

(No Model.)

2 Sheets—Sheet 1.

J. C. KOCH.
ALBUM CLASP.

No. 480,950.

Patented Aug. 16, 1892.

Fig. 1.

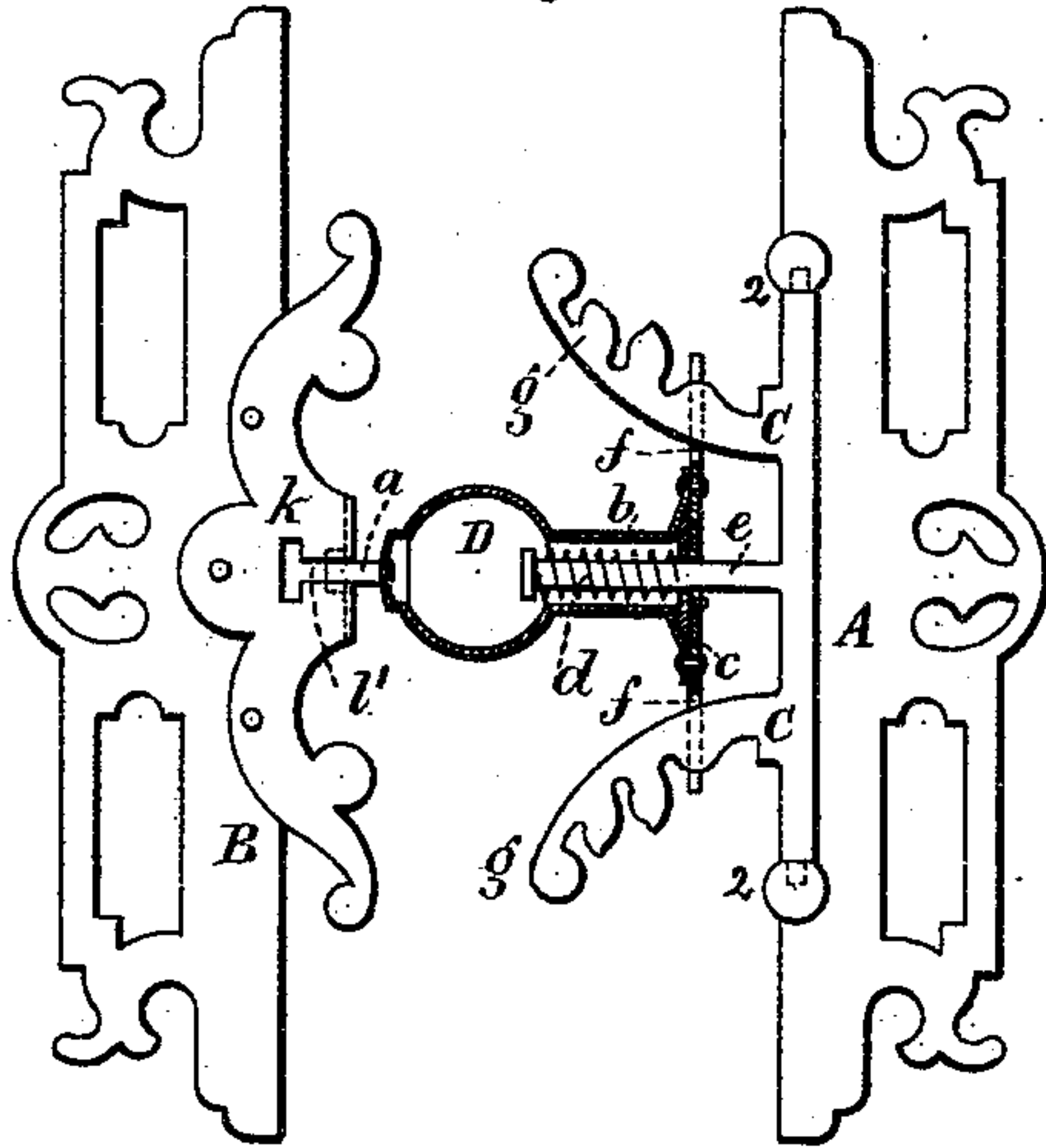


Fig. 2.

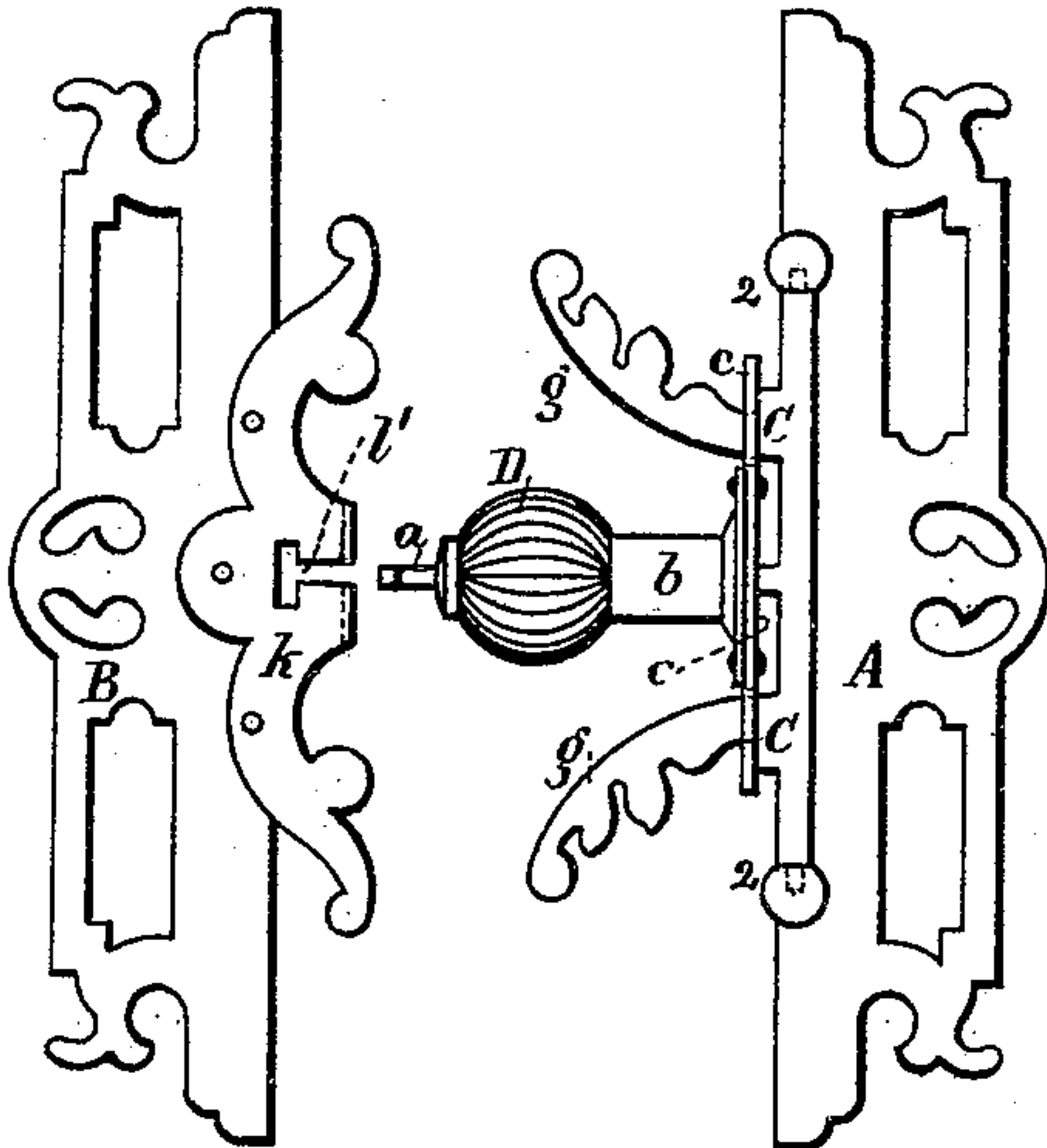


Fig. 3.

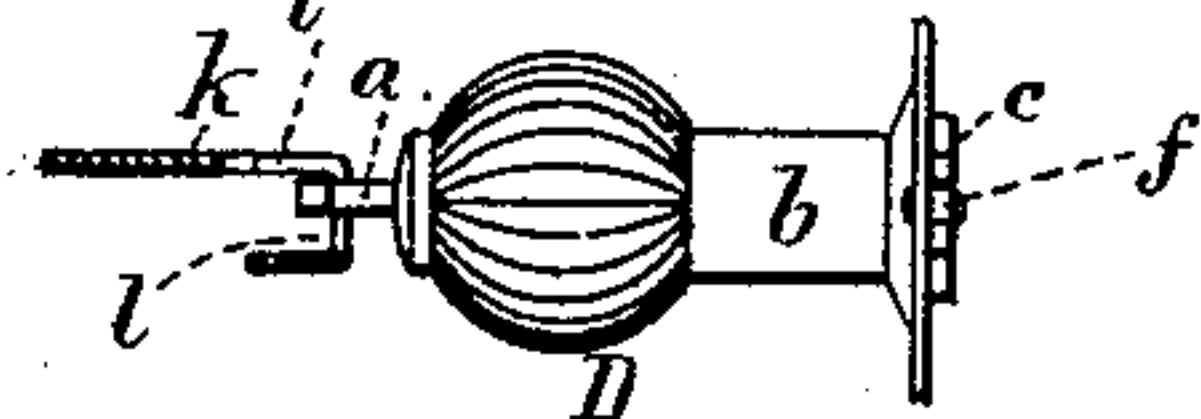


Fig. 4.

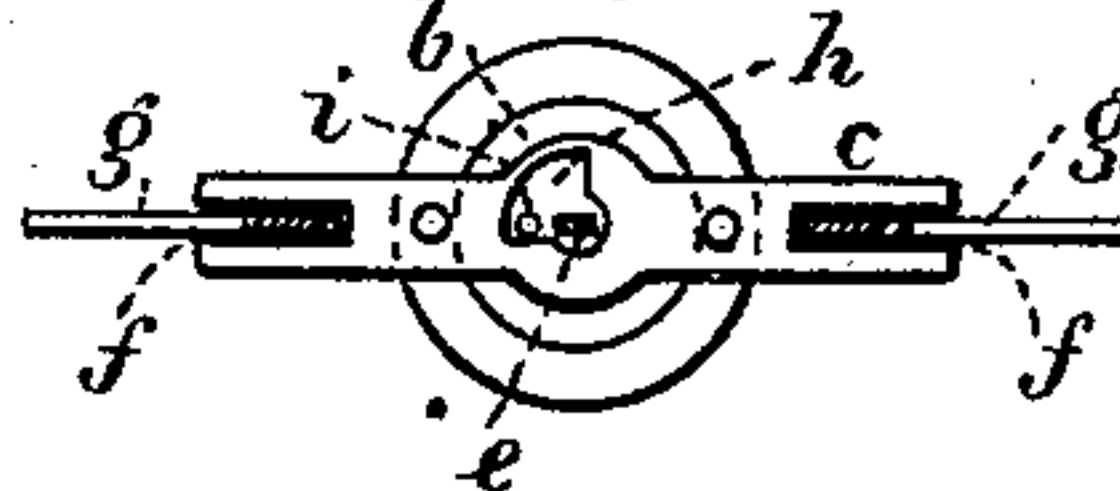


Fig. 5.

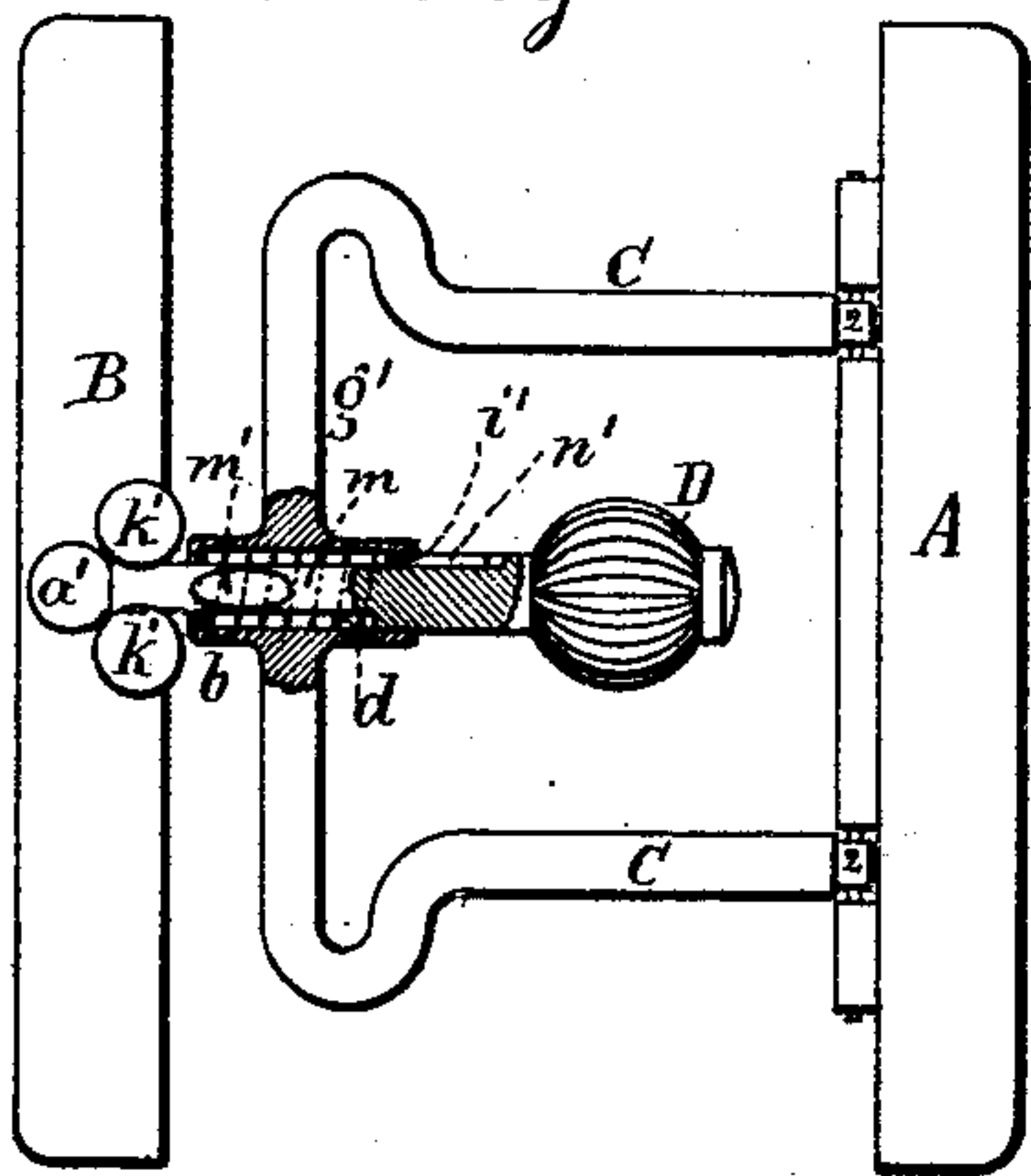


Fig. 7.

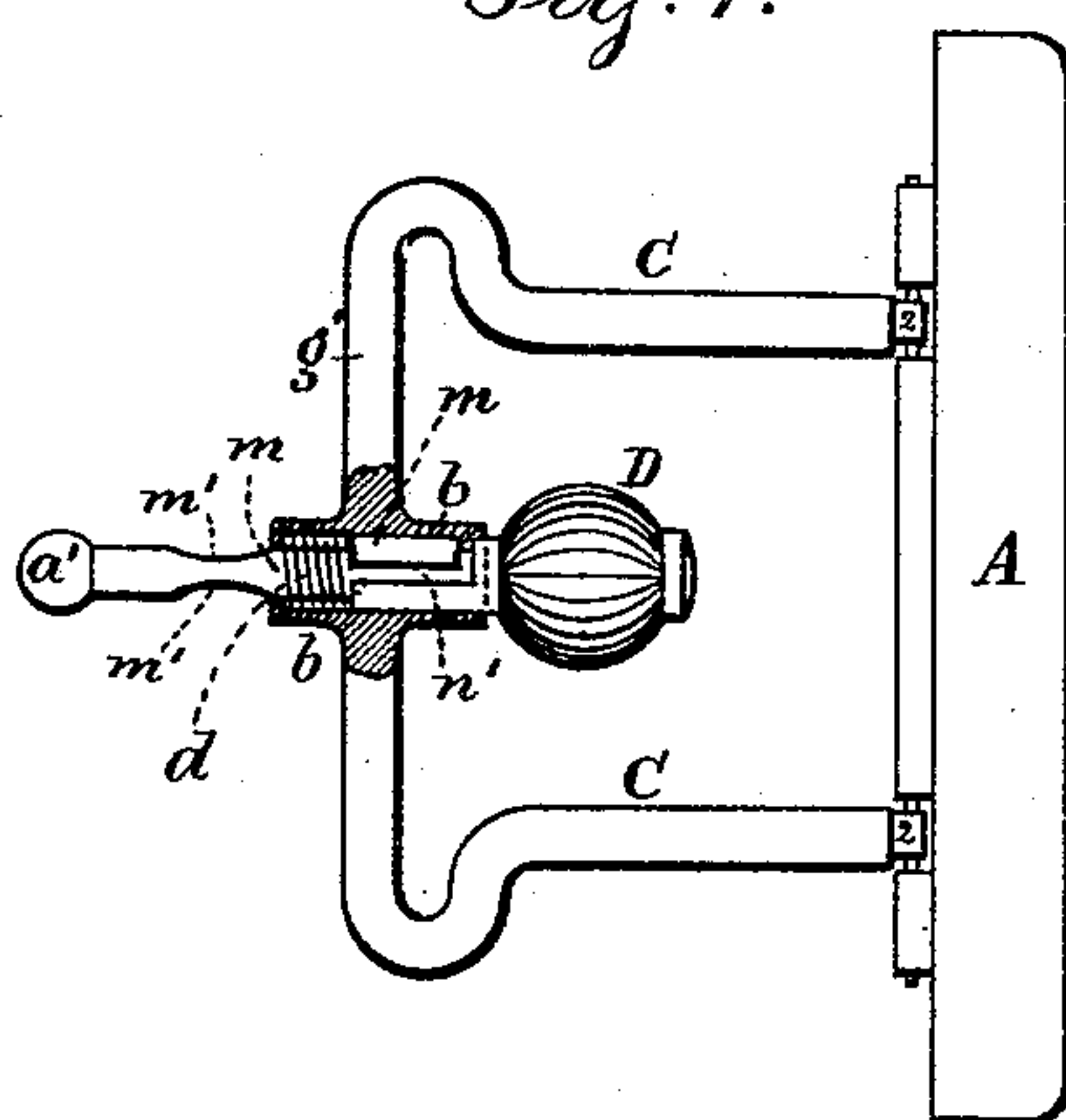
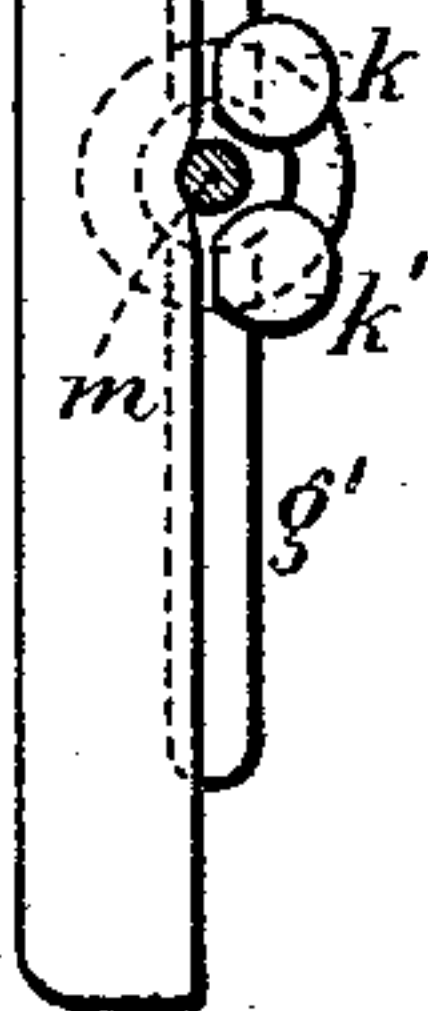


Fig. 6.



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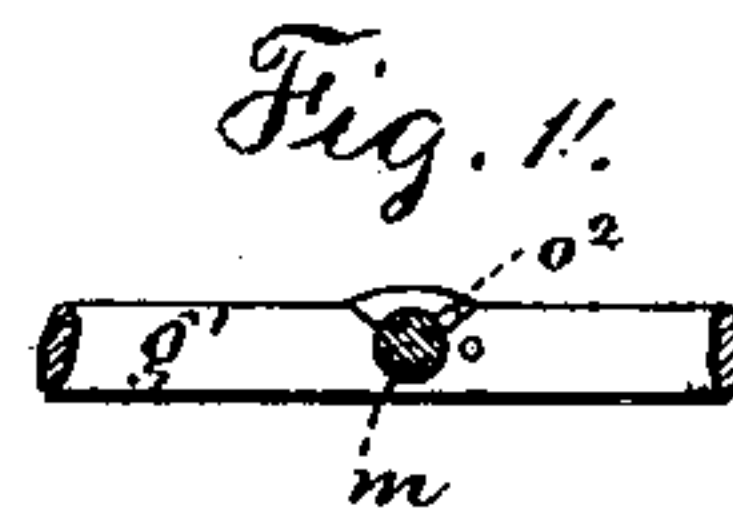
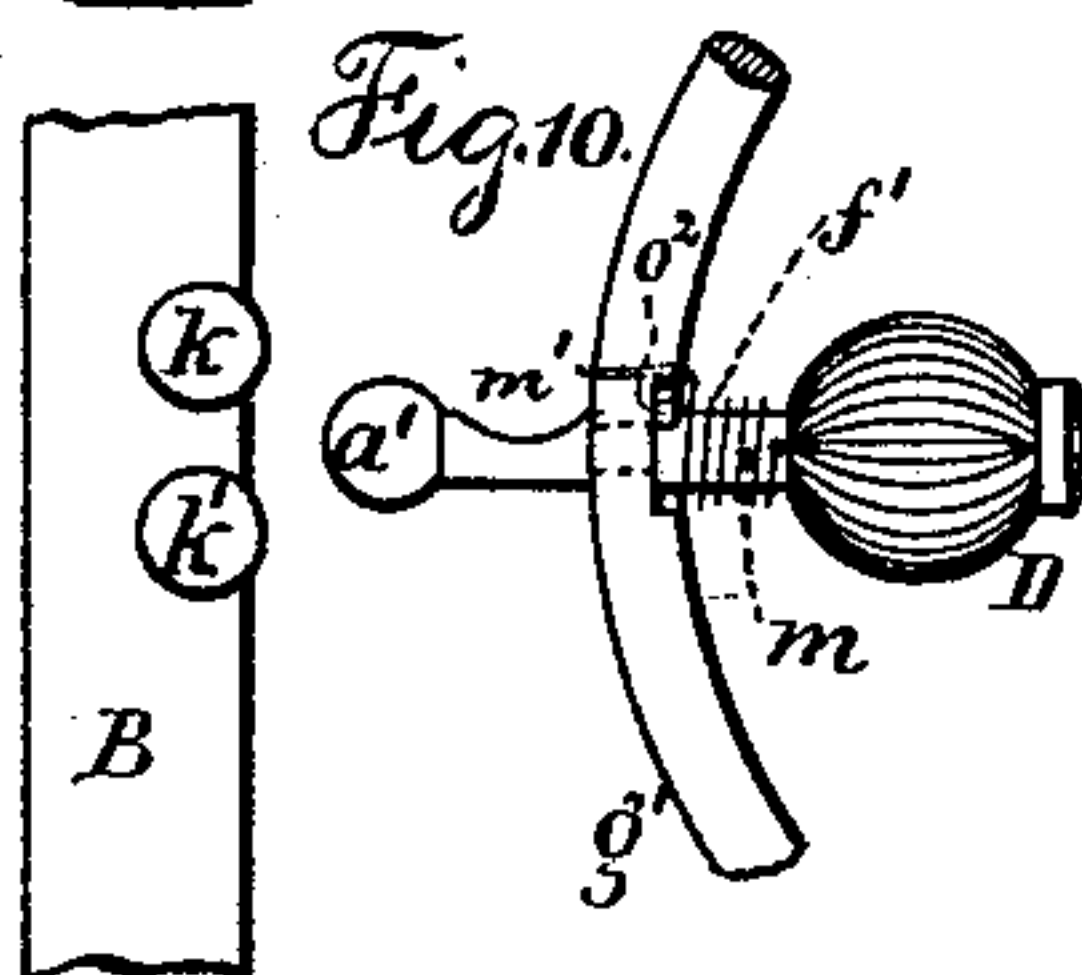
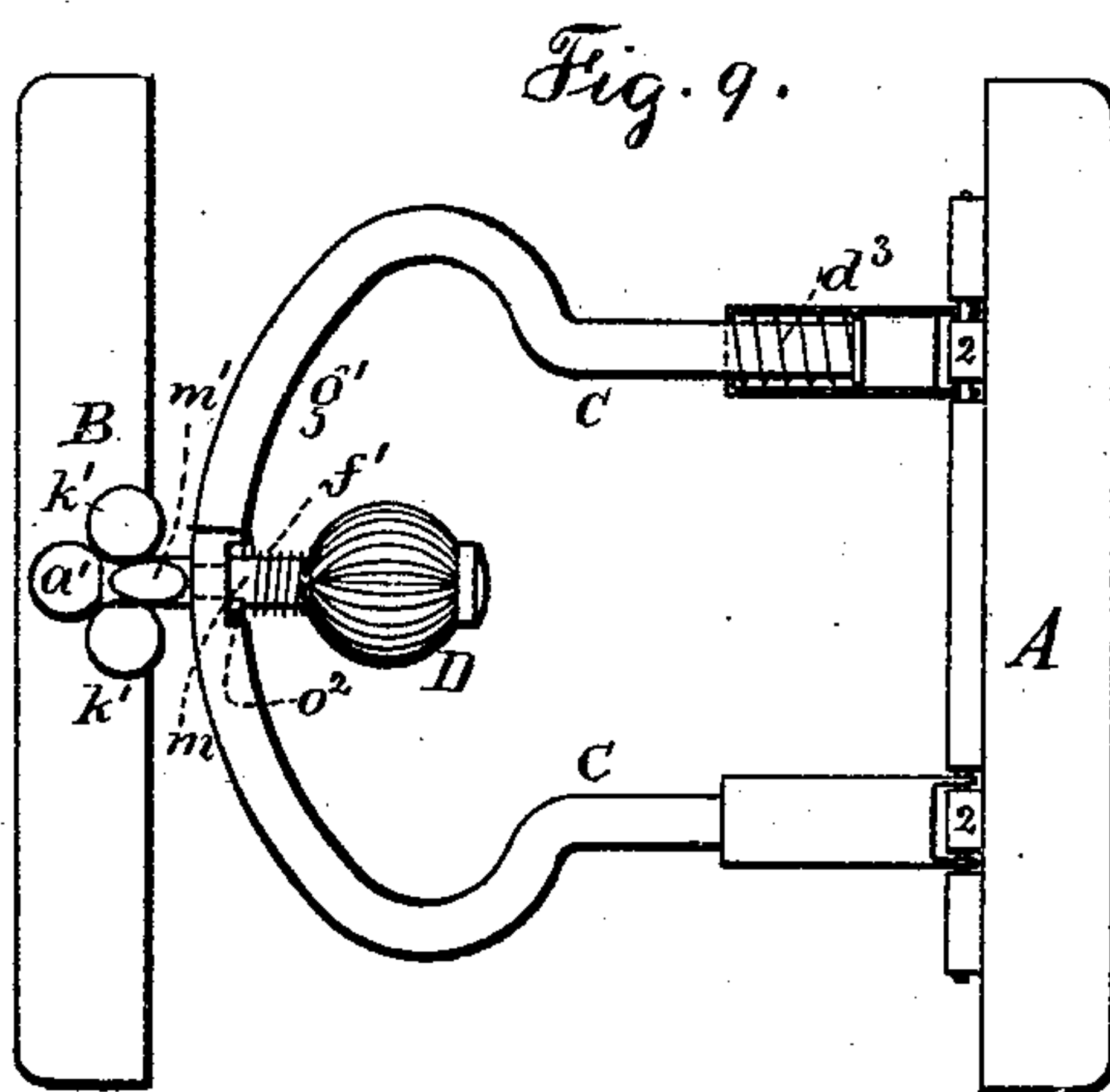
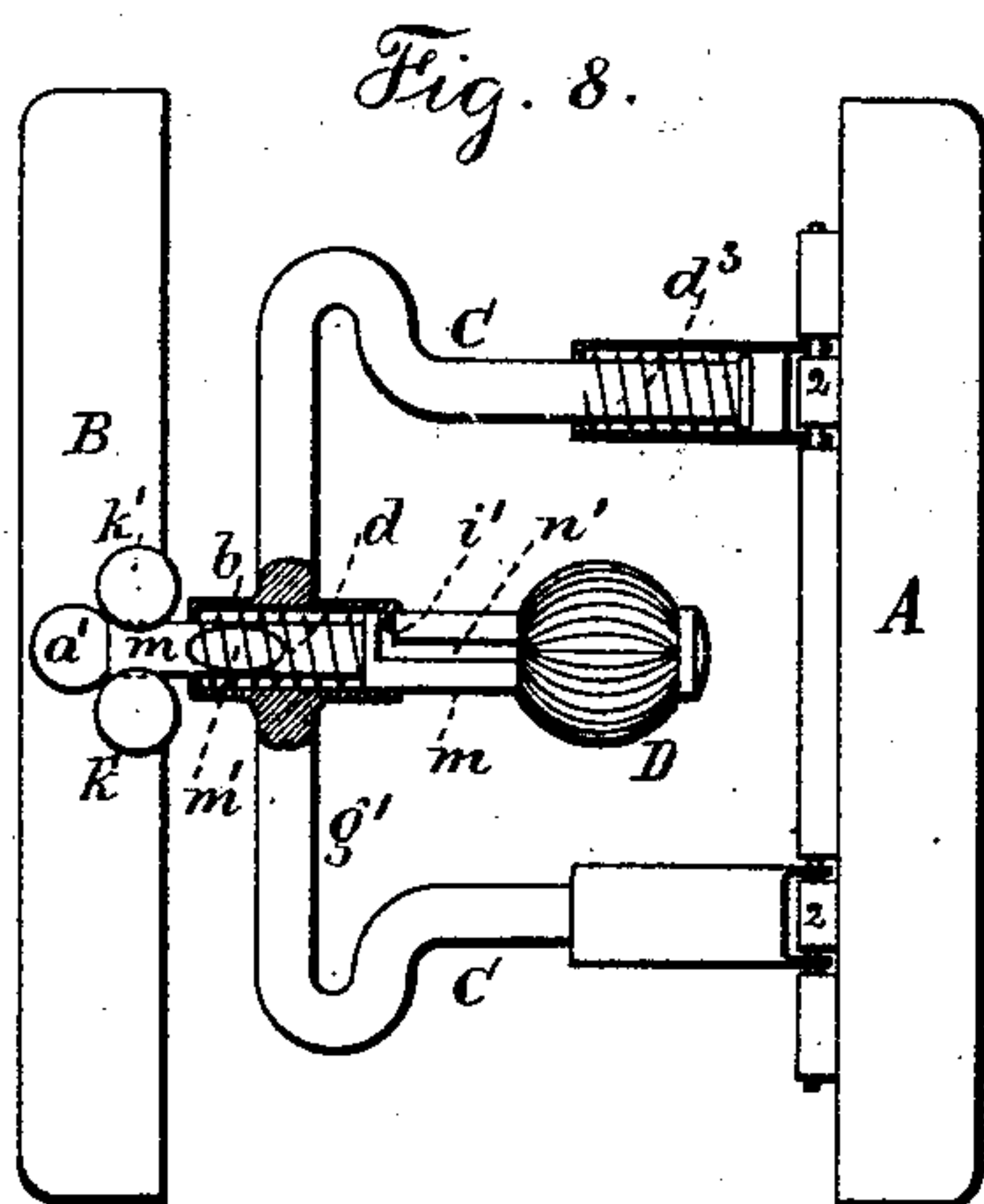
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2 Sheets—Sheet 2.

J. C. KOCH.
ALBUM CLASP.

No. 480,950.

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UNITED STATES PATENT OFFICE.

JOHN C. KOCH, OF BERLIN, GERMANY.

ALBUM-CLASP.

SPECIFICATION forming part of Letters Patent No. 480,950, dated August 16, 1892.

Application filed October 14, 1889. Serial No. 326,939. (No model.) Patented in Germany May 3, 1889, No. 49,743.

To all whom it may concern:

Be it known that I, JOHN CASPAR KOCH, a citizen of the United States, residing in Berlin, Prussia, Germany, have invented an Improvement in Clasps for Albums and other Articles, (for which Letters Patent have been granted to me in Germany, dated May 3, 1889, No. 49,743,) of which the following is a specification.

Album-clasps have heretofore been made in which there is a spring acting upon one portion of the clasp in such a manner as to tend to draw the covers of the book or album toward each other, thus permitting the clasp to be used upon different thicknesses of books and allowing for the inequalities in the thickness of the book resulting from the insertion of photographs or other pictures; but these albums are liable to injury in consequence of the clasp becoming open when handled, especially by children, or when moved from one place to another.

In my present improvements I avail myself of the spring to adapt the clasp to the different thicknesses of the book, and I combine with the same a peculiar locking device composed of a stem that is partially rotated to connect or disconnect the respective parts, and this is usually made in such a way as to form a secret lock that is not easily opened, especially by a person unacquainted with the device, thereby allowing for the more securely connecting of the covers of the book and lessening the risk of the same being opened accidentally or inadvertently and the contents injured, especially by children.

In the accompanying drawings I have represented my improvement in some of the ways in which I have constructed the respective parts.

Figure 1 represents the clasp with a portion thereof in section. Fig. 2 is an elevation of the same parts with the clasp disconnected. Fig. 3 is an edge view, partially in section, of the locking device. Fig. 4 is a detached view showing the base of the cylinder holding the spring and the ornamental arms of the swinging clasp in section. Fig. 5 is an elevation of a modification with the cylinder that holds the lock in section. Fig. 6 is an elevation of the locking device on one of the covers and a section of the stem. Fig. 7

represents the same parts as shown in Fig. 5 with the locking device extended. Fig. 8 is a similar view to Fig. 7 with the L-shaped slot in a different position. Fig. 9 is an elevation, partially in section, of a slight modification in the locking device. Fig. 10 represents the locking device in a position at right angles to Fig. 9. Fig. 11 is a section of the stem of the thumb-piece shown in Fig. 10.

In all of my devices A represents one of the clip-plates, that is secured to one section of the album or book.

B represents the clip-plate, that is secured to the other cover of the book.

C is a swinging clasp made use of for connecting the two clip-plates, and this clasp is pivoted or hinged at 2 2 upon the clip-plate A, and D represents a ball or thumb-piece that is to be revolved or partially turned for operating the locking device.

Upon reference to Figs. 1, 2, 3, and 4 it will be seen that the ball or thumb-piece D is made with a cylinder *b*, containing a spring *d*, which surrounds the stud *e*, having a head at the end, and this spring *d* acts against the sliding cross-piece *c*, slotted at its ends, as shown at *f*, Fig. 4, so that it is free to slide upon the ornamental arms *g* of the swinging clasp C, and the base of the cylinder *b* is flared outwardly and received beneath the ring riveted upon the cross-piece *c*, so that while the parts are connected the thumb-piece D and cylinder *b* can receive a partial rotation, the amount of movement being limited by the pin *i*, Fig. 4, within a quarter-circle opening *h* in the base of the cylinder *b*.

At the end of the thumb-piece D is a stud *a*, having a T-head, and upon the clip-plate B is an ornamental piece of sheet metal *k*, bent into the form of a hook *l*, and in this piece of sheet metal is a slot *l'*, which is similar in appearance to the T-shaped end of the stud *a*, but the length of this stud *a* is not sufficient to allow the stud to be entered into and lifted out of this T-shaped slot. Hence in connecting the parts together the thumb-piece D and stud *a* are turned into the position shown in Fig. 2, and the end of the T-head is passed down into the slot *l'*, after which the thumb-piece D is partially rotated to bring the T-head into the position represented in Figs. 1 and 3 to connect the parts together,

and by a reverse movement the parts can be disconnected, and under all circumstances the spring d yields to allow for connecting the clasp regardless of ordinary variations in the thickness of the book.

In Figs. 5, 6, and 7 the spring d is around the stem m and within the tube b , which is fastened to the part g' of the swinging clasp C, and the ball or thumb-piece D is upon the end of the stem m , which stem is cylindrical and provided with a head a' , and upon the clip-plate B are two studs k' . The opening between them, however, is not sufficient for the passage of the stem m . For that reason the stem m is filed away upon opposite sides, as shown at m' . Hence when the spring d and the stem m are moved endwise sufficiently to bring the reduced part m' outside of the tube b it can be passed down between the studs k' , and the spring d in expanding draws back the stem m , so that the parts cannot be separated until such stem m is again projected, as aforesaid.

It is advantageous to make use of an L-shaped slot n' in the stem m and to pass a pin i' through the cylinder b into such L-shaped slot, in order that the movement of the stem may be determined as it passes in or out. When this L-shaped slot is in the form shown in Fig. 7, the pin i' serves to hold the stem in its projected position, ready to be passed in between the studs k' ; but when the L-shaped slot is in the position shown in Fig. 8 the pin i' serves to lock the stem m , so that it cannot be moved endwise until the thumb-piece D has been partially rotated.

I remark that in the swinging clasp C springs may be introduced to act upon the legs of the clasp, as seen in Fig. 9. This construction is well known in album-clasps.

In Figs. 9 and 10 the same devices are shown as in Figs. 5, 6, 7, and 8, except that the stem m is reduced in thickness only on one side and it passes directly through the cross-piece of the swinging clasp, and the spring f' is around the stem between the thumb-piece and the cross-piece of the clasp, and in this form the cylinder b may be dispensed with, and a stop-pin o^2 may be provided in the stem m and within a notch in the part g' of the swinging clasp to limit the movement of the stem as turned in either direction.

In cases where the ends of the spring f' , Figs. 9 and 10, are attached to the stem and cylinder or support, respectively, such spring can be availed of for turning the stem to lock

the parts, and the thumb-piece will be turned against the action of the spring in opening the lock. The spring d' , Figs. 1, 5, 7, and 8, act to draw the book-covers together when the stem slides endwise, or additional springs may be used to contract the extension-clasp, as seen at d^3 , Figs. 8, 9, and 11. This clasp may be used in books, toilet-cases, and other articles.

I claim as my invention—

1. The combination, in a clasp for albums, books, &c., of two clip-plates, one of which is provided with locking projections, a swinging clasp, hinges by which the swinging clasp is connected to the other clip-plate, a rotary locking-bolt wider in one direction than the other and connected to the swinging clasp, and a thumb-piece by which the locking-bolt can be partially rotated to engage the projections on the clip-plate or to separate the bolt therefrom, substantially as specified.

2. The combination, in a clasp for albums, books, &c., of clip-plates, one of which is provided with locking projections, a swinging clasp in the form of an open bow, guide-cylinders for the ends of the swinging clasp, springs within the same, and two hinges for connecting the parts to the other clip-plate, a locking-bolt passing through a cylindrical opening in the swinging clasp, a thumb-piece at one end of the locking-bolt by which it may be partially revolved, said locking-bolt being wider in one direction than the other for engaging the projections upon the clip-plate, and a spring to act on the locking device and draw the covers toward each other, substantially as set forth.

3. The combination, in a clasp for albums, books, &c., of the clip-plates, one of which is provided with locking projections, a swinging clasp hinged to the other clip-plate, a locking device movable toward and from the hinge and having interlocking parts that are wider in one direction than the other, a thumb-piece connected with the locking device for partially rotating the same to engage or disengage the locking devices, a cylinder supporting the locking device, and a spring to act on the locking device and draw the covers toward each other, substantially as specified.

Signed by me this 8th day of October, A. D. 1889.

JOHN C. KOCH.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.