

W. M. CAMPBELL.

Improvement in Wells.

No. 129,314.

Patented July 16, 1872.

Fig. 1

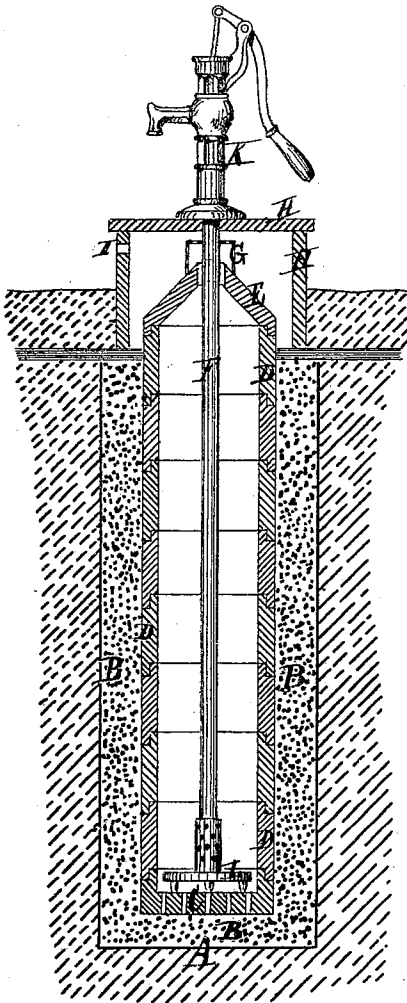


Fig. 2

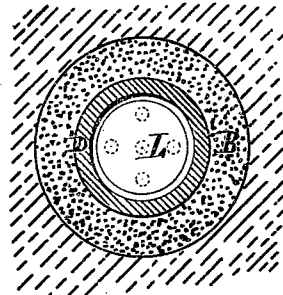
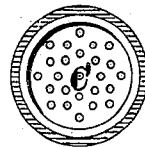


Fig. 3



Fig. 4



Witnesses:

H. D. Eberle.
N. S. Sprague

Inventor:

William M. Campbell
by his attorney.

N. S. Sprague

UNITED STATES PATENT OFFICE.

WILLIAM M. CAMPBELL, OF EVANSTON, ILLINOIS.

IMPROVEMENT IN WELLS.

Specification forming part of Letters Patent No. 129,314, dated July 16, 1872.

To whom it may concern:

Be it known that I, WILLIAM M. CAMPBELL, of Evanston, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Wells; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a vertical section, showing the construction of my improved well. Fig. 2 is a horizontal section. Fig. 3 is an elevation of one of the sections of the lining, and Fig. 4 is a plan of the perforated bottom plate.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improved construction of wells, whereby pure and filtered water will always be supplied to the pump, and quicksand excluded, and which will also prevent the access of vermin to the water.

The invention consists in curbing or lining the well with cylinders of terra-cotta of less diameter than the well proper, the space between the bottom and sides of the cylinder and those of the well-shaft being filled with coarse gravel, which filters the water flowing into the cylinder at the bottom thereof; also in the arrangement for ventilating the well and excluding vermin.

In the drawing, A represents a well-shaft sunk, of that diameter and to the required depth. At the bottom of the shaft there is placed a layer of coarse gravel, B, and on this is laid the terra-cotta bottom-plate C, perforated with apertures about one-sixteenth of an inch in diameter and provided with an encircling flange, which receives a terra-cotta cylinder, D, on which is placed another and similar cylinder, and so on until the surface of the ground is reached, the said lining being covered at the top by a terra-cotta cap, E, in the apex of which there is an aperture, through

which the suction-tube F passes. The top and bottom edges of the cylinders are formed with flanged offsets, which overlap each other and thereby make a strong joint. The joints above the water-line I cement, while those below it I do not. I fill the annular space between the cylinders and the walls of the well-shaft with coarse gravel until near the surface of the ground, when I surround the cylinder with a flooring of planks, fitting snugly thereto, on which I rest a wooden-curb, H, having an opening, I, at one side, covered with wire-cloth to prevent the entrance of insects. The earth is then filled up on the flooring to the surrounding level. K is the pump, its flange being bolted to the cover of the curb, the opening in which should fit the pipe snugly, and which cover should be in two halves to permit of the withdrawal of the suction-tube and its strainer when necessary. G is a perforated sheet-metal case resting on the conical cap E to prevent the entrance of vermin to the well, which may burrow through the curb. The strainer at the lower end of the suction-tube rests upon a terra-cotta plate, L, supported on the plate C by short studs on its under side, so as not to interfere with the flow of water to the strainer. The advantages of this construction over the ordinary brick or stone-curbed wells are so evident that no argument need be made in its support.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The lining described, consisting of the sections D, the perforated bottom-plate C, and the inclined cap E, the parts uniting to entirely inclose the lower end of the pump-barrel within the lining, as described.

2. The combination, with the inclosing lining, of the protecting cap G, as described.

WILLIAM M. CAMPBELL.

Witnesses:

WM. H. LOTZ,
JULIUS WELCK.