

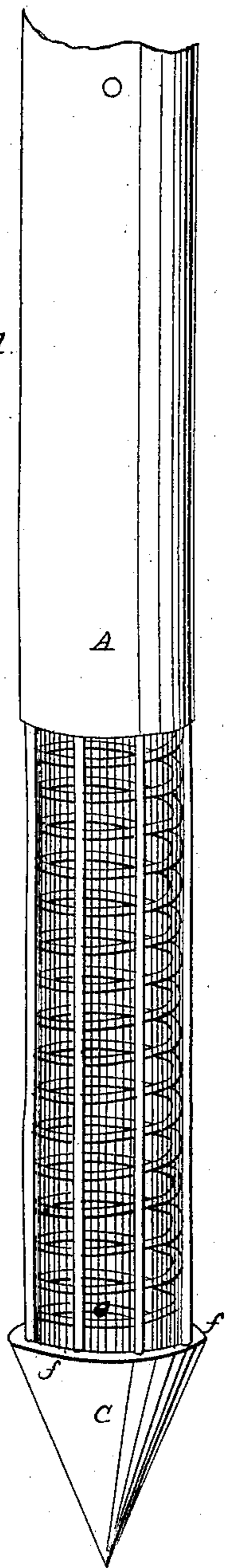
*J. Chandler,*

*Well Tubing,*

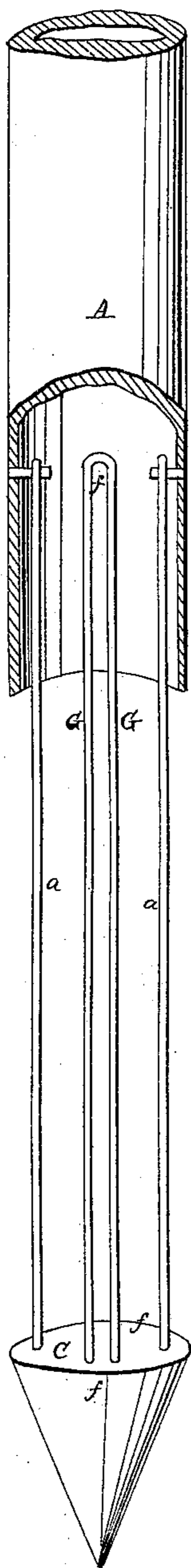
*No. 57,674.*

*Patented Sept. 4, 1866.*

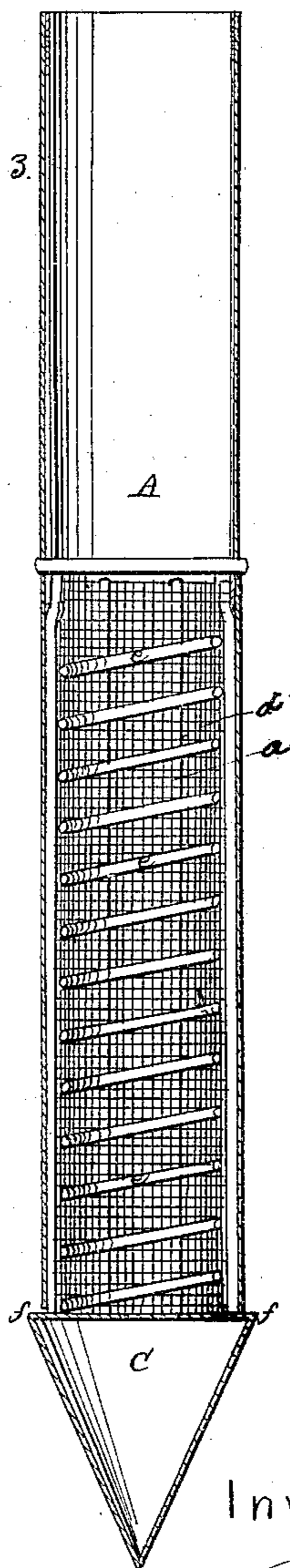
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*E. Roughton*  
*A. Wood*

Inventor:

*John Chandler*  
*by Attorneys*  
*J. B. Wallcut & Son*

# UNITED STATES PATENT OFFICE.

JOHN CHANDLER, OF COLD WATER, MICHIGAN.

## IMPROVEMENT IN WELL-TUBES.

Specification forming part of Letters Patent No. 57,674, dated September 4, 1866.

*To all whom it may concern:*

Be it known that I, JOHN CHANDLER, of the city of Cold Water, in the county of Branch, State of Michigan, have invented certain new and useful Improvements for Obtaining Clear Water from Bored and Tubed Wells; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents the lower end joint of an iron tube, with the inner tube and strainer and the cone-point attached, for driving into a bored well, the tube being withdrawn, leaving the strainer open to admit the water into the tube to be drawn by a pump. Fig. 2 shows also the lower end of the pipe for tubing a bored well, the cone-point and skeleton frame, to support the strainer, drawn out. Fig. 3 is a section through the same, the strainer protected by the pipe, covering it, and resting on the cone-point while it is being driven or placed in a bored well.

The object of my invention is to obtain clear strained water from bored and tubed wells, and to protect the strainer from being crushed or in any way damaged while being placed in the bottom or in any desired position within the bore of the well, there being a sufficient surface of the screen or strainer for filtering to admit of a good supply without choking up the meshes or obstructing the flow into the tube.

My invention consists in the construction and arrangement of the brace-rods which support the wire-gauze strainer, they forming loops, in which pins are placed to prevent the strainer from being detached from the tube or pipe.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation more fully, referring to the drawings and to the letters of reference marked thereon.

In the bottom end of the metal pipe A, to be inserted into a bored or what is usually termed an "artesian" well, I fit, so as to slide easily, an inner tube of non-corrosive metal, the bottom end being thickly perforated with small holes all round, a foot, more or less, up, so as to form a strainer, *d d*, through which the water is admitted into the tube or pipe A.

Another mode of making the strainer is to have iron rods *a a*, bent double, leaving a loop, *b*, between the bars, four, more or less, in number, set at equal distances apart in a circle the diameter of the inside of the tube or pipe A, the iron rods *a a* being set so as to cast into them the cone-point C, as seen in Fig. 2. To the inside of the rods *a a* is fitted and secured a tube, *d d*, made of wire-gauze or of woven wires of suitable mesh, adapted to the nature of the earth where the well is bored. On the inside of the strainer of woven wire I put hoops or a spiral coil of wire, *e e*, of sufficient strength to prevent the tube of wire-gauze *d d* from collapsing by the pressure outside or the suction from within. The iron rods *a a* also being fastened to the wire-gauze tube, help to strengthen from the outside, and prevent the strainer *d d* from coming in contact with the tube A as it slides out to admit the water after the well is tubed.

The conical point C being made of cast-iron, and of any desired length and weight, the top, to which the strainer apparatus is secured, being in a plane with the lower end of the pipe A, so as to fit tight and form a stopper to the tube, the upper edge, *f f*, being sharp and projecting out beyond the diameter of the tube or pipe A, fills the bore of the well, so that as the tube is being placed or forced down the cone C will be bearing against the lower end of the pipe A, so that the strainer is encased in the pipe until it is driven to the place the water is to be drawn from. Then the tube or pipe A is drawn up from one to three or four feet, more or less, as may be required, leaving the cone-point and strainer apparatus stationary in the earth or sand and water. It is then ready to attach the pump to the top of the tube, and very soon a supply of clear pure water is obtained without sand or gravel to obstruct the working of the pump.

It is well known that in the prairie country of the west in many places it has been supposed that no water could be obtained from digging wells without going to a great depth, and then they were liable to cave in or clog up with quicksand. More recently it has been developed that a supply of water can be obtained by boring artesian wells, and in some places the water will rise in them nearly to the surface, and some flow over; but in almost

every case where it is necessary to use a pump in tubed wells the sand or gravel is constantly wearing out and choking up the pump.

Thus it will be seen that a good supply of clear water can be had immediately after it is reached by boring a hole of sufficient depth, and then tubing it with my improved strainer, as above described; and instead of pumping gravel and sand for weeks, or wearing out and choking up the pumps, the well, as soon as it is tubed and the pump connected with the tube, is complete and permanent.

I do not claim a filter or strainer made on or attached to the lower joint of a water-pipe, for they have been long in use; nor a strainer that bored wells are tubed with, for that has

been done in various ways, many of which devices Letters Patent have already been granted for; but

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

The perpendicular loop-rods *aa*, as described, in combination with the wire-gauze tube *dd*, inside supporting spiral coil *ee*, cone-point *C*, and tube *A*, substantially as and for the purposes set forth, thereby adding great strength and security to the lower tube.

JOHN CHANDLER.

Witnesses:

R. F. MOCKRIDGE,  
E. ROUGHTON.