

No. 696,399.

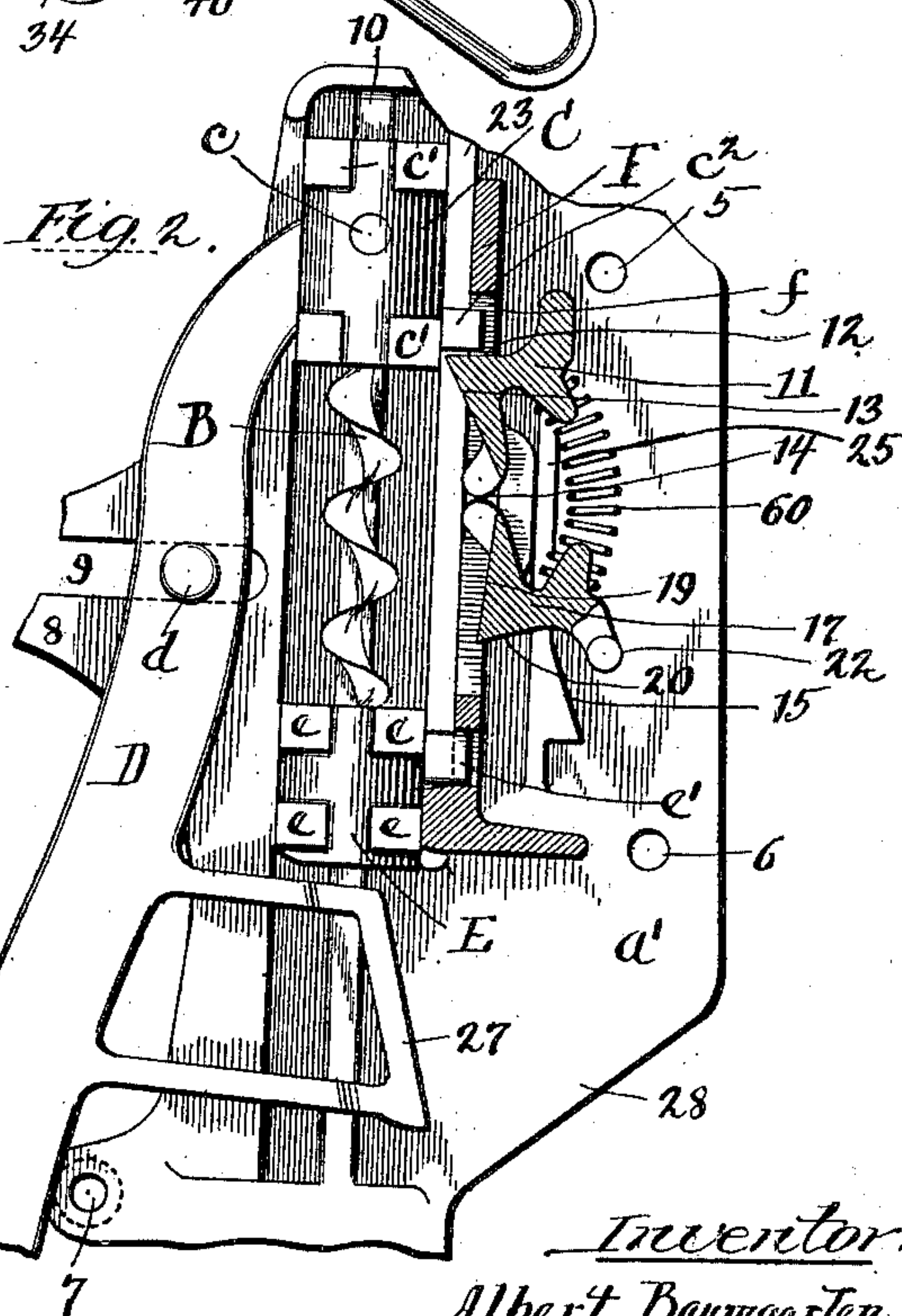
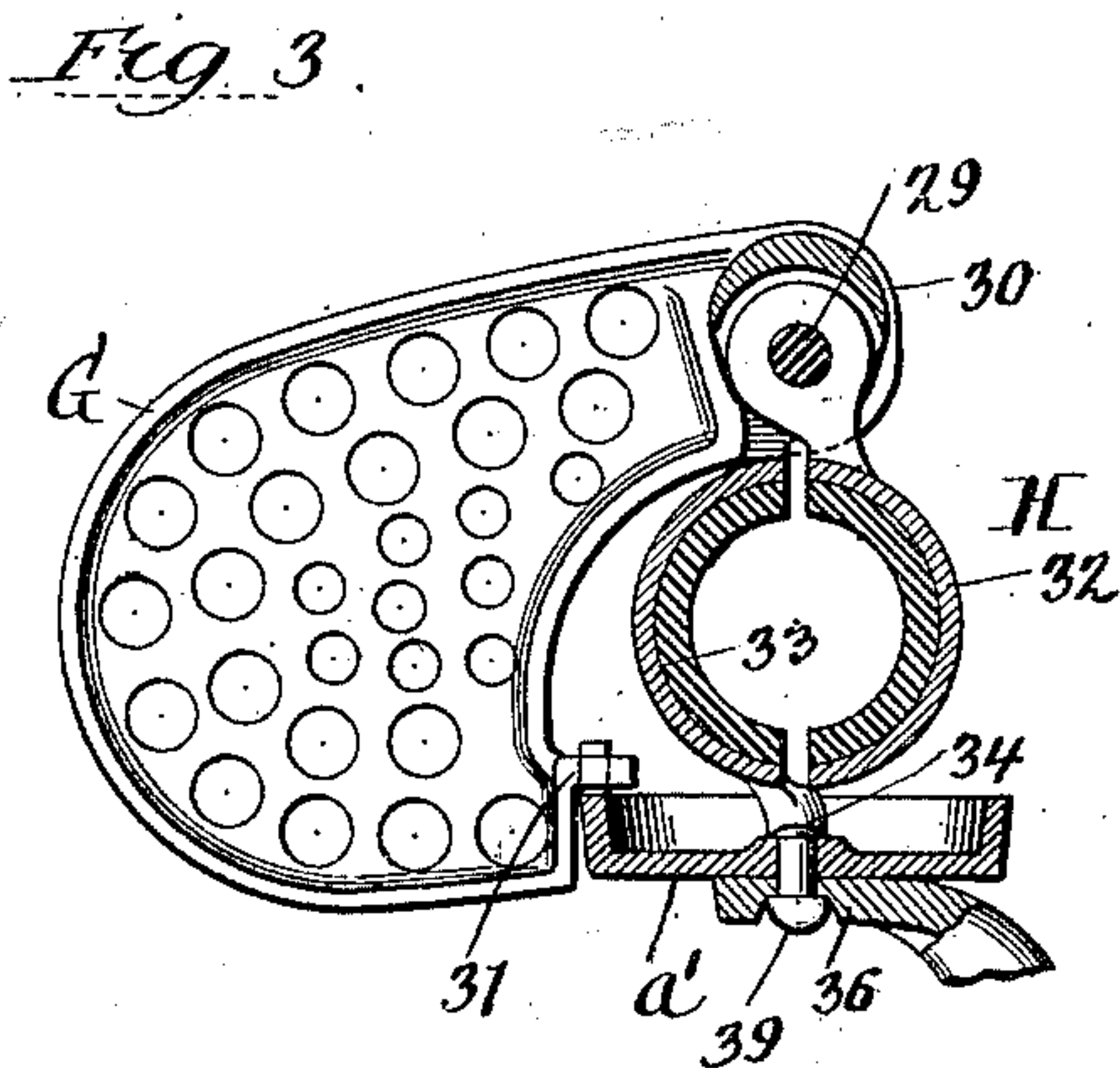
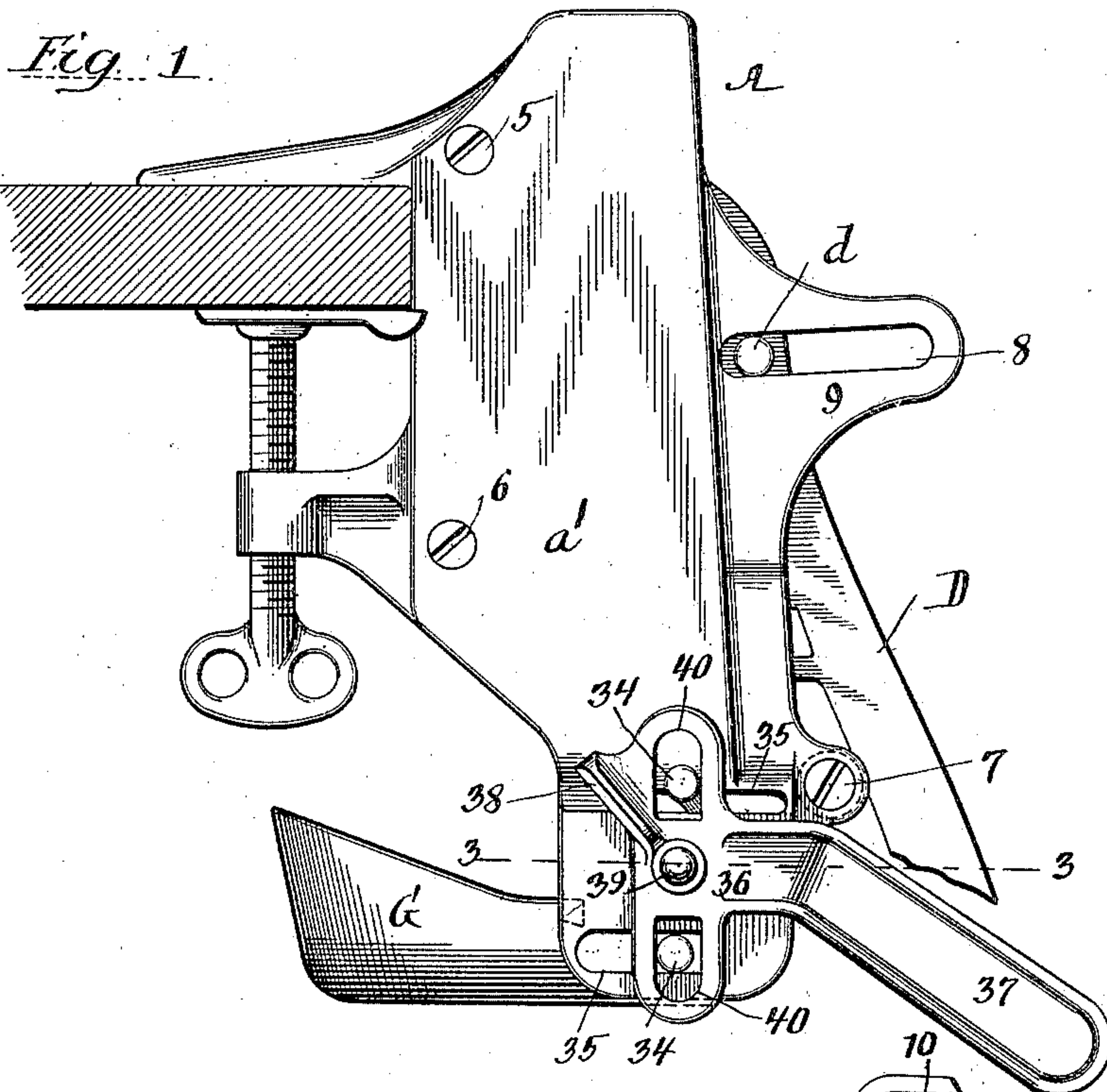
Patented Apr. 1, 1902.

A. BAUMGARTEN.  
CORK EXTRACTOR.

(Application filed Feb. 1, 1901.)

(No Model.)

3 Sheets—Sheet 1.



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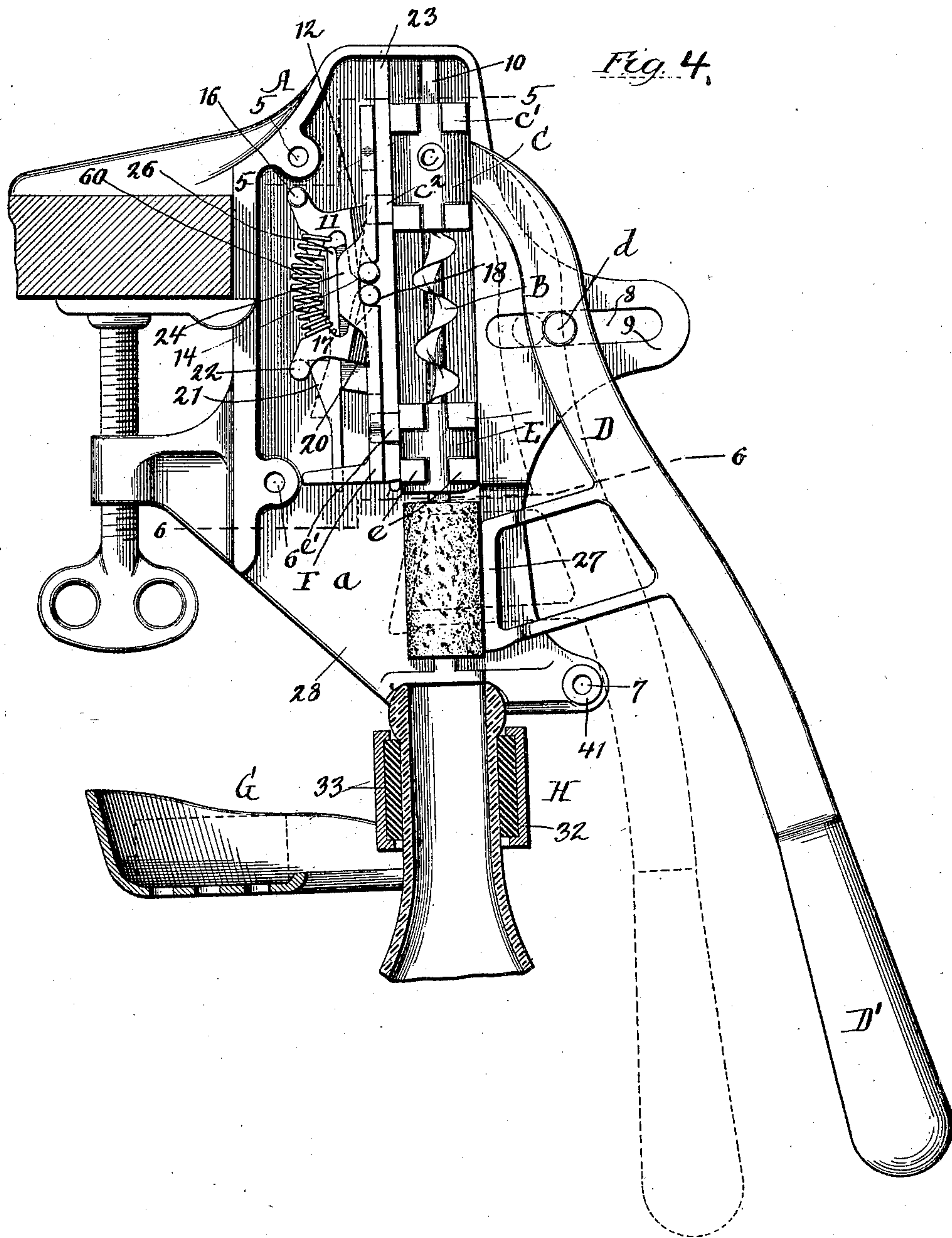
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3 Sheets—Sheet 2.



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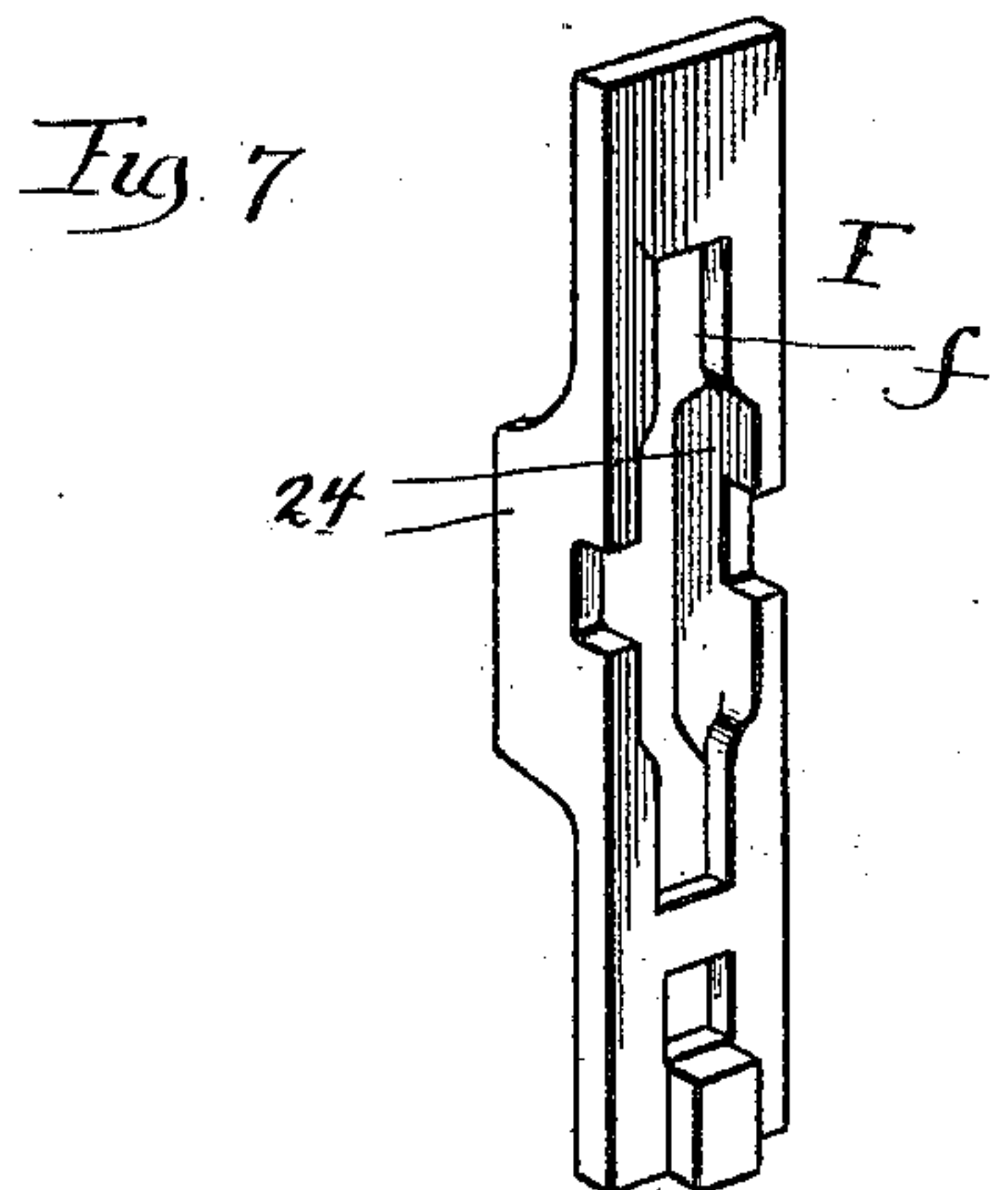
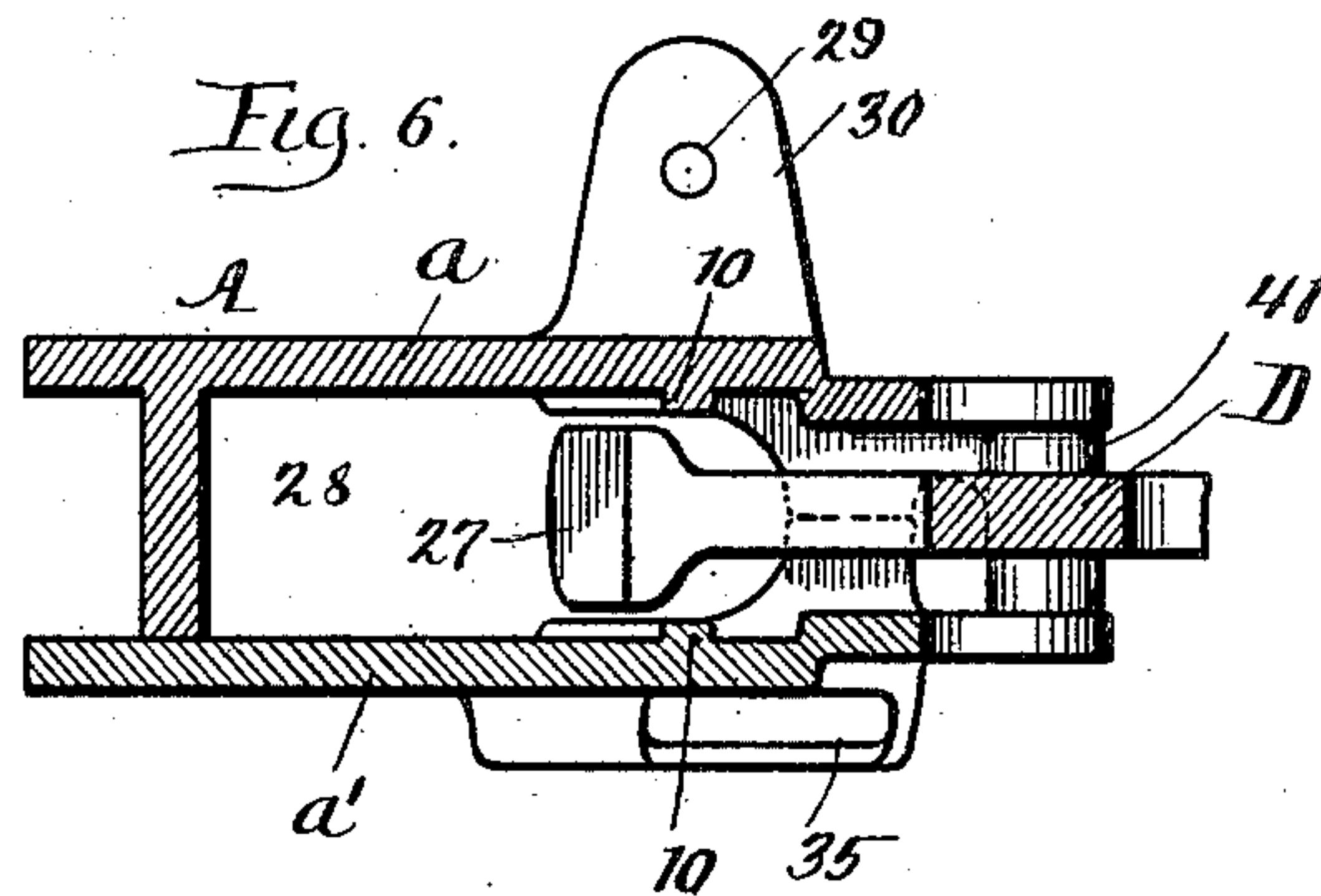
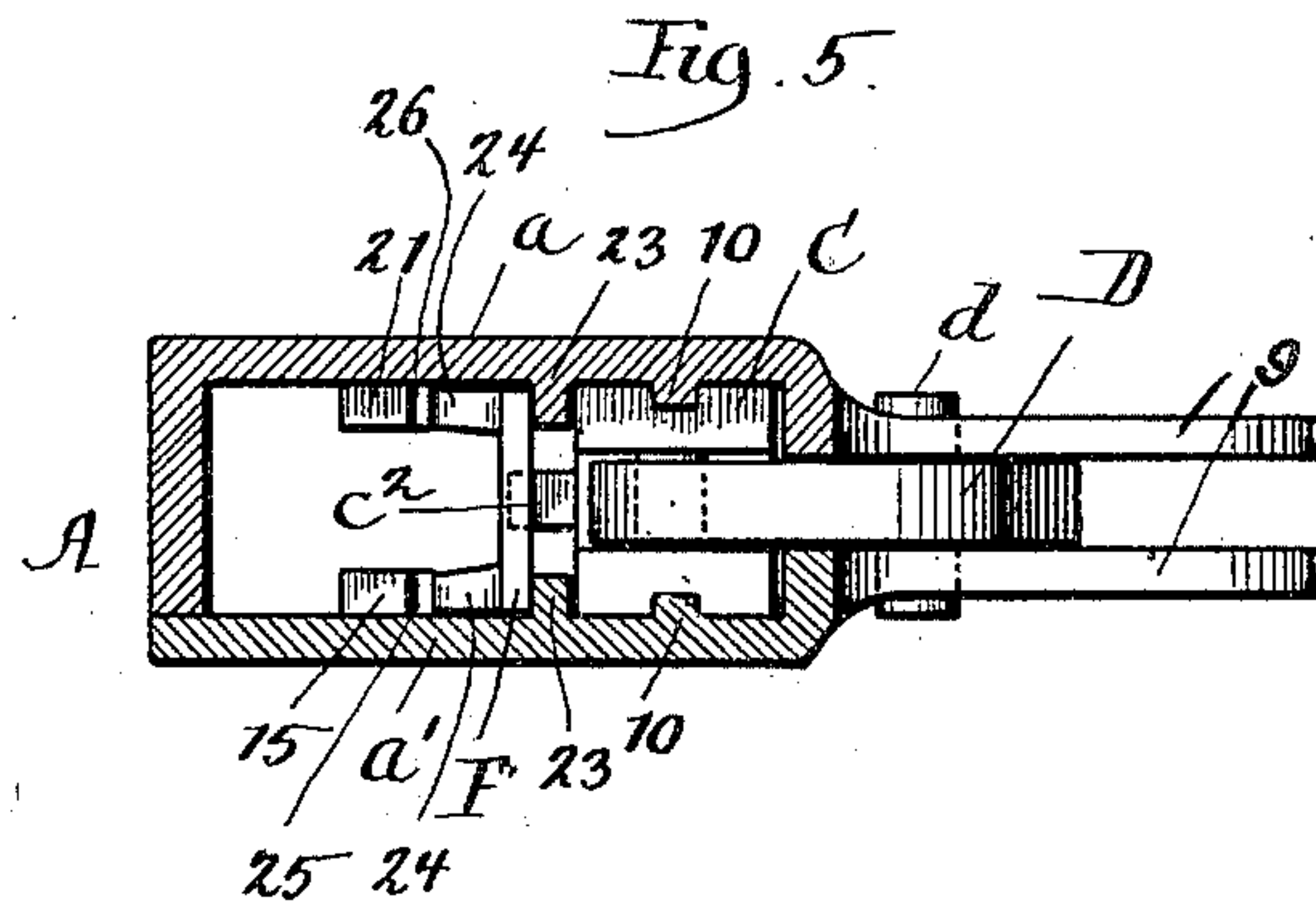
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(No Model.)

3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

ALBERT BAUMGARTEN, OF FREEPORT, ILLINOIS.

## CORK-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 696,399, dated April 1, 1902.

Application filed February 1, 1901. Serial No. 45,546. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT BAUMGARTEN, a resident of Freeport, in the county of Stephenson, State of Illinois, have invented certain new and useful Improvements in Cork-Extractors, of which the following is a full, clear, and exact description.

The present invention relates to devices for withdrawing corks from bottles and the like, and more particularly to that class known as "lever-operated" cork-extractors.

The invention designs to provide an improved construction of mechanism whereby the corks withdrawn from bottles will be positively ejected from the casing.

The invention further designs to provide a suitable and conveniently-located receptacle whereinto the corks will be discharged and wherefrom the corks can be conveniently removed when desired.

The invention still further designs to improve the construction of cork-extractors.

With these objects in view the invention consists in providing a part which engages the cork after it has been withdrawn from the bottle by the corkscrew and stripped from the screw and which part has a positive movement imparted thereto by the operating-lever or other movable part of the operating mechanism.

The invention also consists in the several novel features of construction hereinafter described, illustrated in the accompanying drawings, and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a view in side elevation of a cork-extractor embodying the preferred form of the invention. Fig. 2 is a view in central vertical section, the operating parts being shown in normal position and certain parts being broken away. Fig. 3 is a view in horizontal section on line 3 3 of Fig. 1. Fig. 4 is a view in side elevation (parts being shown in section) upon a somewhat larger scale, one casing-section being removed, the parts being shown in position assumed when a cork has been withdrawn from a bottle and the operating-lever is about to discharge the cork into the tray. Fig. 5 is a view in horizontal section taken on line 5 5 of Fig. 4, the latches being omitted. Fig. 6 is a horizontal section taken on line 6 6 of

Fig. 4. Fig. 7 is a perspective view of the sliding connector.

A denotes a suitable casing or supporting-frame wherein and whereby the several parts of the operating mechanism are mounted and sustained. Casing A is formed of sections *a* and *a'*, secured together by screws, as at 5, 6, and 7. The casing may be secured to a table, counter, or shelf by a jam-screw of usual construction and as well understood in the art. The casing is formed of sections to permit access to the operating parts and to permit said parts to be conveniently and readily assembled.

A longitudinally-movable corkscrew B is arranged in the casing. The upper terminal of cork-screw B is journaled and free to revolve in a carrier C, which is guided longitudinally in the casing. An operating-lever D has one end pivotally secured by a cross-pin *c* to carrier C. The operating-lever serves to impart a longitudinal movement to the carrier and corkscrew, is pivotally sustained by integral studs *d*, held in long slots 8 in forwardly-projecting lugs 9 of the casing, and is provided at its free terminal with a suitable handle *D'*, whereby the lever may be manually shifted.

Corkscrew B is extended through a nut E, non-revolubly held in the casing. Nut E has a limited longitudinal movement in the casing, during which it secures the corkscrew against rotation. The nut serves also to impart a rotary movement to the corkscrew when held against longitudinal movement, while the corkscrew is shifted longitudinally. Each casing-section is formed with a vertical rib 10. The carrier and nut are formed to slide freely in the casing and are guided vertically therein by lugs *c'* and *e*, respectively, which engage the opposite sides of vertical ribs 10 of the casing. Such manner of constructing and guiding the longitudinally-movable parts—i. e., carrier and nut—provides a simple construction, whereby these parts are guided longitudinally. When the end of a pivotally-sustained operating-lever is connected directly to the carrier, the lever during certain portions of its throw exerts a forward or backward pressure against the carrier, and by employing the means described for guiding the carrier vertically unnecessary friction and wear of the casing and carrier are



avoided and little power is required to shift the operating parts.

The mechanism for causing and insuring the timely, positive, and proper relative movements of the carrier and nut to effect the gyration of the corkscrew to engage a cork in a bottle, to impart a longitudinal unison movement to the corkscrew and nut, to withdraw the cork, and then gyrate the corkscrew reversely to strip the cork from the corkscrew comprises a sliding connector F, into the lower end whereof an integral lug  $e'$  of nut E is projected. The connector is provided with a long vertical slot  $f$ , whereinto an integral lug  $c^2$  of carrier is projected and wherein said lug travels. A latch 11, pivotally sustained, as at 14, in connector F, has an upper edge 12, wherewith lug  $c^2$  engages during the initial part of the downward travel of the carrier, and an inclined edge 13, wherewith lug  $c^2$  will engage during a part of the upward travel of the carrier to force the latch backwardly to permit the carrier to be restored to normal position above latch 11. Latch 11 interlocks the connector and carrier during the initial part of the downward travel of the carrier and corkscrew to cause the corkscrew and nut to travel downwardly in unison. A cam 15, integrally formed on casing-section  $\alpha'$ , (see Fig. 2,) engages a laterally-projecting stud 16 of latch 11 and withdraws latch 11 from engagement with the carrier when the nut and corkscrew have been lowered into position to engage a cork. When latch 11 has been withdrawn from engagement with the carrier, the carrier will continue to travel downwardly, and such travel will cause the corkscrew (the nut being then held against longitudinal movement) to gyrate and enter the cork in a bottle held beneath the casing.

An oppositely-arranged latch 17 is pivotally sustained, as at 18, in the connector, and this latch serves to interlock the carrier and nut during the initial part of the upward travel of the corkscrew during which the cork is withdrawn from the bottle. Latch 17 is formed with an upper inclined edge 19, wherewith lug  $c^2$  of the carrier engages during a part of the downward travel of the carrier, and with a lower edge 20, which said lug engages during the initial part of the upward travel of the carrier to interlock the carrier and nut and cause the nut and corkscrew to travel upwardly in unison the extent necessary to withdraw the cork from the bottle. A cam 21, integrally formed on casing-section  $\alpha$ , is engaged by a stud 22 on latch 17 during the upward travel of the carrier and withdraws latch 17 from engagement with the carrier to permit the corkscrew to travel upwardly, while the nut is held against longitudinal movement to effect the reverse gyration of the corkscrew necessary to strip the cork from the corkscrew. The connector is guided vertically between the side walls of the casing, vertical ribs 23 on the casing-sections and is formed with side lugs 24 which

engage the ribs 25 and 26, on which cams 15 and 21 are formed respectively. A coil-spring 60, extending between the latches, holds the latches normally in the path of lug  $c^2$  of the carrier.

The operating-lever is provided with an ejector arm or lug 27, arranged to engage a cork after the cork has been withdrawn from the bottle and stripped from the corkscrew and eject the cork through an opening 28, formed between the casing-sections. A tray or receptacle G is pivotally secured to a pin or bolt 29, secured to a depending lug 30 of casing-section  $\alpha$ . Receptacle G is arranged normally in back of the casing to receive and hold the corks as they are discharged from the casing. Receptacle G is formed with a stop 31, arranged to engage casing-section  $\alpha'$  to properly position the receptacle. Receptacle G, being located back of the casing and beneath the counter or table whereto the casing is secured, is conveniently located and so as to avoid interference with the operation of cork-extractor mechanism. When the corks are to be removed from the receptacle, it can be swung laterally about its pivot 29 to a convenient position in front of the casing. The operating-lever is arranged normally in the position shown in Figs. 1 and 2 of the drawings. A stop 41 on the casing restricts the downward movement of the operating-lever.

The bottle-holder H comprises a pair of jaws 32 and 33, pivotally sustained by bolt or pin 29, each of which is provided with a stud or lug 34, projected through a horizontal slot 35, formed in a depending portion of casing-section  $\alpha'$ . A lever 36, comprising a handle 37 and thumb-piece 38, is pivotally sustained by a pin 39 and provided with slots 40, whereinto studs 34 are projected. Lever 36 serves to close the jaws to hold a bottle in position beneath the casing.

The operation is as follows, viz: Assuming a bottle from which a cork is to be drawn to have been placed beneath the casing and held by the bottle-holder H and the parts to be in normal position, (shown in Fig. 2,) the operator will shift handle D' and the free end of the operating-lever upwardly about its fulcrum  $d$ . Such shift will cause the corkscrew, carrier, connector, and nut to travel downwardly until latch 11 is withdrawn by cam 15. The corkscrew and carrier will then continue to travel downwardly while the nut is held against longitudinal movement, and during such travel the corkscrew will gyrate and enter the cork and lug  $c^2$  will engage inclined edge 19 of latch 17 and pass beneath said latch. The operator will then shift the lever downwardly, and such shift will cause the corkscrew, cork, carrier, connector, and nut to travel upwardly in unison until latch 17 is withdrawn from engagement with the carrier by cam 21. The cork will then have been entirely withdrawn from the bottle. The further upward movement of the carrier by the operating-lever will cause the cork-



screw to gyrate reversely (the nut being then held against longitudinal movement) and strip the cork from the corkscrew. As soon as the cork is released (the parts being then in position shown in Fig. 4) from the corkscrew ejector-arm 27 of the operating-lever will engage the cork and eject it through opening 28, whence it will fall into receptacle G. The operating-lever will then engage stop 41, and the extractor mechanism will then be in proper position and in readiness for succeeding operations. The corks can be conveniently removed from the receptacle when desired.

It will be observed that during the initial upward movement of the free end of the operating-lever the pivot-studs *d* will move forwardly in slots 8 and the downward travel of the carrier and nut will be slight. The ejector-arm will therefore have passed out of the path of travel of the nut before the nut is shifted any material extent. Such construction and arrangement are important, because the travel of the nut need not be increased materially to permit the discharge-arm to be withdrawn before the nut can be moved downwardly.

The invention provides a mechanism whereby the corks withdrawn from bottles will be entirely removed and then positively discharged from the casing by the operating-lever. The invention further provides a cork-extractor whereby corks are entirely withdrawn from the bottle and are discharged into a receptacle conveniently arranged to receive and retain the corks. Important resultant advantages of these features of the invention are: The operator need not catch the cork as it falls from the corkscrew or remove it by hand; all corks are positively discharged from the frame or casing after having been withdrawn; the corks are conveniently held in the receptacle, thus entirely avoiding the falling of the corks and the necessity of the operator catching the corks as they fall from the casing. A single shift of operating-lever in both directions serves to draw the cork, strip the cork from the corkscrew, and positively discharge the cork into a convenient receptacle. In many cork-extractors heretofore employed a cork withdrawn from a bottle would sometimes remain in the casing after being stripped from the corkscrew, and it would then be necessary to remove the cork by hand before the extractor could be again operated. Manifestly, by employing the positively-shifted ejector-arm the cork is removed during every operation and the cork cannot remain in the casing. The construction throughout is simple and the operation of all the operating parts is positive and efficient. The particular construction of ejector-arm and operating-lever is simple and the resultant movements are such that the ejector-arm is withdrawn from the path of travel of the nut, while but a slight movement is imparted to the carrier, corkscrew, and nut.

The invention is not to be understood as restricted to the details shown and described, but may be varied without departing from the spirit of the invention, and, furthermore, features thereof may be employed severally without its adoption in entirety.

For a more particular description of the means whereby the connector and nut are limited in their longitudinal movements and the operation of all of said parts reference may be had to United States Patent No. 675,032, granted to me May 28, 1901.

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

1. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in said casing and for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of an ejector positioned to engage the cork after withdrawal of the cork from the bottle, said ejector having a positive movement imparted thereto by one of the parts of the operating mechanism.

2. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in said casing and for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of an ejector positioned to engage the cork after withdrawal of the cork from the bottle, said ejector having a positive movement imparted thereto by the operating-lever.

3. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in the casing, for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of an ejector carried by the operating-lever.

4. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in the casing, for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of a movable ejector-arm on the operating-lever.

5. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in the casing, for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of a movable ejector-arm integrally formed on the operating-lever.

6. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in the casing, for causing the ro-



tation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of a movable ejector-arm on the operating-lever, said lever  
5 being pivotally sustained and having a shifting fulcrum and whereby a differential movement will be imparted to the ejector-arm and the carrier to cause said arm to be withdrawn from the path of travel of said movable part  
10 during the initial upward shift of the free end of the operating-lever.

7. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held in the casing, for causing the rotation of said corkscrew during a part of its longitudinal travel, and a lever for imparting movement to said corkscrew, of a movable ejector-arm on the operating-lever, elongated  
20 bearings wherein said lever is pivotally sustained, and whereby a differential movement will be imparted to the ejector-arm and the carrier to cause said arm to be withdrawn from the path of travel of said movable part  
25 during the initial upward shift of the free end of the operating-lever.

8. In a cork-extractor, the combination with a suitable frame or casing, a longitudinally-movable corkscrew therein, a part non-revolubly held therein for causing the rotation  
30 of the corkscrew, of a positively-shifted ejector, means whereby the ejector is positively shifted, a bottle-holding device comprising jaws, a pivot for said jaws, and a receptacle for receiving and retaining the corks, said  
35 receptacle being pivotally sustained by said pivot.

9. In a cork-extractor, the combination with a suitable frame or casing, of a longitudinally-movable carrier in said casing, a corkscrew  
40 journaled in said carrier, a nut non-revolubly held in said casing, said nut having a limited longitudinal movement in said casing, a sliding connector, two latches carried by said  
45 connector, a cam integrally formed on each of the side walls of the casing for withdrawing said latches, respectively, and an operating-lever for imparting movement to said carrier.

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