

N. FRITZNER.
Bottle Stopper.

No. 202,100.

Patented April 9, 1878.

Fig. 1.

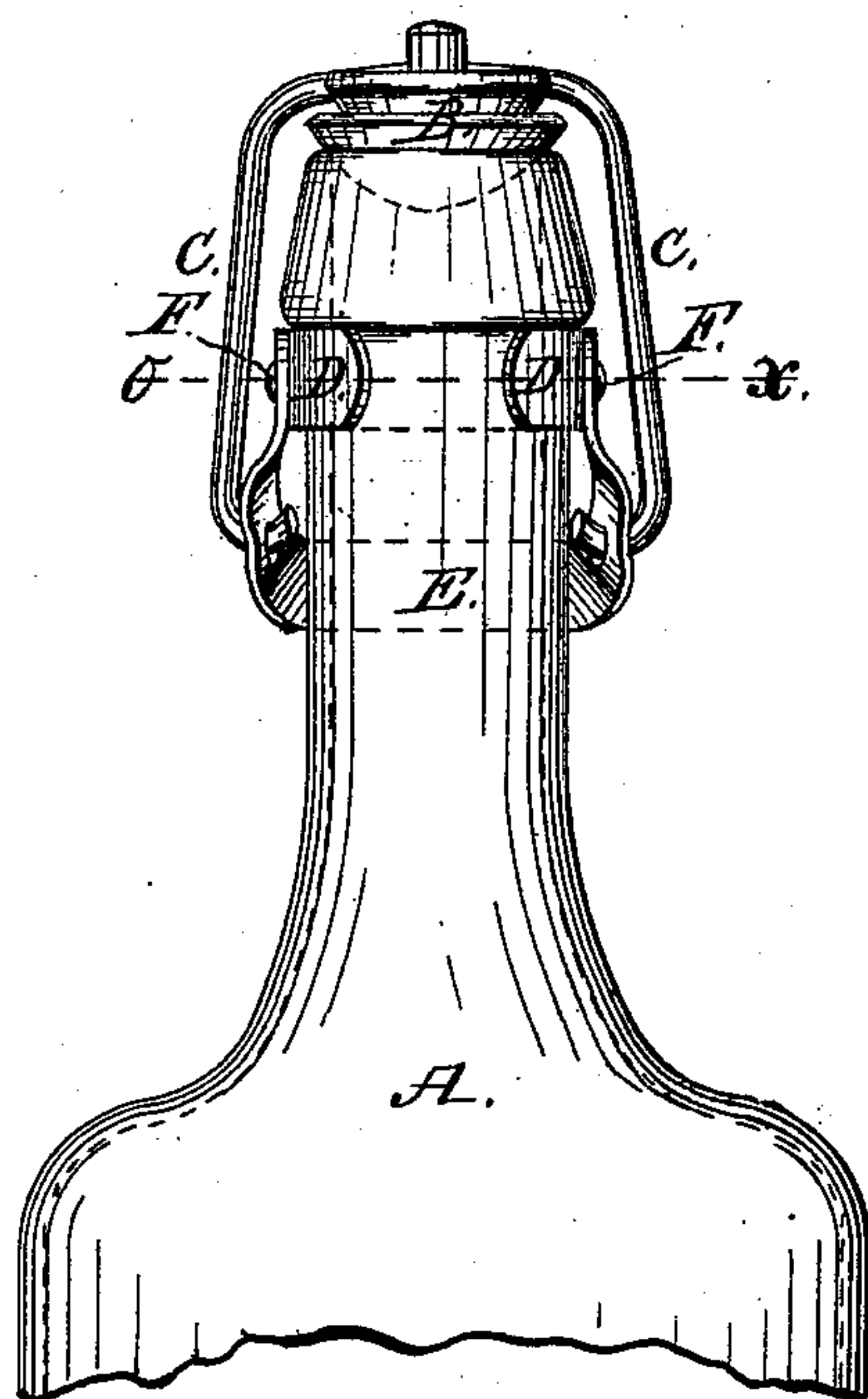
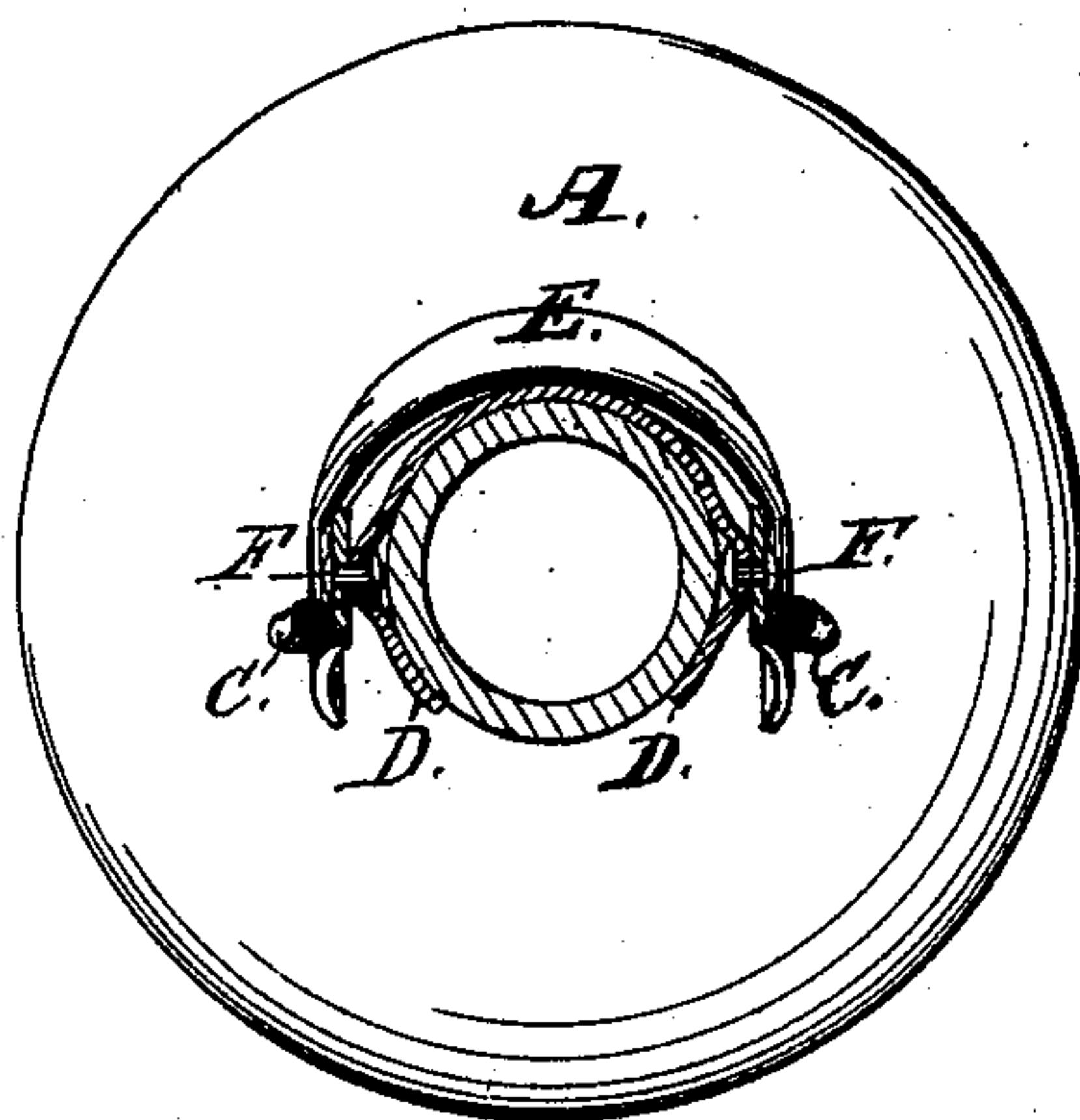


Fig. 2.



Witnesses:

A. v. Eberly
George Banke

Inventor:

N. Fritzner.
by Carl T. Burroughs
his Atty.

UNITED STATES PATENT OFFICE.

NICOLAY FRITZNER, OF BERLIN, PRUSSIA, GERMANY.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **202,100**, dated April 9, 1878; application filed May 17, 1876.

To all whom it may concern:

Be it known that I, NICOLAY FRITZNER, of the city of Berlin, Kingdom of Prussia, German Empire, have invented certain Improvements in Bottle-Stoppers, of which the following is a specification:

In the accompanying drawing, forming part of this specification, Figure 1 represents a vertical elevation of my invention; Fig. 2, a cross-section in the line *o x*.

My invention relates to a bottle-stopper made of rubber or any other suitable soft and elastic material, pressed down to the mouth of the bottle by means of a supporting-plate, in combination with a yoke-wire and a toggle-joint wire lever, the fulcrum of which is formed by a neck-wire fastened around the neck of a bottle or jar; and the object of my invention is to improve the mentioned stopper in such way as to furnish a cheap contrivance, which may be easily applied to and removed from a bottle, and which is absolutely reliable even under the heaviest inside pressure.

In the drawing, A represents a bottle; B, the stopper; C, the yoke-wire, by means of which the stopper B is pressed to the mouth of the bottle A. Instead of the usual neck-wire around the neck of the bottle, I use a steel spring, D, which may be zinc or tinned, of any suitable width and of proper thickness, not fully encircling the neck of the bottle. To this neck-spring D are hinged, by two rivets, F F, one opposite the other, the two legs of the curved lever E, constructed of one piece of sheet metal. To this lever E are loosely and eccentrically hinged or hooked the ends of the yoke-wire C, in such manner that in pressing down the lever E, after the stopper is applied to the mouth of the bottle A, the yoke-wire C is forced downward and locked in this position by the lever E as soon as the latter

touches with its extreme part the bottle A. The lever E forms, therefore, with the yoke-wire C, a toggle-joint.

The advantage of my invention over the arrangements used till now is, that the whole device may be fastened to a bottle without using any skill or any tool, simply by slipping the neck-spring D around the neck of the bottle, taking care only to pick out for the various sizes of necks corresponding wide neck-springs. If a bottle does break, my device is taken off and slipped on another bottle without the least alteration. On the other hand, the now-used neck-wires wear out rapidly, become loose, break, and cannot be used again when a bottle is broken, mostly causing in all these cases a loss of the whole device.

The construction of the toggle-joint lever E from sheet metal gives to it, without any more expense, much more strength and a neater appearance than if it were made of wire, as is done till now, and by jointing the lever E to the neck-spring D by means of rivets, a yielding of these parts to a heavy inside pressure is absolutely avoided, which fault adheres to all wire constructions now in use.

I do not claim the stopper or the arrangement of an eccentrically-hinged yoke-wire; but

I claim as new and as my invention—

In combination with a neck spring, D, the toggle-joint lever E, made from sheet metal, and hinged together by rivets, as described, and for the purpose specified.

This specification signed by me in presence of two witnesses, this 8th day of April, 1876.

NICOLAY FRITZNER.

Witnesses:

HERMANN KREISMANN,
CARL T. BURNHARDT.