

No. 789,689

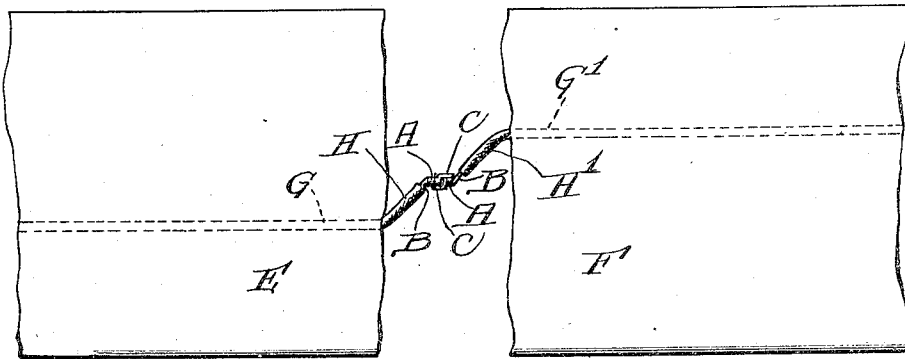
PATENTED MAY 9, 1905.

E. H. GOLD.  
HOSE COUPLING.

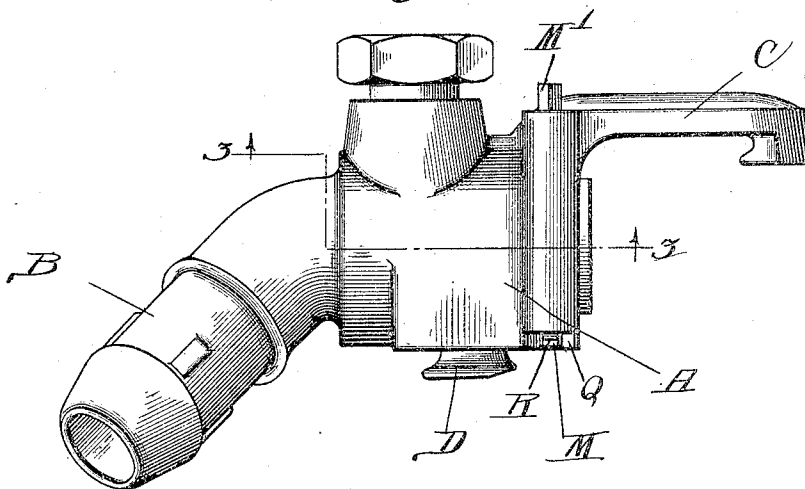
APPLICATION FILED DEC. 30, 1904.

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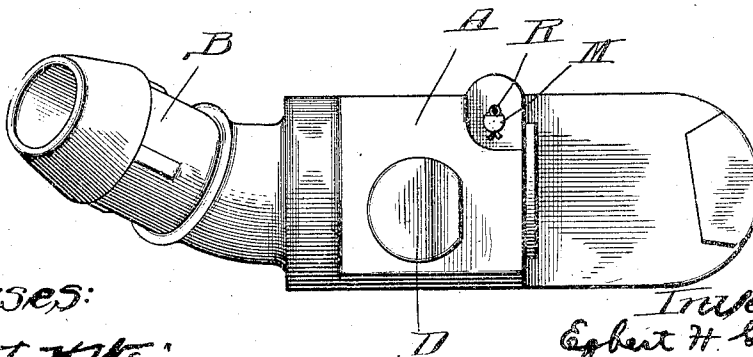
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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3 SHEETS—SHEET 2.

Fig. 4.

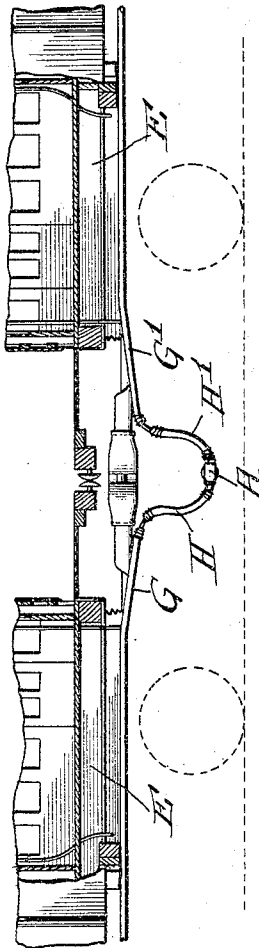
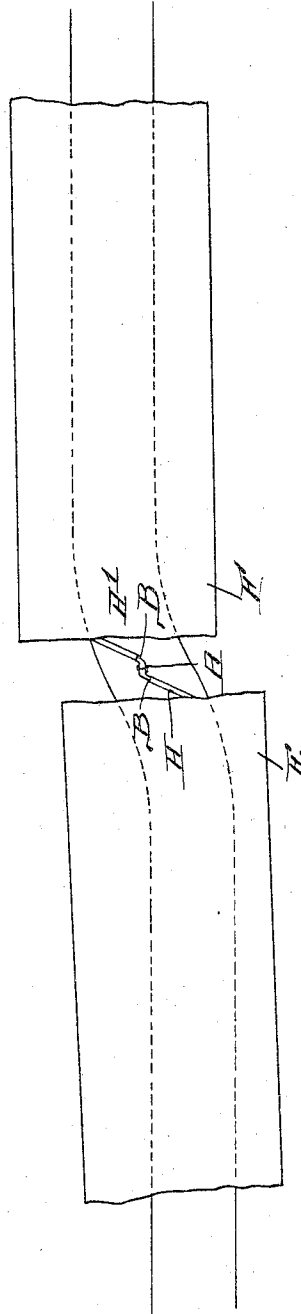


Fig. 5.

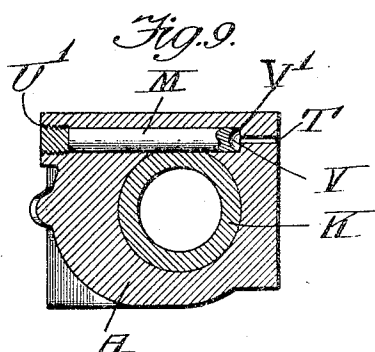
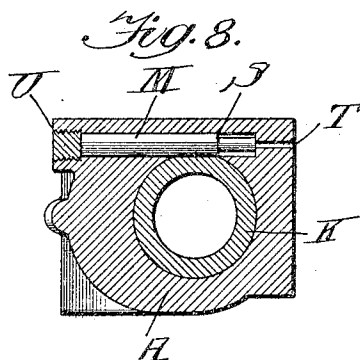
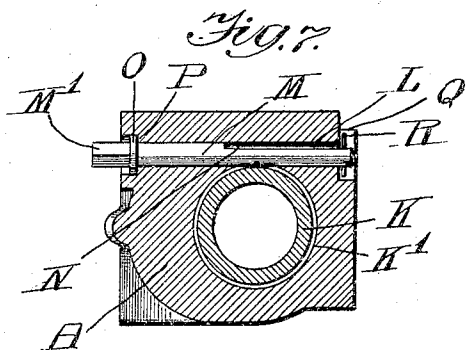
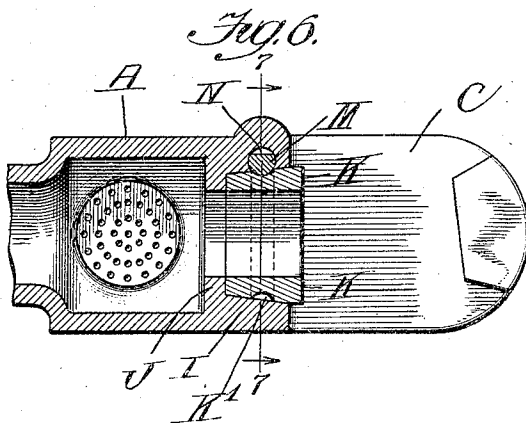


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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

EGBERT H. GOLD, OF CHICAGO, ILLINOIS.

## HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 789,689, dated May 9, 1905.

Application filed December 30, 1904. Serial No. 239,003.

*To all whom it may concern:*

Be it known that I, EGBERT H. GOLD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a specification.

My invention relates to improvements in hose-couplings, especially those which are adapted for use in coupling train-pipe hose between cars for conveying steam through the train. It is a well-known fact that couplings of this character are liable to become separated or pulled apart when the train is crossing over tracks or running over a reversed curve, especially if the curve be of short radii.

The object of my invention is to provide a coupling which will so adapt itself to the changing relations of the cars that after two members are coupled together they will so remain unless the train is pulled apart or they are uncoupled by hand.

Another object of my invention is to provide a coupling with a gasket which, while readily put in place and removed when desired, will not be forced out either by the strain exerted by the moving train or by the carelessness of operators in coupling and uncoupling the hose.

These and such other objects as may hereinafter appear are attained by the devices shown in the accompanying drawings, in which—

Figure 1 is a plan view of my invention in place between two cars. Fig. 2 is a perspective view of my invention, showing it in the position it occupies when coupled in place between cars. Fig. 3 is a perspective view of Fig. 2 looking in the direction indicated by the arrows. Fig. 4 is a side elevation showing the coupling in place between two cars at rest. Fig. 5 is a plan view showing my invention in place between two cars passing over a reversed curve. Fig. 6 is a sectional view of the coupling-head, showing the gasket in position. Fig. 7 is a vertical cross-section on the line 7 7 of Fig. 6. Fig. 8 is a

vertical cross-section of a modified form of my invention, and Fig. 9 is a vertical cross-section of another modification of my invention.

Like letters of reference indicate the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A is the head, B the neck, and C the coupling-arm, of my hose-coupling, which locks on the undercut lug D of the opposite member. In the ordinary coupling now in use this neck B extends upwardly in a plane parallel to the plane of the coupling-arms. In my improved coupling the neck B extends in a plane at an angle to the plane of the coupling-arm C.

In Figs. 1 and 4, E and F represent the platforms of abutting cars, and G G' the train-pipe, to the ends of which are attached the connecting-hose H H', terminating in the coupling A.

Referring to Fig. 5, which represents two cars passing over a reversed curve, in which position the cars are separated on a diagonal line and the hose has been stretched to its full extent, when the ordinary form of coupling is used and the hose stretched, the neck of the coupling assumes a horizontal position and the body of the coupling is turned upwardly, thus unlocking the parts and breaking the connection, regardless of the direction in which the strain is exerted. In my improved form of coupling, however, when the strain is exerted sufficiently to bring the hose taut there is also a transverse strain exerted upon the coupling-arms C. The resultant strain is thus exerted through the coupling-arms instead of through the lines of the necks and serves to bind the arms more closely together, also keeping the arms and the head of the coupling horizontal and at right angles to the ends of the cars, thus preventing the parts from uncoupling.

Referring to Fig. 6, which represents a cross-section of my improved coupling, I represents a gasket-seat provided with a shoulder J, against which rests the gasket K, which is preferably of Jenkins composition or some

similar material which becomes somewhat plastic under a high temperature. This gasket is preferably provided with a peripheral groove K'. Extending transversely through the head is a bolt-hole L, the bottom of which is slightly below the line of the top of the gasket or on a level with the bottom of the peripheral groove. Fitted in this hole is a pin M. In my preferred form this pin is cut away at N sufficiently to clear the gasket when the pin is inserted in the hole. This pin is provided at one end with a boss O, that abuts a shoulder P in the head, thus preventing it from passing through the head, and the end is formed square and projects from the face of the head to enable the pin to be turned after it is put in place. The face of the coupling-head is cut away opposite the pin at Q, and in the end of the pin is inserted a cotter-pin R, which prevents the removal of the pin after it is once in place. In the modification shown in Fig. 8 the end of the pin is cut away, leaving a circumferential shoulder S, and in the modification shown in Fig. 9 a plain pin is used with the end hollowed out at V, forming a circumferential edge V'. The large holes do not extend through the head; but in both of these modifications small holes T T' are drilled through the head from the point reached by the end of the pin. The purpose of these holes is to permit the insertion of an instrument by means of which the pin may be driven out of the coupling-head when it is desired to remove the gasket. In the modification shown in the last two figures the boss and shoulder are dispensed with and the pin is secured in place by screw-plugs U U'.

In my preferred construction (illustrated in Fig. 6) the gasket K is first inserted, and when it has reached the shoulder J the pin M is inserted in the hole L. The pin is then turned so that the cut-away portion is upward, allowing the pin to rest within the peripheral groove K'. This prevents the removal of the gasket. When it is desired to remove the gasket, the pin is turned, by means of a wrench, until the cut-away portion is downward, thus freeing the gasket. I may, if I prefer, use a gasket without the peripheral groove, in which case the pin is inserted with the cut-away portion downward, thus clearing the gasket when inserted. The pin is then turned, and the sharp edges of the cut-away portion cuts the soft material of the gasket and forms a groove within which the pin rests and by which means the gasket is prevented from removal.

In the modification shown in Fig. 8 when the shoulder S reaches the edge of the gasket that portion of the gasket immediately in front of it is cut away and forced forward into the space left between the hole and the cut-away portion of the pin, while in the

modification shown in Fig. 9, in which the end of the pin is hollowed out, that portion of the gasket in a line with the end of the pin is cut off by the knife-edge V' and forced into the hole in front of the pin and a channel is formed in the gasket, within which the pin rests.

I claim—

1. A direct-port gravity-coupler provided with coengaging locking-arms and projections and provided with a neck extending upwardly and laterally from the body of said coupler and outwardly from the longitudinal axis of said coupler.

2. A hose-coupler adapted to engage and disengage a complementary coupling through relative rocking movements of the parts in the plane of their longitudinal axis, provided with a neck extending upwardly and laterally outward from the body of said coupler.

3. A direct-port gravity-coupler adapted to engage a complementary coupler through relative rocking movements of the parts, provided with a neck which extends upwardly from the coupler and laterally outward.

4. The combination with two cars, of a hose-section upon each of the adjacent ends of said cars and adapted to extend diagonally across the space between said cars so as to be coupled together, a two-part hose-coupler comprising means for engaging and disengaging said parts, operative through relative rocking movement of the parts in the plane of their longitudinal axis, each part of the coupler being provided with a neck adapted to engage one of said hose-sections, said neck extending upwardly from the body of the coupler and laterally from the body of the coupler and toward the point at which its respective hose-section is attached to the car.

5. The combination with a coupler-head, of a seat, a recess extending transversely of said coupler-head and opening upon one edge of said seat, a locking member movably mounted within said recess and adapted to lock a gasket to said seat, and means for inclosing said locking member in said recess.

6. The combination with a coupler-head, of a seat, a recess extending transversely of said coupler-head and opening upon one edge of said seat, a locking member movably mounted within said recess and adapted to lock a gasket to said seat, and means for inclosing said locking member in said recess, said coupler-head being provided with a small passage-way leading from the exterior of the coupler-head to said recess, whereby an instrument may be inserted for the removal of said locking member from said recess.

7. The combination with a coupler-head, of a seat, a gasket, and means for holding

said gasket in place, said means comprising a pin adapted to cut its way into the body of the gasket.

5 8. The combination with a coupler-head, of a seat, a gasket, and means for holding said gasket in place, said means comprising a pin, a portion of which has been cut away to

form a shoulder adapted to cut its way through the edge of said gasket.

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