

No. 622,217.

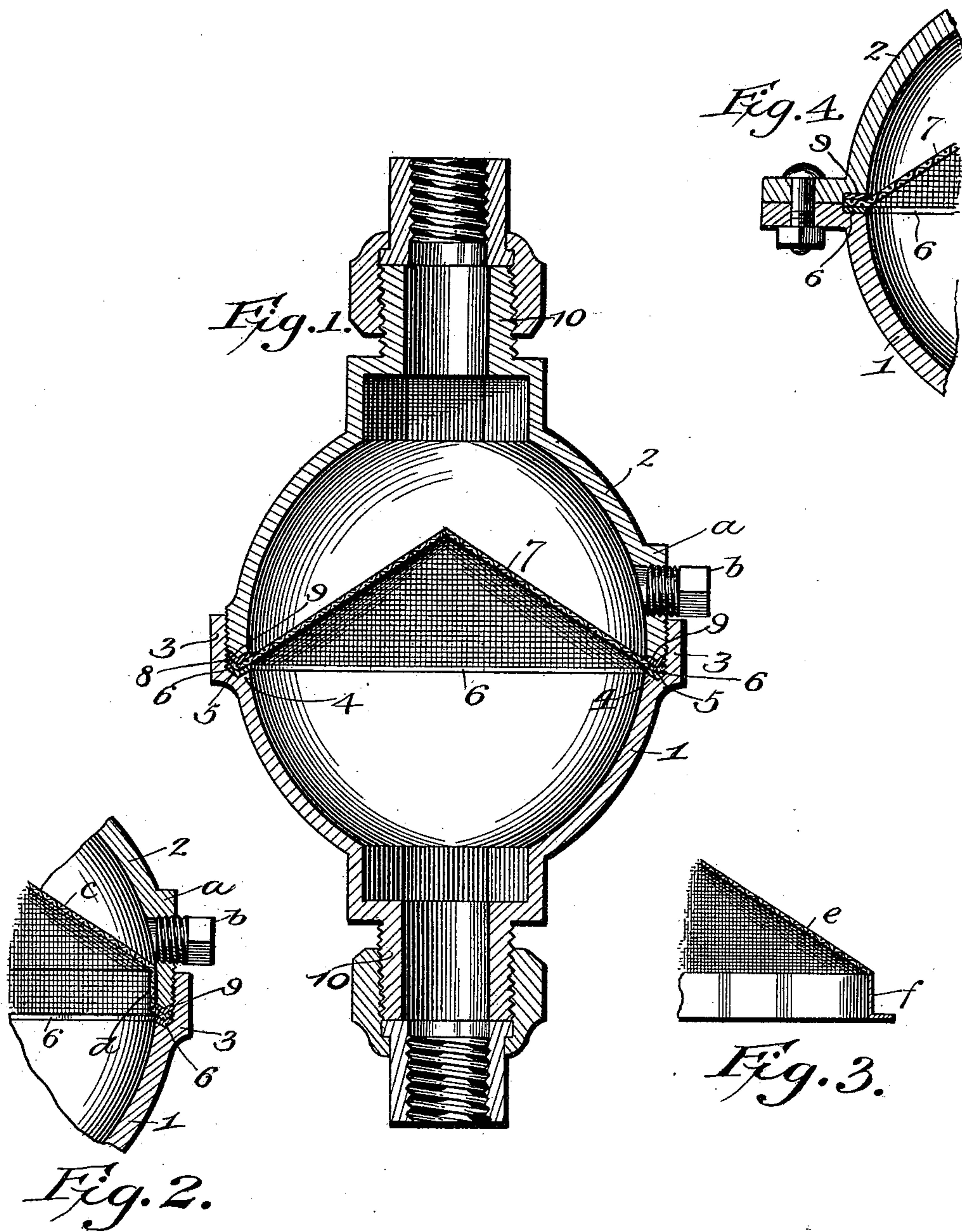
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L. T. FULLER & J. G. VOLLE.

STRAINER.

(Application filed Dec. 31, 1898.)

(No Model.)



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UNITED STATES PATENT OFFICE.

LOUIS T. FULLER AND JOHN GEO. VOLLE, OF CALVERT, TEXAS.

STRAINER.

SPECIFICATION forming part of Letters Patent No. 622,217, dated April 4, 1899.

Application filed December 31, 1898. Serial No. 700,847. (No model.)

To all whom it may concern:

Be it known that we, LOUIS T. FULLER and JOHN GEO. VOLLE, citizens of the United States of America, residing at Calvert, in the county of Robertson and State of Texas, have invented certain new and useful Improvements in Strainers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in strainers, and particularly to that class for use in the line-pipe when it is desired to arrest the impurities.

A further object of the invention is to produce a device which will direct the impurities to a section of the casing where they will not obstruct the passage or fill the meshes of the strainer.

A further object of the invention is to provide a novel arrangement whereby the arrested matter may be withdrawn from the casing when desired.

Furthermore, the object of the invention is to provide means for allowing the sections of the casing to be disconnected, that the strainer may be removed for cleaning, renewal, or repair.

Finally, the object of the invention is to produce a filtering connection which can be readily applied to systems already installed and in which the parts are comparatively inexpensive, also strong, durable, and efficient.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and construction of parts to be hereinafter more fully set forth and specifically claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters of reference denote corresponding parts in the several views, in which—

Figure 1 is a vertical central sectional view of the invention. Fig. 2 is a similar view of a portion of the casing with a slightly-modified form of strainer applied. Figs. 3 and 4 are sections showing still further changes.

In the drawings, 1 denotes the lower and 2 the upper half of the casing, the former having an upwardly-projecting flange 3, threaded internally, there being a shoulder 4 at the

junction of the flange and casing, and in practice we prefer to provide this shoulder with an annular concavity 5, into which the flange of the strainer, to be hereinafter described, may be bent to insure a positive retention of the parts. A gasket 6 is arranged in the shoulder under the strainer's flange to further insure a tight joint.

The strainer 7 is conical and is provided with a flanged section 8, fitting on the gasket which is supported by the shoulder. The upper section 2 of the casing has its outer surface threaded at its lower end to receive the threads of the flange 3. The lower edge of the upper section is tapered from each side toward the center, thus producing in cross-section a V-shaped edge which will coincide with the annular concavity of the shoulder, whereby when the flange of the strainer and the gaskets (for it will be understood that a gasket 9 is arranged between the top of the strainer's flange and the edge of the upper section) are clamped by the screwing together of the lower and upper sections the parts will assume the position shown in the drawings.

By the employment of a strainer of the configuration shown and described the gravel and other foreign matter in the water will be arrested and directed to the lowermost section of the strainer where it touches the side of the casing, and it is one purpose to provide means whereby this accumulated matter may be readily removed for cleansing the strainer and relieving it of the matter which would hinder its operation. To that end the upper section has been strengthened at *a*, and a plug *b* is provided which can be removed to permit an outrushing of the water, and the force of the water will suffice to agitate the particles that have accumulated and cause them to pass out through the opening. It is our purpose to locate the opening as near the point of contact of the screen and casing as possible that the gravel and heavy particles may be easily washed out with the outflow of the water.

The strainer is connected to the line-pipe by any suitable connection, preferably union-couplings.

Where larger-sized strainers are employed, the upper and lower sections of the strainer may be provided with outwardly-extending

recessed flanges which are bolted together to clamp the gaskets and the flange of the screen.

In connection with the illustration, Fig. 2, the casing, nipples, &c., would be the same as heretofore described, the only difference being that we provide a strainer *c*, having its inclined section extending to and touching the inner wall of the casing; but in this arrangement the strainer is provided with a downturned section *d*, adapted to conform to the contour of the inner wall of the casing, said downturned portion being of sufficient width to allow the strainer to touch the inner wall on a line with the lower wall of the opening, this arrangement being made for directing the deposit, when it can be drawn off through the opening, and since in this construction the upper surface of the screen is raised there would be no lodgment for the sediment between the screen and the opening. The downturned portion terminates in an outwardly-extending flange, which is clamped between the sections of the casing in a similar manner to that described in connection with the attachment of the strainer shown in Fig. 1.

The construction, operation, and advantages will, it is thought, be understood from the foregoing description, it being noted that various changes may be resorted to in the proportions and other details of construction without departing from the spirit of the invention. For instance, the form of strainer shown in Fig. 3 may be used, in which the flanged side *f* is shown imperforate.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a line-pipe strainer, a casing consisting of a flanged section and an upper section having its lower end embraced by the flange, a shoulder formed at the junction of the flange and the lower section of the casing, a conical strainer having a flanged section adapted to be held by the shoulder when the parts are secured together, the upper section having an opening above the strainer and a plug in the opening, substantially as described.

2. In a line-pipe strainer, a casing consisting of a flanged section and an upper section having its lower end embraced by the flange, a shoulder formed at the junction of the flange and the lower section of the casing, provided with an annular concavity, a conical strainer having a flanged section adapted to be held by the shoulder when the parts are secured together, the upper section having an opening above the strainer and a plug in the opening, substantially as described.

3. In a strainer, a casing consisting of a flanged section and an upper section having its lower end embraced by the flange, a shoulder formed at the junction of the flange and the lower section of the casing, provided with an annular concavity, a conical strainer having a flanged edge, said flanged edge being bent to conform with the concavity of the shoulder, and the lower edge of the upper section being tapered from each side toward the center, the upper section having a strengthened portion *a*, above the strainer and an opening therein provided with a plug *b*, as and for the purpose described.

4. In a strainer, a casing consisting of a flanged section and an upper section having its lower end embraced by the flange, a shoulder formed at the junction of the flange and the lower section of the casing, a conical strainer having a depending section conforming to the contour of the inner wall of the upper section, said depending portion terminating in a flange, the upper section having a strengthened portion *a*, above the strainer and an opening therein having its lower wall in horizontal alinement with the strainer at the point of contact with the casing, and a plug in the opening, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

LOUIS T. FULLER.
JOHN GEO. VOLLE.

Witnesses:

JOHN EMMRICH,
W. T. SEYMOUR.