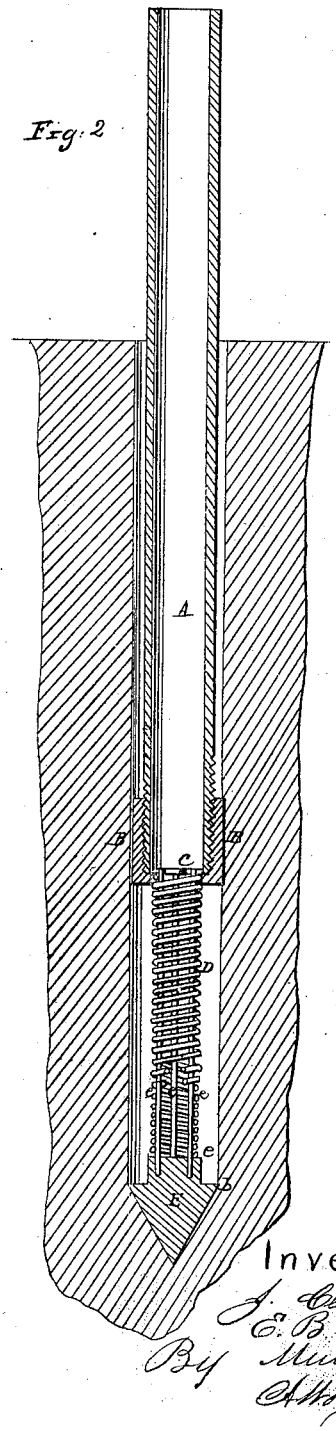
Clary & Torrey,

Well Tube Filter.

No. 50,686. Patented Oct. 31, 1865.

Fig. 1

Fig. 2



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UNITED STATES PATENT OFFICE.

JOHN CLARY AND ELIJAH B. TORREY, OF ITHACA, NEW YORK.

IMPROVED FILTER FOR ARTESIAN WELLS.

Specification forming part of Letters Patent No. **50,686**, dated October 31, 1865.

To all whom it may concern:

Be it known that we, JOHN CLARY and ELIJAH B. TORREY, of Ithaca, in the county of Tompkins and State of New York, have made a new and useful Improvement in Filters for Artesian Well-Tubes; and we do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation. Fig. 2 is a partial elevation and partial section.

The improvement consists in a close-fitting coil of wire around the lower or perforated section of an Artesian or other well tube to prevent the entrance thereinto of dirt, sand, gravel, or other extraneous matter. The mode of attaching it so as to enable its use in connection with this method of sinking the tube will be fully explained hereinafter.

In this specification of invention we do not confine the use of our filter to well-tubes which are shod with a pointed plug and are driven into the ground, though that is the form illustrated in the accompanying drawings. There are many other forms of pumps to whose lower or induction section it is applicable, as will be apparent on a consideration of the nature and scope of the invention.

A represents the lower end of the well-tube, which is presumed to be driven into the ground by means of blows on the upper end, its entrance into the soil being facilitated by the pointed plug E, which, during the process of sinking, is in immediate contact with the lower end of the tube, the latter resting upon the shoulder *b*, as shown in Fig. 1. As soon as the tube has been driven to the required depth, so as to reach the vein or stratum of water, the tube A, Fig. 2, is lifted, when, the plug E remaining at the depth to which it has been driven, the perforated tube or series of rods C is withdrawn from the tube A until its upper end catches upon the flange of the coupling B, which prevents the two portions from being drawn apart, the coupling B being screwed to the tube A.

D is a coil of wire closely wrapped around the section C, and permitting the passage of the water in a thin sheet between the adjacent wires. The lower end of the coil rests upon the shoulder *e* of the plug E.

The section C, with the wire strainer around it, is embraced, as will be seen, within the tube A during the process of driving, and is thereby preserved from injury, as no strain comes upon it, the tube resting immediately on the plug E, Fig. 1. The portion *e* of the plug fills the lower orifice of the tube and prevents the entrance of dirt, &c., while driving, as the filtering or straining coil does when the section C has been withdrawn and the pump which is attached to the upper end of the well-tube is in operation.

The filterer thus constructed is preferred to perforations or wire-cloth, and for an extended entering-aperture of minute diameter it is believed to be superior to any other metallic device yet devised.

The section E may be a perforated or slotted pipe, or, as represented, it may consist of rods forming a skeleton, around which the wire is coiled. In any case the coil must be preserved from exterior strain, which may tend to separate the wires by deflecting it from the vertical by bending the coil forming an exterior filtering-jacket, to which no strain ever comes to mar its usefulness.

Having described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

The filtering-jacket or inclosing-coil which surrounds the lower section of the well or pump tube, forming a strainer for that portion into which the water enters, substantially as described.

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