

No. 634,953.

Patented Oct. 17, 1899.

P. MUELLER.

SAND SCREEN OR STRAINER FOR FLUIDS.

(Application filed Apr. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig 1.

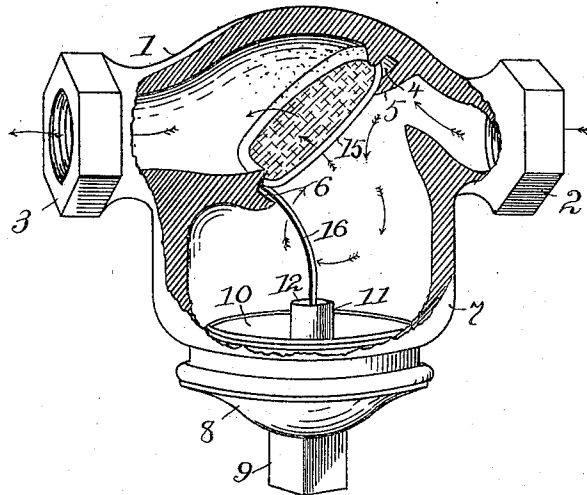


Fig. 2.

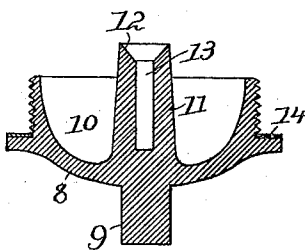
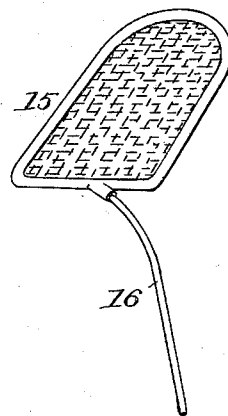


Fig. 3.



Attest,

Nora Graham

Ana Graham

INVENTOR
PHILIP MUELLER
by *L. P. Graham*
his attorney

No. 634,953.

Patented Oct. 17, 1899.

P. MUELLER.

SAND SCREEN OR STRAINER FOR FLUIDS.

(Application filed Apr. 8, 1899.)

(No Model.)

2 Sheets—Sheet 2.

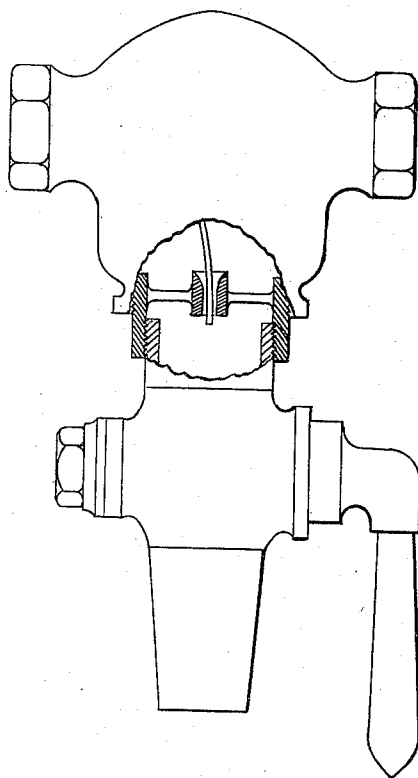


Fig. 4.

Attest

Nora Graham
Ina Graham

PHILIP MUELLER.

by L. P. Graham
his attorney

UNITED STATES PATENT OFFICE.

PHILIP MUELLER, OF DECATUR, ILLINOIS.

SAND-SCREEN OR STRAINER FOR FLUIDS.

SPECIFICATION forming part of Letters Patent No. 634,953, dated October 17, 1899.

Application filed April 8, 1899. Serial No. 712,343. (No model.)

To all whom it may concern

Be it known that I, PHILIP MUELLER, of the city of Decatur, county of Macon, and State of Illinois, have invented a certain new and useful Sand-Screen or Strainer for Water-Pipes, of which the following is a specification.

The invention is exemplified in the structure hereinafter described, and it is defined in the appended claims.

In the drawings forming part of this specification, Figure 1 is a representation of a screen and strainer constructed in accordance with my invention, the shell of the body being broken away to expose the internal construction. Fig. 2 is a diametrical section through the closure-plug. Fig. 3 is a representation of the screen-frame. Fig. 4 shows a modification of the sediment collector and remover.

The body of the strainer comprises a shell having an inlet-opening at one end, an outlet-opening at the other end, and downward extension 7, having a detachable closure. Obliquely across the shell between the inlet and outlet is formed a groove, the upper part 4 of which is shaped to receive and hold the screen-frame from motion in both directions, while the lower part 6 is formed to hold the frame from upward and backward motion, but not otherwise. In other words, the part 4 is a groove proper, with opposing walls, while part 6 is a rabbet with a single wall.

The screen consists of a frame 15, covered with wire-netting or other reticulate or perforate material, and it has a spring-rod 16 extending downward and forward from the lower end of the frame when the screen is in position. The downward extension 7 has a threaded opening, which is closed by plug 8. The plug has a wrench-seat 9. It is cup-formed, as shown at 10, and it has a stem or boss 11, that rises from the center of the cup above the rim thereof. The stem is bored centrally, as shown at 13, and the upper end of the bore is tapered, as shown at 12. Immediately in front of the upper part of the screen-seat is a deflecting-surface 5, which forms one of the walls of groove 4, and the inlet part of the shell 1 is turned upward toward the deflecting-plate.

The screen is set into groove 4, with its

lower edge resting on rabbet 6 and its spring-rod 16 extending downward and toward the front wall of extension 7. The boss 11 is then set over the downward-extending end of the rod, the rod is bent backward until it is in line with the normal axis of the closure-plug, and the plug is then screwed into place, as shown. The boss presses backward against the end of the spring-rod, holding the lower end of the screen firmly seated on rabbet 6, and the concavity 10 forms a receptacle for sand and other matter to which the screen is impervious.

The front of the screen is presented downward at a considerable angle, so that gravity may aid in cleaning the netting, and the water is supplied to it indirectly, so as to lessen the force of impact. The screen-body is set into a pipe, connections being made at 2 and 3, and the water passes upward to plate 5, is deflected downward thereby to the enlarged chamber 7, in which its motion is diminished somewhat, and it eventually passes through the screen and out of the shell. The boss 11 may engage the spring-rod before the threads of the plug enter the threads of the shell, which is the object of having the boss extend beyond the plug.

The plug 8 may be unscrewed at any time to remove an accumulation of sediment and to clean or renew the screen. The cup of the plug may have a drain-pipe provided with a valve in cases where frequent emptying of the cup is necessary, or a bushing with a discharge-pipe and valve therefor may be substituted for the plug. (See Fig. 4.)

What I claim is—

1. A screen or strainer for fluids comprising a shell having an inlet and an outlet, a perforate, porous or reticulate screen set crosswise of the shell between the inlet and the outlet thereof, and a plate or obstruction in the upper surface of the inlet-opening to divert the incoming fluid from direct contact with the screen.

2. A screen or strainer for fluids comprising a shell having an inlet and an outlet, a perforate, porous or reticulate screen set crosswise of the shell between the inlet and the outlet thereof, a plate or obstruction in the upper surface of the inlet-opening to di-

vert the incoming fluid from direct contact with the screen and a sediment-chamber in the shell in front of and below the screen.

3. A screen or strainer for fluids comprising a shell having an inlet and an outlet, a perforate or reticulate screen set across the shell between the inlet and the outlet thereof, with its front or receiving surface presented downward, a spring-rod on the screen-frame, a sediment-chamber in front of and below the screen, and a closure-plug for the bottom of the sediment-chamber having an upward extension adapted to engage the end of the spring-rod.

4. A screen or strainer for fluids comprising a shell having an inlet and an outlet, a groove in the upper part of the shell and a rabbet or shelf in the lower part of the passage-way, a screen-frame extended into the

groove and seated on the rabbet, a spring-rod extending downward from the screen-frame, a sediment-chamber in the shell below and in front of the screen, and a closure-plug for the bottom of the sediment-chamber having an upward-extended boss bored to receive the end of the spring-rod substantially as set forth.

5. A screen or strainer for fluids comprising a shell having a passage therethrough, a screen crossing the passage in the shell and a rod on the screen by means of which the screen is held seated in the shell.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

PHILIP MUELLER.

Witnesses:

BARNA MCDANIEL,
ROBERT MUELLER.