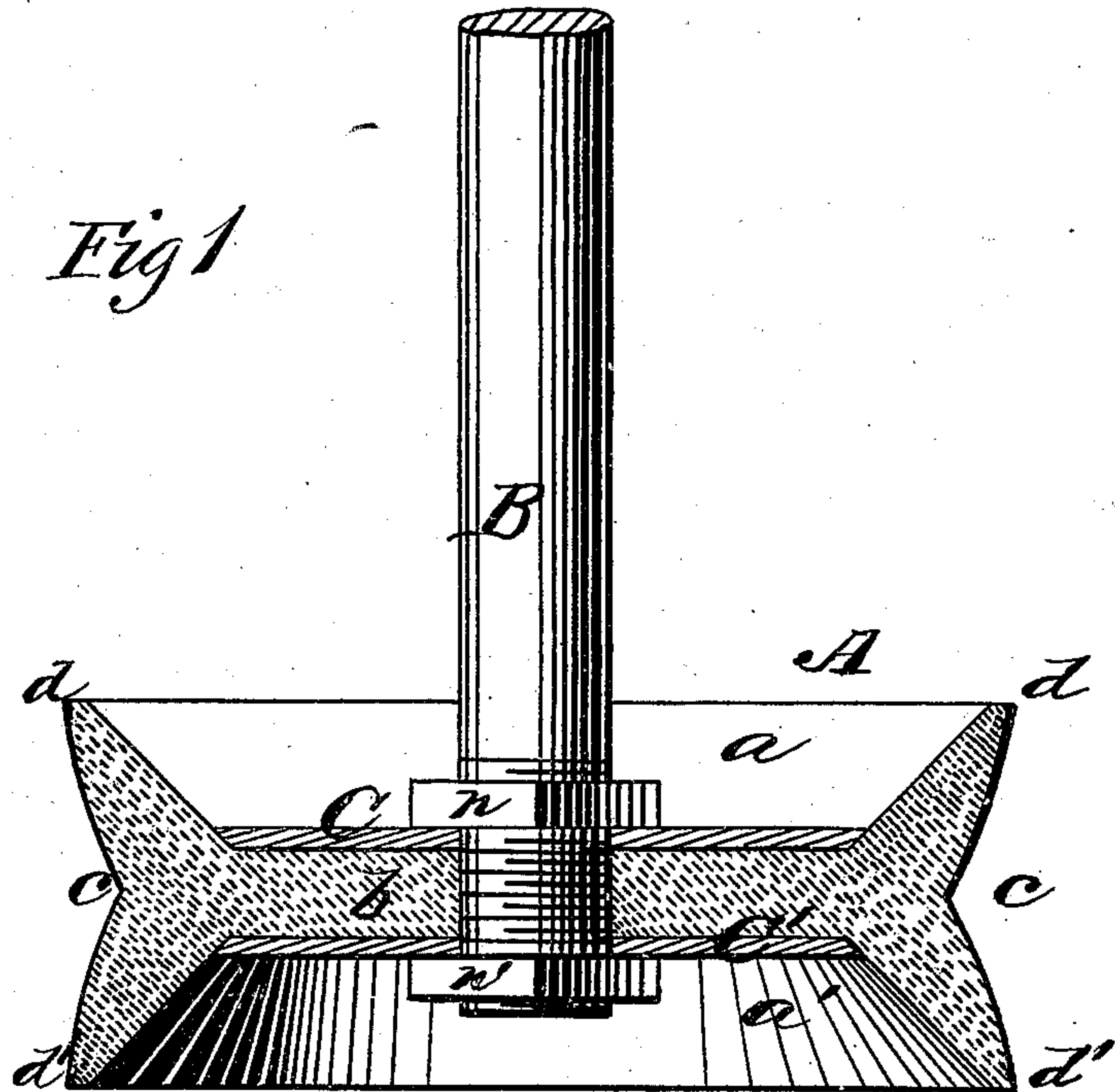


J. E. MOONEY.

GUM CUPS FOR PUMPS AND HYDRANTS.

No. 174,280.

Patented Feb. 29. 1876.



WITNESSES

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JOSEPH E. MOONEY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN GUM CUPS FOR PUMPS AND HYDRANTS.

Specification forming part of Letters Patent No. 174,280, dated February 29, 1876; application filed August 7, 1875.

To all whom it may concern:

Be it known that I, JOSEPH E. MOONEY, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and valuable Improvement in Gum Cups for Pumps and Hydrants; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of section of my pump-plunger.

This invention has relation to improvements in cups for force-pumps, hydrants, and the like; and the nature of the invention consists in a compound or double cup formed in a single piece of gum or gutta-percha, whereby great efficiency is at all times secured, and a corresponding saving of expenditure obtained, as will be hereinafter more fully explained.

In the annexed drawings, A designates my improved cup or plunger, consisting of two cups, *a a'*, one of which has its rim or concavity up, and the other down, and which possesses a bottom or base, *b*, common to all. This cup is provided upon its periphery with an annular groove, *c*, whereby bearing-surfaces *d d'* are formed on the upper edge of cup *a*, and upon the lower edge of cup *a'*, which surfaces only are designed to bear against the inner surface of the pump-barrel, for the purpose of forming an air and a water-tight joint therewith.

Plunger A is molded in the form shown in Fig. 1 in a single piece of india-rubber or other suitable expansive and elastic substance, its construction being thus much simplified, and rendered much less expensive; and it is provided with a central perforation in its base, by means of which it is connected to the piston-rod B. This result is obtained in the following manner, to wit: Two stout metallic disks, C C', are applied in the cups *a a'*, the

one above and the other below dividing-wall *b*, which disks are also provided with a central perforation. Plunger B, the lower end of which is screw-threaded, is then passed through the perforations in the said disks, and in the dividing-wall of the plunger, and is secured in position by means of nuts *n n'*, applied, the one upon its screw-threaded projecting lower end, and the other above disk C, as shown in Fig. 1.

By this means, as the bearing-surfaces *d d'* wear away, causing the joint of the plunger and pump-barrel to leak, a means is provided whereby its air-tight qualities may be restored, it being only necessary to set up nuts *n n'*, thereby clamping the dividing-wall *b* between disks C C', causing it to expand, and the said bearing-surfaces to be thrust against the wall of the pump-barrel. The plunger, being practically impervious to water, and but little affected by climatic changes or changes of temperature, will at all times preserve the close joint necessary for the effective operation of the pump. In consequence, however long it may have been since the pump was used, the plunger will never shrink away from the pump-barrel.

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

1. As a new article of manufacture, the double-cupped rubber plunger A, molded in a single piece, and having annular peripheral groove *c*, substantially as specified.

2. The combination with the expansible double-cupped rubber plunger A, having an annular groove, *c*, of the clamping-disks C C', rod B, and nuts *n n'*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH E. MOONEY.

Witnesses:

WALTER C. MASI,
B. H. MORSE.