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G. E. CRAWFORD, A. V. MEEK & P. C. GRIFFITH.

CLOSURE FOR JARS, BOTTLES, OR SIMILAR RECEPTACLES.

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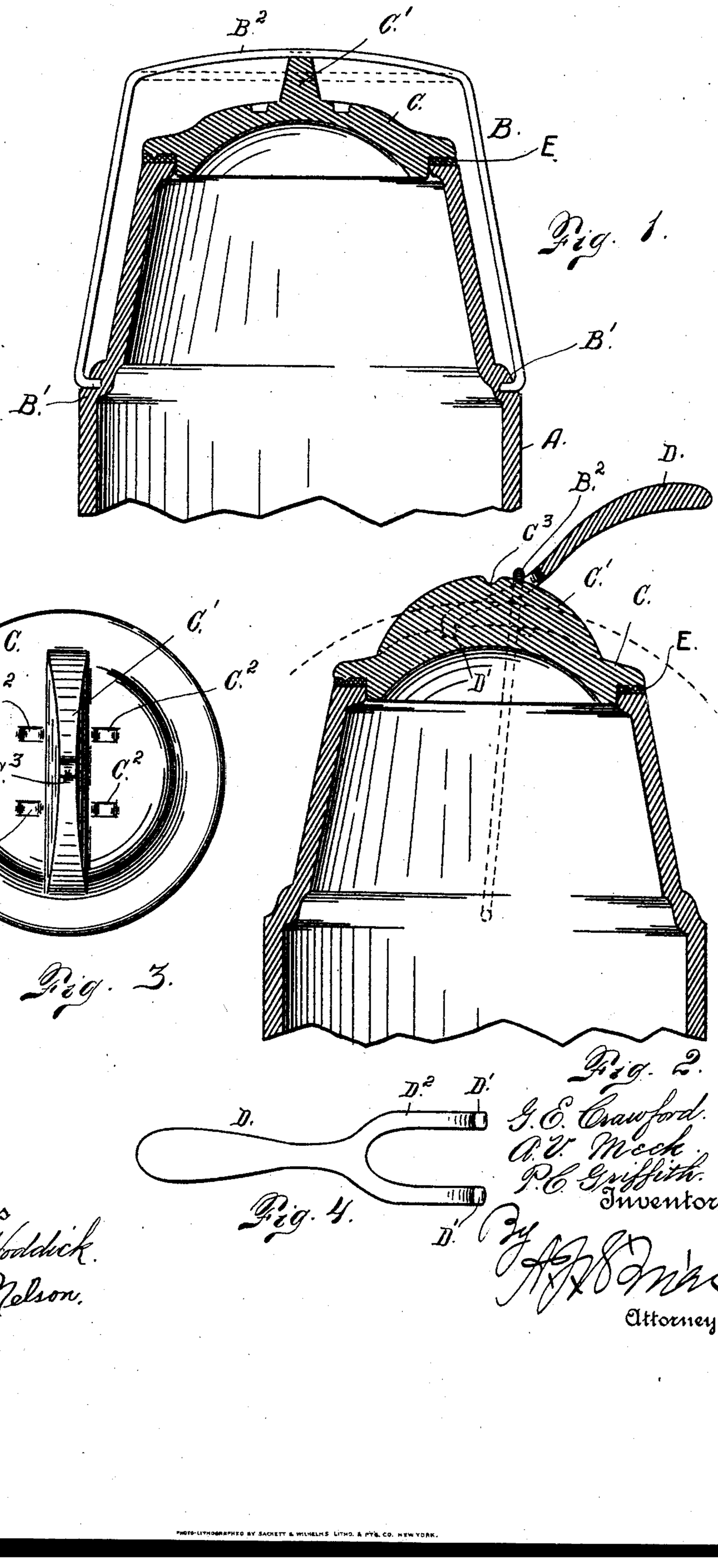

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

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CLOSURE FOR JARS, BOTTLES, OR SIMILAR RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 782,806, dated February 14, 1905.

Application filed March 4, 1904. Serial No. 196,621.

To all whom it may concern:

Be it known that we, GEORGE E. CRAWFORD, ALBERT V. MEEK, and PERCY C. GRIFFITH, citizens of the United States of America, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Closures for Jars, Bottles, or Similar Receptacles; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in sealing-closures for bottles, jars, and similar receptacles adapted to contain goods which it is desirable should be provided with air-tight caps or stoppers.

Our object is to provide a device of this class which shall be simple in construction, economical in cost, reliable, durable, and efficient in use; and to these ends the invention consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a section taken through a jar equipped with our improved closure, the section being taken transversely through the cam formed on top of the closure. Fig. 2 is a section taken at right angles to Fig. 1, the bail being located slightly to one side of its central locking position, a suitable forked instrument being shown in connection with the bail and which may be employed in shifting it to locking engagement with the cap or closure. Fig. 3 is a top view of the cap shown in detail. Fig. 4 is an underneath view of the fork or device for throwing the bail to the locking position on the cap.

The same reference characters indicate the same parts in all the views.

Let A designate the body of a jar or other suitable receptacle, to the opposite sides of which are pivotally connected the inwardly-turned extremities B′ of a locking-bail B, which passes upwardly over the cap C, the latter being provided with a curved projection C′, formed on its top and acting as a cam, whereby the transverse part B^2 of the locking-bail is sprung upwardly or placed under tension as it is moved to the central locking position. (Shown in Fig. 1 of the drawings.) On opposite sides of the cam C′ of the cap are formed recesses C^2, adapted to receive the hook-shaped or downwardly-turned ends D′ of the arms D^2, with which the manipulating device D is provided. The arms D^2 of this device are separated to straddle the cam-shaped part C′ of the cap, and when this device is used the extremities D′ of these arms are preferably placed or made to engage the pair of recesses C^2 more remote from the user. These recesses prevent the device D from slipping on the cap, and as the handle part or shank of the device is raised it engages the bail and carries its transverse part B^2 upwardly in engagement with the cam C′ of the cap until the bail engages a recess C^3, formed in the central part of the cap. As soon as this recess is reached the transverse part B^2 of the bail, which is placed under tension or sprung upwardly by the cam during its upward movement, slips into the recess, and by reason of this recess the bail is prevented from slipping on the cap in either direction.

The device D may or may not be used, as preferred. In cases where the bail is of small cross-sectional area and where considerable pressure is not required in holding the closure in place the bails may be easily adjusted by the hands of the user without the use of any instrument. When, however, our improved closure is used in connection with jars or other receptacles of considerable size, the bail being of considerable cross-sectional area, it is advisable to use a tool in order to throw the transverse part of the bail to the locking position. This bail should be made of some material possessing a reasonable degree of resiliency, so that when placed under tension by passing upwardly over the cam its downward pressure on the cap when seated in the recess C^3 will be sufficient to seal the cap or form an air-tight joint between it and the top of the

receptacle. A packing-washer E of ordinary construction is used in connection with the cap, as illustrated in the drawings.

From the foregoing description the use and operation of our improved device will be readily understood. After the receptacle has been filled the cap is placed in position and the bail made to engage the recesses on the opposite sides of the receptacle in the usual manner. The bail is then raised until its transverse part engages the curved projection or cam C′ of the cap C. This transverse part of the bail is then moved upwardly until it engages the recess C^3. It will be understood that since the part C′ of the cap curves upwardly from the base or lower portion of the cap the transverse part of the bail will be bowed upwardly as it approaches the central position or the recess C^3 of the cap. It will also be understood that the degree of the curve of the part C′ of the cap may be regulated as desired, whereby the necessary pressure may be given to the cap through the instrumentality of the bail when the latter is in the locking position.

Having thus described our invention, what we claim is—

1. The combination with a bottle, jar or similar receptacle, of a bail whose extremities are pivotally connected to the opposite sides of the receptacle, and a closure applied to the top of the receptacle and having a cam-shaped projection formed on top thereof and adapted to spring the transverse part of the bail upwardly, as the latter is moved to a central position transversely of the said projection, the cover being provided with recesses located on opposite sides of the cam-shaped projection for the purpose set forth.

2. The combination with a receptacle of the class described, of a cap or closure applied to the top of said receptacle and having an upwardly-projecting cam-shaped part which is highest at the top, the said cam-shaped part having smooth edges and a shallow central recess at the top, and recesses on opposite sides of the cam-shaped part, and a bail centrally pivoted in the opposite sides of the body of the vessel and having a transverse part adapted to engage the cam-shaped part of the cap, whereby as the bail is moved upwardly to the center of the cam-shaped part, the said bail is placed under tension and engages the central recess at the top of the cap, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE E. CRAWFORD.
ALBERT V. MEEK.
PERCY C. GRIFFITH.

Witnesses:
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