

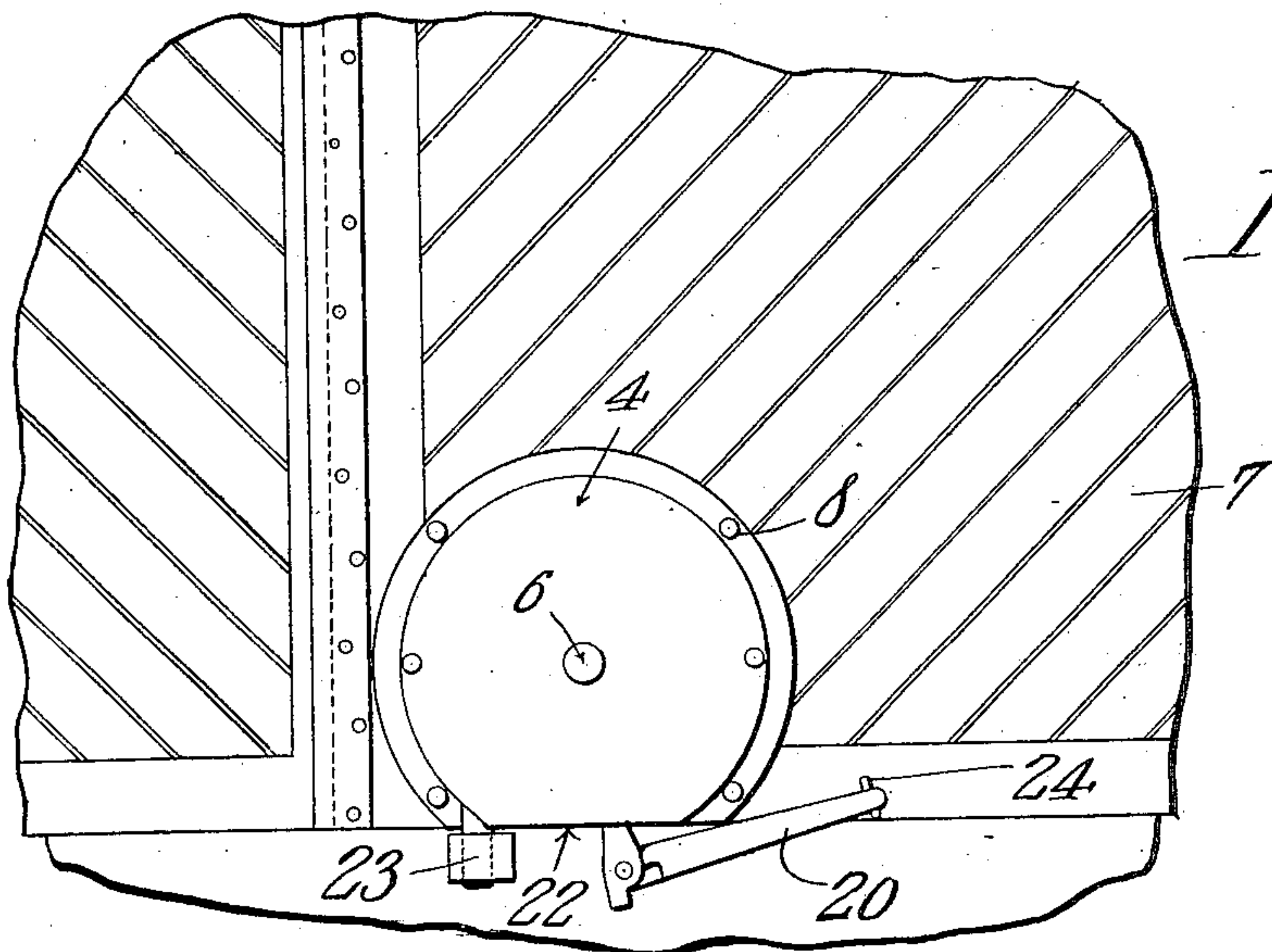
T. B. MODLIN & C. E. FLICK.

LOCK.

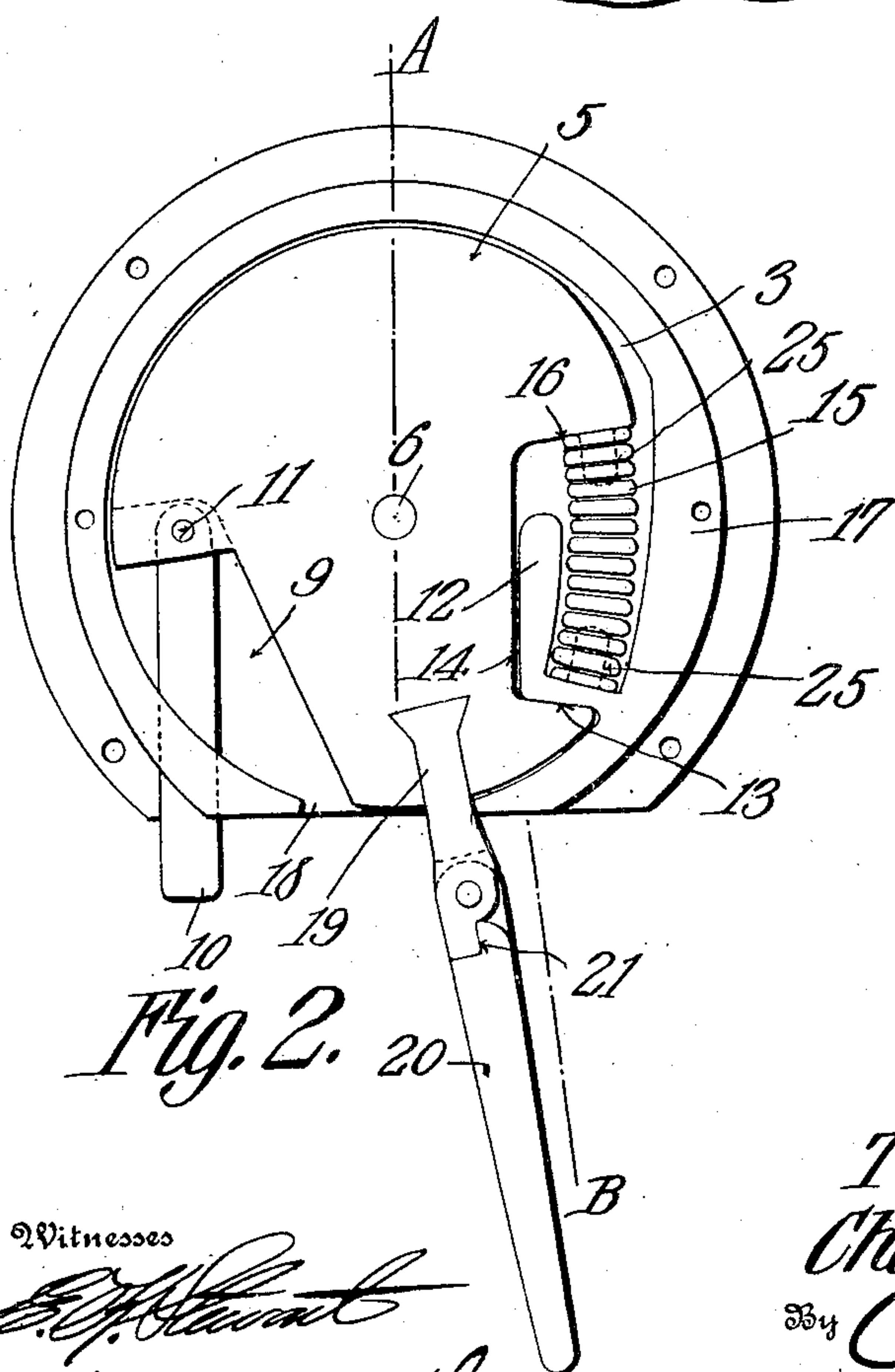
APPLICATION FILED SEPT. 16, 1908.

917,340.

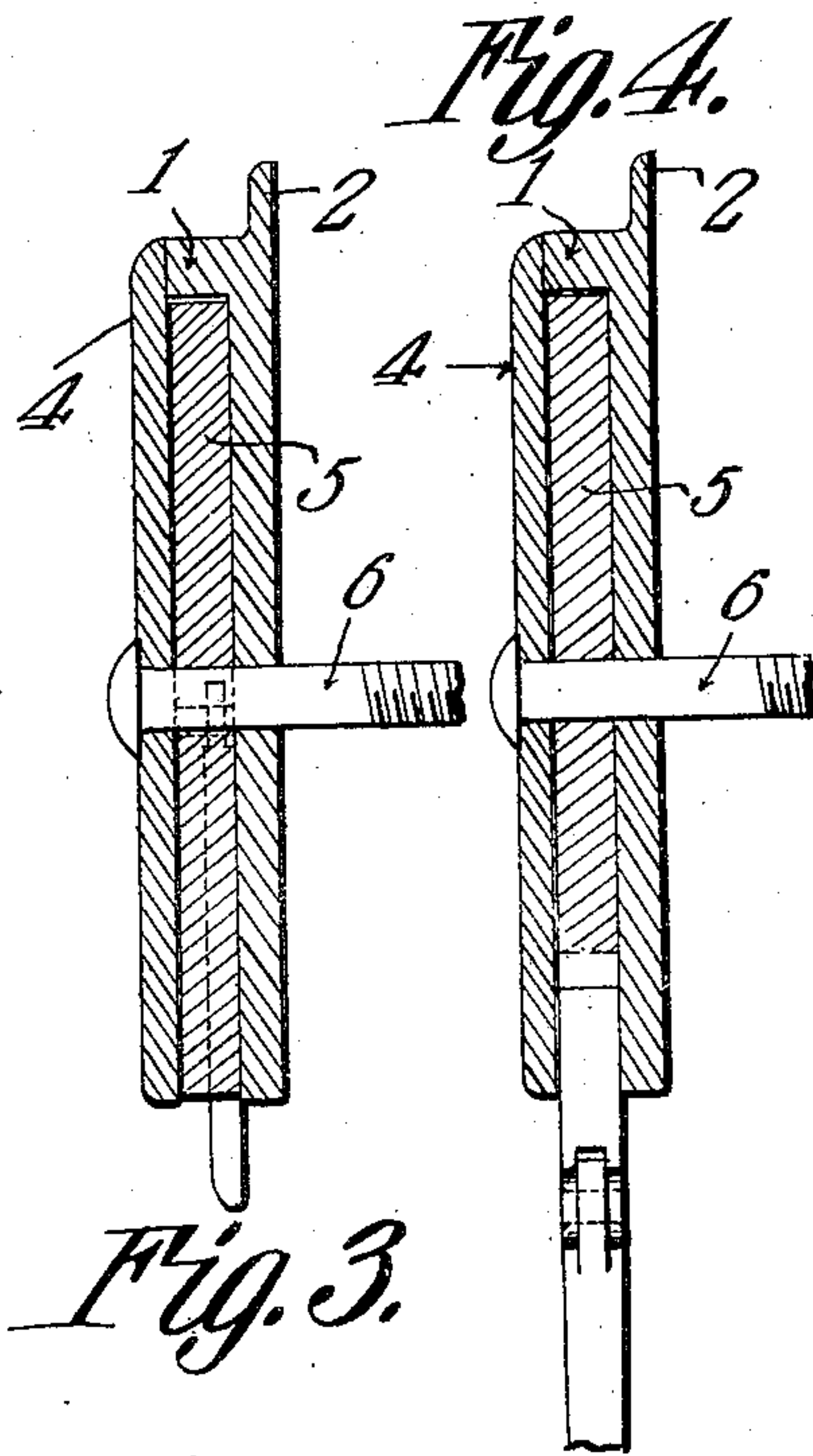
Patented Apr. 6, 1909.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

*Fig. 4.*

Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS B. MODLIN AND CHARLES E. FLICK, OF HURDLAND, MISSOURI.

## LOCK.

No. 917,340.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed September 16, 1908. Serial No. 453,306.

*To all whom it may concern:*

Be it known that we, THOMAS B. MODLIN and CHARLES E. FLICK, citizens of the United States, residing at Hurdland, in the county of Knox, State of Missouri, have invented a new and useful Lock, of which the following is a specification.

It may be stated that it is the common practice of thieves to rob freight cars while in motion, the locking means for freight car doors being of such a nature and so disposed that they may be operated from the car top.

It is the object of this invention to provide a device which shall be so constructed and which may be so located that its manipulation from the top of the car will be impossible, and of such a nature that a firm foot hold upon the ground will be necessary for its manipulation; other objects being made manifest hereinafter, as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that divers changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 is a front elevation showing the invention attached to a car door of the swinging type; Fig. 2 is a front elevation of the invention, the lid 4 being removed in order to reveal the internal mechanism; Figs. 3 and 4 are sections on the line A—B, both faces of the section being shown.

In carrying out the invention, a housing 1 is provided which may be of any form. Preferably, however, it is circular in outline, relatively shallow, and provided with a peripheral flange 2, through which may be passed bolts 8 adapted to attach the device to a door 7, the heads of the bolts 8 being outward and contacting with the flange 2. The housing 1 is provided with an interior chamber 3, approximately circular in outline, a lid 4 serving to close the chamber 3.

Within the chamber 3 is mounted an ap-

proximately circular bolt-throw 5, pivoted concentric with the chamber 3, upon a bolt 6, which is preferably of sufficient length to pass through the door 7 and to reinforce the holding effect of the bolts 8 disposed in the flange 2.

A portion of the bolt throw 5 is cut away as shown at 9, to allow for the lateral movement of the locking-bolt 10 which is terminally pivoted in the bolt-throw 5, as shown at 11, and arranged to project substantially tangentially from the bolt-throw 5, through the housing 1. From the housing 1, an L-shaped shoulder 12, projects into the chamber 3, an excision from the bolt-throw 5 being provided, the said excision having its lower end 13 and its side 14 arranged to engage the L-shaped shoulder. A compression spring 15 has its lower end in contact with the L-shaped shoulder and its upper end in contact with the upper end 16 of the slot in the bolt-throw 5, studs 25 being provided, one of said studs projecting downward from the face 16 of the slot and one projecting upward from the shoulder 12, both arranged to enter the ends of the spring 15, and designed to secure its ends, lateral movement of the spring 15 being prevented on the one hand by the L-shaped shoulder 12, and on the other by the thickened portion 17 which presents within the circular periphery of the chamber 3, a face adapted to limit the lateral movement of the spring 15 as aforesaid.

The lower portion of the housing is provided with an opening 18 through which projects an operating lever comprising a fixed member 19 and a movable member 20 hinged thereto, interlocking shoulders 21 preventing the movable portion 20 from swinging past the common axis of the two parts. The inner end of the fixed member is mounted in the bolt-throw 5, the operating handle being disposed substantially parallel to the locking bolt 10 and in close proximity thereto. The member 19 may be variously attached to the bolt-throw 5; I have shown it as removably dovetailed therein, and this is the preferred construction.

The lower edge of the housing 1 is cut away in a straight line as shown at 22 to conform to the lower edge of the door 7 and a striking plate 23 is provided, arranged to receive the locking-bolt 10. A hook 24 or like device is mounted upon the side of the



door 7 in a position to receive the end of the part 20 of the operating lever when the same is turned up.

It will be seen that the bolt-throw 5 substantially fills the chamber 3, and by this construction, the device will still remain in working order after the bolt 6 has worn loose; and should the bolt 6 be lost entirely, the bolt-throw 5 will still continue to perform its function.

The normal position of the locking bolt 10 is in the locked position shown in Fig. 2, and, to stop the movement of the bolt-throw 5 under the action of the spring 15, the contact between the L-shaped shoulder 12 and the sides 14 and 13 of the slot in the bolt-throw 5 is operative. Further, the location of the portion 19 of the operating lever is such that when the sides 13 and 14 of the slot are contacting with the L-shaped shoulder 12, the member 19 is likewise contacting with the edge of the opening 18 in the housing 1, as shown in Fig. 2. It is intended that the spring 15 shall be of unusual strength in order that a ground foot hold shall be necessary to throw the locking bolt 10, and the construction last above pointed out, is designed with a view to the provision of secure and adequate means for limiting the movement of the locking bolt 10 under the action of the spring 15.

In practical operation, the device is mounted on the door of a car near the opening corner. The positions of the members 19 and 20 are such that, in order to throw the locking bolt 10, the operator must stand upon the ground. Furthermore, the spring 15 is of such strength that a firm foot hold must be had before the locking bolt 10 can be thrown. It will thus be seen that from the construction and location of the device, the same cannot successfully be operated from the roof of the car, when the train is in motion, or at any other time.

When it is desired to open the door of the car, the member 20 is swung clear of the hook 24 and moved in a clock-wise direction, removing the locking-bolt 10 from the striking plate 23, and when the door is unlocked, as above described, the member 20 may be replaced in the hook 24, suspended out of the way, and movable with the door 7 as the same is opened.

The device is shown as mounted upon a car door of the swinging type, but it is obvious that the device may be mounted upon doors operating in other ways, and the use of the invention is not limited to the particular application shown.

Having thus described the invention, what is claimed as new, and for which protection by Letters-Patent is desired, is;

1. In a device of the class described, a housing having an approximately circular interior chamber and being provided with an

inwardly projecting shoulder; an approximately circular bolt-throw mounted in the chamber and being cut away at its periphery to receive the shoulder; a compression spring having its terminals in abutment with the shoulder and the bolt throw; a bolt carried by the bolt-throw; and means for rocking the bolt-throw.

2. In a device of the class described, a housing having an approximately circular interior chamber; an L-shaped shoulder projecting from the housing into the chamber; an approximately circular bolt-throw pivotally mounted in the chamber and provided with an excision arranged to engage the L-shaped shoulder at its lower end and side; a compression spring inclosed laterally by the L-shaped shoulder, and having its lower end in contact with the L-shaped shoulder and its upper end in contact with the bolt-throw at the upper end of the excision; and a bolt pivotally connected with the bolt-throw.

3. In a device of the class described, a housing having an approximately circular interior chamber; an L-shaped shoulder projecting from the housing into the chamber; an approximately circular bolt-throw pivotally mounted in the chamber and being provided with excision arranged to engage the L-shaped shoulder at its lower end and side; a compression spring inclosed laterally by the L-shaped shoulder and having its lower end in contact with the L-shaped shoulder and its upper end in contact with the bolt-throw at the upper end of the excision; a stud projecting from the bolt-throw into the upper end of the excision and a stud projecting from the shoulder, both being arranged to receive the ends of the spring; and a locking bolt pivotally connected with the bolt-throw.

4. In a device of the class described, a housing having an approximately circular interior chamber; an approximately circular bolt throw pivoted in the chamber, the said bolt throw having an excision from its edge; a shoulder projecting from the housing into the excision; a compression spring having one of its ends in contact with the shoulder, and its other end in contact with the bolt throw at one end of the excision; a locking bolt pivoted in the bolt throw, and arranged to project from the housing; a hinged operating lever projecting from the housing in close proximity to the locking bolt and having one of its ends rigidly attached to the bolt throw.

5. In a device of the class described, a housing having an interior chamber and being provided with an opening in its lower side and communicating with said chamber; a bolt throw pivoted in the chamber and having an excision from its edge; a shoulder projecting from the housing and into the chamber and being arranged to contact with the bolt throw at one end of the excision; an op-



erating lever terminally mounted in the bolt  
throw, the said lever being arranged to pro-  
ject through the opening in the lower side of  
the housing and being positioned to contact  
5 with the housing at one end of said opening  
when the shoulder is in contact with the bolt  
throw at one end of the excision therein; and  
a locking bolt pivotally connected with the  
bolt throw.

In testimony that we claim the foregoing 10  
as our own, we have hereto affixed our signa-  
tures in the presence of two witnesses.

THOMAS B. MODLIN.  
CHARLES E. FLICK.

Witnesses:

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HOMER BLACK.