(No Model.) 2 Sheets—Sheet 1.

J. COGHLAN.

HOSE COUPLING.

No. 396,684. Patented Jan. 22, 1889.

Fig: 1.

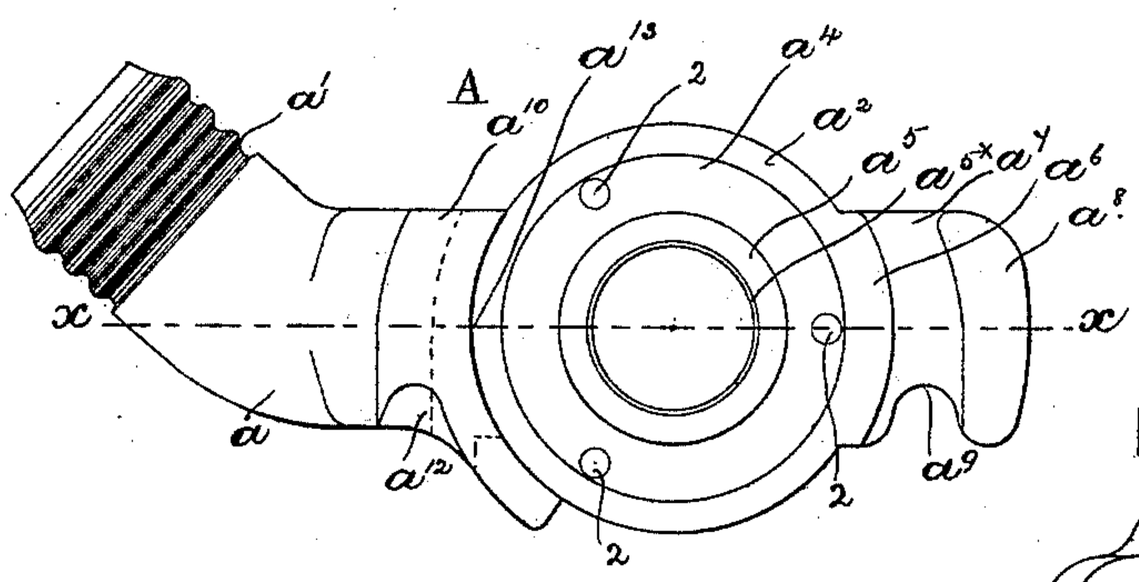


Fig: 3

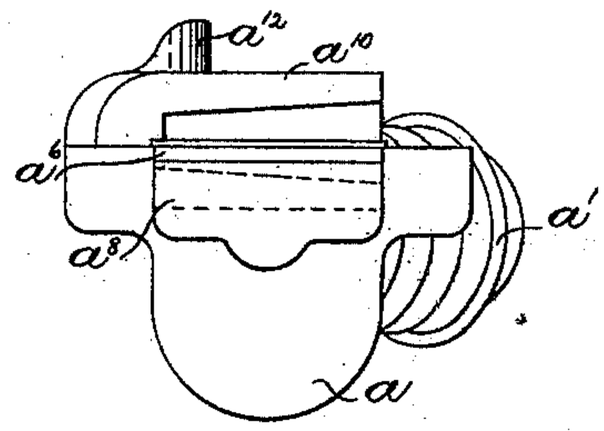
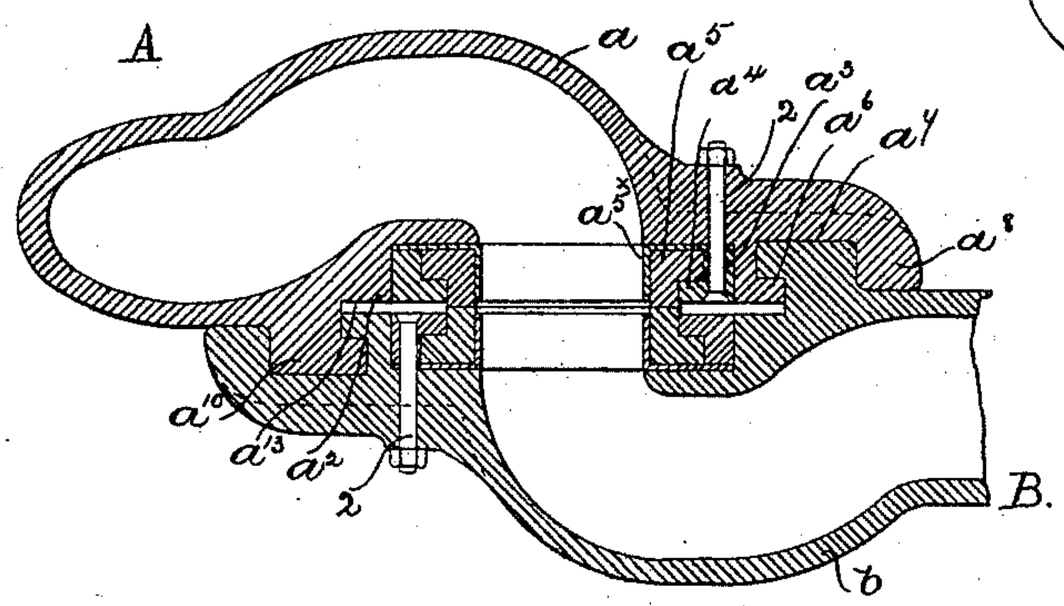


Fig: 2.



Witnesses:

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(No Model.) 2 Sheets—Sheet 2.

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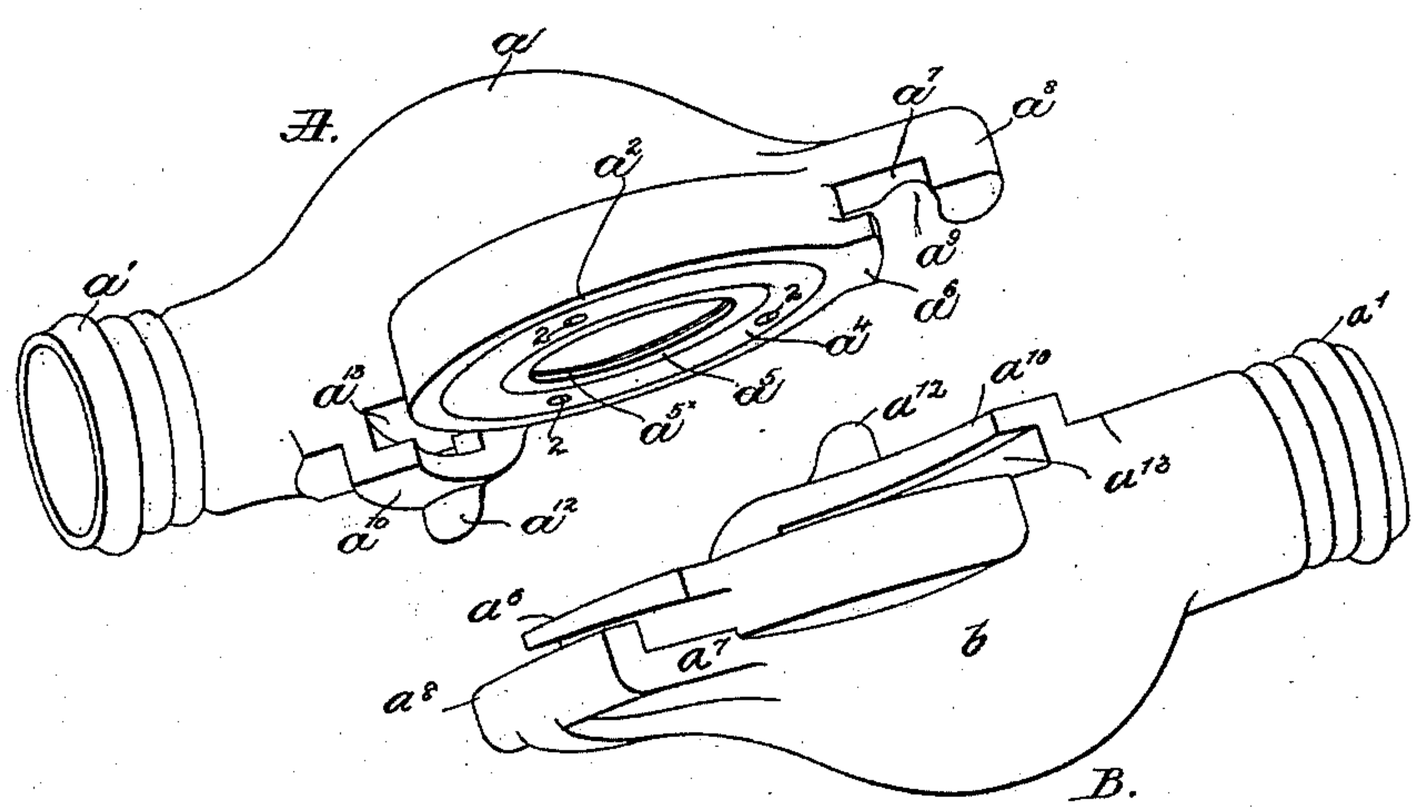
Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN COGHLAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES W. SHERBURNE, OF SAME PLACE.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 396,684, dated January 22, 1889.

Application filed July 30, 1888. Serial No. 281,386. (No model.)

To all whom it may concern:

Be it known that I, JOHN COGHLAN, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Hose-Couplings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to construct a hose-coupling especially adapted for steam-hose.

The two parts of the coupling are substantially alike, and in accordance with this invention each part consists of a shell or case suitably cored out to form a passage through it. The abutting side or face of each part lies at right angles to the length of the coupling, and the end to which the hose is attached is upturned. The abutting side or face of the shell or case is recessed to receive suitable packing. The end of the shell or case opposite the upturned end is provided with two outwardly-extended ears or flanges located a short distance apart, one of the said ears or flanges lying flush with the abutting side or face and being very much shorter than the other one behind it. A boss or projection is formed upon the inner end of the longer ear or flange, thereby forming a recess between it and the wall of the shell or case. The shell or case at the opposite side of the abutting side or face has formed upon it a projection of suitable shape to fit the recess formed by the ears or flanges at the outer end of the case of the opposing half of the coupling, and beneath said projection a recess is formed, which receives the shorter ear or flange at the end of the opposing half of the coupling. The edges or side walls of the projections and recesses are curved, as will be hereinafter described, so that the two halves or parts of the coupling may be screwed together and locked by a partial rotation.

Figure 1 is a side elevation of one half or portion of the coupling; Fig. 2, a horizontal section of the two halves or portions of the coupling locked in position and taken on the dotted line $x\ x$, Fig. 1; Fig. 3, an end view of one-half of the coupling shown in Fig. 1. Fig. 4 is a perspective view of the two halves of the coupling in position to be united.

The coupling herein to be described is composed of two like halves or portions, A B. The description of one of these halves will suffice for the other, and hence like letters of reference on the two halves indicate corresponding parts. The part A consists of a shell or case, a, suitably cored to form a passage through it. The shell or case has one of its ends upturned, as at a', to which upturned ends the hose is attached. The abutting side or face a^2 of the shell or case a is made as a flat surface at right angles to the general line of the coupling. The abutting side or face a^2 is recessed to receive a suitable packing-ring, a^3, which may be bolted to the shell or case, as by bolts 2. The packing-ring a^3 has a flange, a^4, beneath which is placed a flanged gasket, a^5. A flanged ring, a^{5x}, is employed to hold the gasket in its proper relative position. Two ears or flanges, a^6 a^7, project outwardly from that end of the shell or case opposite the upturned end, said ears or flanges being located a short distance apart, the ear a^6 being very much shorter than the ear a^7. A boss or projection, a^8, is formed upon the outer end of the longer ear or flange a^7, said bars or projection being of suitable shape to form between it and the side wall of the shell or case a a recess. That side of this recess which is formed by the side wall of the shell or case is curved in the arc of a circle concentric with the abutting face, and the opposite side wall of this recess, or that formed by one wall of the projection a^8, is curved in the arc of a circle slightly eccentric to the abutting face for a portion of its length and continuing by a line at right angles to the length of the case a, so that the recess formed will be understood as being slightly tapering from end to end, or much larger at one end than the other. The under or inner side of the ear or flange a^6 is inclined, as shown by dotted lines, Fig. 3, to thereby taper the space beneath it.

It will thus be seen that the space or recess formed by the ears or flanges a^6, a^7, and a^8 is tapering in width and depth from end to end. The ear a^7 has also upon its under side a recess, as at a^9.

The shell or case a at the opposite side of the abutting face a^2 has a projection, a^{10}, ex-

tending outwardly, that wall or side of the said projection adjacent to the abutting face a^2 being curved concentric to the abutting face, and the opposite edge or wall of the said projection being curved slightly eccentric to the abutting face a^2 for a portion of its length, and continuing straight or at right angles to the general line of the case, thereby forming a projection slightly tapering in width from end to end. Near the under side of or at the wider part of the said projection a^{10} a boss, a^{12}, is formed.

The shell or case a, adjacent to the abutting face a^2 and beneath the projection a^{10}, is cut away or recessed, as at a^{13}, (see Fig. 2 and dotted lines Fig. 1,) the wall of the recess being curved substantially parallel with the eccentric curve of the projection a^{10}. The recess formed beneath the projection a^{10} is thus made tapering in width from end to end or wider at one end than at the other. The recess thus formed is also made tapering in depth from end to end by inclining the under side of the face of the projection a^{10}, as shown in Fig. 3.

When the two parts of the coupling are to be put together or coupled, the abutting faces a^2 are brought in contact with each other, and by a partial rotation of the parts the ear a^6 of the part a will enter a recess of the part b corresponding to the recess a^{13}, the ear a^7 will overlap or inclose the projection of the shell b corresponding to a^{10}, the projection a^8 will bear upon the shell or case b and against the curved outer side of the projection corresponding to a^{10}, the recess a^9 will receive the boss of the shell b corresponding to the boss a^{12}, and the projection a^{10} will enter the recess of the part b in the manner which will be understood from the foregoing.

By the construction herein described it will be understood that the parts lock by gravity; that by longitudinal strain the parts will become unlocked and separated, while lateral strain has no effect upon it; also, by providing the locking devices with eccentrically curved sides, the parts readily compensate for any wear, and by making said recesses and projections tapering from end to end or wider at one end than at the other, as described, the two parts of the coupling are practically screwed together.

I claim—

1. In a hose-coupling, two like halves or portions, each composed of the shell or case having the passage through it, the abutting face a^2, arranged at right angles, as described, the ears a^6 a^7, the projection a^{10}, and recess a^{13}, all substantially as described.

2. A hose-coupling composed of like halves or portions, each half consisting of a shell or case having an upturned end and an abutting face, ears or projections, as a^6 a^7, at the end of the shell or case opposite the upturned end, and the projection a^8, formed upon the ear a^7, and the projection a^{10}, formed upon the shell or case between the abutting face and the upturned end, and the recess a^{13}, one wall or side of the projection a^{10} being in the arc of a circle eccentric to its opposite wall, and the recess formed between the projection a^8 and the side wall of the shell or case corresponding in shape to the projection a^{10}, all substantially as and for the purpose set forth.

3. In a hose-coupling, two like halves or portions, each composed of a shell or case having a passage through it, an abutting face, a^2, arranged at right angles, as described, the ears a^6 a^7 and boss a^8, forming a recess tapering from one end to the other, both in the direction of its length and its depth, and the projection a^{10} and recess a^{13}, substantially as and for the purpose set forth.

4. In a hose-coupling, the two like halves having abutting faces and provided with interlocking devices alike on each half, and consisting of the ears a^6 a^7 and boss a^8 on each half, forming a tapering recess between them on one side of the face, and the projection a^{10} and its subjacent tapering recess a^{13} on the other side of the face and constituting, essentially, sectional screw-threads to permit the screwing together of the two halves, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN COGHLAN.

Witnesses:
BERNICE J. NOYES,
F. L. EMERY.