

(No Model.)

C. EISELE.
PLIERS, NIPPERS, OR SIMILAR TOOL.

No. 505,217.

Patented Sept. 19, 1893.

Fig. 1.

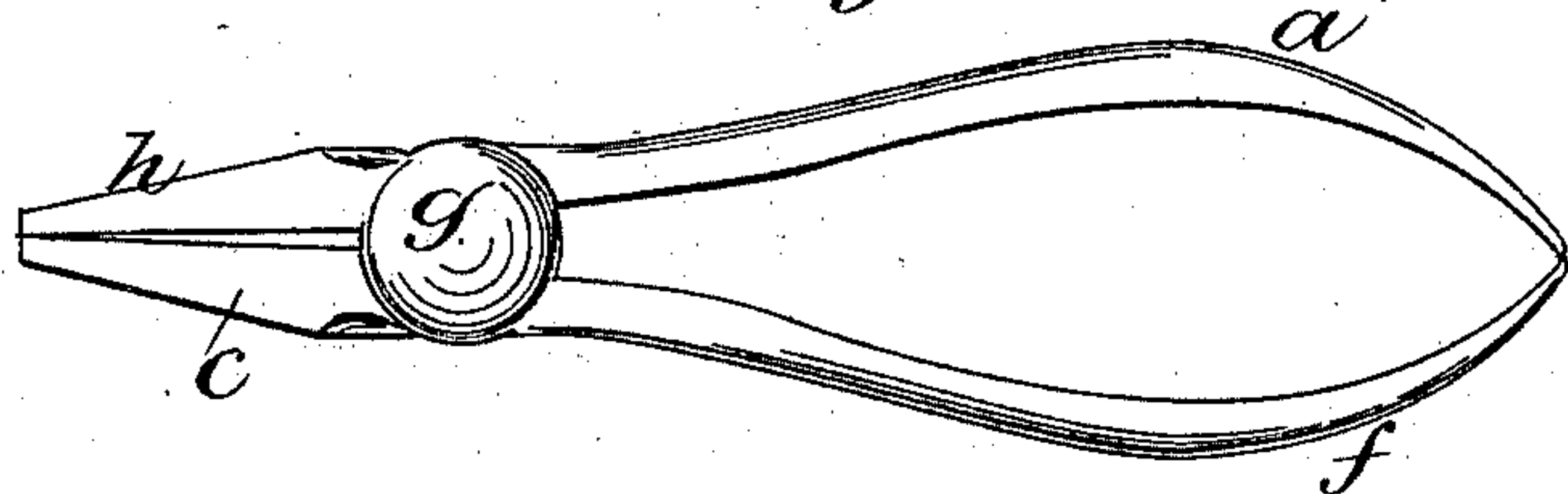


Fig. 2.

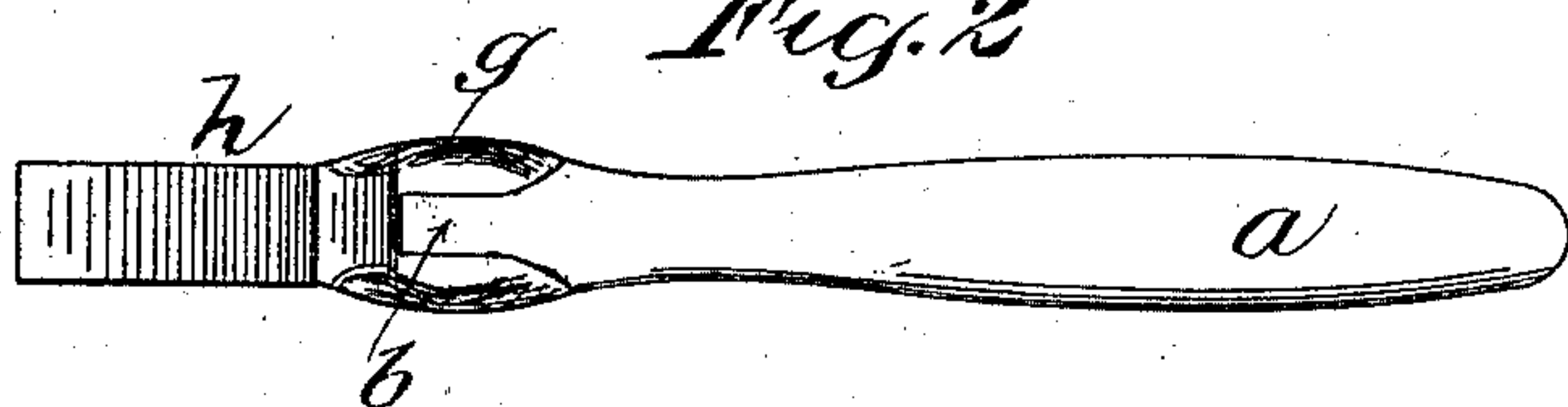


Fig. 3.

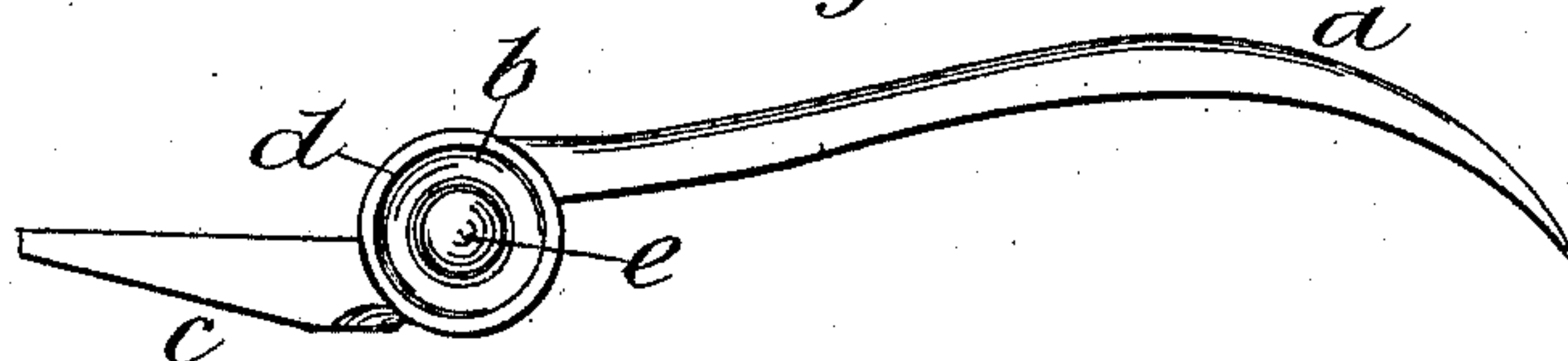


Fig. 6.

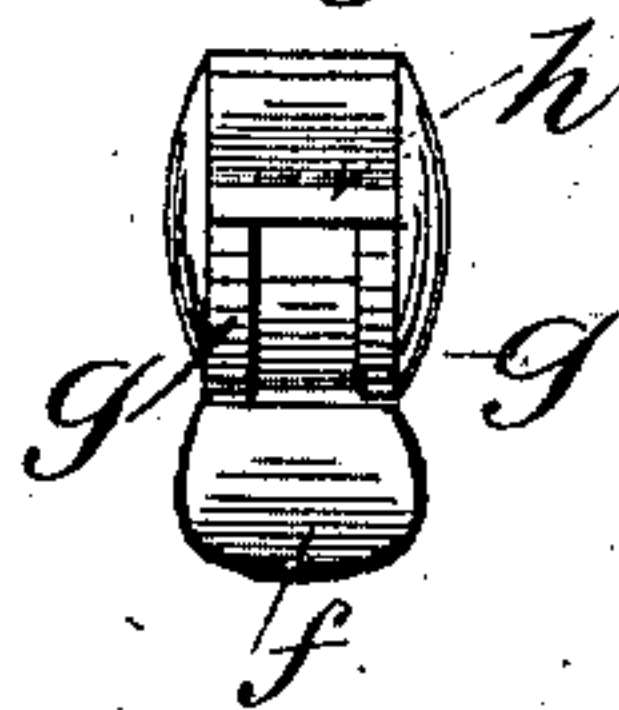


Fig. 4.

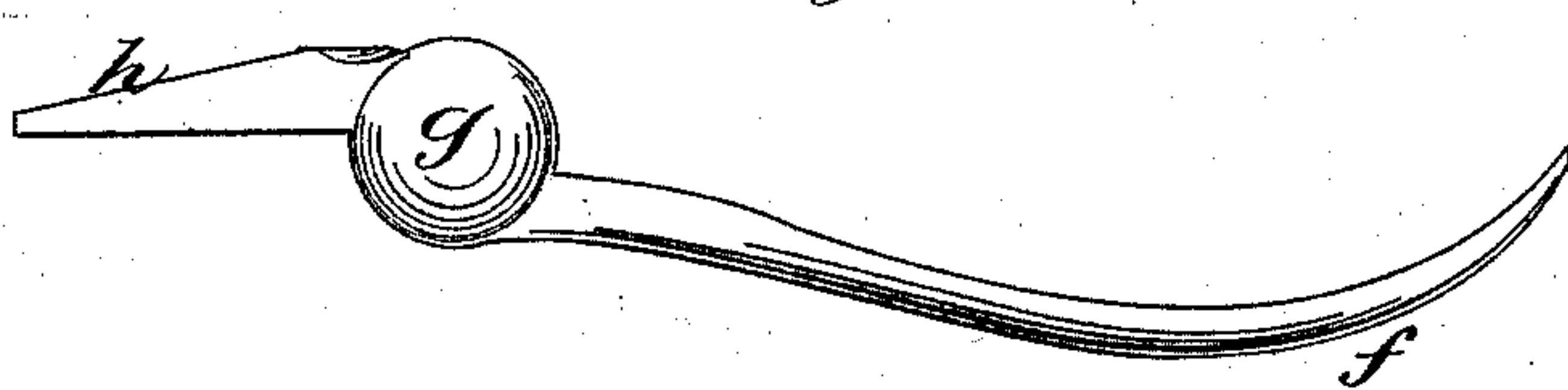
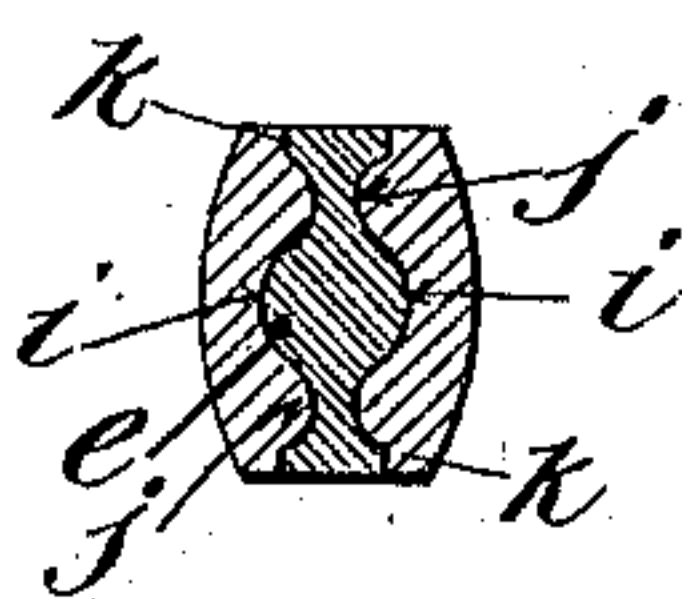


Fig. 5.



Witnesses:
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By his Attorney
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UNITED STATES PATENT OFFICE.

CHARLES EISELE, OF NEWARK, NEW JERSEY.

PLIERS, NIPPERS, OR SIMILAR TOOL.

SPECIFICATION forming part of Letters Patent No. 505,217, dated September 19, 1893.

Application filed October 1, 1892. Serial No. 447,536. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EISELE, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Pliers, Nippers, or Similar Tools, of which the following is a specification.

My invention relates to certain new and useful improvements in pliers, nippers or similar tools, and has for its object the production of such a tool, in which the two members thereof may be cast in one mold, one member surrounding the other at the joint or hinge, thereby dispensing with rivets or other mechanical agencies to effect the union.

To these ends my said invention consists in a tool having its two members jointed or hinged by the casting operation, and without the intervention of mechanical agencies subsequent thereto, all as hereinafter more particularly described and pointed out in the claims.

Referring to the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1, is a top view of a tool constructed in accordance with my invention. Fig. 2, is a side view thereof. Fig. 3, is a view of one member, and Fig. 4, is a view of the other member of such tool. Fig. 5, is a cross-section through the joint or hinge; and Fig. 6, is an end view of Fig. 4.

Fig. 3, shows what I term the inclosed or inner member of the tool, which member consists of the handle *a*, the circular joint portion *b*, and the jaw or nose *c*, said jaw and handle being arranged at opposite sides of the said portion *b*, which is formed, as shown, with the raised circumferential rim *d*, and the raised hub or central projection *e*, acting as a pivot in appropriate joint faces, of the other member of the tool, which is shown detached in Fig. 4. The inclosing or outer member consists also of a handle *f*, a bridge or saddle *g*, having appropriate interior joint faces, adapted to surround and co-act with the portion *b*, of the other member of the tool, and the jaw or nose *h*. As shown particularly in Fig. 5, the interior faces of portion *g*, have the sockets or depressions *i*, surrounded by a raised concentric ring *j*, while the peripheries of saddle *g*, are depressed as at *k*, the said saddle being interiorly the exact re-

verse of hinge portion *b*, of the inclosed or inner member of the tool. In practice, this latter member is cast first and allowed to harden and cool, when the outer or inclosing member is cast, the metal forming which, divides to form the saddle *g*, at the joint *b*, of the member first cast, which acts at the said point as a core during the casting operation, and of course, imparts to the interior faces of saddle *g*, a configuration or form the exact reverse of hinge portion *b*, and forms in said saddle appropriate projections and depressions which correspond and co-act with the said portion *b*, producing a perfect, operative and close-fitting joint, without the intervention of any mechanical device to effect the union.

It will be apparent that my invention may be applied not only to pliers, nippers, cutters or tongs, but also to all tools having two members jointed or hinged to each other, and it is also obvious that my invention is not limited to the precise shape or configuration of the co-acting faces of the joint, shown in the drawings, as manifestly many changes may be made therein, involving merely a mechanic's skill, and without departing from the principle or scope of this invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. A two-part tool having a hinge comprising a flattened circular internal portion cast with symmetrical projections and depressions, and an exterior portion cast surrounding the core formed by said flattened circular portion, substantially as described.

2. A two-part tool comprising an inner and outer member the latter cast surrounding the former at the joint or hinge, and the parts being cast with co-acting faces at such point, substantially as described.

3. A tool comprising handles, jaws and a hinge or joint, the latter formed by casting one member around the other, substantially as described.

Signed at New York, in the county of New York and State of New York, this 27th day of September, A. D. 1892.

CHARLES EISELE.

Witnesses:

ERNEST C. WEBB,
CURTIS LAMMOND.