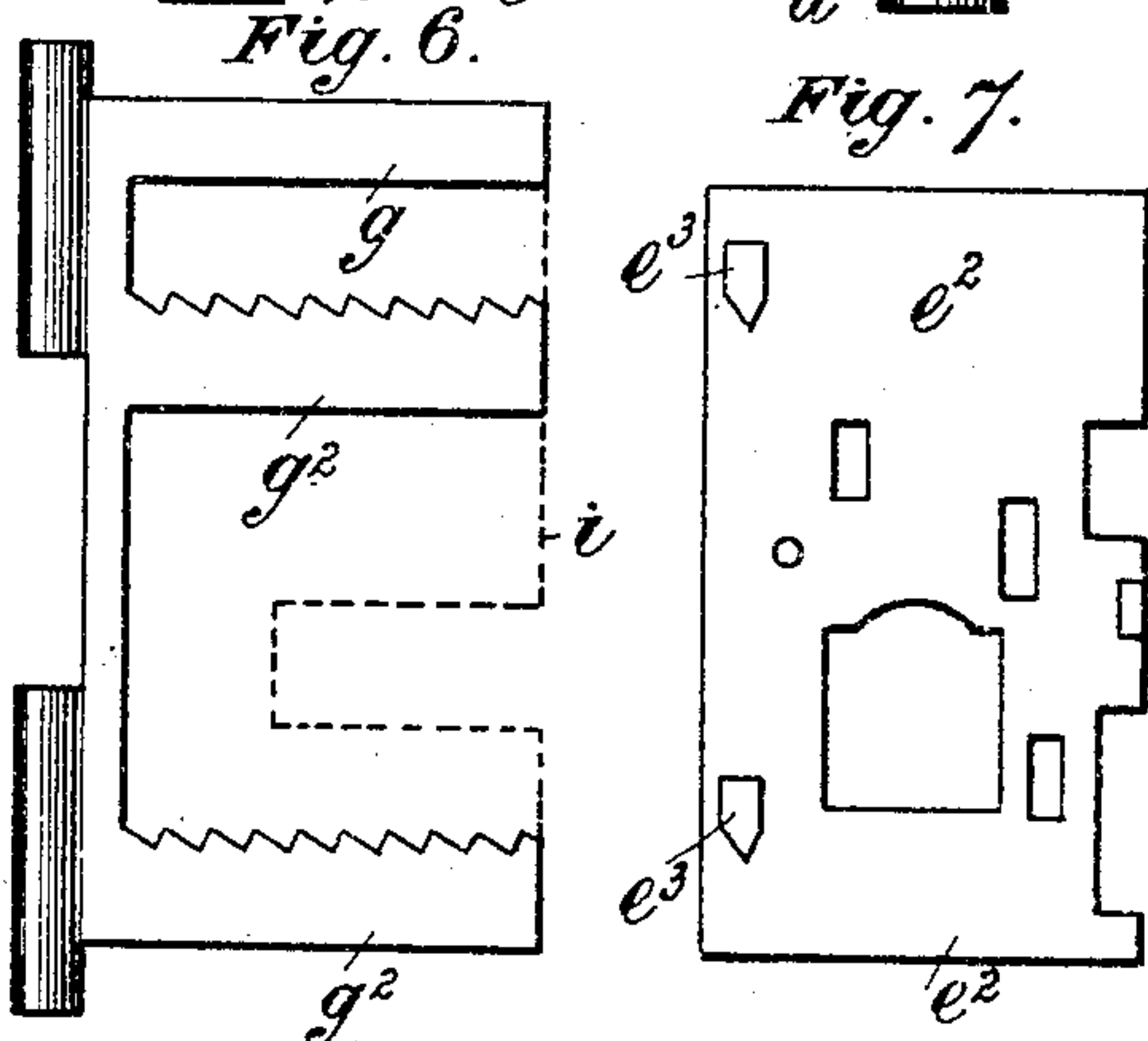
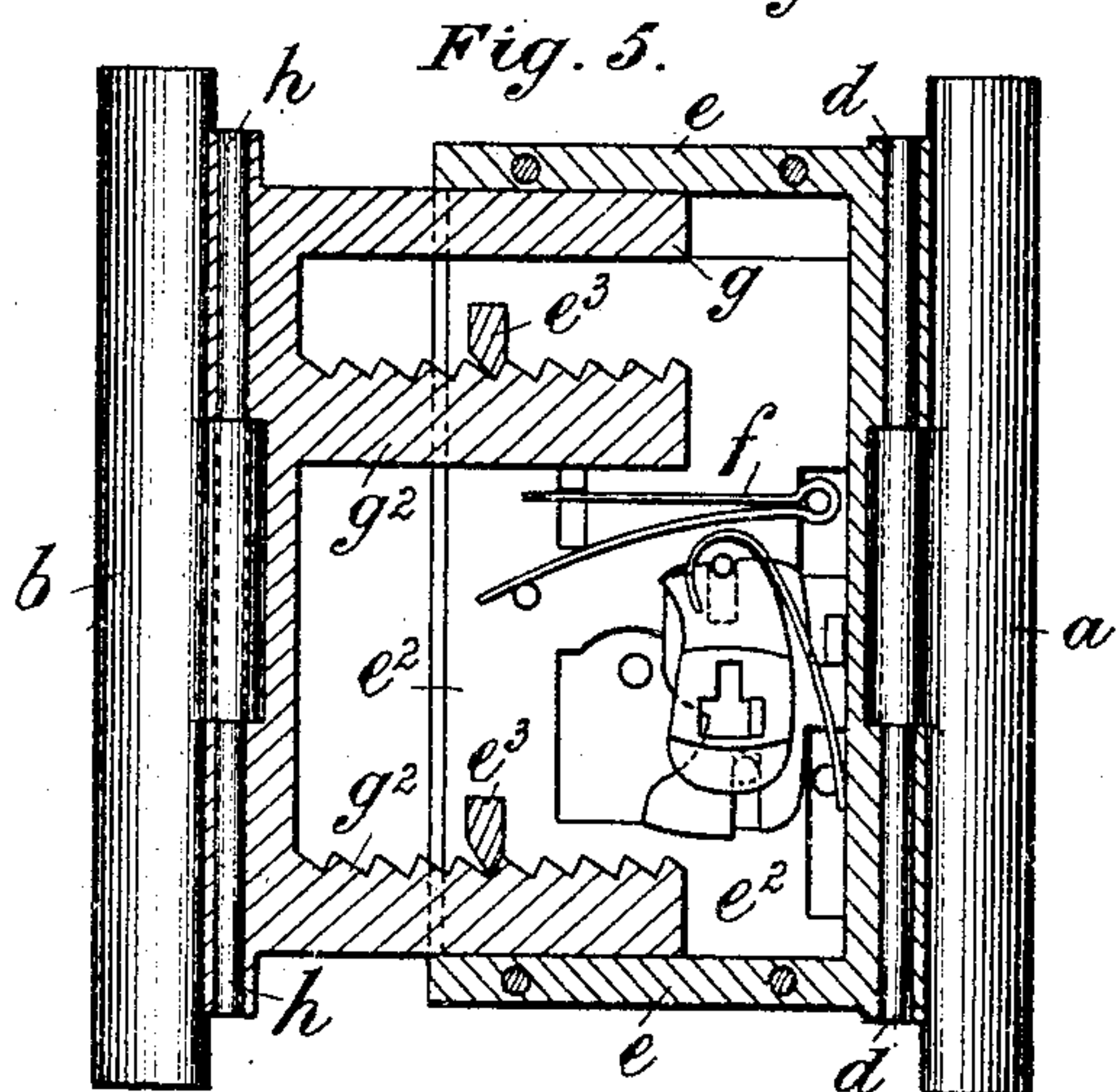
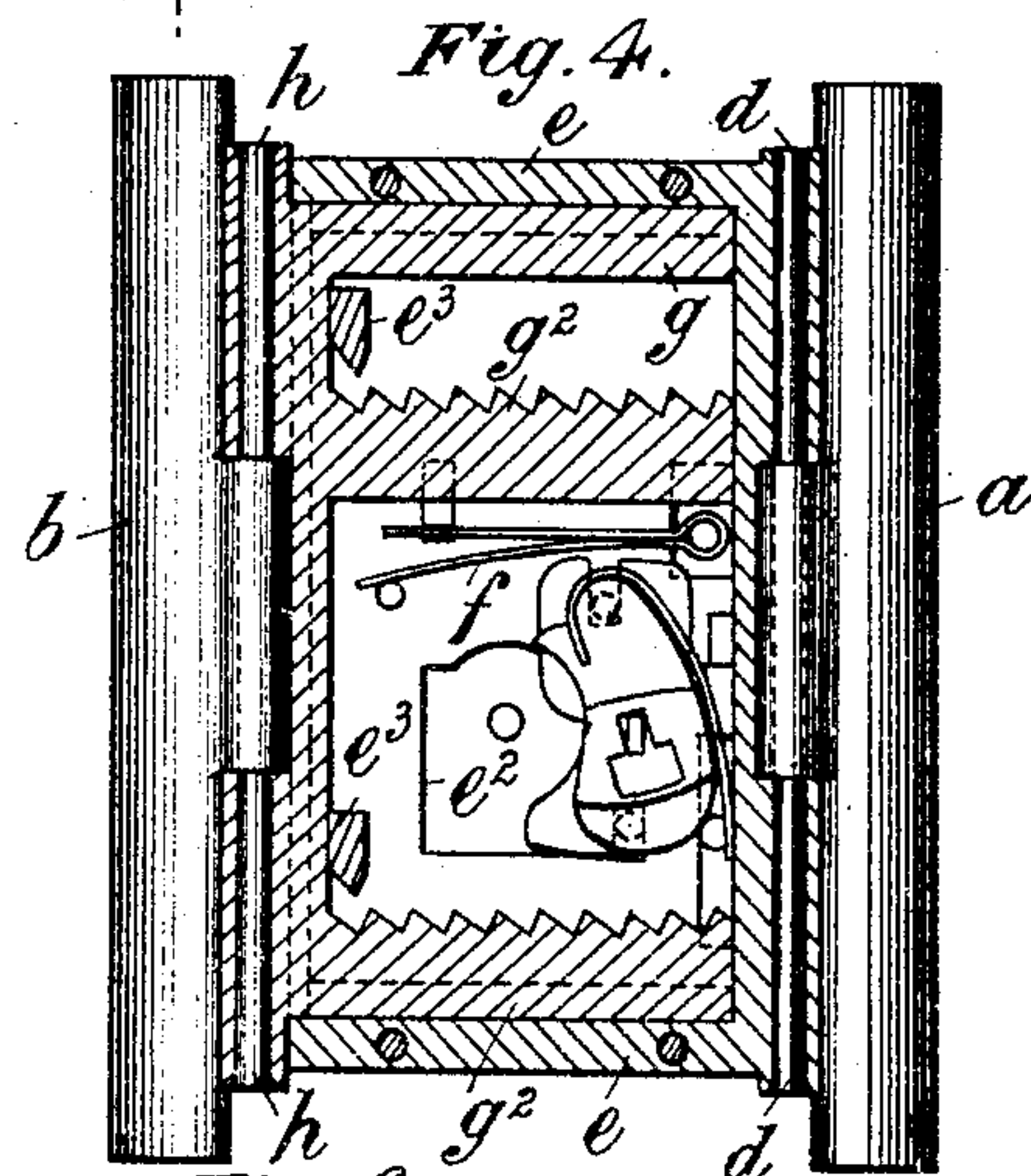
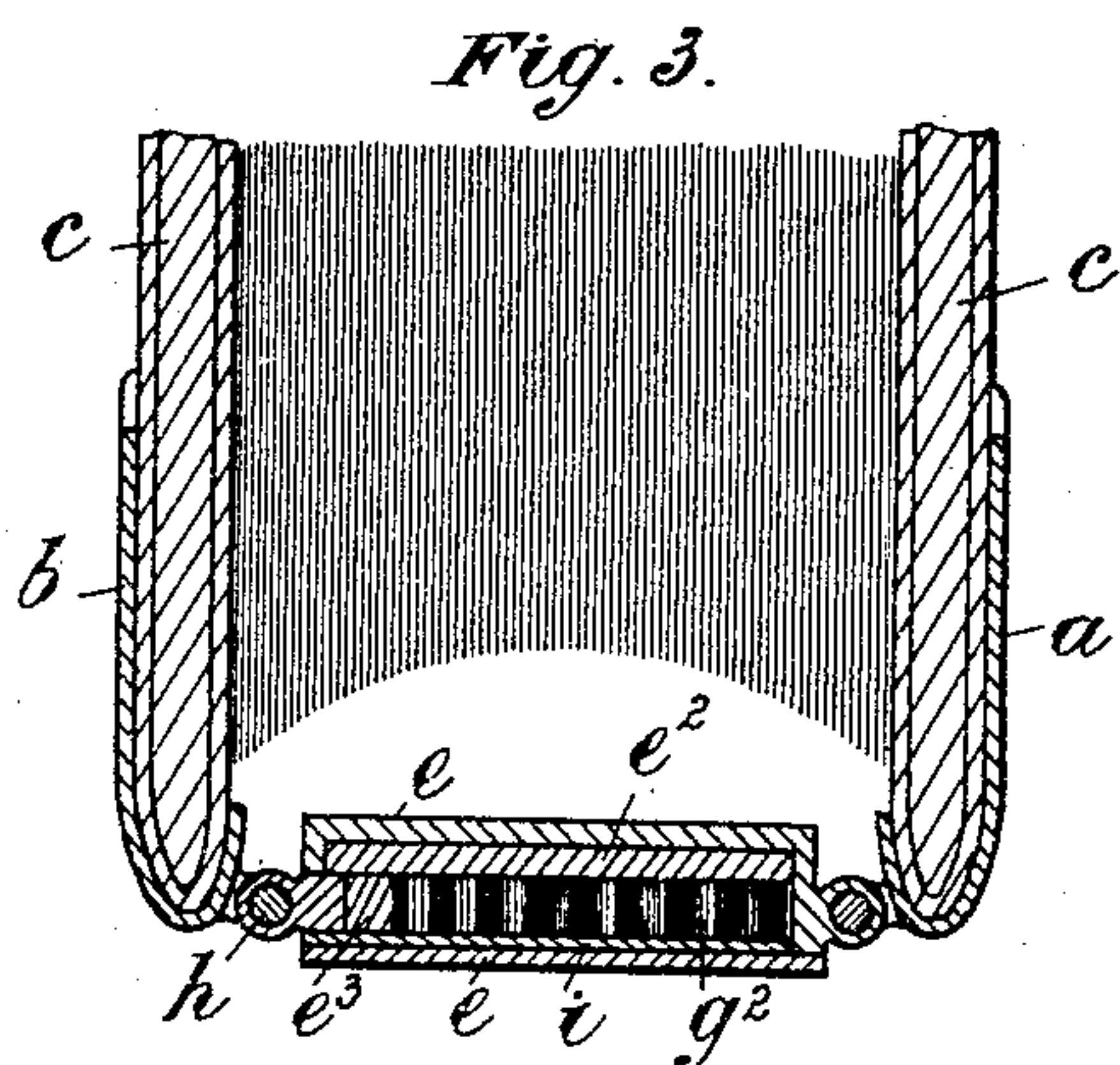
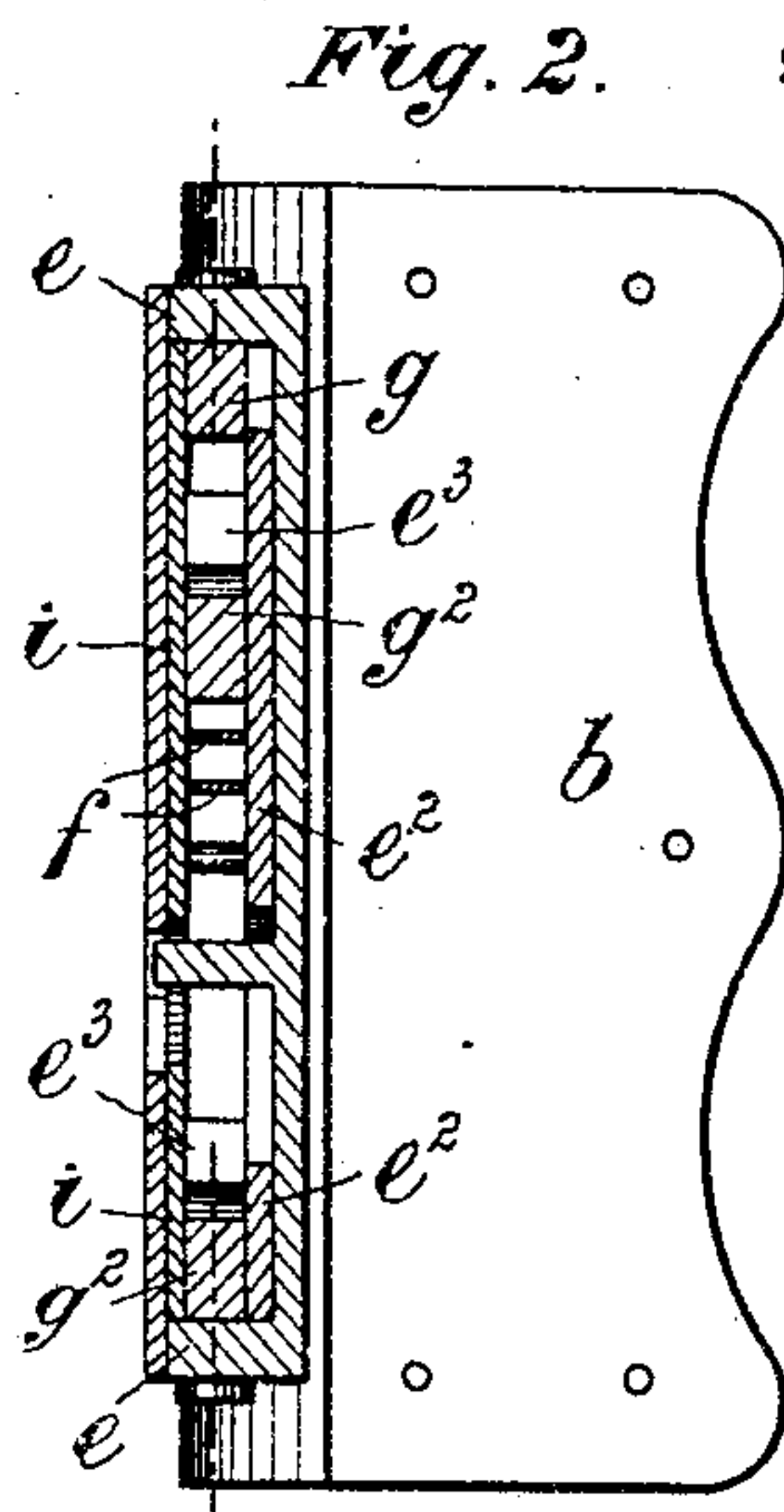
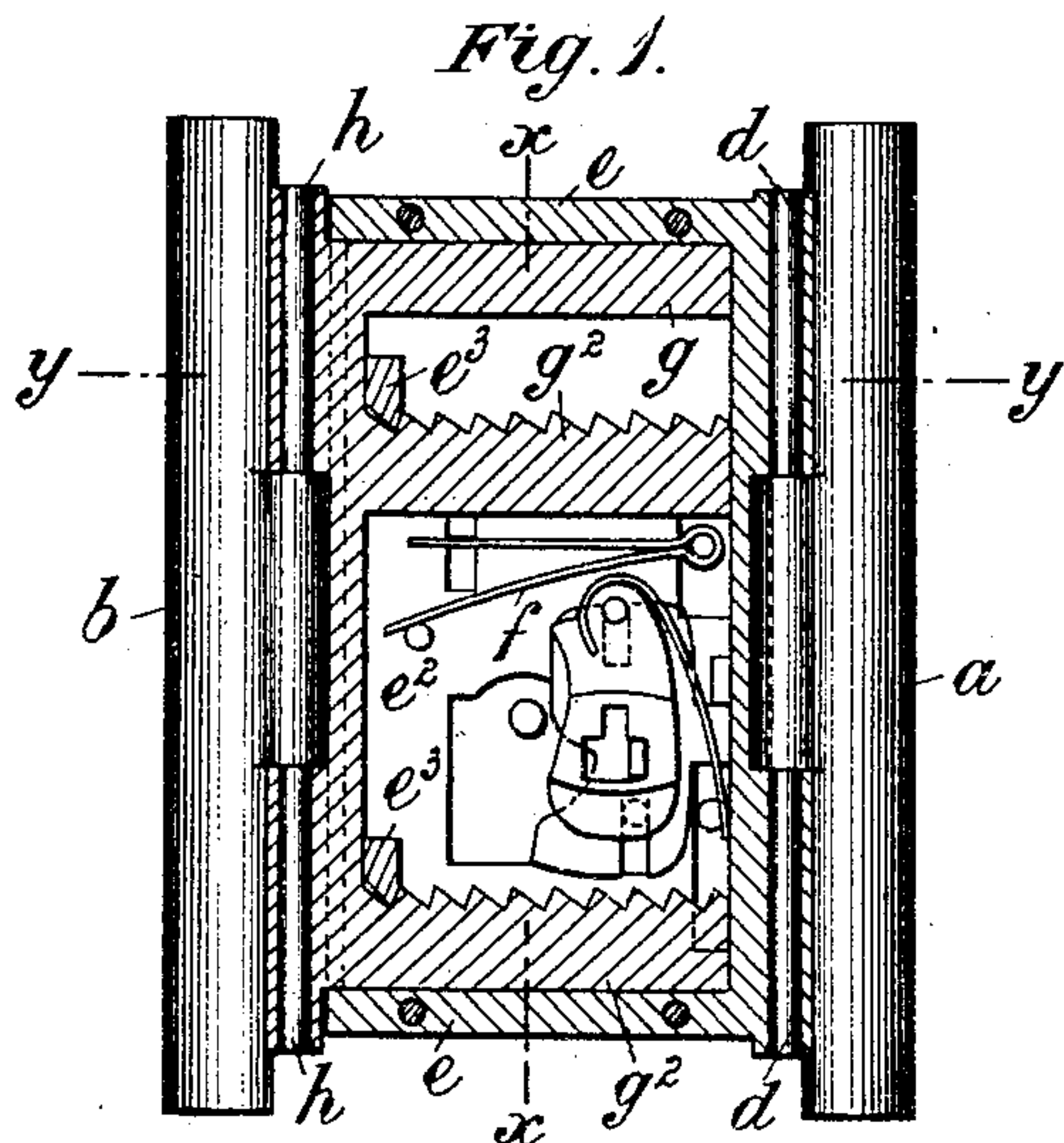


J. G. GIFFORD.

EXPANSIBLE LOCKING CLASP FOR BOOKS, &c.

APPLICATION FILED JUNE 11, 1904.

2 SHEETS—SHEET 1.



Witnesses:—

Richard Menetti
Arthur J. Powell

Inventor:—

John Luther Gifford

J. G. GIFFORD.
EXPANSIBLE LOCKING CLASP FOR BOOKS, &c.
APPLICATION FILED JUNE 11, 1904.

2 SHEETS—SHEET 2.

Fig. 9.

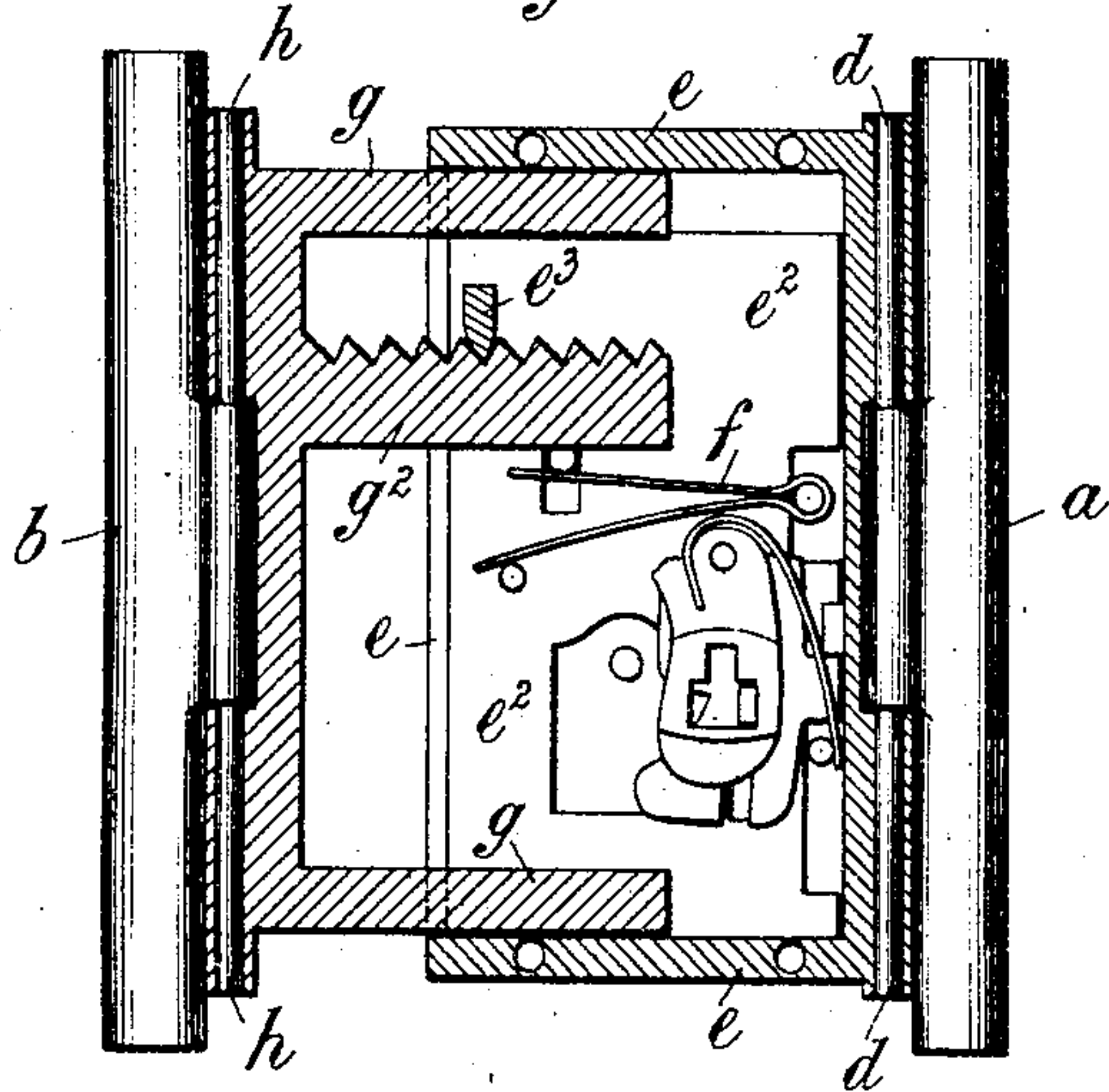


Fig. 8.

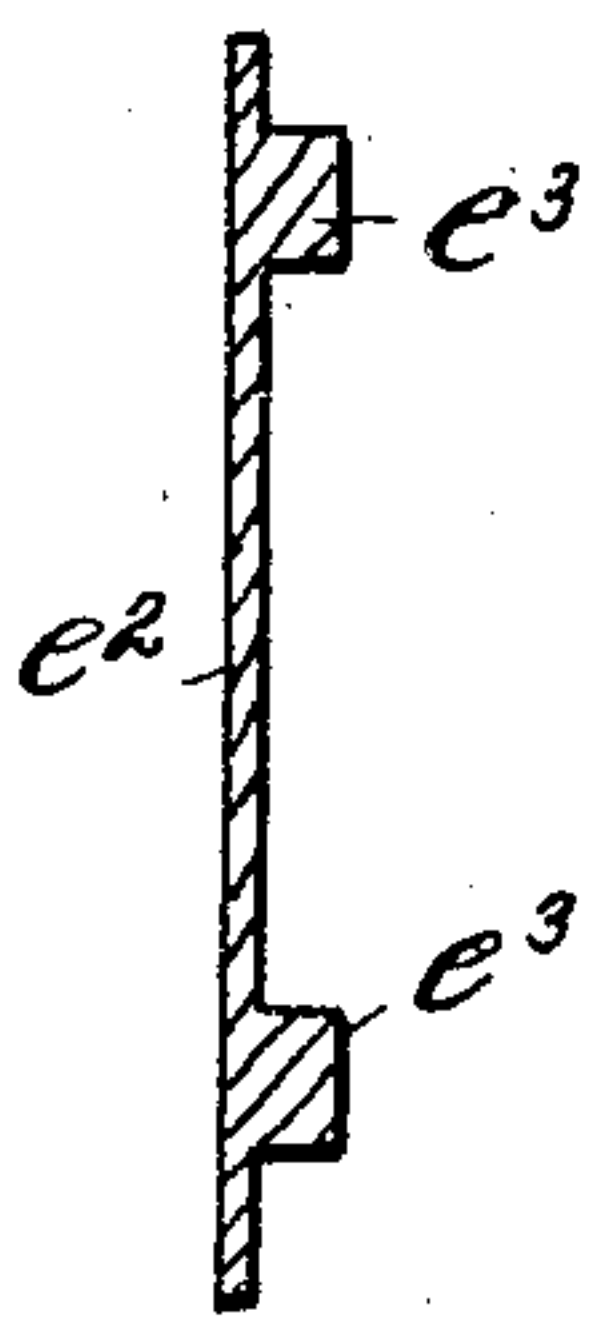
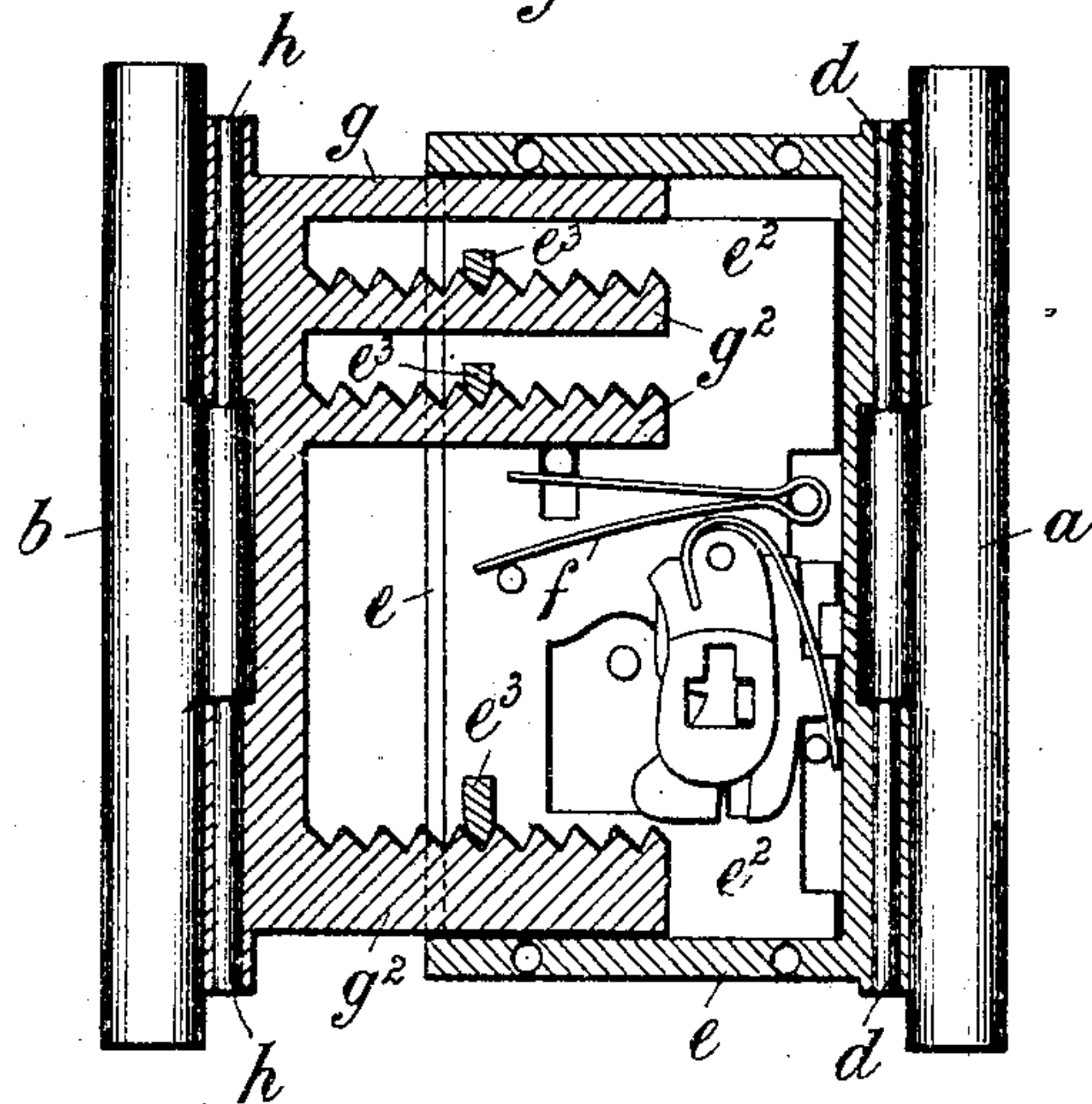


Fig. 10.



Witnesses:
C. S. Kesler
James L. Norris, Jr.

Inventor;
John A. Gifford
By James L. Norris

Attys.

UNITED STATES PATENT OFFICE.

JOHN GUTHRIE GIFFORD, OF WEST BROMWICH, ENGLAND, ASSIGNOR TO
KENRICK & JEFFERSON, LIMITED, OF WEST BROMWICH, ENGLAND.

EXPANSIBLE LOCKING-CLASP FOR BOOKS, &c.

SPECIFICATION forming part of Letters Patent No. 779,922, dated January 10, 1905.

Application filed June 11, 1904. Serial No. 212,194.

To all whom it may concern:

Be it known that I, JOHN GUTHRIE GIFFORD, a subject of the King of Great Britain, residing at Eaton Cottage, High street, West Bromwich, England, have invented certain new and useful Improvements in Expansible Locking-Clasps for Books and other Like Articles, of which the following is a specification.

The said invention consists of the improvements hereinafter described in expansible locking-clasps for books and other like articles—such, for example, as the leaf-binders commonly called “loose-leaf” books, paper-files, binders, and boxes—the said improvements having for their objects to permit the locking-clasp to accommodate itself automatically to the varying thickness of the book or the like to which it is applied and to provide for the automatic locking of the said book or the like, the unlocking being effected by the aid of a key.

In constructing an expansible locking-clasp according to my invention I hinge to the plate, which is fixed on one edge or cover of the book or the like, a lock, the outer edge or end of which has an opening or openings for the reception of a racked bar or a series of racked bars hinged to the plate secured to the other edge or cover of the book and provided with lock mechanism of such a kind that when the racked bar or bars are passed into and pushed partially or fully home in the opening in the outer edge or end of the lock proper the said racked bar or bars are fastened and the clasp thereby automatically locked. The unfastening of the lock is effected by a key.

Figure 1 of the accompanying drawings represents in vertical section an expansible locking-clasp for books and other like articles constructed according to my invention. Fig. 2 is a vertical section taken on the dotted line *xx*, Fig. 1. Fig. 3 is a horizontal section taken on the dotted line *yy*, Fig. 1. Fig. 4 is a similar view to Fig. 1 with the lock mechanism unfastened to permit the clasp to be opened. Fig. 5 represents the clasp fastened in an expanded state. Fig. 6 represents in elevation the racked bars, which are hinged to one of the fixing-plates of the clasp; and Fig. 7 represents in

elevation the locking-plate of the expansible locking-clasp detached from the lock. Fig. 8 is a transverse vertical section through the plate shown by Fig. 7. Fig. 9 is a section similar to that shown by Fig. 1, illustrating the use of a single rack-bar. Fig. 10 is a view similar to Fig. 1, showing the use of more than two rack-bars.

The same letters of reference indicate the same parts in the several figures of the drawings.

a b are the fixing-plates of the clasp, which are fixed by riveting to the edges of the cover *c c* of the book, as is represented in Fig. 3.

To the fixing-plate *a* is hinged by the hinge-pin *d* a lever-lock *e*, the essential feature of which lock consists of a locking-plate *e*², (shown detached in Fig. 7,) carrying two projections *e*³ *e*³ in line, the acting parts of which have a shape somewhat resembling the letter **V**. The locking-plate *e*² is capable of being raised to a limited extent, as is represented in Fig. 4, by the key of the lock against the action of the spring *f*, by which the locking-plate is normally preserved in its locking position. To the other fixing-plate, *b*, a series of bars *g* *g*² *g*² are hinged by the hinge-pin *h*, the said bars having, preferably, a front slotted covering-plate *i*. (Indicated in dotted lines in Fig. 6.) The bars *g*² *g*² are racked, as is best seen in Fig. 6, the teeth being of such a shape that the bars can be readily forced into openings in the outer edge of the lock *e*, the racked bars *g*² *g*² working under the projections *e*³ *e*³ on the locking-plate *e*², by which projections the bars are retained in the position to which they have been advanced into the lock. The clasp can only be opened by the aid of a key, which effects the raising of the locking-plate *e*² into the position represented in Fig. 4, and thereby disengages the projections *e*³ *e*³ from the racked bars *g*² *g*². When the lock is unfastened, as is represented in Fig. 4, the racked bars are free and can be withdrawn from the lock to permit of the opening of the book.

I wish it to be understood that the lever mechanism of the lock constitutes no part of my invention and may be varied without af-

fecting the essential feature of the invention, and although I have represented two of the bars hinged to the fixing-plate *b* of the clasp with rack-teeth I wish it to be understood that
5 one rack-bar only or more than two rack-bars may be employed, as clearly shown by Figs. 9 and 10.

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

1. A self-locking and self-adjusting expansible clasp for books and other like articles consisting of a supporting member movably connected to one of the fixing-plates of the clasp
15 and carrying a lock operative by a key, and a hasp member movably connected to the other fixing-plate of the clasp, said hasp member having an endwise movement in the lock-case and adapted to be retained in any locked position therein into which it may be pressed by
20 closing the book.

2. A self-locking and self-adjusting expansible clasp for books and other like articles, consisting of a plate carrying a lock and hinged
25 to one of the fixing-plates of the clasp, and a

hasp-plate hinged to the other fixing-plate of the clasp and having one or more bars with rack-teeth which are engaged by portions of the first-named plate, the hasp-plate being capable of an endwise motion in the lock-case, and of being retained in any position therein into which it may be pressed on the closing of the book or like device. 30

3. A self-locking and self-adjusting expansible clasp for books and other articles, consisting of a lock hinged to one of the fixing-plates of the clasp, one or more rack-bars hinged to the other fixing-plate of the clasp, and mechanism in connection with the latter for retaining the rack bar or bars in any position which they may be disposed in the lock, the latter mechanism being controlled by a key. 35 40

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN GUTHRIE GIFFORD.

Witnesses:

RICHARD SKERRETT,
ARTHUR J. POWELL.