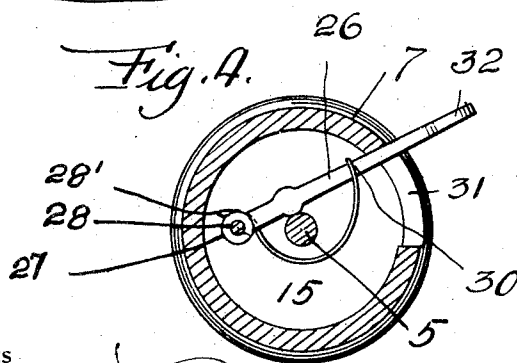
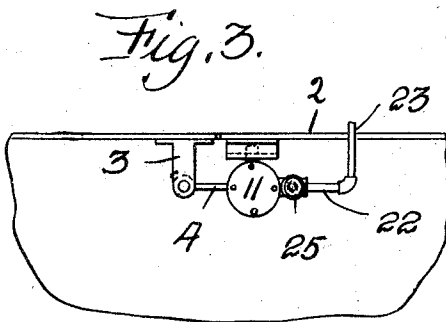
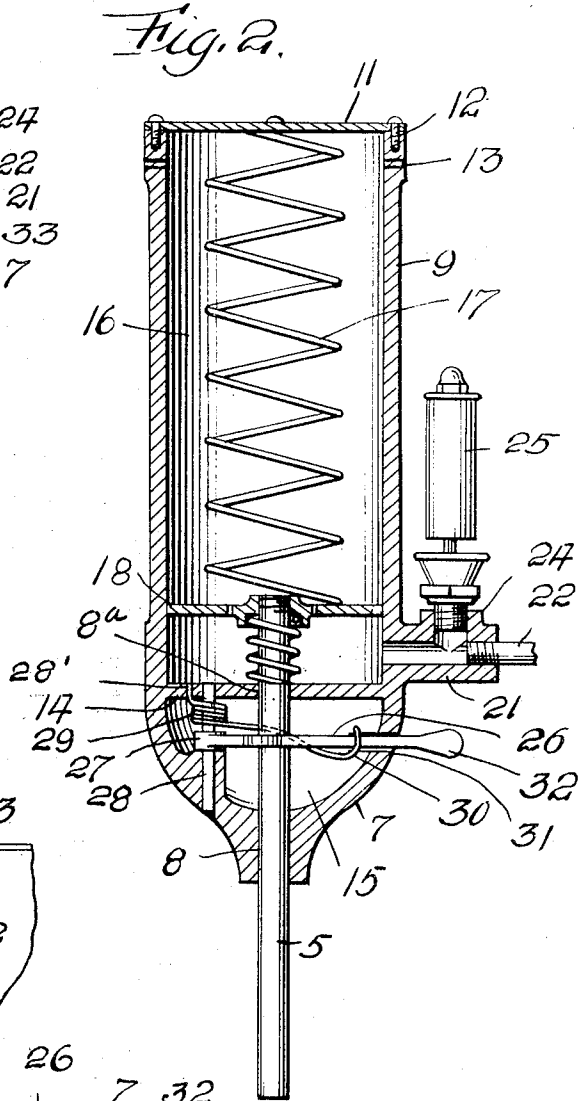
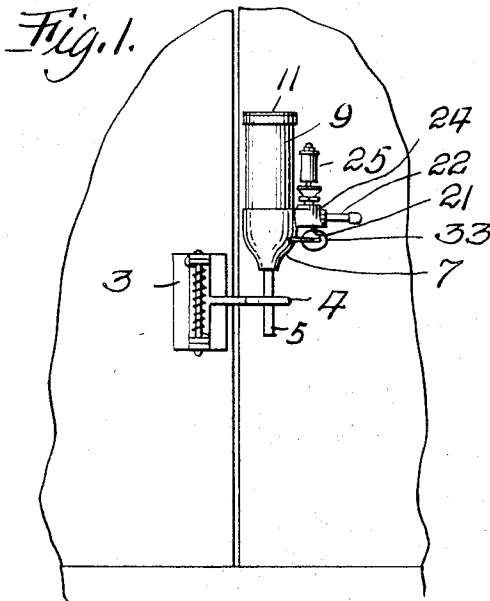


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 FLUID PRESSURE RELEASABLE LOCK FOR FREIGHT CAR DOORS.
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1,050,556.

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UNITED STATES PATENT OFFICE.

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FLUID-PRESSURE-RELEASABLE LOCK FOR FREIGHT-CAR DOORS.

1,050,556.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE VANCE MCGILL, a citizen of the United States of America, residing at Albion, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Fluid-Pressure-Releasable Locks for Freight-Car Doors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a fluid pressure releasable lock for freight car doors, and has for its object to provide a lock of such class, with means in a manner as hereinafter set forth whereby the lock can only be released by the application of fluid pressure.

A further object of the invention is to provide a fluid pressure releasable lock with means in a manner as hereinafter set forth for shifting the lock to operative position, and with means whereby fluid pressure can be supplied to the lock for releasing the same, at the same time indicating by signal that the lock is being released or has been released.

Further objects of the invention are to provide a fluid pressure releasable lock for freight car doors which is simple in its construction and arrangement, strong, durable, efficient in its use, readily set up with respect to the car door, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, wherein like reference characters denote corresponding parts throughout the several views, and in which—

Figure 1 is an elevation of a fluid pressure releasable lock in accordance with this invention, showing the adaptation thereof in connection with a freight car door. Fig. 2 is a longitudinal sectional view of the lock. Fig. 3 is a top plan illustrating the lock in connection with a freight car door, and Fig. 4 is a detail illustrating the retaining de-

vice for maintaining the lock in a released position after it has been shifted to released position by fluid pressure.

Referring to the drawings by reference characters, 1 denotes a freight car door and 2 a door frame. Although as stated, the lock is designed primarily for use in connection with freight car doors, it is to be understood that it can be employed for locking doors of any construction wherever it is found applicable to do so.

Secured to the door 1 is a bracket 3 carrying a spring-controlled hasp 4, the latter having an opening for the passage of a locking bolt 5 of the lock. The hasp is of such length that it will project upon the door frame 2 within the path of the locking bolt 5 of the lock. Secured to the door frame 2 and disposed in a vertical manner is a cylinder 9 carried by a bracket not shown, the latter being fixedly secured to the door frame 2. One of the heads of the cylinder, as indicated at 11, is detachably secured in position by hold-fast devices 12. The cylinder 9 in proximity to the head 11 is formed with a plurality of exhaust ports 13, the other head of the cylinder 9 is indicated at 14 and is cast integral with the body of the cylinder. Formed integral with that end of the cylinder 9 provided with a head 14 is a tapering extension 7 which is formed with an opening 8, the latter being in alinement with an opening 8^a in the head 14. The extension 7 provides a chamber 15 which is independent of the chamber 16, the latter constituting a piston chamber. The locking bolt 5 extends through the openings 8 and 8^a, as clearly shown in Fig. 2. Arranged within the chamber 16 is an expansible spring which bears against a piston 18 from which projects the locking bolt 5. The function of the spring 17 is to shift the piston head 18 toward the head 14 so as to move the locking bolt 5 to operative position to extend through the hasp 4, whereby the door 1 is locked. Projecting from the cylinder 9 is a nipple 21, the latter opening into the chamber 16 and has connected thereto a fluid pressure supply pipe 22 which extends, as at 23 into the door frame 2 or side wall of the car and is adapted to have detachably coupled thereto a fluid feed pipe (not shown) whereby motive fluid can be supplied to the piston chamber 16.

When fluid pressure is supplied to the

chamber 16, the pressure acting against the piston 18 will force the same rearwardly and compress the spring 17. As the piston 18 moves rearwardly, the locking bolt 5 will be carried therewith and will move eventually clear of the hasp 4. To maintain the spring 17 under a state of compression, and the locking bolt 5 in an inoperative position, a spring controlled pivoted arm is employed, said arm is indicated at 26 and pivoted, as at 27, to a pin 28 carried by the head 14 and extension 7. Surrounding the pin 28 is a spring 29, the latter being connected, as at 30 to the arm 26, and at 28' to the head 14. The arm 26 extends through the slot 31 formed in the extension 7 so that the handle end 32 of said arm can be conveniently grasped by the operator and shifted from in front of the bolt 5, as shown in Fig. 4. When the arm is shifted to a position against the end of the bolt 5 the latter is maintained in an inoperative position.

What I claim is:

In combination a hasp adapted to be carried upon the inner face of a door, a spring-controlled piston arranged upon the inner face of a door-frame and provided with a locking bolt extending through said hasp to prevent movement thereof thereby locking the door, means whereby fluid pressure can be supplied from a point exterior of the door and frame and against said piston for shifting it to move the locking bolt clear of the hasp to release the latter, and a spring controlled pivoted arm adapted to be swung against the free end to said bolt for maintaining it in an inoperative position.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE VANCE MCGILL.

Witnesses:

R. E. ALLEN,
E. L. PHELPS.