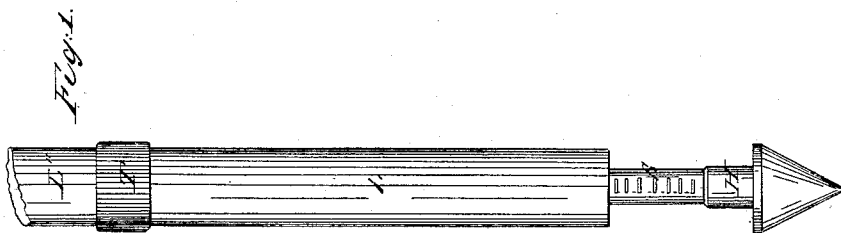
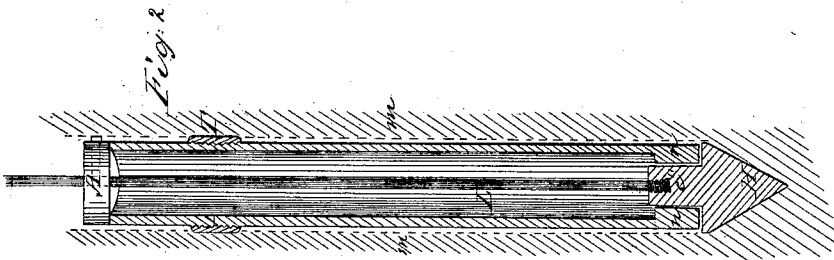
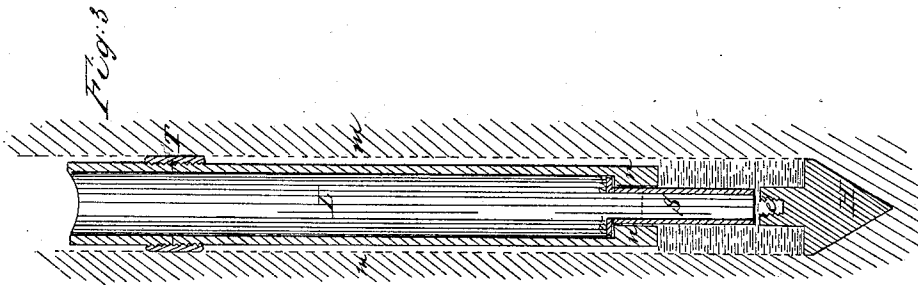


*Duck, & Whitcomb,*

*Well Tubing,*

*N<sup>o</sup> 58,721.*

*Patented Oct. 9, 1866*



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# UNITED STATES PATENT OFFICE.

JOHN H. DUCK AND ELIAS K. WHITCOMB, OF ELGIN; SAID WHITCOMB  
ASSIGNS HIS RIGHT TO JAMES T. WHIPPLE, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN PIPES AND FIXTURES FOR WELLS.

Specification forming part of Letters Patent No. 58,721, dated October 9, 1866.

*To all whom it may concern:*

Be it known that we, JOHN H. DUCK and ELIAS K. WHITCOMB, of the city of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Pipes and Fixtures for Driven Wells; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a vertical section with arrangement for adjusting the point attached; Fig. 3, a vertical section through the same, showing the parts thereof when complete.

Similar letters of reference when they occur in the several figures denote like parts in each of the drawings.

The nature of our invention consists, first, in forcing or driving a hollow pipe into the ground to any given distance, and inserting therein, at the bottom, a perforated tube, in a manner hereinafter more fully explained; second, in the shape of the point and manner of adjusting the same.

To enable others skilled in the art to make and use our invention, we will proceed to describe the same with reference to the drawings.

L represents the pipe, which is of iron and in sections coupled together, as shown at T. The lower section of this pipe has a flange, *n n'*, internal at the bottom, which forms a socket or collar for the reception of the point H. This point is of a cone shape vertically, and has its upper part cut away or formed in suitable shape to admit of its passing into the socket in the pipe.

The objects of this style of pipe and point are several: First, the shoulder or flanges on the pipe coming in contact or against the shoulder on the point gives sufficient strength to the same; and, second, the upper part or neck of the point passing into the socket in the end of the pipe holds the point in a perpendicular position while being driven into the ground, and can be more readily adjusted than any of

the heretofore-known arrangements, wherein the point is flanged or permanently attached to the pipe.

We also insert within the pipe a tube, S, which has at its upper end a flange, U U', which rests upon or is supported by flanges *n n'* of pipe L, this tube being perforated transversely nearly its entire length, to admit of the water passing through the same up into the pipe, this arrangement being to obviate the difficulty arising from the pipe filling with earth while being driven into the ground, as is the case with all those pipes which have the lower part perforated externally and covered with wire-cloth. This tube may be of iron, zinc, or any thin metallic substance.

When driving a well or pipe, should the point come in contact with rock or any hard substance which may prevent the downward progress of the same, it is found necessary to remove or withdraw the pipe. For this we apply the arrangement shown in Fig. 2—that is to say, point H, having a hole, *e'*, in its upper end vertically, and a thread cut therein, which receives rod *e*, this rod having at its upper end an adjustable collar, A, which is held at any adjusted height by means of a set-screw, *i*, which keeps the pipe and point together, and can be withdrawn.

The manner of sinking or driving our well and its operation are as follows: The neck of point H being inserted in the socket of pipe L, with the flanges *n n'* thereon resting or coming in contact with the shoulder of the point, as shown in Fig. 2, the first section is driven into the ground its entire length, a second section of pipe L' then is attached, and so on until the requisite depth is attained. The pipe is then withdrawn from one to two feet, leaving the point in the bottom of the well, which forms a vacuum between the point and end of the pipe, for the water to collect. We then insert the perforated tube S, allowing the flanges U U' thereon to rest upon the flanges *n n'* of pipe L, which keeps the same in a vertical position and brings the perforated part thereon in contact with the water in the vacuum, as shown in Fig. 3, which admits of the same passing through the perforations in the

tube into the pipe, and may be drawn out by a common pump attached to the top of the pipe.

We are aware that wells have been heretofore formed by driving a hollow pipe into the ground, with the lower end of the same perforated and covered with wire-cloth; but such arrangements are not so effective, as the perforations in the pipe are liable to fill with earth while being driven, and the pipe has to be withdrawn, while in ours we insert the tube after the pipe is driven, thus preventing any liability of the tube filling with earth or any substance that may prevent the water from passing into the pipe.

Having thus fully described the nature and object of our invention, what we claim as new, and desire to secure by Letters Patent, is—

Tube or screen S, suspended within the main tube L by means of flanges U U", in combination with the several parts of the within-described device, for the purpose specified.

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