

J. M. TOWNE.
HOSE COUPLING.
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938,183.

Patented Oct. 26, 1909.

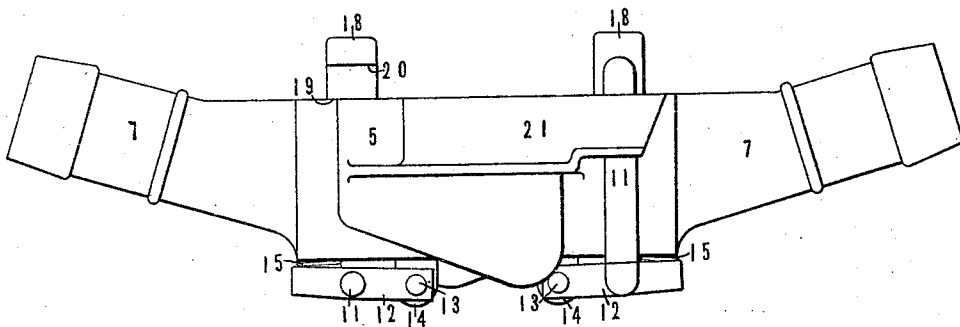


Fig. 1.

Fig. 2.

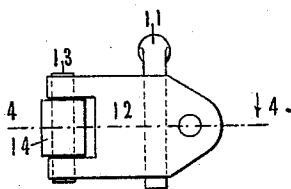
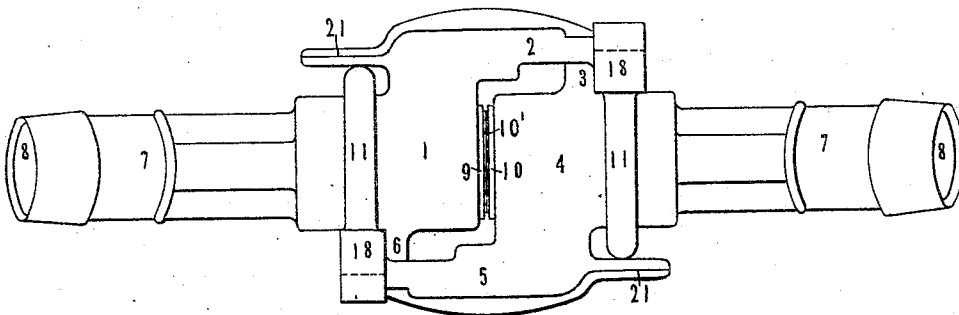


Fig. 3.

WITNESSES:

Novra P. J. J.
Paul M. J. J.

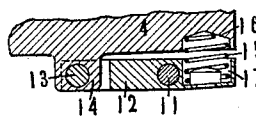


Fig. 4.

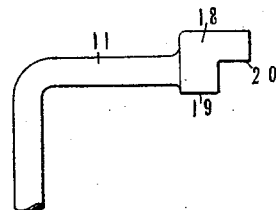


Fig. 5.

INVENTOR

J. M. TOWNE.

BY

Dr. W. J. J.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH M. TOWNE, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO SAFETY CAR HEATING & LIGHTING COMPANY, A CORPORATION OF NEW JERSEY.

HOSE-COUPLING.

938,183.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, JOSEPH M. TOWNE, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hose-Couplers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hose couplers, and more particularly to gravity hose couplers designed for use in connection with the steam heating apparatus of railway cars.

One of the objects of the present invention is to provide improved means for positively holding the complementary parts of the gravity hose coupler of the above character in locked condition under all conditions of service.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein is illustrated one of various possible embodiments of my invention, Figure 1 is a view in elevation of a coupler with the complementary parts in locked condition showing the same; Fig. 2 is a top plan view thereof; Fig. 3 is a bottom plan view showing the spring supported block which carries one of the locking members; Fig. 4 is a view taken on line 4-4 of Fig. 3; and Fig. 5 is a view in elevation of a portion of one of the locking members.

Referring now to the drawings, 1 represents the body portion of a gravity hose coupler broadly, one of the "Sewall" type, having a projecting side arm 2 which overlaps and engages with the rigid lug or projection 3 formed upon the body portion of the complementary coupler 4, the latter being likewise provided with an arm 5 overlapping and engaging a lug or projection 6 formed upon the coupler member 1. Each of the complementary parts of the coupler is provided with the usual nozzle or neck 7 which is adapted to be attached to a section of flexible hose extending from the train

pipe at the end of the car, and a passageway 8 extends through the body portion of each coupler, said passageways meeting and registering in the face portions 9 and 10 of the complementary parts when they are in locked condition as shown. Suitable gaskets, as at 10', are provided to effect a tight joint between the complementary parts of the coupler. The coupler members when locked are supported as usual by the flexible hose sections between the cars, which hose sections hang in a catenary curve between the ends of adjacent cars.

In hose couplers of the "Sewall" type, such as above described, it has been found desirable to provide means for preventing the relative rocking movements of the coupler parts when the coupler is subject to strains that are due to the ordinary relative lateral movements of adjacent car platforms, such as are produced, for instance, in the rounding of reverse curves, which movements have a tendency to tauten the hose sections, thereby rocking the coupler parts and producing leakages, if not accidentally uncoupling them. In order to prevent such relative movements of the coupler members as would tend to produce leakages or accidentally uncouple them, I mount upon each of the complementary parts a spring supported latch 11. Each of these latches, which is substantially U-shaped as shown, is pivotally supported in a block 12, in turn carried upon a pivot 13 supported in a lug 14 cast integral, in the present instance, with the body of the coupler part. An extensile spring 15 is interposed between the body portion of the coupler part and block 12, suitable seats for said spring, as at 16 and 17, being provided. The extremity of latch 11 terminates in an engaging portion or head 18 which is provided with a plurality of stepped surfaces, as at 19 and 20. These portions of the latch are adapted when the same is swung longitudinally of the casing to take over the side arm of the complementary coupling and maintain the parts firmly in their locked condition. Lugs 21, preferably cast integral with the body of the coupler parts form keepers for the latches and hold them against transverse movements with respect to their supports when they are subjected to strains.

Having thus described the construction of this embodiment of my invention, the op-

eration thereof may now be understood. It will be understood that before locking the reciprocal parts of the couplers, the swinging latch parts are swung backward upon the bodies of the coupler members, so that the latter may be interlocked in the usual manner. The latches are then swung forward to the positions shown in the drawings, in which each of the latches engages the arm of the opposite coupler. It will be seen that these latches will hold the coupler members in their locked condition under all conditions of service. When it is desired to uncouple the parts of the coupler, these latches may be readily swung rearwardly, when such operation may be effected in the usual manner. It will, accordingly, be seen that I have provided a construction well adapted to attain among others all the ends and objects above pointed out, in a simple yet efficient manner. The coupler members may be held firmly in locked position, but nevertheless may be easily uncoupled, it being only necessary to swing the latches rearwardly upon the coupler parts. Owing to the fact that the latches are spring supported and are provided with stepped engaging portions, a wide range of adjustability is provided, enabling coupler parts of dissimilar sizes to be effectively connected.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

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

1. The combination with the two parts of a hose coupling having means for engaging and disengaging them, operative through relative rocking movements of said parts, of a locking member mounted to swing longitudinally upon one of said parts adapted to engage the other and hold said parts against accidental uncoupling, and a pivotally mounted spring support for said locking member.

2. The combination with two parts of a hose coupling having complementary locking means operative to lock and unlock said parts upon relative movements thereof, of auxiliary locking means located upon each part, comprising a member mounted to swing longitudinally thereon and engage the other

part to prevent such relative movement of said parts as will tend to uncouple them, pivotally mounted blocks for supporting said locking members, and springs interposed between said blocks and said coupler parts.

3. A direct port gravity hose coupler for railway cars having a locking arm on one side and a locking projection on the opposite side, adapted to couple with its reciprocal coupler with a downward springing movement and to automatically uncouple with an upward springing movement by the tautening of the hose as the cars draw apart, combined with a pivotally mounted locking member mounted beneath and adapted to swing upon each of said couplers and engage the arm of the reciprocal coupler, thereby to prevent accidental uncoupling.

4. The combination with a hose coupler having two complementary parts, a latch mounted to swing longitudinally upon each of said parts and engage the other thereof, when said parts are in locked condition, and a pivotally mounted spring support for said latch.

5. The combination with a hose coupler having two complementary parts, each of which is provided with a locking arm on one side and a locking projection on the opposite side adapted to couple by a downward swinging movement and to automatically uncouple by an upward swinging movement, a latch pivotally mounted underneath each of said couplers and adapted to take over the arm of the other coupler part when said parts are in locked condition, and a pivotally mounted spring block interposed in the support of said latch.

6. The combination with a hose coupler having two complementary parts, each of which is provided with a locking arm on one side and a locking projection on the opposite side, said parts being mutually engageable and disengageable by a pivotal movement of said parts about a transverse axis, a spring supported latch pivotally mounted on the lower portion of each of said coupler parts and extending partially about said part and adapted to be swung into engagement with the upper portion of the arm of the other of said parts, thereby to prevent accidental uncoupling.

7. The combination with a hose coupler having two complementary parts, each provided with a side arm overlapping and engaging with the other, a projection upon each of said parts with which one of said arms interlocks, a latch pivotally mounted upon each of said parts and adapted to swing longitudinally thereon into engagement with the side arm of the other part to hold said parts firmly in locked condition, and means located upon each of said parts and projecting over said latches for guiding the latter in their swinging movements.

8. The combination with a hose coupler having two complementary parts, each of which is provided with a locking arm on one side and a locking projection on the opposite side adapted to couple by a downward swinging movement and to automatically uncouple by an upward swinging movement, of a latch mounted to swing upon each of said parts and adapted to engage with the arm of the complementary part, said latch having a plurality of engaging portions.

9. The combination with the gravity hose coupler having two complementary parts, each of which is provided with a side arm adapted to overlap and engage with the other part, of a block pivotally supported underneath each of said parts, an extensile spring interposed between said block and said coupler part, a substantially U-shaped latch member pivotally supported in said block, said latch extending partially about the coupler member and adapted to be swung longitudinally of the coupler part into engagement with the upper portion of the arm of the complementary part, whereby said coupler parts are maintained in locked condition.

10. The combination with a gravity hose coupler for railway cars comprising two complementary parts, each of which is pro-

vided with a locking arm on one side and a locking projection on the opposite side adapted to couple with its reciprocal coupler with a downward swinging movement and to automatically uncouple with an upward swinging movement by the tautening of the hose as the cars draw apart, a block pivotally supported underneath each of said couplers, an extensile spring interposed between said block and said coupler, seats for said spring formed in said coupler and in said block, respectively, and a substantially U-shaped latch member pivotally supported in each of said blocks and adapted to be swung to take over the arm of the reciprocal coupler, whereby said couplers are maintained in locked condition, said latch having a plurality of stepped engaging surfaces.

11. The combination with a hose coupler having two complementary parts of a latch pivotally mounted beneath each of said parts and adapted to take over the other part when said parts are in locked condition, thereby preventing accidental uncoupling.

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

JOSEPH M. TOWNE.

Witnesses:

JOHN T. CLARK,
E. E. ALLBEE.