

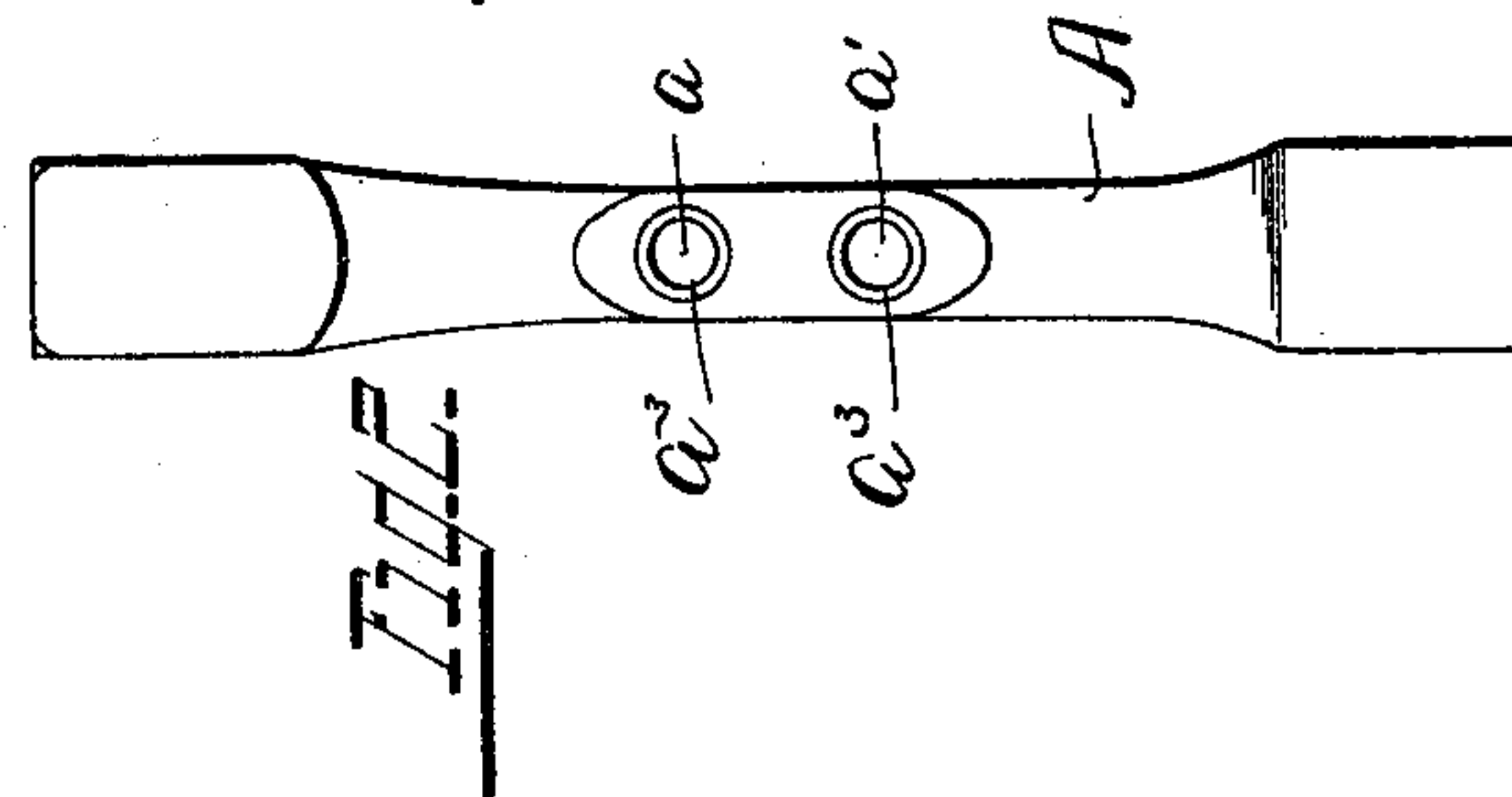
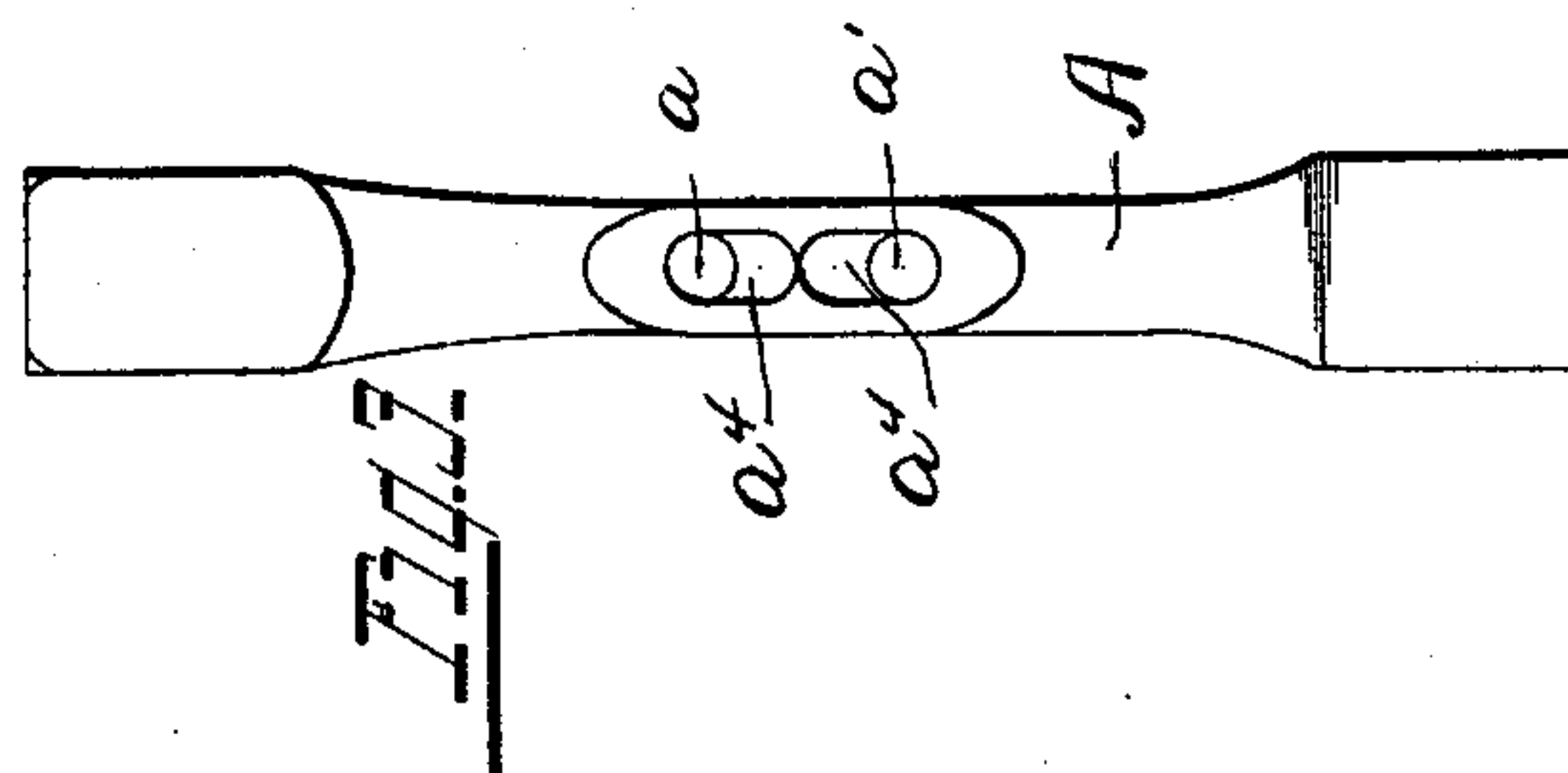
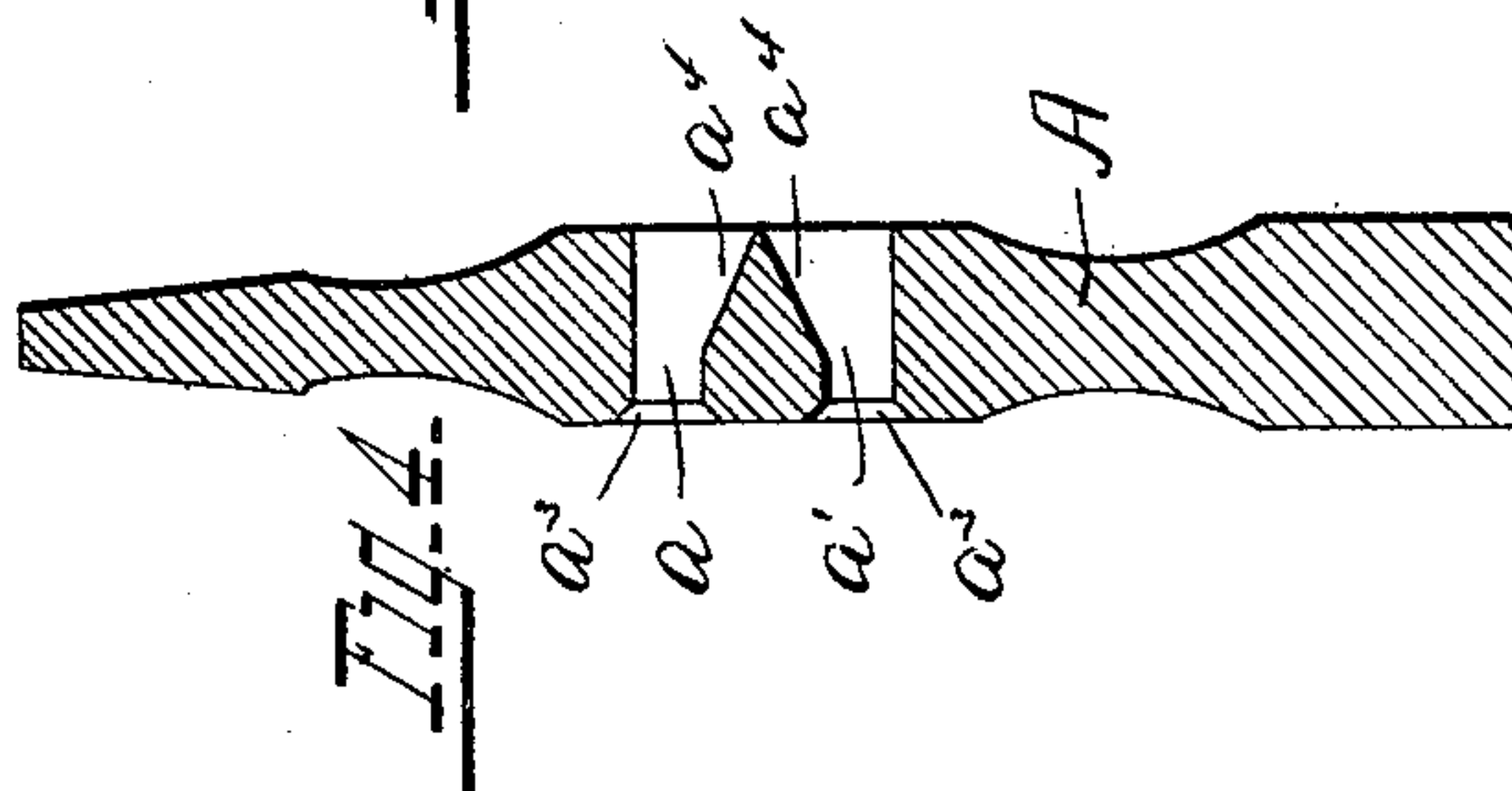
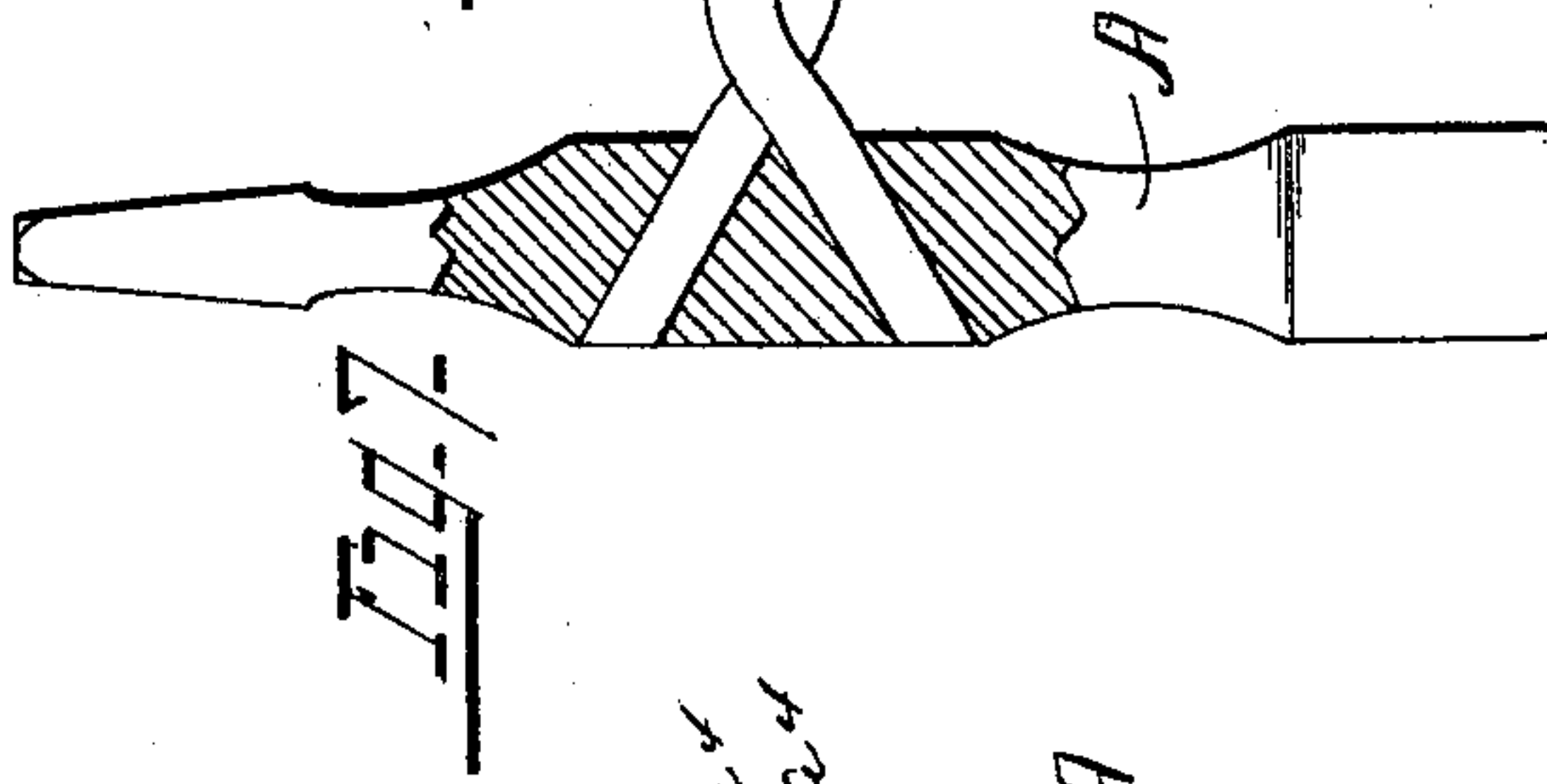
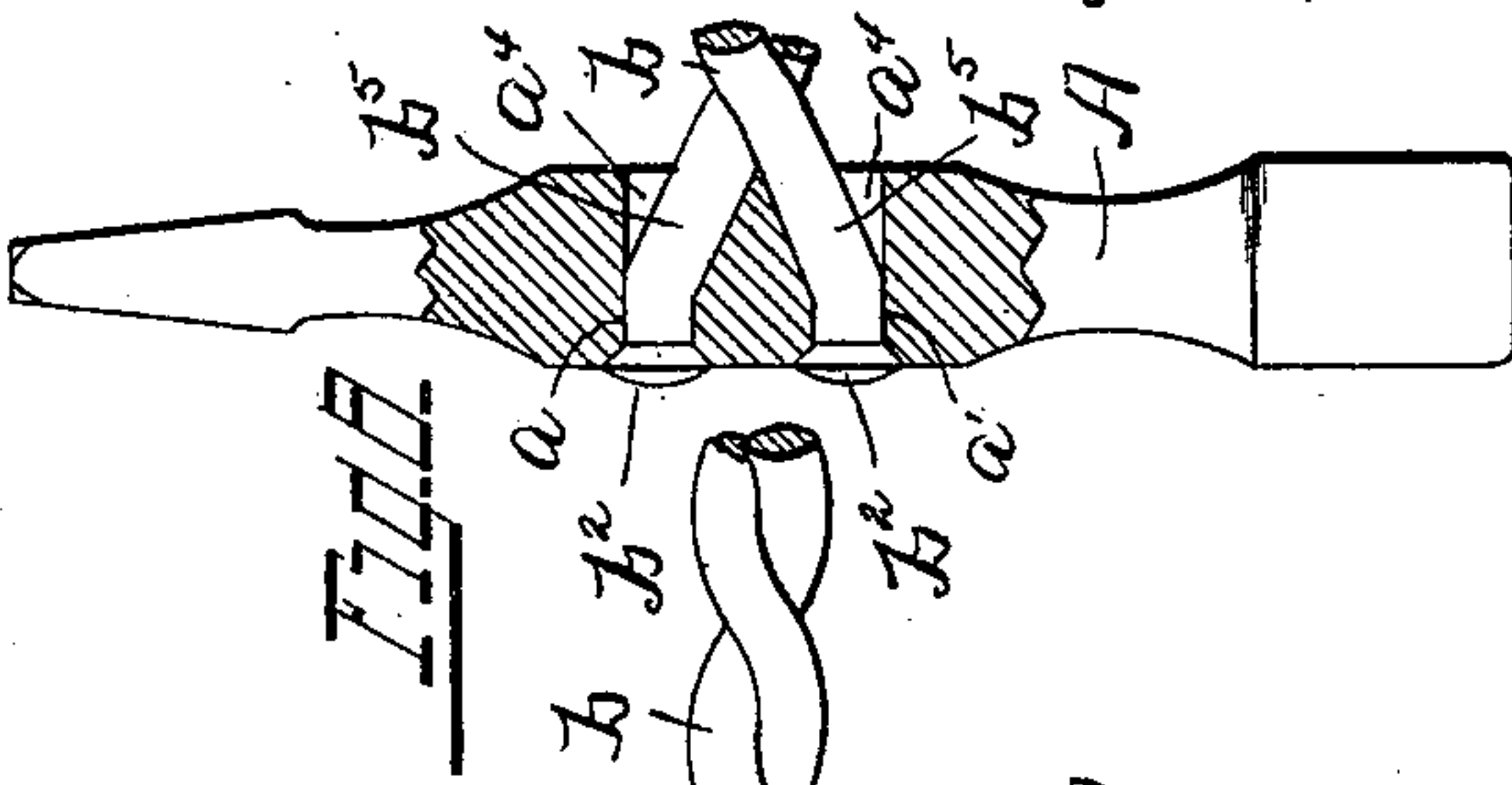
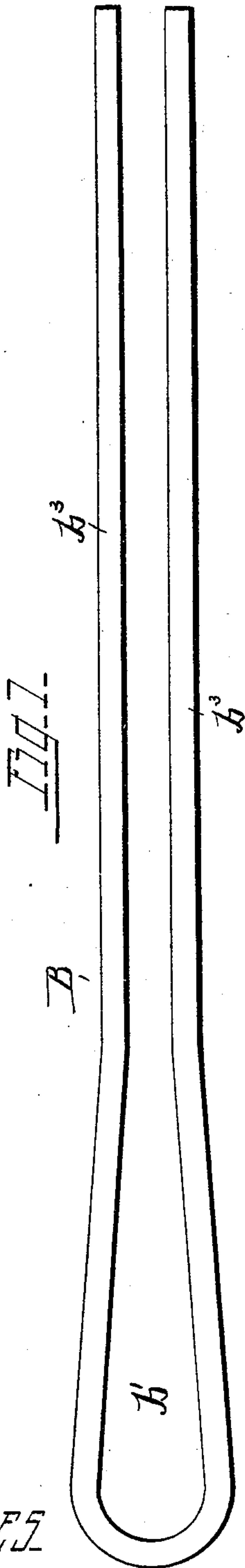
(No Model.)

2 Sheets—Sheet 1.

E. G. MINNEMEYER.
HAMMER

No. 587,154.

Patented July 27, 1897.



WITNESSES

Carroll J. Webster
Arthur L. Bugant

INVENTOR

Edward G. Minnemeyer
By J. H. Bliss
Att'y.

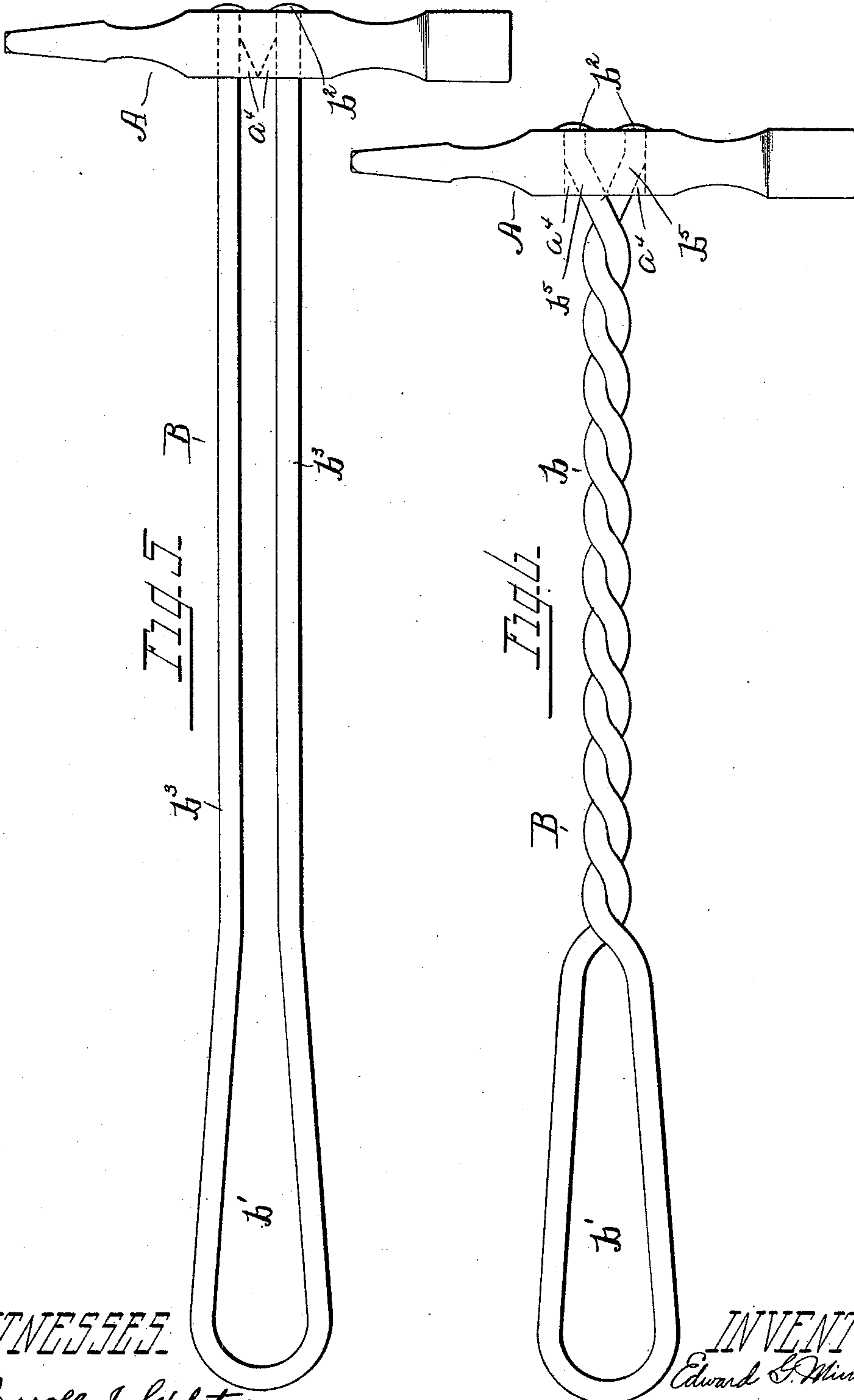
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By J. V. Bliss
Atty

UNITED STATES PATENT OFFICE.

EDWARD G. MINNEMEYER, OF CHICAGO, ILLINOIS.

HAMMER.

SPECIFICATION forming part of Letters Patent No. 587,154, dated July 27, 1897.

Application filed November 20, 1896. Serial No. 612,898. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. MINNEMEYER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hammers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Figure 1 is a view of the handle detached from the hammer-head, showing the initial bending thereof. Fig. 2 is an elevation of the hammer-head. Fig. 3 is an elevation of the hammer-head from the side opposite to that in Fig. 2. Fig. 4 is a sectional view through the hammer-head. Fig. 5 is an elevation showing the hammer-head and handle connected together. Fig. 6 is a similar view showing the completed article. Fig. 7 is a view, partly in section, of a slightly-modified construction. Fig. 8 is a view similar to Fig. 7, showing the manner of connecting the handle with the head when the latter is formed as in Fig. 4.

In the drawings, A designates the hammer-head, and B designates the handle. The latter is formed from a single piece of wire rigidly secured at its ends to said head and having its intermediate portions twisted together, as at b , and a loop b' at its outer end.

The object of my invention is to provide improved means for connecting a metallic handle to a hammer-head and to produce a light, strong, and ornamental handle particularly adapted for use in connection with light hammers.

In the head A are formed two transverse passages $a a'$, through which the ends of the wire forming the handle B may be passed, said ends being afterward upset, as at b^2 , to prevent the head from slipping thereover.

In manufacturing my improved handle I take a piece of wire of suitable gage and length and first bend it at its middle to form the loop b' and the two parallel sections b^3 . The ends of said sections b^3 are then passed through the aforesaid apertures $a a'$ in the head A and the metal upset, as described, after which the head is grasped in a suitable holder and the members or sections b^3 of the

handle are twisted together to form the ornamental body of the handle.

The free ends of the handle do not extend through the hammer-head on straight parallel lines, but are related in such manner as to be tightly clamped within and to the head and to have a more extended surface in engagement with the head than would be presented if said ends extended on parallel lines therethrough.

The head A has countersinks a^3 formed therein about the outer ends of the passages $a a'$ to receive the enlarged portions or heads formed at the ends b^3 of the handle, and in the form illustrated in all the figures except Fig. 7 the web separating said passages in the head A has grooves a^4 , formed in its opposite faces, which receive the diverging portions b^5 of the handle. By this construction when the members b^3 of the handle are twisted together the enlarged portions b^2 are drawn tightly into the sockets provided therefor and the diverging end portions of said handle are bent at an intermediate point (see Fig. 8) and forced into the grooves a^4 , thereby clamping or binding the handle and head firmly together.

Instead of initially making the passages $a a'$ in the head A parallel and forming the grooves a^4 in the web separating the same adjacent to the inner ends thereof, as above described, said passages may be arranged as in Fig. 7. In this form said grooves diverge outwardly from a common opening in the inner face of the head A, and each is inclined in one direction throughout its length.

It will be seen that when the handle and head are secured together in the manner illustrated in Fig. 8 the heads b^2 at the ends of the wire strands effectually prevent disengagement of the head and handle. In the construction illustrated in Fig. 7 the elasticity of the ends of the wire strands and the wedge-like portions of the body of the head adjacent to the outer side of each diverging passage act to bind the handle and head firmly together and draw said ends into close contact with the head, and it is not necessary that the ends of the wire from which the handle B is formed should extend entirely through the head A. Tack-hammers and similar ar-

articles are commonly formed with cast-metal heads, and such a head can be cast onto a handle of the form herein, if desired, the diverging ends of the handle serving to effect
5 a firm union of the parts.

From the above description and the drawings it will be seen that I am enabled to provide a light, durable, and inexpensive hammer. By constructing the handle in the way
10 described and securing it to the head in the manner shown I avoid making a large opening or eye through the metal of the head, and by twisting the handle up to the head, as shown, I avoid the flexibility which would be
15 incident to the handle if such twisted portion terminated some distance from the head.

I am aware that it has been heretofore proposed to make handles for spoons and kitchen articles of twisted wire, said handles having
20 the ends of the wire connected together by soldering or welding and then united with the bowl of the spoon or the body of the article by similar means or by rivets, such constructions being illustrated in Patents No. 130,297
25 and No. 225,789, and I make no claim for a handle made from twisted wire for any and all tools or articles, but believe myself to have been the first to have provided a hammer having a handle made and connected with
30 the head in the peculiar manner herein illustrated and described.

What I claim is—

1. A hammer consisting of a head having two sockets or passages, and a handle formed
35 of two strands of wire having separated end portions, and twisted and held rigidly to-

gether beyond said end portions, said end portions of the wire strands being inserted into the sockets or passages in the head and surrounded by the metal of the head, and
40 means positively engaging with said end portions to prevent their withdrawal from the head, substantially as set forth.

2. A hammer consisting of a head, a handle formed of two strands of wire having end
45 portions extending through the head and terminating in heads, b^2 , to prevent withdrawal from the hammer-head, said strands being twisted and held rigidly together beyond the
50 said end portions, substantially as set forth.

3. In a hammer the combination of a head having two passages a , a' , extending transversely thereof and the two diverging grooves, a^4 formed in the wall separating said transverse passages and adjacent to the inner ends
55 thereof, a handle formed from a single piece of wire having its ends extending through said passages, a , a' , a twisted portion extending outwardly from the head, and the diverging portions b^5 , connecting the said twisted
60 portion with the end pieces in said passages, fitted in the aforesaid grooves, a^4 , and means for preventing withdrawal of the end portions of the wire strands from the hammer-head; substantially as set forth.
65

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD G. MINNEMEYER.

Witnesses:

H. T. DAVIS,

EUGENE C. ASHBY.