

C. HOLTZ.
CONSTRUCTING WELLS.

No. 171,513.

Patented Dec. 28, 1875.

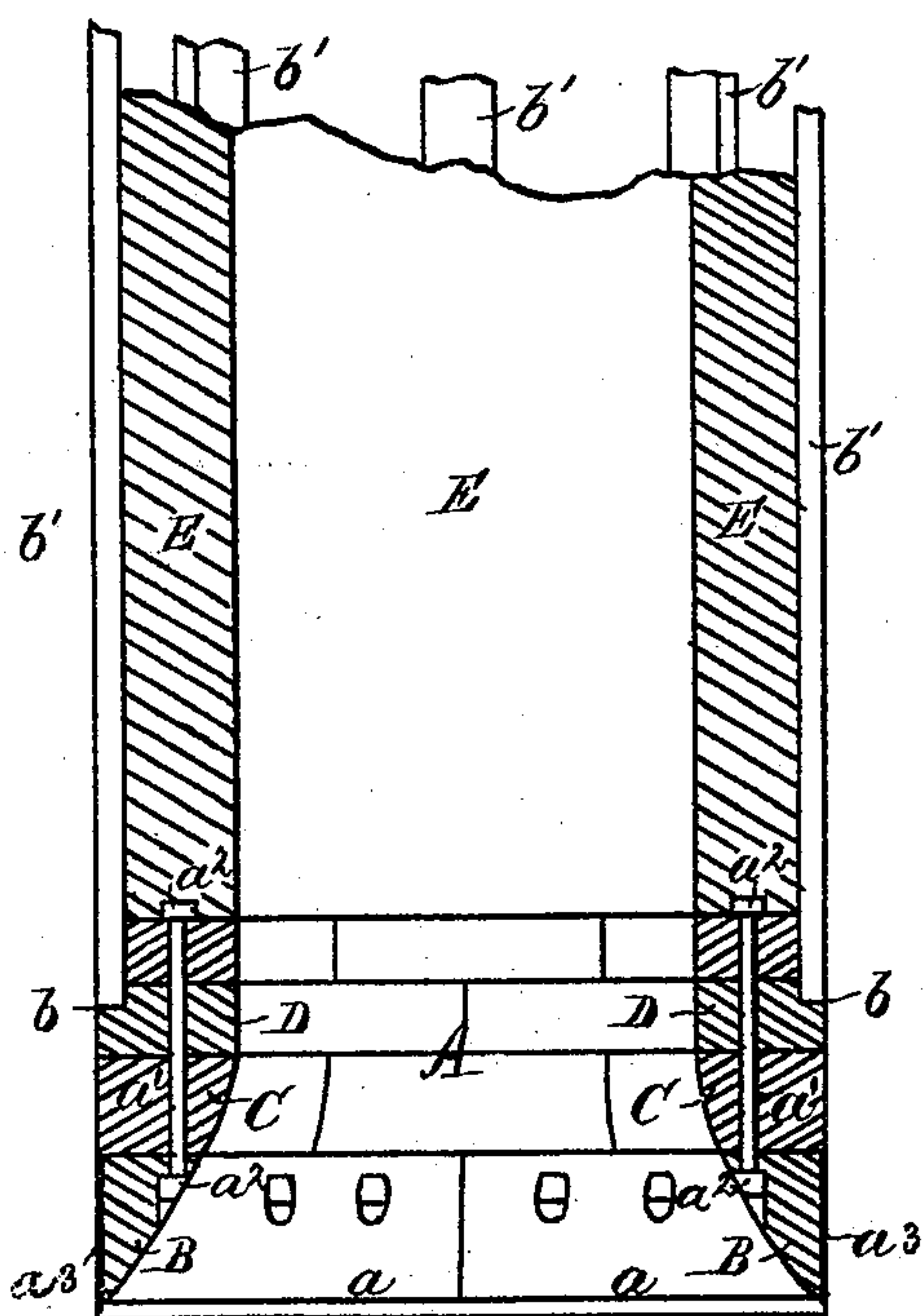


Fig. 1.

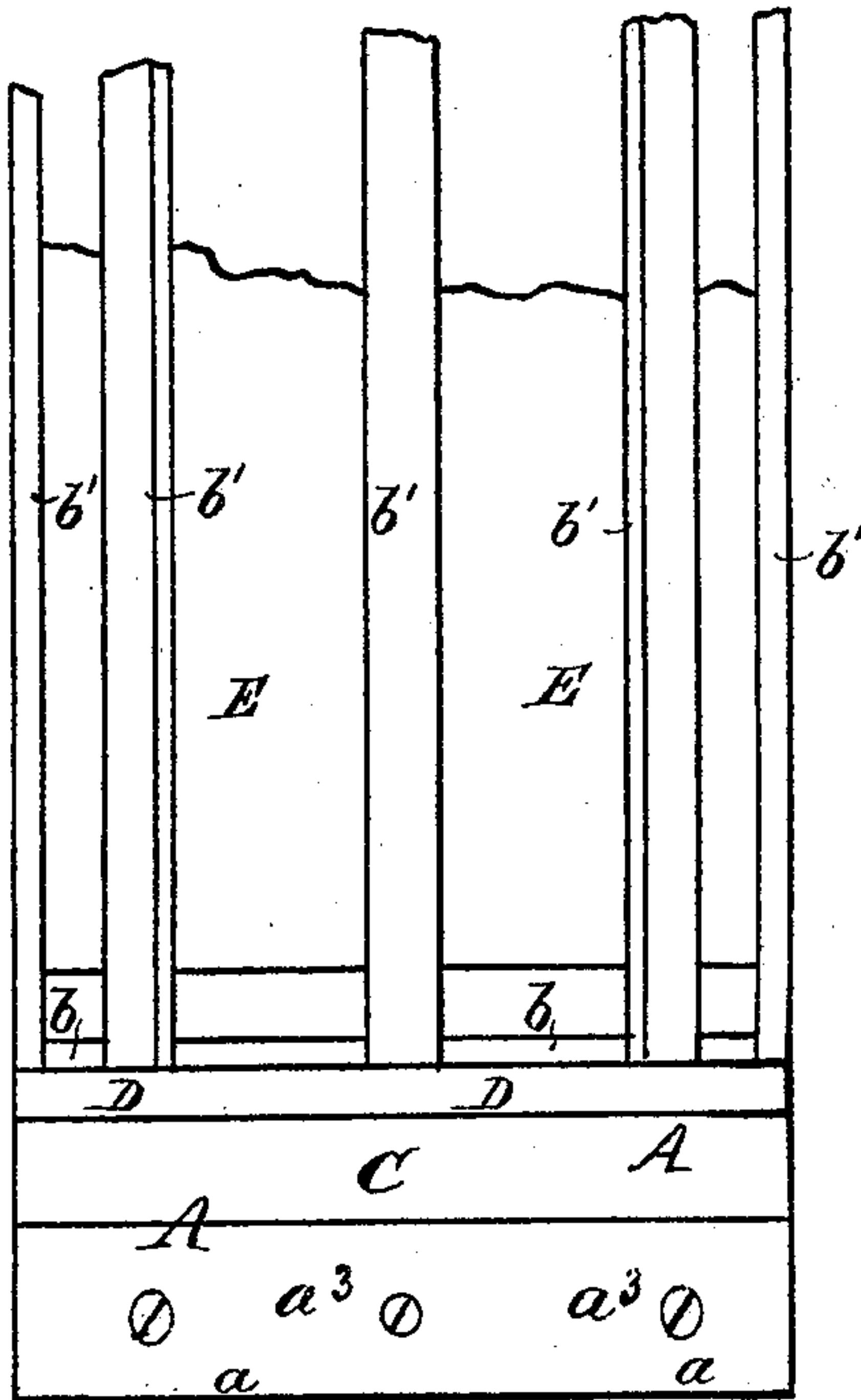


Fig. 2.

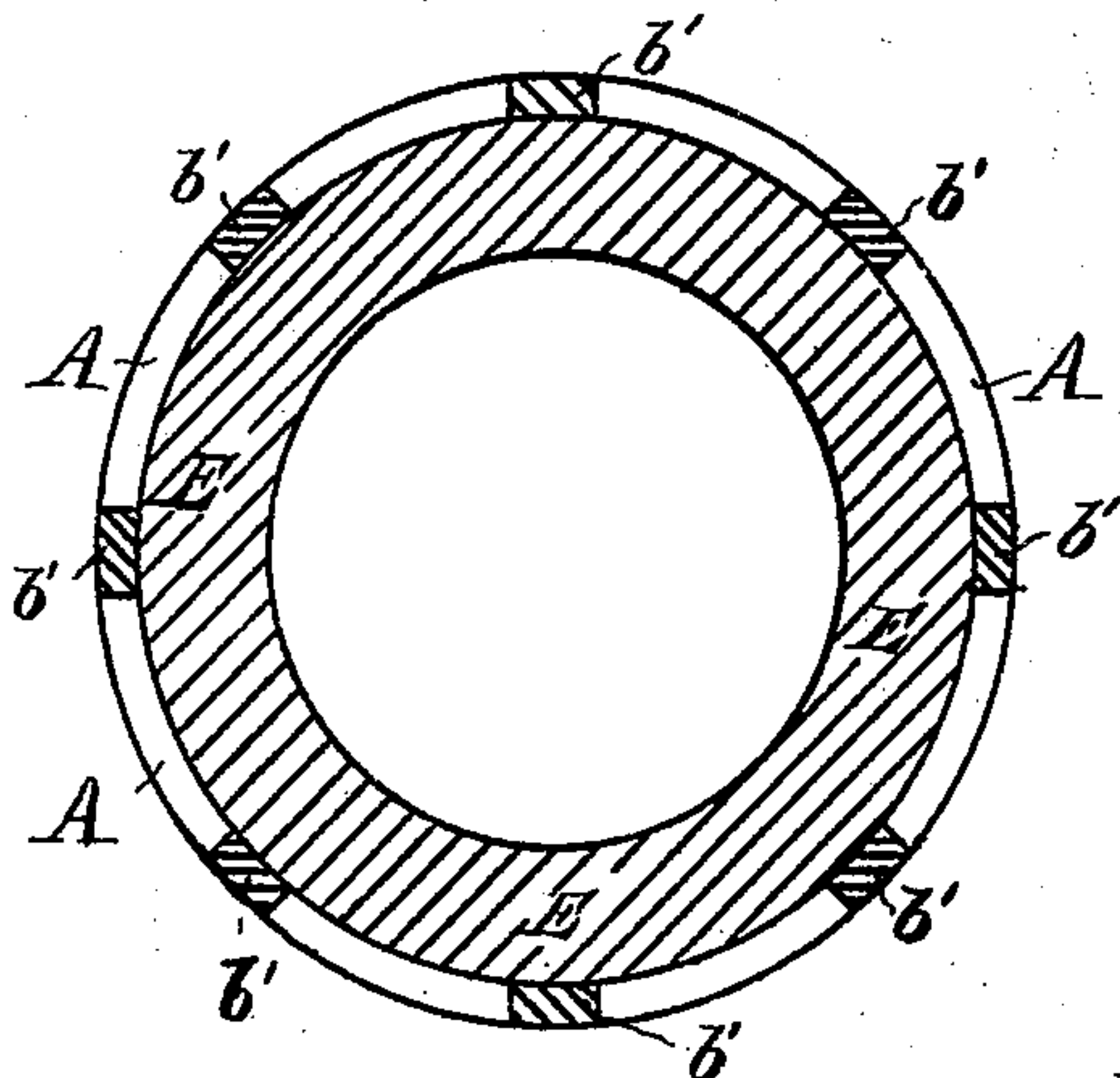


Fig. 3.

Witnesses:
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CARL HOLTZ, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIRAM A. FRENCH.

IMPROVEMENT IN CONSTRUCTING WELLS.

Specification forming part of Letters Patent No. **171,513**, dated December 28, 1875; application filed May 25, 1875.

To all whom it may concern:

Be it known that I, CARL HOLTZ, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improved Mode of Constructing Wells, of which the following is a specification:

This invention relates to those modes of constructing wells in which the weight of masonry-work is utilized as a means of sinking the earth-box lower and lower to required depth.

My invention relates to the improved construction of the earth-box proper, to consist of layers of wood braced by rods and screw-nuts, the whole internally formed with a bevel or cutting edge, the object being to form a most durable, practicable, yet readily-made earth-box, to directly support the bricks or masonry, as well as to cut its way through the varying natures in which the soil presents itself. Further at top my earth-box has an offset to which the lower ends of scantling or strips are secured, and which separate the earth from direct contact with the bricks, facilitating the sinking of the well, all of which will now more fully appear.

Of the drawing, Figure 1 is a vertical sectional elevation, showing the masonry-built top of the earth-box; also showing the scantling. Fig. 2 is an elevation of Fig. 1. Fig. 3 is a top plan.

It is essential that the earth-box should be strong, capable of resisting great pressure, adapted for cutting through varying natures of the soil, as well as to support the masonry. Hence, as stated in the nature of my invention, I form the earth-box A to consist of wood layers, such as B, C, D, &c. (See Figs. 1 and 2.) The layers are varied in thickness; thus the layer B should be the thickest, as it forms the cutting-edge *a*. Through the layers I pass connecting-rods *a*¹ fastened by nuts *a*² top and bottom, so as to firmly brace the layers, and form the needed strong earth-box.

The earth-box thus made, I next internally bevel sharp, as indicated in Fig. 1. *a*³ is a metal band to protect as well as form part of the cutting-edge. The masonry E is built top of the top layer, or top of the earth-box A, to weight same.

In order to form clearance-space surrounding the wall as it is being built, I provide the earth-box A at top with an offset, *b*. (See figures.) To this offset the lower end of scantling or strips *b*¹ are secured. These strips surround the wall, and, being in vertical line with the outer circumference of the earth-box below, the earth is by this means kept sufficiently away from the wall, so as to facilitate the sinking of the well. As apparent to the sides at top end of scantling, additional strips can be added from time to time, as the depth of the well requires. It will here be noticed that the surrounding scantling remains a permanent fixture with the earth-box sunk in the well.

The operation of sinking a well according to my improved mode of construction is, therefore, as follows: Sufficient earth is first removed preparatory for sinking the earth-box. As the masonry weights the earth-box, this sinks. By its cutting-edge *a* it cuts loose the soil and forces it by its internal bevel into the core or cylinder of the well. The operator within removes the loosened soil as it accumulates while at same time the wall is being built. After the well is completed the earth, by its own action, will fill up the clearance-spaces between the scantling and the wall.

What I claim is—

1. The uprights or strips *b*¹, in combination with the offset *b*, of an earth-box, by means whereof the masonry is kept clear from the surrounding earth during the sinking of the well, and as herein shown and described.

2. The earth-box A to consist of separate layers B, C, D, &c., and formed with a cutting-edge, *a*, and braced by rods *a*¹ and nuts *a*², in combination with the upright strips *b*¹, by means whereof the sinking of wells is done by the weight of masonry-built top of said earth-box, substantially in the manner as herein shown and described.

In testimony of said invention I have hereunto set my hand.

CARL HOLTZ.

Witnesses:

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