(No Model.)

G. P. GATES.

STRAINER FOR FLUID PIPES.

No. 435,140. Patented Aug. 26, 1890.

Fig. 2.

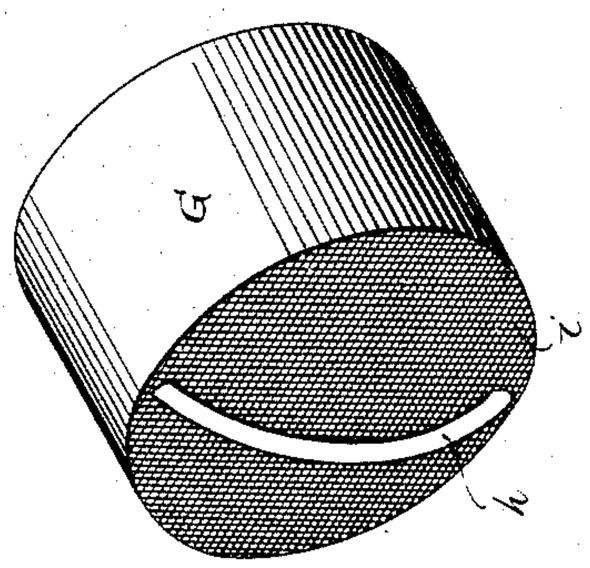


Fig. 3.

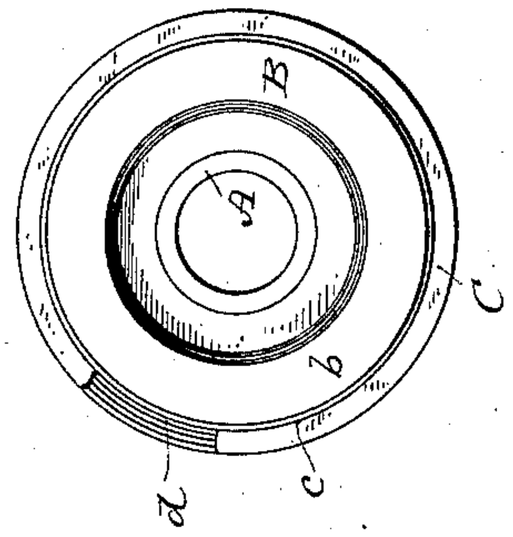
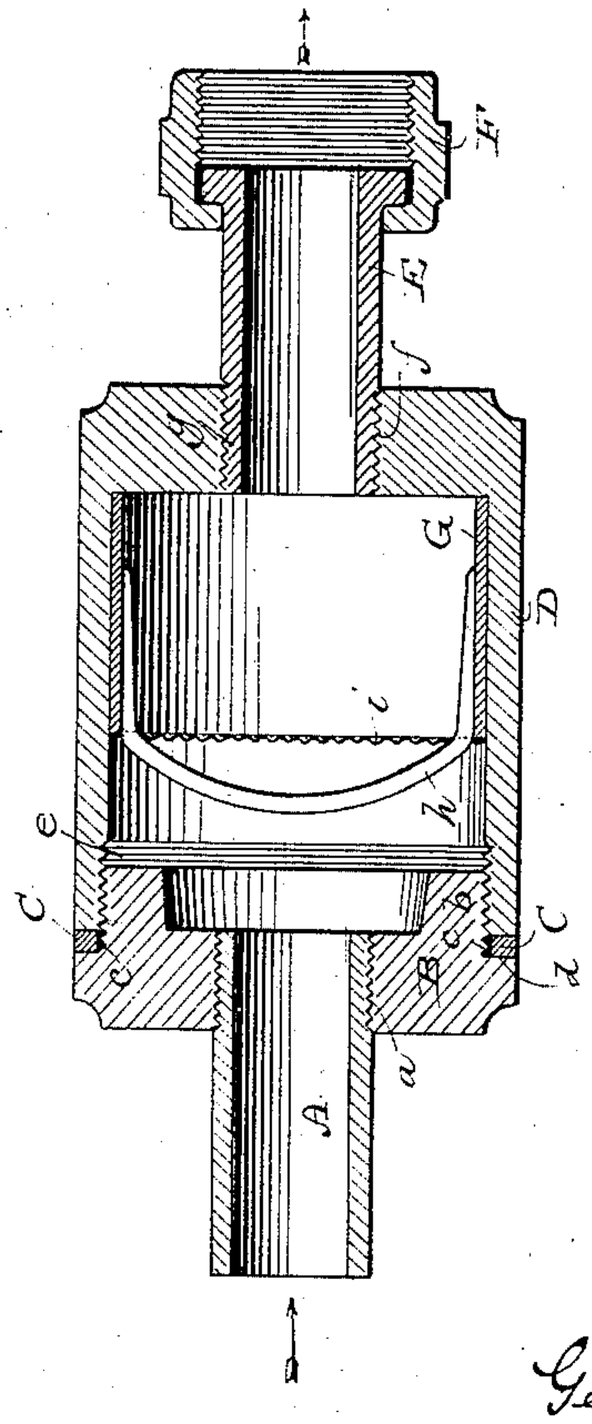


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE P. GATES, OF WATERTOWN, WISCONSIN.

STRAINER FOR FLUID-PIPES.

SPECIFICATION forming part of Letters Patent No. 435,140, dated August 26, 1890.

Application filed February 19, 1890. Serial No. 341,022. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. GATES, of Watertown, in the county of Jefferson, and in the State of Wisconsin, have invented certain new and useful Improvements in Strainers for Fluid-Pipes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to strainers for fluid-pipes, and is especially designed for use in connection with the pipes connecting beer-pumps with beer in barrels and kegs; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter and subsequently claimed.

In the drawings, Figure 1 is a longitudinal sectional view of my improved strainer and strainer-case in position on sections of pipes for the purpose named. Fig. 2 is a perspective view of the strainer removed; and Fig. 3 is an inside end view, partly broken away, of the strainer-cap, packing-ring, and connected pipe.

A represents a section of pipe of any ordinary construction leading from the barrel or keg containing the beer. This pipe-section is shown as being of metal and screw-threaded at its inner end to fit within a correspondingly-screw-threaded opening *a* in the center of the strainer-cap B, which latter is further provided on its inner side with a raised ring or annular flange *b*, preferably of less diameter than that of the main portion of said cap and having exterior screw-threads, as shown at *c*. Outside of said flange *b* the cap B has a square annular shoulder *d* to receive a packing-ring C, of rubber or other suitable material.

D is the strainer-case, and consists of a hollow cylindrical body of brass or other suitable material, preferably metallic, having a much greater diameter than that of the said pipes, for a purpose hereinafter explained. At the end adjacent to the cap B the interior of the case D is provided with screw-threads, as shown at *e*, for the reception of the threads *c* on the outside of the said flange *b*. The other end of the cylinder is closed, except at the center, which is formed with a screw-threaded opening *f* corresponding to the described opening *a* in the strainer-cap B, the opening *f* being for the reception of the screw-threaded end *g* of the pipe-section E, which latter is provided with a suitable coupling F, properly packed to receive the end of the pipe (not shown) leading to a beer-pump. The pipes leading from the barrel and to the beer-pump may be metallic or flexible, as preferred, and form no part of my present invention.

G is the strainer, and consists of a preferably-metallic cylinder of a diameter just sufficient to enable it to fit closely within the cylindrical portion of the case D, though of considerably less length, and having a suitable pull-handle or bail *h* secured thereto, and provided with a sieve *i*, of fine mesh, covering one end.

The operation of my device will be readily understood from the foregoing description of its construction. When beer (or other fluid) is drawn through the pipes, it passes first through the pipe-section A into the space at the adjacent end of the strainer-case D, where it encounters the sieve *i* and passes through it, leaving in said space all solid impurities and foreign matter—such as rosin, splinters, and the like—and thence passes out through the cylindrical portion of the strainer G and the pipe-section E, as indicated by the arrows.

It is of the utmost importance, especially in using my strainer for beer, that the diameters of the parts D and G shall be much greater than that of the pipes, for if the strainer were merely placed within one of said pipes, for instance, the rapid forcing of the beer therethrough would cause it to foam and be delivered in an unsatisfactory and objectionable condition. By making the cylinder of the strainer G of less length than that of the cylinder of the case D space is afforded for the reception and retention of the solid impurities and foreign matter without clogging the pipes, and by unscrewing the cap B the same can be readily removed, while by reason of making the diameter of the cylinder G of just sufficient size to fit snugly within the case D the former is held by frictional contact at the point to which it is adjusted, and will remain there even if the parts are in a vertical position.

If desired, the screw-threads *e* may be on the outside of the case D, in which case, of course, the flange *b* of the cap B would be of

greater diameter than that of said case and have corresponding interior screw-threads; but ordinarily I prefer the construction illustrated and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a strainer for fluid-pipes, the combination, with said pipes, of an interposed separable cylindrical strainer-case of greater diameter than that of said pipes, with a removable strainer comprising a cylinder of a diameter just sufficient to fit tightly within the cylinder of said case, but of less length, and having a suitable handle or pull, and a sieve of fine mesh covering one end of said inner cylinder, substantially as set forth.

2. A strainer for fluid-pipes, comprising a strainer-case of greater diameter than the conduit-pipes, having a central screw-threaded opening at one end to receive one of said pipes, a removable cap screwed upon the opposite end of the case and having a central screw-threaded opening to receive the other pipe, and a tubular strainer-frame arranged to fit closely within said strainer-case and of less length than the latter, said frame carrying a perforated partition or strainer at one end, all substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand, at Watertown, in the county of Jefferson and State of Wisconsin, in the presence of two witnesses.

GEORGE P. GATES.

Witnesses:

WM. M. KELLY,

S. S. WOODARD.