(No Model.)

B. F. SMITH.

SAND TRAP.

No. 382,117. Patented May 1, 1888.

Fig. 1.

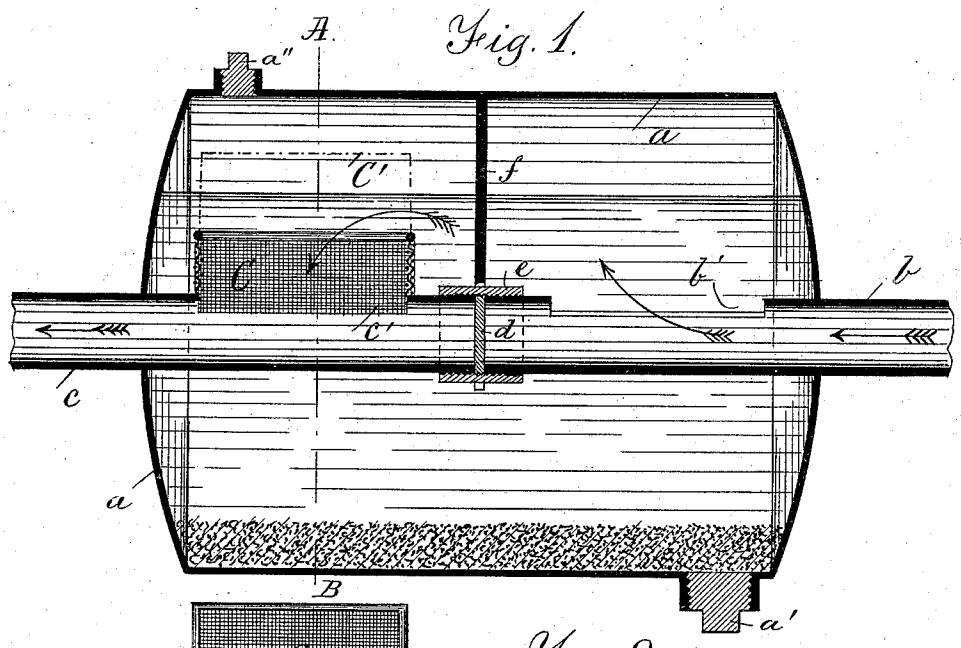


Fig. 2.

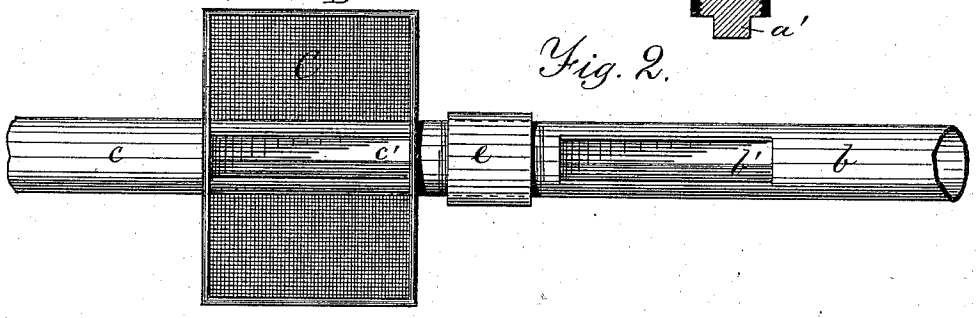
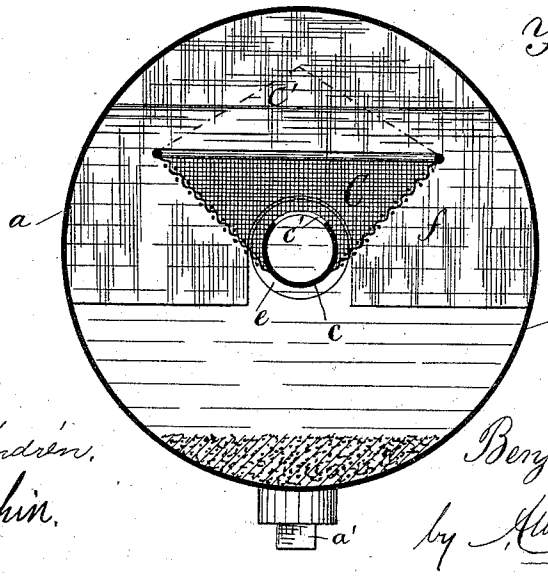


Fig. 3.



Witnesses.

Helen L. Andrén.

H. L. Chapin.

Inventor.

Benjamin F. Smith.

by Alban Andrén.

his atty.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

BENJAMIN F. SMITH, OF SOMERVILLE, MASSACHUSETTS.

SAND-TRAP.

SPECIFICATION forming part of Letters Patent No. 382,117, dated May 1, 1888.

Application filed November 3, 1887. Serial No. 254,180. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. SMITH, a citizen of the United States, and a resident of Somerville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Sand-Traps, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in sand traps for Artesian or driven wells, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a central longitudinal section of the invention. Fig. 2 represents a detail plan view of the inlet and outlet pipes leading to and from the sand-chamber, and the perforated netting guard attached to such pipe; and Fig. 3 represents a cross section on the line A B. (Shown in Fig. 1.)

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, *a* represents the sand-chamber, which is arranged horizontally, as shown, and has connected to its ends the inlet and outlet pipes *b* and *c*, as shown in Figs. 1 and 2. The pipes *b* and *c* are closed at their meeting edges, preferably by means of an interposed washer or diaphragm, *d*, which is confined between the inner ends of the pipes *b c* by means of the screw-threaded sleeve or coupling *e*, that is screwed over the inner ends of the respective pipes *b c*, as shown in the drawings, or in any other well-known manner.

b' is an opening or perforation in the top of the inlet-pipe *b*, by which communication is established from said pipe *b* to the interior upper part of the case *a*, as shown. *c'* is a similar opening or perforation in the top of the pipe *c*, through which the water passes from the case *a* to the outlet-pipe *c*.

Between the openings *b'* and *c'* on the respective pipes *b* and *c* is arranged within the case or chamber *a* a vertical division-wall, *f*, that is soldered or otherwise secured to the interior portion of the case *a*, as shown in Figs. 1 and 3, and having its lower portion extending a little below the openings *b' c'*, or below the pipes *b c*, as shown in Figs. 1 and 3, so as to permit the water from the inlet-pipe *b* to pass directly out through the pipe *c* without first being deflected toward the lower portion of the chamber or case *a*, and there to deposit the sand or impurities that may be carried with the water from the inlet-pipe *b*.

Within the case *a*, I attach to the outlet-pipe *c*, around its opening *c'*, a cup-shaped deflector, C, made of perforated netting or suitable perforated material, which is preferably open at the top, as shown in the drawings, and it serves to arrest the sand or heavy particles that are carried with the water from pipe *b*, and to deflect the same toward the bottom of the sand-chamber, as shown in Figs. 1 and 3. I do not, however, wish to confine myself to a perforated deflector C made open at the top, as, if so desired, it may be carried upward, as shown in dotted lines marked C' in Figs. 1 and 3, and thus still further prevent the sand or other impurities from passing out through the pipe *c* and its opening *c'*.

a' is a detachable screw-plug screwed through a socket in the lower portion of the case or sand-chamber *a*, and *a''* is a similar detachable screw-plug screwed through the top portion of the case *a*, which plugs are to be removed when it is desired to force out the accumulations in the lower portion of the case *a*, as is common in sand-traps for Artesian or driven wells.

I am aware of the Patent No. 230,579, issued to myself, as assignee of J. T. Sell, July 27, 1880, for improvements in sand-traps, in which a vertical case is used with inlet and outlet pipes, and a deflecting-shield arranged at the junction of said pipes; and I wish to state that I do not claim the construction and arrangement as shown and described in the said patent; but

What I wish to secure by Letters Patent, and claim, is—

The horizontal case or chamber *a*, having inlet and outlet pipes *b c*, with perforations *b' c'* and partition *d*, as described, combined with

the case-partition *f*, secured to the interior of case *a*, and extending downward below the perforations *b' c'*, and the perforated or netting deflector C, secured to the pipe *c* around its opening *c'*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 1st day of November, A. D. 1887.

BENJAMIN F. SMITH.

Witnesses:
ALBAN ANDRÉN,
HENRY CHADBOURN.