

M. C. Manson,

Filter.

No. 104,052.

Patented June 7, 1870.

Fig. 1.

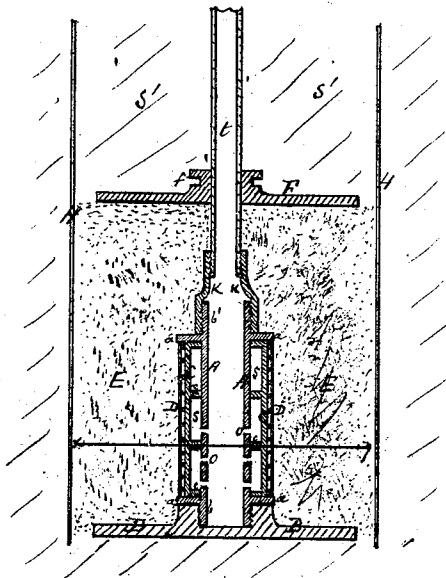
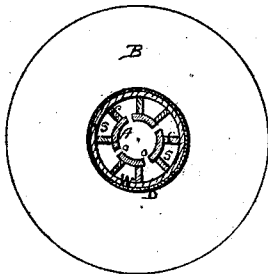


Fig. 2.



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MADS C. MONSON, OF CHICAGO, ILLINOIS.

Letters Patent No. 104,052, dated June 7, 1870.

## IMPROVEMENT IN TUBING AND FILTERING-ARRANGEMENTS FOR WELLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MADS C. MONSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in "Tubing-Wells;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

Figure 1 is a vertical section of the well, and

Figure 2 is a plan of section taken on line *x y*.

My invention may be considered as an improvement in tubing-wells; yet it differs from the said tubing-wells in this, that the lower or water-receiving part of the well is arranged separately from the tubing proper, and the tubing, which may extend to any desirable length, serves simply as a means of connection between the said water-receiving part of the well and the cylinder of the pump.

The invention differs from the so-called tubing-wells also in the mode of making the well, which is done, not by forcing the tubing down, but by ordinary digging, and sinking a tube of heavy sheet metal, and of a large diameter, for the purpose of forming a hole or bore in the ground which would permit to place the tubing-well conveniently, and to arrange the filtering material at and around the water-receiving part of it properly; and

The nature of my invention consists in arranging the water-receiving part of the well in such a manner as to admit to the tubing an abundance of perfectly-filtered and strained water, without using any box or chamber to contain the filtering material.

A is a cylinder or tube, provided with flanges *a a'*.

To the lower end *b* of the said tube a metallic plate or disk, B, is secured, and the upper end, tapped with screw-thread, is connected with tubing *t* by coupling *k*, the tubing *t* being connected with the cylinder of the pump of the well in the usual manner.

The plate B having the purpose of presenting the bearing for the tubing, and of preventing the same from sinking, therefore any unconnected plate, stone, or any other object answering the same purpose may be considered as an equivalent of the plate B.

The cylinder *A* is provided with several openings or perforations *o o*, placed near the bottom of the tube, and of dimensions proportionate to the capacity of the tubing *t*.

Bars *C C*, provided with lugs *c c*, are placed around the tube *A*, and their ends secured to the flanges *a a'*. They have the purpose of forming a space, *S*, between

the cylinder *A* and the strainer *D*, to accumulate the water therein.

*W* is a wire wound over the bars *C C*, and covered on the outside by wire-cloth or perforated sheet metal *D*, secured to the flanges *a a'* of the cylinder *A*, and forming a strainer for the well.

*E* is a select gravel, or any desirable filtering material, placed around the strainer *D*, resting on the plate *B*, and extending upward to any desirable height.

*F* is another metallic plate or disk, of the same diameter as the plate *B*, provided with an opening in the center, to be slipped over the tubing *t*, and provided also with a groove, *f*, for the purpose of using a hook for adjusting or removing the plate.

Said plate *F* is placed on the top of the gravel *E*, thus separating the same from the soil with which space *S'* is filled. Of course, any kind of plate or stone may be used for the same purpose, and, therefore, should be considered as an equivalent of the plate *F*.

The gravel *E* being piled around the strainer and between plates *B* and *F*, has on the outside or walls the natural soil, and, therefore, is somewhat boxed without any box.

The operation of putting in the well consists in this, that the ground is dug and the tube *H* is forced down to the required depth, thus forming a safe hole or bore in the ground.

The cylinder *A* is connected with tubing *t*, the plate *F* is passed on, and the device is placed down so as to have the plate *B* resting on the bottom. Then the gravel or filtering material is put in, the plate *F* is adjusted, the tube *H*, which was put in for temporary purposes, is withdrawn, the connection with the pump to work the well is established, and the space *S'* above the plate *F* is filled with earth or soil that was dug out.

Having thus fully described my invention, I disclaim the novelty of making the openings *o o* in the cylinder *A*, as also of placing a filter around the same; but

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

1. The cylinder or tube *A*, arranged as described, the bars *C C*, wire *W*, metallic sheeting *D*, and plates *B* and *F*, all combined, arranged, and operating substantially as herein set forth, and for the purposes described.

2. In combination with a perforated well-tubing, the plates *B* and *F*, when constructed and arranged substantially as herein described, forming, in connection with the walls of the well, a chamber about the tube, for holding filtering-material, as set forth.

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