

No. 792,374.

PATENTED JUNE 13, 1905.

W. C. WOLFORD.

PLIERS.

APPLICATION FILED NOV. 1, 1904.

FIG. 1.

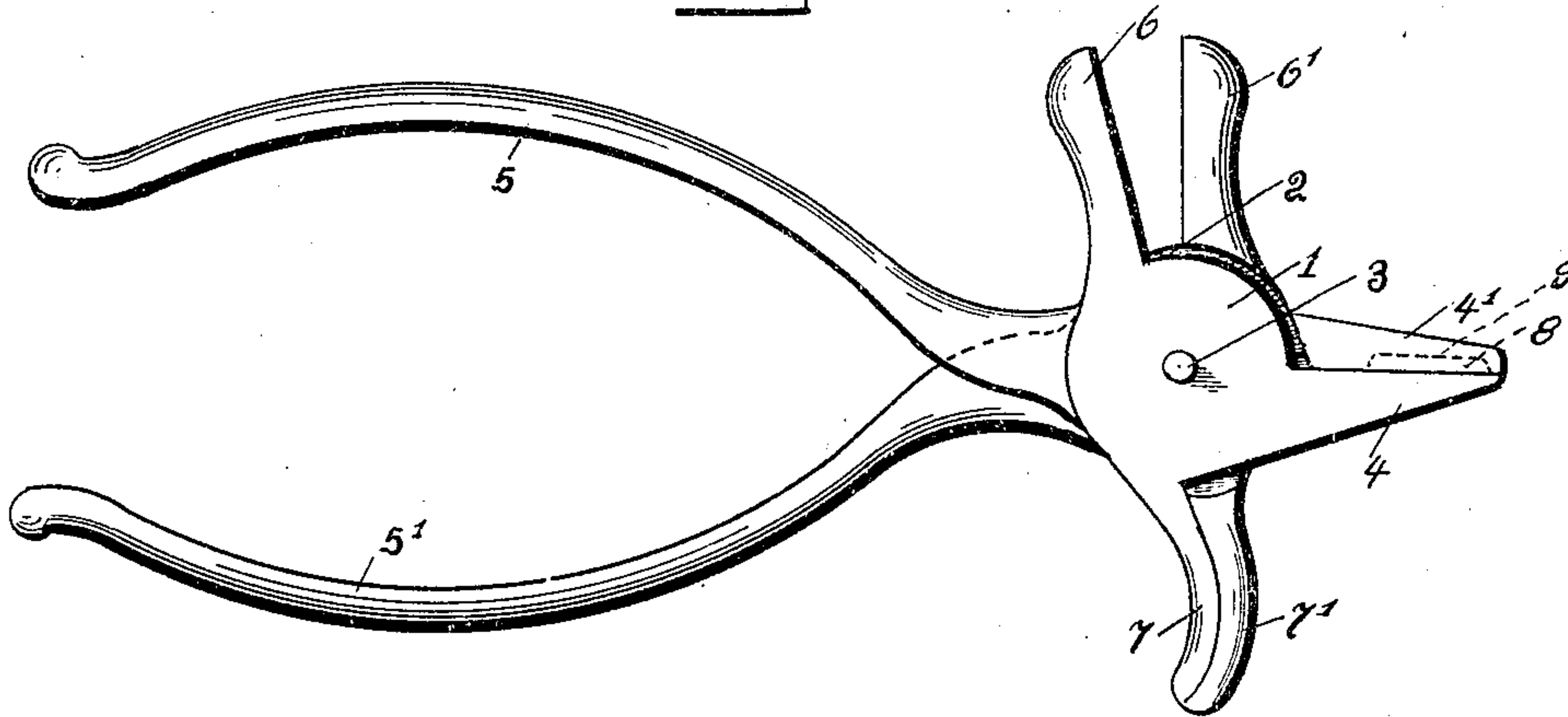


FIG. 2.

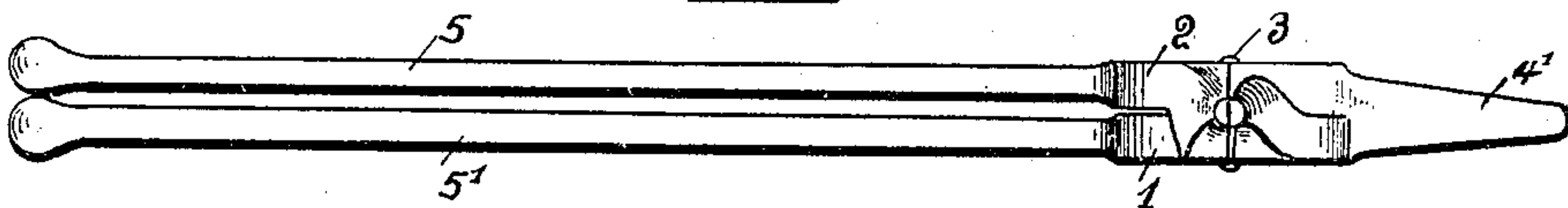


FIG. 3.

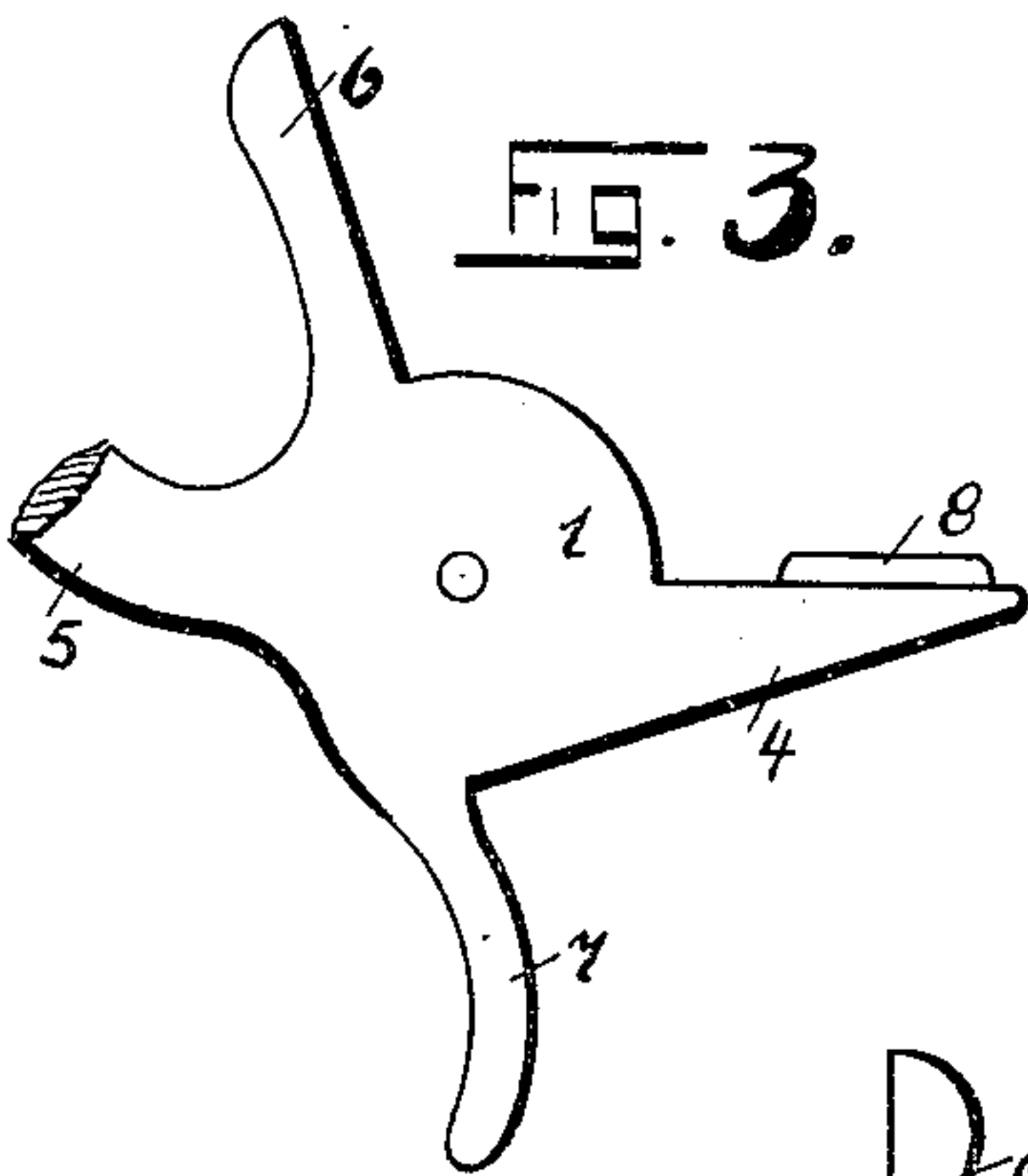


FIG. 4.

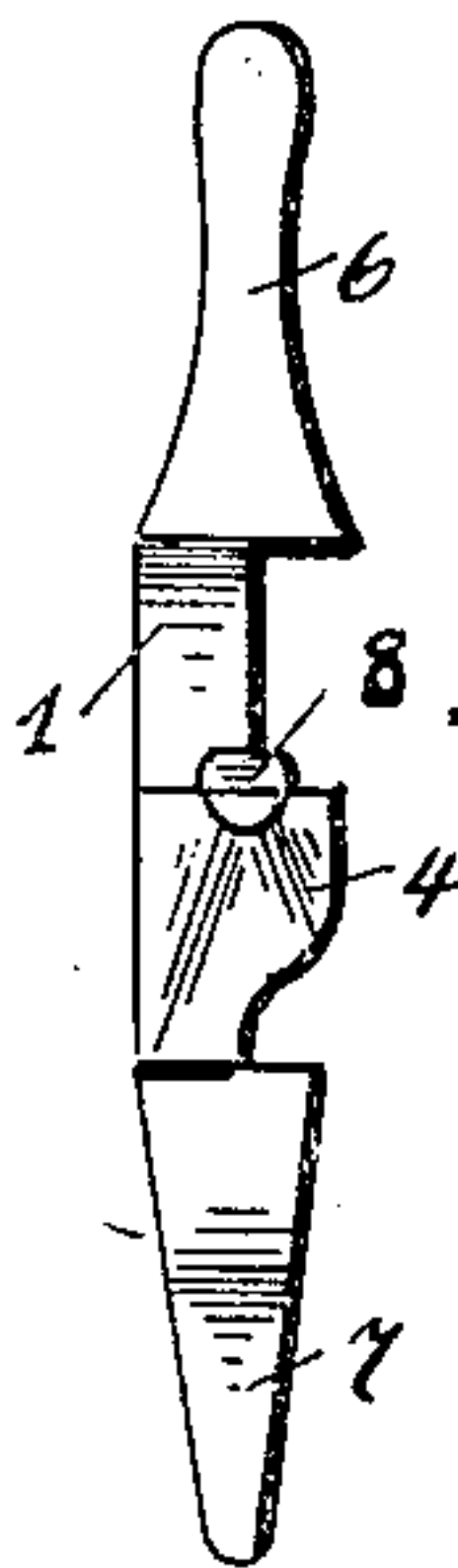


FIG. 5.

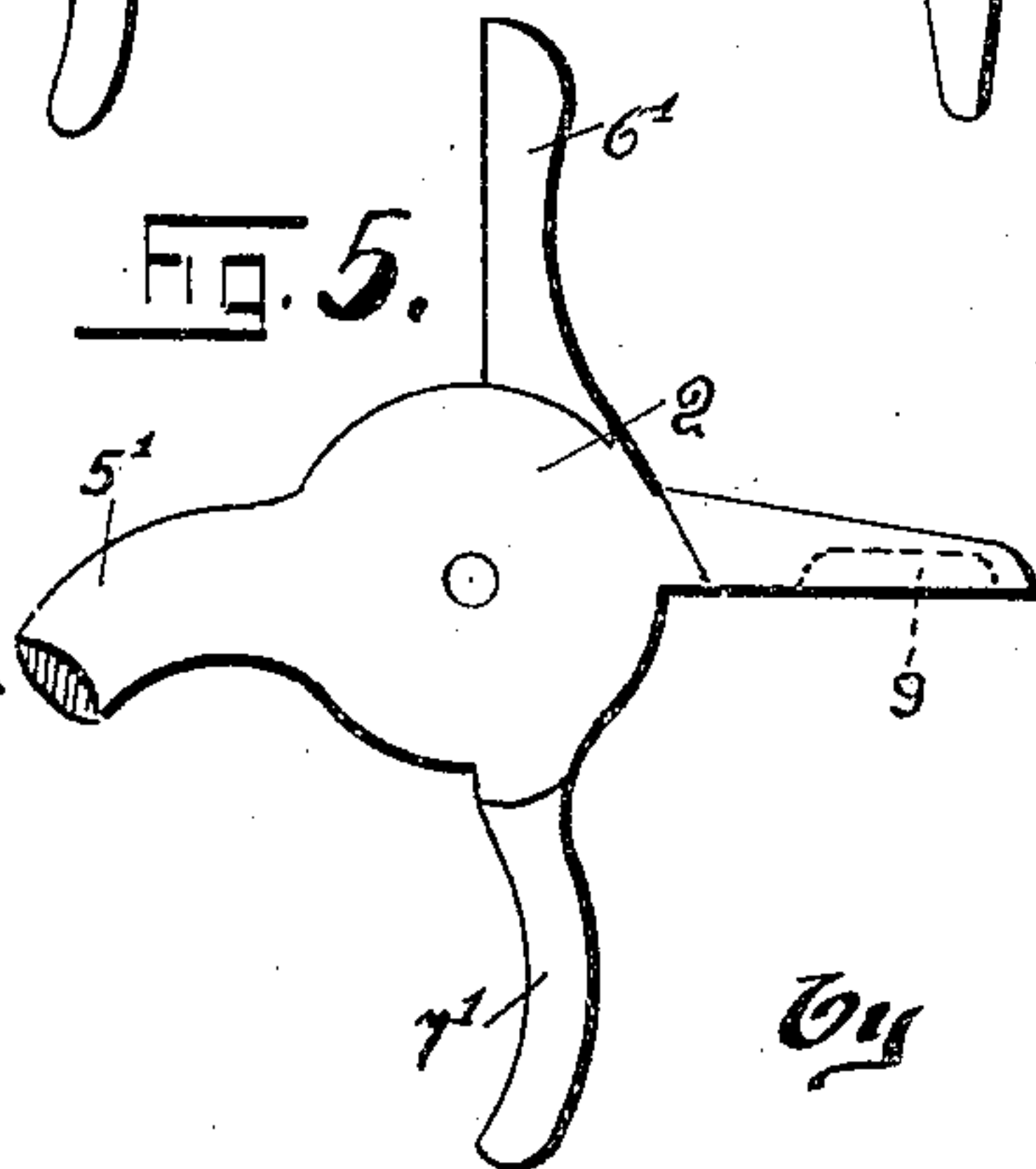
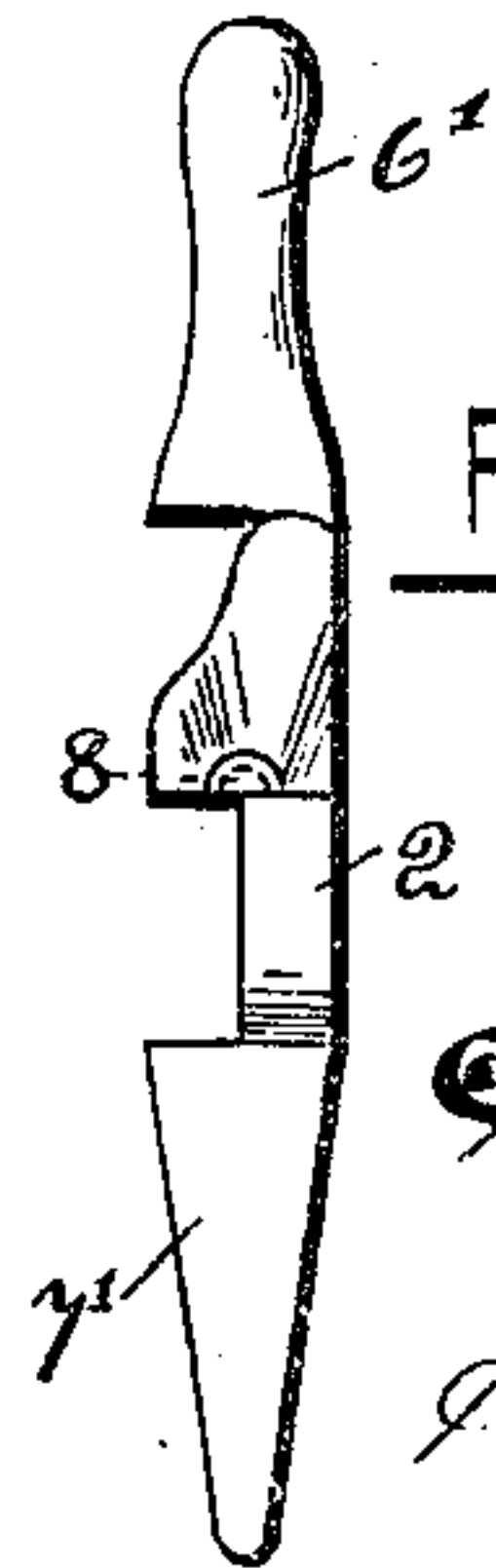


FIG. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

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PLIERS.

SPECIFICATION forming part of Letters Patent No. 792,374, dated June 13, 1905.

Application filed November 1, 1904. Serial No. 230,911.

To all whom it may concern:

Be it known that I, WILLIAM C. WOLFORD, a citizen of the United States of America, residing at Confluence, in the county of Somerset and State of Pennsylvania, have invented certain new and useful Improvements in Pliers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to certain new and useful improvements in combined pliers and crown-stretchers, which are particularly adapted for use by dental surgeons in crown and bridge work and in regulating appliances.

The primary object of the invention is to construct an instrument of the above type which can be conveniently handled in shaping metals for crowns and bridge work.

Briefly described, the invention comprises two members pivoted together, each member having a main jaw and a handle. The cheek-plates of the members from which the handles and jaws project each carry a supplemental jaw or jaws, these jaws being brought together or moved away from each other with the opening or closing of the handles in the same manner as the main jaws carried by the cheek-plates. These supplemental or auxiliary jaws are particularly shaped to permit their use for various purposes, which ordinarily require a separate pair of pliers in the working of metal, and the particular construction will be hereinafter more specifically described, and then particularly pointed out in the claim.

Referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a top plan view of my improved pliers. Fig. 2 is an edge view of the same. Fig. 3 is a top plan view of one of the cheek-plates, the handle thereof being broken away. Fig. 4 is an end view of the same. Fig. 5 is a top plan view of the cheek-plate used in connection with the cheek-plate shown in Fig. 3 of the drawings, and Fig. 6 is an end view of the same.

My improved instrument or pliers consists of two members pivotally connected together, the member 1 comprising a cheek-plate upon which is mounted the cheek-plate 2 of the other member, these cheek-plates being pivotally connected together by a pin 3. The member 1 carries the integral jaw 4 and a handle 5, the latter being suitably shaped to conform to the hand. Projecting outwardly from the one edge of the member 1, which edge I will hereinafter term the "top" edge, is a rigid jaw 6, and projecting from the opposite edge of this member is a jaw 7. The member 2 carries a jaw 4', situated to oppose the jaw 4 and has projecting from opposite edges the jaws 6' and 7' to oppose the jaws 6 and 7, respectively. The member 2 carries a handle 5' of the same shape and contour as the handle carried by the member 1. The jaw 4' is formed on its inner face with an elongated ridge 8, which when no object is being grasped between the jaws 4 and 4' and the said jaws are closed fits into an elongated recess 9, formed in the inner face of the jaw 4'. When a piece of metal is grasped between these jaws 4 and 4' and pressure is brought to bear upon the handles so as to close the jaws, the ridge will be forced into the recess 9 and will bend the metal, as will be readily apparent.

The jaws 6 and 6' when closed are substantially cylindrical; but the jaws 7 and 7' are slightly curved and are particularly adapted for pinching out the metal into desired shapes. The jaws 4 and 4' are particularly adapted for use as contouring-jaws in shaping gold crowns for the teeth and the jaws 6 and 6' for stretching the crown into form. The jaws 7 and 7' are employed for imparting desired shapes to the crown that it may conform to the tooth on which it is to be fitted. By the aid of such pliers it will be evident to those skilled in the art that the crown may be completed with no other instrument than the pliers, and in the practice of the invention it will be obvious that various changes may be made in the details of construction without departing from the general spirit and scope of the invention.

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

5 Combined pliers and crown-stretchers for dental surgery comprising two pivoted members, each having a handle and each formed with three jaws, the jaws of both members constituting three pairs of jaws, two of said
10 handles and one of said pairs of jaws opening with the closing of the handles, one of said first-named sets of jaws being formed with a

coacting ridge and recess, the other of said first-named sets of jaws being curved, and the third set of jaws being formed with enlarged and rounded ends, substantially as described. 15

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

WILLIAM C. WOLFORD.

Witnesses:

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O. F. McKEE.