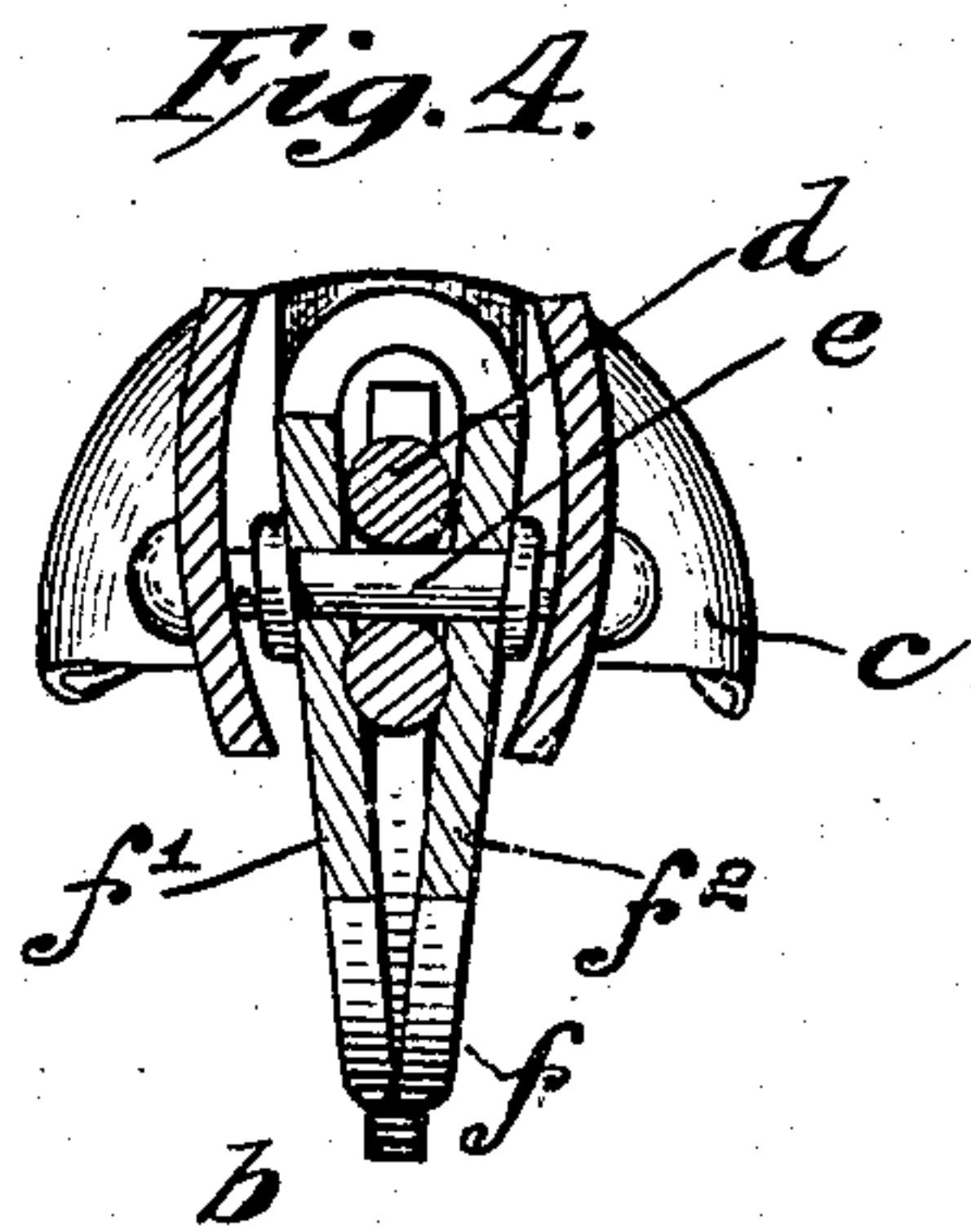
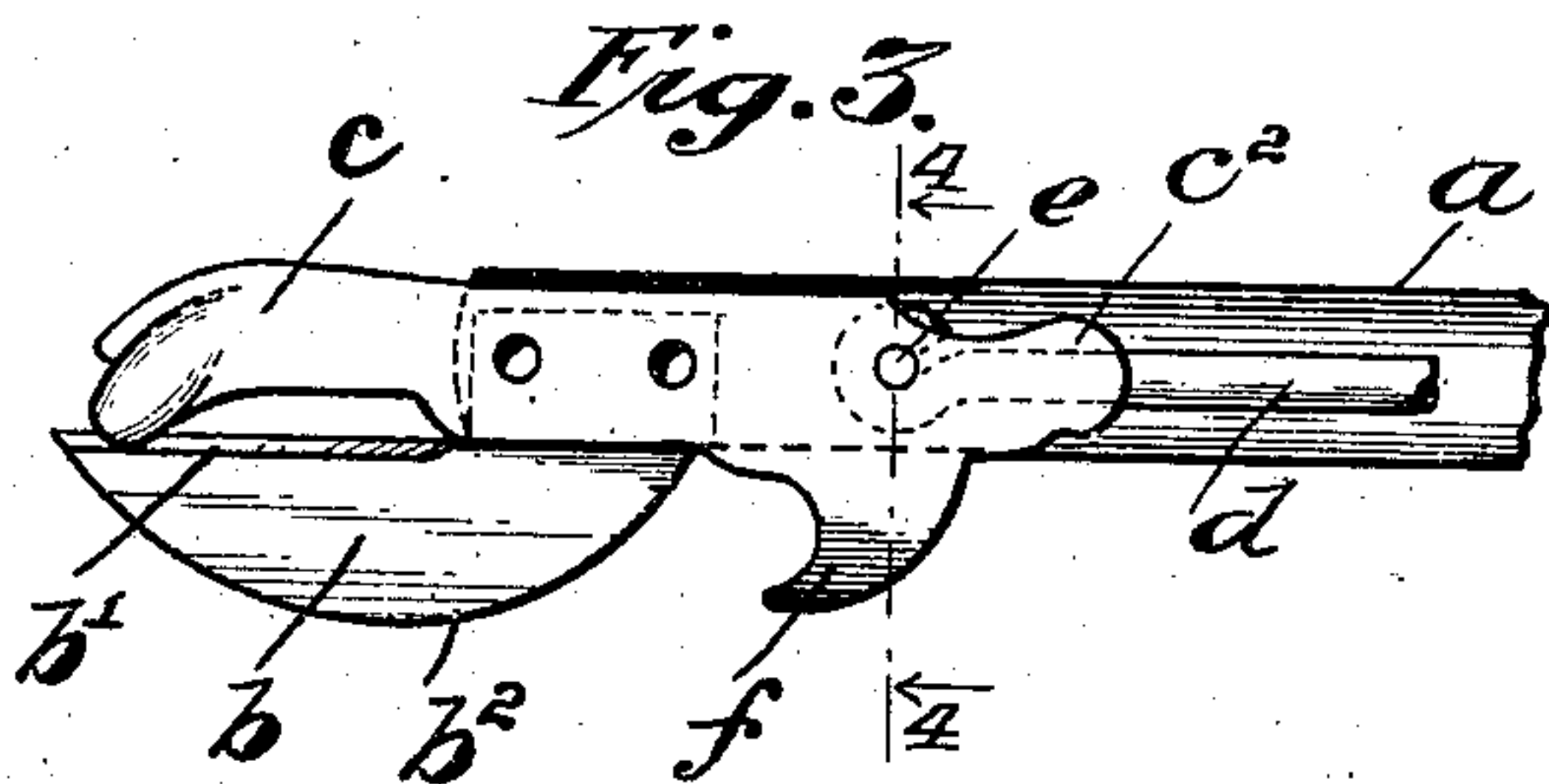
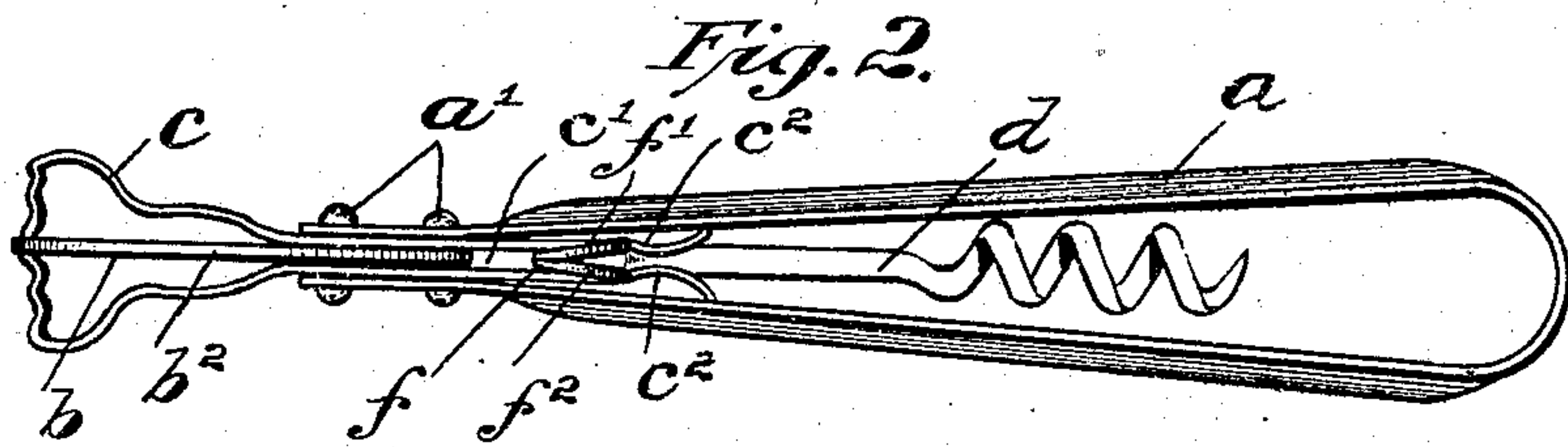
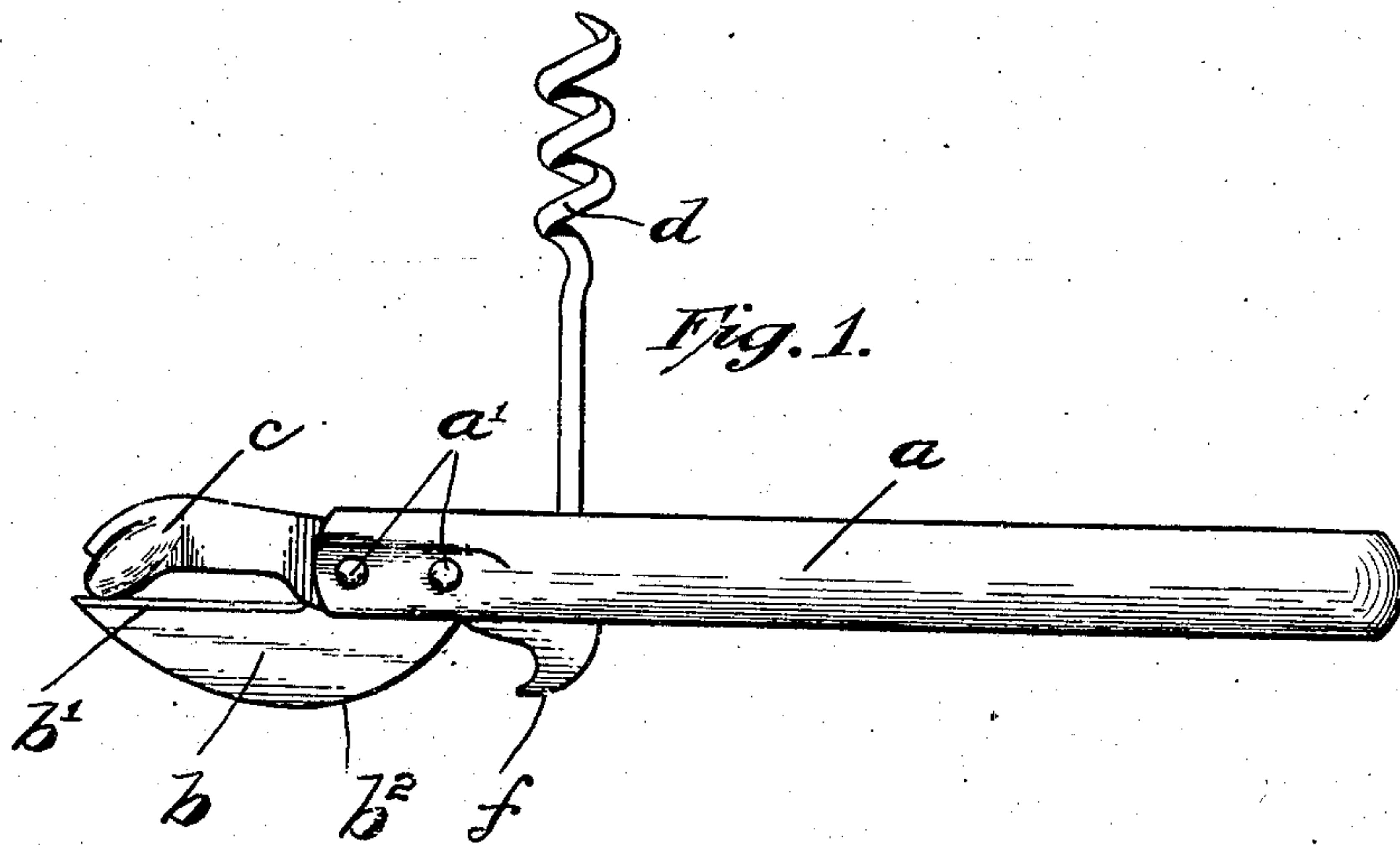


No. 854,979.

PATENTED MAY 28, 1907.

B. F. BIRD.  
COMBINATION TOOL.  
APPLICATION FILED MAR. 28, 1907.



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# UNITED STATES PATENT OFFICE.

BENJAMIN F. BIRD, OF KINGSTON, NEW YORK.

## COMBINATION-TOOL.

No. 854,979.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed March 28, 1907. Serial No. 364,972.

*To all whom it may concern:*

Be it known that I, BENJAMIN F. BIRD, a citizen of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Combination-Tools, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to combination tools and more particularly to that class thereof embodying therein a can opener.

The main object of the invention is to provide a tool of this character embodying therein a hook adapted to be used to remove the ordinary bottle cap, which hook will be so positioned relative to the cutting blade, as to utilize said blade for a fulcrum in bringing the necessary strain upon the edge of the cap.

A further object of the invention is to provide a tool of this character wherein the various implements will be so related, constructed and combined as to co-operate in producing a neat compact tool, the various implements embodied in which will co-operate with certain of the other implements in a manner to minimize the number of essential elements in the entire tool.

A still further object of the invention is to provide a tool of this character embodying therein a can opener, a bottle cap remover and a corkscrew in such relation with each other as to avoid any one of such interfering with the user, while any other is being used.

A still further object of the invention is to provide a device of this character wherein the various implements will all be simultaneously secured to the handle, by the same means, thus insuring economy in assembling, and strength in the assembled structure.

A still further object is to provide a device of this character wherein the bottle cap hook will form an integral part of the fulcrum head, thus insuring a proper, permanent positioning of the same, relative to the cutting blade, and the addition of this implement without materially increasing the cost of the production of the entire tool. And a still further object is to provide a tool of this character which may be inexpensively produced and which will be strong and durable.

The invention consists primarily of a combination tool comprising a handle, a fulcrum head therefor, a cutting blade mounted in said handle and extending under said fulcrum head, and a hook positioned rearwardly

of said blade, adjacent to the under edge thereof, whereby said blade acts as a fulcrum relative to said hook; and in such other novel features of construction and combination of parts as are hereafter set forth and described and more particularly pointed out in the claims hereto appended.

Referring to the drawings: Figure 1, is a side elevation of a tool embodying my invention; Fig. 2, is a bottom plan view thereof; Fig. 3, is a view of the forward end of the tool with one side of the handle removed, and Fig. 4, is a section on the line 4—4 of Fig. 3, on a larger scale.

Like letters refer to like parts throughout the several views.

In the embodiment of my invention shown in the accompanying drawings, I have shown the combination as embodied in the type of can opener described in Letters Patent No. 776,540, of Dec. 6, 1904, such being the type to which the invention in its preferred form is particularly adapted. This tool comprises a looped sheet metal handle *a*, arched in cross section to give strength thereto. Between the ends of the metal of the handle are secured by means of the headed rivets *a'*, a cutting blade *b*, and a sheet metal fulcrum head *c*. The said cutting blade has a straight laterally beveled upper cutting edge *b'*, and has its lower edge curved longitudinally of the tool as shown at *b<sup>2</sup>*, for the purpose of bringing the blade to a point and facilitating the operation thereof. The fulcrum head *c*, is preferably made of sheet metal formed up to make a channel *c'*, adjacent to the rivets *a'*, adapted to receive the top of the blade, and rearwardly of this point the metal of said head is extended to form the oppositely disposed arms *c<sup>2</sup>*, between which the corkscrew *d*, is adapted to be pivoted. The said arms may be sprung by means of a rivet *e*, against the eye of said corkscrew to secure the necessary frictional resistance to movement thereof. Suitable stops are provided by constricting the lower edge of said arms, for limiting the movement of said corkscrew. Positioned rearwardly of this cutting blade *b*, is a pendent hook *f*, so positioned that by bringing the curved surface *b<sup>2</sup>*, of said blade, upon the top of a bottle cap, the hook may be brought beneath the rim of said cap, thus causing said blade to serve as a rolling fulcrum in the operation of said hook. Preferably I form this hook in two oppositely disposed sections as *f'*, *f<sup>2</sup>*, Fig. 4, forming an



integral part of, and pendent from the arms  $c^2$ , of the fulcrum head. This construction permits the said hook to be made an integral part of the fulcrum head, thus permitting it to be secured to the handle at the same time with the fulcrum head, and the cutting blade, and insuring its accurate positioning relative to said blade. As the channel at  $c'$ , makes the opposite arms of the fulcrum head substantially parallel with each other it is necessary to destroy the parallelism of the sections  $f'$ ,  $f^2$ , of the hook  $f$ , to bring them together so that the point of the hook at the lower end will be substantially a single hook member and the wedge formed in the upper end will serve to aid in retaining the corkscrew  $d$ , in the proper position when it is closed, within the loop of the handle. It will be observed that the rivet  $e$ , in addition to creating the proper frictional engagement of the arms  $c^2$ , with the eye of the corkscrew also serves to prevent the separation of the two parts of the said hook.

By positioning the hook  $f$ , as described, I not only secure the advantage of using the lower surface of the cutting blade as a fulcrum but also have said hook so positioned that when the corkscrew is used, it may be placed between the fingers without bringing a finger into such engagement with the hook as might lacerate it. The said corkscrew is arranged so as to open on the side of the handle away from the cutting blade, in a manner to avoid the inconvenience resulting from the presence of said blade. Consequently I secure an advantage in the matter of both convenience and safety, by positioning both the hook and the cutting blade on the same side of the handle, and on top thereof relative to the corkscrew when the latter is open for use.

While the fulcrum head  $c$ , being of drawing steel is not highly tempered, nevertheless the conditions of use are not such as to require a hook possessed of greater strength and durability than is afforded by the use of softer steel.

The operation of the heretofore described tool is apparent from the description and in use is substantially as follows: When it is desired to use the tool as a can opener, the corkscrew  $d$ , is turned within the loop of the handle  $a$ , until its shank engages the constricted portion of the arms  $c^2$ , which with the friction of the eye  $d'$ , thereof with the said arms prevents said corkscrew from accidentally projecting from the handle in a manner to injure the hand. The hook  $f$ , while the tool is being so used being under the handle, and rearwardly of the cutting blade, is not in the way of the hand, being positioned at a point substantially forwardly of the handle grip  $a$ . The fulcrum head  $c$  is applied to the can in the usual and well known manner, and the handle repeat-

edly raised and lowered in taking successive cuts, and in feeding the blade  $b$ , about a can. It will be observed that during this operation, the hook  $f$  is not in the way of the can nor in the way of the hand of the user. When, however, it is desired to use the tool as a corkscrew, the corkscrew,  $d$ , is turned outwardly away from the hook  $f$ , at right angles to the handle  $a$ , the friction on the eye of said corkscrew by the arms  $c^2$ , and the pivot pin  $e$ , serving to offer the necessary resistance to this movement and to aid in holding the corkscrew in place for use. The arrangement of the corkscrew and its manner of use is necessarily such as to require the fingers to be positioned at each side of the shank in extracting a cork, and as the drawing of a cork sometimes requires considerable effort, the presence of the hook  $f$  parallel with and adjacent to said shank would not only be awkward but would present a liability of the laceration of the finger thereby in case the hand should slip. This manner of turning the corkscrew in opening also permits the use of the top of the fulcrum head  $c$ , as a fulcrum point to secure leverage to extract a cork. It will thus be seen that not only is the fulcrum head common to both the cutting blade and the corkscrew as a means securing same in place, but that it has the same function as to both these implements.

The hook  $f$ , is used for removing metallic bottle stoppers of the "Crown" type, and its arrangement just back of the cutting blade  $b$ , and below the curved edge  $b^2$ , thereof thus causes the said blade to act as a rolling fulcrum for said hook  $f$ . To remove a cap the blade  $b$ , at any point of its edge  $b^2$ , is placed on top of the cap and brought downward or upward until the points at  $f^2$ , pass under the edge of the cap. The entire tool is then turned upon the curved edge  $b^2$ , until the said hook engages said cap. It will be observed that during this operation there is a constant though rolling engagement of the blade with the top of the cap, and that it is therefore possible to use the hooks for various depths of cap rims. It will also be observed that said curved edge  $b^2$ , forms a rolling fulcrum, the constant changing of the point of engagement of which will cause a substantially vertical pressure on the cap. The handle  $a$ , affords ample leverage and the vertical movement above referred to avoids all liability of the hook slipping from the cap.

The hook  $f$ , being positioned rearwardly of the cutting blade and below the fulcrum, not only insures the advantages in the mode of operation above referred to, but permits structurally the advantage of permitting the hook  $f$ , to be formed integrally with the fulcrum head and the opposite portion  $f'$ , and  $f^2$ , to be brought together by substantially the same operations required to form the head and to secure the corkscrew therein,



thus insuring not only simplicity of structure but economy of construction. While I prefer to make the said hook an integral part of the fulcrum head, such a construction is not essential to my invention considered broadly. The arrangement of the hook *f*, back of the cutting blade so as to utilize the curved under edge of said blade as a fulcrum for the use of said hook is of the utmost importance and I intend to claim such broadly.

It will be observed that the fulcrum head *c*, serves as the means for securing all parts of the tool to the handle, and also as a fulcrum common to both the cutting blade and the corkscrew, while accurately positioning all these parts relative to each other.

Having described the invention, what I claim as new and desire to have protected by Letters Patent is:

1. A combination tool comprising a handle, a fulcrum head therefor, a cutting blade in said handle and extending under said fulcrum head, and a hook positioned rearwardly of said cutting blade adjacent to the under edge thereof, whereby said blade acts as a fulcrum relative to said hook, in removing a cap.

2. A combination tool comprising a handle, a fulcrum head, the shank of which has a channel adjacent to the head, on the under

side thereof adapted to receive the blade, oppositely disposed rearwardly projected arms, pendent, integral coincident hooks thereon, a cutting blade mounted in said channel and extending under said fulcrum head, a corkscrew having an eye on the end of its shank, said arms being constricted on one side, and a rivet drawing said arms upon said eye, and said hooks together, whereby movement of said corkscrew to open it is limited to a direction away from said blade and said hook, and said fulcrum head, said blade, said hook and said corkscrew are simultaneously attached to the handle.

3. A combination tool comprising a handle, a fulcrum head therefor, a cutting blade extending under said fulcrum head, a rearwardly projected shank to said fulcrum head, and a hook forming an integral part of said shank disposed rearwardly of said blade whereby the under edge of said blade acts as a fulcrum for said hook in removing a cap.

In witness whereof, I have hereunto affixed my signature, this 27th day of March, 1907, in the presence of two witnesses.

BENJAMIN F. BIRD.

Witnesses:

F. T. WENTWORTH,

ELEANOR T. MINOGUE.