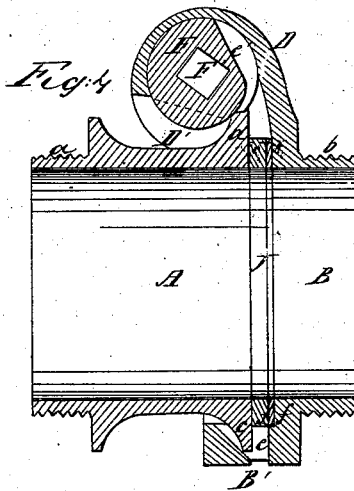
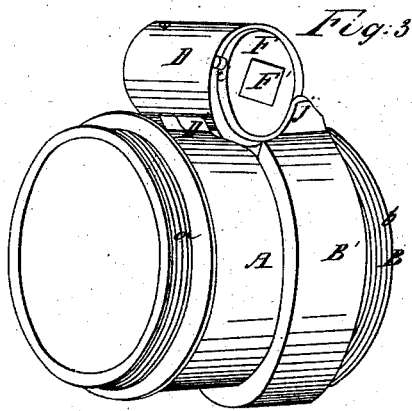
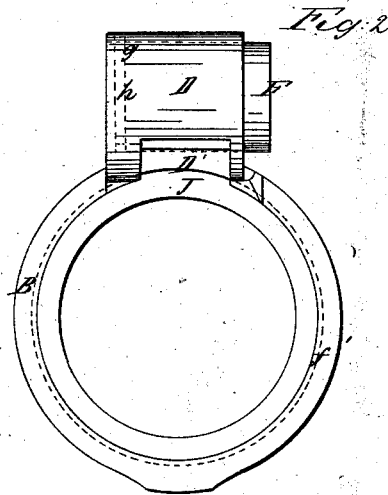
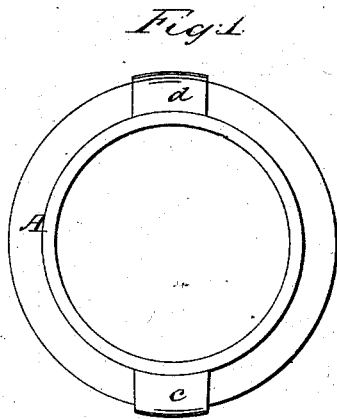


A.E. Barnard,
Hose Coupling,
No. 48,038, *Patented June 6, 1865.*



Witnesses:
W. H. Burnage
J. Holmes

Inventor
A. E. Barnard

UNITED STATES PATENT OFFICE.

A. E. BARNARD, OF CLEVELAND, OHIO.

IMPROVEMENT IN PIPE-COUPLINGS.

Specification forming part of Letters Patent No. 48,038, dated June 6, 1865.

To all whom it may concern:

Be it known that I, A. E. BARNARD, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hose-Couplings; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 represent the sections of the coupling detached from each other. Fig. 3 is a perspective view of the coupling. Fig. 4 is a longitudinal section of the same.

Like letters of reference denote like parts in the different views.

My improvement relates to the manner of forming a coupling, whereby a perfectly close connection or joint is made by clamping the sections of the coupling together, which will be described as follows:

A and B represent the sections of the coupling detached from each other in Figs. 1 and 2 that are coupled together in Fig. 3, of which Fig. 4 is a sectional view. One end of the sections has screws on the outside, as at *a* and *b*, by which the sections are connected to the hose. The inner end of the section A is formed with lugs or projections *c* and *d*, extending outward opposite each other, as seen in Figs. 1 and 4. The section B is formed with an enlarged part, B', on one side of which there is a boss, D, bored out on the underside, as at D'. Inside of the boss there is a cam, F, which is turned by a wrench for that purpose, put into the opening F'. The cam is kept in place as it is turned by a pin, *g*, in the boss, fitting into a groove, *h*, in the cam, as indicated by the dotted lines in Fig. 2. The enlarged part B' of the section B is turned out, forming a chamber to receive the section A, and making a shoulder, *f*, which is recessed out still more, as indicated by the dotted lines *f'* in Figs. 2 and 4, on which a washer or packing, J, is placed, the packing fitting closely round into the recess, as shown in Fig. 4. The recess prevents the packing from dropping out. Opposite the opening D in the boss there is an

opening, *e*, in the part B' of the section, into which one of the lugs of the section A is placed in connecting the sections together. One side of the cam F is scarfed off, as at *e'*, and from the point *e'* to *e''*, round in the direction of the arrow, it is gradually curved inward, forming the cam of such a shape that it will tighten in the desired manner on the lug of the section A when it is turned down upon it.

In coupling the sections A and B together the cam must be turned so that the scarf *e'* will be in the position indicated by the dotted line *x*, when the section A can be introduced into the chamber of the section B. One of the lugs, as *c*, must be placed in the opening *e* first, when, as the other side of the section is put in place, it tightens down on the packing, being tighter at the side where it is first put in at, by the lug *c* pressing against the upper part of the opening *e*, until the cam is turned or clamped down on the lug *d*, when the end of the section will be pressed down equally close all round, forming a firm compact joint or coupling, which can most readily be disengaged at any time or coupled together by simply turning the cam by the wrench either way, tightening or loosening the cam on the lug. By turning the cam round till the pin *i* comes against the projection *j* the scarf *e'* is brought round, so that the sections can be uncoupled, and in the same position the cam must be when the sections are put together, when by turning the cam round in the opposite direction, until in the position seen in Fig. 3, the sections are firmly fastened or coupled together.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. The cam F and boss D, in combination with the lugs *d c* and opening *e*, substantially as and for the purpose set forth.

2. The recessed chamber *f'*, packing J, in combination with the coupling, substantially as and for the purpose set forth.

A. E. BARNARD.

Witnesses:

W. H. BURRIDGE,
J. HOLMES.