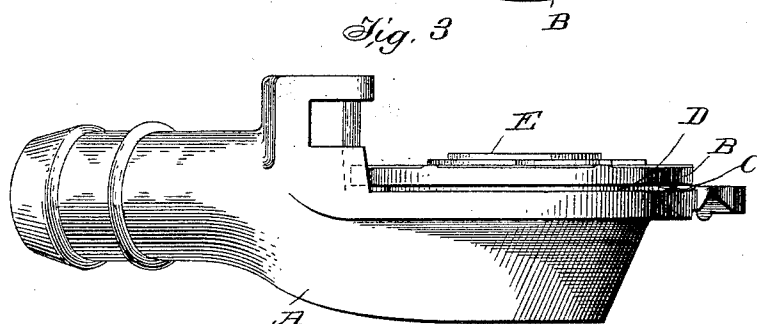
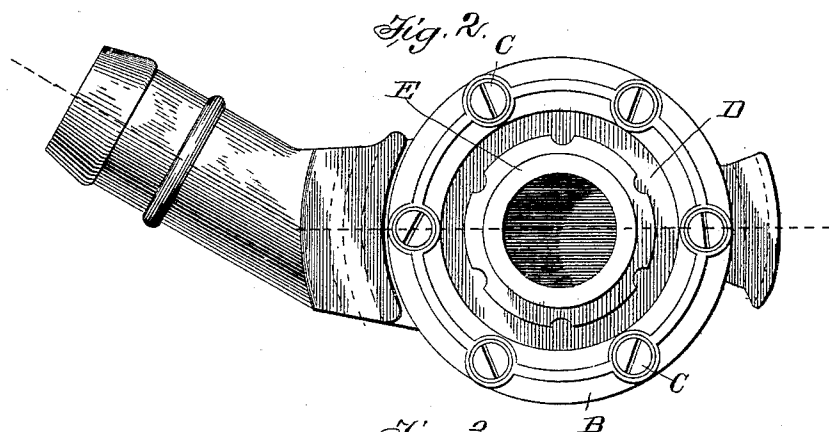
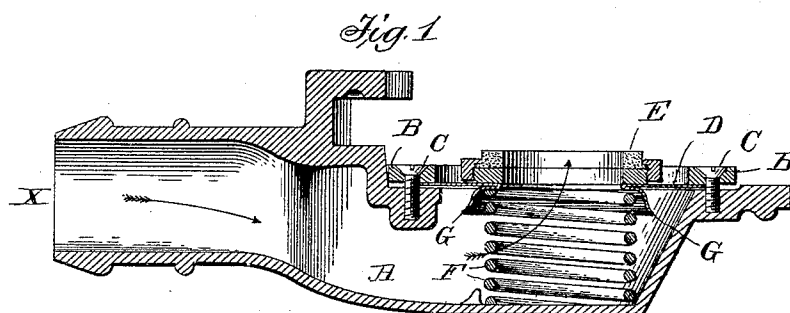


(No Model.)

R. M. DIXON.
PIPE COUPLING.

No. 467,880.

Patented Jan. 26, 1892.



Witnesses:

F. R. Cornwall.
C. P. Elwell

Inventor,

Robert M. Dixon
by Hopkins & Atkins.

Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT MUNN DIXON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE
SAFETY CAR HEATING AND LIGHTING COMPANY, OF NEW YORK, N. Y.

PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 467,880, dated January 26, 1892.

Application filed July 11, 1891. Serial No. 399,227. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MUNN DIXON, of East Orange, Essex county, and State of New Jersey, have invented certain new and useful
5 Improvements in Pipe-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

My improvements relate to that class of pipe-couplings set forth in United States Patent No. 375,547, dated December 27, 1887, to G. Gibbs; and they consist in the employment
10 of a cup which serves at once to reinforce the diaphragm and to furnish a seat for a helical spring, which spring serves to press the diaphragm and its attached annular packing in
15 the direction that steam will press them when supplied.

In the drawings I only illustrate so much of a coupling like that shown and described
20 in said patent as is necessary to exhibit my improvements.

Figure 1 is a central section through one part of the shell of the coupling and the parts connected with it. In this figure the arrow
25 indicates the direction of the steam-passage. Fig. 2 is a plan view of the same, and Fig. 3 is a side elevation of the same.

The other part of the shell is not illustrated, because in practice it is well known, and it is
30 thoroughly set forth in said patent.

Referring to the letters on the drawings, A indicates the shell of one part of the pipe-coupling.

B indicates a ring secured to the shell by
35 screws C and clamping between it and the shell the usual diaphragm D, through which is a central opening for the passage of steam.

This diaphragm has secured to it, as usual, an annular packing E, which forms no part
40 of my invention.

F indicates a coiled spring seated at one end upon the casing and at the other within a cup G, which forms a reinforcement to the inner edge of the diaphragm to strengthen it
45 and at the same time holds one end of the spring in place. The spring serves to force the diaphragm and packing outward and to press the packing firmly against the adjacent
50 packing, (in practice used in the other part of the shell, but not here illustrated,) so as to form a steam-tight joint and prevent the steam from getting between the packings of the two parts of the shell. The spring also serves to keep the diaphragm pressed outwardly more and more as wear takes place, so
55 as to always keep a steam-tight joint between the packings.

The steam is admitted at X, and it supplements the action of the spring by pressing against the diaphragm, and thus increasing
60 the pressure upon the packing, so that the greater the steam-pressure the tighter the joint will be.

What I claim is—

The combination, with the diaphragm having a central opening, of a cup G, serving to
65 reinforce the inner edge of the diaphragm and to seat the spring F, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

ROBERT MUNN DIXON.

Witnesses:

ROBT. ANDREWS,
JOHN T. CLARK.