

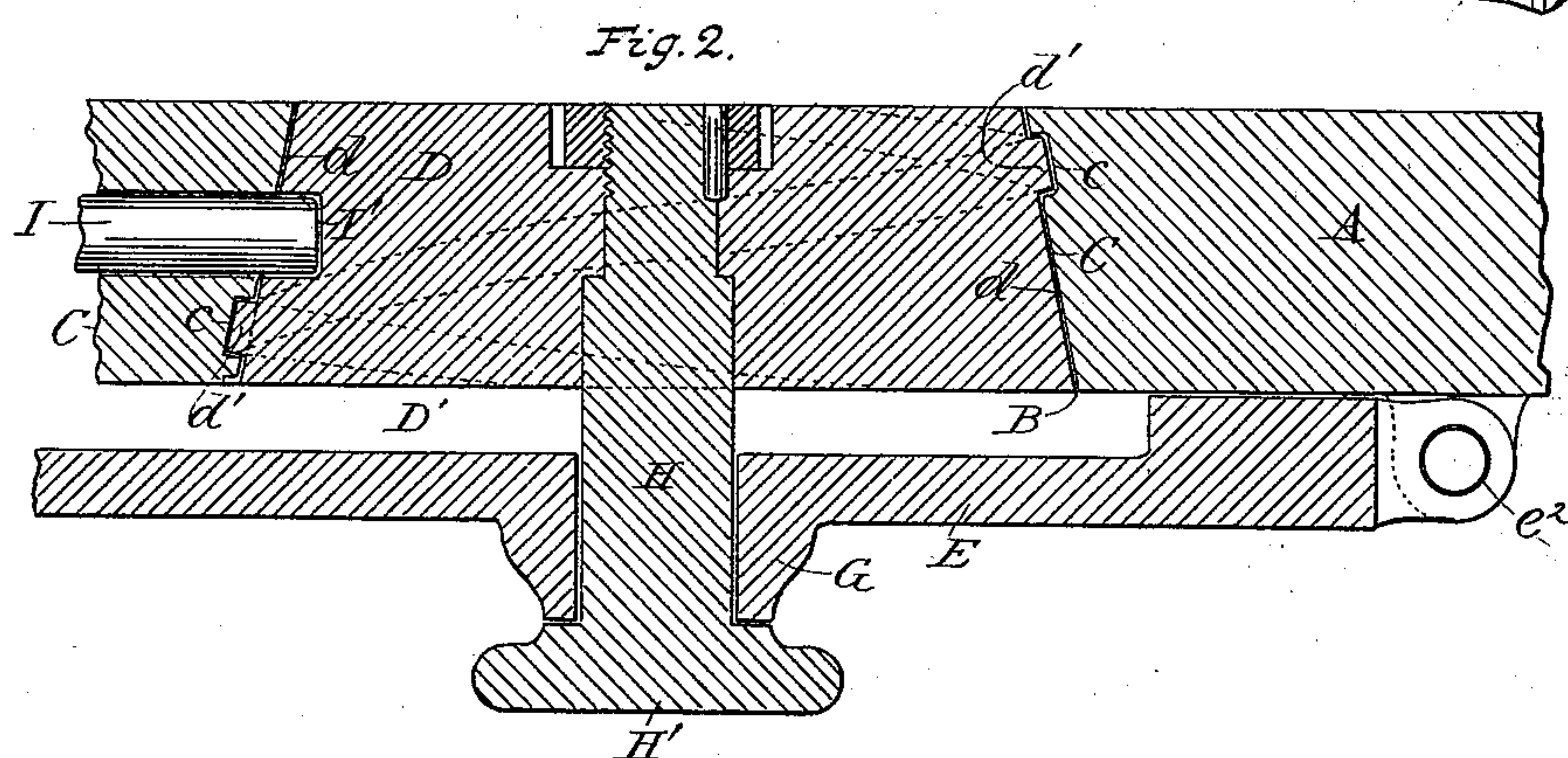
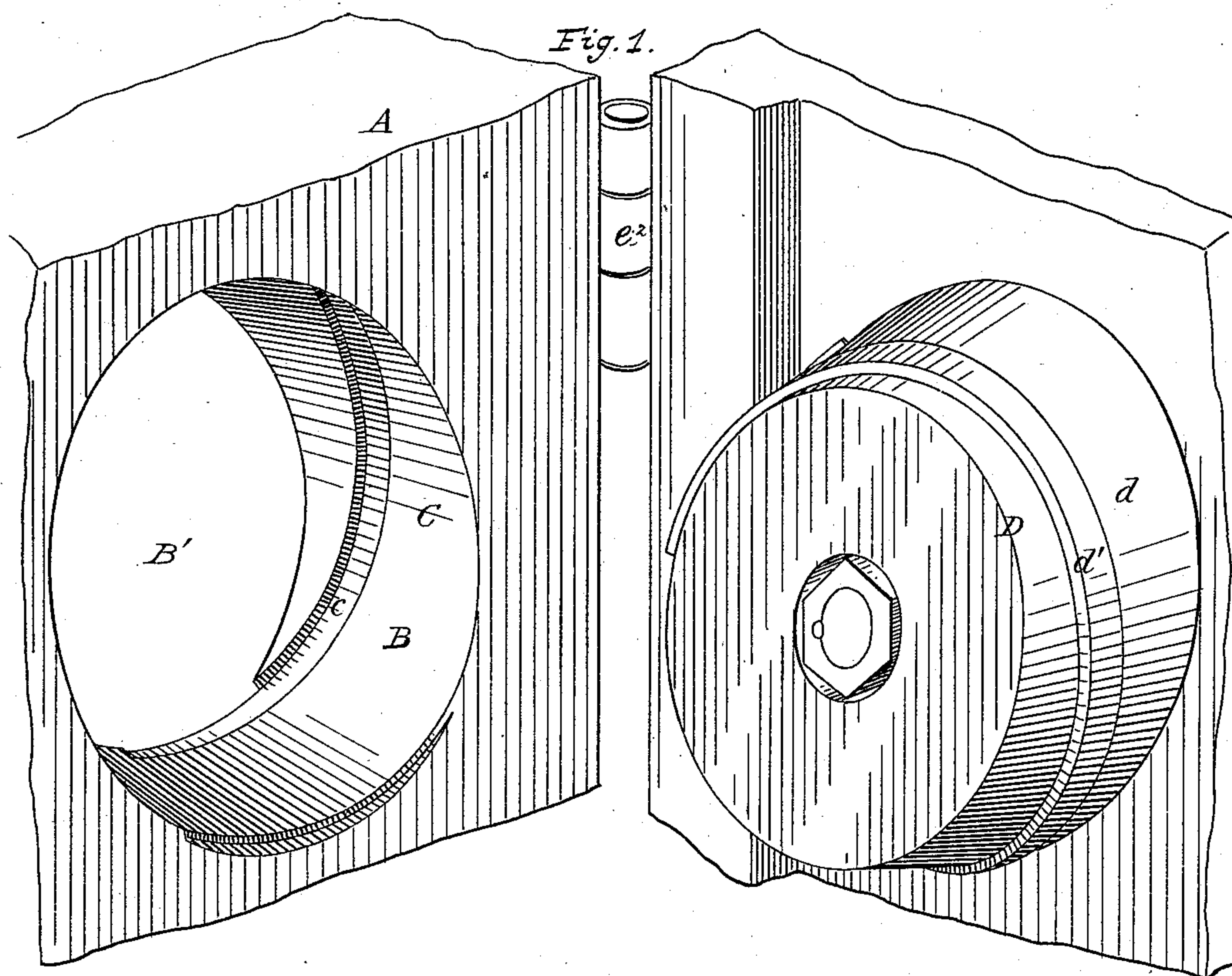
(No Model.)

2 Sheets—Sheet 1.

G. B. CAVERT.
SAFE.

No. 543,334.

Patented July 23, 1895.



Witnesses.

Charles S. Kirk
A. S. Kirk Jr.

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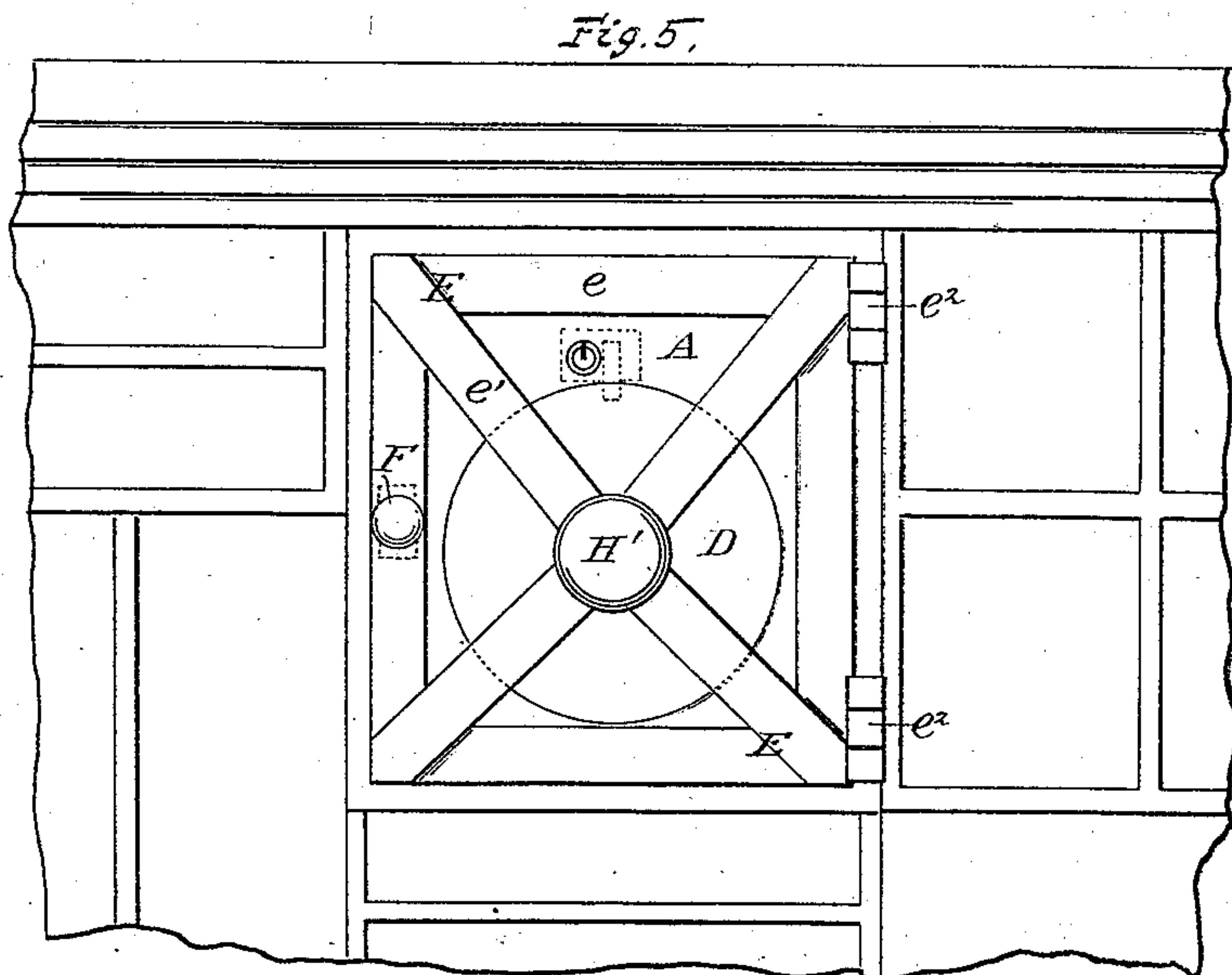
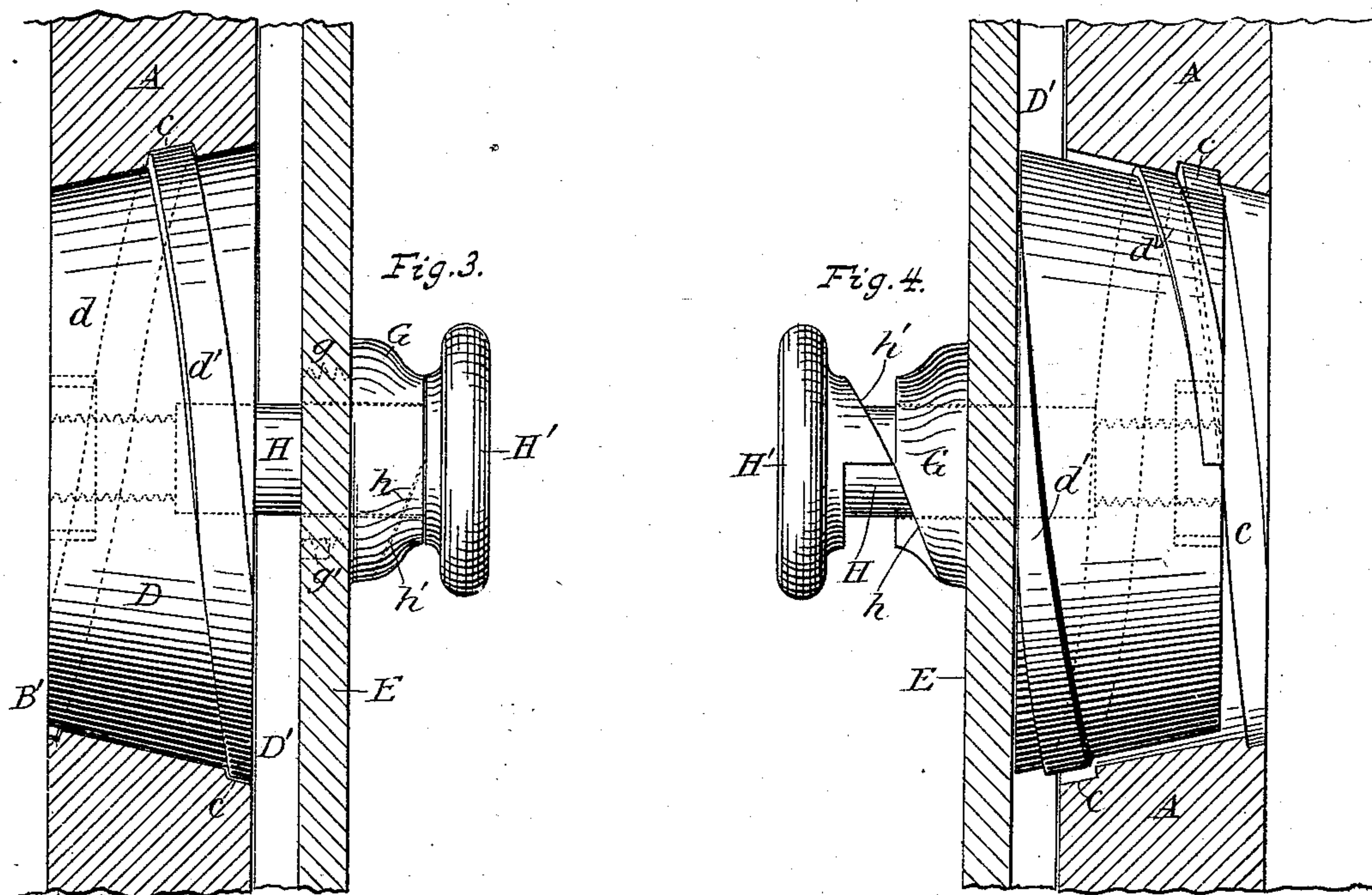
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

GEORGE B. CAVERT, OF ALBANY, NEW YORK.

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SPECIFICATION forming part of Letters Patent No. 543,334, dated July 23, 1895.

Application filed June 18, 1894. Serial No. 514,945. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. CAVERT, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented a new and useful Improvement in Safes, of which the following is a specification.

My invention relates to safes; and it consists of the combination of devices and elements hereinafter particularly described and specifically set forth in the claim.

The object of my invention is to provide simple means by which access may be had, or be prevented, to the interior of safes or the treasure or cash compartments of the same. I attain this object by the means illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a section of a wall of a safe or a compartment of the same and of the closing-piece of the same and door or frame carrying said closing-piece. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a view of the same with the closing-piece in place, closing the opening in the wall and the wall shown in section. Fig. 4 is a view of the same, showing the closing-piece in an unlocked position with the wall of the safe shown in section; and Fig. 5 is a view illustrating my invention applied to a compartment of the safe and closed.

The same letters of reference refer to similar parts throughout the several views.

In the drawings, A is a wall of a safe or of the cash or treasure compartment of the same, which wall may be made of any suitable metal (steel or hard or chilled iron) or of any suitable alloy. This wall may consist of a single piece of metal or of several pieces or plates secured together by rivets, as sometimes practiced by the trade, the manner of production of this wall not being essential.

B is the opening by which access may be had to the chamber B' of the safe or a compartment of the same. This opening is circular in form and may be of any preferred size as may be capable for the passage of a person or of one or both arms of a person through same into the said chamber B'. The annular side edge of this circular opening, marked C, is made uniformly flaring outwardly all around, so that the plane of the

surface of said edge will be of a uniform inclination, running outwardly from the inner sides to the outer side, as shown. In the metal of this flaring edge C of the said circular opening B there is formed a spiral groove c of suitable width and depth for strongly holding, with a corresponding spiral tongue provided with the closing-piece. This spiral groove c is shown to be made with a single turn, commencing at the front side of the wall and ending at the rear side of the same, yet this groove may be made to have a greater length than that of a single turn if preferred.

D is the closing-piece, preferably made of steel, chilled iron, or a hard alloy, and with a diameter corresponding with that of the opening B, and with an inclination of the plane of its edge surface d corresponding with the inclination of the outwardly-flaring annular side edge C of said opening B, so as to nicely fit and fill the latter.

Integral with the closing-piece D is the spiral tongue d', projecting from the periphery of said closing-piece and having correspondence in number of turns and width with the spiral groove c, provided in the circular edge C of opening B, so as to nicely fill the same when said closing-piece is in place in said opening.

E is a swinging closing-piece holder, which may be made with any suitable form of construction, as in the form of a solid or unperforated door, as shown by a section in Figs. 1, 2, 3, and 4, or with the form of an open-work door composed of metal pieces e e', as shown in Fig. 5. This door or swinging closing-piece holder is suitably pivoted to the wall of the safe by means of hinges e² applied to one of the edge margins of said holder or door, while a suitable lock F, (indicated by dotted lines in Fig. 5,) of any known construction secured to the opposite edge margin of the same and holding with the body of the safe, will hold it securely closed.

G is a suitable journal-bearing secured to said door or closing-piece holder E at a point corresponding with the axis or center of the closing-piece D. This journal-bearing may be made integral with the door or holder E, as shown in Fig. 2, or be made a separate piece and secured to the said door or holder by any suitable known means, as by a screw-

threaded stem *g*, Fig. 3, screwing into the metal of said door or holder, and a keying-piece *g'* holding the said bearing from turning. The door or holder *E*, to which this journal-bearing is secured, or the portion thereof opposite the closing-piece *D*, sets off from the outer side surface of said closing-piece to a short distance, so as to produce between it and the door or holder the chamber *D'*, Figs. 2, 3, and 4, of sufficient depth to admit the said closing-piece *D* being drawn out from the opening *B* to such a distance as to free the spiral tongue *d'* from the spiral groove *c*, as illustrated in Fig. 4, preparatory to moving the said closing-piece wholly away from said opening, for access to the chamber of the safe.

H is the journal on which the closing-piece *D* is secured, which journal is preferably of steel and of diameter corresponding with that of the bore of the bearing *G*. Secured to the outer end of this journal *H* or integral with it is the knob or head *H'* for revolving said journal and the closing-piece *D* secured to it. The outer end of the said bearing *G* is provided with the inclined *h*, and the lower side of the knob or head *H'* of the journal *H* is provided with incline *h'* corresponding with incline *h*. These inclines *h* and *h'* are so arranged on their respective pieces and in relation to the incline of the spiral tongue of the circular closing-piece *D* that when the said closing-piece is in place in opening *B*, as shown in Figs. 2 and 3, the incline *h'*, made with the head of the journal *H*, will rest on the incline *h* provided on the bearing *G*, as indicated by dotted lines in Fig. 3, while when the said closing-piece is out from a holding with the edge margin of the opening *B* the said incline *h'* will be out from contact with the incline *h*, as shown in Fig. 4. When the knob *H'* of the journal *H* is turned in a proper direction for turning the spiral tongue *d'* out from the spiral groove *c*, the incline *h'* will ride on incline *h* and in direction off from the same uniformly as the said spiral tongue rides out from the said spiral groove, while, when the knob

H' is revolved in the opposite direction, the one incline will slide on the other and prevent the closing-piece *D* from being pushed forward into the opening *B* until the spiral tongue of the one is properly entered into the spiral groove of the other.

I, Fig. 2, is the locking-bolt of any suitable lock, and may be made of any known construction, which bolt is shown to hold with the wall of the safe and locking into a suitable mortise *I'* made in the circumference of the closing-piece *D*. The lock operating said locking-bolt *I* may be a key-lock, combination-lock, or a time-lock, all of which are so well known as not to require any particular description.

The drawings show the spiral tongue *d'* to be made with the closing-piece *D* and the spiral groove *c* to be made in the metal of the edge of the opening *B*, yet they may be arranged reversely, so that the tongue will be made with said edge of said opening and the groove with the closing-piece, when substantially the same operations will be had.

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

The combination with a circular closing piece *D*, secured to a revolving journal and working into a corresponding circular opening provided in a wall of a safe, a spiral tongue and a corresponding spiral groove provided respectively with said closing piece and edge portion of said opening, the closing piece holder having with it a bearing within which the journal of the closing piece works, the incline *h* provided with said bearing, and incline *h'* provided with said journal, and a locking bolt, locking said closing piece secure with a wall of the safe whereby the former will be held from being turned in relation to the latter, substantially as and for the purposes set forth.

GEORGE B. CAVERT.

Witnesses:

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