

UNITED STATES PATENT OFFICE.

ALDEN L. BAILEY, OF ST. JOHNSBURY, VERMONT.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 536,774, dated April 2, 1895.

Application filed July 21, 1894. Serial No. 518,287. (No model.)

To all whom it may concern:

Be it known that I, ALDEN L. BAILEY, a citizen of the United States, residing at St. Johnsbury, in the county of Caledonia and State of Vermont, have invented a certain new and useful Improved Spring-Actuated-Tongue Hose-Coupling; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to steam or water hose couplings, in which one section is a duplicate of the other.

The invention consists, broadly, in the retractile coupling-tongues, and in the novel means for tightening the same, as pointed out in the following specification and claims, and clearly illustrated in the drawings, accompanying and forming part of the same, of which—

Figure 1, is a longitudinal section, showing the sections in position, ready to be coupled. Fig. 2, is a similar view, showing the sections as when coupled. Fig. 3, is a cross section. Fig. 4, is a detached elevation of my improved grooved, and threaded collar, which receives the coupling-tongues.

Corresponding parts are designated by a similar reference letter in all the views.

A—A, are coupler-sections, to which the flexible hose may be attached in the ordinary manner.

B—B, are sliding collars, having each a pair of tongues b — b , formed integral with, and projecting from said collars at points diametrically opposite; the outer surface of said tongues being on a plane with that of said collars, while their inner surface represents a larger diameter than the bore of the said collars, thus forming the shoulder b' , as shown.

The diameters of the outer surface of the coupler-sections vary, as will be seen at a , a' and a'' . That shown at a , forms a bearing for the collars B—B, that shown at a' , forming a stop for limiting the forward movement of said collars, while that shown at a'' , forms a bearing for the tongues b — b , as well as a stop for the forward end of a spring C, which is made of helical form and mounted, (one on each of the coupler-sections) underneath said tongues, and bearing at its other end against

said collars. By this means the coupling-tongues, which otherwise would be constantly exposed to the danger of becoming broken, or bent, from careless handling, are for the most part, normally concealed or drawn in, and back of the uniting faces of the sections A—A, which when disconnected, thus present a smooth surface.

A stop collar D, is secured to each section A, which limits the movement of the collars B, when the coupler-sections are disconnected.

A collar or sleeve E, having a smooth bore and an exterior thread, is mounted upon each of the collars B, and secured thereon with a limited amount of play both longitudinally and rotatively, as shown in Figs. 1, 3, and 4, and an annular groove e , is formed in its interior, near its outer end, and slots e' , connect said groove with the outer end of said sleeve. These slots e' are placed at points diametrically opposite in the end of each sleeve, and form a passage way for the projections b^2 , (of either tongue b ,) to effect an entrance to the groove e . In order that the sleeves E, may be moved sufficiently in a rotative course to carry the projections b^2 , of the coupling-tongues past the slots e' , so that they shall be retained in the groove e , said sleeve is movably attached to the collar B, by means of one or more pins b^3 , placed in collar B, at the proper point to enter corresponding slots e^2 , which are made slightly wider than the pins in order to facilitate the entrance and movement of the said projections b^2 in said groove e .

An adjusting nut F, having a flange f , at its rear end, is threaded to fit the sleeve E, and after placing the sections A—A, face to face said nuts are drawn toward each other, which enter the tongues of each section, into the coupling-ring or sleeve E, of the other section, and then by giving said nuts a slight turn in opposite directions, the sleeve E, is thus rotated sufficiently to catch the projections b^2 , of the tongues in the groove e , and the further rotation of the nut F, by the action of its flange f , against the end of the collar B, causes the coupling-sleeves E, to move backward, or in a direction away from each other, thereby drawing the gaskets S, of the coupler-sections closely together.

The spring C, may, if desired, be omitted,

and the collar B, rigidly secured to the coupler-section with the tongues *b*, extending the proper distance beyond the face of the said sections, but I prefer a construction in which the tongues *b-b*, shall be normally out of danger of accidental injury.

Having described my improvements, what I claim as my invention is—

1. In a hose coupling composed of duplicate parts or sections, each section being provided with tongues having projections on their outside, a longitudinally and rotatively movable sleeve having an internal annular groove near its outer end and slots connecting said groove with said outer end, said sleeve being provided with external threads and a nut threaded thereto, and having a flange at its rear adapted to bear against a suitable shoulder for making a tight joint of said coupler-sections.
2. In a hose coupling composed of duplicate sections, each section being provided with retractile tongues having projections on their outside, said tongues being normally flush, or nearly so, with the coupling face of said sections, a longitudinally and rotatively movable sleeve having an internal annular groove near its outer end, and slots connecting said groove with said outer end for the entrance of the

tongues of either section, said sleeve being provided with external threads, and a nut threaded thereto having a flange at its rear end adapted to bear against a ring or collar from which said tongues project, and a ring or collar adapted to limit the rearward movement of the tongues, all substantially for the purpose set forth.

3. In a hose coupling composed of duplicate sections, suitable spring-actuated coupling tongues having a limited movement, a longitudinally and rotatively movable sleeve mounted upon said tongues, having an internal annular groove near its outer end, and slots connecting said groove with said outer end for the entrance of the tongues of either section, and a nut threaded to said sleeve and having a flange at its rear adapted to bear against said spring-actuated coupling tongues, substantially for the purpose specified.

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

ALDEN L. BAILEY.

Witnesses:

GILBERT E. WOODS,
HARRY M. NELSON.