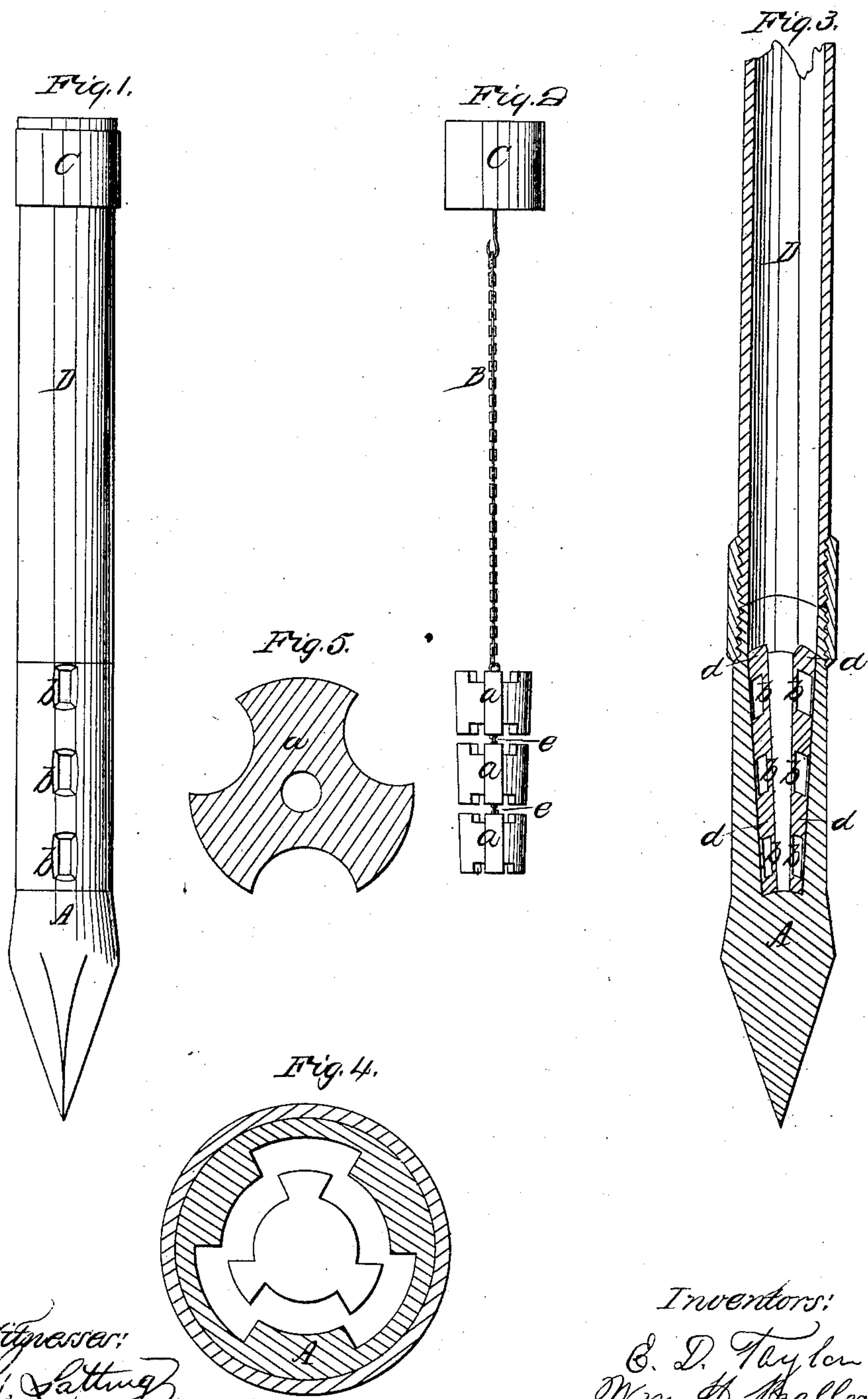


Taylor & Ballou,

Well Tubing.

N^o 62,508.

Patented Feb. 26, 1867.



Witnesses:
R. S. Lattin
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United States Patent Office.

ESAU D. TAYLOR AND WILLIAM H. BALLOU, OF HORNELLSVILLE
NEW YORK.

Letters Patent No. 62,508, dated February 26, 1867.

IMPROVEMENT IN TUBE-DRIVING, OR BORING WELLS.

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, ESAU D. TAYLOR and WILLIAM H. BALLOU, both of Hornellsville, in the county of Steuben, in the State of New York, have invented certain new and useful Improvements in Tubing, Driving, or Boring 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.

Figure 1 represents an outside view of the point, first section, or joint of tubing, with the cap or head for driving.

Figure 2 shows a detached view of the jointed plug or stopper, with chain for pulling up the stopper, hook, and head.

Figure 3 shows a vertical section of the barrel, point, pipe, and coupling.

Figure 4 is a top-end view of the barrel or point.

Figure 5 is a top-end view of the plug or stopper.

The object of our invention is to cheapen the process of making wells, when tubing is driven into the earth for that purpose, to save boring, and generally to insure a good supply of clear water, when the tubing is first put down to a sufficient depth to be tested.

Our invention consists in the interior form and construction of the point or lower section of the tube A, which is made of cast iron, into the centre of which is fitted a series of plugs, *a a a*, jointed together to form stoppers to the apertures *b b b* in the sides of the pointed tube A, the jointed plugs *a a a* being connected to a chain, B, wire, rope, or rod, which are in sections. The same length of the sections of the tubing to be coupled together as the sections of the tubing are screwed on and driven down, the chain B being hitched to a link or snaffle-hook in the head or cap C, which is to be placed on the top end of each tube, D, as it is driven down.

To enable others to construct the parts and put down wells with our invention, we will describe it more fully, referring to the drawings and the letters marked thereon.

We make the point, lower section, or barrel A of hard cast iron, tapering inside from the upper end, with longitudinal grooves, *d d*, for a plug or a series of plugs, *a a a*, to fit in closely, so as to effectually close the apertures *b b b* made in the sides of the barrel A while it is being forced into the earth. The plugs *a a a* being made in sections, tapering to fit in the grooves *b b*, are connected together with links, *e e*, so that each plug will rest in its seat over the section of apertures, and the series of plugs being connected by the top one to a chain, B, rope, or rod, can be more easily started from their seat; and will also enable them to be drawn up, and taken out of the tube after it is driven. Should the tube D become bent or curved in the driving, any required number of lengths of tubing may be used, the chain being added in sections and hitched to the hook *f* in the under side of the head or cap C, which is put on to the tube to take the blow, and to prevent the bruising of the tube. When the tubing has been driven to the depth required, the cap is removed, and by drawing on the chain B the series of plugs are taken out, and the well is ready for applying the pumps and testing. One set of the plugs *a a a* and chains, as seen in fig. 2, will answer for putting down any number of wells, they fitting the grooves *d d* in the cavity of the barrels A or lower pointed section of the tube.

The mode of operation is as follows: When a well is to be put down, the series of plugs is put in the pointed cast-iron barrel, and it is driven into the earth; then the chain or rope is attached to the cap or head, and run through a length of the tube and secured to the ring in the top plug; the tube or pipe is then screwed on and driven down its entire length. The head is then removed and another section of chain is attached to the hook in the head, passed through another joint of tubing, and coupled to the other chain, the tubing screwed on and driven in the same manner, and so on until the tubing has been driven down to the required or to any desired depth, the bulb or enlarged portion of the point making the hole in the ground large enough for the tubing to go free, so that in common earth, where no rocks or stones obstruct, a well from thirty to fifty, and even to one hundred feet in depth can be put down in a little time. When the desired depth is attained, the cap or head is removed, the draught is applied to the chain, and the plugs are taken out at the top, and the well is then ready for applying the pumps. In some cases the water will follow the plug as it is withdrawn from the

tube, and a flowing spring is the result. Thus it will be seen that water can be obtained in a short time and economical manner by our apparatus, as above described.

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

The combination of the cap or head C, chain B, (wire, rope, or cord,) with a series of jointed plugs, *a a*, and barrel A, substantially in the manner as herein described for the purposes set forth.

Subscribed to this 28th day of November, 1866.

ESAU D. TAYLOR,
WILLIAM H. BALLOU.

Witnesses:

R. G. LATTING,
JOSEPH MILLER.