

917,417.

F. CRUZE.
PLIERS.
APPLICATION FILED NOV. 9, 1908.

Patented Apr. 6, 1909.

Fig. 1

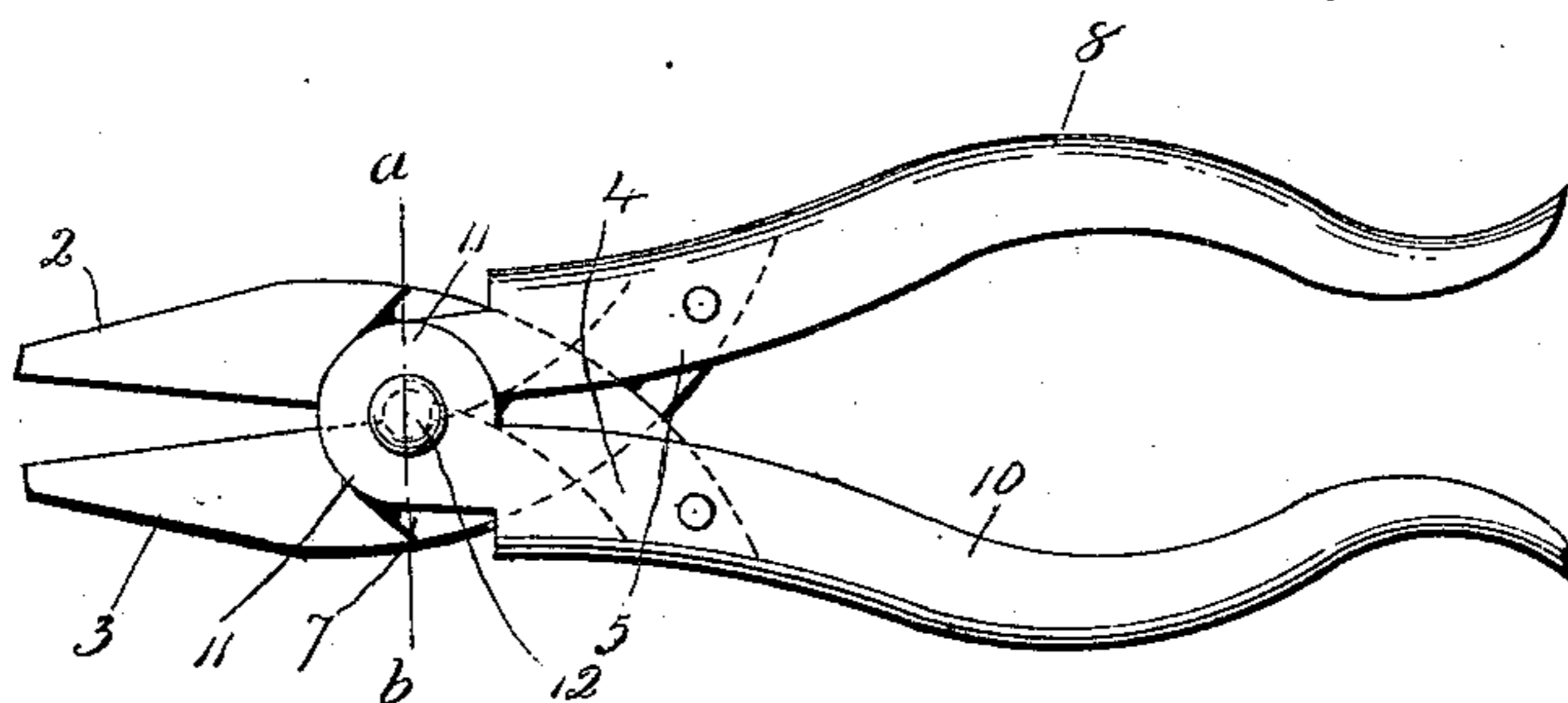


Fig. 2

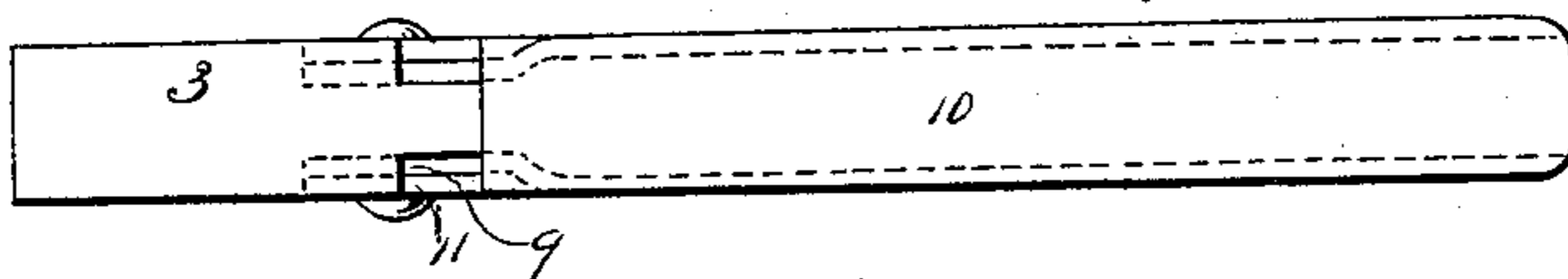


Fig. 3

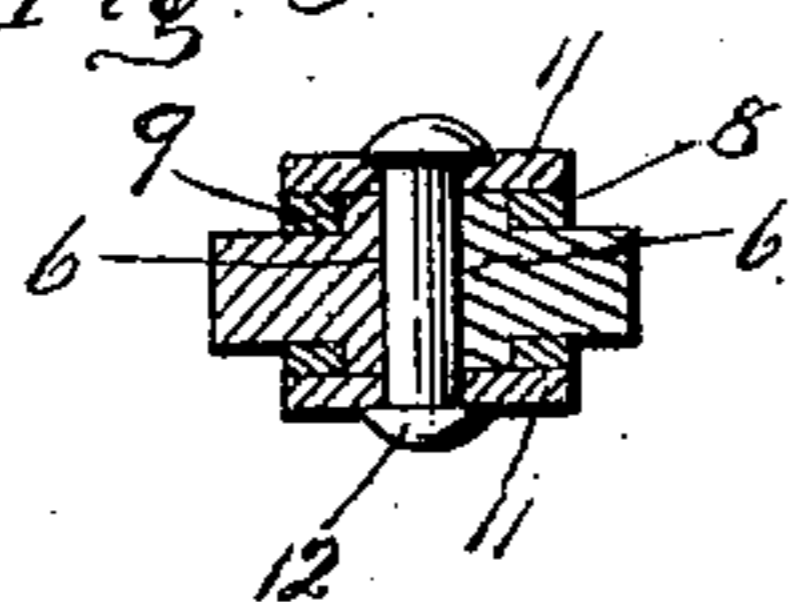


Fig. 4

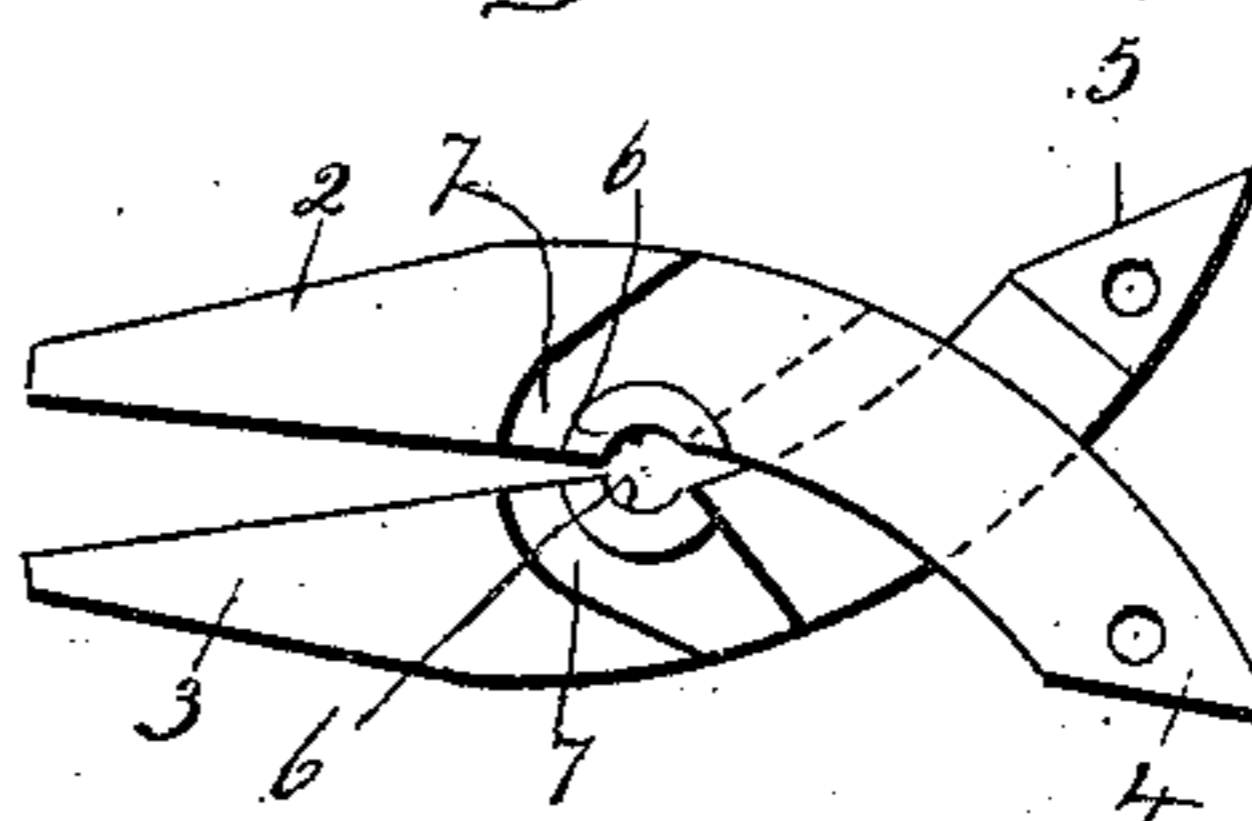


Fig. 5



Fig. 6

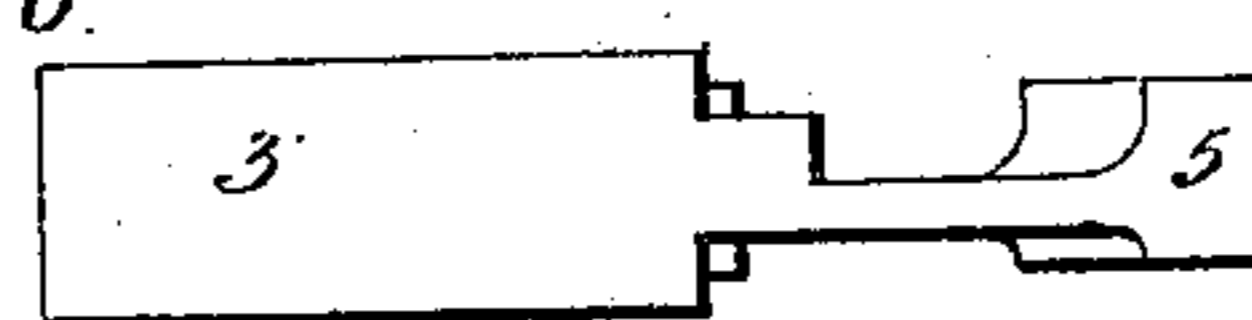
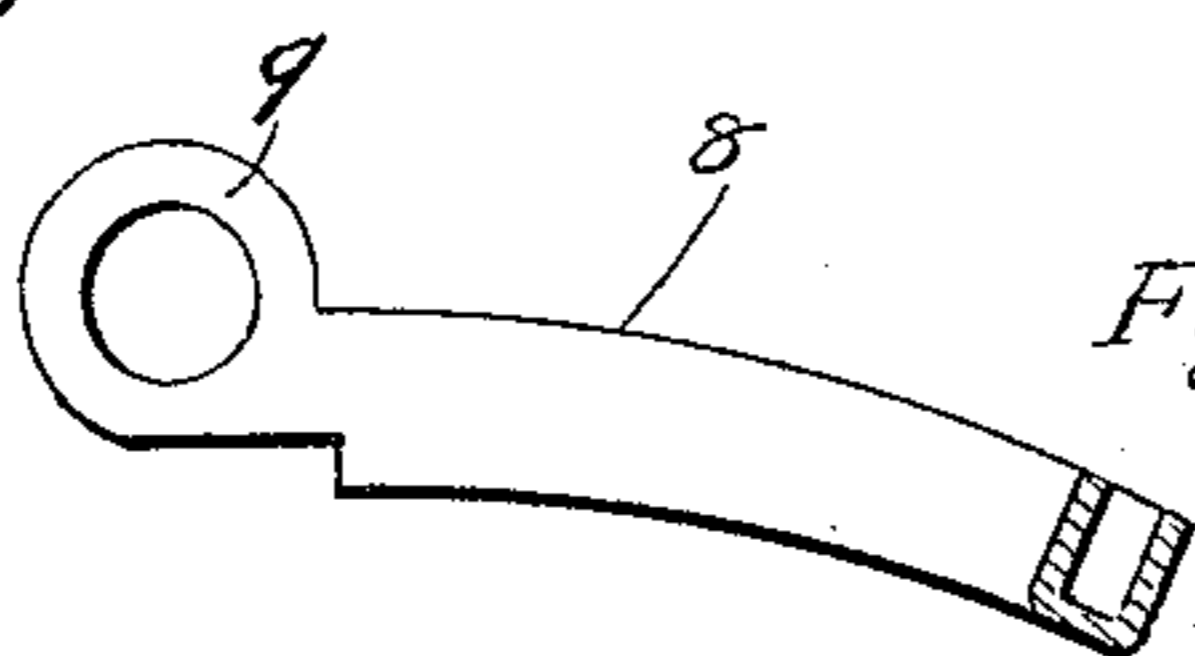


Fig. 7



Witnesses
C. J. Reed.
C. L. Reed

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UNITED STATES PATENT OFFICE.

FRANK CRUZE, OF NEW HAVEN, CONNECTICUT.

PLIERS.

No. 917,417.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed November 9, 1908. Serial No. 461,684.

To all whom it may concern:

Be it known that I, FRANK CRUZE, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Pliers; and I do hereby declare the following, when taken in connection with the accompanying drawings and the reference-numerals marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a side view of a pair of pliers constructed in accordance with my invention. Fig. 2 an edge view of the same. Fig. 3 a sectional view on line *a—b* of Fig. 1. Fig. 4 a side view of the jaws, detached. Fig. 5 a view of the inner face of one of the jaws. Fig. 6 a view of the outside face of the other jaw. Fig. 7 a side view partly in cross section of one of the handles, detached.

This invention relates to an improvement in pliers either of the flat nose, round nose or cutting type.

The object of the invention is to construct simple means for firmly hinging the jaws together and connecting the handles thereto; and the invention consists in the construction hereinafter described and particularly recited in the claims.

The pliers comprise jaws 2, 3, and as shown in the drawings these are of the flat nose type, but it is apparent without illustration that they might be made with round noses or with cutting edges. The jaws are formed from forgings and are both alike, and are respectively formed with stub ends 4, 5. The stub ends of the jaws are mortised so that the sides of the jaws will stand in the same planes. In the adjacent faces of the jaws is a semi-circular groove 6 and on each side of each jaw around the groove 6 is a segmental channel 7. The handles are struck up from sheet metal and are riveted to the stub ends 4 and 5. One of the handles as 8 is formed on opposite sides with a ring 9 which is adapted to enter the channels 7 and thus couple the two jaws together. The other handle 10 corresponding in shape to

the handle 8 has its ends formed with disks 11 which correspond in diameter to the diameter of the rings and so as to set over these rings. These disks are perforated for the passage of a rivet 12 which extends through the groove 6 and forms a pintle on which the jaws turn. This rivet is headed down onto the disks 11 so as to interlock the handles and jaws. I thus provide a very strong connection for the jaws and an increased bearing surface on which they turn as the jaws are supported not only by the rivet, but by the rings on one of the handles.

I claim:—

1. The herein described pliers comprising two jaws having stub ends mortised to overlap each other, the adjacent faces of the jaws formed with grooves, the opposite sides of the jaws provided with channels, a handle riveted to one of the jaws and formed with rings to enter said channels, the other handle riveted to the second jaw and formed with disks to overlap said rings, and a rivet extending through the disks and through the grooves in the jaw, substantially as described.

2. The herein described pliers comprising two jaws having stub ends mortised to overlap each other, the adjacent faces of the jaws formed with grooves, the opposite sides of the jaws formed with circular channels, a handle riveted to the stub end of one of said jaws and formed with rings adapted to be entered into the channels on opposite sides of the said jaws, and a handle riveted to the stub end of the other jaw and formed on opposite sides with disks adapted to extend over the said rings and a rivet extending through said disks and through the grooves in the jaws, substantially as described.

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

FRANK CRUZE

Witnesses:

FREDERIC C. EARLE,
CLARA L. WEED.