

No. 743,597.

PATENTED NOV. 10, 1903.

W. I. TUTTLE.
CAN OR BOX STRUCTURE.
APPLICATION FILED MAR. 31, 1902.

NO MODEL.

Fig. 1.

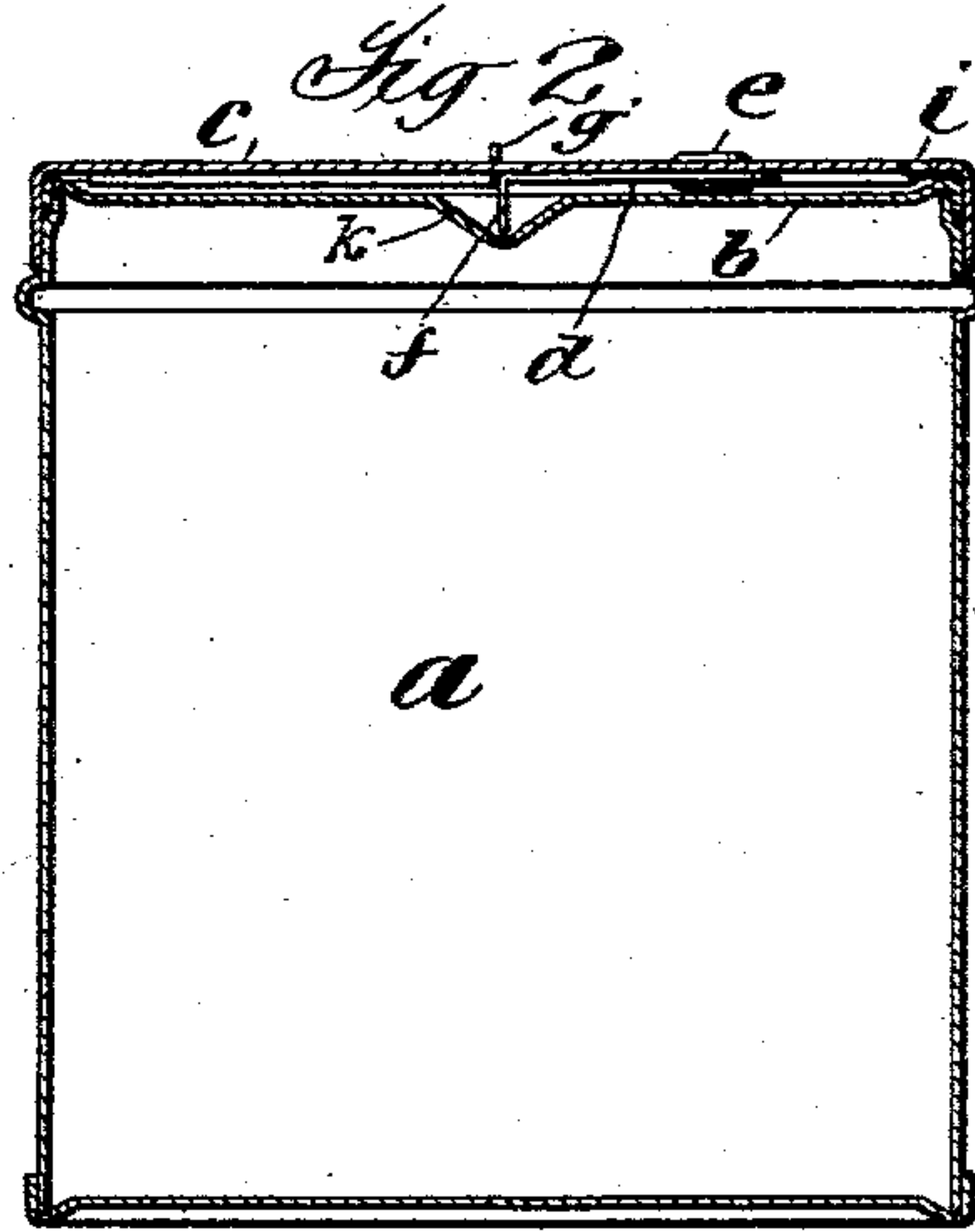
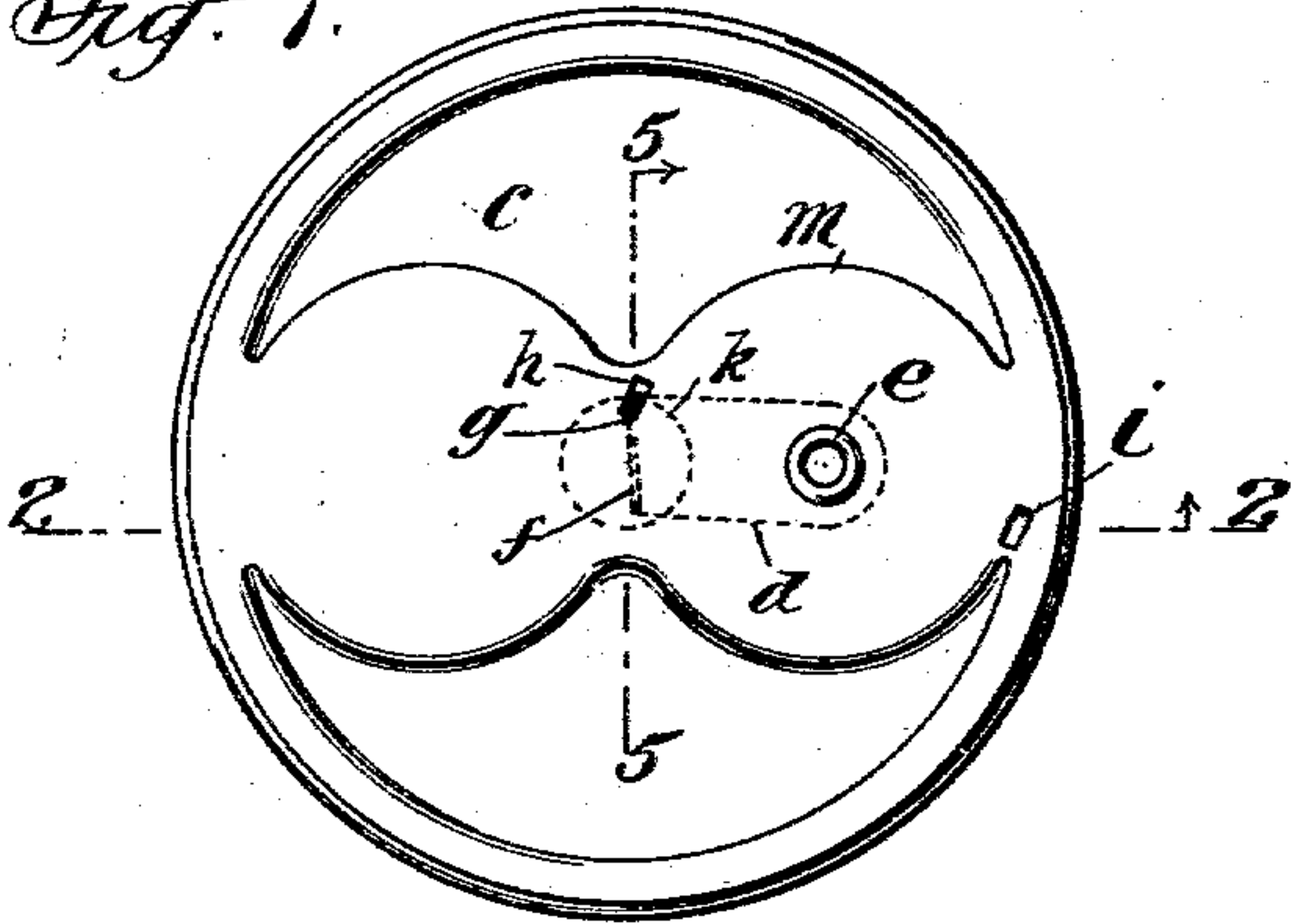


Fig. 3.

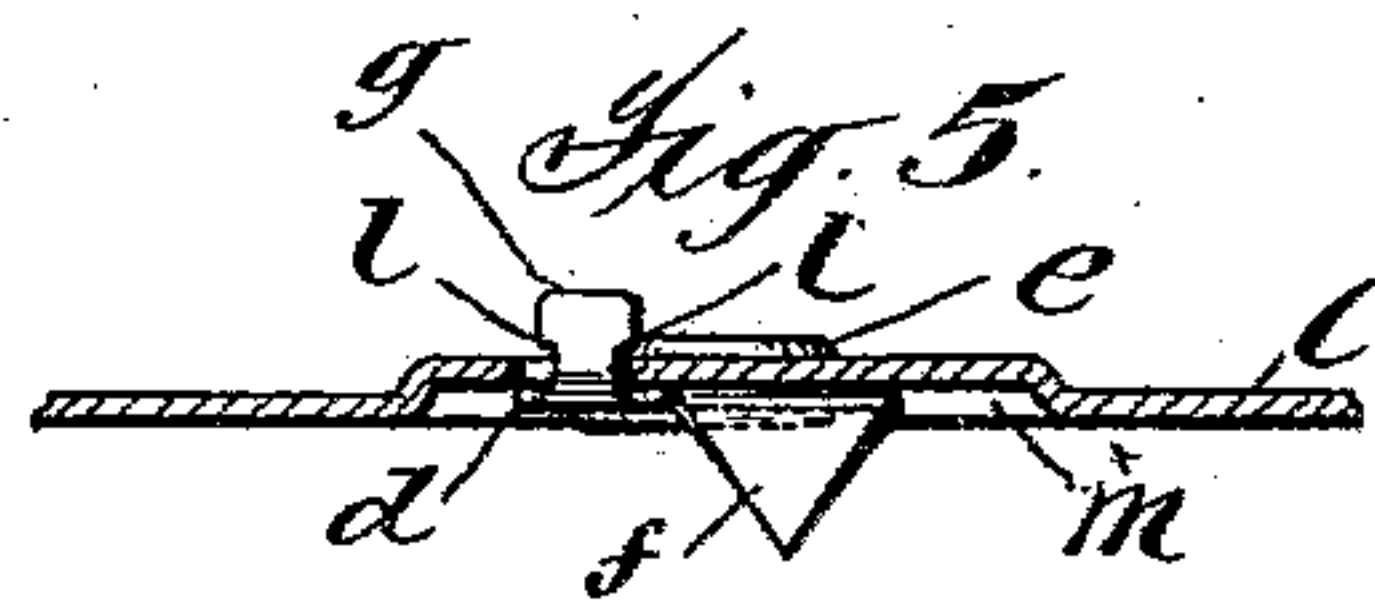
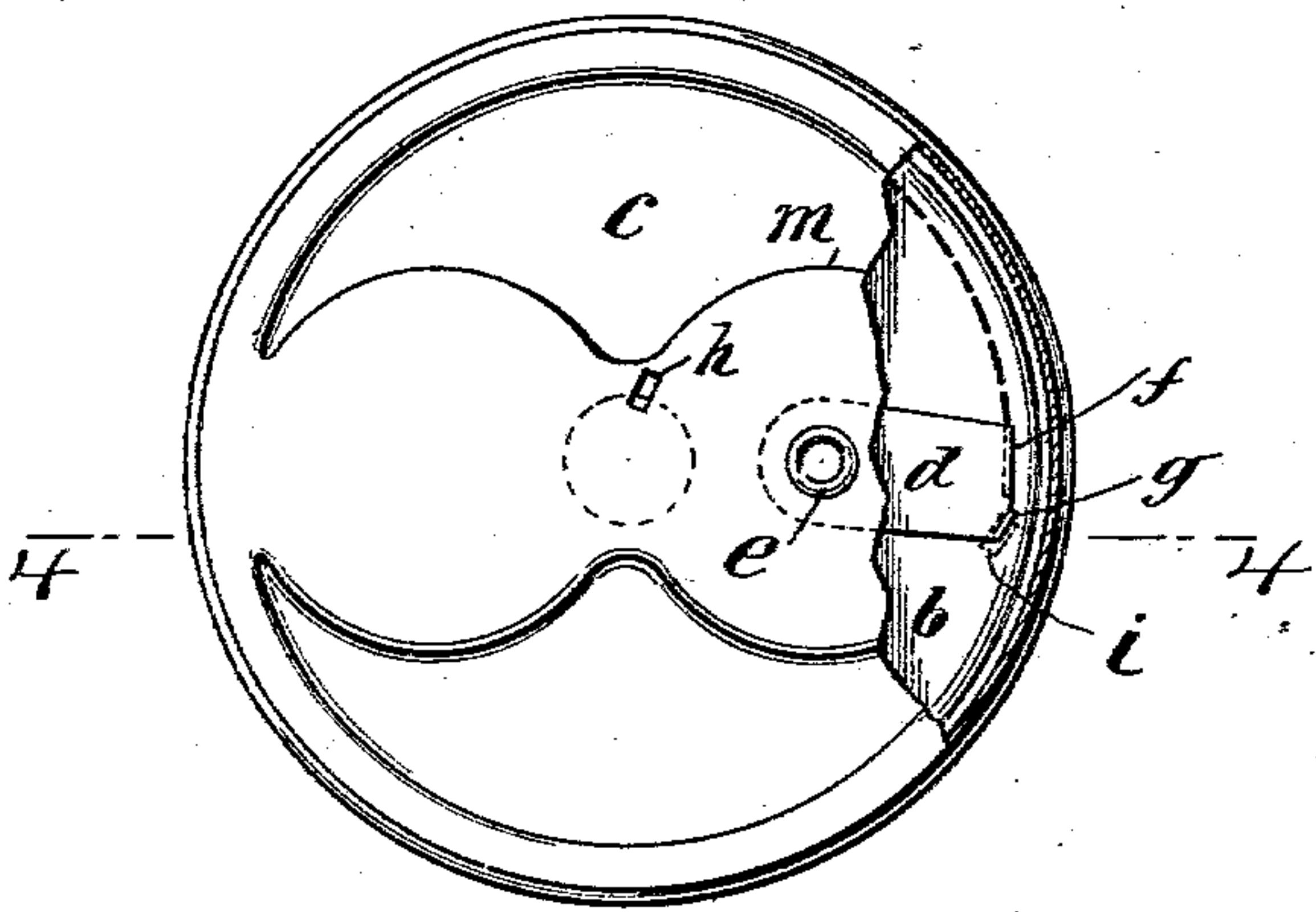
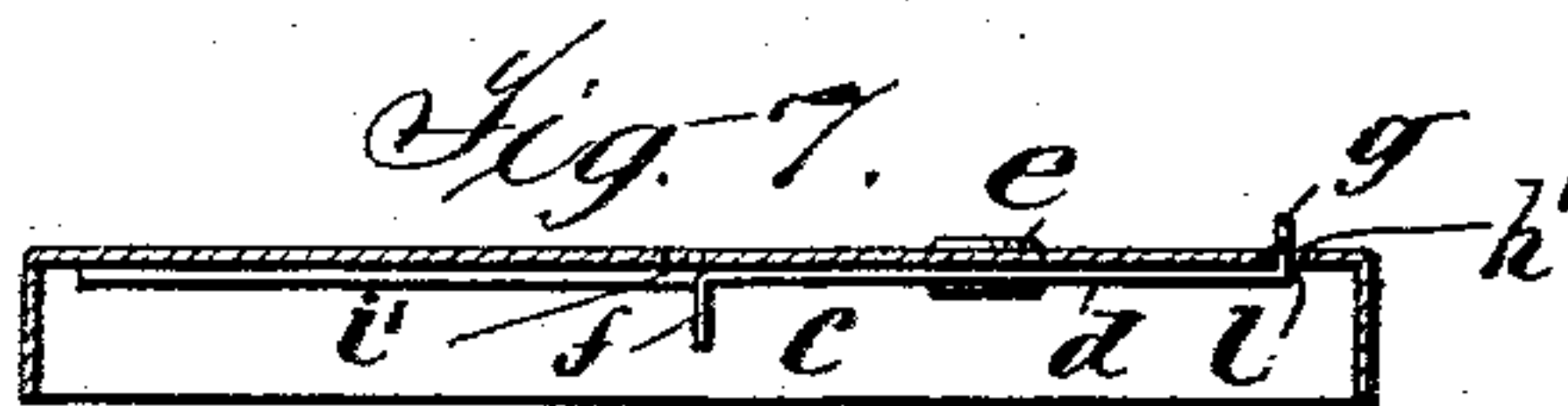
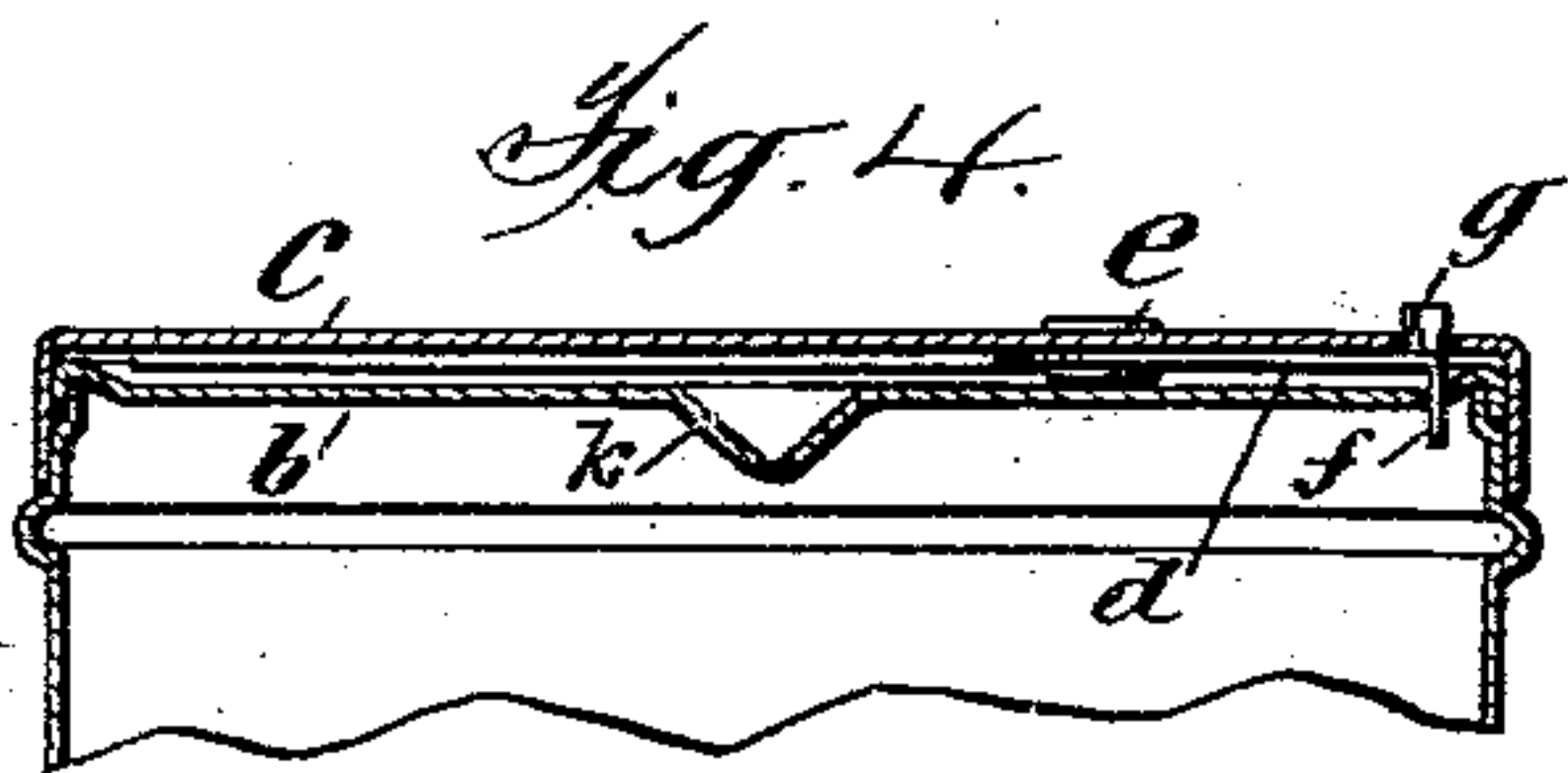
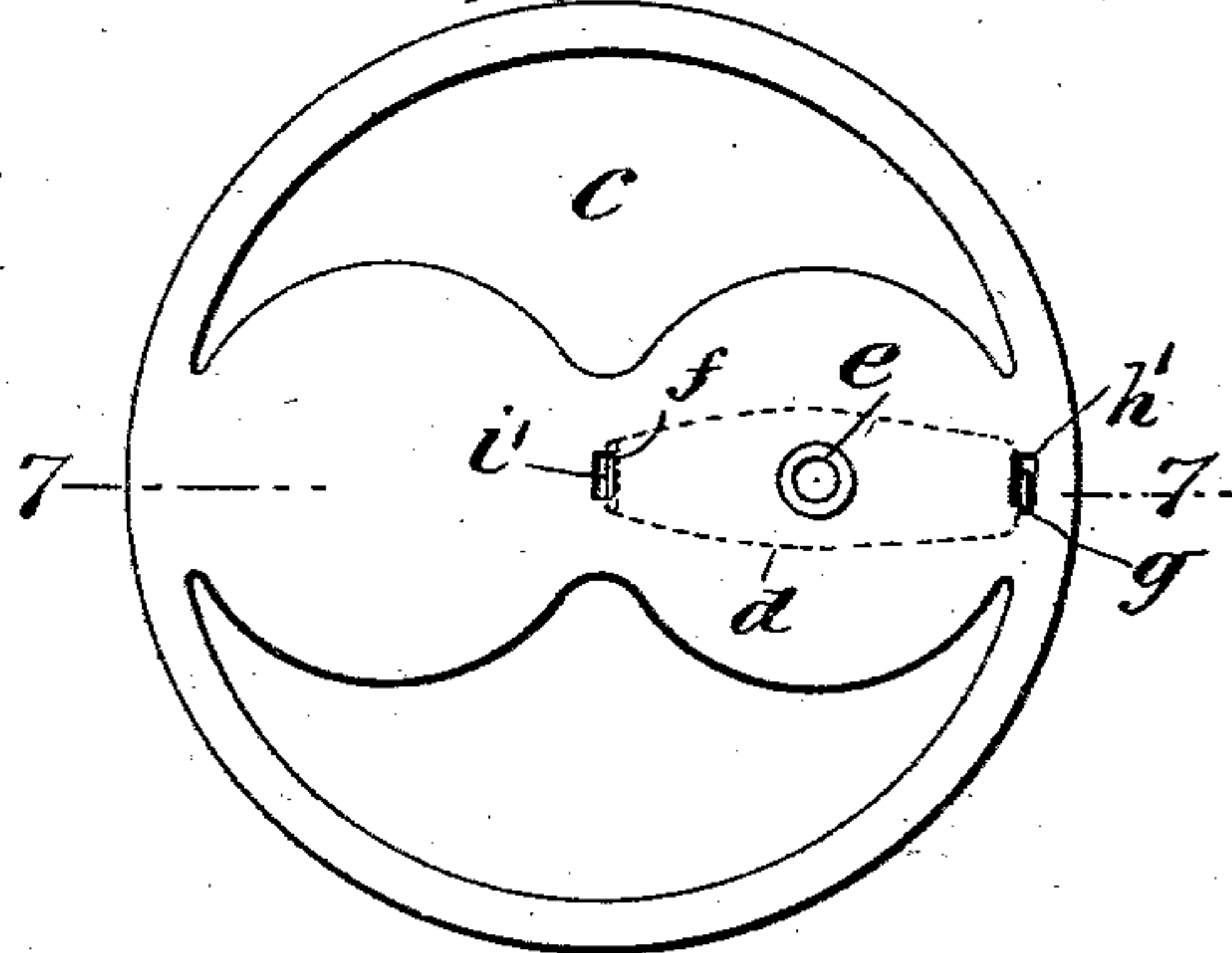


Fig. 6.



Attest:

T. F. Kehoe
Witness.

Inventor:

Washington I. Tuttle

by Philip Dwyer Reinhardt
Attys

UNITED STATES PATENT OFFICE.

WASHINGTON I. TUTTLE, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE AMERICAN TOBACCO COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CAN OR BOX STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 743,597, dated November 10, 1903.

Application filed March 31, 1902. Serial No. 100,688. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON I. TUTTLE, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Can or Box Structures, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to improvements in cans or boxes and cutters and loose covers for the same, the improvements of the present invention having reference particularly to hermetically-sealed cans or boxes of the
15 kind in which the can or box is provided with a loose cover carrying a cutter which when the cover is placed in position and rotated cuts out the end or top of the can or box, the cover then on removal of the end or top
20 thus cut out serving as the cover for the can or box.

The present invention consists in a peculiar construction of cutter pivoted to the loose cover of the can or box, in a loose cover having means coacting with the cutter whereby
25 the latter is positively locked against rotation in either direction while in cutting or non-cutting position on the cover, and in a can or box provided with a top or end having
30 a recess for receiving the end of the knife of the cutter in the non-cutting position of the cutter, so that the knife will not puncture the can or box, and thus destroy the hermetic sealing of the same.

35 In the accompanying drawings, Figure 1 is a top plan view of a can or box and a loose cover or cutter (the latter being shown in dotted lines in non-cutting position) embodying the improvements of the present invention.
40 Fig. 2 is a section of the same on the line 2 of Fig. 1. Fig. 3 is a view similar to Fig. 1, a portion of the cover being broken away so as to show the cutter, which is in cutting or operative position. Fig. 4 is a section on the line 4 of Fig. 3. Fig. 5 is a detail
45 in section, and on an enlarged scale, of the cover and its cutter. Fig. 6 is a plan view of a modified construction of cover and cutter, and Fig. 7 a section of the same on the line
50 7 of Fig. 6.

Referring to said drawings, and particularly to Figs. 1 to 5, which illustrate the preferred construction of cover and cutter, *a* represents the can or box body; *b*, its top or end; *c*, the loose cover of the can or box, and *d* the cutter. The cutter *d* is of spring metal and is pivoted at *e* to the underside of the loose cover *c*, as by a rivet, and is provided with a downwardly-bent end or knife *f*, which when the cutter is turned to cutting position, Fig. 3, is adapted
55 to be forced into the can-top *b* and on rotation of the cover to cut out the top of the can on a circular line close to the side of the can, as shown in Fig. 3. The cutter *d* is also provided with an upwardly-bent portion or stop
60 *g*, which in the non-cutting position of the cutter is designed to enter a slit or opening *h* in the cover (see Figs. 1 and 2) and when in said slit to positively lock the cutter against rotation in either direction. The cover *c* is
65 also provided with a second slit or opening *i*, which the stop *g* springs into when the knife is swung to cutting position, (see Figs. 3 and 4,) so as to lock the cutter against movement in either direction from this position.
70

To prevent accidental puncturing of the can-top by the knife *f* when the cover *c* is applied to the can or during packing, shipment, or storing, the can-top *b* is provided with a depression or recess *k* for receiving the knife *f*
75 in the non-cutting position of the cutter, as shown in Fig. 2. This depression or recess is central of the can-top, the knife *f* in its non-cutting position being also central of the top. The depression and knife may be otherwise
80 positioned, if desired; but the central position shown is preferred, for the reason that no matter in what position circumferentially of the can-body the cover may be placed the knife *f* when in non-cutting position will always be
85 in line with the recess. Another reason why this central position of the recess or depression and knife is preferred is that in this depression may be provided the opening through which the air in the can is exhausted by any
90 of the well-known vacuum processes, this opening being then soldered while the can is still *in vacuo*.

The stop *g* is undercut or notched at its sides, as shown at *l*, so as to hook over or in-
95 100

terlock with one edge of the slit *i* while the cutter is cutting, and thus aid in supporting and maintaining the cutter in proper cutting position. In the other or non-cutting position of the cutter the undercut or notched portion of the stop *g* hooks over or interlocks with one edge of slit *h*, and thus aids in retaining the cutter in proper position.

Although a single-arm pivoted cutter, such as shown in Figs. 1 to 5—that is, one in which the knife *f* and stop *g* are both located on a single arm and on one side of its pivot—is preferred, still a two-armed cutter may be employed, if desired. Such a two-armed cutter is shown in Figs. 6 and 7, the knife *f* being carried by one arm of the cutter and the stop *g* by the other arm. In such a construction the stop *g* will engage the outer opening *h'* of the cover in the non-cutting position of the cutter, as shown, and the opening *i'* in the cutting position of the cutter.

The under side of the cover *c* may be plain, but will preferably be provided with a slight depression *m*, in which the cutter *d* is pivoted, so that the surface of the cutter will be flush with the surface of the under side of the cover, as shown.

Other modifications and changes may be made in the construction of the can, cover, and cutter without departing from the present invention.

What is claimed is—

1. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover being provided with means adapted to engage the cutter in one of these positions and positively lock it against swinging movement in either direction, substantially as described.

2. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover being provided with means adapted to engage the cutter in each of these positions and positively lock it against swinging movement in either direction, substantially as described.

3. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover and cutter being provided with locking means coacting in one of these positions of the cutter to positively lock the latter against swinging movement, said locking means comprising an opening or slit in the cover and a stop on the cutter adapted to spring upwardly into said opening or slit, substantially as described.

4. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover and cutter being provided with

locking means coacting in both positions of the cutter to positively lock the cutter against swinging movement, said locking means comprising openings or slits in the cover and a stop on the cutter adapted to spring upwardly into said openings or slits, substantially as described.

5. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover and cutter being provided with locking means coacting in one of these positions of the cutter to positively lock the latter against swinging movement, said locking means comprising an opening or slit in the cover and a stop on the cutter adapted to spring upwardly into said opening and to hook over the edge thereof, substantially as described.

6. A loose rotatable cover for cans or boxes, bearing a cutter secured thereto by a vertical pivot upon which said cutter is adapted to be swung from inoperative to operative position, said cover and cutter being provided with locking means coacting in both positions of the cutter to positively lock the cutter against swinging movement, said locking means comprising openings or slits in the cover and a stop on the cutter adapted to spring upwardly into said openings or slits and to hook over the edges thereof, substantially as described.

7. A loose rotatable cover for cans or boxes, bearing a cutter-arm secured thereto by a vertical pivot upon which said cutter-arm is adapted to be swung from inoperative to operative position, said cutter-arm having on one side of its pivot a downwardly-projecting knife and an upwardly-projecting stop, the cover being provided with an opening or slit for engaging the stop, substantially as described.

8. A loose rotatable cover for cans or boxes, bearing a cutter-arm secured thereto by a vertical pivot upon which said cutter-arm is adapted to be swung from inoperative to operative position, said cutter-arm having on one side of its pivot a downwardly-projecting knife and an upwardly-projecting stop, the cover being provided with a pair of openings or slits for engaging the stop in the operative and inoperative positions of the cutter, substantially as described.

9. A can or box provided with a top or end having a substantially central depression and with a loose cover bearing a cutter-arm secured thereto by a vertical pivot upon which said cutter-arm is adapted to be swung from inoperative to operative position, said cutter-arm having a downwardly-projecting knife which in the inoperative position of the cutter-arm is in line with said depression, substantially as described.

10. A can or box provided with a top or end having a depression and with a loose cover bearing a cutter-arm secured thereto by a vertical pivot upon which said cutter-arm is

adapted to be swung from inoperative to operative position, said cutter-arm having a downwardly-projecting knife which in the inoperative position of the cutter is in line with
5 said depression and said cover being provided with means for locking said cutter in inoperative position, substantially as described.

11. A loose rotatable cover for cans or boxes, provided with a depression on its under side and bearing a cutter located in said
10 depression and secured to the cover by a ver-

tical pivot upon which it is adapted to be swung from inoperative to operative position, substantially as described.

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

WASHINGTON I. TUTTLE.

Witnesses:

DANL. AMMER,
FRANK A. CRIST.