

A. H. McMASTERS.  
 TRAIN HOSE COUPLING.  
 APPLICATION FILED MAY 6, 1909.

939,070.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

FIG. 1

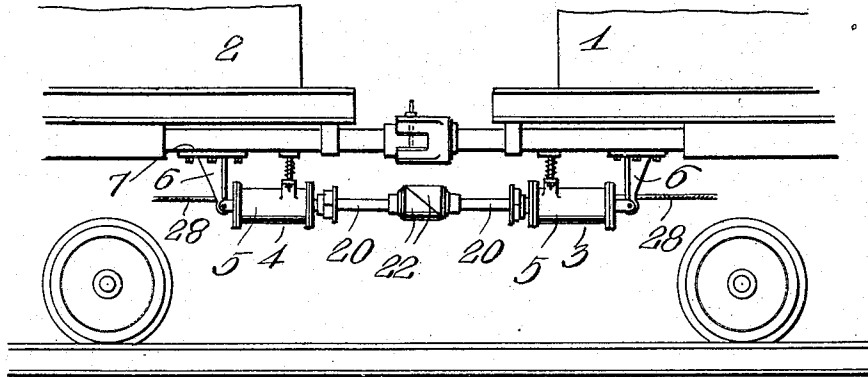
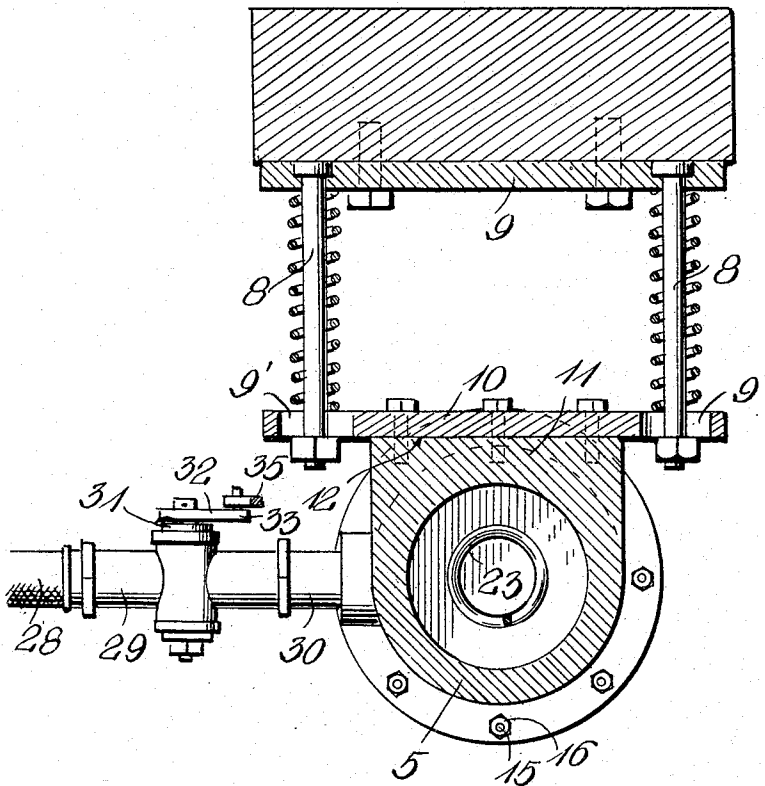


FIG. 5



Witnesses

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2 SHEETS—SHEET 2.

FIG. 2

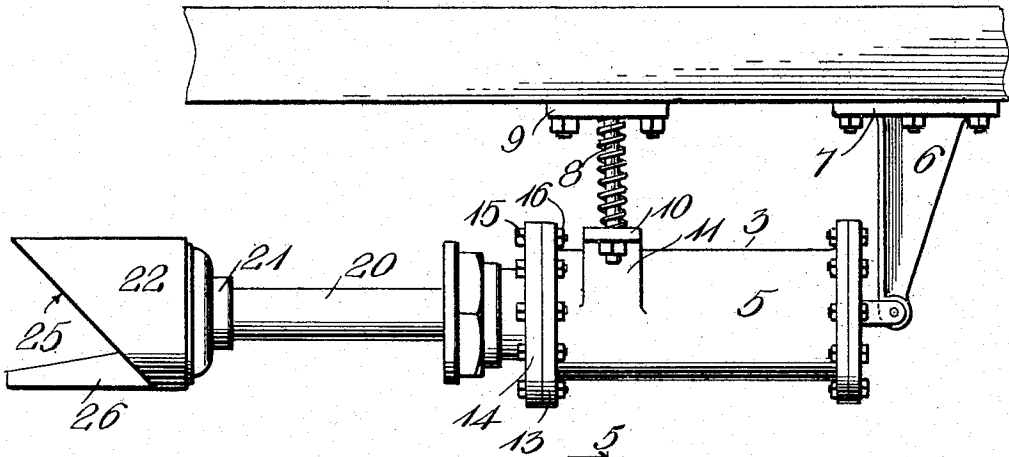


FIG. 3

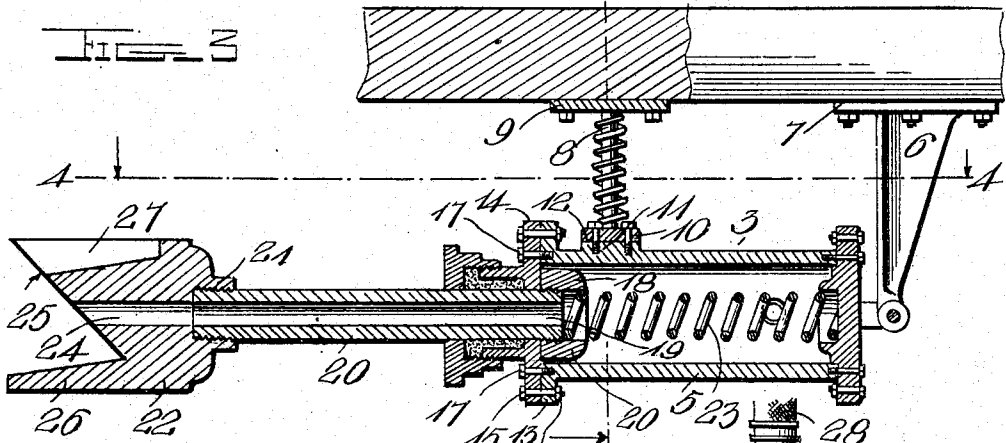
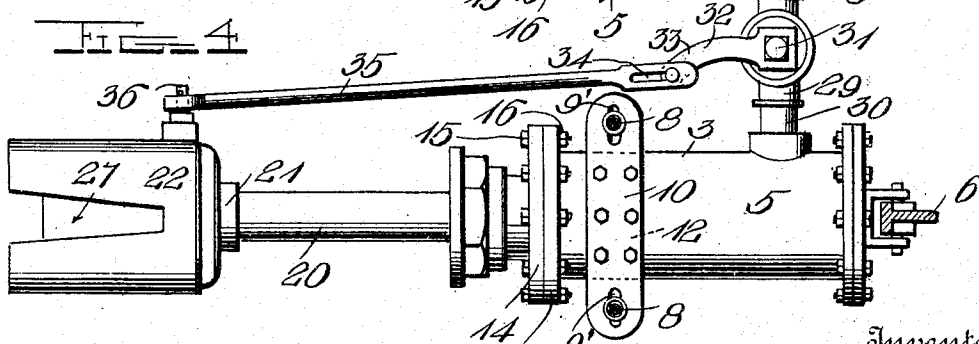


FIG. 4



Witnesses

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# UNITED STATES PATENT OFFICE.

ALVIN HORLD McMASTERS, OF BELLAIRE, OHIO, ASSIGNOR OF ONE-HALF TO MEYER HERZBERG, OF BELLAIRE, OHIO.

## TRAIN HOSE-COUPLING.

939,070.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed May 6, 1909. Serial No. 494,268.

*To all whom it may concern:*

Be it known that I, ALVIN HORLD McMASTERS, a citizen of the United States, residing at Bellaire, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Train Hose-Coupling; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an automatic hose coupling for railway service and has for its object to provide a coupling of this type which will automatically couple together as the cars come together and thus obviate the necessity of the brakeman going between the cars which has often resulted disastrously.

A further object of the invention is to provide a coupling which will turn on the air as it is coupled together and which will shut off the air when the coupling is detached. Furthermore by the use of my improved coupling, should the train happen to break in two the brakes will be set gradually and not suddenly.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a diagrammatic view showing portions of two cars coupled together; Fig. 2 is a side elevation of one section of the coupling on an enlarged scale; Fig. 3 is a central longitudinal section of Fig. 2; Fig. 4 is a horizontal section taken on line 4—4 of Fig. 3, showing the coupling in plan. Fig. 5 is a transverse section taken on line 5—5 of Fig. 3.

Referring to the drawings for a more particular description of the invention, 1 and 2 indicate the cars, and 3 and 4 the hose coupling members, each of which members is carried by one of the cars and is adapted to be coupled to the other member when the cars come together. Each coupling member comprises a cylindrical casing, 5, the inner end of which is pivotally supported from the draw bar of the adjacent car by the hanger, 6, depending from the draw bar plate, 7, which is screwed or otherwise at-

tached to the draw bar. The outer or opposite end of the casing is supported from the draw bar by a pair of laterally spaced supporting bolts, 8, which depend from the plate, 9, which is secured to the draw bar. The lower ends of the bolts, 8, extend through the slotted ends, as 9', of a flat attaching bar, 10, which is screwed or otherwise removably attached to an enlargement 11 of the casing, said enlargement having a flat top surface, 12, which forms a seat for the attaching bar, 10. The inner end of the casing, 5, is provided with an annular shoulder or flange 13, which forms a seat for the outer edge of the casing head, 14, said head being secured in position by bolts and nuts, 15 and 16, respectively, and the screws, 17, the latter passing through the head, 14, and screwing into the inner end of the casing, 5. A coupling nut, 18, is also mounted in the inner end of the casing, 5, to which is screwed the inner end, as 19, of the tubular steel piston, 20, the outer end of which has a screwed connection with the reduced extension, 21, of the coupling head, 22. A coil spring, 23, is arranged in the casing, 5, to normally hold the piston, 20, in its extreme outward position. Each of the coupling heads is provided with a central tubular bore or passage, 24, and is approximately in the form of a cylinder having an inclined face, 25, from the outer end of which extends a longitudinal tongue, 26, and in which is formed a longitudinal tapering recess, 27.

When the coupling heads are coupled together the tongue of one head fits in the recess of the other head while the bores or passages, 24, thereof register. The hose coupling 28, is connected with the outer end of the casing, 5, of each member of the coupling by the coupling and nipple, 29 and 30, respectively, the former of which forms a valve casing for the valve, 31. This valve, 31, is provided with a longitudinal arm, 32, having the offset portion, 33, to which is connected the inner slotted end, as 34, of a longitudinal operating bar, 35, the outer end of which has pivoted connection, as at 36, with the inner end of the coupling head, 22.

In practice, when the cars come together the impact of the coupling heads causes the piston rods, 20, to move inwardly to a certain extent against the action of the coil springs, 23, and the operating bars, 35, to swing the arms, 32 of the valves, 31, laterally

to open the latter in order to establish communication between the hose, 28, and the casings, 5. When the cars are uncoupled, or detached the coupling heads and piston rods, 20, are forced into their extreme outward position by the springs, 23, while the arms, 32, of the valves are moved into cut-off position.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim is:

1. A device of the class described comprising an air casing, a tubular piston rod having its inner end extending therein, a coupling nut screwing on the inner end of the piston rod to limit the outward movement thereof, a coupling head at the outer end of the piston rod, a spring in the casing tending to hold the piston rod in extended position, a valve between the hose and the inner end of the casing, and connections for moving the valve into cut-off position when the piston rod is extended and to move the valve into its other position when the piston rod is forced inwardly.

2. A hose coupling comprising a pivotally mounted air casing, a piston rod having one end movable in the casing, a spring to hold the piston rod in extended position, a coupling head at the outer end of the piston rod, and means to yieldably support the free end of the air casing, said means comprising an attaching plate secured to the top of the casing, a pair of laterally spaced supporting bolts supported beneath the car and extending through the ends of the attaching plate, nuts on the ends of the supporting bolts, and coil springs around the supporting bolts between the attaching plate and car.

3. A hose coupling comprising air casings, adapted to be supported beneath adjacent cars, piston rods extending through one end of said casings, resilient means in the casings to hold the piston rods extended, and coupling heads at the outer ends of the piston rods, each of said coupling heads having a longitudinal recess and a longitudinal tongue at opposite sides, the recess of one coupling head being adapted to receive the tongue of the other coupling head when brought together.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALVIN HORLD McMASTERS.

Witnesses:

FRANK S. MASON,

JAMES L. LANCASTER.