

(No Model.)

J. KENYON.  
Hose Coupling.

No. 235,777.

Patented Dec. 21, 1880.

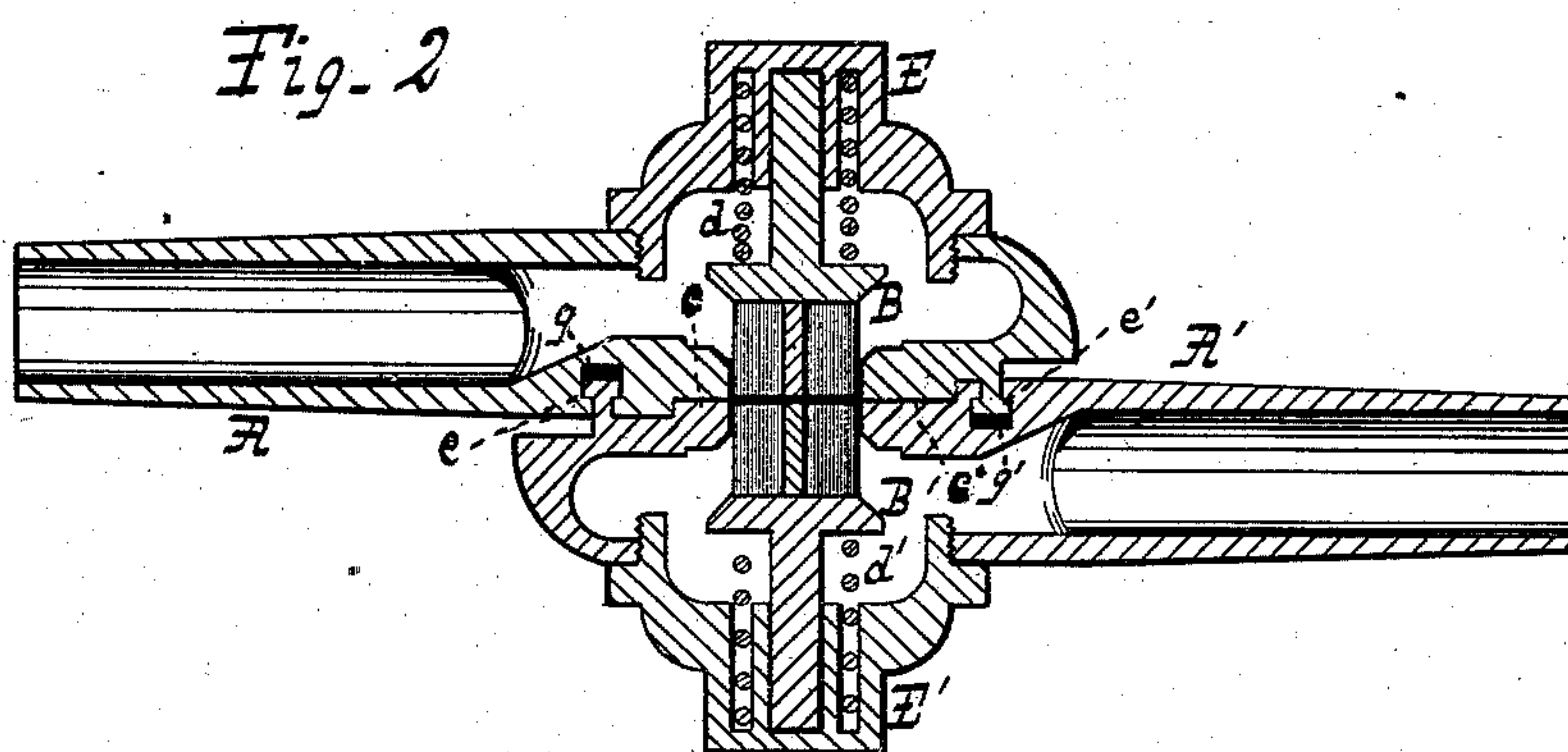
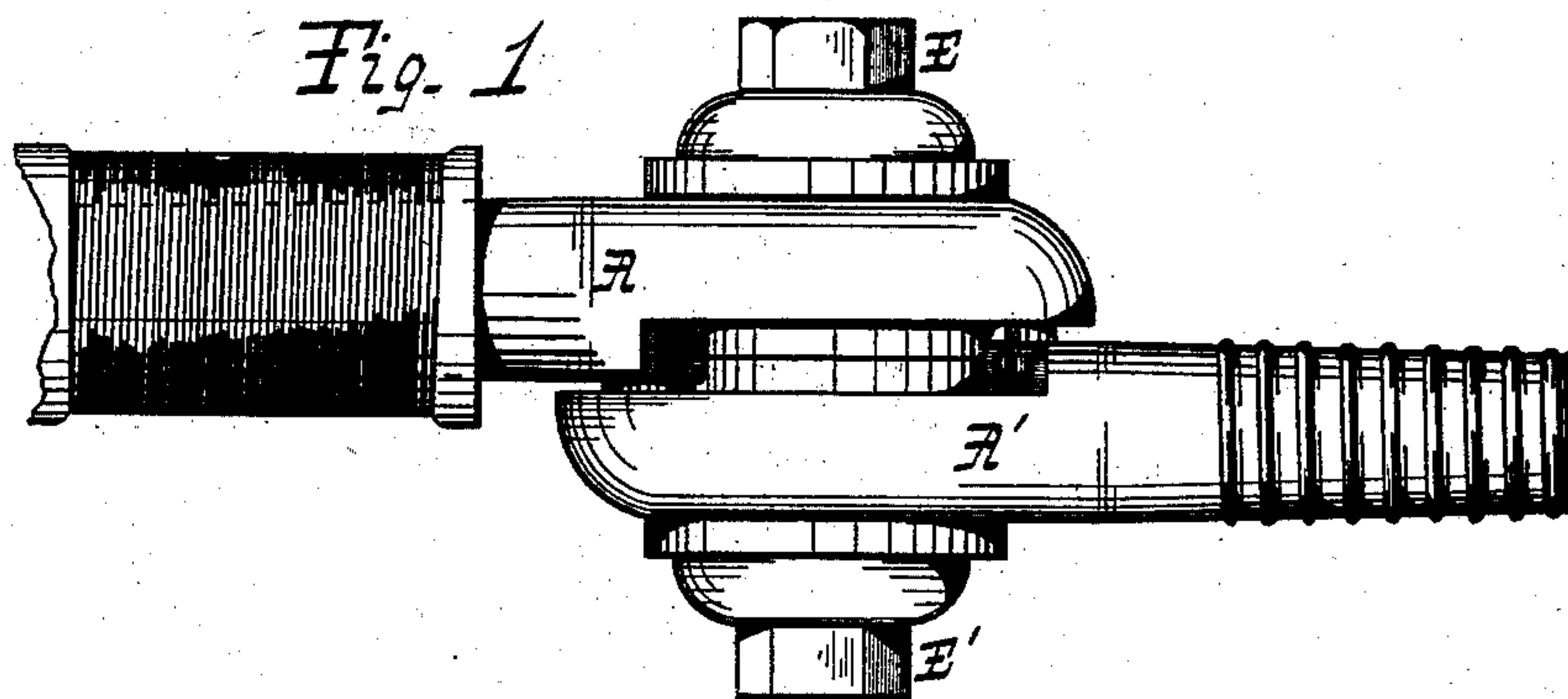


Fig. 3

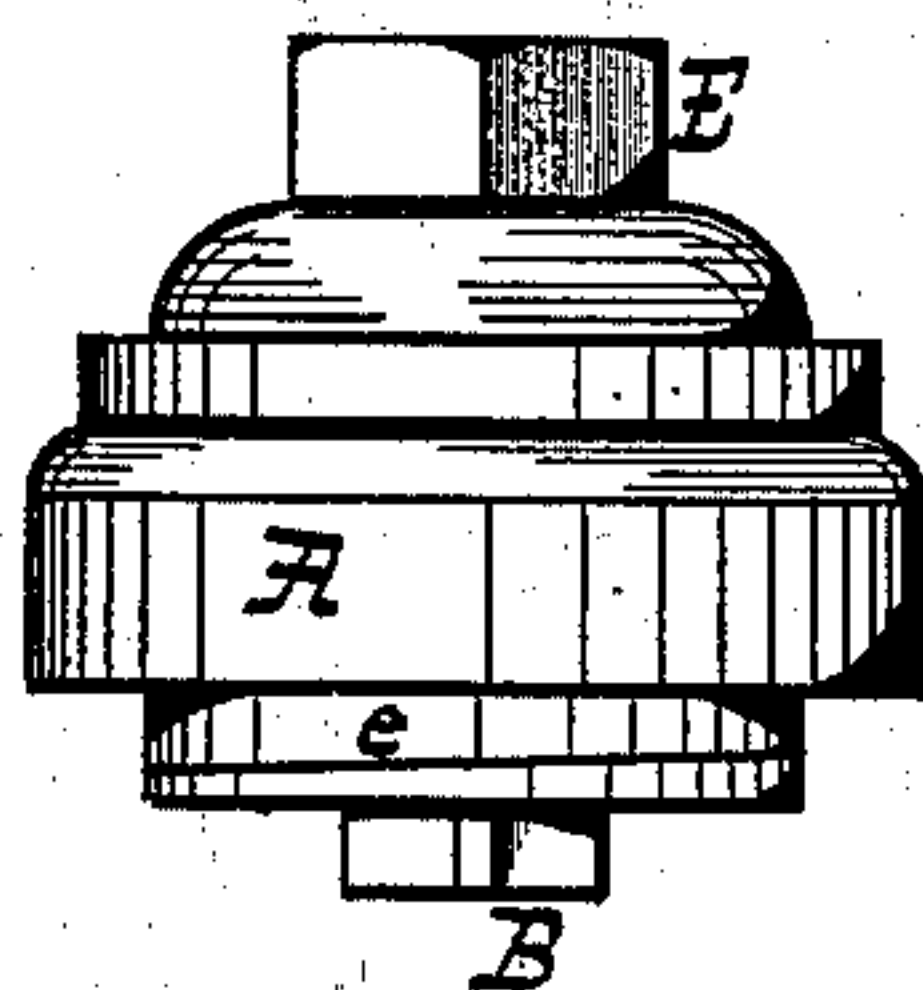


Fig. 4

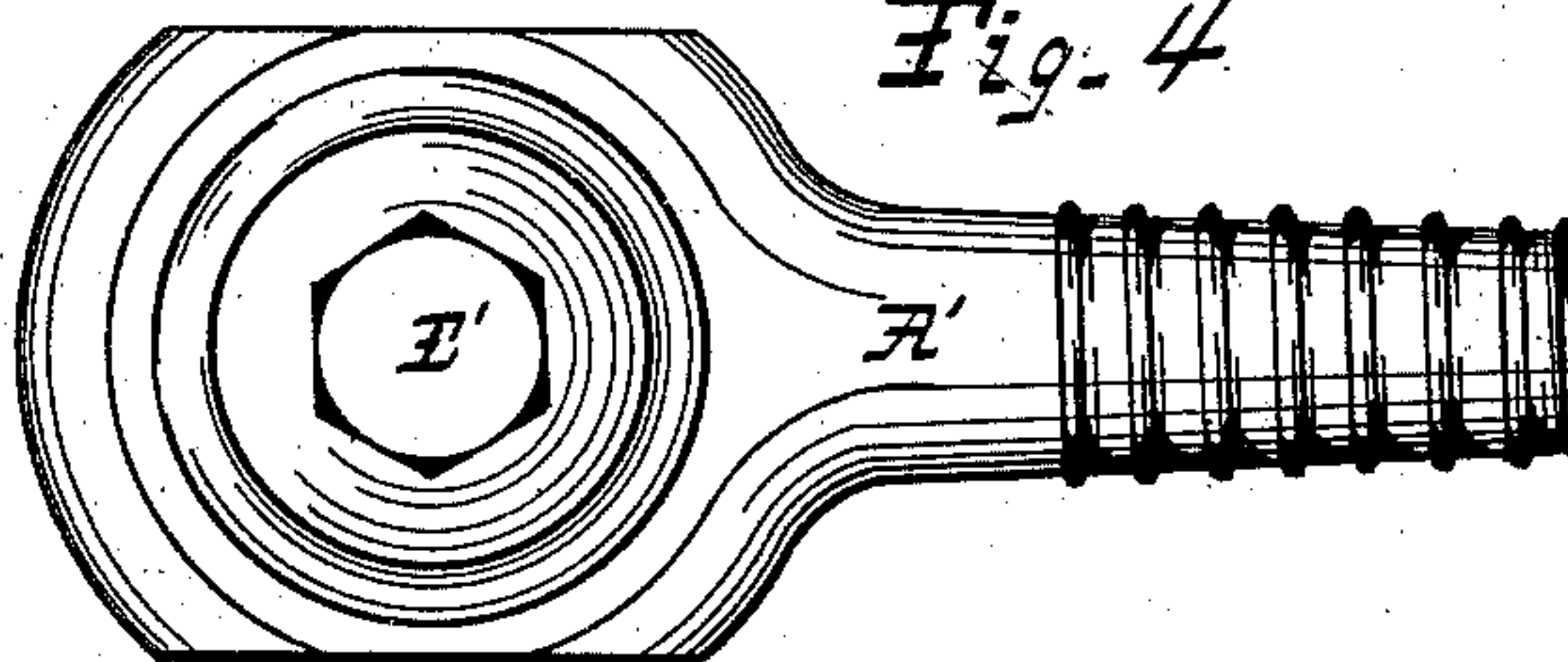
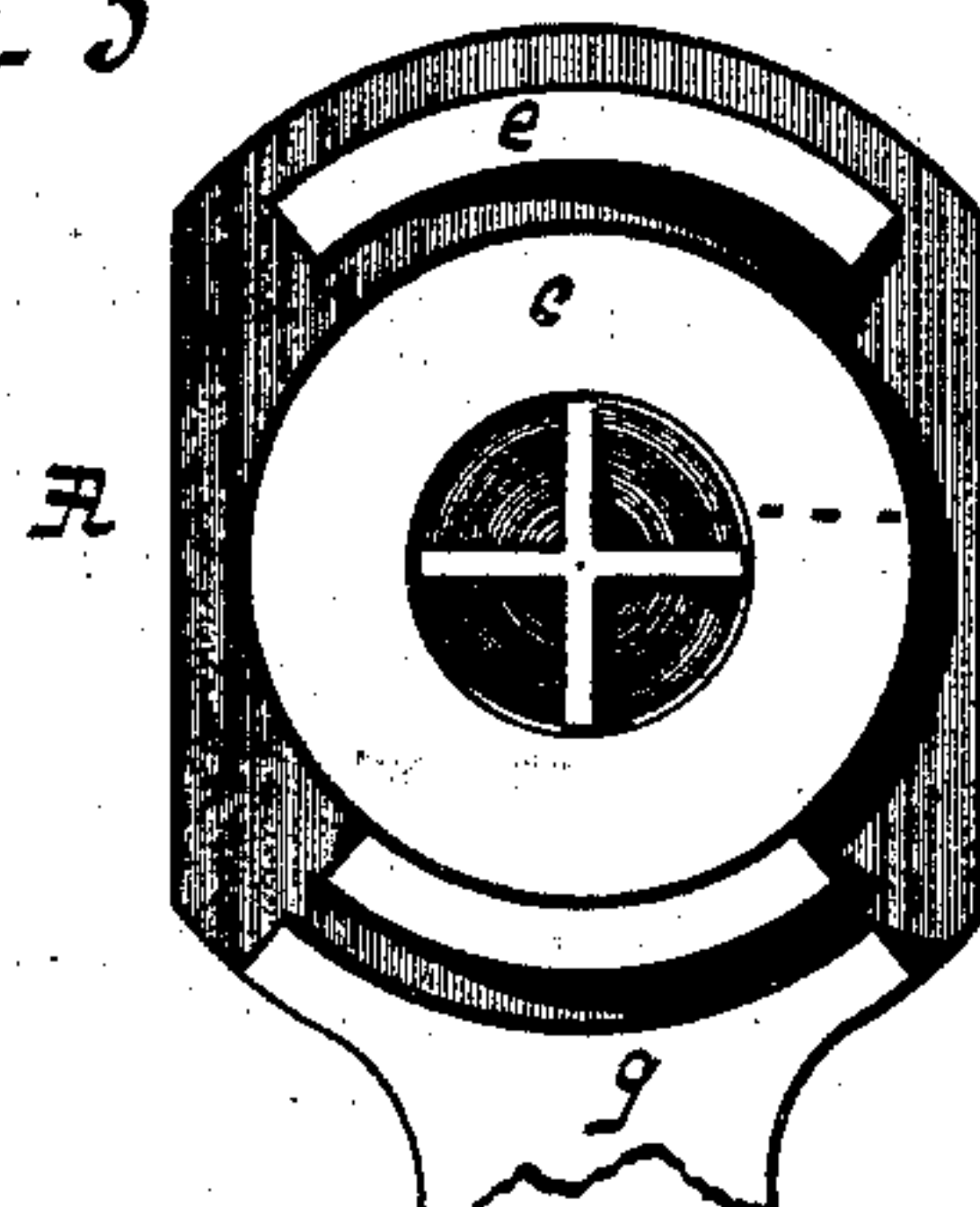


Fig. 5



Witnesses:

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att'y -



# UNITED STATES PATENT OFFICE.

JOHN KENYON, OF BUFFALO, ASSIGNOR TO HIMSELF AND JAMES G. HUBBARD, OF SAME PLACE, TUNIS ISBISTER AND FRANK S. UPTON, OF ROCHESTER, AND JOHN H. ISBISTER, OF NIAGARA FALLS, N. Y.

## HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 235,777, dated December 21, 1880.

Application filed September 9, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN KENYON, of the city of Buffalo, in the county of Erie and State of New York, have invented certain Improvements in Hose-Couplings, of which the following is a specification, reference being had to the annexed drawings, in which—

Figure 1 is a side view of my improved hose-coupling. Fig. 2 is a central longitudinal section of the same. Figs. 3 and 4 are respectively end and plan views of a half-coupling constructed in accordance with my invention. Fig. 5 shows the face of the same.

My invention relates to an improvement in hose-couplings designed more especially for use in connection with steam-heating apparatus for railway-cars, but capable of being employed for other purposes.

The principal object of my invention is to dispense with the elastic packing which has hitherto been used in devices of this kind; and for this purpose my invention consists in providing the opposed faces of half-couplings with suitable metallic valve-seats and circular screw-threaded T-flanges fitting into corresponding grooves, by which the half-couplings are firmly secured together, the whole being so constructed and arranged as to maintain a tight joint between the couplings, notwithstanding the expansion and contraction of the metal composing them from changes in temperature.

My improved hose-coupling is represented in the accompanying drawings, in which—

A and A', Figs. 1 and 2, are the two half-couplings; B and B', Fig. 2, automatic valves, fitted respectively to the half-couplings A and A', for the purpose of closing the same when separated from each other; and *c* and *c'* are the metallic valve-surfaces forming the joint between the half-couplings.

The two half-couplings are alike in all particulars. Each is provided with a hollow stem or shank for the attachment of the hose, and each has a screw-cap, E E', by removing which access is had to the valves B B'.

The screw-caps are made deep enough to receive the stems of the valves B B' and the springs *d* and *d'*, by which the valves are closed when the couplings are separated from each other.

On the face of each half-coupling, and at the

outer end thereof, a segment of a circular T-shaped flange is cast, as represented at *e e'*, Figs. 2 and 5.

The inside edges of the T-flanges are finished in a lathe into screw-threads, as represented in Fig. 3. A corresponding T-shaped groove is also cast on each half-coupling, on the end of the face opposite the flange. These grooves are represented at *g g'*, Figs. 2 and 5. The inner edges of the grooves are also finished into screw-threads, the flanges and grooves being so arranged that the flange on each half-coupling will fit into the groove on the other coupling, and when so fitted will bring the joint-surfaces *c* and *c'* into contact. These surfaces are accurately finished at the same time with the flanges and grooves.

It will be observed that the T-flanges and their corresponding grooves are brought as near as possible to the joint-surfaces *c* and *c'*, and that the inner surfaces of the T-flanges and grooves and the joint-surfaces *c* and *c'* are practically in the same plane.

The joint-surfaces and the flanges and grooves are located at equal distances above the face of each half-coupling. It follows as a result from this construction that when the surfaces *c* and *c'* are brought into contact by screwing the T-flanges into the grooves the tightness of the joint will not be affected by the expansion or contraction of the metal of which these parts are composed. This is absolutely essential to the efficiency of couplings of this class, which are necessarily subject to frequent changes of temperature.

In practical use my improved hose-couplings are connected to the heating-pipes of railway-cars by flexible hose, and they should be so arranged, when coupled, that their weight will tend to screw them together to prevent accidental derangement.

I claim—

The combination of the half-couplings A and A', provided with valves B and B' and metallic valve-surfaces *c* and *c'*, and having on their opposed faces corresponding T-shaped flanges and grooves, forming screw-threads, substantially as described.

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Witnesses:

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