

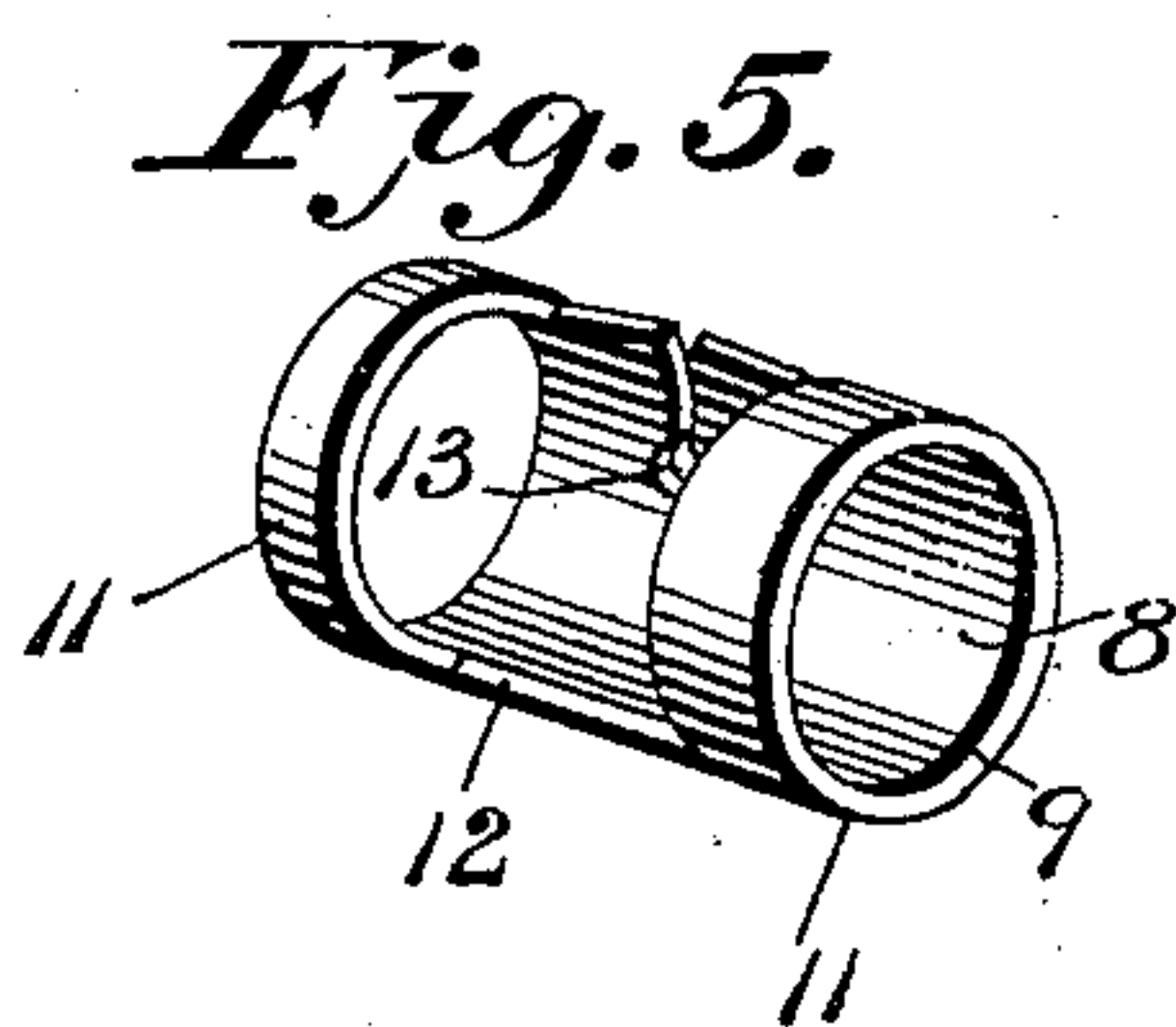
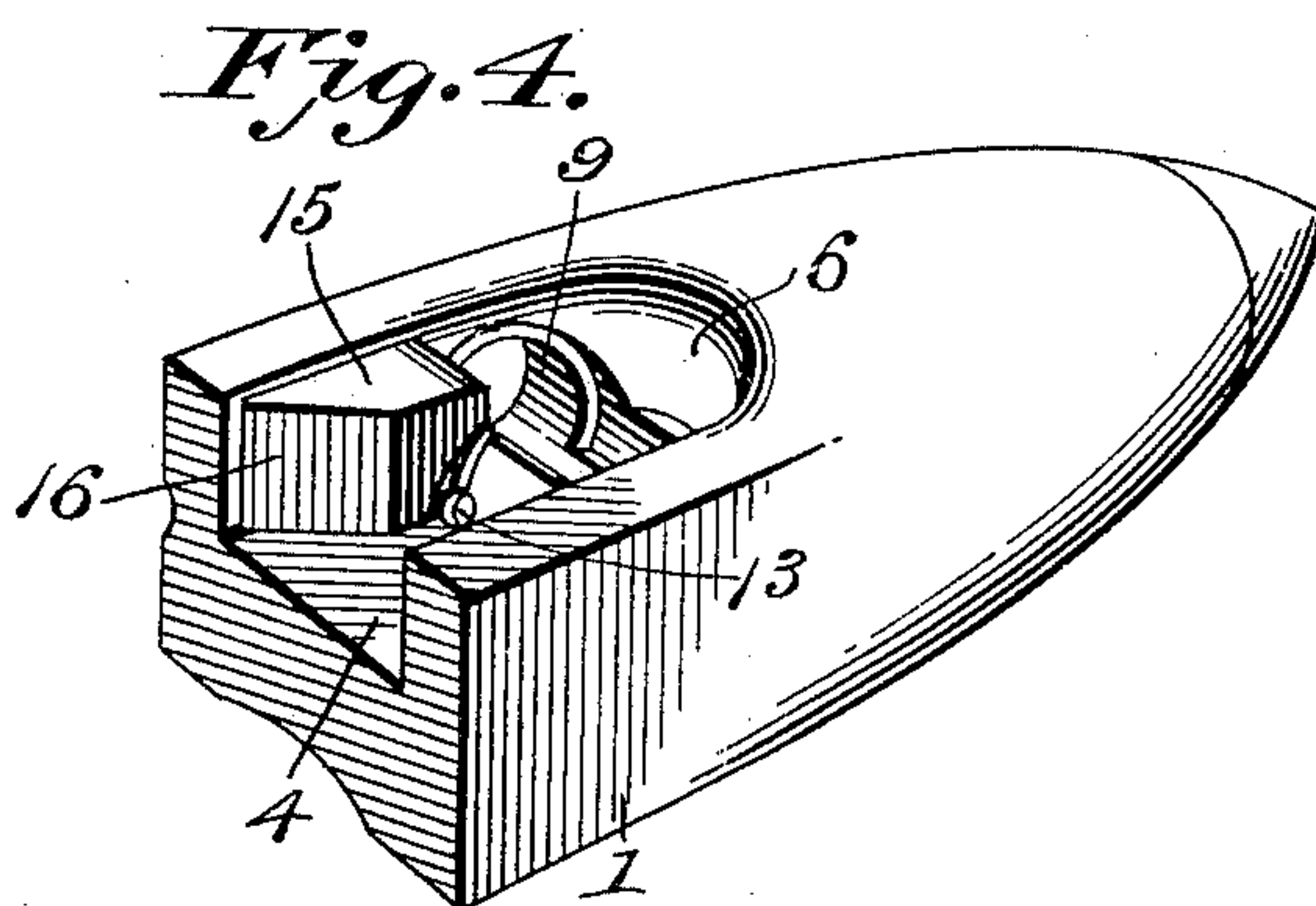
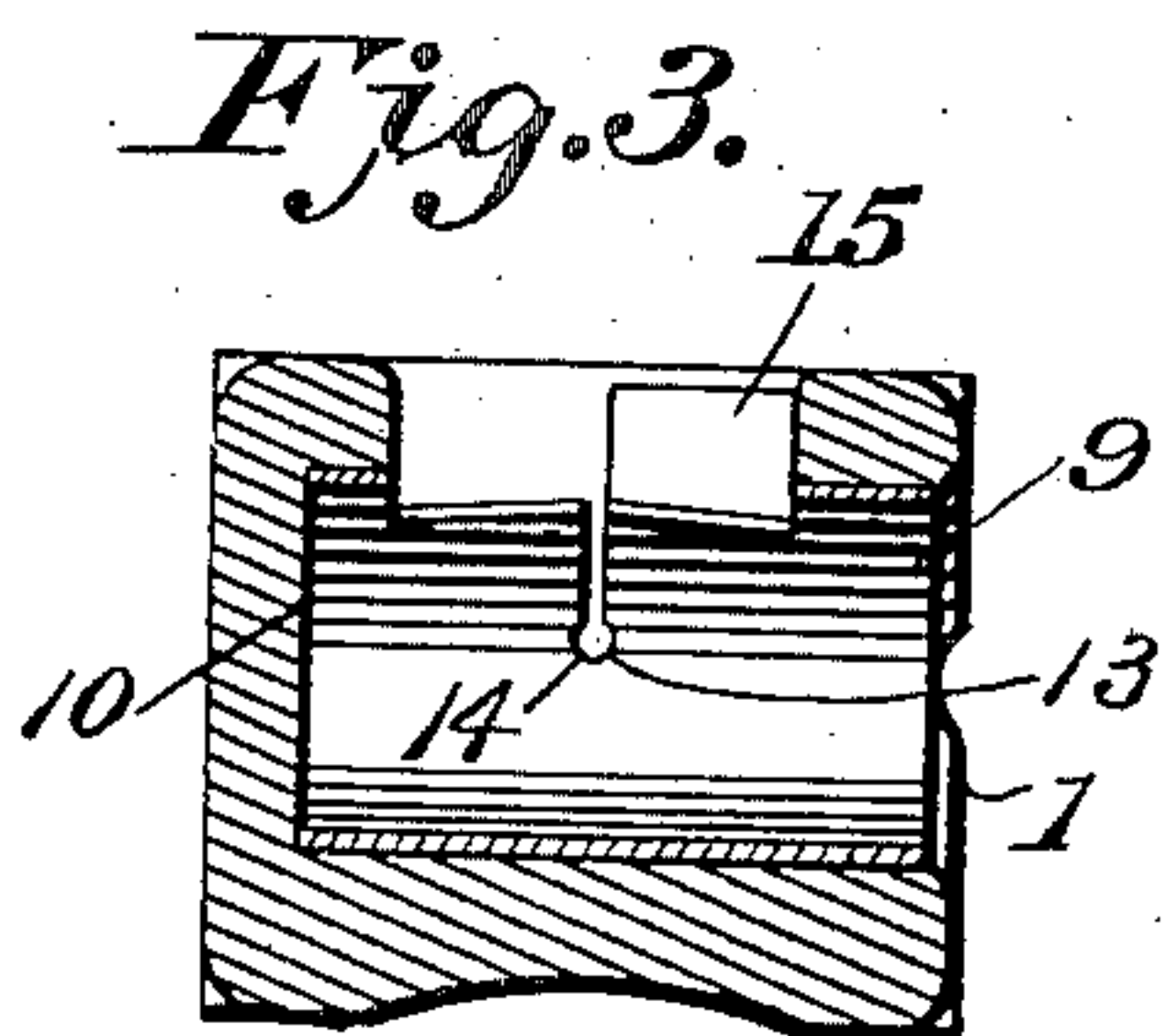
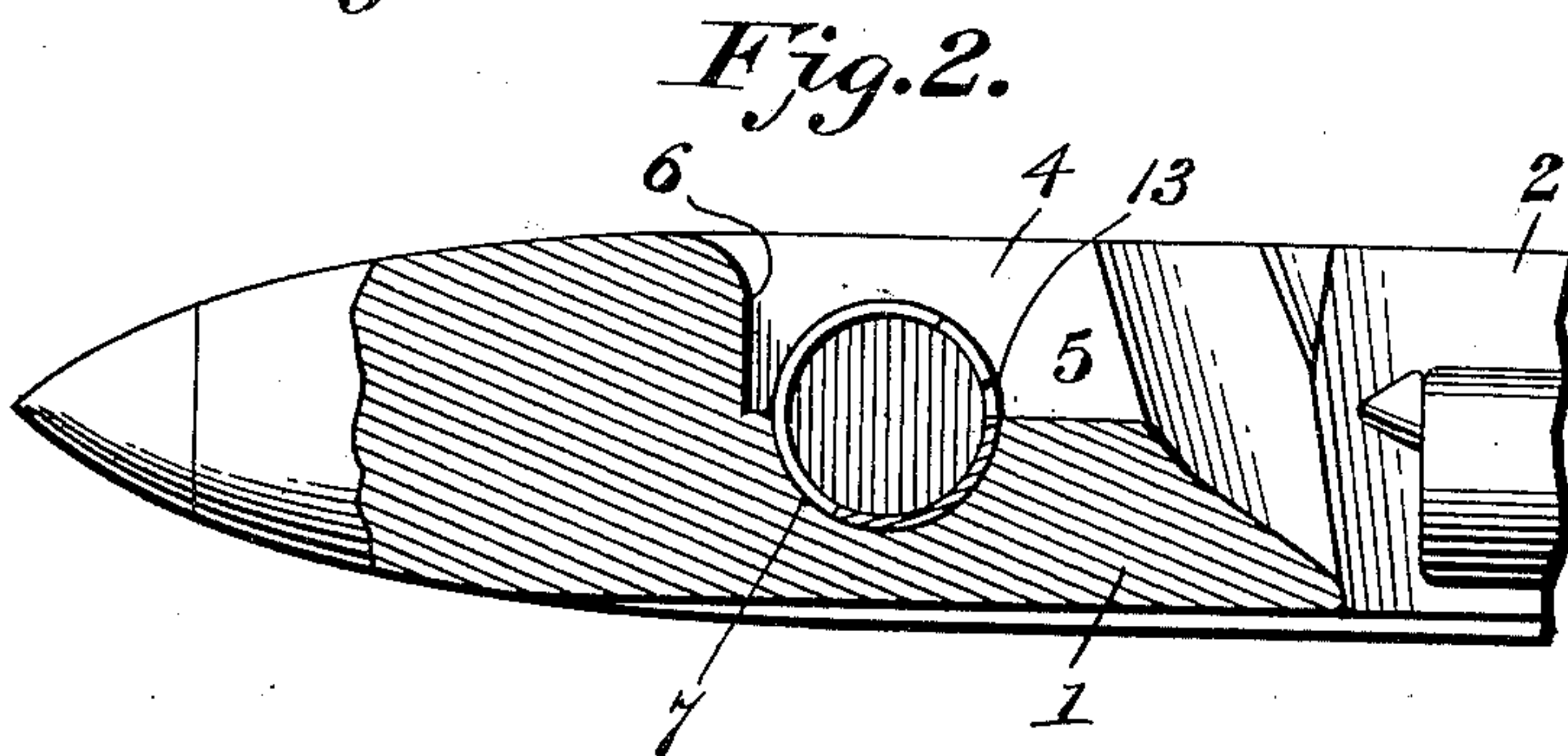
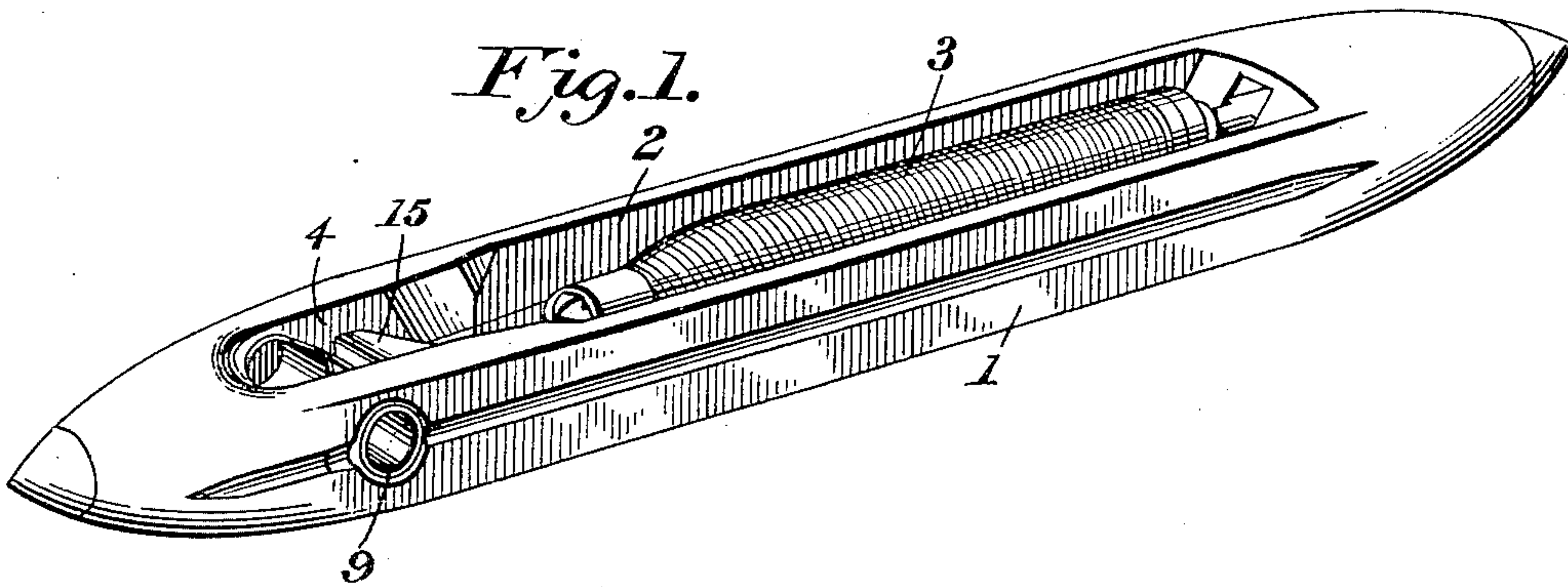
No. 657,098.

Patented Sept. 4, 1900.

N. DURAND.  
LOOM SHUTTLE.

(No Model.)

(Application filed Feb. 23, 1900.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

NORBERT DURAND, OF RANGE, WISCONSIN, ASSIGNOR OF ONE-HALF TO  
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## LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 657,098, dated September 4, 1900.

Application filed February 23, 1900. Serial No. 6,279. (No model.)

*To all whom it may concern:*

Be it known that I, NORBERT DURAND, a citizen of the United States, residing at Range, in the county of Polk and State of Wisconsin, have invented a new and useful Loom-Shuttle, of which the following is a specification.

In threading loom-shuttles it is the ordinary practice to thread the shuttle by sucking the end of the thread through the delivery-eye of the shuttle. It is well understood that this is detrimental to the health of operators, for the reason that in sucking the thread through the eye dust, lint, and grease are inhaled. Not only this, but it is very objectionable to women employees to thread the shuttle in the manner indicated after such shuttle has previously been threaded in the same manner by some man who is addicted to the use of tobacco. Various attempts have been made to provide means for enabling a shuttle to be quickly threaded without the use of the method above referred to, but in overcoming this objection the construction of the shuttle has been rendered more or less complicated.

It is the object of this invention to provide, in connection with an ordinary shuttle, a simple, cheap, and effective expedient whereby the thread from the bobbin may be quickly passed through and out of the delivery-eye of the shuttle; and to this end the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a shuttle with the improved threading device applied thereto. Fig. 2 is an enlarged longitudinal section through one end of the shuttle-body, showing the manner in which the finger-socket is intersected laterally by the bobbin-cavity or a longitudinal extension thereof. Fig. 3 is a cross-section taken in line with the finger-socket. Fig. 4 is a detail perspective view of one end of a shuttle, showing the socket-tube and guide-block in place. Fig. 5 is a detail perspective view of the socket-tube *per se*.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

The construction contemplated in this in-

vention is adapted to be employed in connection with the ordinary form of shuttle. I therefore have illustrated one of the ordinary forms of shuttles, in which 1 designates the shuttle-body, 2 the bobbin-cavity, and 3 the bobbin arranged therein.

In carrying out the present invention the bobbin-cavity is provided with a longitudinal extension 4 in the form of a recess extending approximately half-way through the body of the shuttle and comprising a floor 5 and terminating in an end wall 6. The floor 5 of the recess is provided with a semicylindrical depression or groove 7, forming a seat for a socket-tube 8, of any suitable material, such as metal. One of the walls at the side of the recess 4 is provided with a circular opening 9, while the opposite wall is provided upon its inner side with a circular recess 10. The circular opening and circular recess are in transverse alinement with each other and are also concentric with the semicylindrical depression 7, the said opening, recess, and depression forming what may be termed a "finger-socket," which extends transversely of the shuttle and which is laterally intersected by the bobbin-cavity or the longitudinal end extension thereof, so as to enable the operator in threading the bobbin to insert a finger into the bobbin-cavity extension and into the finger-socket, and thence outward through the end of the socket, which terminates in and forms the delivery-eye of the shuttle.

Within the finger-socket is arranged the socket-tube 8, above referred to, which comprises an annular end portion 11, one of which lines the circular opening 9 and the other the circular recess 10, above described. The socket-tube 8 is cut away laterally at one side to form a finger-notch 12, so as to enable the finger to be inserted laterally into the tube, and thence outward through the discharge end thereof. The socket-tube is also provided with a guide-eye 13 in the form of a slit having one end enlarged, as shown at 14, to form the eye proper, while the opposite end opens out into the finger-notch 12, so as to enable the thread to be passed through the slit into the guide-eye. Within an extension of the bobbin-cavity and immediately adjacent to the socket-tube 8 is placed a



guide-block 15, one surface 16 of which is made to slope from the side wall of the bobbin-cavity to a point about in line with the guide-eye 13. Said block serves to direct the thread into the slit which communicates with the guide-eye and at the same time strengthens the shuttle-body.

In operation a person grasps the end of the thread and draws it across the finger-socket and against the guide-block 15, at the same time depressing the thread until it passes downward into the guide-eye. The thread is now released and a finger is then inserted into the finger-socket or socket-tube, so as to engage the end of the thread in front of it. The finger is now bent and pushed lengthwise of the socket-tube until the end of the thread is forced outward through the end of the tube, and consequently through the delivery-eye of the shuttle, thus completing the operation of threading the shuttle.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A shuttle provided with a longitudinal cavity in one face, a delivery-eye extending transverse to the cavity, and a finger-opening located in the same side of the shuttle as the longitudinal cavity and communicating with the eye, whereby the yarn may be drawn across the finger-opening and may be depressed into the finger-opening and through the eye by the finger of the operator.

2. A loom-shuttle having a longitudinal bobbin-cavity and provided with a transverse finger-socket of sufficient size to admit

of the insertion of the operator's finger there-through, said socket being laterally intersected by the bobbin-cavity and terminating at one end in the delivery-eye of the shuttle.

3. A loom-shuttle having a longitudinal bobbin-cavity and provided with a finger-socket one end of which forms the delivery-eye of the shuttle and the other end of which is closed, said socket communicating laterally with the bobbin-cavity.

4. A loom-shuttle having a longitudinal bobbin-cavity and provided with a transverse finger-socket of sufficient size to admit of the insertion of the operator's finger there-through, said socket being laterally intersected by the bobbin-cavity and terminating at one end in the delivery-eye of the shuttle, a guide-eye at the entrance to the finger-socket, and a guide-block for directing the thread into the eye as it is drawn from the bobbin.

5. A loom-shuttle having a longitudinal bobbin-cavity, and provided with a transverse finger-socket which is laterally intersected by the bobbin-cavity and which terminates at one end in the delivery-eye of the shuttle, and a socket-tube inserted in said finger-socket and cut away at one side to admit of the insertion of the finger.

6. A loom-shuttle having a longitudinal bobbin-cavity and provided with a transverse finger-socket which is laterally intersected by the bobbin-cavity and which terminates at one end into the delivery-eye of the shuttle, a socket-tube set into said finger-socket and cut away at one side to form a finger-notch, the said tube being further provided with a guide-eye which communicates with the finger-notch.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

NORBERT DURAND.

Witnesses:

W. T. KENNEDY,  
MAY KENNEDY.