

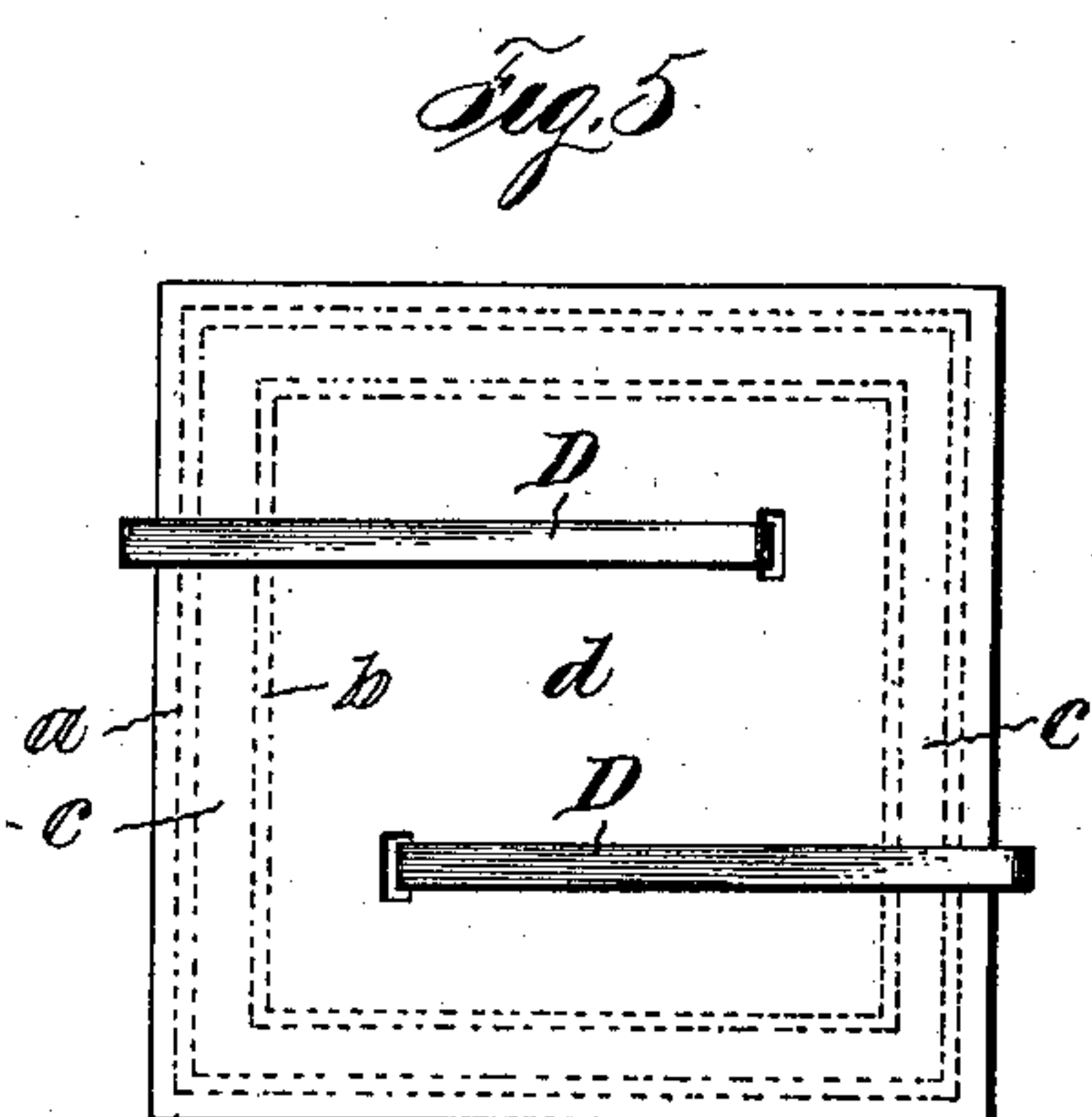
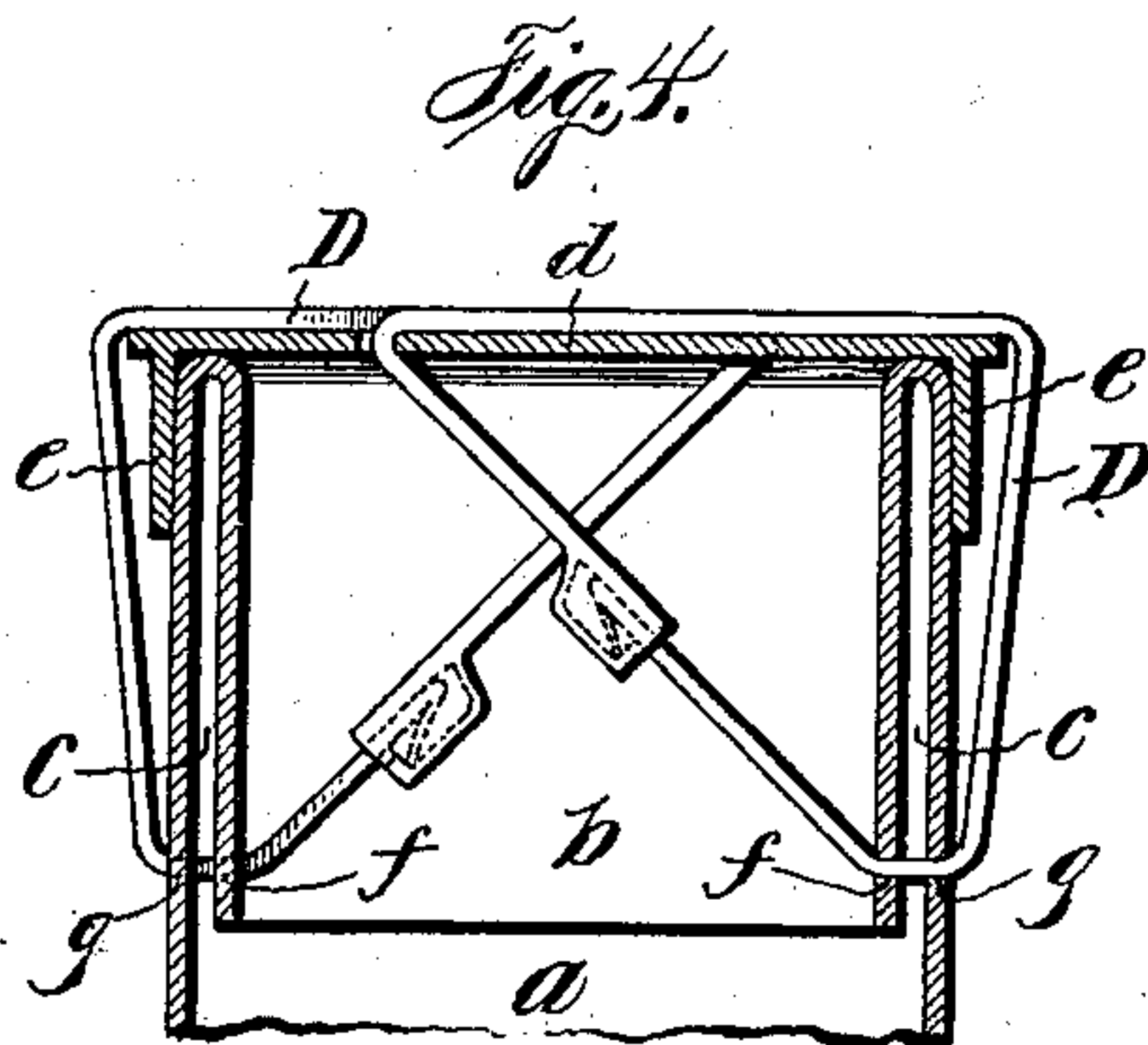
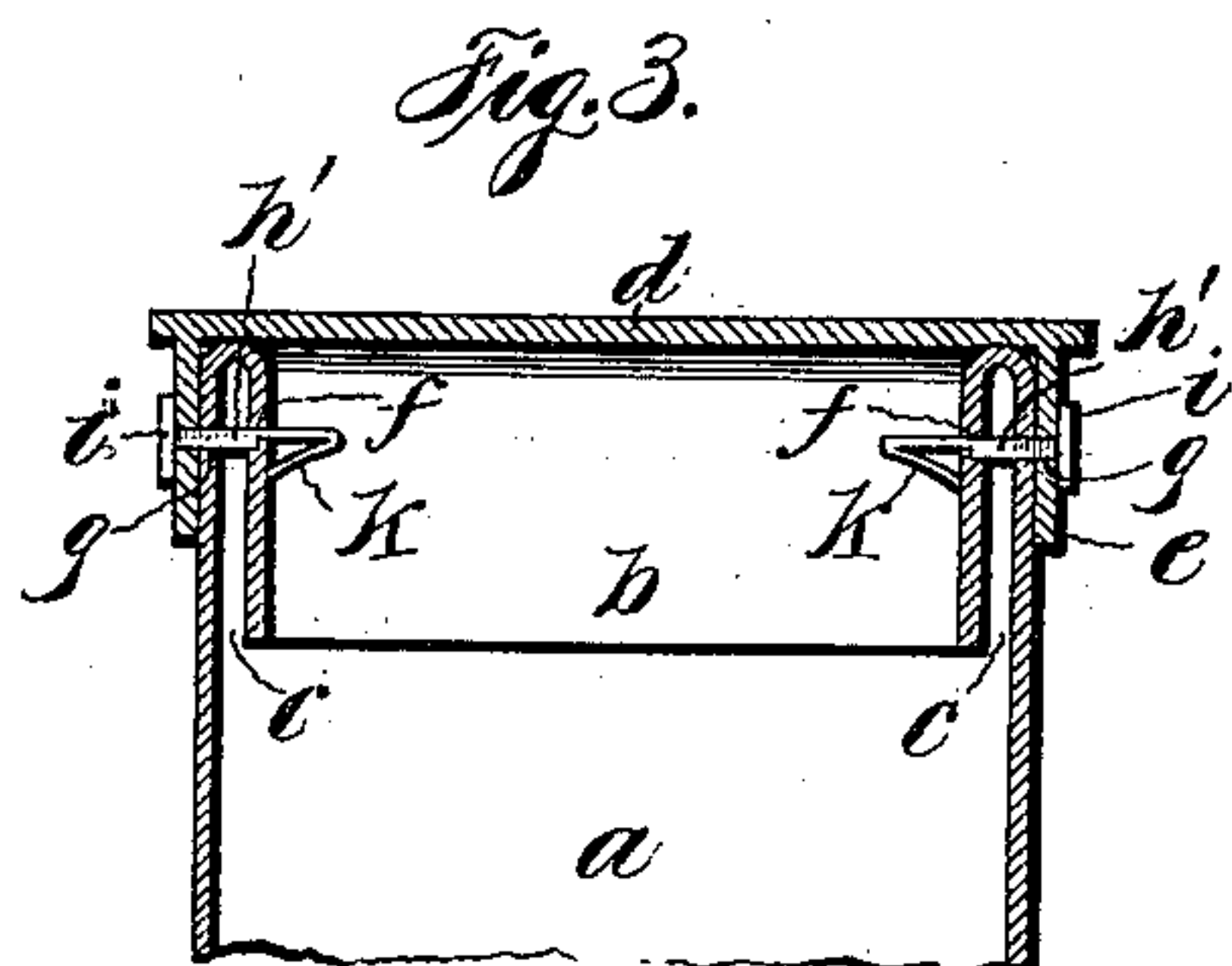
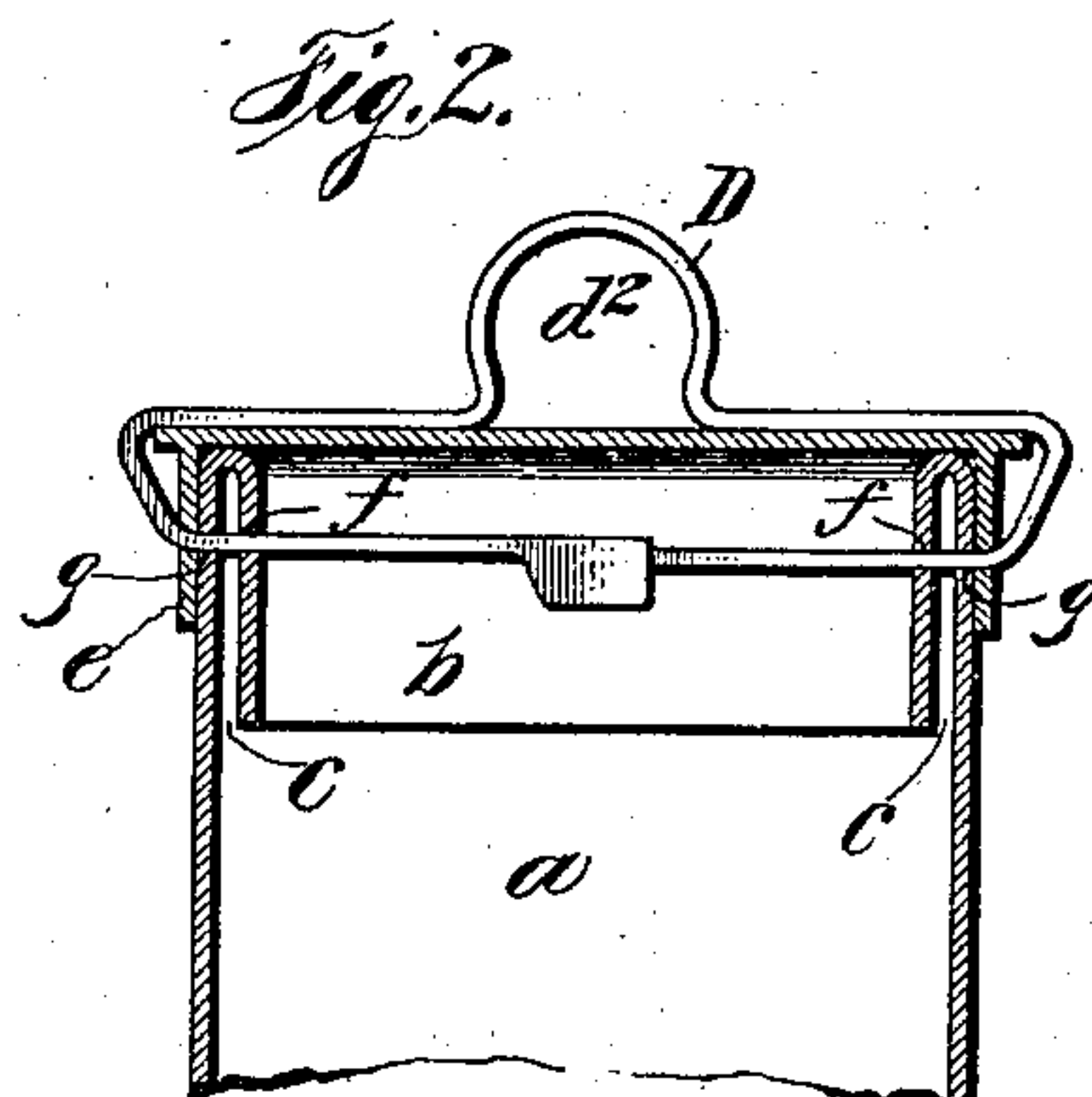
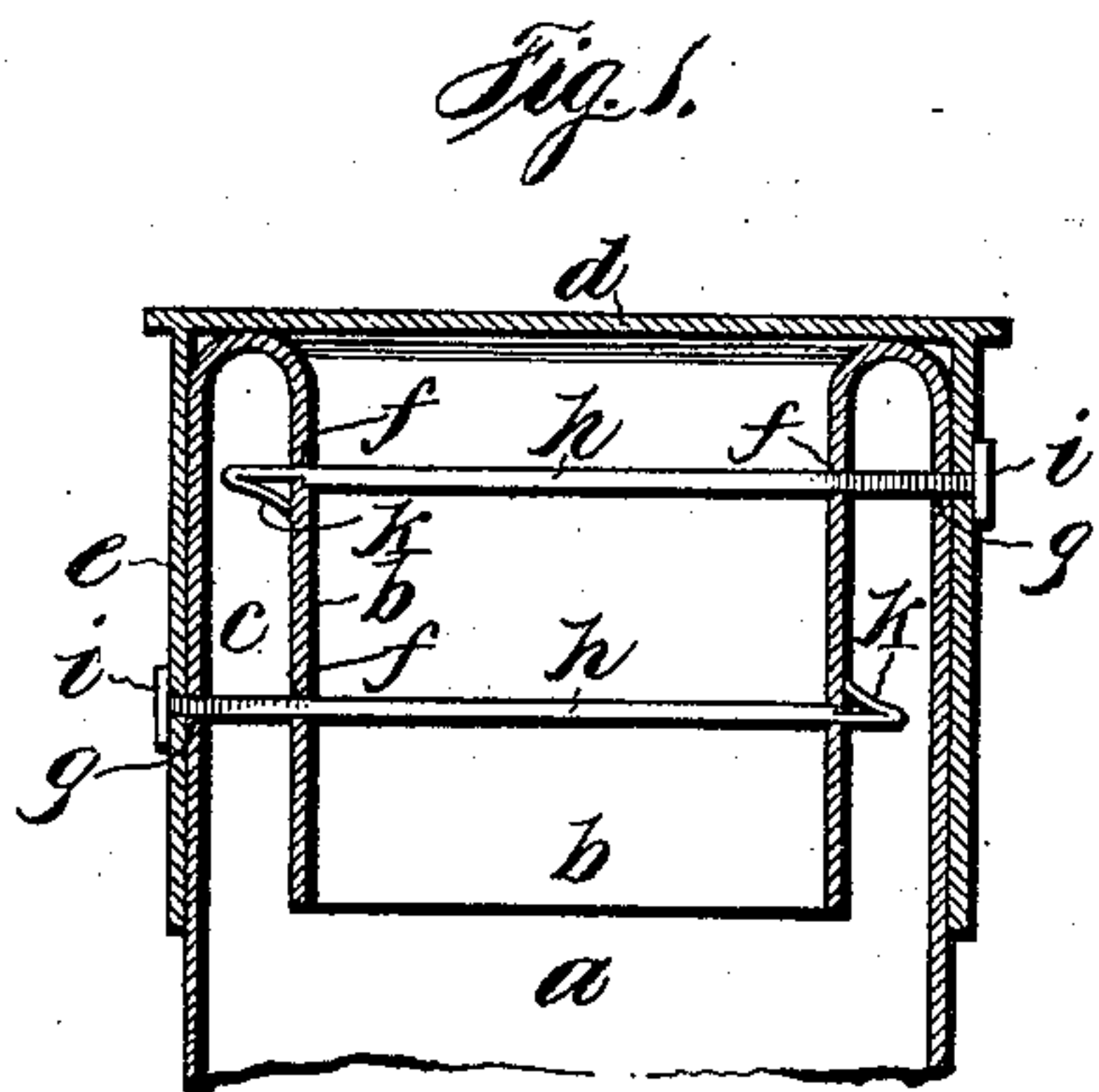
No. 692,766.

Patented Feb. 4, 1902.

C. CARR.
NON-REFILLABLE BOTTLE.

(Application filed May 21, 1901.)

(No Model.)



Witnesses:
A. Ober.
A. Lommoners

Inventor,
Caroline Carr.

by *Henry J. Carr*
Attys.

UNITED STATES PATENT OFFICE.

CAROLINE CARR, OF SUNDERLAND, ENGLAND.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 692,766, dated February 4, 1902.

Application filed May 21, 1901. Serial No. 61,213. (No model.)

To all whom it may concern:

Be it known that I, CAROLINE CARR, spinster, a subject of the King of Great Britain and Ireland, residing at and whose post-office address is 14 The Terrace, Roker, Sunderland, in the county of Durham, England, have invented certain new and useful Improvements in Closing Bottles, Jars, and Like Vessels to Prevent Fraudulent Refilling or Interference, (for which I have applied for a patent in Great Britain under No. 19,164, dated October 26, 1900,) of which the following is a specification.

My invention relates to an improved non-refillable bottle of the type set forth in my British Patent No. 15,935 of 1899. In this prior patent I have set forth a number of devices applicable for the closing of a bottle or jar in such a manner that it cannot be fraudulently opened or the contents abstracted or exchanged without traces of the operation being visible afterward. Further experiment has, however, shown that improvement can still be made in the closing device, both as regards rendering it more convenient for manufacture and also more certain in its operation.

This invention relates to a new construction of closing device, which I find preferable to that set forth in my British patent hereinabove referred to, and comprises devices to lock a closure on a vessel provided with a reentrant mouth.

In order to fully set forth this invention, I have illustrated the same in the accompanying drawings, in which—

Figures 1 and 3 show sections of the mouth of my improved receptacle or bottle-neck and a closing device in which the cover fits the outside of the neck and is provided with a depending flange and substantially straight locking devices inserted from the outside through the closure and main and reentrant walls at the mouth. Figs. 2 and 4 are similar views of a modified form of locking device; and Fig. 5 is a plan view of Fig. 4, showing the relative positions of the sealing device.

In all of the figures herein shown the mouth of the receptacle or bottle-neck has a main

wall *a* turned in upon itself at the lip and caused to descend inward, thereby forming the reentrant portion *b* for a certain distance from the lip. There is thus formed between the main wall *a* and reentrant portion *b* an annular air-space *c*, that prevents the cork or other internal closure from coming in contact with the outer wall *a*. The outer wall *a* is provided with perforations *g* and the reentrant portion with perforations *f*, preferably, though not necessarily, in a horizontal line with those *g* in the wall *a*.

A closure *d* is provided, having a depending flange *e* fitting the outer wall *a* of the mouth of the receptacle or bottle-neck, and the sealing devices, in the form of spring-fasteners, are caused to pass through the closure either at one place or another and through the perforations *f* and *g*.

Referring more particularly to Figs. 1 and 3, I have here shown spring-fasteners of the same form, those in Fig. 1 being long pins *h*, provided with heads *i* and recurved spring ends *k*. These pins *h* pass through the flange *e* of the closure *d*, a perforation *g* in the main wall, and perforations *f* in opposite sides of the reentrant portion *b*, terminating in the annular air-space *c*, so that their recurved spring ends *k* will assume substantially the position shown and be locked against said reentrant portion, thereby preventing the withdrawal of the pins.

In Fig. 3 the spring-fasteners *h'* are short and only take through one side of the reentrant portion *b*, so that their spring ends *k* spring behind the interior wall of the reentrant portion *b* and not within the annular air-space *c*.

In Fig. 2 I have shown a modified form of locking device. *D* is substantially a long pin, each end of which is passed through the depending flange *e* of the closure, both the main wall and reentrant portion, and caused to meet in the center and engage one within the other in the manner shown, a loop *d'* being provided in the middle thereof to form a handle.

In the construction shown in Figs. 4 and 5 duplicate fasteners *D* of the type shown in Fig. 2 and slightly modified in construction by the omission of the loop *d'* are shown.

In these figures the fastener D is not shown as passing through the flange *e* of the closure, which it might readily do.

The operation of my improved device will be obvious from the drawings. The lid or cover having been put in place, whether the same be internal or external to the bottle-neck, the fastening devices are then caused to engage through the perforations provided for the purpose, and when the springs have once acted and the fasteners engaged firmly with the bottle-neck the stopper or cover cannot be removed without breaking some portion of the device, usually the neck of the bottle. The devices herein shown are simple in construction and capable of being produced on the manufacturing scale.

Although in the foregoing description I have spoken of the bottle as being the form of receptacle most commonly constructed for the purpose aforesaid, yet I would have it understood that I include in the term "bottle" all receptacles for solids or liquids capable of being securely closed in the manner set forth against fraudulent removal or alteration of the contents.

The term "spring-fastener" includes any pattern of metal strip, loop, or wire adapted to be pushed through perforations in the other portions of the device and to lock itself therein by aid of its own elasticity.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination with a receptacle having a main and a reëntrant wall at its mouth and perforations through both of them, of a closure for the receptacle and metallic locking means passing through the closure and the perforations in the main and reëntrant

walls and a device on the sealing means to prevent withdrawal thereof, substantially as set forth.

2. The combination with a receptacle having a main and a reëntrant wall at its mouth and perforations in both of them, of a closure having a depending flange and a resilient metallic locking device organized to spring into locked position within the reëntrant portion at the mouth of the receptacle to prevent withdrawal, and pass through said closure and the perforations in said walls, substantially as set forth.

3. The combination with a receptacle having a main and a reëntrant wall at its mouth and perforations in both of them, of a closure having a depending flange and a resilient metallic locking device having a recurved spring end and adapted to pass through the perforations in said walls and flange in one direction and be locked within the reëntrant portion at the mouth of the receptacle, substantially as set forth.

4. The combination with a receptacle having a main and a reëntrant wall at its mouth and perforations in both of them, of a closure having a depending flange exterior of the mouth of the receptacle, and a locking device of spring metal having a central bend to form a bail and ends passing through said walls and flange and adapted to interlock within the reëntrant portion at the mouth of the receptacle, substantially as described.

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

CAROLINE CARR.

Witnesses:

JAMES ANDREW HARVEY,
JOHN FRANCIS GAIRNS.