

(No Model.)

2 Sheets—Sheet 1.

I. D. WEAVER.
HOSE COUPLING.

No. 421,036.

Patented Feb. 11, 1890.

Fig. 1.

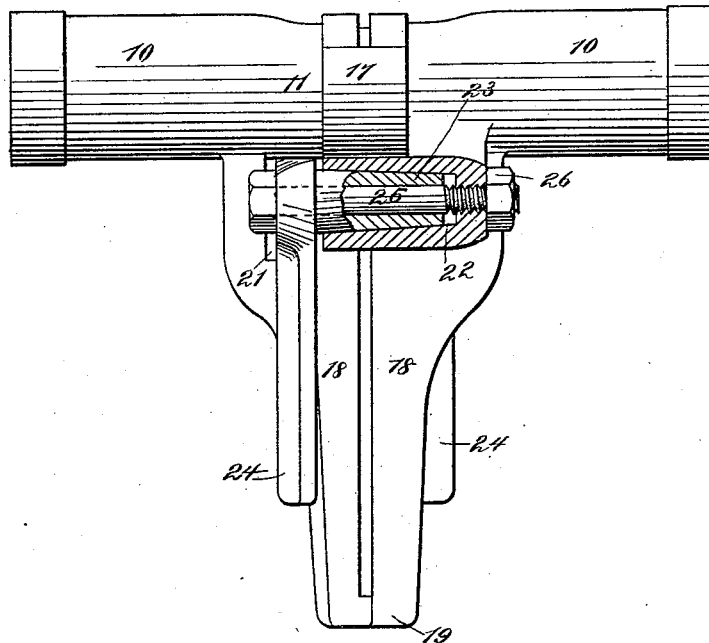


Fig. 2.

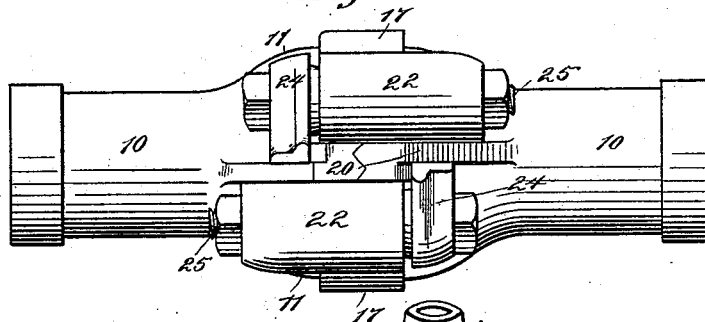
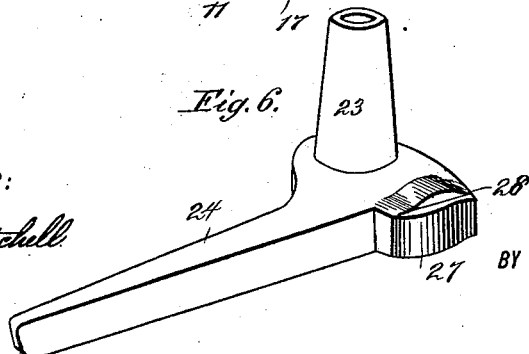


Fig. 6.



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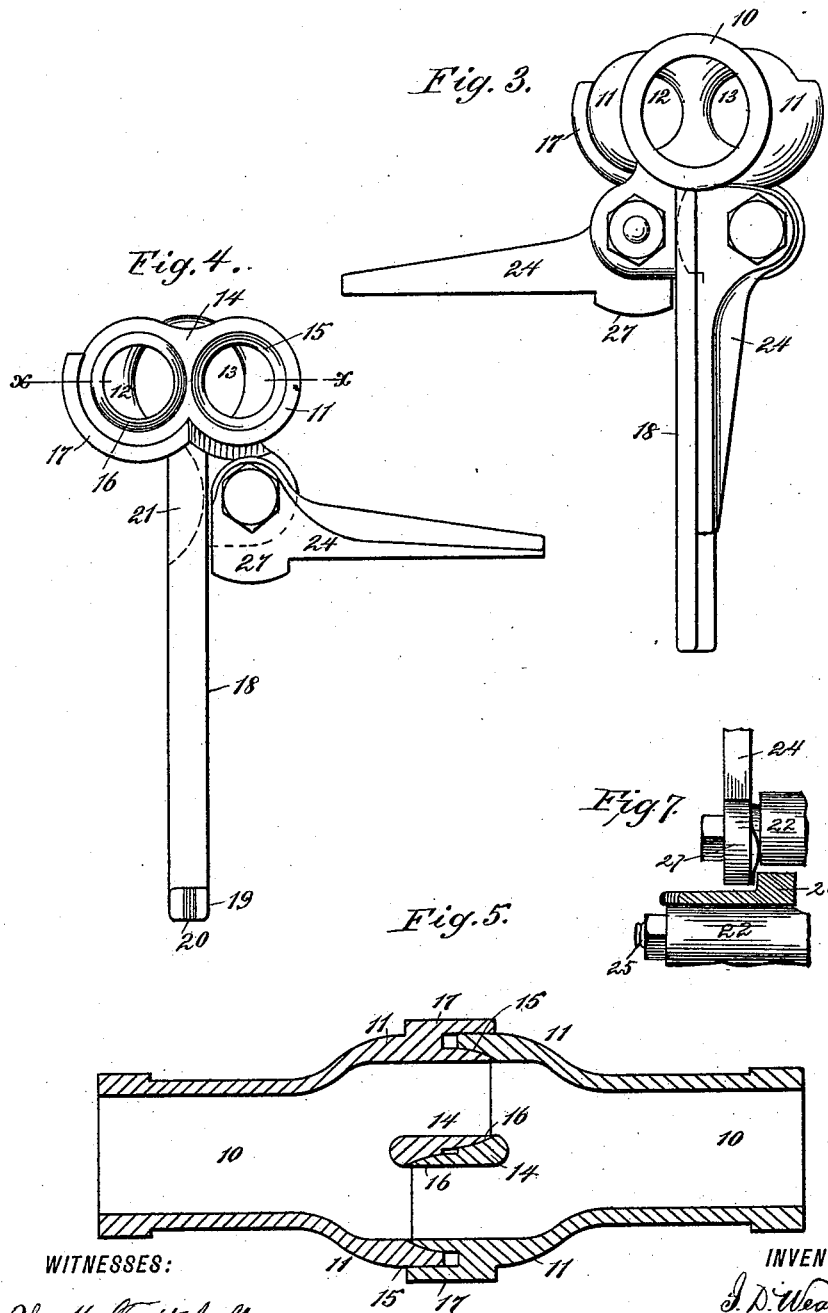
(No Model.)

2 Sheets—Sheet 2.

I. D. WEAVER.
HOSE COUPLING.

No. 421,036.

Patented Feb. 11, 1890.



WITNESSES:

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C. Sedgwick

INVENTOR:

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UNITED STATES PATENT OFFICE.

ISAAC D. WEAVER, OF LEBANON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO CHARLES M. BOWMAN, OF SAME PLACE.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 421,036, dated February 11, 1890.

Application filed March 1, 1889. Serial No. 301,693. (No model.)

To all whom it may concern:

Be it known that I, ISAAC D. WEAVER, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Improvement in Hose-Couplings, of which the following is a full, clear, and exact description.

My invention relates to an improvement in hose-couplings especially adapted for use in connection with steam-heating apparatus for railway-trains, and has for its object to provide a simple and durable coupling, in which washers and objectionable, leaky, and interchangeable devices may be dispensed with.

A further object of the invention is to provide a coupler capable of convenient and expeditious manipulation, and wherein there will be but little danger of the operator being scalded in the process of uncoupling by escaping steam or condensed water.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter more fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of two sections coupled and partially in section. Fig. 2 is a plan view of the coupled sections. Fig. 3 is a rear elevation of the coupled sections. Fig. 4 is a front elevation of a single section. Fig. 5 is a horizontal section through the body of the coupled sections on a plane corresponding with the line xx in Fig. 4. Fig. 6 is a perspective detail view of the handle and bolt-head, and Fig. 7 is a detail plan view of the same.

In carrying out the invention the body 10 of the coupling is provided with cylindrical side extensions 11 at the outer end, and with two circular openings 12 and 13 in the said ends separated by a vertical partition 14 extending a short distance within the body, which partition is usually beveled at the inner face and likewise the inner wall of the body at the opening, so that the least possible resistance will be offered to the free

passage of steam into the opposed and interlocked coupler, as best illustrated in Fig. 3.

In the mouth of the opening 12 a concave recess 15 is formed, and a nose 16, having a spherical outer surface, is projected from the outer wall to the opposite opening, as shown in Fig. 5, which nose is capable of neatly fitting in the recessed mouth of the opening in the opposed coupler corresponding to the aforesaid opening 12. By reason of this construction when the couplers are brought together they are united practically by a ball-and-socket joint.

From the lower surface of the cylindrical extension 11 of the body containing the nose-opening a housing or shield 17 is projected, which follows the contour thereof from the partition 14, preferably to a point below the horizontal axis of the body.

A perpendicular horn 18 is formed integral with the under central surface of the body 10 at the front, provided with an inwardly-extending arm 19 at the upper extremity, having a serrated surface 20, as best illustrated in Figs. 2 and 4, and a vertical recess 21 in one side, the rear wall of which is preferably concaved, as illustrated in Figs. 3 and 4. Upon the opposite side of the horn, at the upper end, a socket 22 is transversely secured or cast integral therewith, having a conical bore, as shown in Fig. 1, capable of receiving a conical sleeve 23, integral with the handle 24, as best shown in Fig. 6, the said handle being held to revolve within the socket by a threaded pin 25, passed through the sleeve 23 and the rear end of the socket 22, which pin is provided upon the rear extended end with a suitable nut 26. (Clearly illustrated in Fig. 1.) The pivoted end of the handle is provided with a bolt-head 27, capable of entering the recess 21 of the horn of the opposing coupler, the inner face of the said bolt-head being provided with a cam-surface 28, as shown in detail in Fig. 6. By reason of the pivotal connection of the handle above described with the horn the wear is reduced to a minimum, and only a tensile strain is brought to bear upon the bolt-head.

In the process of coupling the two couplers

are brought together in such manner that the thimble 16 of one coupler will enter the opening 12 of the opposed coupler. The handles which are in process of coupling in a horizontal position are carried downward to a vertical position in contact with the horn, whereupon the cam-face 28, being brought in contact with the outer side wall of the horn-recess 21, crowds the two couplers together, making a firm, secure, and steam-tight joint, and the bolt-head 27, entering the said recess in the horn, securely locks the couplers in position. When the couplers are locked together, the lower extending serrated ends of the horns are brought together, as illustrated in Fig. 2.

To uncouple, it is simply necessary to throw the handle upward to the horizontal position illustrated in Figs. 3 and 4, and as the housing 17 extends over the joint until the couplers are carried a considerable distance apart the escaping steam or hot water cannot interfere with the operator, as it is prevented from escaping downward in the direction of the handle, and must of necessity find a vent upward.

I have described the hose-coupling as adapted for use with steam-pipes; but if it is used for other purposes, the horn and the handle may be omitted, and the sections may be held in contact in any suitable or approved manner.

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

1. In a hose-coupling, the combination, with a body provided with openings in its end separated by a central partition, one of the said openings being provided with an outwardly-extending nose having a spherical exterior and the other opening having a concave recess in the mouth, of a shield or housing projected from the side of the body from which the nose projects, all combined for operation substantially as and for the purpose specified.

2. In a hose-coupling, the combination, with a body provided with openings in its ends separated by a central partition, and a nose projected from one of the said openings and the other opening having a recess in the mouth, of a shield or housing extending from one side of the body under the nose, and a locking

device attached to the body at the forward end, substantially as shown and described. 55

3. In a hose-coupling, the combination, with a body provided with openings in its ends separated by a central partition, and a nose projected from one of said openings and the other opening having a recess in the mouth, of a shield or housing extending from one side of the body under the nose, a locking device attached to the body at the forward end, a horn projecting from the body having a recess in one side, a socket secured to the opposite side of the horn, and a handle pivoted in the said socket provided with a bolt-head capable of entering the recess of the opposed coupler and provided with one cam-shaped side face, all combined for operation substantially as shown and described. 70

4. In a hose-coupling, the combination, with a body provided with openings in its ends separated by a central partition, and a nose projected from one of said openings and the other opening having a recess in its mouth, of a shield or housing extending from one side of the body under the nose, a horn projecting from the body having a recess in one side having a conical bore, a handle provided with an attached conical sleeve capable of entering the bore of the socket, and an attached bolt-head having an inner cam face, and a threaded pin passed through the handle, the sleeve thereof, and through the rear end of the socket, said pin provided with a lock-nut, substantially as and for the purpose specified. 85

5. In a hose-coupling, the combination, with a body portion consisting of two sections, each provided with a horn, of a lever pivoted to one horn and provided with cam-head for engaging the other horn, substantially as described. 90

6. In a hose-coupling, the combination, with a body portion consisting of two sections, each provided with a recessed horn, the said horns interlocking with each other, of a lever pivoted to each horn and provided with a cam-head for engaging the recess of the horn of the other section, substantially as herein shown and described. 100

ISAAC D. WEAVER.

Witnesses:

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