

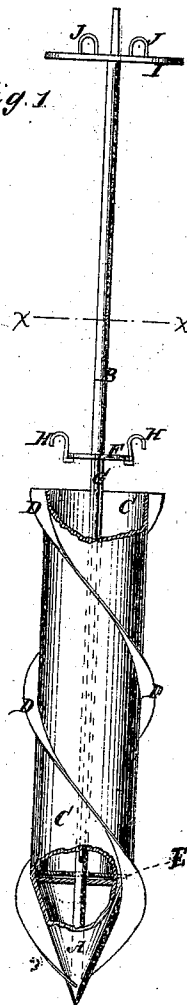
*E. Altman,*

*Well Auger.*

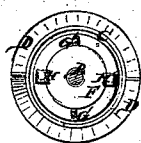
*No. 111,300.*

*Patented Jan. 31. 1871.*

*Fig. 1*



*Fig. 2.*



**Witnesses:**

*L. S. Maber*  
*Alex. F. Roberts*

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**PER**

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# United States Patent Office.

ELIJAH ALTMAN, OF HAMILTON, MISSOURI.

Letters Patent No. 111,300, dated January 31, 1871.

## IMPROVEMENT IN WELL-AUGERS.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that I, ELIJAH ALTMAN, of Hamilton, in the county of Caldwell and State of Missouri, have invented a new and useful Improvement in Well-Auger; 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 drawing forming part of this specification.

Figure 1 is a side view of my improved well-auger, parts being broken away to show the construction.

Figure 2 is a top view of the same, partly in section through the line *z z*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved well-auger, designed more particularly for boring through veins of quicksand; and which shall be simple in construction and effective in operation, taking out the water and dirt much cleaner than augers constructed in the ordinary manner; and

It consists in the construction and combination of the various parts of the auger, as hereinafter more fully described.

The conical point A of the auger is rigidly connected with the lower end of the shaft B, and is preferably formed in one piece with the tube C.

D D indicate a double spiral flange, securely attached to or formed on and extending around the point A and tube C, on opposite sides of the same, as shown. The office of these flanges is the same as that of the lips and twist or spiral flanges of the ordinary double-twist wood-augers.

E is a disk, through the center of which the shaft B passes, and which fits loosely into the interior of the tube C.

The disk E is connected with the disk F by rods, G, which rods should be longer than the tube C, so that when the disk E is in the bottom of the tube C the disk F may be above the upper end of the said tube, so as to leave its upper end wholly unobstructed.

To the disk F are attached hooks, H, for convenience in drawing the disk E out of the tube C to clear it of dirt.

To the upper part of the shaft B is rigidly attached a disk, I, having staples or keepers, J, attached to its upper side to receive levers for operating the auger.

The upper end of the shaft B, that projects above the disk I, should be squared off, for convenience in coupling another shaft to it when required.

Having thus described my invention,

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

An improved well-auger, formed by the combination of the point A, shaft B, tube C, flanges D, disk E, connecting-rods G, disk F provided with hooks H, or equivalent, and disk I provided with keepers J, with each other, substantially as herein shown and described, and for the purpose set forth.

ELIJAH ALTMAN.

Witnesses:

MARCUS A. LOW,  
ISAAC N. ALTMAN.