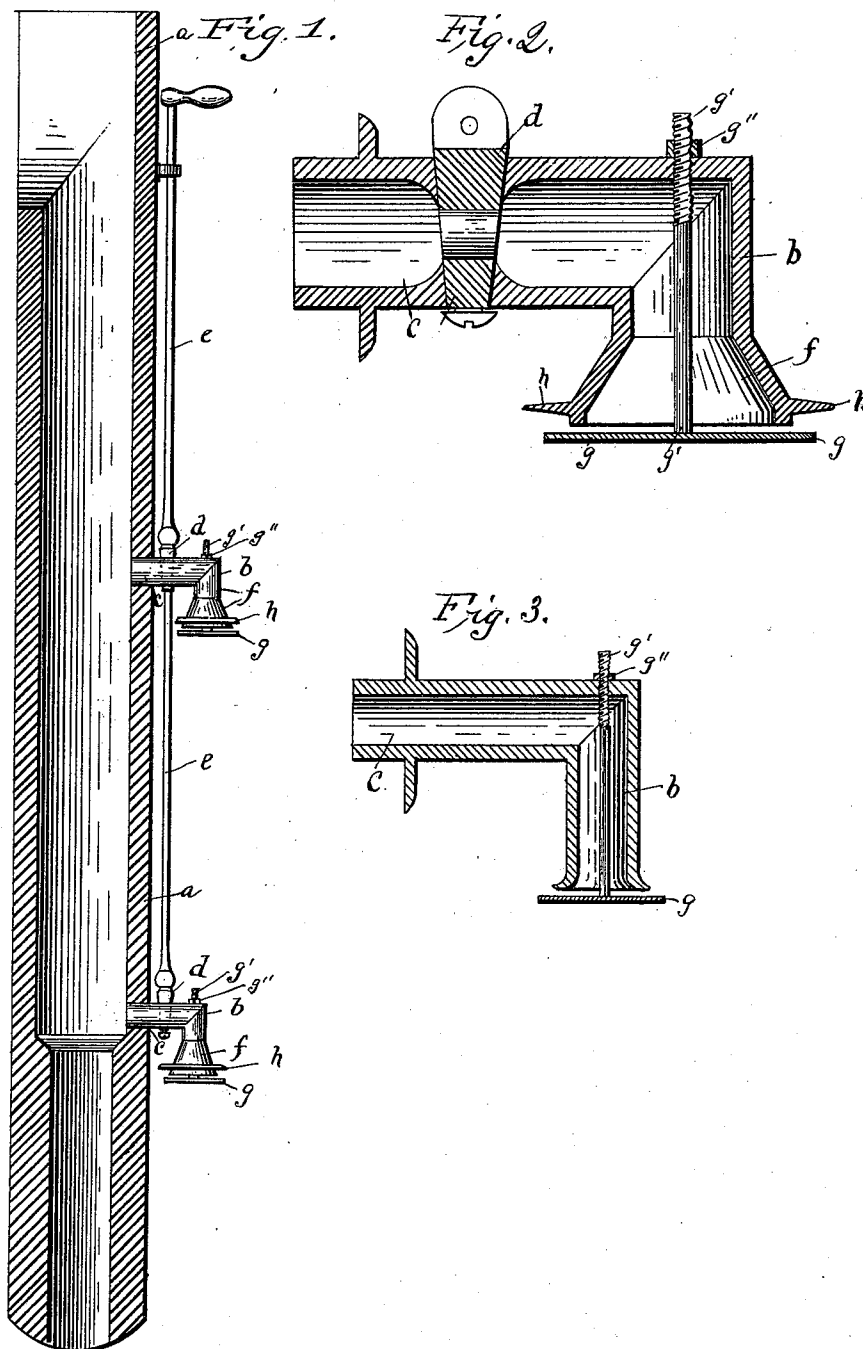


(No Model.)

C. L. MERRILL
PUMP.

No. 429,464.

Patented June 3, 1890.



Witnesses
C. H. Conway.
C. O. Davis

Inventor
C. L. Merrill.
By his Attorney
C. M. Alexander

UNITED STATES PATENT OFFICE.

CHARLES LEE MERRILL, OF INDIANAPOLIS, INDIANA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 429,464, dated June 3, 1890.

Application filed September 16, 1889. Serial No. 324,086. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LEE MERRILL, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Pump Attachments, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of an ordinary pump-stock provided with my improved sprayers; Fig. 2, a detail sectional view of one of the spraying devices, and Fig. 3 a similar view without the conical spraying part.

The invention relates to improvements upon the method and apparatus covered by Letters Patent No. 246,801, granted to me September 6, 1881, for purifying the water and air of wells or cisterns, as will more fully hereinafter appear.

The object of the present invention is to so improve the apparatus covered by my former patent that it will be more efficient in operation and whereby the volume of spray may be readily regulated and adjusted, as will presently appear.

In the accompanying drawings, *a* designates an ordinary pump-stock for a chain or other character of pump. Secured to this stock, at a suitable point below the well or cistern platform, are one or more elbows *b*, the horizontal portions of which communicate with the interior of the pump-stock by means of passages *c*. Stop-cocks *d* are placed in the horizontal portions of the elbows, whereby the supply of water to the spraying devices may be entirely shut off or regulated to any desired degree, an operating-rod *e* being connected to the said stop-cocks and extended up to near the well-platform for convenience in operating. Formed integral with the vertical portions of the elbows are inverted funnels *f*, and secured over the respective lower ends of these funnels is a disk *g*, which is slightly larger in diameter than the mouth of the funnel. The disks are held in close proximity to the lower edge of the funnel by means of central rods or bolts *g'*, which are screw-threaded at their upper ends and tapped into screw-threaded passages formed in the hori-

zontal portions of the elbows, lock-nuts *g''* being employed to hold the rods and disks in their adjusted positions. By means of these rods the annular spaces between the disks and funnels may be readily regulated and adjusted, according to the volume of spray desired.

To protect the spraying-disks *g* from falling objects and assist in forming the spray, I may provide each of the inverted funnels near its lower end with an annular horizontal flange *h*.

It is evident that, although I have shown two in the drawings, I may employ a greater or less number of the spraying devices, as the exigencies of the case may require.

The operation of the device will be apparent, and is as follows: A portion of the water raised from the cistern or well by means of the pump will (when the stop-cocks are open) flow through the horizontal passages *c* into the elbows and inverted funnels and be forced out through the narrow space between the spraying-disks and funnels in the form of a fine shower of spray, which will spread out horizontally in all directions and then fall back into the well or cistern. This method of spraying the water of the well or cistern will keep it perfectly pure and sweet without further attention. The falling spray not only serves to oxygenate the water in the well, but also serves to keep up a continuous circulation of fresh pure air in the well, thereby preventing the accumulation of foul odors and vapors.

As shown in Fig. 3, instead of forming the vertical portion of the elbow into an inverted funnel the same may be omitted entirely and the spraying-disk brought in close proximity to the lower end of elbow proper.

Having thus fully described my invention, what I claim is—

The combination of a pump-stock, an elbow *b*, communicating with the interior of the same and provided with a downwardly funnel or flaring portion, a stop-cock in the said elbow, an operating-rod connected to the said stop-cock and extending up to within reach of the well-platform, a disk *g*, larger than the mouth of the funnel and secured adjustably over the same, a projecting annular

flange formed on the funnel near its mouth,
a vertical rod secured to the said disk *g* and
extending up and through the vertical por-
tion of the said elbow and tapped into a
5 screw-threaded aperture in the horizontal por-
tion thereof, and a nut on the upper end of
this rod, substantially as described.

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

CHARLES LEE MERRILL.

Witnesses:

A. W. HEINLY,
S. D. REYNALDS.