No. 778,936. PATENTED JAN. 3, 1905.

C. B. J. WITMOND.

HOSE COUPLING.

APPLICATION FILED APR. 26, 1904.

Fig. 1.

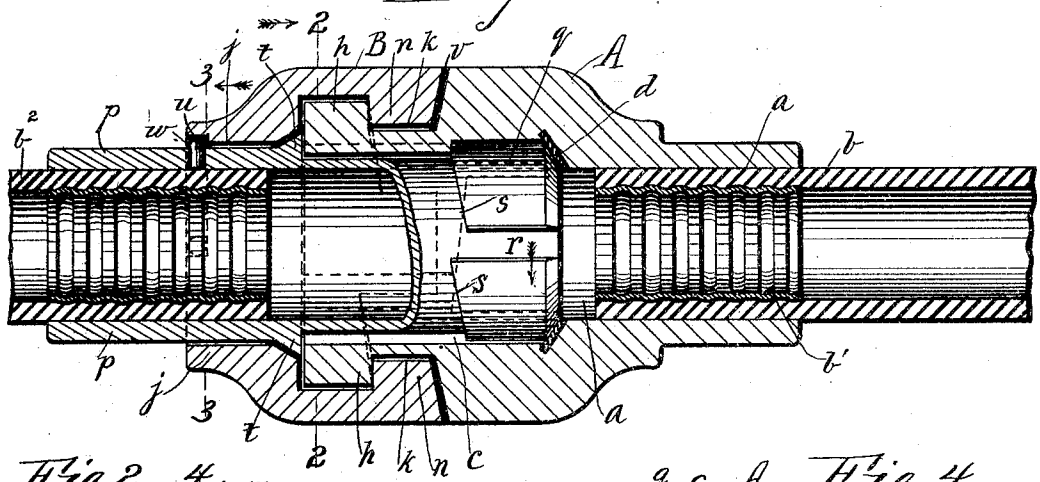

Fig. 2.

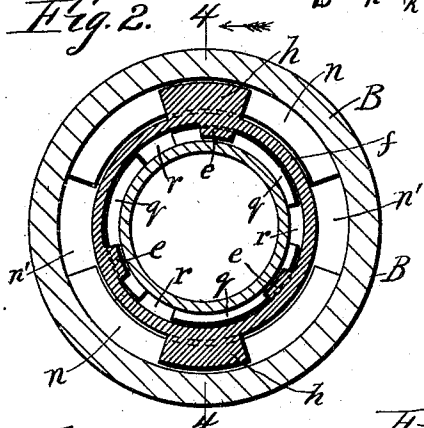

Fig. 4.

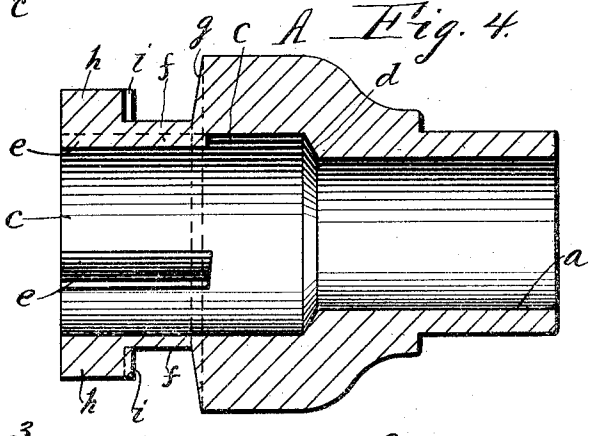

Fig. 6.

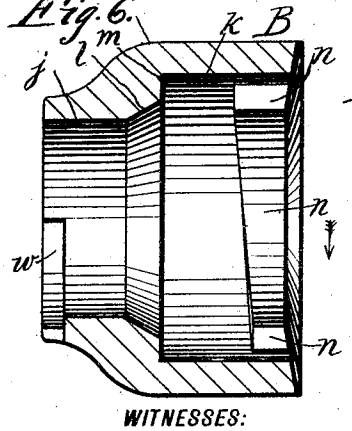

Fig. 3.

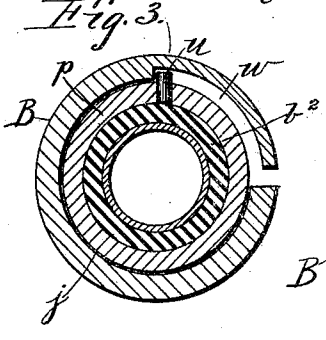

Fig. 5.

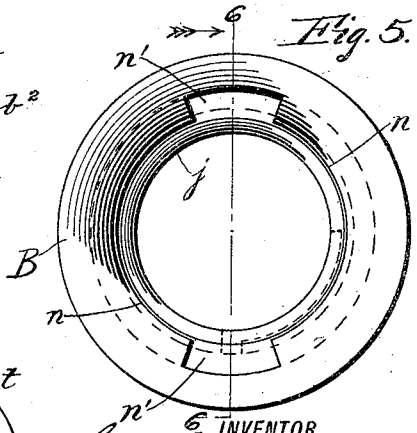

Fig. 7.

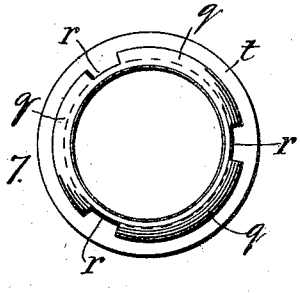

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PHOTO LITHOGRAPHED BY SACHETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 778,936. Patented January 3, 1905.

UNITED STATES PATENT OFFICE.

CHRISTOPHER B. J. WITMOND, OF NEW YORK, N. Y.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 778,936, dated January 3, 1905.

Application filed April 26, 1904. Serial No. 204,965.

To all whom it may concern:

Be it known that I, CHRISTOPHER B. J. WITMOND, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a specification.

My invention relates to hose-couplings, and has for its objects to provide couplings of simple construction and capable of ready coupling and uncoupling and that will not work loose in use, the said improved coupling being constructed as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a central longitudinal section of the coupling with the parts coupled together. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a transverse section on the line 3 3 of Fig. 1. Fig. 4 is a central longitudinal section of the principal body-piece represented at the right hand in Fig. 1 detached from the rest. Fig. 5 is an end elevation of the minor body-piece of Figs. 1, 2, and 6. Fig. 6 is a central longitudinal section of the minor body-piece shown at the left hand of Fig. 1 detached from the rest. Fig. 7 is an end view of a coupling-nozzle for one of the hose ends to be first secured in a tight joint in the principal body part and again secured in another tight joint in the minor body part.

A represents the major part of the coupling. For about half its length it has the bore *a* for reception of the hose end *b*, which is secured by a metallic bushing *b'*, inserted in the hose and expanded in the bore *a*. A larger bore *c* extends from the inner end of bore *a* through the rest of the part A, with a seat *d* for a closing-joint at the junction of the two bores. Three (more or less) longitudinal ribs *e* are formed on the surface of bore *c*, reaching from the outer end inward about half the length of said bore, and at the exterior of this part there is a section *f* of reduced diameter, at the inner end of which is an annular shoulder *g*, and on the outer end portion of said section *f* are a couple of cam-lugs *h*, placed diametrically opposite each other, said lugs being of less radial dimensions than the diameter of part A, and they are formed with cam-surfaces *i* for drawing lengthwise of the coupling by rotation of one of the parts of the coupling.

B represents the minor part of the coupling. It is bored at *j* for a short portion of its length larger than the hose end b^2 to be coupled, and for the rest of its length the bore is still larger, as shown at *k*, and has the shoulder *l m* intermediately of said bores, and in the outer part of the bore *k* are oppositely-placed cam-ribs *n*, and between these ribs longitudinal notches *n'* are provided to admit the cam-lugs *h* of part A for engaging behind said ribs *n*. A nozzle-piece *p* for the connection of hose end b^2 has an enlarged head *q* fitted to seat on shoulder *d* of part A, said head having longitudinal grooves *r* to pass the ribs *e* of bore *c* in said part A to engage behind cam-surfaces *s* of said head to draw said head tightly onto seat *d* and to draw collar *t* on nozzle-piece *p* tightly against the end of part *f* of A to form a second packing-joint for greater protection against leakage.

The cams *n* and *s* are in reverse of each other in respect of their inclines, so that they tighten or slacken, respectively, by turning in reverse directions and may be tightened or slackened independently of each other and so that tightening one will not slacken the other. An elastic packing-ring *v* is provided between the meeting ends of the parts A and B for a further means of insuring tightness, and a stud-pin *u* is provided in the nozzle *p* and a limited traverse-groove *w* in outer end of part B therefor to prevent the turning of the parts unduly for disconnection, whereby less time will be wasted in coupling than if the turning of the parts in uncoupling were unlimited.

A suitable packing-ring may be applied between the end of head *q* and the seat *d* as may be required.

What I claim as my invention is—

In a hose-coupling, the combination of the major part having the hose-connecting bore of one end portion, the larger nozzle-receiving bore of the other end portion, internal locking-ribs of said larger bore, joint-forming seat intermediate of said bores, exterior cam-

ribs at the extremity of the larger-bored part, minor part of said coupling having in a large bore of the end meeting the major part, the internal cam-ribs for engaging the external cam-lugs of the said major part, the smaller bore of the other end and the shoulder intermediate of said bores, and the nozzle having the head bearing on the intermediate seat of the major part, the inclines to draw said head on said seat through the instrumentality of the ribs of the larger bore of the major part, and the collar to draw against the end of the major part, said nozzle having one hose end connected to it.

Signed at New York this 21st day of April, 1904.

CHRISTOPHER B. J. WITMOND.

Witnesses:

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