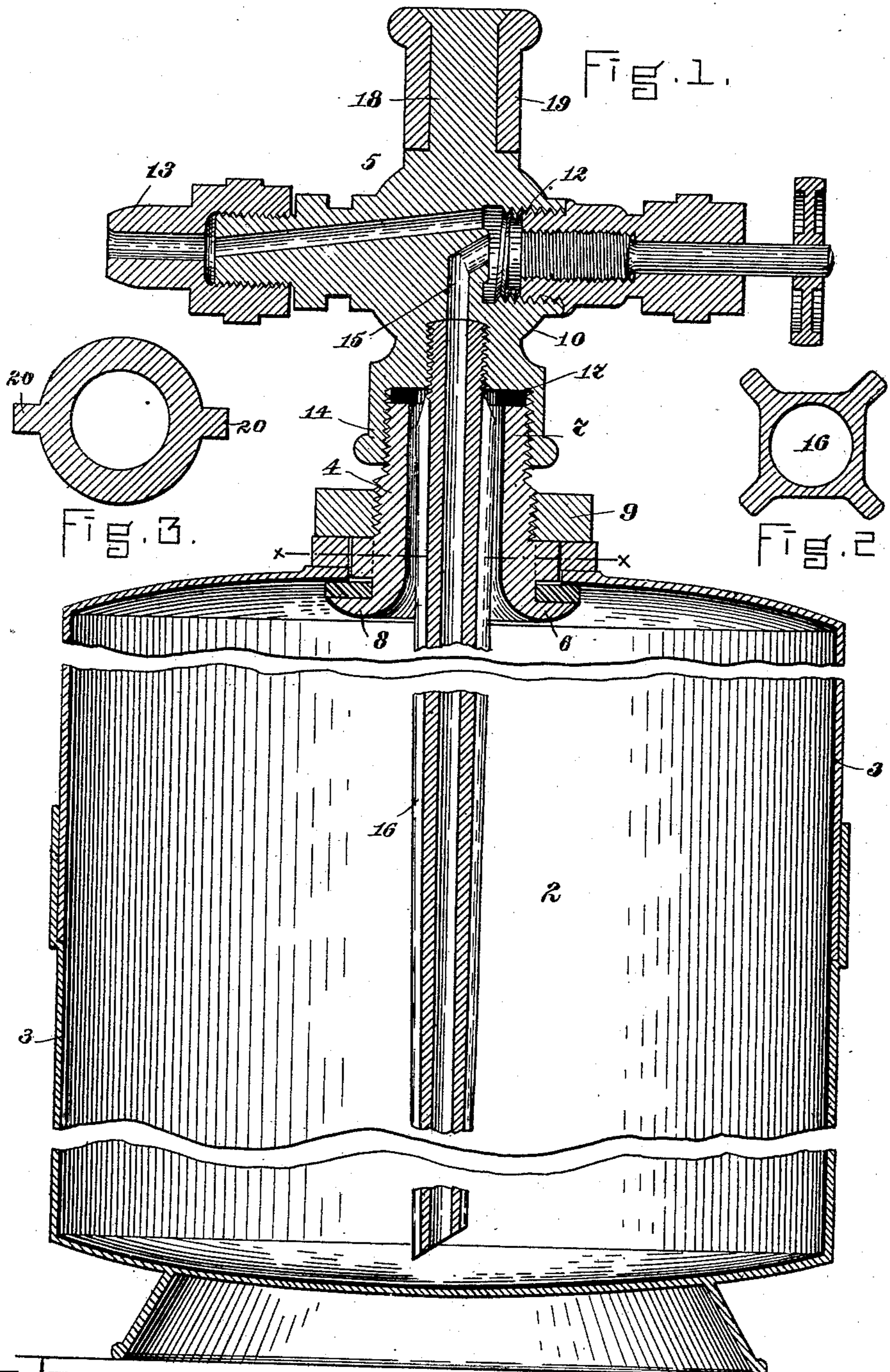


(No Model.)

A. D. PUFFER.  
SODA WATER FOUNTAIN.

No. 465,049.

Patented Dec. 15, 1891.



WITNESSES.

*John A. Joseph*  
*E. H. Bognuto*

INVENTOR.

*Alvin D. Puffer.*  
*by H. E. Lodge Atty.*

# UNITED STATES PATENT OFFICE.

ALVIN D. PUFFER, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN SODA FOUNTAIN COMPANY, OF JERSEY CITY, NEW JERSEY.

## SODA-WATER FOUNTAIN.

SPECIFICATION forming part of Letters Patent No. 465,049, dated December 15, 1891.

Application filed January 16, 1891. Serial No 378,004. (No model.)

*To all whom it may concern:*

Be it known that I, ALVIN D. PUFFER, a citizen of the United States, residing at Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Soda-Water Fountains; and I do hereby 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 figures of reference marked thereon, which form a part of this specification.

The invention relates to soda-water fountains; and it consists in improvements in the construction of the fountain attachment for the faucet or valve, as likewise for the faucet itself, which controls the liquid contents of said fountain.

My invention has for its object to provide a fountain of such construction that the contents thereof cannot come in contact with any base or corrosive metal, and also to render the fountain-pipe very strong in proportion to its size or weight, and to provide a fountain which will be convenient for use, as hereinafter more fully set forth and claimed.

The drawings represent, in Figure 1, a central longitudinal section of a soda-water fountain embodying my improvements. Fig. 2 is a cross-section of the fountain-pipe. Fig. 3 is a cross-section of the bung on line *x x*.

In said drawings, 2 represents a soda-water fountain as a liquid and gas tight vessel made of a fine quality of steel and lined with pure block-tin. (Shown by the heavy black line 3.) Fountains of this class are usually provided with a bung secured within the top of the fountain and projecting therefrom, to which is removably fastened the cock or valve 5. The bung is interiorly screw-threaded, while the shank of the valve enters the same. Objections arise from this arrangement, and the reasons therefor will be hereinafter mentioned. My present bung 4 is composed of a brass casting, flanged at 6 interiorly of the fountain and with a projecting portion exteriorly screw-threaded at 7. An interior shell or lining of tin is shown at 8 and the fastening-nut at 9.

The valve-shell at 10 is fitted with a valve 12, which controls the delivery-nozzle 13. The valve-stem is preferably arranged at right angles to the longitudinal axis of the fountain. The ducts in this valve-shell are lined to prevent contact of the liquid contents with any portion of the brass of which the valve-shell is composed. One important feature in this valve-shell consists in its mode of attachment to the bung of the fountain. As will be seen by reference to Fig. 1, the valve-shell is formed with a pendent hollow boss or shank 14, exteriorly of polygonal shape to enable it to be grasped when making the faucet fast to the fountain. Interiorly it is screw-threaded to engage the projecting end of the bung before mentioned. The mouth of the discharge-valve duct 15 is, moreover, enlarged and interiorly screw-threaded of a size to engage the end of the fountain-pipe 16. Thus the latter is removably attached to the faucet and may be detached if necessary. Said fountain-pipe 16 is a wrought pipe in lieu of a cast one, which is liable to contain blow-holes, with a gradual taper and preferably of tin polygonal in cross-section, with the corners extended. (See Fig. 2.) This makes the pipe much stiffer than if round and with the same amount of material. It is further to be observed that the fountain-pipe is smaller in diameter than the bung, as likewise that of the pendent boss or valve-shank. In this way I form a packing gland or box between the pipe 16 and the boss 14, in which a gasket 17 is to be confined. The advantages of this mode of attachment are readily perceived and radically different from the usual method, inasmuch as the screw-threads are removed from all possible contact with the contents of the fountain, for this reason that when the cock is made fast upon the bung and screwed into place the gasket or packing 17 is firmly pressed down upon the end of the bung. In this way all liquid is prevented from working into the engaging screw-threads of the boss 14 and bung 4. Furthermore, since the screw-threads are kept from the liquid they may be greased, if desired. It is apparent that by confining the gasket between metal on all sides it becomes

practicable, with high pressure of the fountain, to use leather or rubber, and the employment of base metal, as lead packing, is avoided.

It is evident in the use of these fountains 5 and during their transportation from the place of charging to the place where they are emptied, or vice versa, but more particularly when freshly charged and filled with liquid, that they receive much handling, and since 10 they are extremely heavy the most ready way has been found to roll them upon their bottom edge after the manner of rolling barrel upon its chine. Hitherto this has been a slow and awkward process, since there was nothing 15 to steady the fountain when turning, and the valve or cock was an impediment. To overcome this difficulty and to enable one hand to grasp and steady the fountain at all times while the other was employed to give it rotary motion, I have cast a stout pin or stud 18 upon the 20 valve-shell. This stud is to be in alignment with the central longitudinal axis of the fountain, and upon it is fitted a hand piece or sleeve 19, free to revolve thereabout but prevented 25 from coming off. When a fountain is to be moved, the hand-piece is grasped with one hand and held fast to keep the fountain in the proper oblique position, while the other hand imparts rotary movement to the fountain, the stud revolving in the bore of the hand-piece. I do 30 not desire to be limited to the precise form of hand-piece, since the shape may be varied.

To explain the advantage of my improved attachment between the valve or faucet and 35 the fountain, I might add that in the old method the shank of said valve screwed into the bung, with the packing outside the latter, thus admitting the liquid contents between the screw-threads, even to the lead washer, 40 the water coming in contact with over twenty inches of base metal. Moreover, in the charg-

ing of the fountains the latter are not kept stationary, but are tipped end for end. Hence as the liquid contents are violently agitated at each charging it will be seen that in the 45 old form of attachment the water will be driven into the threads and to the top, where it can wash the inner edge of the lead packing, which is an objection. In my form of attachment the gasket 17 effectually prevents 50 such action, while the bung and the boss enable their screw-threads to be greased and provide for ready disengagement of the faucet from the fountain when so desired.

In Fig. 3 is shown the bung in cross-section 55 on line  $x x$ ; with side lugs 20, which engage in the body of the fountain to prevent said bung from turning when the fastening-nut is being adjusted.

What I claim is— 60

In a soda-water apparatus, the combination, with a fountain provided with a bung having an exteriorly-screw-threaded portion, of a faucet having an interiorly-screw-threaded 65 boss 14, fitting the threaded exterior of said bung, said faucet having also centrally within said boss an interiorly-threaded recess with a surrounding shoulder, a fountain-pipe screwed into said recess and being thereby removably joined to said faucet, and a packing 70 gasket 17, interposed between the top of said bung and the said shoulder, whereby the contents of the fountain are entirely excluded from the screw-threads connecting the parts of the bung and the faucet and the joints are 75 securely packed, substantially as set forth.

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

ALVIN D. PUFFER.

Witnesses:

H. E. LODGE,

FRANCIS C. STANWOOD.