

T. J. Dean,

Well Tubing,

No 71,144.

Patented Nov. 19, 1867.

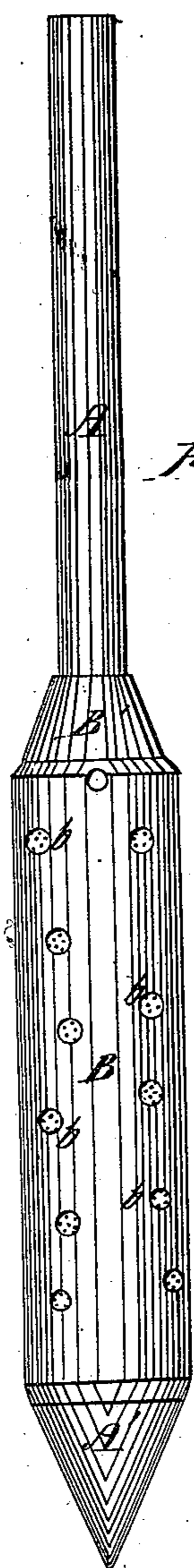


Fig. 1

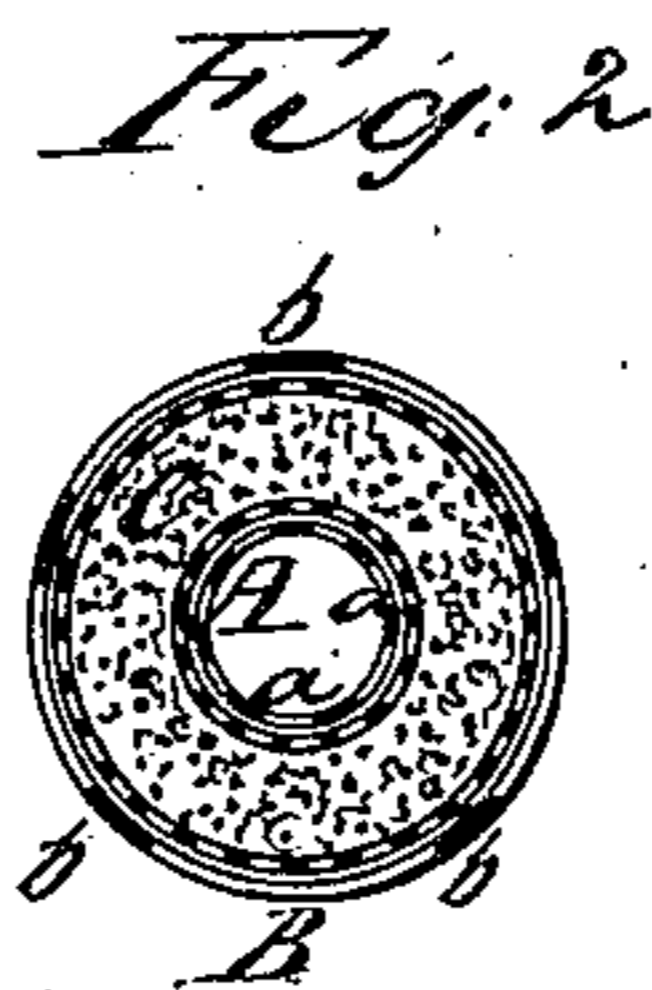


Fig. 2

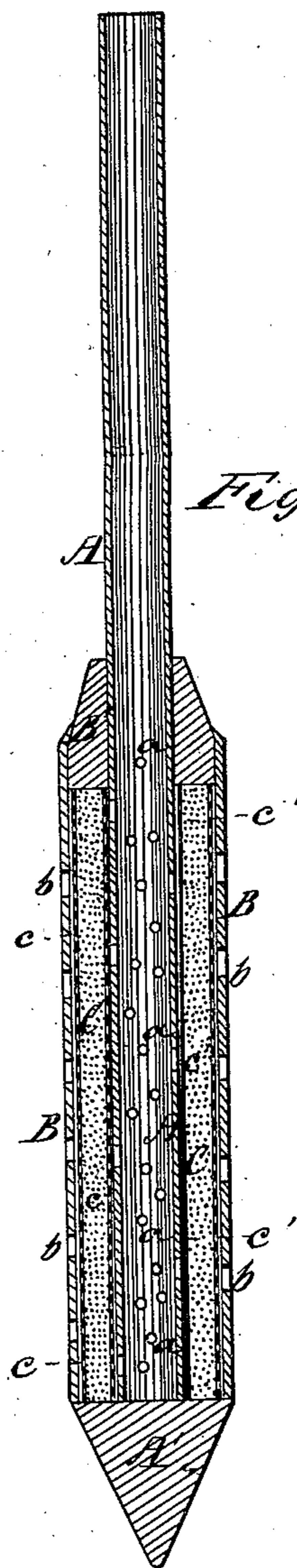


Fig. 3

Witnesses

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T. J. DEAN, OF ST. LOUIS, MISSOURI.

Letters Patent No. 71,144, dated November 19, 1867.

IMPROVEMENT IN TUBE-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, T. J. DEAN, of St. Louis, in the county of St. Louis, and State of Missouri, have made certain new and useful Improvements in Wells; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to construct a well in such a manner as to free the water drawn from it from mechanical impurities, by filtering, before it is drawn from the well. This is most readily accomplished by using the driven wells, that is, the wells constructed by driving a pipe (having its lower end perforated) down into the ground. When this kind of a well is used, I surround the lower end of the tube with a cylindrical casing, also perforated; but this outer casing should be of two or three times the diameter of the inner or well-tube, thus leaving an annular chamber between the two, and this annular chamber is to be filled with some kind of a filtering material. When the well is dug or bored, the bottom part of the wall of the well may form the exterior tubing. When the well is driven there are some other details necessary, which will be more fully understood by reference to the following description, which will enable those skilled in the art to make and use my improved wells.

Figure 1 of the drawings is a side elevation of one of the improved wells formed by tubing.

Figure 2 is a horizontal section taken on the line $x-y$ of fig. 1.

Figure 3 is a sectional elevation of the same.

The tube A is to have a pointed, solid end, A', in the same manner that the solid points were affixed to the ordinary tubes of the driven wells, except in this instance the point A' will be much larger in diameter than the points hitherto used for such purposes, it being necessary for the present purpose to make the point, at its upper end, two or three times the diameter of the tube A. To the top end of the point-piece A' is securely affixed the bottom end of the cylindrical casing B, which is to be of a diameter equal to the diameter of the top end of the point-piece. This casing is to be, say, three or four feet long, (more or less,) and is to be perforated with numerous holes, b , of, say, a quarter to a half-inch in diameter. It will enclose between it and the tube A an annular chamber, C, of, say, two to six inches width, (more or less,) and this chamber is to be closed at its top end by the annular plug B', which is to be secured to the top end of the cylinder A. The enclosed end of the tube A is to be pierced with holes, a , corresponding in size to the holes b . In the annular chamber C, which is thus formed, are to be placed two concentric strainers, c c' , the strainer c being placed close to the inner side of the casing B, and the strainer c' close to the outer side of the tube A. Between these strainers, thus located, is to be introduced some filtering material, as, for instance, coarse gravel or sand, or any other material that may be suitable for the purpose. The enlarged end, formed by the cylinder B, will form such an enlarged orifice while being driven into the ground as to avoid much friction on the sides of the tube A, and the driving will consequently be easier than when a small point is used. When the well is bored or dug, the cylinder B may be dispensed with.

Having described my invention, what I claim, is—

A tube-well, its lower section consisting of two concentric perforated tubes, one wire-gauze tube surrounding the interior perforated tube, and another lining the exterior perforated tube, a body of filtering material being placed between the two tubes of gauze, all substantially as shown and described.

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Witnesses:

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