

No. 690,517.

Patented Jan. 7, 1902.

A. E. DART.
PIPE COUPLING.

(Application filed Apr. 9, 1901.)

(No Model.)

Fig. 1.

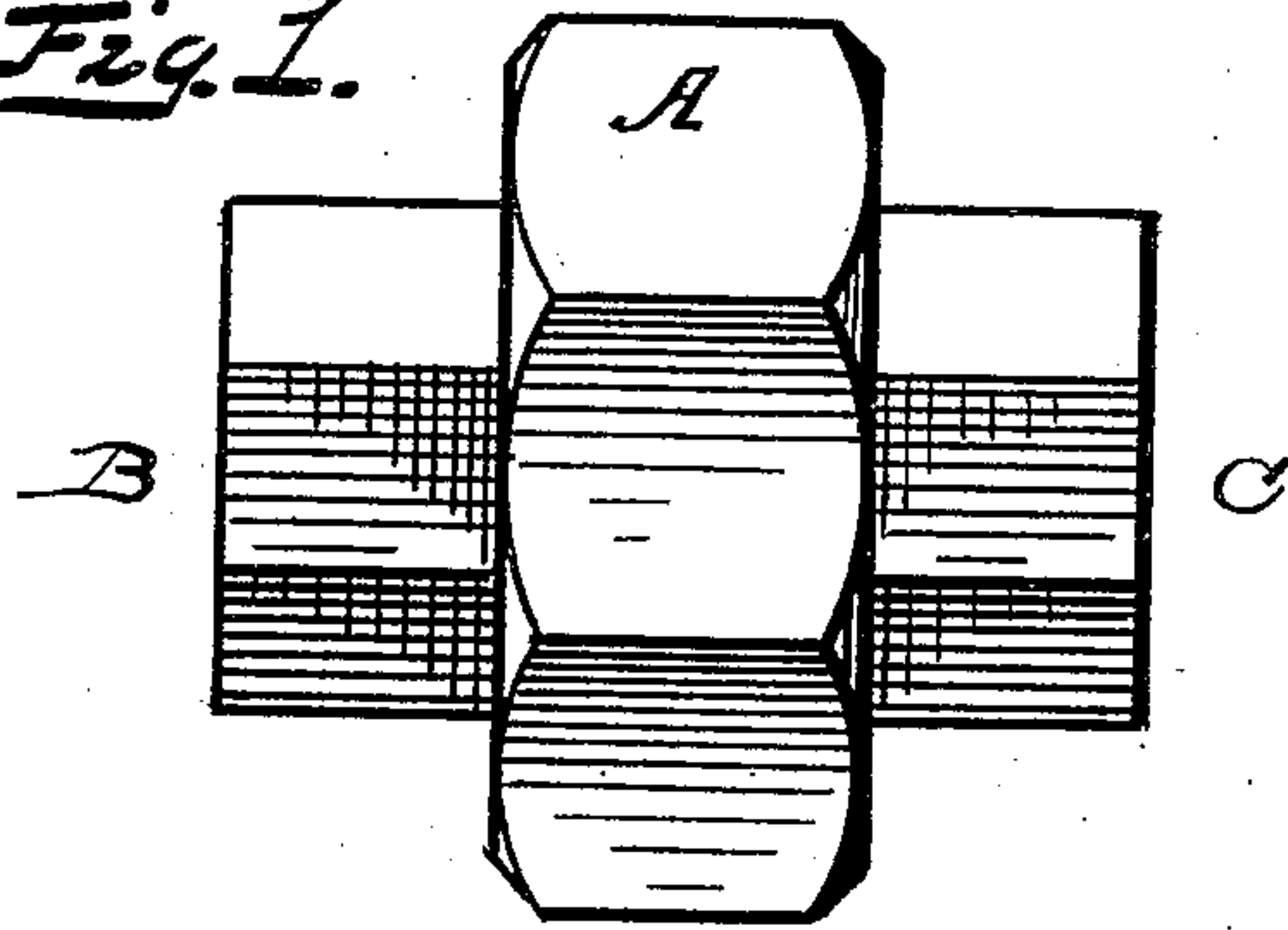
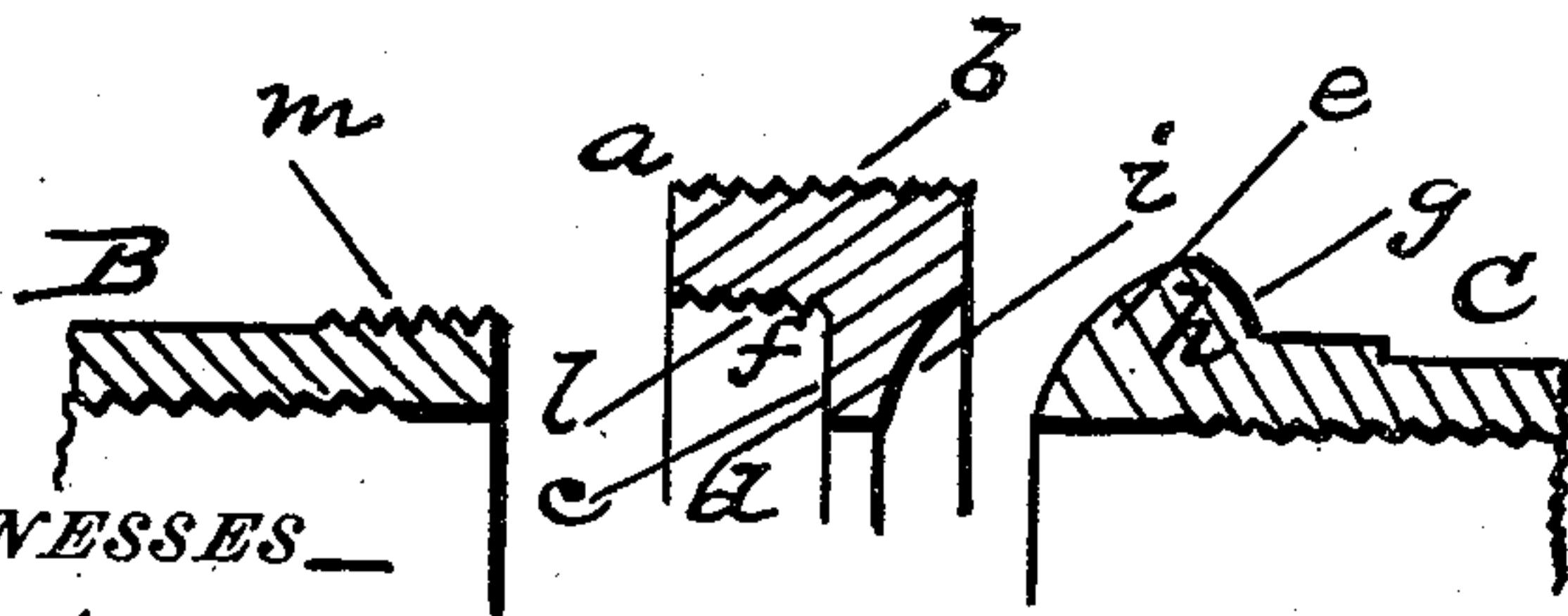
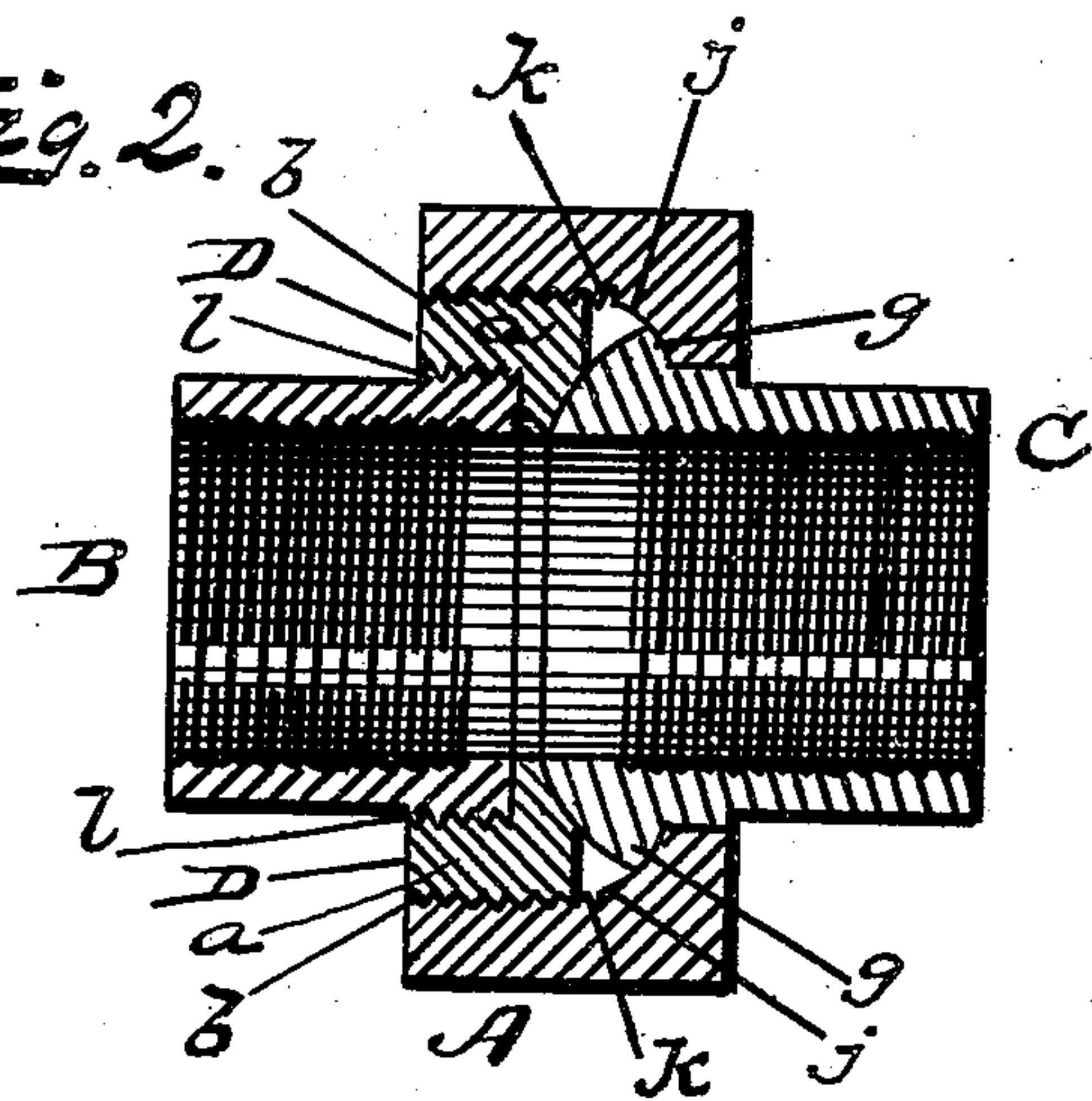


Fig. 2.



WITNESSES—

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Fig. 3.

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PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 690,517, dated January 7, 1902.

Application filed April 9, 1901. Serial No. 54,970. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. DART, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in pipe-couplings; and it consists in the novel construction, combination, and arrangement of parts of which it is composed, all as will be hereinafter more fully explained, and particularly pointed out in the appended claim.

The annexed drawings, to which reference is made, fully illustrate my invention, in which—

Figure 1 represents a side view, and Fig. 2 represents a central vertical sectional view, of my improved pipe-coupling; Fig. 3, a detail view of some parts separated from one another.

Referring by letter to the accompanying drawings, A designates the coupling-ring, B C the coupling-joints, and D is the inner ring that is interposed between the two inner ends of the opposite coupling-joints. This coupling-ring D is constructed in a peculiar manner, the same comprising an outer thickened circular portion *a*, that is provided with exterior or male screw-threads *b*, which extend from one side of the ring to the opposite and cover the entire surface of the ring, while the screw-threads on the inner face thereof extend across the ring about two-thirds of the distance, as shown; leaving an inner circular flange *c* and a shoulder *f*. This flange is constructed with a vertical surface *d* on one side thereof, and on the opposite side thereto the flange presents a concave surface *i*, adapted to engage the convex surface *e* of the pipe-joint C, while the opposite surface *g* of the annular shoulder *h* is also convexed to en-

gage the concaved inner shoulder *j* of the coupling-ring A. The flanged inner ring is preferably constructed of brass or other non-corrosive metal to avoid rust, and the inner or female threads *l* engage the male threads of the coupling-joint B where they are machined together, thereby forming a perfectly tight joint. The interior of the two joints B and C are constructed in the usual manner with female screw-threads.

It will thus be observed from the above description, when taken in connection with the annexed drawings, that I construct a collar that is interposed between the two opposite inner ends of the pipe-joints in a peculiar manner, the same having the vertical flat surface on one side and a tapering concaved surface on the opposite side or face. At the same time it is also provided with outer or male screw-threads and inner or female screw-threads, the former to engage the nut or coupling ring A, as at *k*, and the latter engaging the male threads *m* on the section or joint B, and the whole constitutes a pipe-coupling composed of four parts that can be joined together, so that a perfect water or steam tight coupling can be produced, and the bronzed inner ring *a* can be removed and another replaced at will should the ring or collar become worn from use; and it will be further seen that in constructing the bearing-surfaces of the parts the convexed and concaved surfaces provide means whereby the parts can be drawn perfectly tight together, rendering the joint steam-tight as well as water-tight, and this interposed ring may be constructed of any suitable metal to serve as a packing between the meeting surfaces of the parts A a C.

Having thus described my invention, what I claim is—

In a pipe-coupling, the combination with the coupling-ring A, having female screw-threads, and inner concaved shoulder; of the pipe-sections B, and C, the latter being provided with the annular shoulder *h*, having convex surface *e* thereon, and opposite convex surface *g*, this latter convex surface being adapted to engage the concave surface of the coupling-ring A, the coupling-ring D, having the thickened circular portion *a*, and ex-

terior male screw-threads *b*, and inner female screw-threads *l*, engaging the threads of the section B, vertical flange *c*, provided with the concave portion *i*, for engagement with the
5 convex surface *e*, of the shoulder *h*, all constructed and arranged for joint operation as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT E. DART.

Witnesses:

FRED C. CHAMBERLIN,
RANDALL B. ANDROS.