W. SHAW.

EARTH-AUGER.

No. 192,463. Patented June 26, 1877.

FIG. 1.

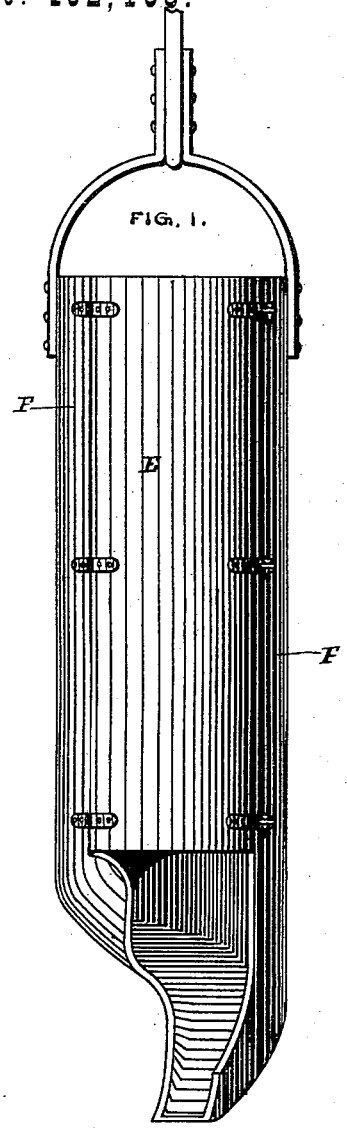
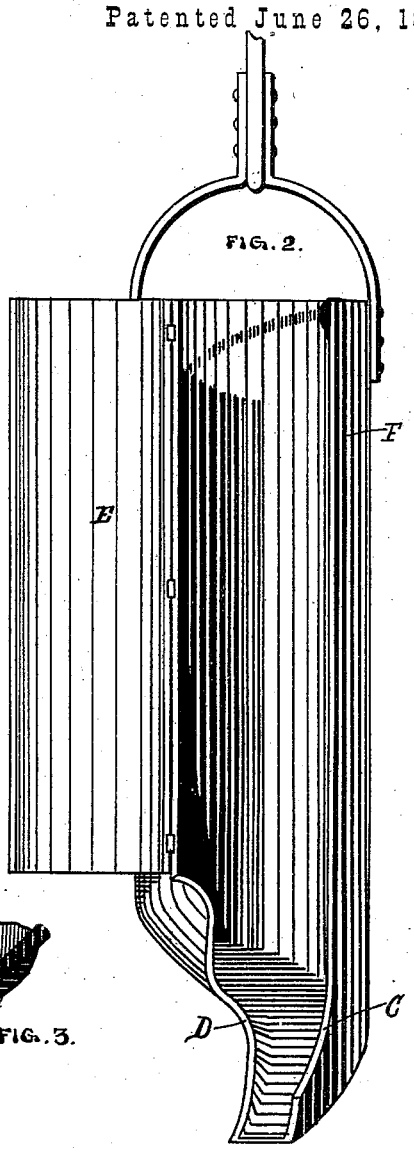


FIG. 2.



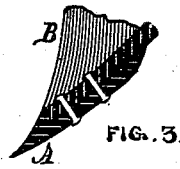


FIG. 3.

Witnesses

F. L. Howse

Robert Ellis Jr

William Shaw Inventor

By

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM SHAW, OF CHICAGO, ILL., ASSIGNOR TO HIMSELF, BENJAMIN L. HONORÉ AND FRANCIS L. HONORÉ, OF SAME PLACE.

IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **192,463**, dated June 26, 1877; application filed April 27, 1877.

To all whom it may concern:

Be it known that I, WILLIAM SHAW, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Earth-Augers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 shows the auger with the door attached and closed. Fig. 2 shows the auger with the door swung open. Fig. 3 shows the point, or lower extremity of the auger with a short cutting-knife attached.

In constructing my improved auger, the barrel or cylindrical part, and the bottom or twist part is made from one and the same piece of metal. In using the terms "barrel or cylindrical part" they do not embrace the door, which is detachable at pleasure, and is only used at times. The other part, which embraces about two-thirds of the cylinder, is always used, and the object of this invention is to form this cylindrical part, that is always used, and the bottom or twisted part of one and the same piece. The auger is made of cast material, or those parts forming the bottom and the barrel in one piece; or, it can be made of boiler or other kinds of iron. Boiler iron is preferable. When made of cast metal a pattern of the proper shape is made, from which a casting is made. When made of boiler iron, an anvil or former is made of the shape of the bottom of the auger and the boiler iron, after having been rolled into cylindrical form, and the end designed for the bottom, a twist part is cut in proper shape, is placed in the fire and brought to the proper heat, is then placed on the anvil or former, where it is readily hammered to the proper shape.

F is the barrel of the auger, the lower end of which terminates in the bottom or twist part. The extreme lower point of this twist or bottom part, does the cutting or loosens the earth, and as the auger is turned around the loosened earth is forced up into the barrel of the auger.

To strengthen the lower portion of the bottom or twist part, the edge is turned up at C and D, Fig. 2. This turning up the edge serves the purpose also of giving direction to loosened earth in its course upward into the auger.

E is the door attached to the barrel of the auger by hinges, and is detachable at pleasure. It is used only when boring through quicksand or any similar substance. The auger is operated by levers applied to the shaft, attached to the upper end of the auger.

When the door is removed, the auger is then shown, formed and made from one piece with the barrel or cylindrical part, and the bottom or twist part all so formed, that it constitutes an auger complete and ready for use, and of very great strength. By making the auger as above described in one piece, it can be made much cheaper than in the manner hitherto made.

The extreme lower end of the auger that does the cutting can be case-hardened, and thus answer the purpose, or a knife of steel can be attached, as shown at Fig. 3. The outer edge of the lower or bottom part of the auger also serves the purpose of cutting the extreme edge of the circle formed by the revolving of cutting edge or knife, and for this purpose it is sharpened.

Having thus described my invention, what I claim is—

As an article of manufacture, an earth-auger, having the bottom or twist part provided with flanges D C, and the barrel or cylindrical part made and formed of one and the same piece, substantially as shown and described.

WILLIAM SHAW.

Witnesses:
F. L. HONORÉ,
ROBERT ELLIS, Jr.