

(Model.)

G. V. HENRIE.  
FRUIT JAR FASTENING.

No. 335,754.

Patented Feb. 9, 1886.

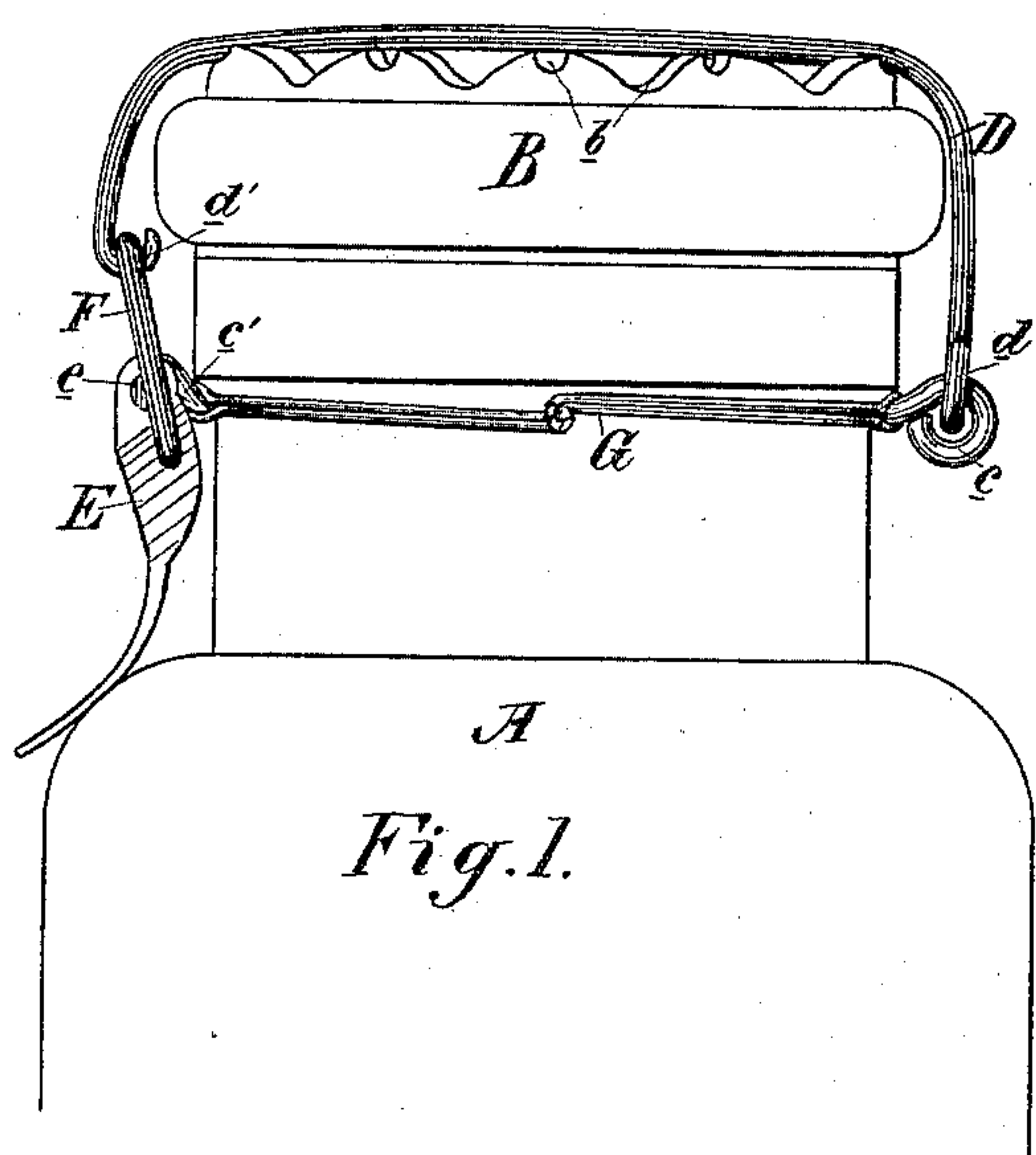


Fig. 1.

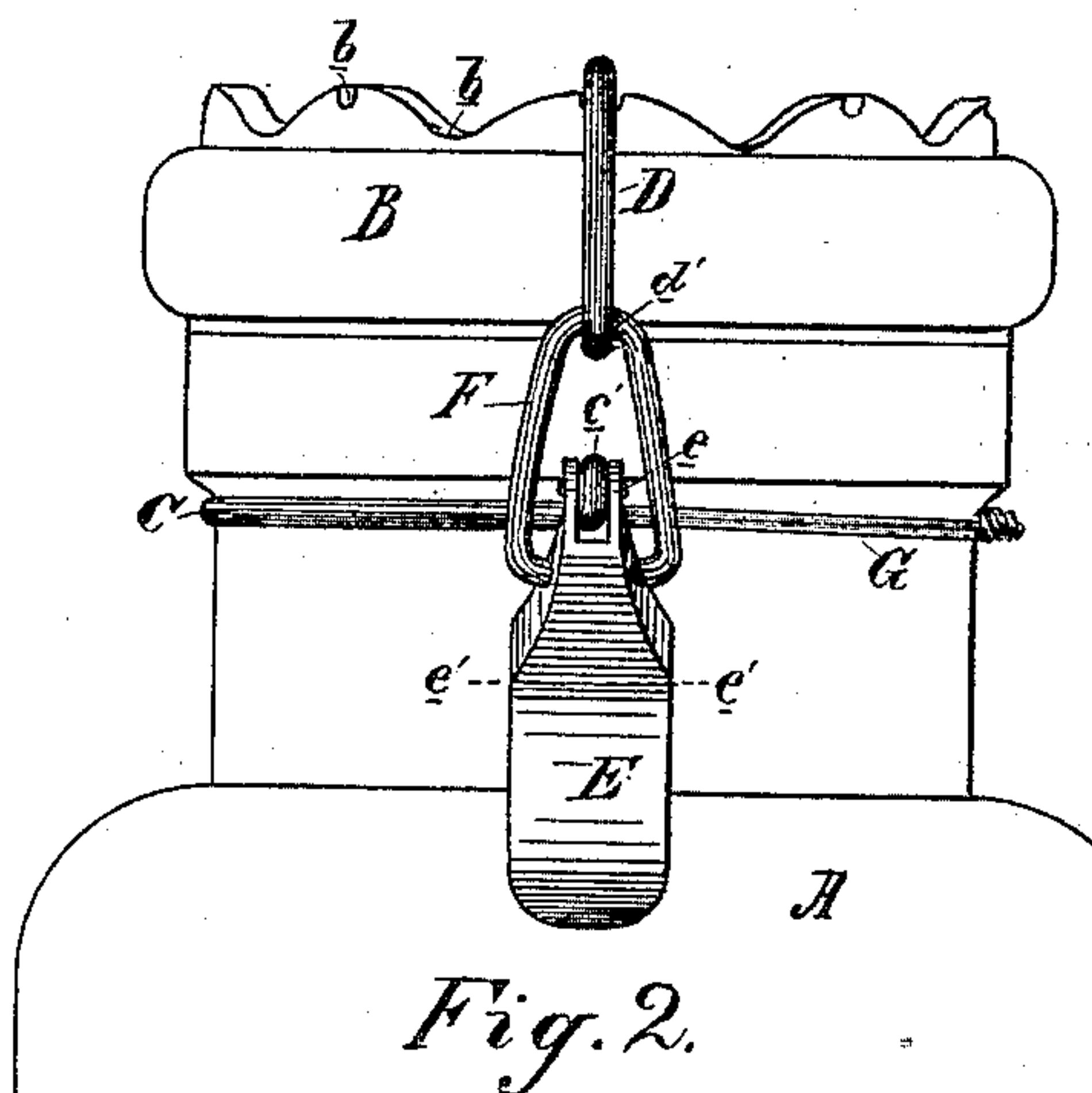


Fig. 2.

Fig. 3.

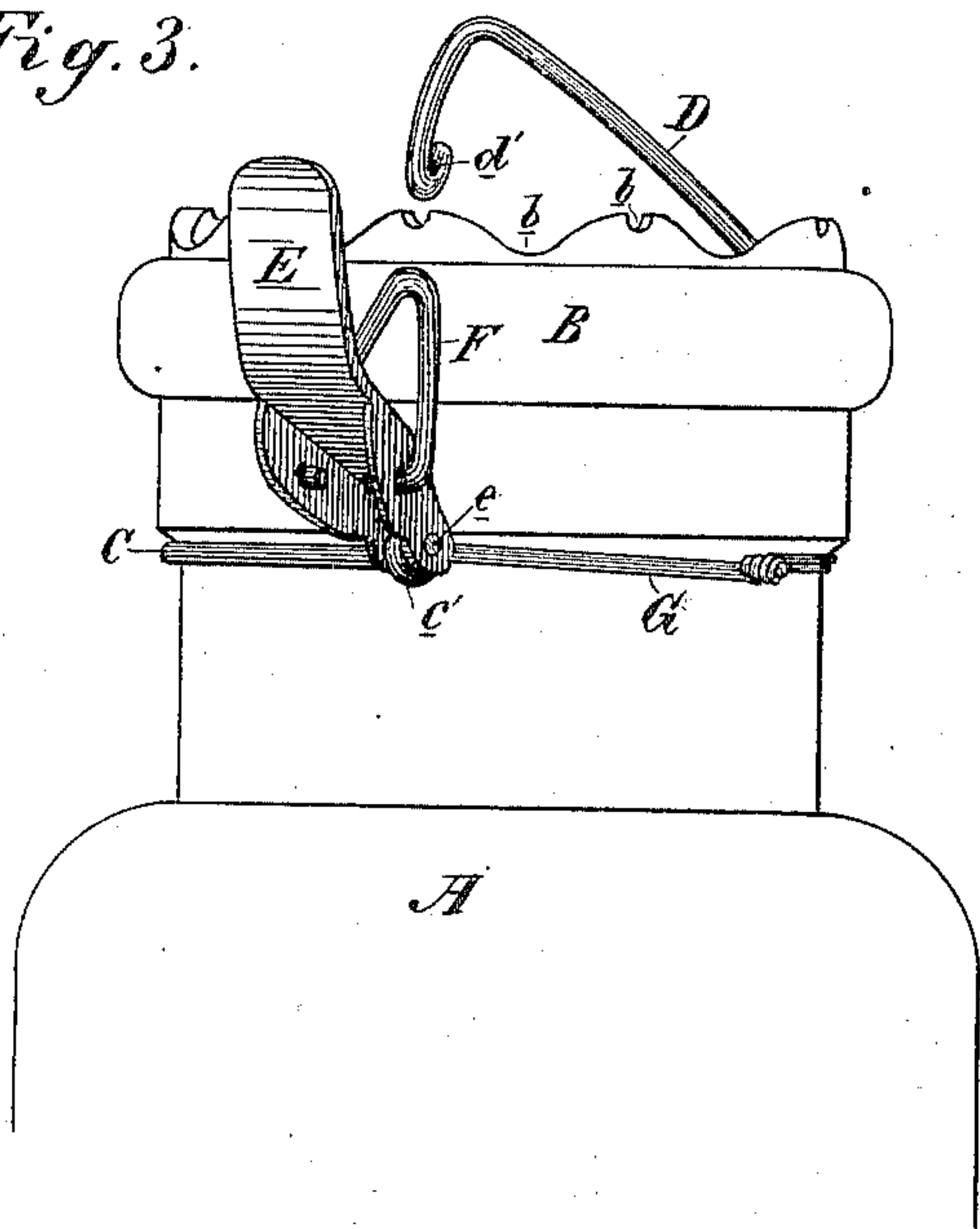
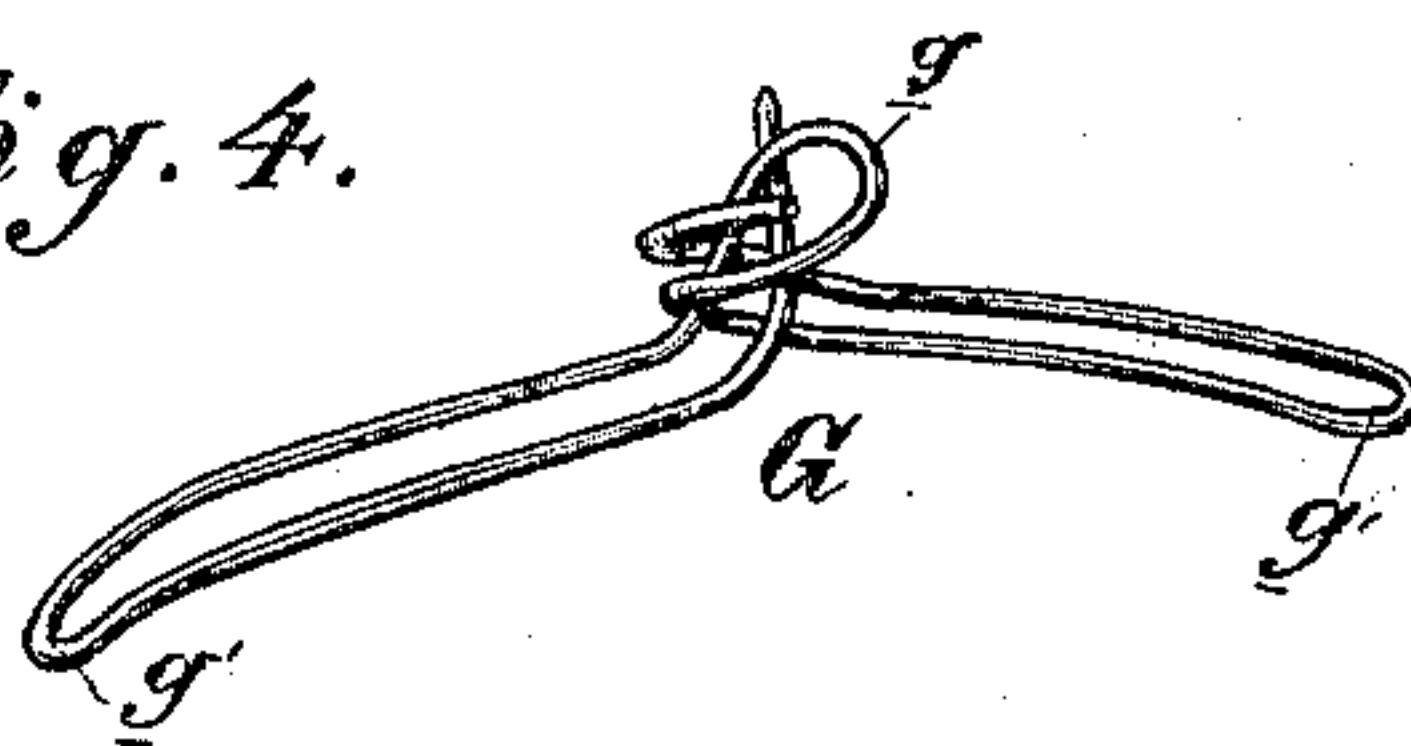


Fig. 4.



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# UNITED STATES PATENT OFFICE.

GEORGE V. HENRIE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO MARTIN V. B. WATSON, OF SAME PLACE.

## FRUIT-JAR FASTENING.

SPECIFICATION forming part of Letters Patent No. 335,754, dated February 9, 1886.

Application filed October 24, 1885. Serial No. 180,874. (Model.)

*To all whom it may concern:*

Be it known that I, GEORGE V. HENRIE, of the city and county of San Francisco, and State of California, have invented an Improvement in Fruit-Jar Fastenings; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of fruit-jar fastenings in which a wire bail hinged at one end to the neck-wire passes over the top or cover of the jar, and is fastened to and disconnected from the neck-wire by a thumb piece or lever.

My invention consists in a novel connection between the lever and the neck-wire, and between said lever and the bail-wire, whereby the latter may be readily engaged and disengaged.

It further consists in an improved loop for securing and tightening the ends of the neck-wire, and in means for applying a greater or less pressure to the cover, as may be required.

The object of my invention is to provide a simple and effective fastening for the covers of fruit-jars, or other stoppers or lids of bottles and kindred vessels.

Referring to the accompanying drawings, Figure 1 is an elevation showing the fastening complete. Fig. 2 is a front elevation of same. Fig. 3 shows the fastening disengaged. Fig. 4 is a view of the wire loop G.

A is a fruit-jar, and B is its cover or lid.

C is the neck-wire, and G is the wire loop by which its ends are secured and tightened up.

D is the bail, bent at one end to form an eye, *d*, which engages with a similar eye, *c*, on one end of the neck-wire, thus forming a hinge-joint. The bail passes up and is bent over the cover or lid B, bearing preferably thereon in small notches made in its edges. The other end of the neck-wire is formed with an eye, *c'*, over which is placed the upper end of the thumb piece or lever E, which is pivoted permanently thereto by a small rivet or pin, *e*.

F is a link pivoted in the lever E at a point below the pivotal center of said lever. Its upper end engages a hook, *d'*, on the end of the bail D.

The operation of the fastening is as follows:

The lever E being thrown upwardly, elevating the link F, the bail D is brought over the top of the cover and hooked to the link. Then the lever is forced down, taking the link and bail with it and tightening them until the pivotal center of the link is below and in line with the pivotal center of the lever. Then the lever moves farther to carry the link past the center, and is limited by the body of the jar, whereupon the fastening is complete.

I am aware of the existence of a bottle-stopper fastening in which a double bail is used having a lever pivoted to it, the top of which finds a temporary bearing under the neck-wire; but in that device there is scarcely any security, for the lever is very liable to be knocked away from its bearing, while in mine the fulcrum of the lever is permanent, and its connection with the bail being through the link and hook, there is no danger of disengagement; but a more important and obvious difference lies in the distinct points of disengagement. In the fastening to which I refer this disengagement is at the fulcrum-point of the lever, and the lever is carried up and thrown over with and by the bail, they being permanently connected.

In my fastening the lever and link remain with the neck-wire, while the bail is completely freed from all attachments.

In order to make the disengagement as simple and automatic as possible, I so construct the parts that when the lever E is moved up beyond a certain point the link F is forced positively from the hook *d'* of the bail, thereby avoiding the necessity of effecting the disengagement by hand. The body of lever E on the line *e' e'* is made wider than the base of the link F, so that said link is limited in its movement in that direction. Therefore, when the lever is thrown up, the link is allowed to rise, under the influence of the upward spring or tendency of the bail, until it comes in contact with the thick portion of the lever, when it is positively forced inwardly and slightly raised, thereby freeing it from the hook of the bail; and in order to facilitate this engagement I may bevel the inner surface of the hook *d'*.

I have found in constructing the wire loop G,



for tightening up the ends of the neck-wire, that if the loop-wire be passed around the ends of the neck-wire, and its own ends brought back to the center and there twisted, the outer portion will twist off before the inner one will tighten at all. To obviate this I take a piece of wire, Fig. 4, bend it at its center to form a single twist-eye, *g*, carry it out to form the side loops, *g'*, for engaging the ends of the neck-wire, and then bring its ends back to the central eye, the one passing above it and the other below. Then with the pinchers I sieze both ends and the intervening eye and twist them all together.

It will be seen that the twisting of the ends tightens the outside portion and the twisting of the eye the inside portion, so that the tightening of both parts is effected simultaneously, and there is no danger of breaking.

It often happens in the manufacture of fruit-jars that through some slight imperfection the cover will not fit down snugly enough to make a tight joint, though in a great many, if not in all, cases it would do it if an increased pressure were applied. I accomplish this as follows: The cover is provided with a number of notches, *b*, around its top near the rim. In these notches the bail *D* finds a bearing. Now, I make the notches of different depths, as shown, whereby the shallower ones will provide for a greater pressure of the bail than the deeper ones. The opposite notches will, of course, be of equal depth, and I may arrange those of different depths with relation to each other in any manner I see fit, though perhaps the best way would be to make a shallow and a deep notch alternate. It will be seen that these notches may be used with many kinds of fastenings, being, in fact, serviceable with any device in which a pressure-bail bears on the cover; and I do not therefore wholly confine myself to their use with the fastening I have described.

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

1. In a fruit-jar fastening, the combination of a neck-wire and a swinging bail hinged thereto at one end and passing over the cover

or lid, with a thumb-piece or lever pivoted to the neck-wire, and a connection between the free end of the bail and the lever, at a point between the end and the pivotal center of said lever, said connection being detachable from the bail, substantially as described.

2. In a fruit-jar fastening, the neck-wire *C* and the swinging bail *D*, hinged at one end thereto, and having a hook, *d'*, at its other end, in combination with the thumb-piece or lever *E*, pivoted to the neck-wire, and the link *F*, pivoted in the lever, between the end and the pivotal center of said lever, and effecting with its top a detachable engagement with the hook *d'*, substantially as herein described.

3. In a fruit-jar fastening, the neck-wire *C* and the swinging bail *D*, hinged at one end thereto and having a hook, *d'*, at its other end, in combination with the thumb-piece or lever *E*, pivoted to the neck-wire, and the link *F*, pivoted in the lever, between the end and the pivotal center of said lever, and engaging with its top the hook of the bail, said link being free to move on its pivot in one direction, but limited by the lever in the other direction, whereby its disengagement with the hook is effected by the movement of the lever, substantially as herein described.

4. In a fruit-jar fastening, the loop *G*, for securing and tightening the ends of the neck-wire, consisting of a wire bent at its middle into the eye *g*, at its sides into loops *g'*, and having its ends brought back, the one above and the other under the central eye, whereby they and the eye may be twisted together, substantially as herein described.

5. In a fruit-jar fastening, the cover or lid *B*, having notches *b* of different depths, in combination with the neck-wire *C*, the lever *E*, pivoted thereto, the link *F*, pivoted to the lever, and the bail *D*, hinged to the neck-wire, bearing in the notches and engaging the link, substantially as described.

In witness whereof I have hereunto set my hand.

GEORGE V. HENRIE.

Witnesses:

S. H. NOURSE,

H. C. LEE.