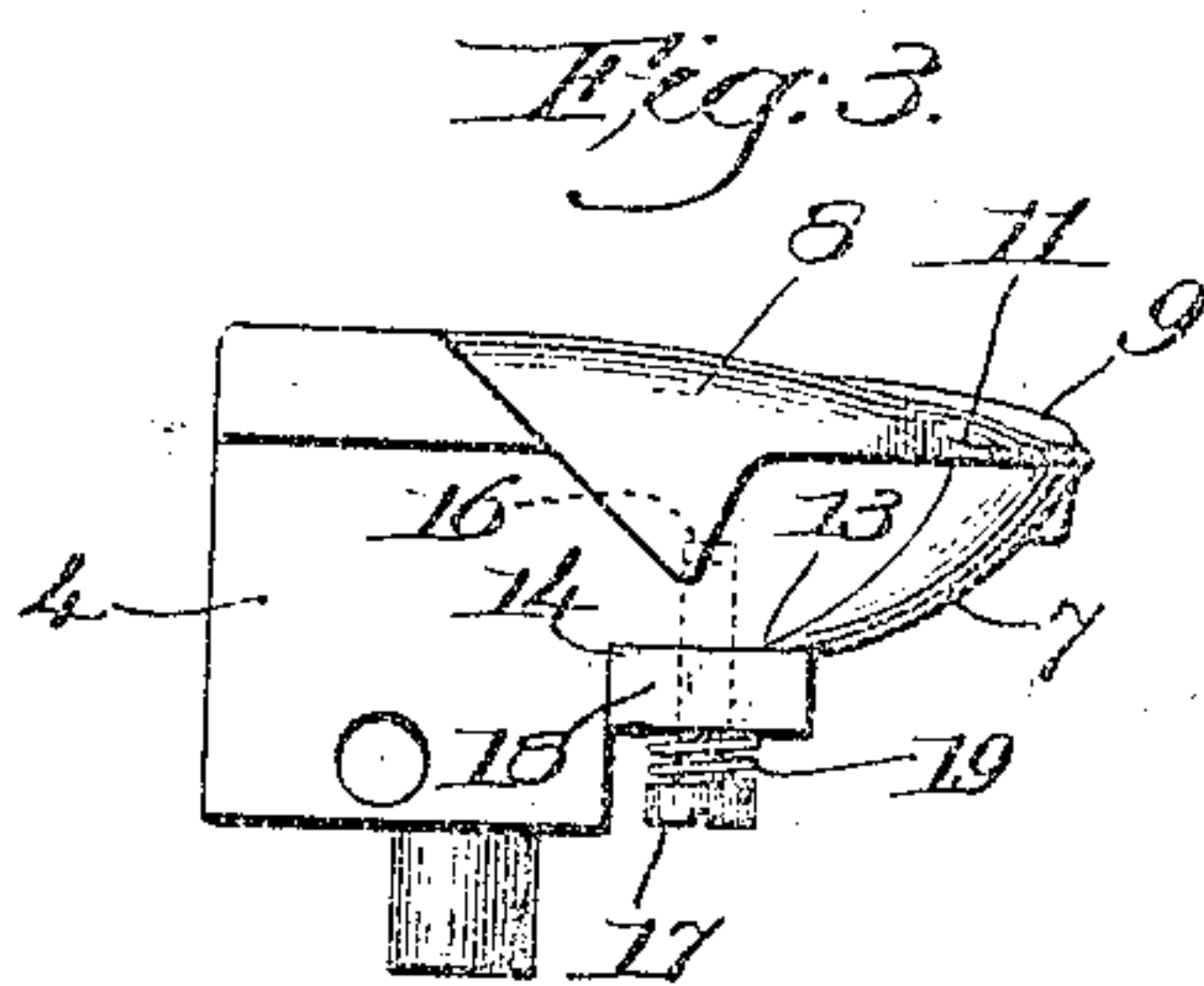
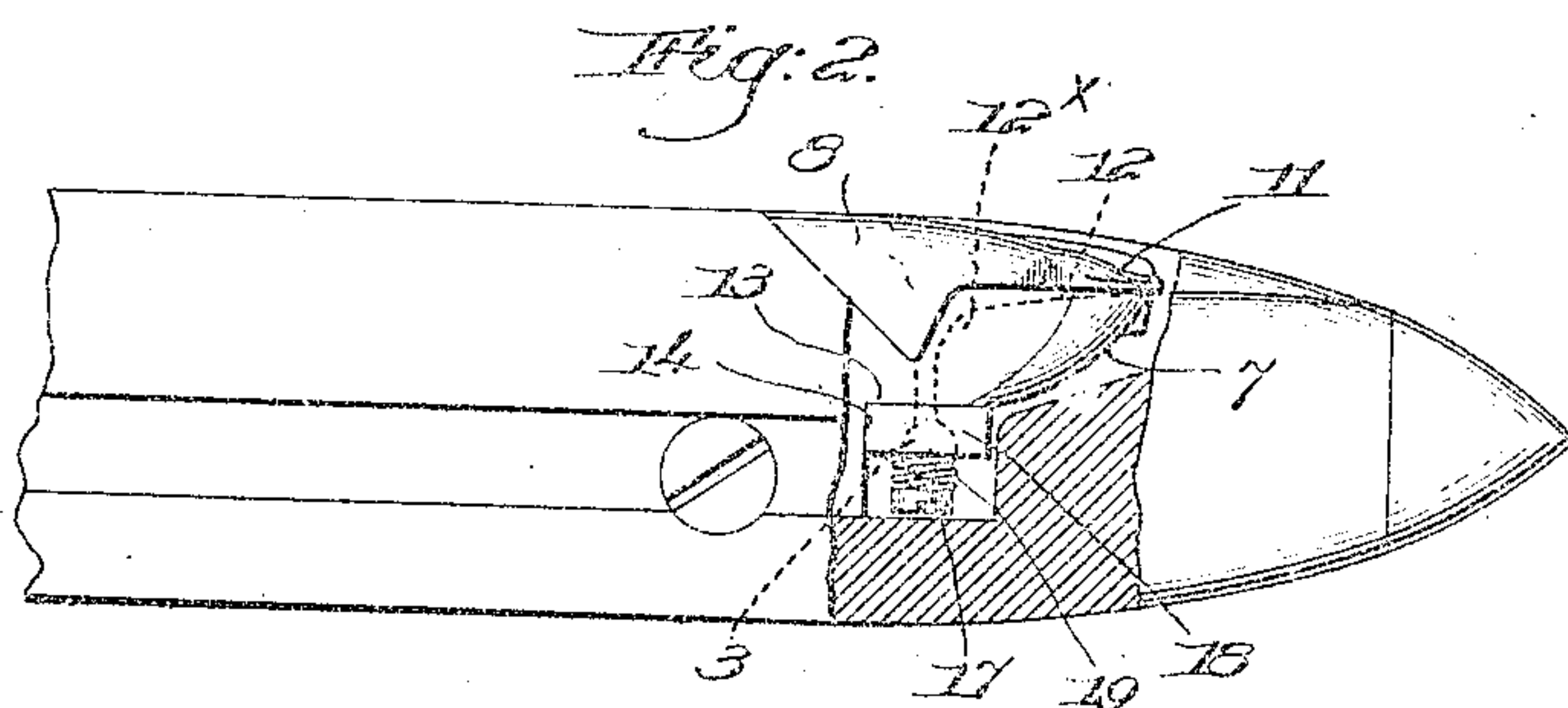
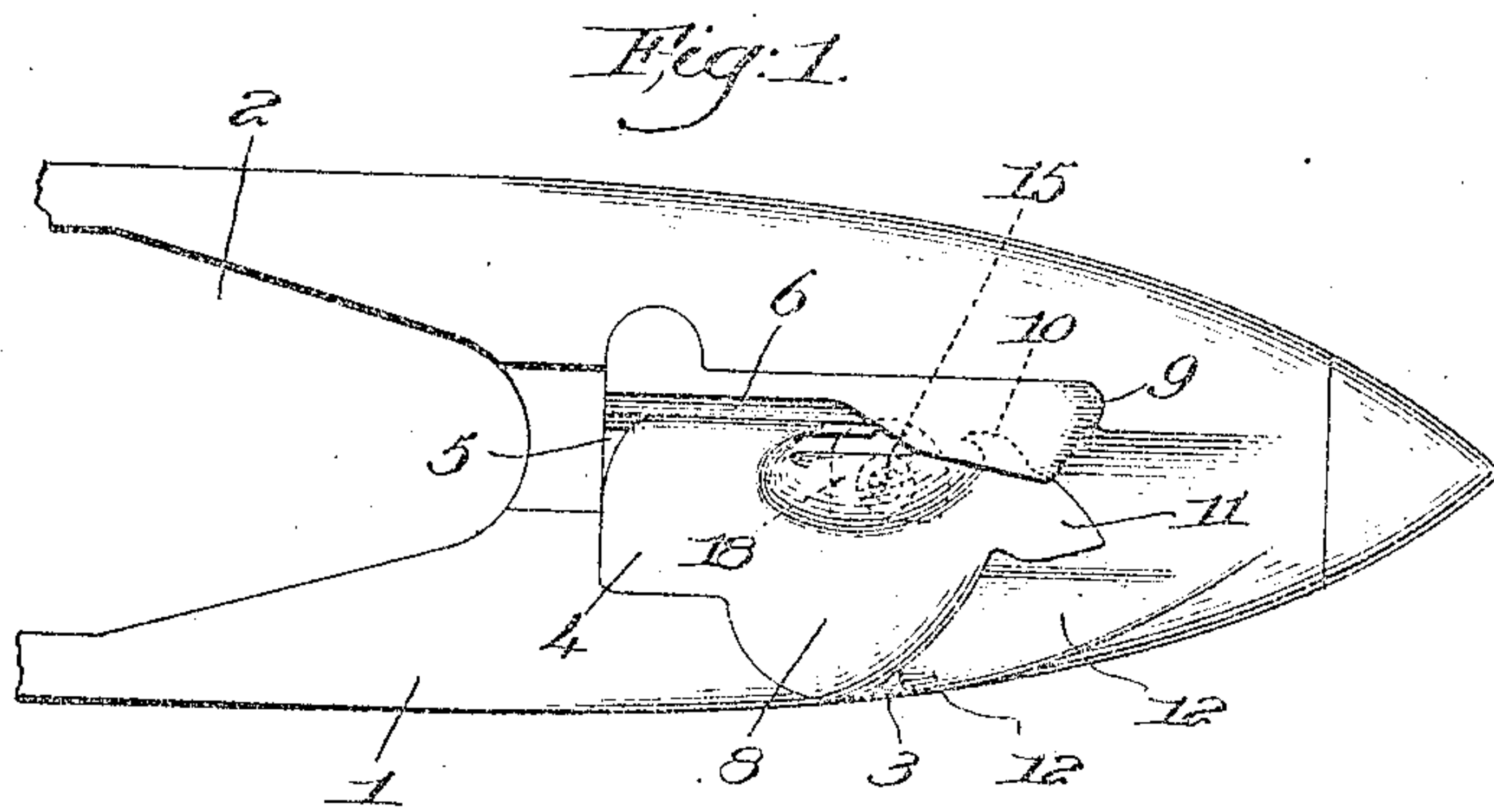


No. 887,920.

PATENTED MAY 19, 1908.

C. H. CARR.
LOOM SHUTTLE.
APPLICATION FILED AUG. 13, 1907.



Witnesses,
Edward F. Allen.
Joseph M. Ward

Inventor,
Charles H. Carr;
by Crosby Frezney,
attys

UNITED STATES PATENT OFFICE.

CHARLES H. CARR, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF
HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM-SHUTTLE.

No. 887,920.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed August 13, 1907. Serial No. 388,335.

To all whom it may concern:

Be it known that I, CHARLES H. CARR, a citizen of the United States, and resident of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Loom-Shuttles, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object the production of a loom-shuttle having novel and efficient means for exerting a substantially constant and uniform tension on the yarn or thread as it is drawn through the delivery-eye of the shuttle.

I have herein shown my invention applied to a loom-shuttle of the automatically self-threading type, the threading device in its general features of construction being substantially the same as that shown in United States Patent No. 769,914, granted September 13, 1904 to Northrop, but other threading devices may be used so far as my invention is concerned.

In accordance with my invention I have arranged the thread tension device immediately adjacent the delivery-eye of the shuttle, said device comprising essentially two members or parts between which the thread passes, the said members being constantly and yieldingly pressed together.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a top plan view of the delivery end of a loom-shuttle with one embodiment of my invention applied thereto; Fig. 2 is a side elevation thereof, with a portion of the shuttle body broken out to show the parts behind it; Fig. 3 is a side elevation of the threading device or block, detached, with my novel tension device applied thereto; Fig. 4 is a right-hand end elevation of the device shown in Fig. 3.

The shuttle-body 1 having an opening 2 to receive the usual filling-carrier or bobbin, and the side delivery-eye 3, shown in dotted lines Fig. 2, may be all of usual construction.

The metallic threading block 4 has a longitudinal thread-passage 5, with a narrow or slot like entrance 6, and an inclined horn 7 is provided at the front end of said passage, on the underside of the head 8 which overhangs the delivery-eye of the shuttle, Figs. 1 and 2.

A shield 9 overlaps a beak 10, the upper end of the horn being extended at 11, Fig. 1, to project above the cut away part 12 of the shuttle-body, Fig. 1.

The filling-thread is drawn into the thread-passage 5 and under the beak 10, and is then drawn under the extension 11 and directed downwardly automatically by the horn 7 and the adjacent portions of the shuttle-body, as usual.

Ordinarily a depending pin at the base of the horn is used to form a thread-guide around which the thread travels on its passage from the threading-passage to the delivery-eye, and an equivalent device is employed herein but of a different construction, as will be explained.

The lower end or base of the horn 7 is shaped to present a flat friction face 13, in a plane parallel to the bottom of the shuttle and above the bottom of the passage 5, see Fig. 4, with a transverse depending shoulder 14 at the rear end of the face. Such flattened portion 13 forms one member of the tension device in my present invention, and a steel pin or stud 15 is screwed into a threaded hole 16 in the face 13, the pin depending therefrom and having at its lower end a head 17, shown as nicked, Figs. 2 and 3. The other member of the tension device is a flat block 18 loosely mounted on the pin and held pressed constantly and yieldingly against the face 13 by a coiled spring 19 interposed between the block and the head of the pin 15.

At its rear end the block is squared to rest against the shoulder 14 and be thereby positioned upon the pin and held from any rotative movement, the member 18 extending inward across the front of the thread-passage 5, see Fig. 4 beneath the path of the thread.

When the thread is directed downward and rearward by the horn 7 and the part 12 of the shuttle-body the thread is drawn in between the members 13 and 18 of the tension device and draws around the pin 15 as it passes through the delivery-eye 3, said pin thus serving as a thread-guide.

The spring 19 causes the tension members to act upon the thread with a substantially uniform and constant tension or drag, so that there is little or no variation in the thread tension during weaving.

As the inner portion of the member 18 projects beneath the thread as the latter enters

the thread-passage the thread is prevented from dropping below the tension device.

By turning the guide-pin 15 in one or the other direction the force of the spring 19 is increased or diminished, with a corresponding variation in the tension.

The tension is applied to the thread immediately adjacent its point of delivery from the shuttle, and the structure is simple and
19 very efficient in operation.

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

1. An automatically-self-threading loom-shuttle having a delivery-eye and means to
15 direct the filling-thread to the eye, including a longitudinal thread-passage and a horn, combined with an upright thread-guide depending from the horn adjacent the eye and
20 around which the thread passes when directed thereto by the horn, a tension device comprising a fixed member formed by a part of the horn and a movable member mounted on the guide and projecting inward beneath
25 the path of the thread in the thread-passage, and a spring to yieldingly press said member toward the fixed member.

2. An automatically-self-threading loom-shuttle having a delivery-eye and means to
30 direct the filling thread to the eye, including a longitudinal thread-passage and a horn,

combined with a depending pin screwed into the base of the horn and having a headed lower end, the horn being flattened around the pin, which latter forms a thread-guide, a
35 movable tension member on the pin, and a spring between said member and the head of the pin, to constantly press the tension member against the flattened portion of the horn, the thread passing between such flattened
40 portion and the tension member, as and for the purpose set forth.

3. An automatically-self-threading loom-shuttle having a side delivery-eye and a
45 threading block provided with a longitudinal thread-passage and a horn, to automatically direct the filling-thread from the passage to the eye, said horn having a friction face and a shoulder, a thread-guide fixedly mounted on the horn and depending from the friction
50 face, and a spring-controlled tension member movably mounted on the thread-guide, to press the thread against the friction face, the shoulder on the horn positioning the tension member on the thread-guide.
55

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

CHARLES H. CARR.

Witnesses:

FISHER H. PEARSON,
FLORENCE A. PARR.