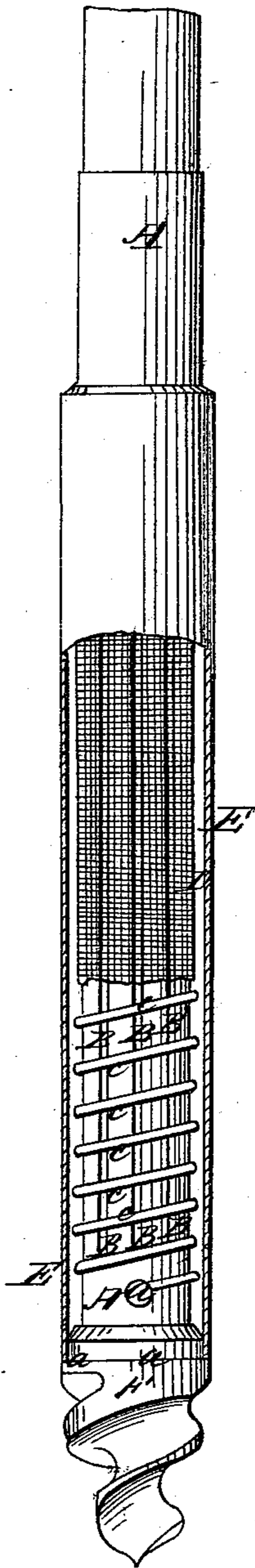


*Knapp & Pease,*

*Well Tubing,*

*Nº 64,332.*

*Patented Apr. 30, 1867.*



*Witnesses.*

*Theo Tusch  
J. A. Service.*

*Inventors.*

*H. Knapp  
W. H. Pease  
Per Munnell  
Attorneys.*

# United States Patent Office.

HIRAM KNAPP AND WARREN H. PEASE, OF GOSHEN, INDIANA.

*Letters Patent No. 64,332, dated April 30, 1867.*

## IMPROVED WELL-TUBE.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, HIRAM KNAPP and WARREN H. PEASE, of Goshen, in the county of Elkhart, and State of Indiana, have invented a new and useful Improvement in Well-Tubes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The principal object of the present invention is to prevent quicksand or gravel from entering the well-tubes when driven into the ground, the presence of which has heretofore operated seriously against the successful working of the said tubes; and for the attainment of this object it consists in the use of a wire screen or netting about the perforated end of the well-tube, which, while it will allow the water to freely pass into the tube, will keep out the quicksand or gravel; this screen being covered by a surrounding casing or tube, either closed or perforated, so fastened or hung to the tube that it can be removed therefrom when the tube has been driven to the desired depth, so as to expose the said wire screen by either lifting the same or unfastening it and then driving the tube through it.

This invention also consists in forming at or attaching to the end of the well-tube, by which it is inserted in the ground, a tapering screw-shaped plug, so that in lieu of driving, the tube can be screwed into the ground; as will be hereinafter explained.

In the accompanying plate of drawings our improvement is illustrated; the figure being a side view of the well-tube at its end, by which it is driven or inserted in the ground, with the surrounding or protective casing for the wire screen broken away or out for a portion of its length.

A, in the drawings, represents the well-tube, which, in lieu of being perforated as heretofore, is provided with a series of slots or openings, B, extending in the direction of the length of the tube. C, a wire wound spirally upon the outside of the tube at its slotted portion, over which wire, fitting about the same, is a wire screen or netting-tube D. E, a cylindrical casing or covering placed about and around the wire-screen tube D, resting by its lower end upon the shoulder *a* formed by the tapering screw-shaped plug F inserted in the lower end of the tube, this casing being enlarged at one point and fitting over the stud or pin *a* of the well-tube. In inserting the well-tube, constructed as above described, in lieu of driving the tube it is screwed into the ground, when, having reached the desired depth, the surrounding casing or covering E is then drawn up with a wire hook, or other suitable means, sufficiently to expose or open the wire screen D to the passage of water through it and the slots of the tube to the interior of the same, from which it is to be pumped out, or in any other suitable manner removed. In lieu of drawing up the casing E for exposing the wire screen D, the well-tube may be turned backward sufficiently to relieve the pin *a* from the enlargement of the casing E, and afterward driven down into the ground sufficiently to open the tube to the passage of water through the wire screen or netting. By using a wire screen or netting about the open sides of the well-tubes, no quicksand or gravel can pass into it, (an advantage of much importance to the successful working or operation of the well-tube,) while at the same time it offers no obstruction to the free passage of the water thereto; and, furthermore, as the wire screen is held from contact with the sides of the tube by the wire C, the effectiveness of its operation is insured to a greater degree. In conclusion, it may be here remarked that by using the surrounding casing E as the well-tube is inserted or driven into the ground, the wire netting is protected from injury, or from being clogged by the sand or gravel as the case may be.

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

The combination of the slotted tube A, plug F, spiral wire C, screen D, encasing cylinder E, substantially as described for the purpose specified.

HIRAM KNAPP,  
WARREN H. PEASE.

Witnesses:

M. M. LATTA,  
C. C. SPARKLIN.