

(No Model.)

A. H. GRAVES.
SEPARABLE BUTTON.

No. 351,434.

Patented Oct. 26, 1886.

Fig. 1.

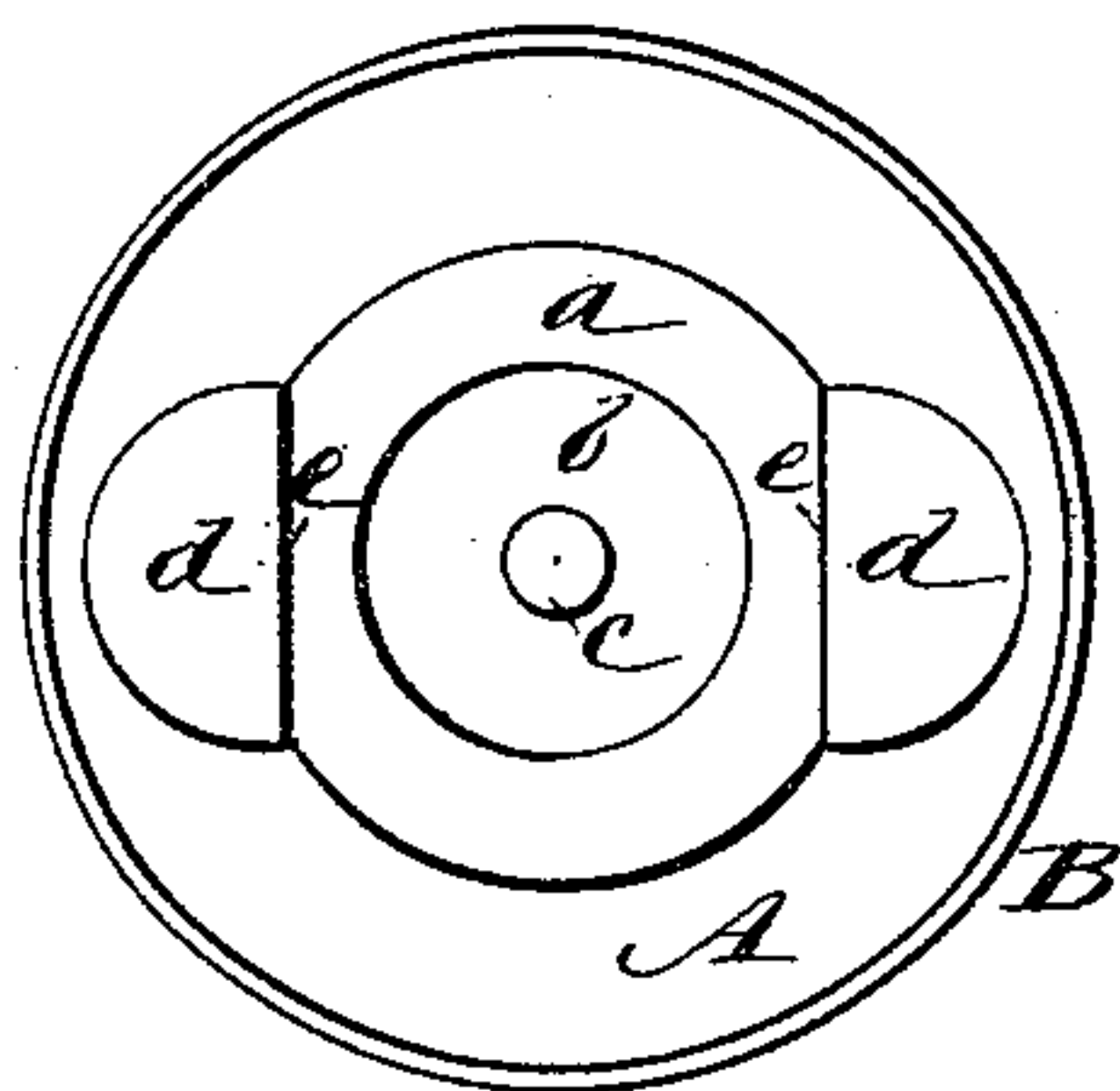


Fig. 2

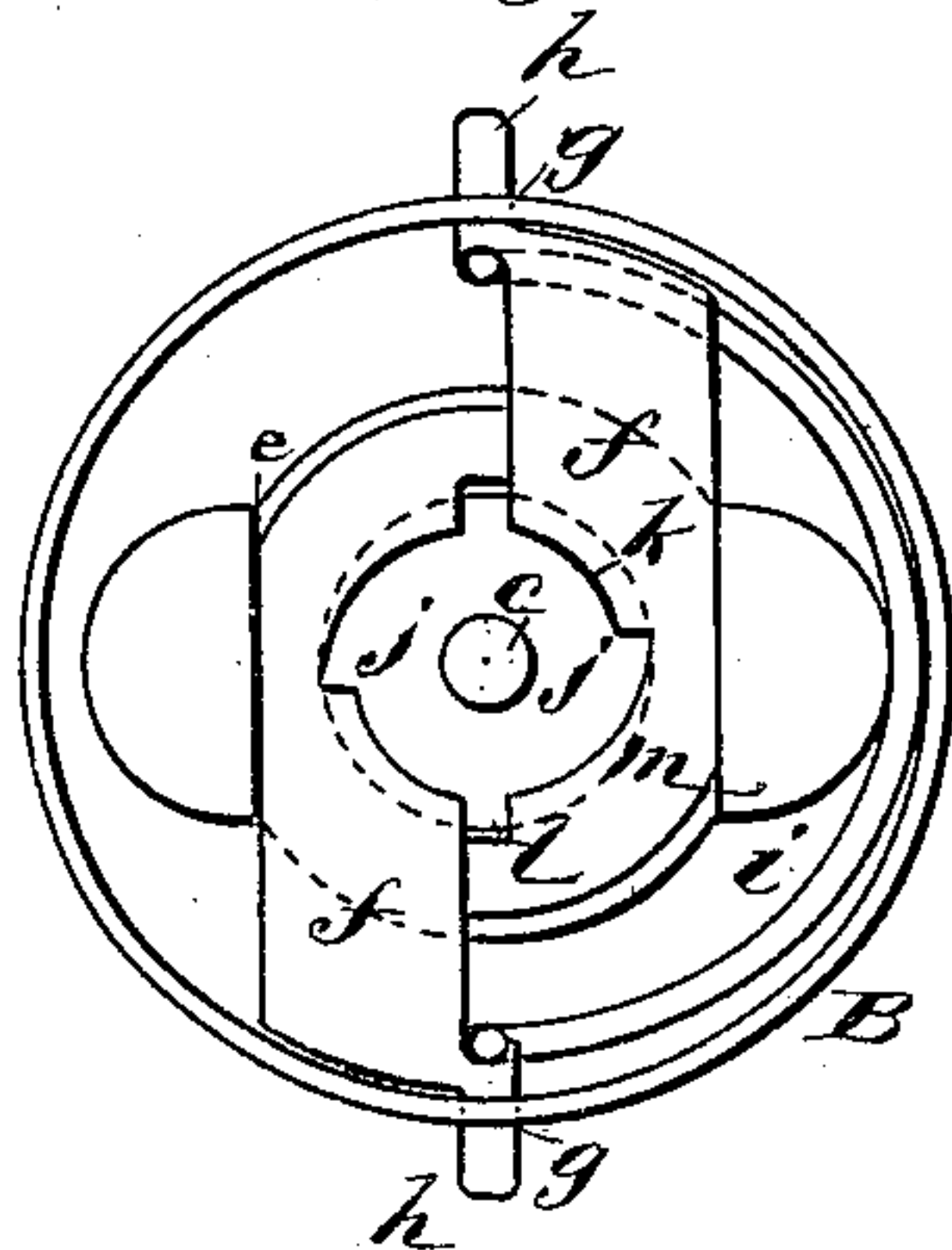


Fig. 7

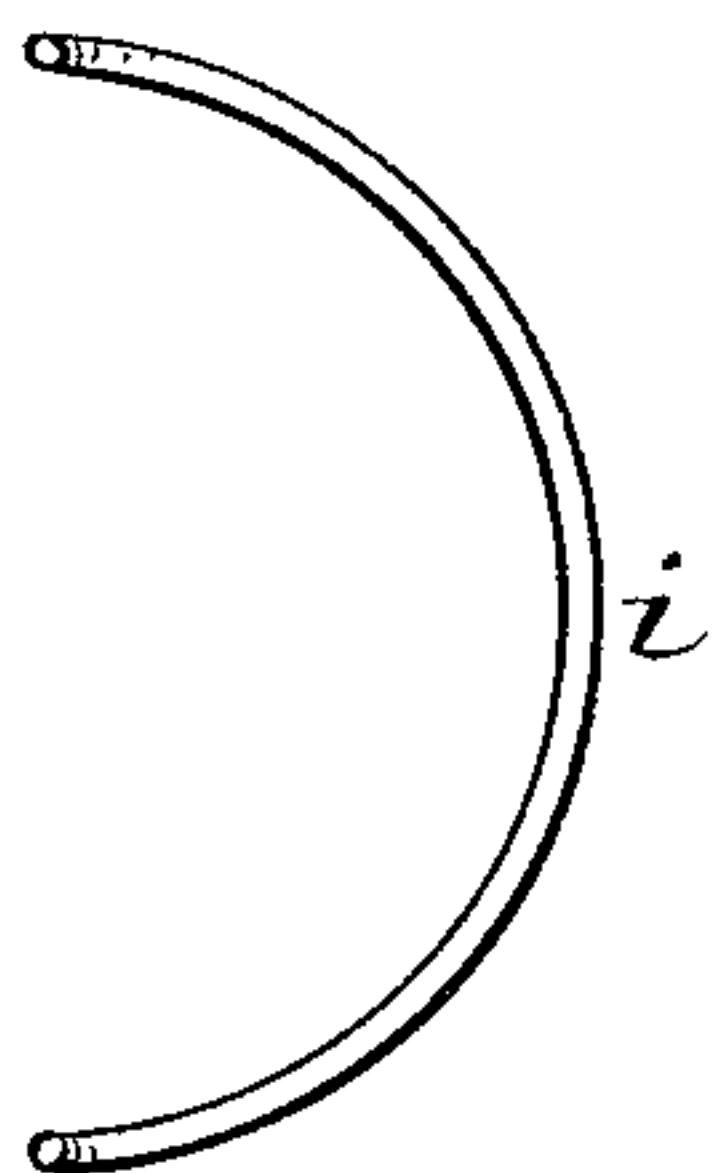


Fig. 4

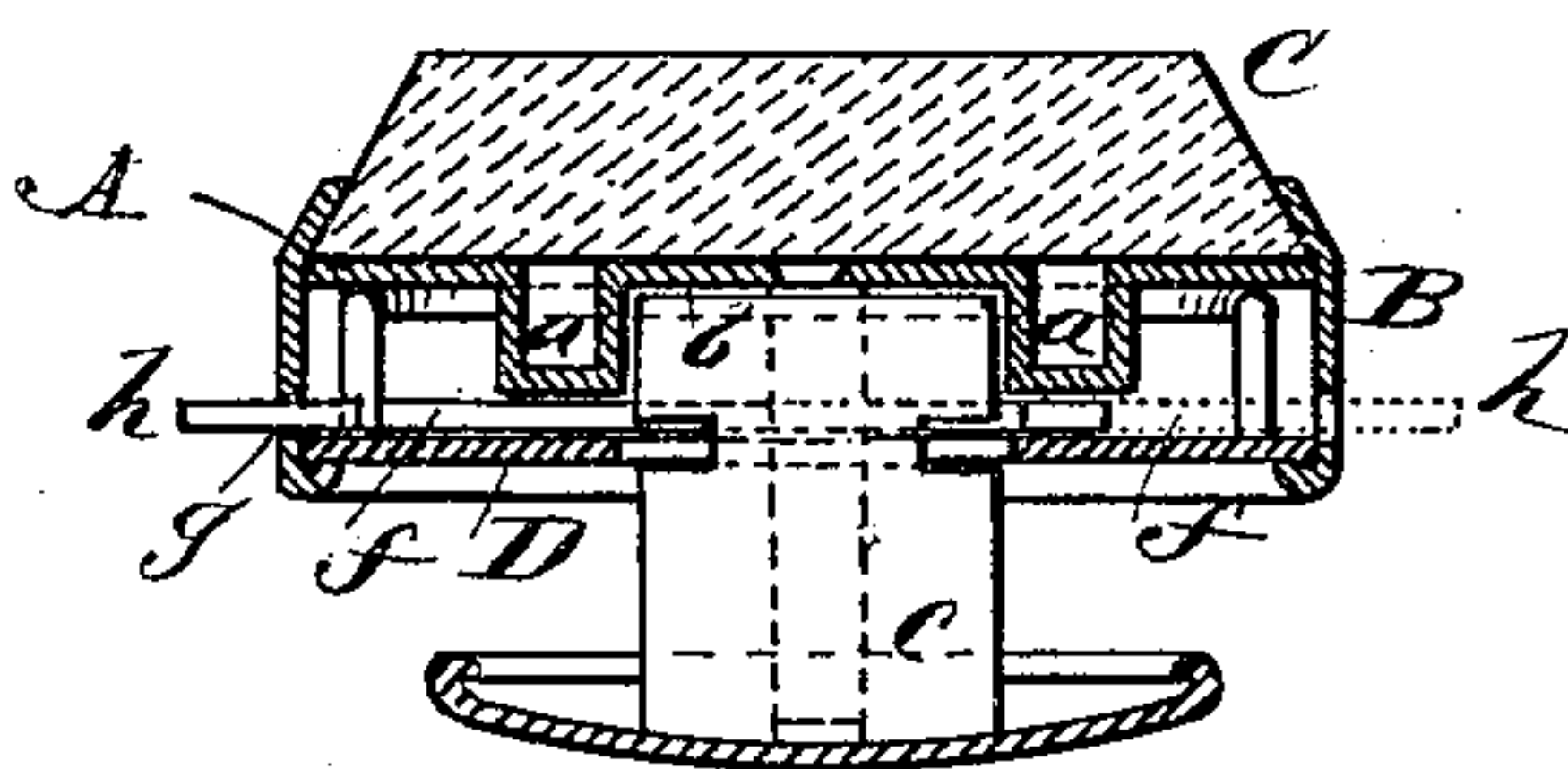


Fig. 3

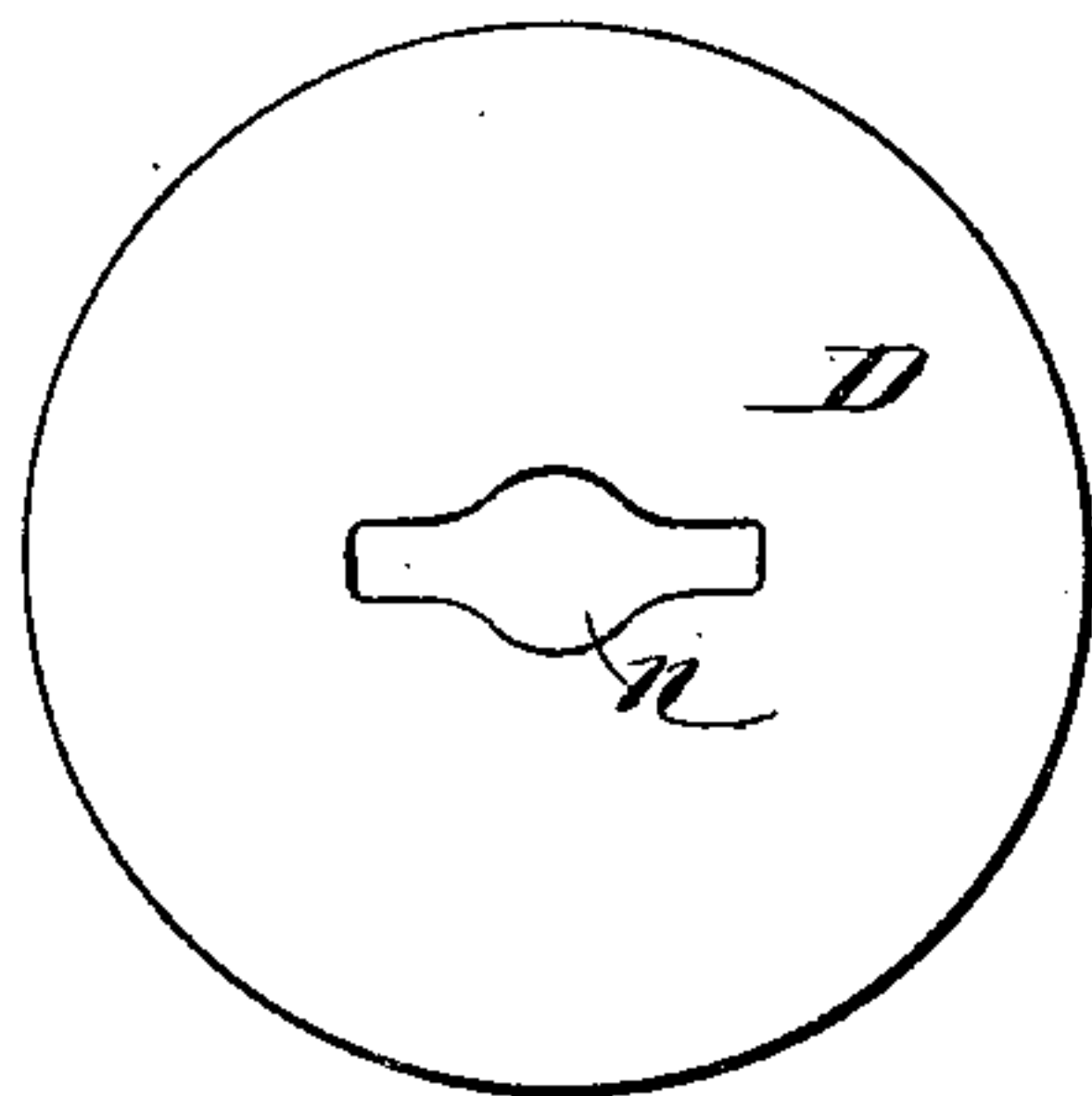


Fig. 5

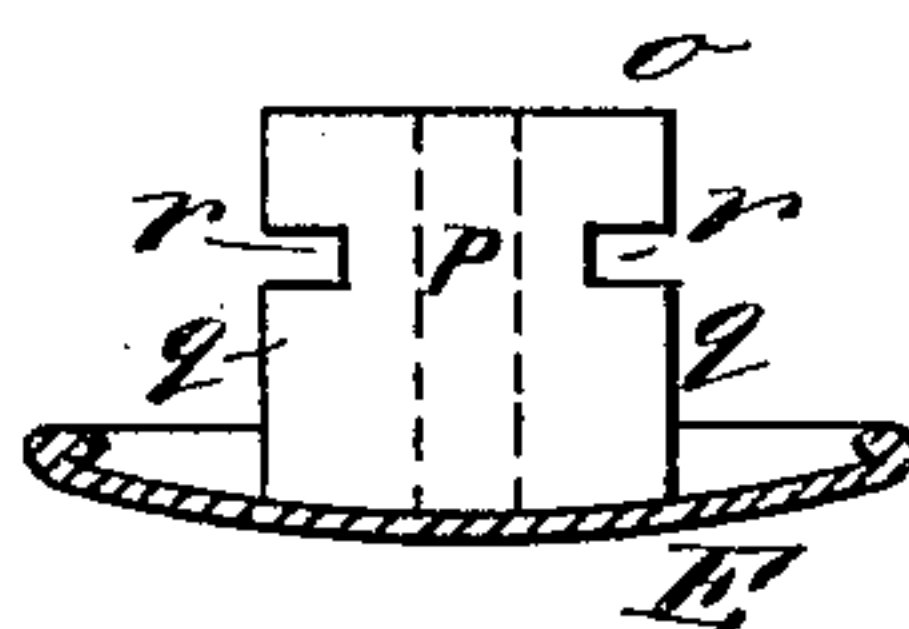
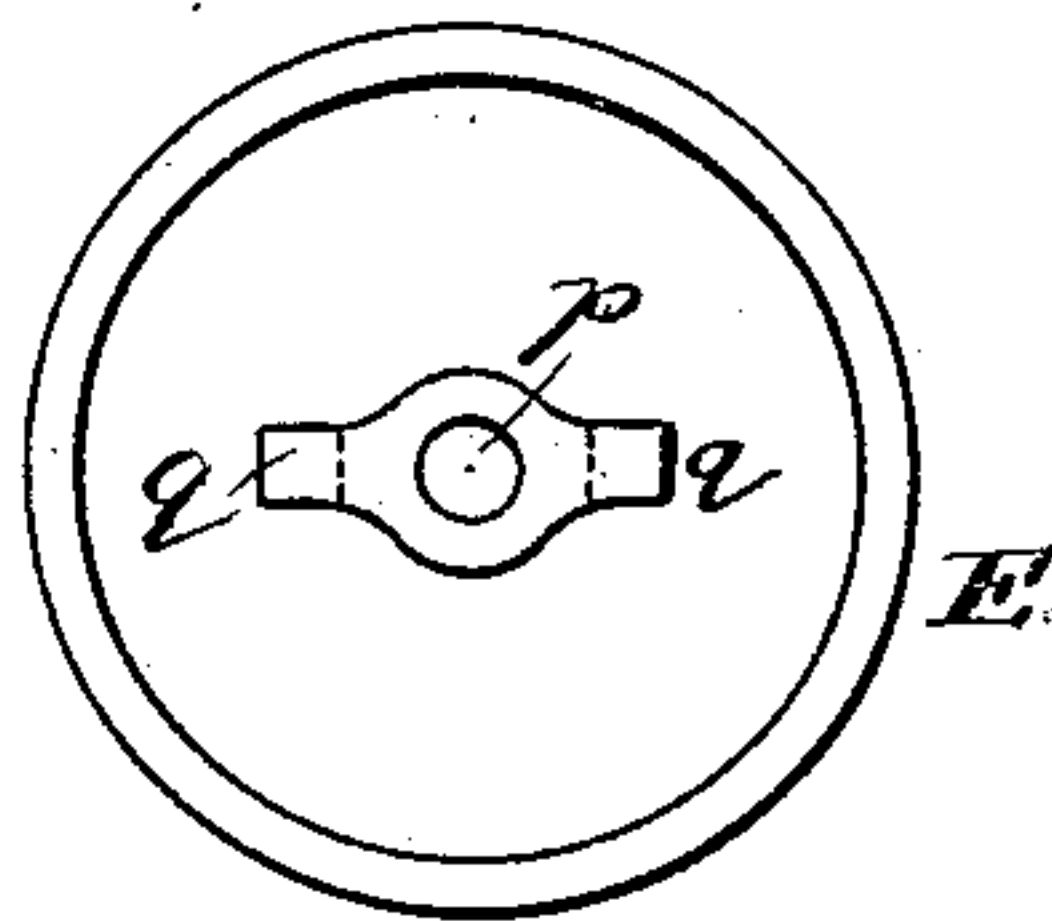


Fig. 6



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT H. GRAVES, OF CENTRAL CITY, NEBRASKA.

SEPARABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 351,434, dated October 26, 1886.

Application filed February 2, 1886. Serial No. 190,610. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. GRAVES, of Central City, in the county of Merrick and State of Nebraska, have invented a new and useful Improvement in Separable Buttons, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a rear view with the removable parts removed. Fig. 2 is a rear view with the cover removed to show internal parts. Fig. 3 is a rear view of the front of the button. Fig. 4 is a diametrical section of a complete button. Fig. 5 is a sectional side elevation of the back of the button. Fig. 6 is a face view of the back of the button. Fig. 7 is a detail view of the bolt-operating spring.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

The object of my invention is to provide a separable button which may be readily taken apart, and which, when put together, will be prevented from accidental separation.

The invention consists of the combination of parts, including their construction, substantially as hereinafter set forth, and pointed out in the claim.

The plate A, forming the main portion of the button, is formed with an elevated annular ridge, *a*, inclosing a circular depression, *b*, from the center of which the stud *c* projects at right angles with the body of the plate. At diametrically-opposite sides of the annular ridge are formed semicircular projections *d*, which extend beyond the ridge *a*, and are provided with parallel surfaces *e*, forming guides to the sliding bolts *f*. A ring, B, surrounds the plate A and receives the stone setting C, forming the front of the button. In diametrically-opposite sides of the ring B there are openings *g*, through which thumb-pieces *h*, formed on the ends of the bolts *f*, project. The bolts *f* are oppositely arranged with respect to each other, and are each notched at the inner end of the thumb-piece *h*, to receive the angled ends of a semicircular spring, *i*, received within the ring B, and tending to press the bolts *f* outward into contact with the inner surface of the ring B. The bolts *f* are arranged to slide past each other in the space between the shoulders *e*, and in

the adjacent edges of the bolts are formed irregular notches *j*, each having a circular portion, *k*, and a right-angled portion, *l*, and between the circular portion *k* and the right-angled portion *l* is a spirally-curved portion, *m*, forming a cam for engagement with the shank of the back of the button, as hereinafter more fully described, the part of the curved portion *m* adjoining the right-angled portion *l* being nearest the stud *c*. A plate, D, having in the center thereof an oblong slot, *n*, is secured to the rear portion of the button-front, with the slot *n* at right angles to the bolts *f*. The central part of the oblong slot *n* is enlarged to receive the middle portion of the shank *o* of the button-back E. The button-back E is of the usual form; but the shank *o* is thickened in the middle and is traversed longitudinally by a hole, *p*, which is adapted to receive the stud *c* when the shank of the button-back is in its position on the button-front. The shank *o* is provided with flanges *q*, having notches *r* formed therein, the distance between the notches and the end of the shank being equal to the distance from the plate D to the body of the plate A.

The button-back E is placed in position by inserting the shank *o* in the slot *n* of the plate D, the extremity of the shank being received in the notches *j* of the bolts *f*, and when the button-back E is turned in a right-hand direction the flanges *q* are brought into engagement with the spirally-curved edges *m* of the bolts *k*, pushing the bolts backward until the flanges *q* are opposite the right-angled portions *l* of the bolts *f*, when the spring *i* presses the bolts outward, bringing them into engagement with the flanges *q*, thus preventing the shank *o* from turning. The edges of the plate, as the shank *o* is turned to bring it into a locked position in the button-front, are received in the notches *r* of the shank *o*, thus retaining the shank and preventing it from being withdrawn from the stud *c*.

When it is desired to release the button-back from the button-front, the thumb-pieces *h* are pressed, withdrawing the notched ends of the bolts from the flanges *q*, permitting the back to be turned in a reverse direction until the flanges *q* coincide with the slot *n* of the plate D, when the button-back may be withdrawn.

From the foregoing it will be seen that the

button-back is readily connected to the front plate, its shank being permitted to pass through the slot in the bottom plate directly and unerringly into engagement with the notches of the
5 bolts, without at this time requiring the turning of said button-back and shank, and that then, upon turning the latter to the right hand, the bolts will be retracted or disengaged from the front-plate rim, while by a further move-
10 ment of the button-back in the same direction the right-angled portions of the bolts will allow the bolts to be again projected, and at the same time the bottom plate will be received into the notches in the shank of the button-
15 back, thus having the joint effect of holding the bolts as against accidental retraction and of locking the button-back to the bottom plate.
Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

The separable button consisting of the front plate having the apertured or slotted rim, the elevated annular ridge inclosing a circular depression and the central stud, the slotted bottom plate, the spring-pressed bolts having the
25 thumb-pieces, and each provided with an irregular notch, a circular portion, a right-angled portion, and an spirally-curved portion between the circular portion and notch, and the back having a tubular flanged shank provided
30 in the side edges of its flanges with notches, substantially as set forth.

ALBERT H. GRAVES.

Witnesses:

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H. GURNEY.