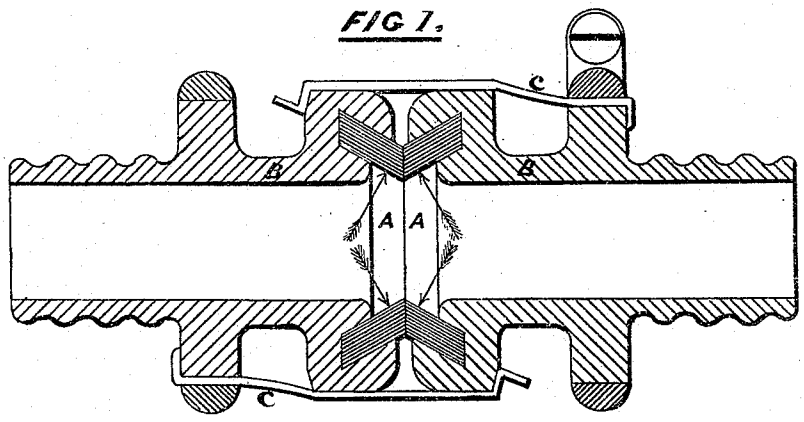
W. M. HENDERSON.

Hose-Couplings.

No. 147,498. Patented Feb. 17, 1874.

FIG 1.



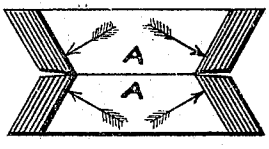
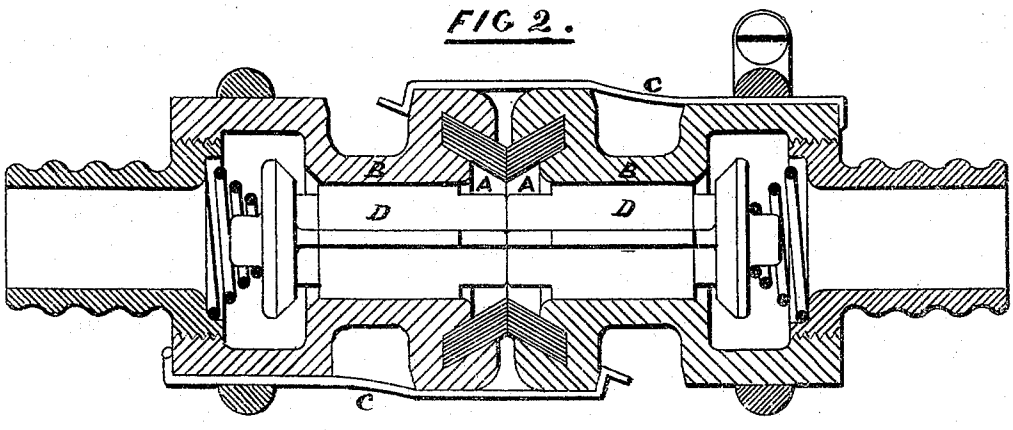


FIG 3.

FIG 2.



WITNESSES.

Ted Paxson

Thomas Luke Moore

INVENTOR.

William M. Henderson.

(A PHOTO-LITHOGRAPHIC CO. N. Y. OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

WILLIAM M. HENDERSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN HOSE-COUPLINGS.

Specification forming part of Letters Patent No. **147,498**, dated February 17, 1874; application filed January 21, 1874.

To all whom it may concern:

Be it known that I, WILLIAM M. HENDERSON, of Philadelphia, Pennsylvania, have invented certain Improvements in Hose-Couplings, of which the following is a specification:

This invention relates to that class of hose-couplings which are made to immediately engage with each other without the use of the usual positive screw-thread form of connection, a leading type of the same being illustrated in the United States Patent of Alfred C. Jones, No. 1,131, A. D. 1861. The object of this improvement is to produce a coupling by direct contact of two similar halves, which shall be air-tight when no interior pressure is experienced, and shall become more effectually sealed the greater that interior pressure becomes; and consists in the application to a hose-coupling of certain cone-shaped elastic rings, forming lips, which bind together in the act of coupling, making an air-tight joint, which is, furthermore, effectually sealed by interior pressure.

Referring to the annexed drawing, Figure 1 shows a form of coupling which may be employed for the ordinary purpose of coupling fire-engine hose and other similar uses. Fig. 2 shows a form adapted to the requirements of hydraulic, steam, and air brakes, as employed for railroad purposes; and Fig. 3 illustrates the form of the elastic rings in their normal condition.

A A are cone-shaped elastic rings, preferably of pure rubber, fitted into corresponding grooves turned in the faces of each half of the coupling. Their faces, where they come together, are slightly beveled, as shown by Fig. 3, so that the circular edge of the least diameter shall first come together and be subject to compression in the act of coupling, which shall thus make an air-tight joint, uninfluenced by the absence or presence of interior pressure, the influence of the latter being such that acting upon the inclined surfaces of the elastic rings in the direction shown by the arrows will bind the lips of the rings more firmly together in proportion to the interior pressure experienced. B B is the shell of the coupling. C C are clip-springs for holding the two halves of the coupling together, of such nature that any undue direct force or jerk will cause a separation. D D are wing-valves fitted to the interior of coupling, Fig. 2, with springs, to insure their prompt closing when separated. The wings are made to project equal to the amount required for opening, which, when coupled, forces each valve from its seat, establishing a passage through the body of the coupling.

I claim—

In a hose-coupling, as described, the cone-shaped elastic rings A A, arranged so that interior radial pressure binds their lips firmly together, making an air-tight joint, substantially in the manner set forth.

WILLIAM M. HENDERSON.

Witnesses:
FREDK. PAXSON,
MARMADUKE MOORE.