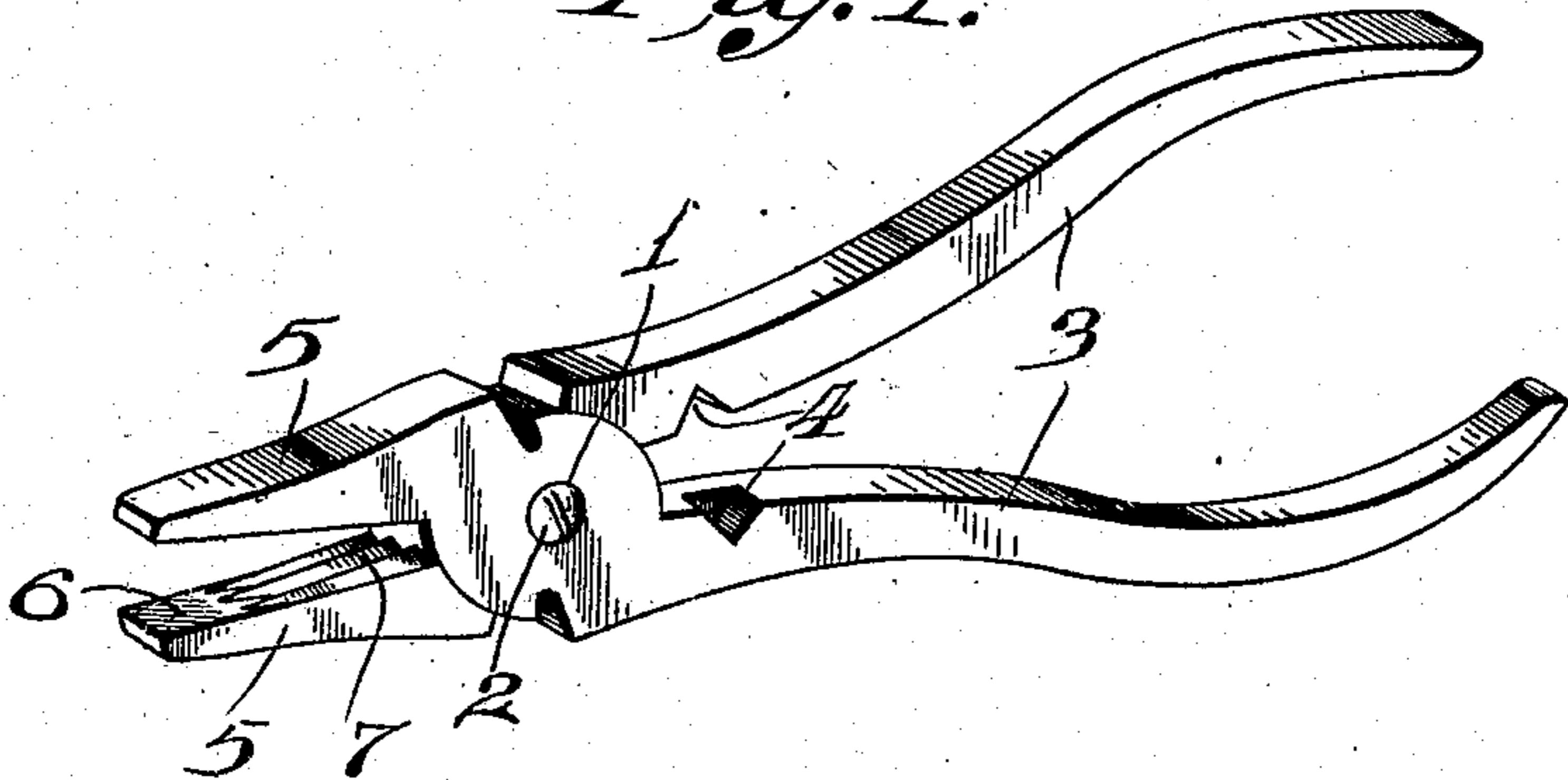


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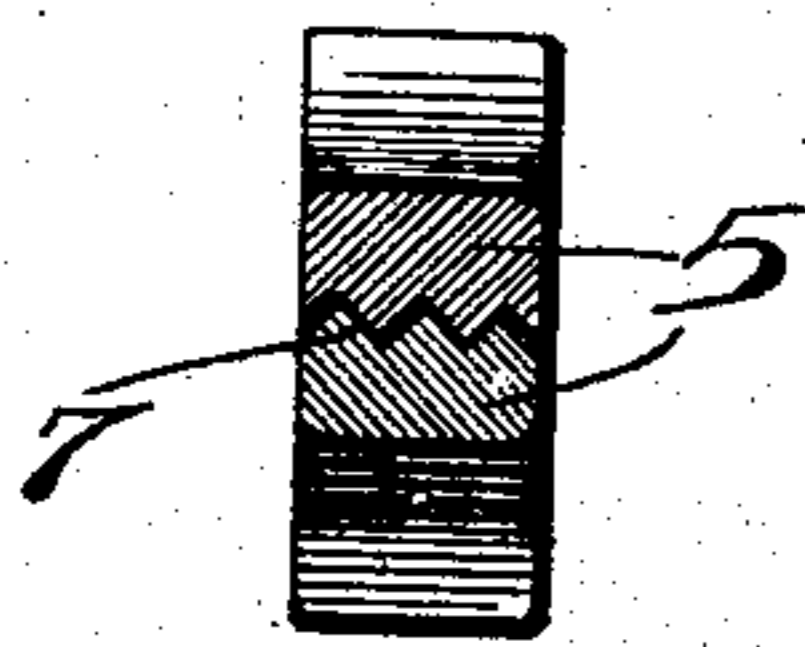
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APPLICATION FILED MAY 14, 1908.

Patented Nov. 24, 1908.

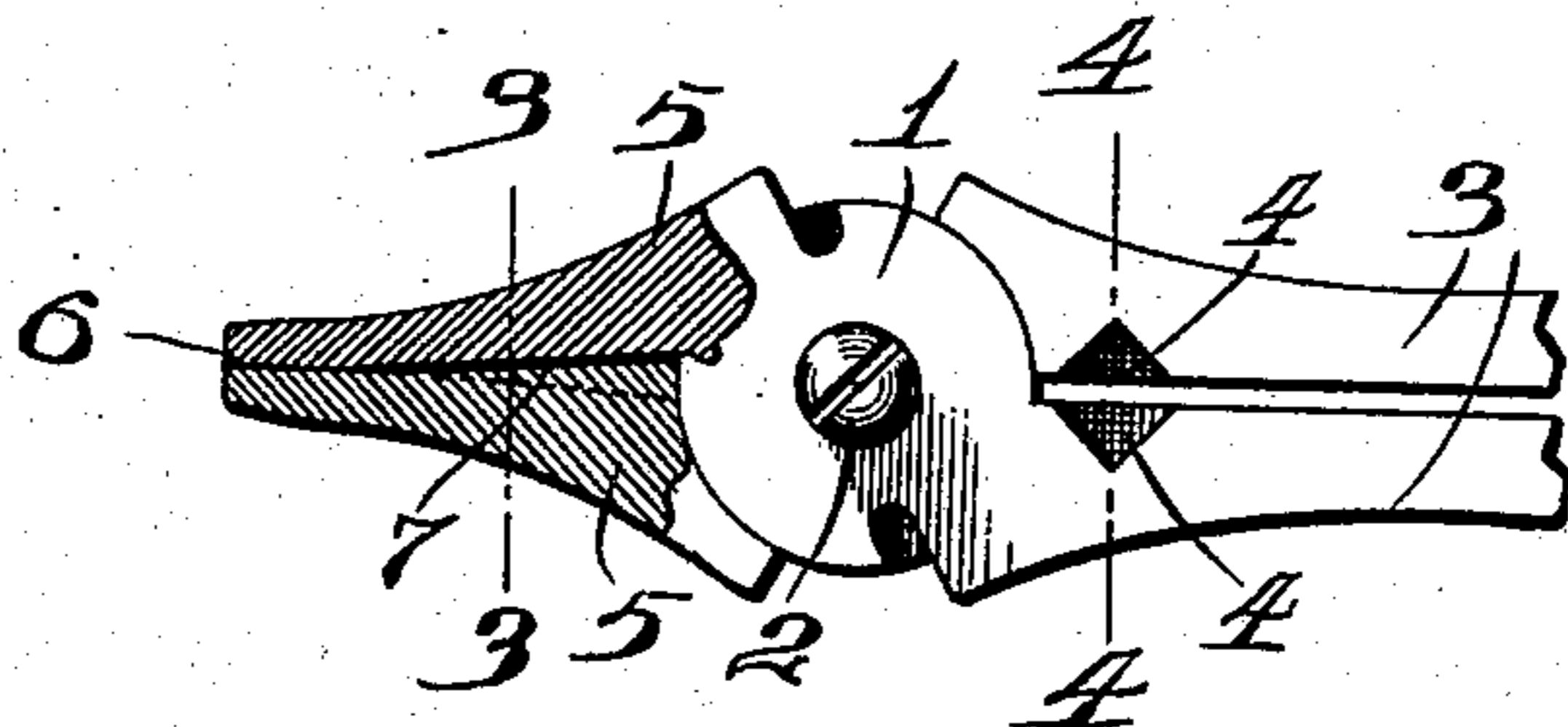
*Fig. 1.*



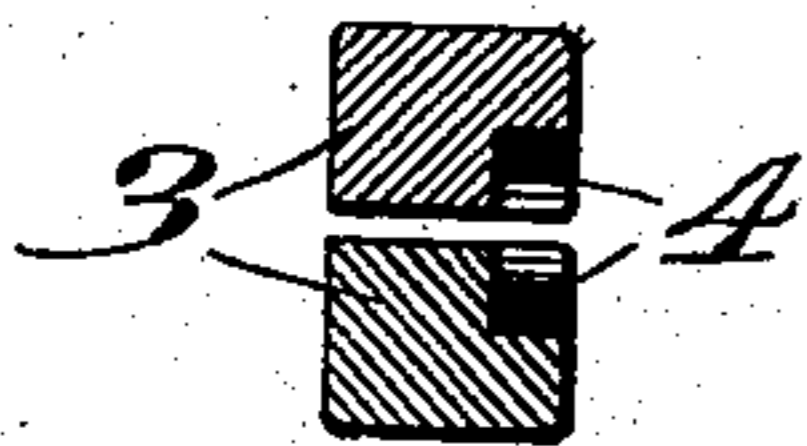
*Fig. 3.*



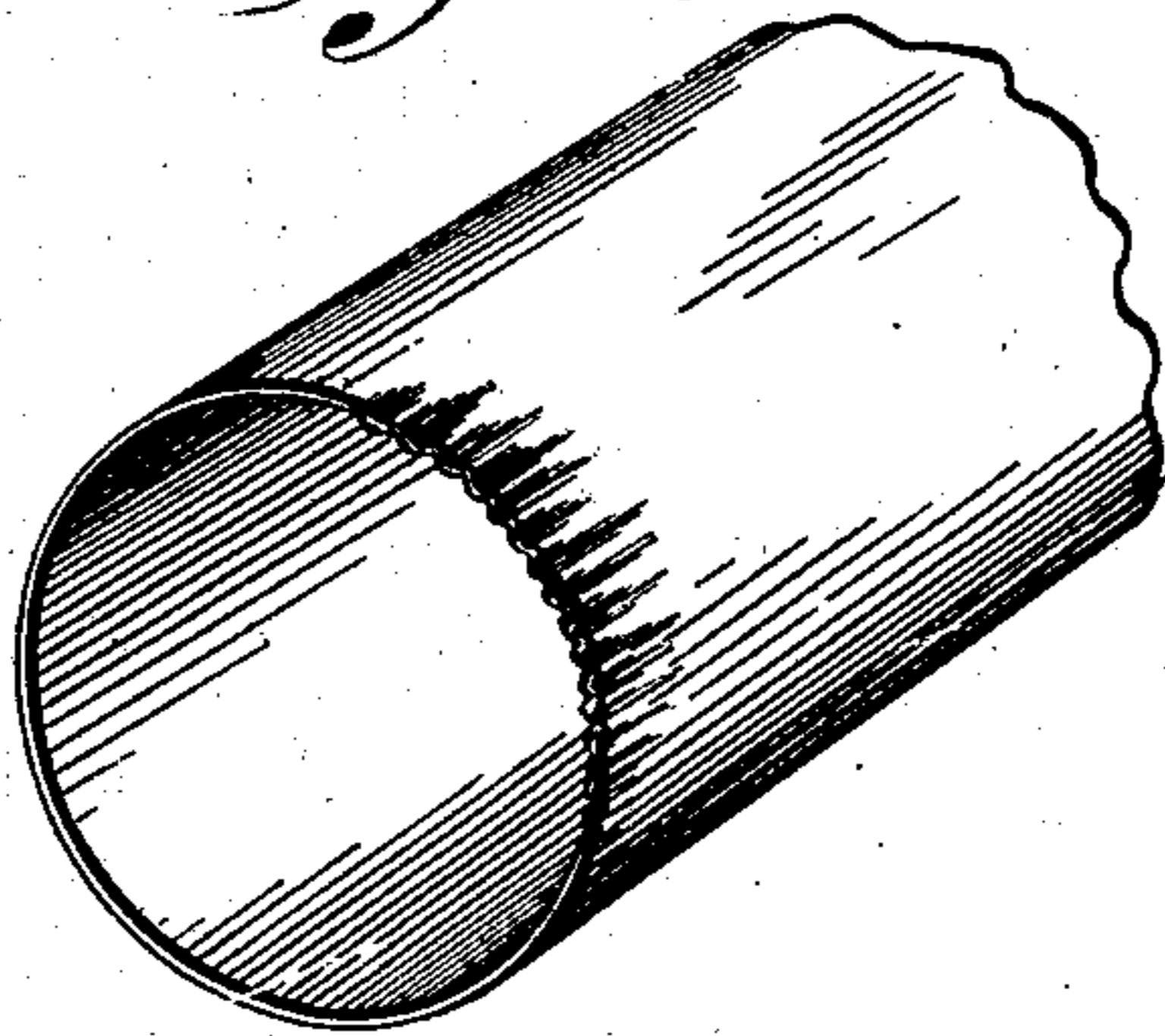
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

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## PLIERS.

No. 905,074.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed May 14, 1908. Serial No. 432,774.

*To all whom it may concern:*

Be it known that I, CHARLES HILLER, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain

5 new and useful Improvements in Pliers, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 My invention relates to improvements in crimping pliers, and the object of my invention is to provide a simple, inexpensive pair of pliers, the jaws of which are provided with coinciding ribs, in order that when said

15 jaws are clamped upon a piece of sheet metal, such as the end of stovepipe, the same will be crimped, or corrugated.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

25 Figure 1 is a perspective view of a pair of pliers constructed in accordance with my invention; Fig. 2 is an elevation of the forward end of the pliers, showing the jaws in vertical section; Fig. 3 is a cross section taken on the line 3—3 of Fig. 2; Fig. 4 is a

30 cross section taken on the line 4—4 of Fig. 2; Fig. 5 is a perspective view of a portion of a stovepipe joint, with the parts partially crimped or corrugated with my improved pliers.

35 In the construction of my improved pliers, I make use of a pair of circular plates 1, which are placed side by side, and passing through the centers of said plates is a pivot pin 2.

40 Formed integral with each plate, and extending rearward therefrom is a handle 3; and formed in one of the side faces of each of the handles 3 is a triangular notch 4, which notches are arranged directly opposite

45 one another, and are immediately adjacent the plates 1; and said notches being for the

purpose of engaging on the corners of a nut to tighten or loosen the same by means of the pliers.

Formed integral with the plates 1, directly 50 opposite the handles 3, are the jaws 5, the outer portions of the engaging faces of which jaws are perfectly flat, as designated by 6; and formed integral with the rear portions of the engaging faces of the jaws is a series 55 of longitudinally disposed ribs or corrugations 7, which ribs start at the rear ends of the flat faces 6 and gradually increase in height toward the rear ends of the jaws; and these ribs are so disposed as that the ribs on 60 one jaw engage in the V-shaped grooves between the ribs on the opposite jaw, and thus when the pliers are utilized for crimping the edge of sheet metal, the indentations or corrugations are higher or more pronounced at 65 the immediate edge of the piece of sheet metal and gradually become more shallow toward the body of the section of sheet metal.

A pair of pliers of my improved construction are simple and inexpensive, may be used as a wrench for tightening and loosening nuts and the like, and the jaws of the pliers being particularly adapted for crimping or 75 corrugating the edges of sheet metal.

I claim:—

The herein described pliers, comprising a pair of handles pivoted to one another at one end, a pair of jaws integral with the handles, the outer portions of the faces of which jaws 80 are flat, and there being a series of longitudinally disposed ribs formed on the rear portions of the opposing faces of the jaws, which ribs gradually increase in height toward the rear ends of said jaws. 85

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

CHARLES HILLER.

Witnesses:

M. P. SMITH,  
E. L. WALLACE.