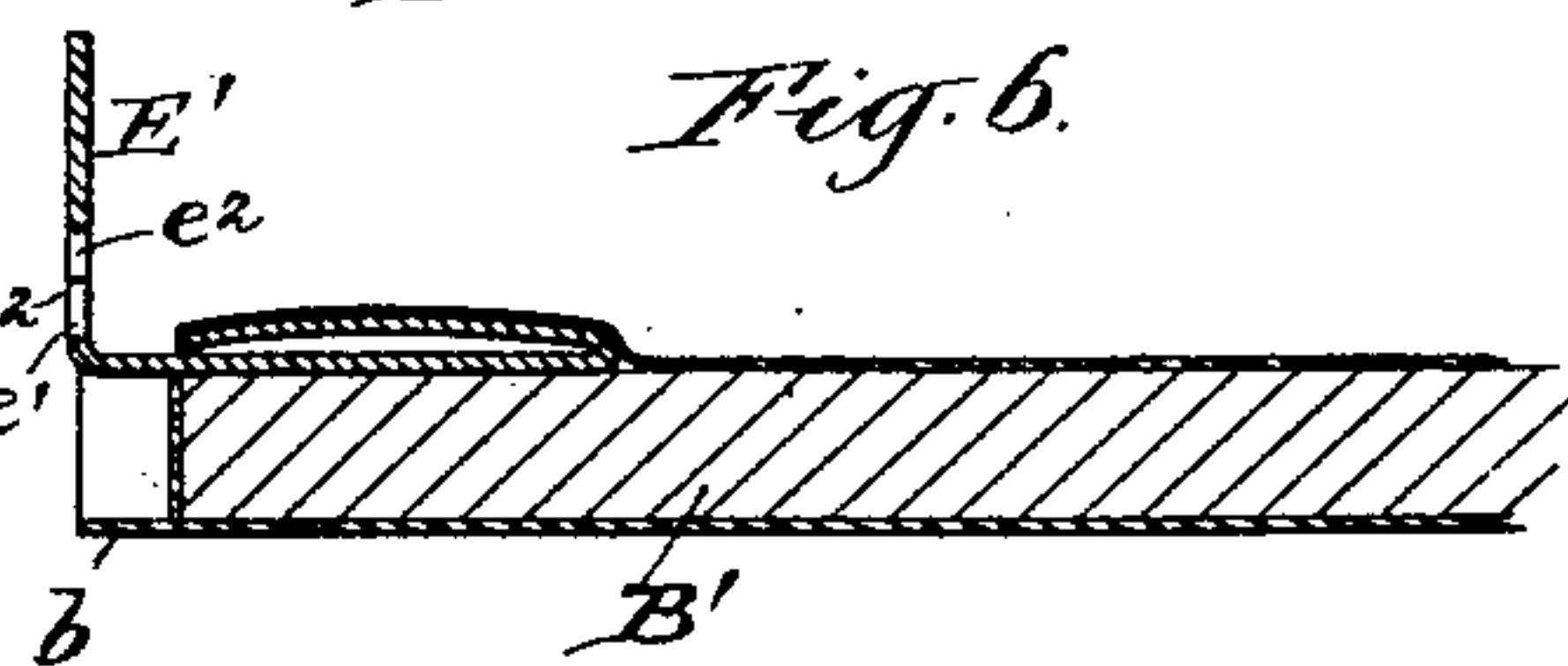
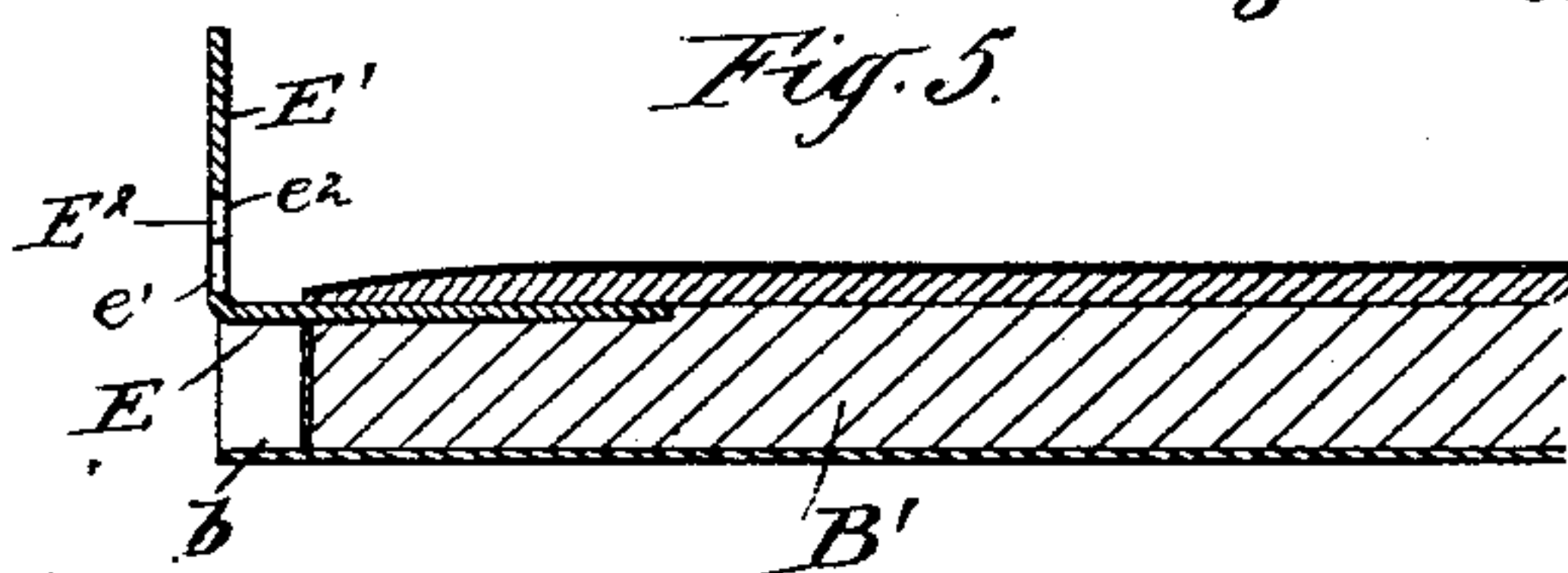
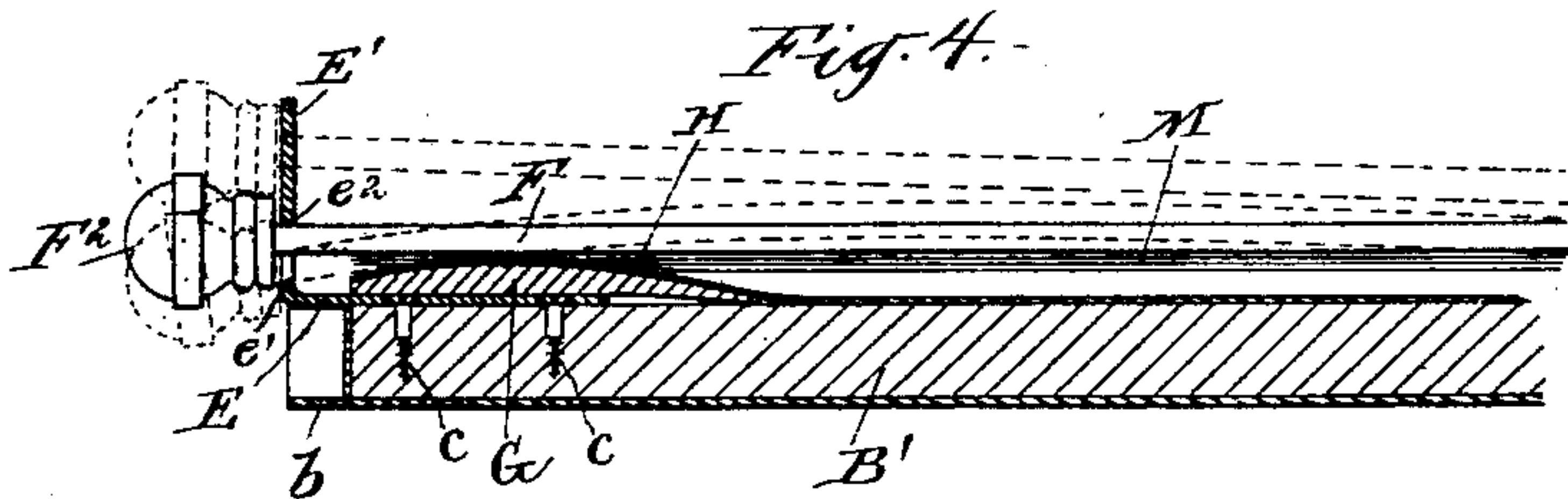
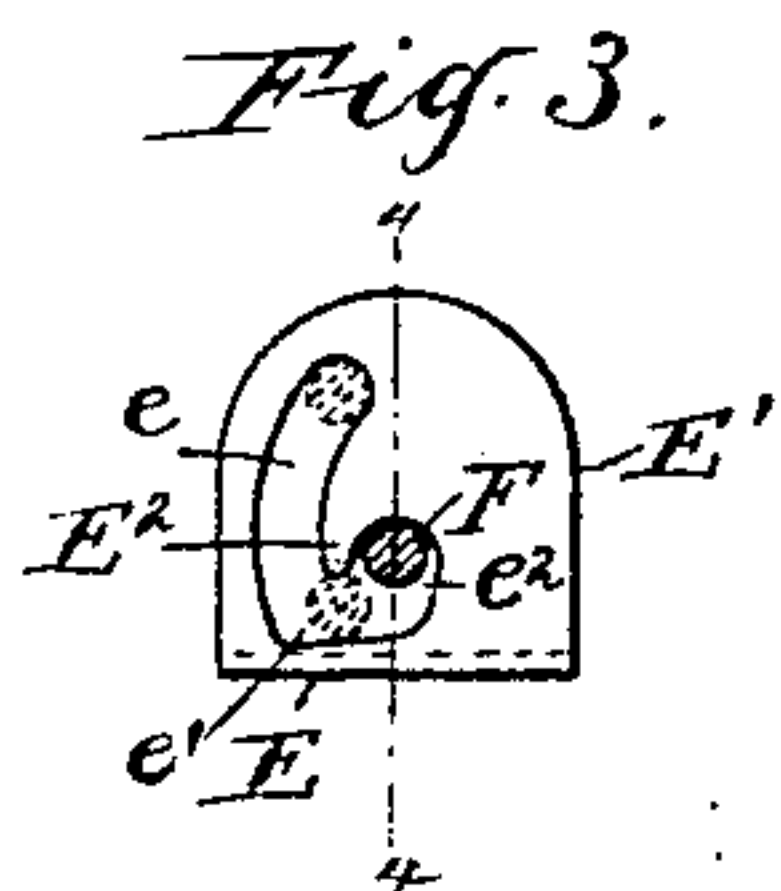
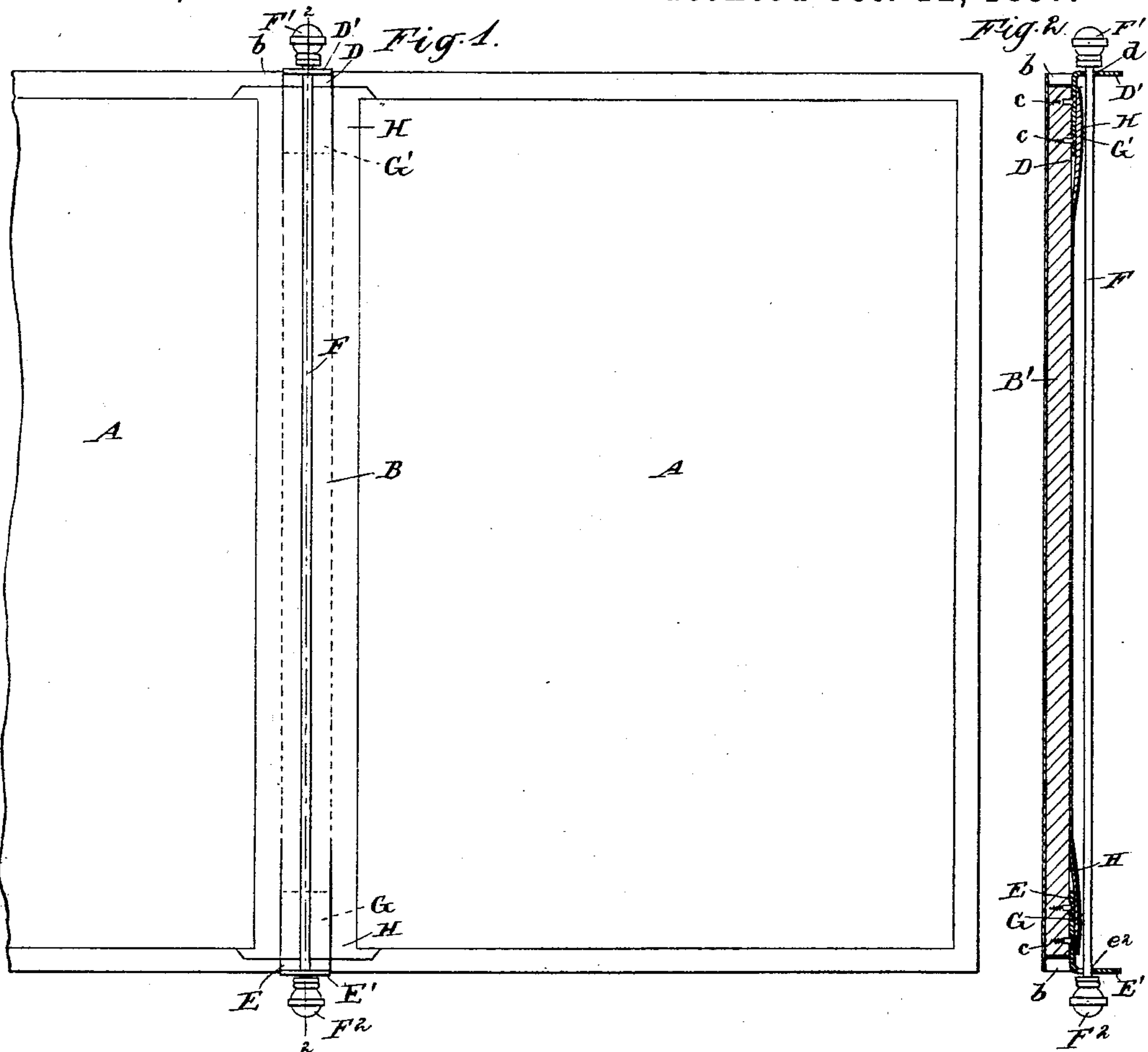


(No Model.)

J. L. & W. J. RILE.
TEMPORARY BINDER.

No. 591,638.

Patented Oct. 12, 1897.



Witnesses:
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Not. Comm.

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UNITED STATES PATENT OFFICE.

JOHN L. RILE AND WILLIAM J. RILE, OF BROOKLYN, NEW YORK.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 591,638, dated October 12, 1897.

Application filed May 13, 1897. Serial No. 636,279. (No model.)

To all whom it may concern:

Be it known that we, JOHN L. RILE and WILLIAM J. RILE, citizens of the United States, and residents of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Temporary Binders, of which the following is a specification.

The invention relates to that class of binders sometimes known as "rod binders," in which a movable rod is employed to hold the pamphlets or sheets in place within the covers.

Our improvement consists in extending the rod loosely through lugs at the top and bottom of the back, thus holding the rod always approximately in line with the back, but allowing sufficient motion to permit the easy insertion or removal of a pamphlet or sheet when desired. The lug at one end, preferably the upper, is formed with a circular hole of a diameter a little greater than the rod to allow the latter the required angular motion without straining the lug or its fastening means. The opening in the lug at the opposite end is peculiarly formed and locks the rod in strong contact with the leaves or sheets when it is forced into one portion of the opening, and when in another portion allows it to rise and relieve the pressure, but in both conditions the rod is held in engagement with both lugs and against displacement endwise.

Another important feature consists in building up the inner face of the back immediately adjacent to the lugs, so that its surface lies at the required short distance from the under face of the rod, or, if preferred, in contact therewith. These elevations serve to definitely locate the points at which the pressure upon the leaves is greatest, and one of them also performs, with the elasticity or spring of the rod, the important function of holding the latter in the locked condition.

The accompanying drawings form a part of this specification and represent the manner in which we have carried out the invention.

Figure 1 is a face view of the binder with the covers open or extended. Fig. 2 is a corresponding section taken on the line 2 2 in Fig. 1. The remaining figures are on a larger scale. Fig. 3 is an end view of one of the lugs, the inclosed rod being in vertical cross-section. Fig. 4 is a section corresponding to

Fig. 3, taken on the line 4 4 in that figure.

Figs. 5 and 6 are sectional views similar to Fig. 4, but showing modified constructions.

Similar letters of reference indicate like parts in all the figures.

A A are the covers, of the usual materials, ornamented and covered in any ordinary or approved manner, flexibly secured to the back B, and adapted to be folded upon each other to form a casing or portfolio for the inclosed leaves or sheets. The back B consists of a strip of wood B', having the desired shape. We have shown it as semicircular in cross-section, extending nearly the whole length of the covers and securely cemented to the flexible material *b*, joining them. To the inner flat face of the strip are fastened the plates D and E, one at the upper and the other at the lower end. Each is bent sharply upward at a right angle, as shown, forming the lugs D' E', through which extends the binding-rod F. The upper lug D' is provided with a plain circular hole *d*, receiving that end of the rod and allowing the latter sufficient liberty to turn freely therein and to be deflected angularly in all directions to the extent required without tending to loosen the screws *c c* or otherwise straining the parts. A knob F', secured to the rod beyond the lug D', prevents its withdrawal lengthwise. At the opposite end it passes through the lug E', similar in all respects to the lug D', excepting in regard to the shape of the opening therein. The latter, instead of being, as before described, simply a circular hole, is a peculiarly-formed slot. The main portion *e* is approximately semicircular, extending from a point near the upper end of the lug E' to the angle at the junction with the plate E and thence laterally at *e'* on a slight upward inclination, terminating in the circular pocket *e*², about in line with the hole *d* in the other lug D'. The pocket *e*² is separated from the semicircular portion *e* of the slot by the downwardly-projecting tongue E², the space between the point of the latter and the bottom of *e'* being just sufficient to allow the passage laterally of the rod. A knob F² at this end serves with the knob F' to prevent the removal of the rod, and also serves as a convenient means for grasping the end in transferring it from one portion of the slot to the other.

G G' are pieces of thin wood or book-board fastened upon the upper faces of the plates D E. They are preferably beveled away from the adjacent lug, as shown, and are concealed by the strip of covering material H, neatly applied and cemented. The highest point on the face of the piece G lies a little above the bottom of the slot e' and a short distance inward therefrom, slightly obstructing the free movement of the rod past the tongue E^2 and requiring it to be sprung downward a little in passing to or from the pocket e^2 . The elasticity of the rod allows this deflection and immediately springs back again so soon as the tongue E^2 has been passed. Thus constructed the movable end of the rod is held lightly but reliably in either portion of the slot. The piece G with its companion G' at the opposite end also serve as pinching-surfaces upon which the leaves or sheets M are compressed beneath the rod.

To introduce a sheet M, the knob F^2 is depressed and moved laterally until that end of the rod is forced past the tongue E^2 and springs upward in the portion e of the slot. In this position one or more sheets or an open pamphlet to be held between the covers A A may be easily slipped beneath the rod. The movable end of the latter is then forced downward and inward to the pocket e^2 , into which it springs and is securely held, as above described, until again released to permit the removal of the sheets M or the reception of others.

One of the main advantages of our invention is the constant engagement of the rod and holding it in such position relatively to the back and covers that the latter may be opened and closed regardless of the rod and without danger of loosening or breaking the fastenings by careless handling when the rod is in the unlocked condition.

The locking means is simple and effective and the whole is inexpensive to manufacture and is neat and ornamental in appearance.

Modifications may be made in the forms and proportions without departing from the principle of the invention or sacrificing its advantages.

The vertical distance between the upper face of the piece G and the point of the tongue E^2 may be varied, and will in some cases require to be more or less than here shown to accommodate thick pamphlets or masses of sheets or to hold a single sheet reliably.

In the form shown in Fig. 5 the pieces G G' are in one, extending the whole length of the back. In Fig. 6 these pieces are omitted, their places being supplied by folding a portion of the metal of the plate upon itself to act as a yielding spring beneath the rod, as will be readily understood.

In adapting the binder for use with large sheets, as illustrated papers and journals,

the lugs and rod will be mounted on a stick of sufficient length without the covers A A.

We claim—

1. In a binder, the back, the lugs secured thereto one at each end, a rod extending longitudinally of the back, held at one end in one of said lugs, the opposite end extending through and held in a closed slot in the other, the said slot consisting of a main portion and a pocket portion, and a tongue separating said portions, the said rod being held in permanent engagement with both lugs with liberty to rise in the main portion of said slot and be locked in said pocket portion, all combined and arranged to serve substantially as herein specified.

2. In a binder, the back, the lugs secured thereto one at each end, a rod extending longitudinally of the back, held at one end in one of said lugs, the opposite end extending through and held in a closed slot in the other, the said slot consisting of a main portion and a pocket portion, a tongue separating said portions, the said rod being held in permanent engagement with both lugs with liberty to rise in the main portion of said slot and be locked in said pocket portion, and a raised surface on said back adjacent to said slot, adapted to lock the said rod in said pocket portion by the spring of the rod, all combined and arranged to serve substantially as herein specified.

3. The covers A, A and back B, the plates D and E fastened to the back and bent to form lugs D', E', a rod F extending longitudinally of said back, held loosely in one of said lugs and permanently engaged in the other in the closed slot comprising the curved portion e and pocket e^2 separated by the tongue E^2 , the latter serving to retain the rod in one portion until it is forcibly transferred to the other, all combined and arranged to serve substantially as herein specified.

4. The covers A, A and back B, the lugs D', E' carried by the back, a rod F extending longitudinally of the said back, held loosely in one of said lugs and permanently engaged in the closed slot e , e' , e^2 in the other, and the knobs F' , F^2 on said rod, in combination with the raised surface G on said back in such relation to said slot as to lock said rod therein by the spring of the latter, and the raised surface G' serving with said surface G and said rod to firmly grip the sheets M at those points, all substantially as herein specified.

In testimony that we claim the invention above set forth we affix our signatures in presence of two witnesses.

JOHN L. RILE.
WILLIAM J. RILE.

Witnesses:

JOHN VOLKERT,
JACOB BENACK.