No. 660,225. Patented Oct. 23, 1900.

D. SMITH.

HOSE COUPLING.

(Application filed Aug. 12, 1899.)

(No Model.) 2 Sheets—Sheet 1.

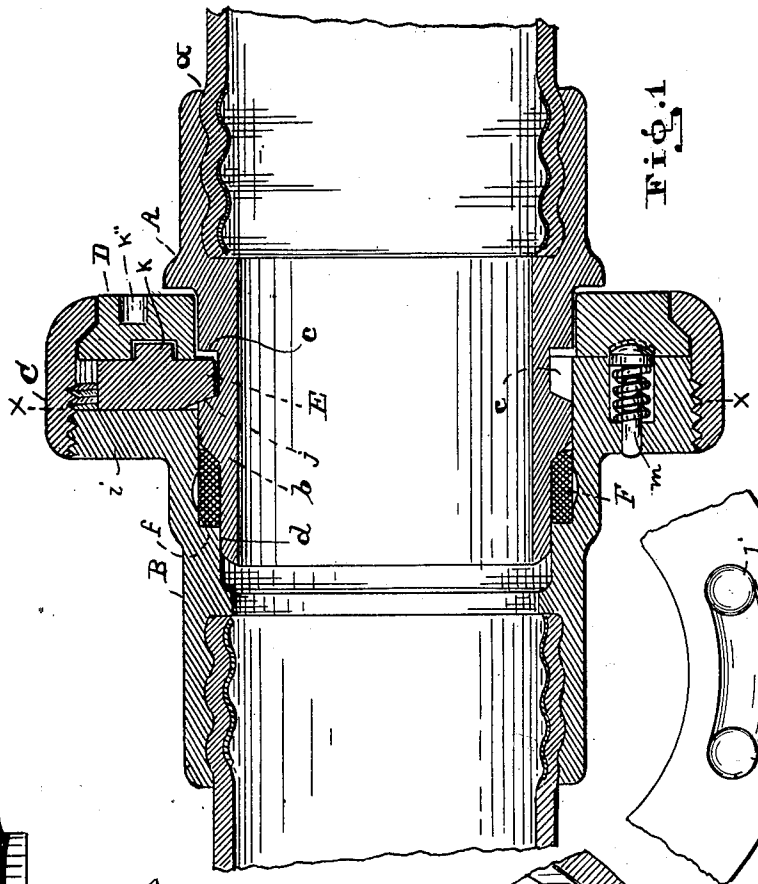


Fig. 1

Fig. 3

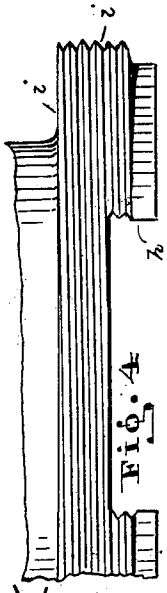


Fig. 4

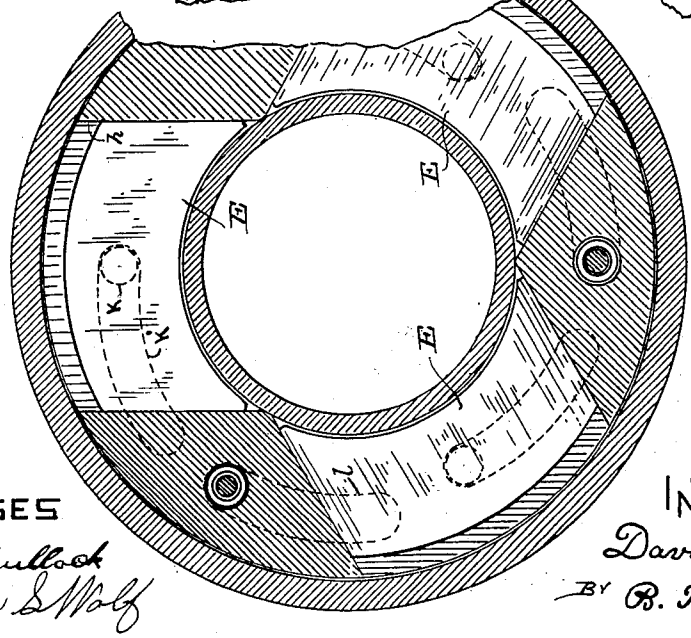


Fig. 2

WITNESSES

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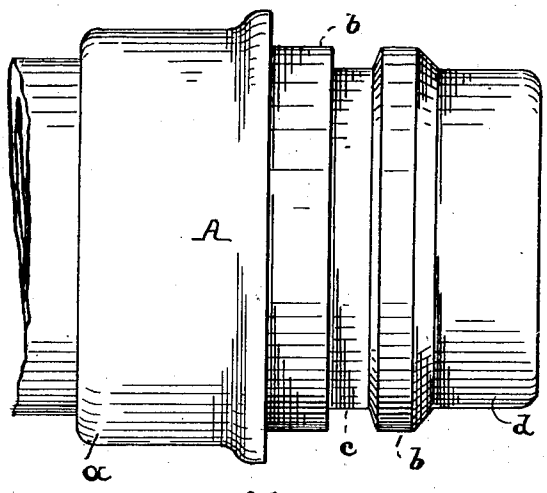


Fig. 5

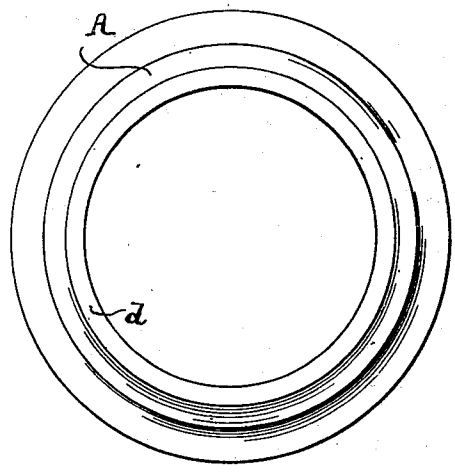


Fig. 6

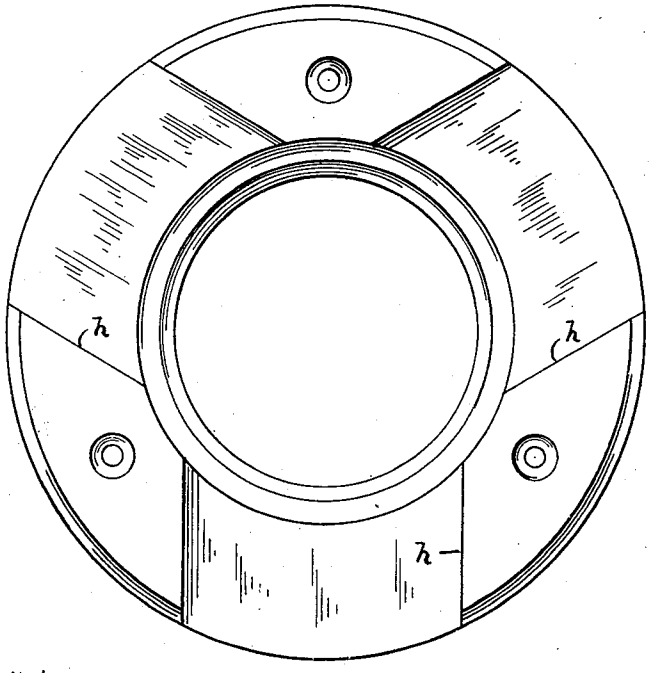


Fig. 7

Fig. 8

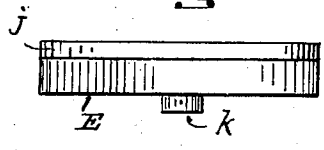
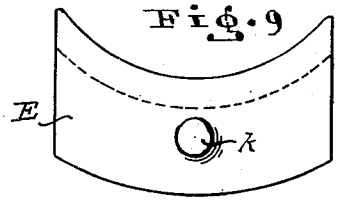


Fig. 9



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UNITED STATES PATENT OFFICE.

DAVID SMITH, OF CLEVELAND, OHIO.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 660,225, dated October 23, 1900.

Application filed August 12, 1899. Serial No. 727,026. (No model.)

To all whom it may concern:

Be it known that I, DAVID SMITH, a citizen of the United States of America, and a resident of Cleveland, Cuyahoga county, State of Ohio, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a specification.

My invention relates to hose-couplings of the kind wherewith connection can be established without turning the hose.

The object of my improvement is to provide for a quick-action, secure, and reliable coupling of this kind. I attain this object in a construction substantially as illustrated in the accompanying drawings, in which—

Figure 1 represents a central sectional view of a coupling embodying the features above referred to. Fig. 2 is a transverse sectional view of the same on line *x x*, Fig. 1. Figs. 3 and 4 represent partial views of detached parts thereof hereinafter referred to. Fig. 5 represents an exterior side view of the male part of said coupling. Fig. 6 is a face view of said male part. Fig. 7 is a face view of the female part of said coupling; and Figs. 8 and 9, respectively, represent an end and face view of the locking medium for said coupling.

Like letters of reference denote like parts in the drawings and specification.

Substantially the coupling consists of the hose members A B, the flange-nut C, the jam-ring D, and jam-blocks E. Both the members A and B are so constructed as to enable secure connection with hose in the usual manner. The member A comprises the part *a*, which is corrugated for connection with hose, and the gland *b*, of which the internal diameter corresponds with that of the hose. Externally said gland is grooved, as at *c*, and the outer terminal is reduced, as at *d*. The member B is likewise corrugated in the rear portion of its tubular part, which is recessed, as at *f*, for the reception of packing F and gland *b*. (See Fig. 1.) The head *i* is screw-threaded, as at *i'*, and recessed in the face side, as at *h*. (See Figs. 2 and 4.) Fitted in said recesses are the jam-blocks E. The jam-ring D is provided for operation of said blocks, while the flange-nut C retains both the blocks and ring in operative connection with head *i*. Each of the blocks E is provided with a lug *k*, which engage into eccentric or slanting grooves *k'* in the ring. One side of the groove *c*, as well as one face of the blocks, is tapering, as at *j*, in order to enable exertion of pressure against the packing when and while the blocks are drawn into the groove *c*.

In the outside of ring D there are one or more sockets *k''*, which enable the application of a wrench for the purpose of turning said ring. Furthermore, there are concentric grooves *l* intermediate the eccentric grooves of the ring D. The terminals *l'* of said grooves are slightly deeper than the middle portion. Thus when said grooves are passed by the head of the spring-actuated pins *m* then said heads can spring into said deepened terminals and maintain the ring in locked condition. In applying the wrench on the ring a jerking pull or push will suffice to relieve the ring for being turned to cause either the opening or closing in of the jam-blocks. While the jam-blocks are open, the gland can freely slide into member B, and in closing jam-blocks the same are wedged into the groove and cause compression upon the packing to insure a liquid-tight joint.

In assembling the receiving-section of this coupling the blocks E are first placed into the above-mentioned recesses *h*. Also the pins are inserted into the countersunk holes located between said recesses. Then the ring is laid over said blocks in such manner that the lugs *k* engage into the eccentric grooves *k'* and the pins *m* into the concentric grooves *l*. Finally the nut C is slipped over said ring and screwed onto the head *i*, whereupon the member A is ready for use. In Figs. 1 and 2 the blocks are shown as locking the members A and B. In that instance the ring C has been turned to the left. In turning the ring to the right the blocks are moved outwardly owing to the engagement of the lugs *k* into the eccentric grooves *k'*. When the blocks are moved outwardly, the members are ready for engagement or disengagement.

A coupling of the kind as described is preeminently adapted for use in connection with fire-hose, owing to the quick connection which can be established therewith.

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

1. A hose-coupling comprising the members A B, one having a groove-gland with reduced

terminal, the other having a screw-threaded recessed head and recessed bore, blocks sliding in the recesses of the head, a ring in suitable engagement with said blocks, to enable locking and unlocking of the coupling and a flanged nut screwing over said head to retain the ring and blocks in operative connection, all constructed and arranged substantially as and for the purpose set forth.

2. In a hose-coupling the combination of the metallic hose members A B one serving in the capacity of a stuffing-box, the other as a gland for said stuffing-box, a jam-ring, jam-blocks and a flange-nut, the said jam-ring containing eccentric grooves and the blocks being adapted for engagement in said grooves and a tapering circular groove of the gland, for connection of the members A B and compression of the packing contained therein all constructed and arranged substantially as and for the purpose set forth.

3. In a hose-coupling of the kind as described the combination with the head of one of its members, the jam-blocks, the jam-ring and a flange-nut of spring-actuated pins engaging said ring substantially in the manner as and for the purpose set forth.

Signed by me at Cleveland, Ohio, this 20th day of July, 1899.

DAVID SMITH.

Witnesses:
BERNH. F. EIBLER,
E. L. MANCHESTER.