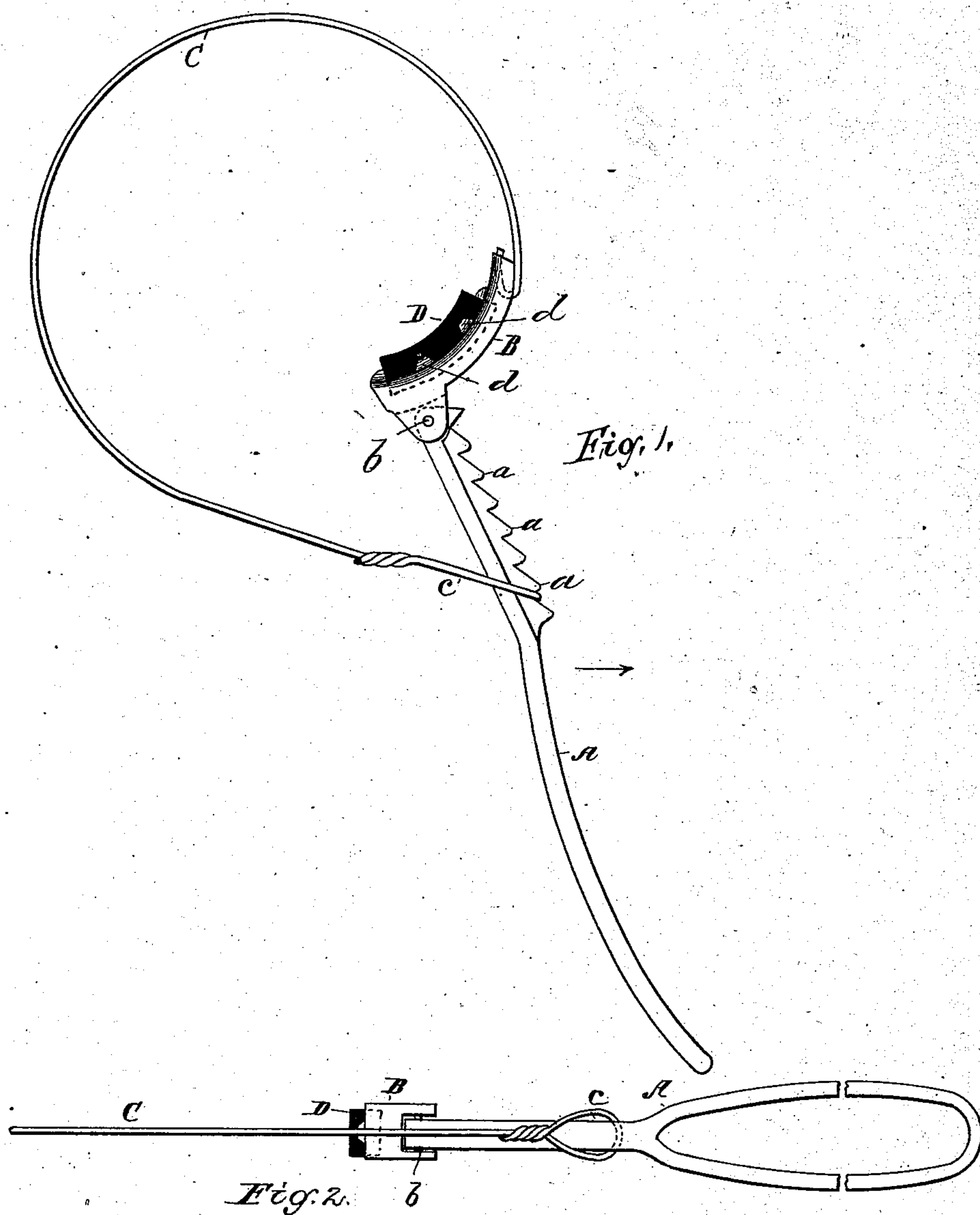


(No Model.)

J. H. CHRISTIE.
WRENCH.

No. 381,213.

Patented Apr. 17, 1888.



WITNESSES:

W. Benjamin
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UNITED STATES PATENT OFFICE.

JAMES H. CHRISTIE, OF BROOKLYN, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 381,213, dated April 17, 1888.

Application filed June 7, 1887. Serial No. 240,506. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. CHRISTIE, of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 The object of this invention is to provide an improved wrench for applying or removing preserve-jar covers and the like.

Reference is to be had to the accompanying drawings, forming part of this specification, in 15 which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the wrench. Fig. 2 is a rear edge view of the same.

In the drawings, A represents the handle or 20 lever of the wrench, provided with teeth *a* for a portion of its length. To the lower end of this handle or lever, on a transverse pin, *b*, is pivoted a recessed block, B, that serves as the fulcrum of the device, and a wire or band, C, 25 secured at one end in the extreme point of the block B, and having the other end looped, as shown at *c*, and adjustably engaged over the serrated portion of the handle A, serves as an extension of the fulcrum.

30 Secured in the recess of the block B by teeth *d*, or by other suitable means, is a cushion, D, of rubber, wood, or other suitable material, which is designed to increase the friction of the fulcrum and prevent the slipping of the 35 wrench when applied to a jar-cover.

If the wrench, arranged as shown in Fig. 1, be applied about a glass or metallic jar-cover

which is in place on a jar, and the wrench-handle be moved in the direction of the arrow, Fig. 1, the block B and cushion D will form 40 the fulcrum against the cover-edge, and the wire C will be drawn closely about said cover-edge, and continued pressure upon the handle will cause the wrench to grip the cover more and more closely, and finally turn it on or off, as 45 the case may be.

By the adjustment of the wire loop *c* on the handle-teeth, and thereby enlarging or diminishing the circle of the wire, the wrench may be made to fit larger or smaller jar-covers, as 50 may be desired.

I am aware of the United States Patents Nos. 152,940, 178,655, 192,760, and 218,835, and do not claim the constructions therein shown:

Having thus described my invention, I claim 55 as new and desire to secure by Letters Patent—

A wrench adapted for screwing on or unscrewing jar-covers, constructed, substantially as herein shown and described, of a lever or 60 handle serrated on one edge, a fulcrum-block provided with a friction-cushion, pivoted on an end of the handle, and a wire secured to that end of the fulcrum-block opposite the handle and having its free end looped for adjustable engagement over the serrated handle, as and 65 for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand, in the presence of two witnesses, this 14th day of May, 1887.

JAMES H. CHRISTIE.

Witnesses:

WM. H. BRIGHTSON,
JACOB CHRISTIE.