

C. Shepard,

Well Tubing,

N^o 56,623,

Patented July 24, 1866.

Fig 1.

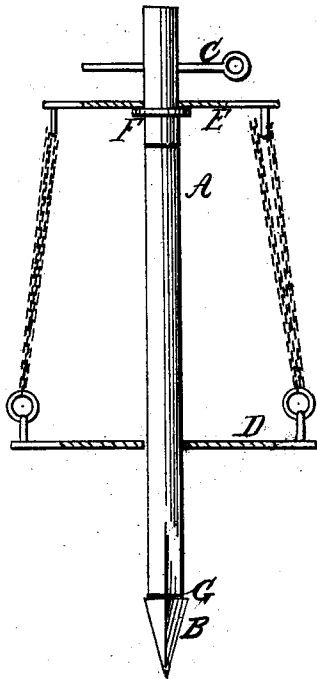
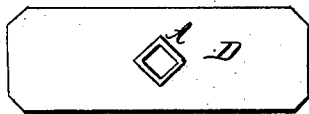


Fig 2.



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UNITED STATES PATENT OFFICE.

CALVIN SHEPARD, OF KATTELVILLE, NEW YORK.

IMPROVEMENT IN DRIVING WELL-TUBES.

Specification forming part of Letters Patent No. 56,623, dated July 24, 1866.

To all whom it may concern:

Be it known that I, CALVIN SHEPARD, of Kattelville, Broome county, State of New York, have invented a new and useful Improvement in Driving Well-Tubes; and I 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, in which—

Figure 1 represents a well-tube and the apparatus for driving or sinking it. Fig. 2 is a cross-section above the platform D.

Similar letters of reference indicate like parts.

The object of this invention is to provide more efficient and speedy means for driving or sinking well-tubes than have been known or used hitherto.

The invention is applicable to wells which are made by sinking a tube down to the place of water and using such tube afterward as a pump-tube.

The invention dispenses with the use of sledges and similar appliances for driving the tube, a heavy weight being used instead, in connection with a rotary motion given to the tube, which is provided with a suitable point for penetrating the ground.

The letter A designates a well-tube, which is to be sunk into the ground to the place of a vein or natural reservoir of water. Its lower part is made square and fits loosely upon the shank of a pointed piece, B, the end of said tube resting on the shoulder G of the piece B, which at that part is of greater diameter than the tube it supports. Said piece B is four-sided; but its sides converge to a common point, leaving four right angles and four straight sides. The upper part of the tube has a solid head, a flange, F, which supports lever C, and a collar, E, from which is suspended by chains a platform, D, that is loaded with such weights as it is desired to use in sinking the tube. The upper part of the tube is provided with a lever wherewith to give rotary motion to the tube in sinking it into the ground.

That part of the tube to which the lever C is applied is connected to the lower part by a joint below the flange F, so that a section may be added as the lower part sinks into the ground. The platform D and collar E are both fitted loosely to the tube.

In operating the apparatus the pointed

piece B is set in the ground, and the tube being held upright the platform is loaded with a ton in weight, more or less, and the tube is turned by means of the lever C. As the tube is turned it carries round with it the four-sided pointed piece B, whose angles tear up the ground they come in contact with while the point is continually driven into the ground by the pressure of the weight above, thereby preparing the way for the tube A, which settles down with it. It advances thus until a proper depth is reached. A trial can be always easily made to ascertain if water has been reached by lifting the tube a little off the shoulder G of the point, so as to allow room for the water, if any, to rise in the tube. The tube is not lifted so high as to disconnect it from the point, and they may be so connected as to allow motion upon each other. When water has been reached the tube may be raised and secured at a proper height above the point, or they may be both withdrawn (in case the tube and point are fastened to each other) and a pump-tube introduced into the opening.

The rotary motion given to the angular point is well calculated to displace stones and dirt and allow the point and the tube to be sunken by the weight above.

My invention saves the tube from injury and obviates the danger which its joints are liable to receive from the use of a sledge, as in the common mode of driving tubes for this purpose.

Tubes can be readily and easily sunk by my method in buildings and places where there is not room to use a sledge with effect.

It will be observed that the operation is conducted somewhat upon the same principle of the advance of a carpenter's rotating boring-tool in operating on wood.

I claim as new and desire to secure by Letters Patent—

1. The combination of the tube A, constructed as described, with the flange F, the collar E, and platform D, suspended therefrom, all arranged and operating in the manner and for the purpose herein specified and shown.

2. The platform D, supported on the flange F, as shown, in combination with the well-tube, substantially as described.

CALVIN SHEPARD.

Witnesses:

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