No. 778,562. PATENTED DEC. 27, 1904.

J. L. ZESIGER.

JAR WRENCH.

APPLICATION FILED NOV. 11, 1902.

FIG. 1.

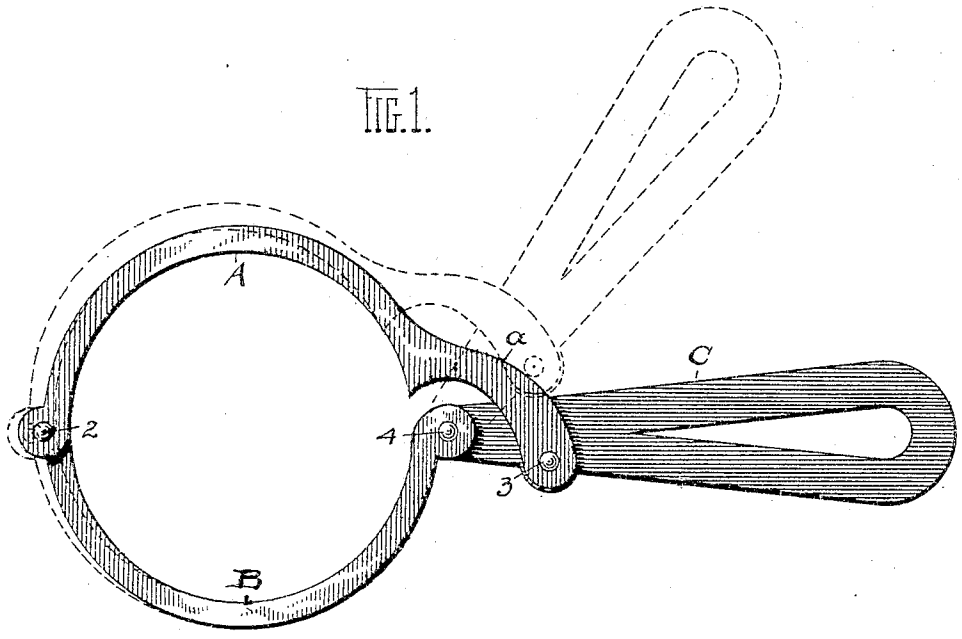


FIG. 2.

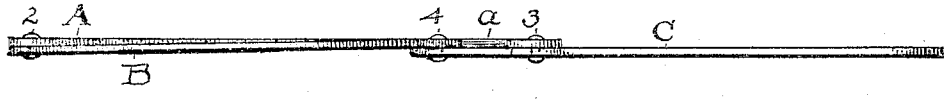
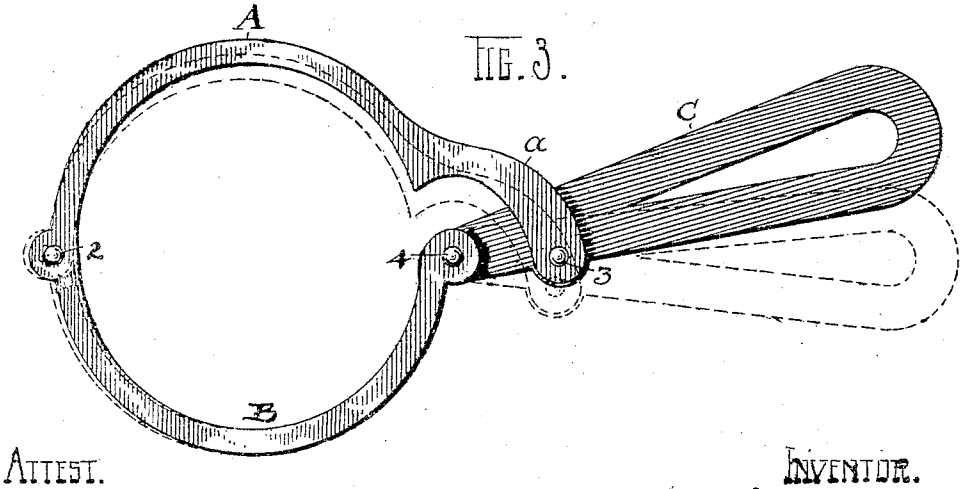


FIG. 3.



Attest.

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No. 778,562. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

JOHN L. ZESIGER, OF CLEVELAND, OHIO.

JAR-WRENCH.

SPECIFICATION forming part of Letters Patent No. 778,562, dated December 27, 1904.

Application filed November 11, 1902. Serial No. 130,856.

To all whom it may concern:

Be it known that I, JOHN L. ZESIGER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Jar-Wrenches; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to jar-wrenches; and the object of the invention is to provide a wrench which is adapted to engage the covers of fruit-jars and the like and to rotate said covers onto the jars and remove the same, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved wrench, showing it open in dotted lines and closed in full lines; and Fig. 2 is an edge view thereof. Fig. 3 is a further plan view in which the parts are shown in full lines on a dead-center as to their three pivots and in closed position in dotted lines.

As thus shown, the wrench comprises two jaws A and B and handle C. The said jaws have each a semicircular outline and are preferably formed of flat comparatively light spring sheet metal stamped out in dies to the desired width and shape and adapted to be connected up substantially as shown. The outer extremities of said jaws are connected at 2, where they are provided with ears or such enlargement as may be necessary, adapting them to be loosely riveted and pivoted together, and the jaw A is pivoted upon handle C at point 3 at one side of the axial center of said handle lengthwise, while the other jaw, B, is pivoted to said handle at 4 directly at the inner end of said handle. Now having this construction and remembering that the two jaws are of spring metal and are under tension, especially when passing over their dead-center either way, it will be seen that the effect of the spring residing in said jaws will always hold the jaws either open or closed, according as they are thrown to one side or the other from a dead-center line through the pivot-points 2, 3, and 4. Thus in Fig. 3 the said points are in exact alinement and a dead-center of rotation of the handle has been reached. Then whichever way the handle is turned the spring of the jaws alone will throw the handle either to open or closed position, according as it is started either way. If the handle be thrown into position full lines, Fig. 1, the jaws are closed on the jar-cover, and they will remain closed by their own tension, and the wrench can be left thereon in that way as long as may be desired, with the assurance that it will hold its place unless forcibly removed. However, if the handle be thrown in the opposite direction, (dotted lines, Fig. 1,) but not to this extreme position, the jaws are not only opened, but the spring therein will hold them open and keep all the parts in open position until they are again purposely closed. Obviously these results are only obtainable, first, because of the spring action of the metal, and, secondly, by reason of the three several fixed pivot-points arranged substantially as shown and adapted to throw the said points across their dead-center to one side or the other of their alinement. When thrown to one side, the wrench is open and when thrown to the other the wrench is closed, and fixed pivots with spring-metal jaws under tension are necessary to accomplish these results. Further than this it is also necessary that the pivot 3 be far enough behind pivot 4 to carry the jaws open far enough, and the pivots 3 and 4 are so positioned on the handle as to not only produce spring tension in the jaws at the dead-center pivot, but to effect a closing throw-back of said center when the jaws are closed. In other words, the pivots 3 and 4 must be off alinement on the axis of the handle relatively about as shown, and jaw A has an extension or arm *a* to give it the necessary reach on the handle. However, it does not necessarily follow that the exact relationship here shown of pivots 3 and 4 to each other and to the handle must be observed; but any aquivalent arrangement and construction may be adopted instead.

What I claim is—

1. A jar-wrench comprising a pair of substantially semicircular spring-metal jaws pivoted together at one end, and a handle having

one of said jaws pivotally fixed upon its end and the other jaw pivotally fixed thereto behind the pivot of the first-named jaw, whereby the ends of said jaws on the handle can be thrown either forward or back across a dead-center line on all their pivots and are held open or closed by their own spring action, substantially as described.

2. The wrench substantially as shown consisting of a handle and a set of spring-metal jaws having joint pivot 2 and separate fixed pivots 3 and 4, respectively, on said handle, the said pivots 3 and 4 being so disposed on the handle as to throw one of said pivots out of alinement with the other two when the handle is rotated and the jaws are closed, whereby the wrench is held fixed upon the object gripped until released by hand, substantially as shown and described.

Witness my hand to the foregoing specification this 3d day of November, 1902.

JOHN L. ZESIGER.

Witnesses:
R. B. MOSER,
A. N. MOSER.