

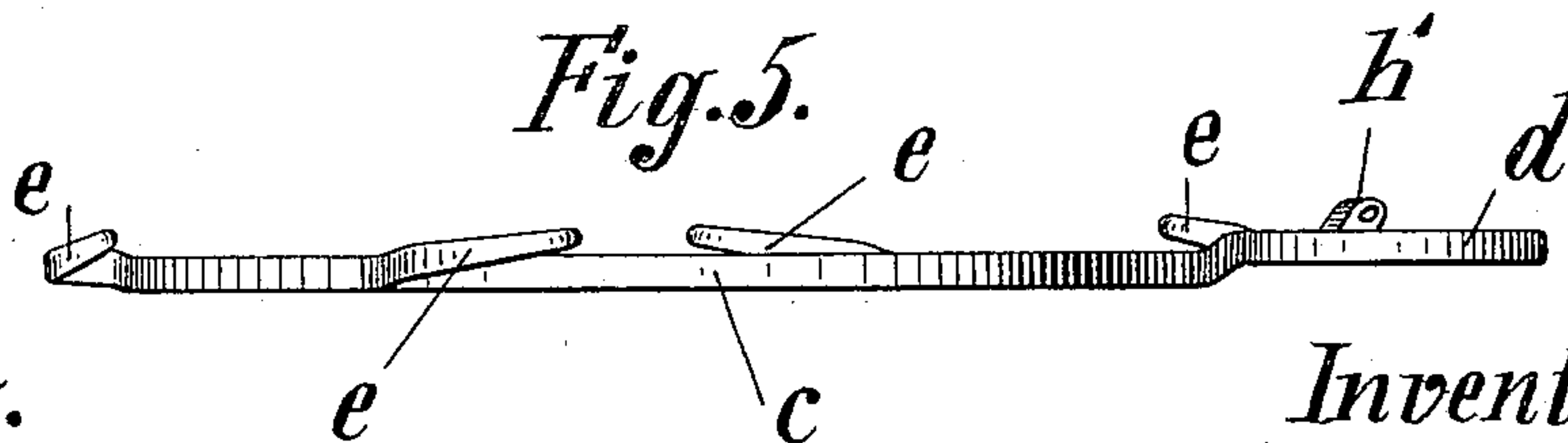
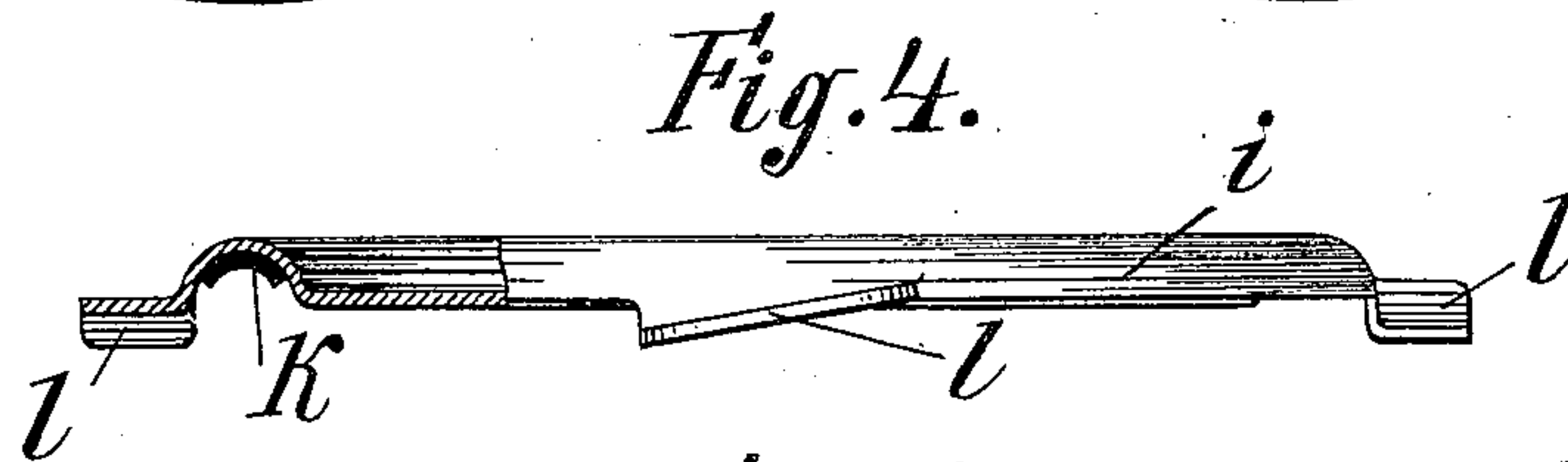
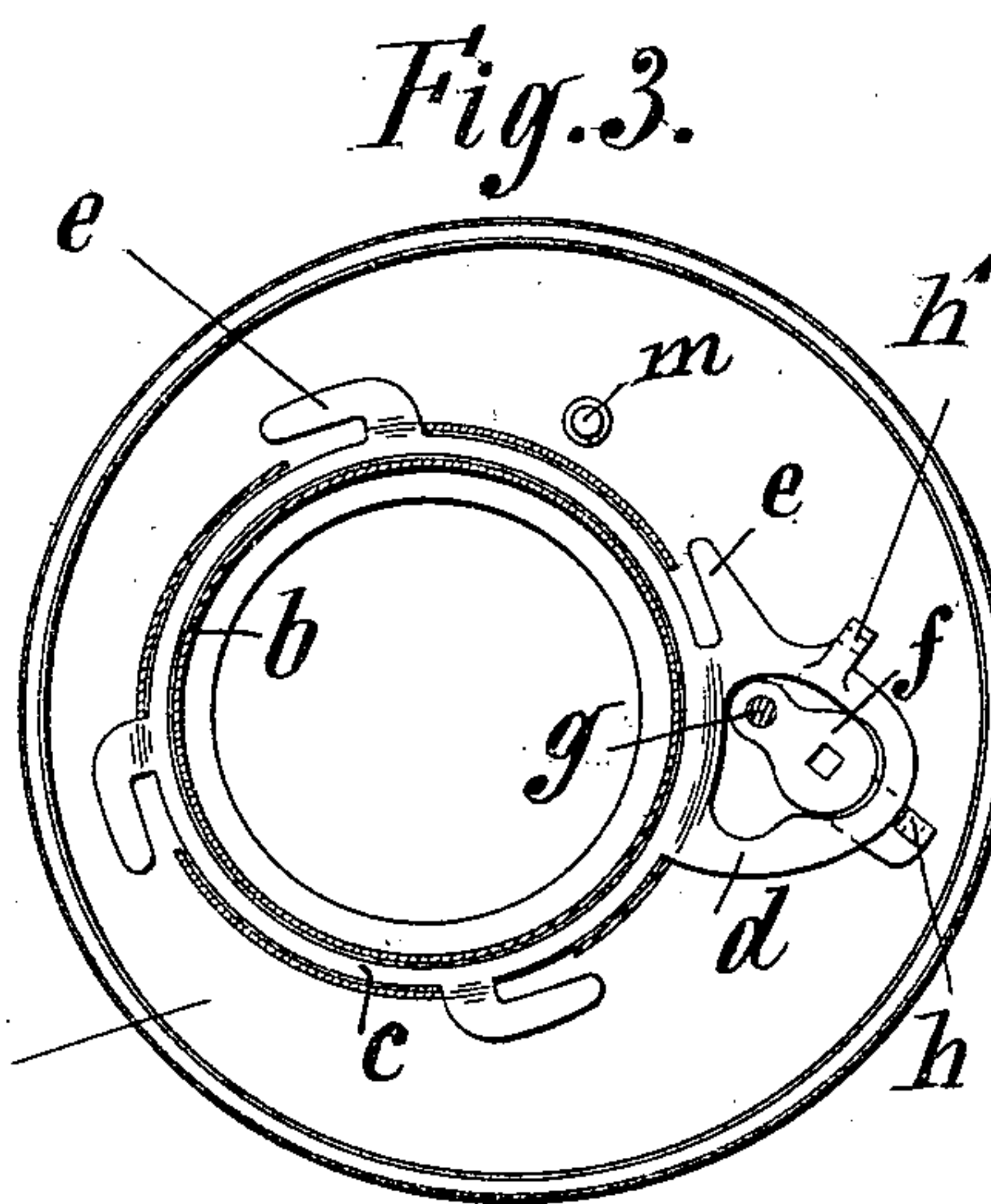
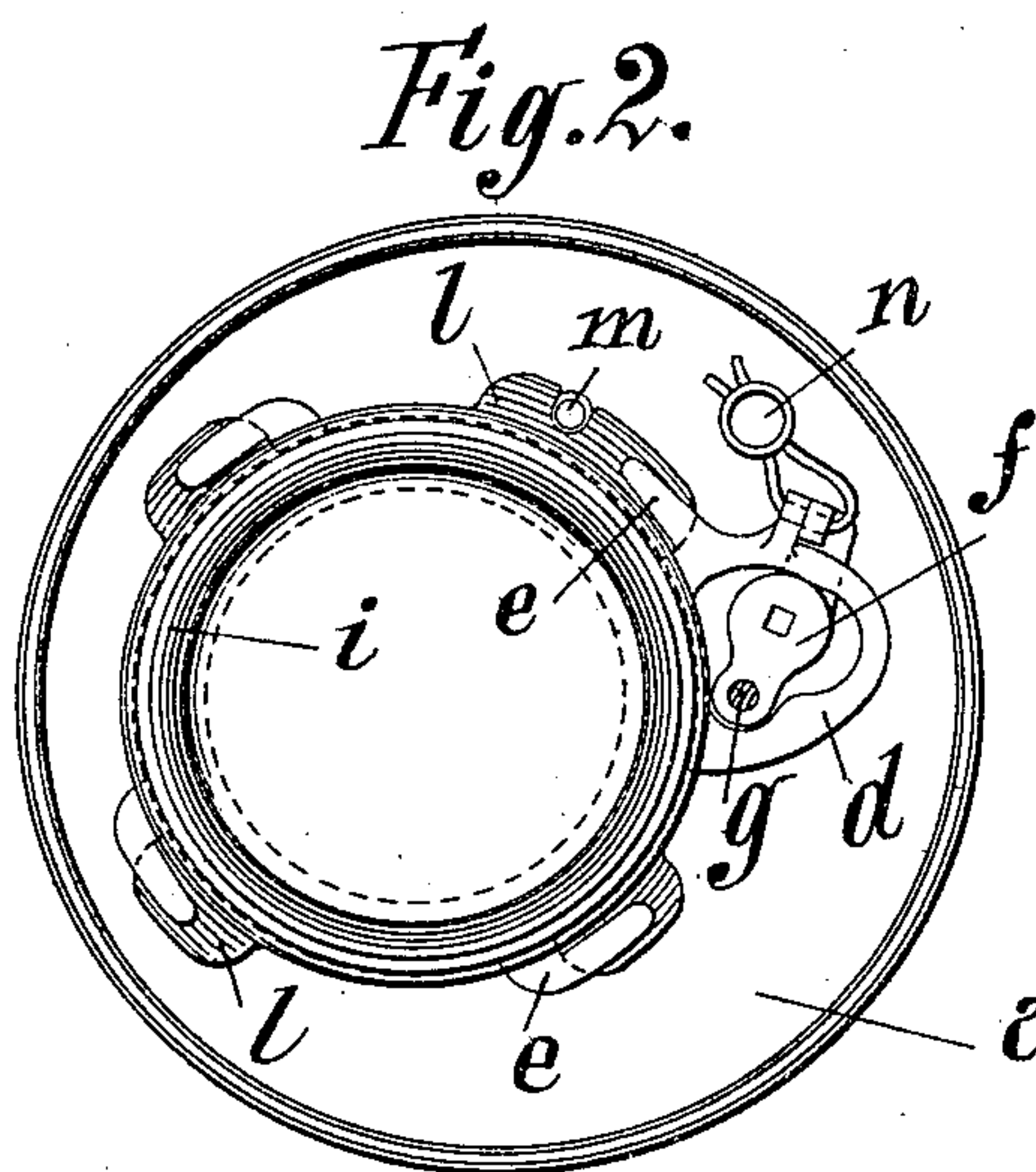
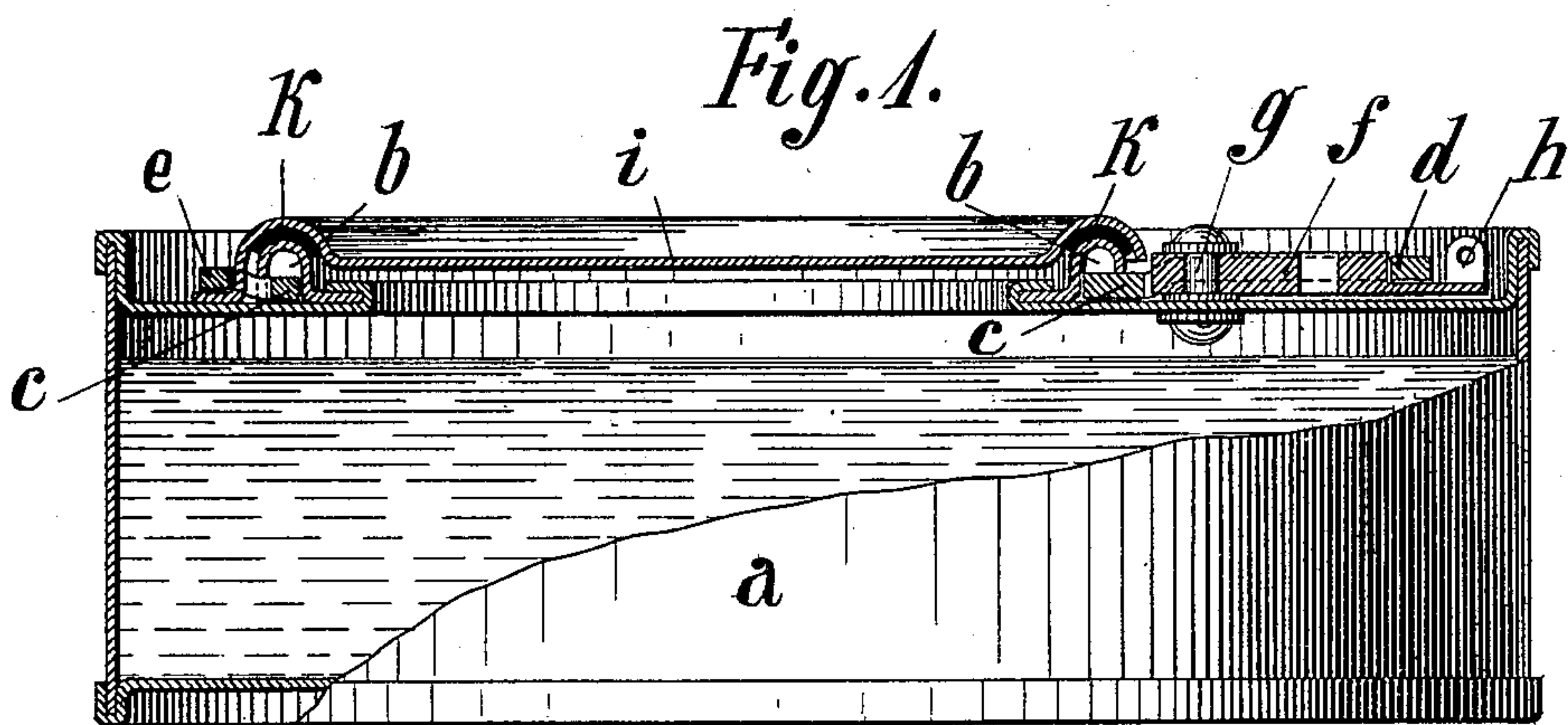
No. 631,907.

Patented Aug. 29, 1899.

A. SCHMALENBACH.
AIR AND WATER TIGHT COVERING FOR VESSELS.

(Application filed Dec. 28, 1898.)

No Model.)



Witnesses.

William Eschenwein

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AUGUST SCHMALENBACH, OF DUISBURG, GERMANY.

AIR AND WATER TIGHT COVERING FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 631,907, dated August 29, 1899.

Application filed December 28, 1898. Serial No. 700,558. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHMALENBACH, manufacturer, a subject of the King of Prussia, German Emperor, residing at Duisburg, Kingdom of Prussia, German Empire, have invented an Improved Covering for the Air-Tight and Water-Tight Closing of Vessels and Receptacles of All Kinds, of which the following is a specification.

The object of the present invention consists in an improved covering for the air-tight and water-tight closing of receptacles of all kinds, which covering distinguishes itself from those hitherto known both by its easy manipulation and by its entirely reliable action. All the drawbacks which attach to the device already known for a similar purpose are obviated in the present construction.

Referring to the accompanying drawings, in which the invention is illustrated, Figure 1 shows a transverse section, Fig. 2 a view from above in the closed position, Fig. 3 the same in the open position, and Fig. 4 a side view, of the lid, and Fig. 5 a side view of the locking-bolt.

To the receptacle *a* is attached the high projection *b*, surrounding the opening thereof and in which the revoluble closing-ring *c* is placed, Fig. 1. This ring is provided with four projections *e*, bent at an angle upward, Figs. 3 and 5. The closing lid *i*, which is shaped to correspond to the shape of the piece *b*, but is, moreover, provided with the inserted rubber washer *k*, also possesses at its periphery four sloping projections *l*, Figs. 2 and 4. In order to close the receptacle, the lid *i* is put in place and the closing-ring *c* is revolved, on which the projections *e* of the said ring, which fit in corresponding cavities of the piece *b*, Fig. 3, engage over the projections *l* of the lid *i*. Owing to the sloping position of both sets of projections, which, moreover, may be in greater or less number, according to the size of the closing device, the lid, with its rubber washer *k*, is pressed upon the piece *b*, and in this manner the receptacle is closed air-tight.

The action of the closing device is as follows: In order to prevent the lid from revolving, one of the four sloping pieces *l*, arranged on the lid, is cut out for the safety-bolt *m*, Fig. 2. Further, the revoluble closing-ring *c* is developed into the loop *d*, which is also cut, as shown. Within the piece thus formed

there is fitted a revoluble eccentrically-actuated disk *f*, which disk revolves upon the bolt *g*, firmly attached to the receptacle and is provided with a square hole for a corresponding square key. Further, there is attached to the disk *f* another perforated piece *h*, engaging under the edge of the piece *d* and bent forward and upward. This piece *h* has corresponding to it a similar piece *h'*, fixed to the loop *d*. When the vessel is closed and the lid has been inserted, the displaced eccentric disk *f*, Fig. 3, is moved by means of the square key toward the safety-bolt *m*. The handle of the square key is bent to one side, so that it facilitates its engagement at a right angle to the axle of the eccentric disk *f*, and thus enables considerable pressure to be exerted on revolving the same. In consequence of the curved aperture of the loop the locking-ring *c* will then be turned and at the same time the projections *e* of the closing-ring *c*, which reveal in corresponding cavities of the piece *b*, Fig. 3, will be pressed against the fixed projections of the lid, and the lid will consequently be firmly pressed, together with its washer *k*, upon the projection *b*, thus producing an air and water tight closure which is reliable under all circumstances. When the disk *f* is fully revolved, its projections *h* rest against the projections *h'* of *d*, so that by the application of the seal *u*, Fig. 2, attached through the two holes of the projection, the unauthorized opening of the receptacle can be prevented.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

An improved closing device consisting of, a closing-ring *c* provided with wedge-shaped projections *e*, a lid *i* provided with wedge-shaped projections *l* against which said projections *e* are adapted to press means for preventing motion of the lid, said closing-ring *c* being also provided with a curved loop *d* and an eccentric disk *f* in said loop, adapted to be actuated by means of a square key to thereby cause a firm pressure between said projections *e* and *l* and effect an air and water tight closure, substantially as described.

AUGUST SCHMALENBACH.

Witnesses:

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