

Brewer & Winter,

Well Tubing,

No. 56,355,

Patented July 17, 1866.

Fig. 1.

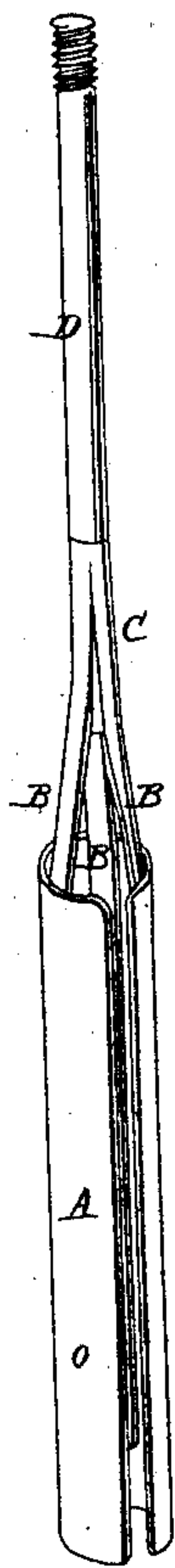
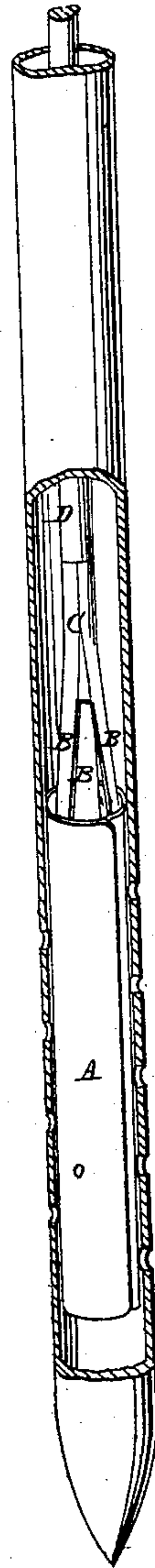


Fig. 2.



Witnesses:

W. H. Brown
Wm W. Wright

Inventor:

Stephen Brewer
Wm W. Winter

UNITED STATES PATENT OFFICE.

S. BREWER AND W. W. WINTER, OF CORTLANDVILLE, NEW YORK.

IMPROVEMENT IN WELL PIPES OR TUBES.

Specification forming part of Letters Patent No. 56,355, dated July 17, 1866.

To all whom it may concern:

Be it known that we, STEPHEN BREWER and WILLIAM W. WINTER, of Cortlandville, in the county of Cortland and State of New York, have invented a new and useful device for preventing sand, gravel, and dirt from entering well pipes or tubes through the lateral apertures for the water to enter in the lower portions thereof while said tubes or pipes are being driven or sunk into the ground in the construction of pipe or tube wells; and we do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the device as it appears when out of the tube or pipe. Fig. 2 is a sectional view of the pipe, showing the device therein.

Our invention consists of a thin piece or sheet of elastic metal, hard rubber, or other suitable material bent or coiled into the form of a cylinder, A, the edges of which do not come quite together when out of the tube, but lap past each other when within the tube. This cylindrical piece we call a "shield," and usually make it of a good quality of sheet-iron, and about two feet long, more or less. To the inside of this shield we attach, by rivets, or other means, three steel or brass springs, B B B, about equidistant from each other, which extend its whole length, and come together near the upper end thereof, at C, at which point they are united by welding or otherwise. These springs are so adjusted as to have a forcible tendency to spring apart or outwardly, the object of which is to keep the shield to which they are attached pressed closely against the inside surface of the tube or pipe, to prevent the soil from forcing its way into the pipe through the lateral apertures aforesaid.

These well tubes or pipes are usually manufactured in lengths of about twelve feet, and therefore, for the convenience of inserting this

shield into the tube and forcing it down to the bottom thereof, we connect therewith a small rod, D, of metal or wood, at the point C, where the three springs come together, said rod extending up through to the top of the tube, by means of which we are enabled to insert and withdraw the shield at pleasure. To lengthen this rod when necessary we couple on other pieces. A cord attached to said shield would answer to draw it out, but would be of no use in inserting the same.

When about to use our invention or device in constructing a well, we connect the rod and shield together, as it appears in Fig. 1, and entering the shield at the top of the pipe or tube, force it down by means of the rod until it reaches the bottom, as seen in Fig. 2, thus covering the lateral apertures. When the pipe or tube has reached its destination in the ground we then draw up the shield, thus uncovering said apertures and allowing the water to enter freely to the interior of the pipe.

The advantages of this device for the purposes specified are, first, its economy, because our shield and apparatus answer for a vast number of wells; secondly, it is very effectual, as it fits the interior of the pipe closely by reason of the constant outward pressure of the springs B B B; thirdly, it is easily inserted and withdrawn, as its peculiar structure allows it readily to yield to any inequalities in the pipe or even crooks in the same, which often result from driving it through stony soil.

What we claim as our invention, and desire to secure by Letters Patent, is—

The device consisting of the springs B B B, the shield A, and the rod D, all in combination, as and for the purposes herein shown and described.

STEPHEN BREWER.
WM. W. WINTER.

Witnesses:

R. P. OUT,
WM. W. WRIGHT.