H. A. CHRISTENSEN & H. C. M. ANDREASEN.

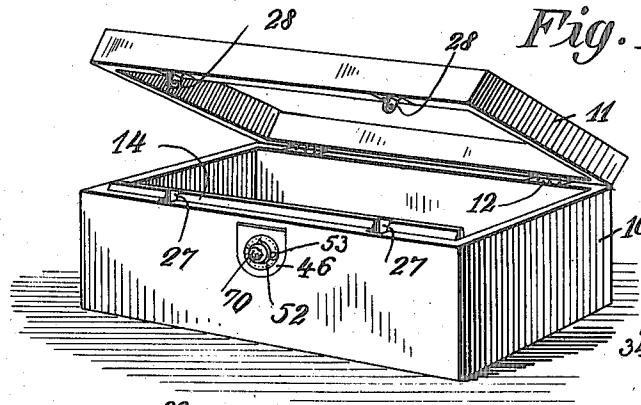
LOCK.

APPLICATION FILED APR. 18, 1917.

1,255,583. Patented Feb. 5, 1918.

2 SHEETS—SHEET 1.

Fig. 1.



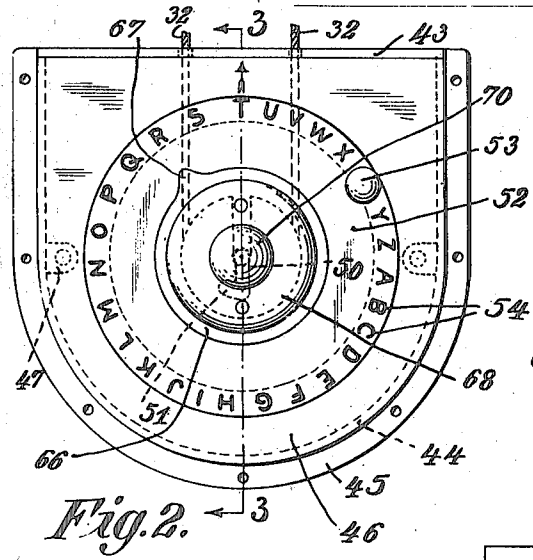


Fig. 2.

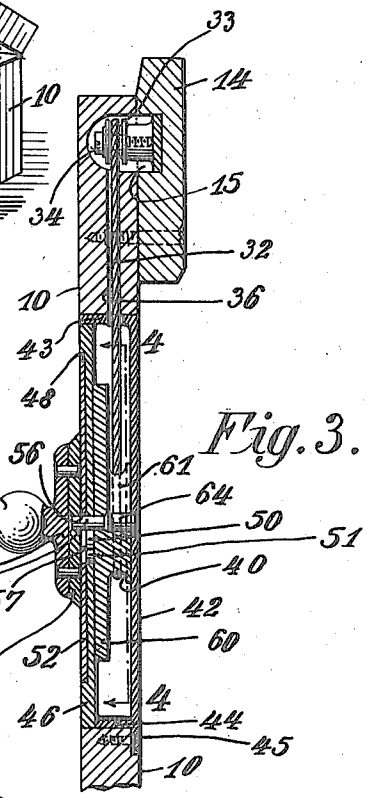


Fig. 3.

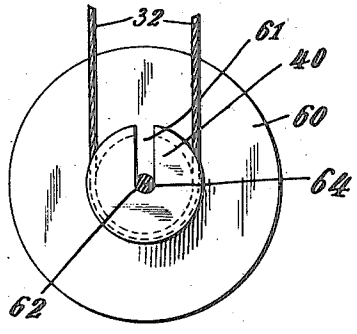


Fig. 4.

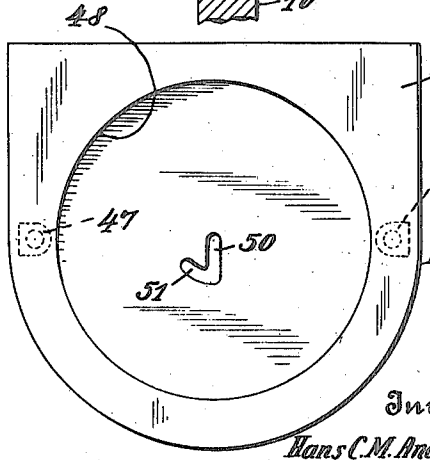


Fig. 5.

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2 SHEETS—SHEET 2.

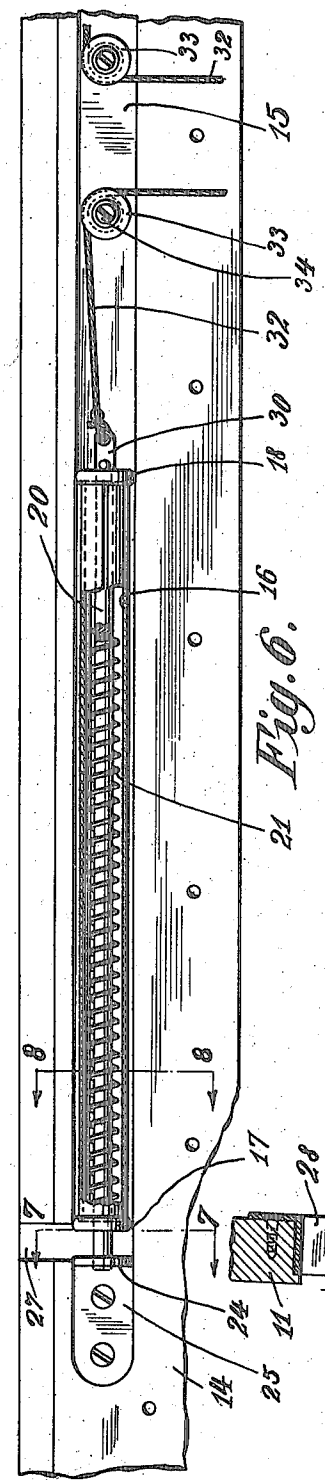


Fig. 6.

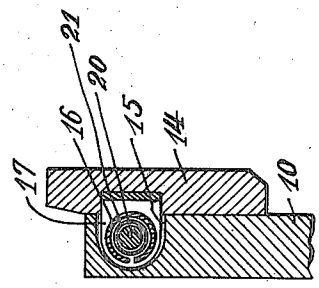


Fig. 8.

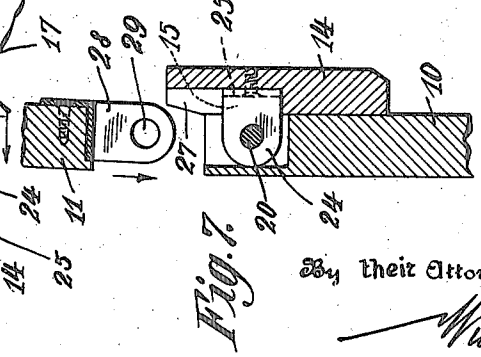


Fig. 7.

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UNITED STATES PATENT OFFICE.

HANS ANTON CHRISTENSEN AND HANS CHRISTIAN MARIUS ANDREASEN, OF CLIFFSIDE, NEW JERSEY.

LOCK.

1,255,583. Specification of Letters Patent. Patented Feb. 5, 1918.

Application filed April 18, 1917. Serial No. 162,912.

To all whom it may concern:

Be it known that we, HANS ANTON CHRISTENSEN and HANS CHRISTIAN MARIUS ANDREASEN, subjects of the King of Denmark, and residents of Cliffside, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locks, and particularly to types adapted for containers, such as trunks, suitcases, portfolios, and the like.

The principal object of the invention is to provide a lock by means of which the cover or hinged portion may be positively and securely engaged to the body portion in an easy and expeditious manner, without the use of a key.

A further object is to provide a lock in which the bolt may be held in either a locked or unlocked position, and finally, to provide such locks in forms which are inexpensive to construct, durable and simple in nature, easy to apply, and operate, and which present a pleasing appearance.

These and other like objects are attained by the novel construction and combination of parts hereafter described and shown in the accompanying drawings, forming a material part of this disclosure, and in which:—

Figure 1 is a perspective view showing a container partially open and indicating the application of the invention.

Fig. 2 is an enlarged front elevational view of the lock.

Fig. 3 is a further enlarged transverse sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a vertical sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is a similar front view of the lock plate, the rotative parts having been removed.

Fig. 6 is a fragmental front and elevational view, indicating the application of the bolt.

Fig. 7 is a transverse sectional view taken on line 7—7 of Fig. 6, and

Fig. 8 is a similar transverse sectional view showing the parts in engagement, the section being taken on line 8—8 of Fig. 6.

In the drawings, the numeral 10 represents the main or body portion of the container, to which is attached a cover 11 by means of the hinges 12, a reinforcing strip 14 being rigidly engaged with the inner front edge of the container body 10.

Partially formed in the strip is a longitudinal recess 15, containing near its ends rigid tubes 16, having perforate heads 17 and 18, through which pass bolts 20, encircled by coiled springs 21, the latter being so arranged with reference to the bolts as to keep them in a normally outward position, as shown in Fig. 6, the extreme outer end of the bolts being received in openings formed in the flanged keepers 24, secured by the feet 25 to the strip 14, in register with the recess 15.

Secured to the cover 11 are downwardly extending plates 28, containing eyes 29, the plates passing through openings 27 and alining with the bolts, so that when the latter are withdrawn, the lid can be tightly shut, whereupon the springs will press the bolts through the eyes rigidly holding the lid or cover engaged with the body.

The opposite inner ends of the bolts 20 are furnished with links 30, in which are engaged the ends of the cord or cable 32, passing over sheaves 33, secured by the pivot screws 34 at the bottom of the recess, the bight of the cord passing down through the slots 36, and around the annularly grooved element 40, forming a loop, the other end of the cord being engaged with a similar construction upon the opposite side of the container.

Secured to the face of the container is the locking mechanism, comprised of a plate 42, having a straight, flat flanged upper end 43, and an arcuately curved lateral and bottom flange 44, the plate 42 being continued beyond the latter flange into a margin 45 which may be secured to the interior of the container wall as shown best in Fig. 3.

A plate 46, suited to the profile of the lock frame is secured to it by the lugs 47 and has

formed in its front surface an annular recess 48, at the center of which is a through opening communicating with an elongated slot 50, having an angularly turned lower portion 51; the recess is receptive of a plate 52, provided with a raised operating knob 53, and a plurality of significant characters 54 upon its face contiguous to its periphery, and has a central opening 56, from which extends a slot 57, equivalent in length to that of the slot 50.

Interiorly of the cover plate 46, is an annular disk 60, upon which the grooved element 40 is rigidly engaged, in the latter of which is formed a slot 61 leading from a central passage 62, into which extends a stud 64, rigidly engaged in the frame plate 42, the length of the stud 64 being just sufficient to clear the disk 60.

Secured in the center of the disk 60 upon the side opposite the grooved element 40, is a pin 65, the same extending through the slots 50 and 57 in the plate 46 and disk 52 and being rigidly connected with an annular beveled plate 66 with which is formed an index or projecting finger 67, the disk preferably being made of relatively soft material so as not to deface or mark the disk 52.

Engaged with the disk 60 is the base 68 of an operating knob 70, by means of which the lock is manipulated.

As the slot 50 is preferably located vertical and directly below the center of the annular depression 48, it is obvious that by manipulating the knob 70 the pin 65 may be moved downward therein.

This motion is normally prevented by reason of the pin 65 coming in contact with the sides of the slot in the disk 52, through the center of which it passes, unless the slot 57 in the disk 52 be turned vertically, which may be done through the operation of the knob 53, until one of the characters 54 register with a definite point on the plate 46 as for instance the arrow shown, and also the slot 61 in the disk be brought perpendicular through manipulating the knob 70, the direction of the slot being indicated by the index 67, relative to one of the characters 54.

Thus when the several slots 50, 57 and 61 are brought into register, the knob 70, together with the disks 66 and 60, may be pressed downward toward the bottom of the lock carrying with them the element 40, around which is the loop of the cord or cable 32, and by means of which the bolts 20 may be retracted, permitting the cover to be raised.

If it is desired to maintain the bolts in a retracted or unlocked position, when the knob 70 is at its lowermost point, it may be moved laterally so as to carry the pin 65 into the curved, hook-like slot 51, thereby holding the bolts in an unlocked position, so that the extending ends will not be damaged should the cover, carrying the keeper elements 28, be pressed down.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is:—

1. A lock composed of a casing having solid front and rear walls, said front wall having an annular depression formed in the face thereof and a vertical slot therethrough extending from the center to a point directly therebelow, a stud rigidly engaged in said rear wall, centrally thereof and extending into the casing, a disk movable within said casing, an annular peripherally grooved element formed with said disk having a slot engageable with said stud, an outer disk rotatably engaged in the mentioned depression, said outer disk having a slot registerable with the slot formed through said front wall, means on said outer disk whereby the position of said slot may be determined, an annular plate movable on the face of said outer disk, a pin fixed in said annular plate engaging said disks together, said pin being operable in the mentioned slots, a knob secured to said annular plate, means on said knob whereby the position of the slot in said inner disk may be determined and by which said pin may be caused to traverse in said slot, one or more bolts combined with said casing, flexible connections between said bolts and said grooved element whereby when said knob, disks, and grooved element are moved down said bolts are retracted, and means formed in said front wall whereby said bolts may be held in a retracted position.

2. In a lock of the class described, the combination with a container, a cover hingedly engaged therewith, and a lock casing having front and rear walls secured to said container, of one or more bolts carried by said container, keepers carried by said cover engageable with said bolt, means for normally keeping said bolt or bolts in a locked position, a stud rigidly engaged with said rear wall extending into the space within said casing, an annular element rotatable on said stud, said annular element having a slot permitting it to slide on said stud, a pin rigidly engaged with said annular element and extending through a slot in the front wall of said casing, a disk rotatably engaged with the outer wall of said casing having an elongated slot alinable with the first named slot and in which said pin is movable, flexible connections between said bolt or bolts and said annular element, means for rotating said annular element interiorly of said casing, means for alining the slot in said disk with the mentioned slot in said front wall, and means combined with said pin for sliding said annular element and

disk whereby said flexible connections are caused to retract said bolt or bolts.

3. In a lock of the class described, the combination with a container and a cover hingedly engaged therewith, of a pair of bolts slidably engaged in said container, keepers secured to said cover engageable by the outer ends of said bolts, means for maintaining said bolts in a normally engaged position, a permutation lock secured to said casing, said lock having a slidable element, flexible connections between the inner ends of said bolts and said slidable element whereby, when said lock is in an unlocked condition, the bolts may be retracted, and means combined with said lock for maintaining said bolts in a positively unlocked position.

In testimony whereof we have signed our names to this specification.

HANS ANTON CHRISTENSEN.
HANS CHRISTIAN MARIUS ANDREASEN.