

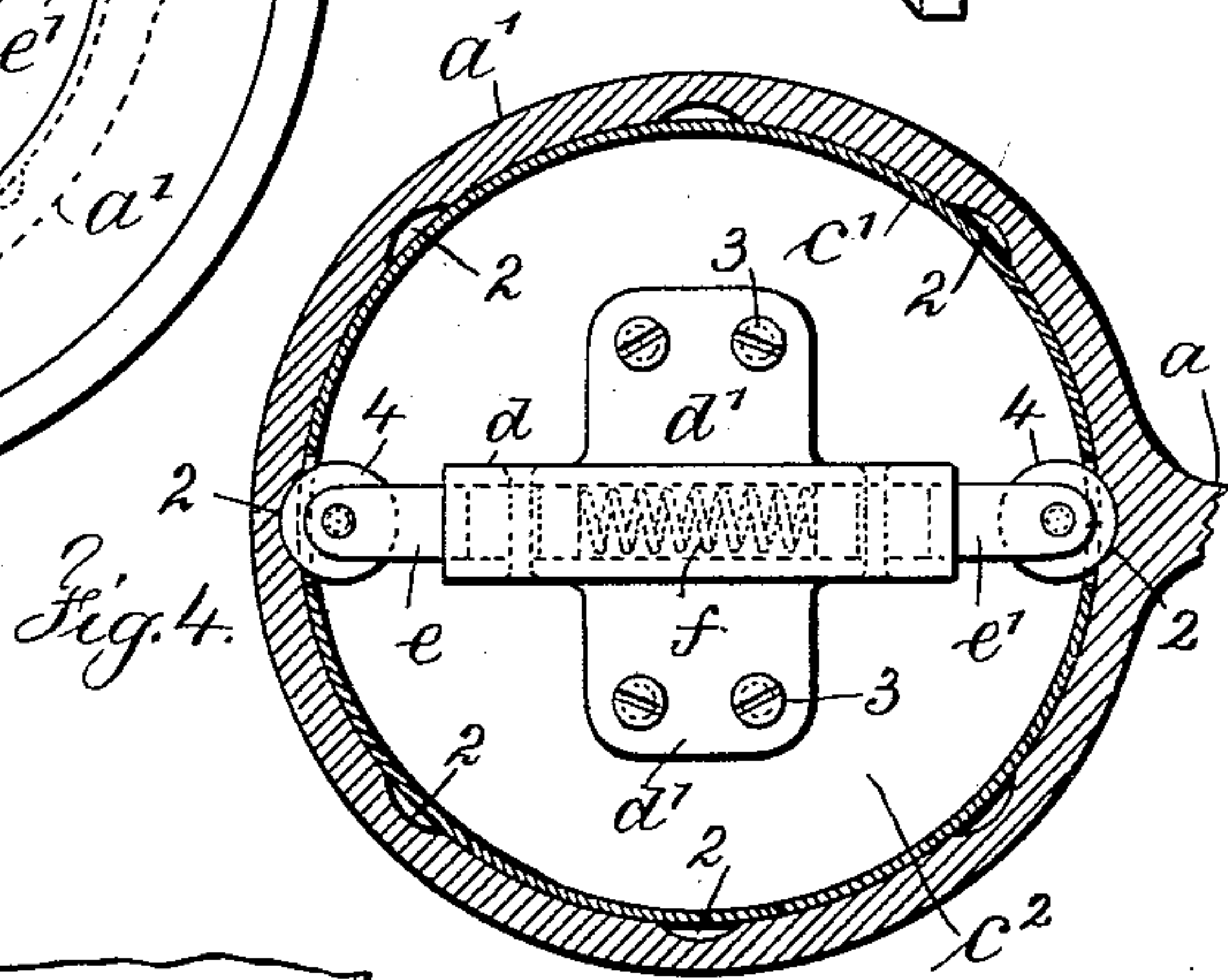
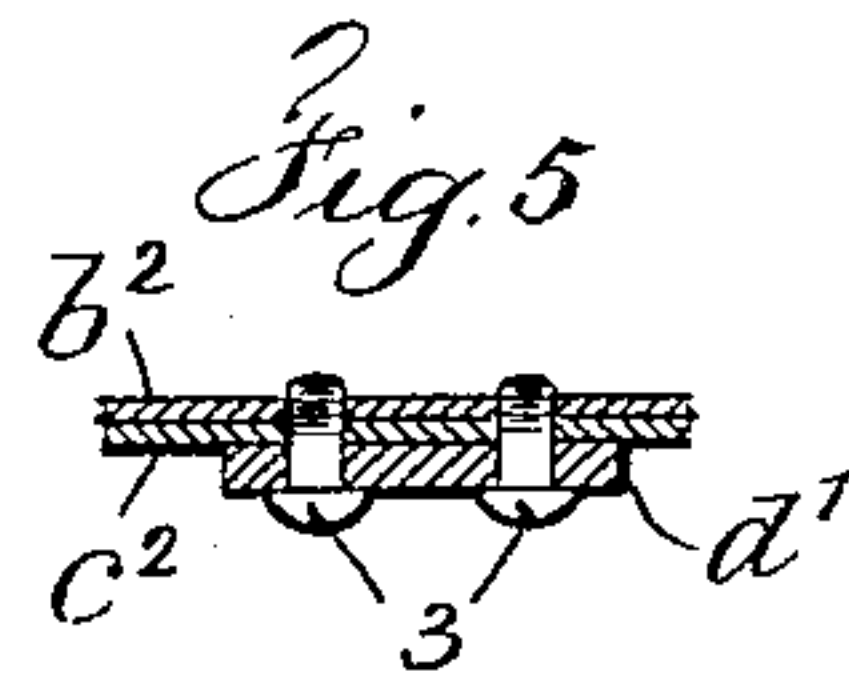
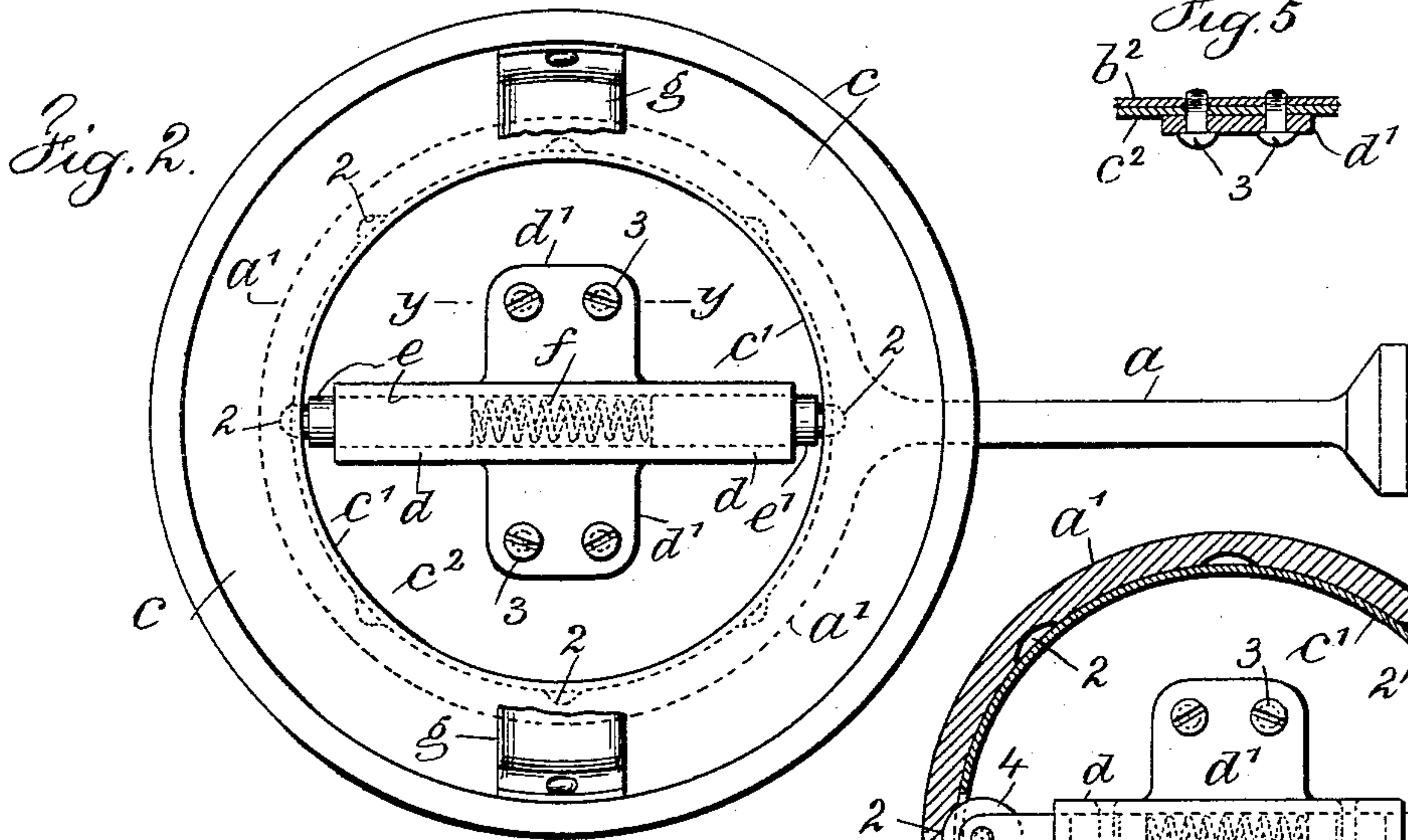
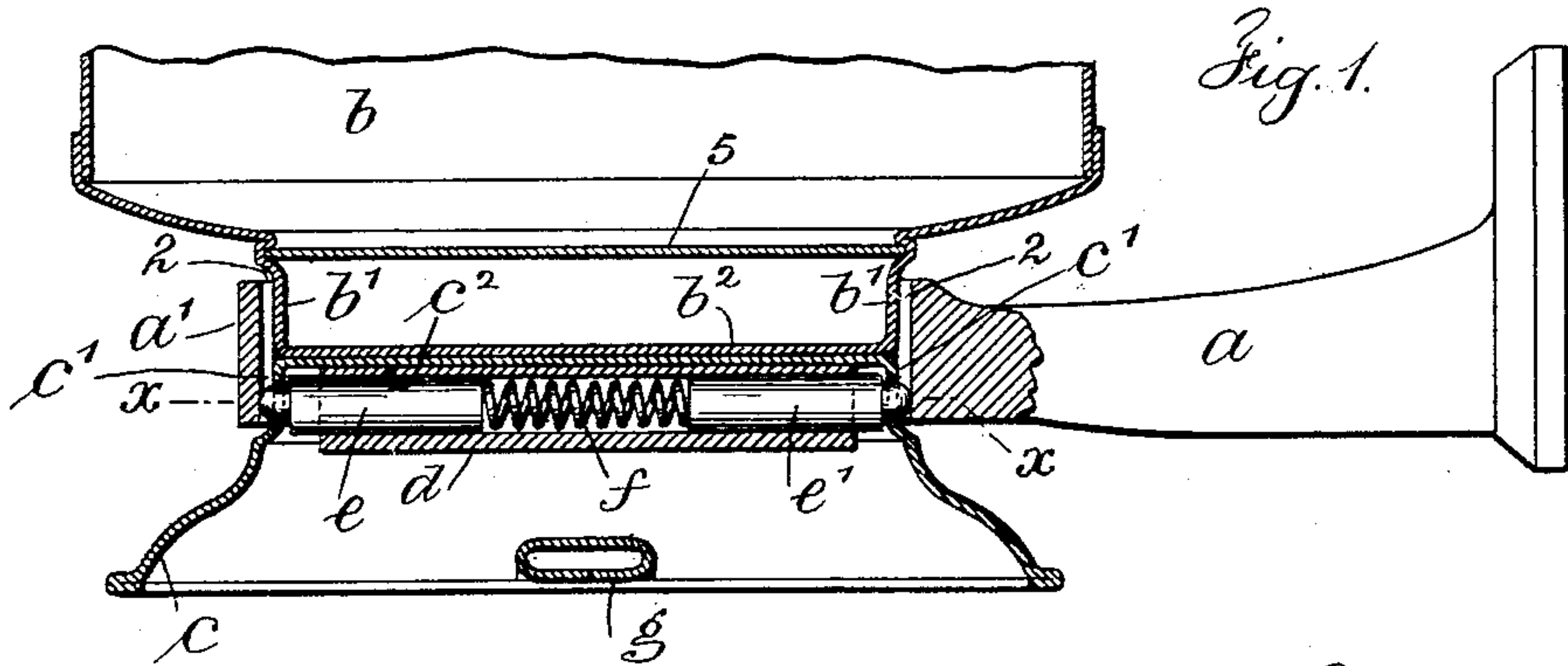
No. 745,770.

PATENTED DEC. 1, 1903.

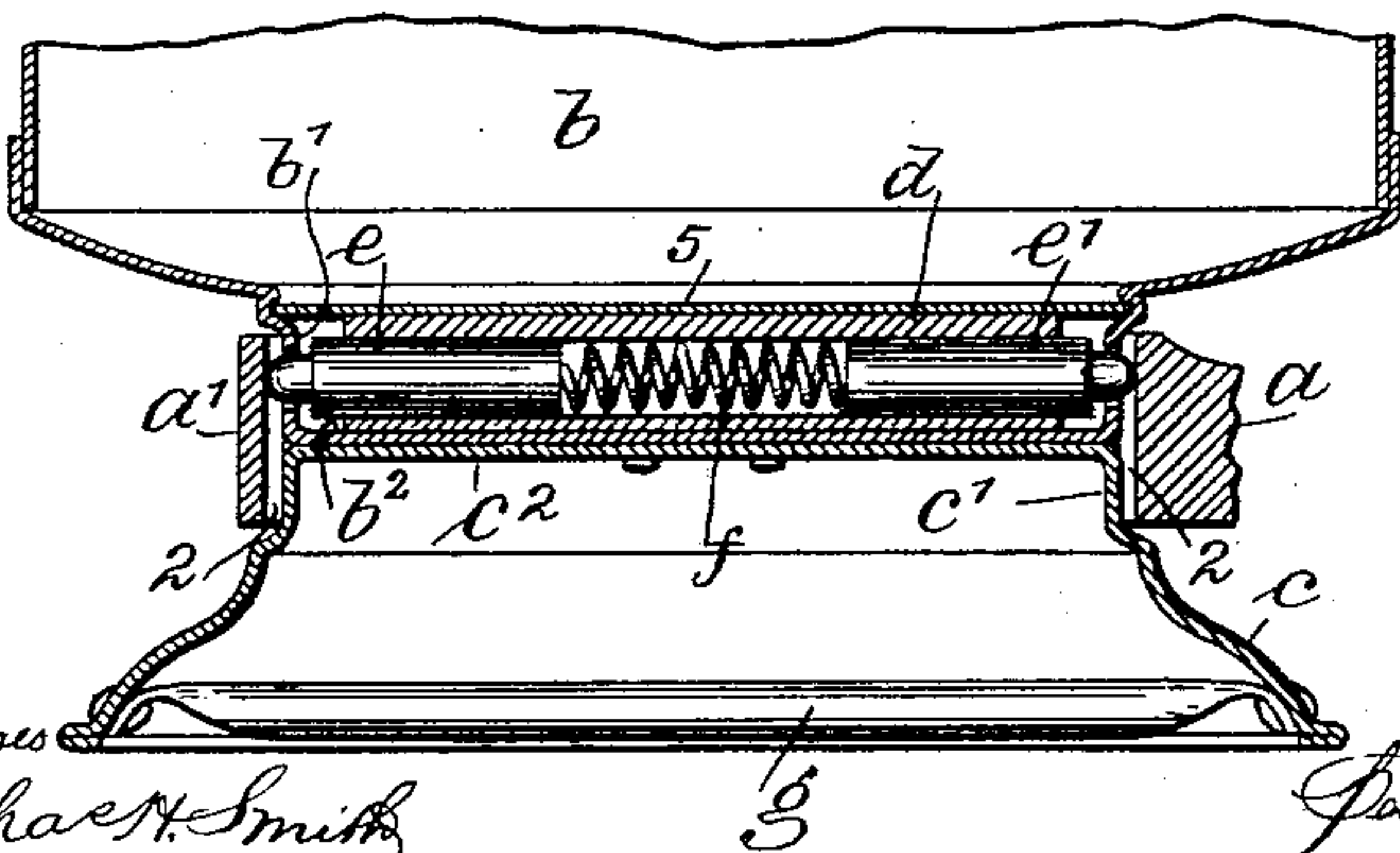
R. BLACK.  
LANTERN.

APPLICATION FILED AUG. 15, 1903.

NO MODEL.



*Fig. 3.*



Witnesses  
Chas. H. Smith  
J. Staib

Inventor  
Robert Black.

For Harold Lurrell

att'y



# UNITED STATES PATENT OFFICE.

ROBERT BLACK, OF NEW YORK, N. Y., ASSIGNOR TO THE DRESSEL  
RAILWAY LAMP WORKS, A CORPORATION OF NEW YORK.

## LANTERN.

SPECIFICATION forming part of Letters Patent No. 745,770, dated December 1, 1903.

Application filed August 15, 1903. Serial No. 169,624. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT BLACK, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Lanterns, of which the following is a specification.

My invention relates particularly to such lanterns as are employed on the rear cars of passenger-trains or on the caboose of freight or coal trains and which lanterns are carried by bracket-arms fitting, supported by, but movable from sockets secured to the vehicle or car. Heretofore in these devices it has required one hand to release the catch and the other hand to turn the lantern—a great disadvantage, as it required the attendant to reach upward and lean the body at the same time even on a moving train. These lanterns are sometimes placed on the end face and sometimes on the rounded rear corners of the vehicle or car, and as these positions vary forty-five degrees, and also as these lanterns and brackets must be interchangeable, it is imperative that the lanterns contain the requisite adjustability and at the same time simplicity and strength for use by unskilled employees.

In carrying out my invention the bracket is provided with a ring flange preferably integral and in the inner surface of which flange are eight equidistant spaced-apart grooves, two of which are in line with the bracket-arm. The flange of the sheet-metal lantern-body sets down into this ring flange, and the flange of the sheet-metal base extends up into this ring flange, and a bolt-case is secured in position to one of said parts by screw-bolts that at the same time connect the bottom of the lantern-body to the said metal base, making the lantern structure and the bracket normally inseparable. This bolt-case may be secured to the under side of the said metal base or the upper side of the lantern-base. It extends centrally across and is provided with oppositely-moving spring-actuated bolt-stems, the outer free ends of which engage the grooves of the bracket-ring to hold the lantern in the position to which it has been moved. A bridge-

bar is provided across the said metal base to be grasped by the hand in turning the base and lantern from one set position to another—that is, from one pair of grooves to another—so as to direct the light shining from the lantern as is required.

In the drawings, Figure 1 is a vertical section and partial elevation representing my improvement. Fig. 2 is an inverted plan of the parts shown in Fig. 1. Fig. 3 is a vertical section of a form of my invention. Fig. 4 is a sectional plan of another form of my invention, and Fig. 5 is a cross-section at  $y$   $y$  of Fig. 2. Fig. 3 differs from Fig. 1 only in the position of the bolt-case and bolts, which in Fig. 1 are shown within the said metal bottom portion of the lantern. Fig. 4 is taken sectionally at  $x$   $x$  of Fig. 1 so far as the structure of the ring flange and said metal lamp-body is concerned.

$a$  represents the bracket and  $a'$  the ring flange or annulus, preferably formed integral with the bracket, and in the inner surface of which there is a series of vertically-placed grooves 2 equidistant from one another, or, in other words, arranged at equal spaced-apart intervals in line with the bracket  $a$ , as will appear from reference to Figs. 2 and 4. The right-hand end of the bracket  $a$  is enlarged and so adapted to fit the usual socket secured to the end of a car or caboose.

$b$  represents the lantern-body of sheet metal,  $b'$  the base-flange, and  $b^2$  the bottom of the same, the latter two parts of which fit into the ring flange or annulus  $a'$  and are adapted to turn therein. The sheet-metal base  $c$  is provided with a flange  $c'$  and top  $c^2$ , the flange and top passing up into the ring flange or annulus  $a'$  of the bracket, the top of the flange and the bottom of the lantern meeting or lying together and secured by a common device and supported by the ring flange or annulus  $a'$ .

The bolt-case  $d$  is shown as of tubular form, with oppositely-extending flanges  $d'$ , through which flanges and through the bottom of the lantern and top of the base pass the screws or screw-bolts 3, which firmly connect all the parts together and to the ring



flange or annulus of the bracket. In Figs. 1 and 2 I have shown this bolt-case as secured in the sheet-metal base *c* against the top of the same, while in Fig. 3 this bolt-case is shown as resting upon the bottom of the lantern-body and between the same and the base-plate 5 thereof, and I do not limit myself in regard to which of these two positions the bolt-case occupies. It is, however, a fact that in the structure Fig. 1 the bolt-case is accessible, while in the structure Fig. 3 the bolt-case is quite inaccessible. I therefore give the preference to the structures Figs. 1 and 2. This bolt-case is tubular and receives the companion bolt-stems *ee'*, which project from opposite ends of the case and move in opposite directions and between which is the compression-spring *f*. The free ends of these bolt-stems are preferably rounded, so as to engage the grooves 2 of the ring flange or annulus *a'*, which are preferably rounded in cross-section. In the first three figures of the drawings the ends of these bolt-stems are shown as semicircular, while in Fig. 4 I have shown rollers 4 let into slots in the ends of said bolt-stems and pivotally connected thereto, which rollers engage the said grooves 2. I do not limit myself to the size of the grooves 2 in the ring flange or annulus *a'*, nor to the special construction of the free ends of the bolt-stems *ee'*. With either structure there must be openings provided either at the flange *c'* or the flange *b'*, through which the free ends of the bolt-stems pass.

I have shown and prefer to employ a bridge-bar *g*, extending across within and at the lower portion of the sheet-metal base *b*. This bridge-bar is to be grasped by hand for turning the lantern in either direction, and when so turned the bolt-stems yield, compressing the spring *f*, and are projected to engage the next succeeding oppositely-placed pairs of grooves. The bolt-stems, with the rollers 4, are to be preferred, because while they hold as efficiently as the structure shown in Figs. 1, 2, and 3 they provide a yielding function in the turning of the lantern that is advantageous over and above the frictional sliding bar of the parts shown in the other figures. This device is exceedingly simple and in operation only requires the use of one hand of the brakeman or other attendant.

In turning the lantern to show the desired light it must be given a quarter-revolution either when on the end of the car or corner of the same. Consequently in the movement imparted thereto one pair of notches is passed over; but if, as an illustration, a lantern showing red is removed from the end of one car and placed on the rear corner of another car, then a turn of one-eighth is all that is required to bring the red light into a posi-

tion corresponding to that previously occupied.

I claim as my invention—

1. The combination in a lantern with a bracket having a ring flange or annulus in the inner surface of which are a series of equally-spaced-apart grooves, of a lantern-body having parts passing down into said ring flange, and a sheet-metal base having parts passing up into said flange so that the bottom of the lantern-body and the top of the flange come into contact in parallel planes and a spring-actuated bolt device extending centrally across and connected in place with the bottom of the lantern and the base, the free ends of which bolt device act in opposite directions and are adapted to engage the grooves of the ring flange to fix the position of the lantern.

2. The combination in a lantern with a bracket having a ring flange or annulus in the inner surface of which are a series of equally-spaced-apart grooves, of a lantern-body having parts passing down into said ring flange and a sheet-metal base having parts passing up into said flange so that the bottom of the lantern-body and the top of the flange come into contact in parallel planes, a bolt-casing extending centrally across and fastening devices securing the same in position and at the same time securing the lantern and base together, bolt-stems in said case, a central spring between the same moving the bolt-stems outwardly so that the free ends of the stems engage oppositely-placed notches of said ring flange.

3. The combination in a lantern with a bracket having a ring flange or annulus in the inner surface of which are a series of equally-spaced-apart grooves, of a lantern-body having parts passing down into said ring flange and a sheet-metal base having parts passing up into said flange so that the bottom of the lantern-body and top of the flange come into contact in parallel planes, a bolt-case having a tubular portion and oppositely-extending flanges, screws connecting the bolt-case, the base and the lantern-body together, a spring centrally placed within the tubular part of the bolt-case, oppositely-placed bolt-stems in said tubular portion acting to compress the spring and consequently to be forced outwardly by the spring, and rollers pivotally mounted in the free ends of said bolt-stems and adapted to engage the grooves of the bracket ring flange in holding the lantern in the desired position.

Signed by me this 14th day of August, 1903.

ROBT. BLACK.

Witnesses:

GEO. T. PINCKNEY,  
BERTHA M. ALLEN.