

W. W. Silz, Earth boring Auger.

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PATENTED AUG 1 1871

Fig:1.

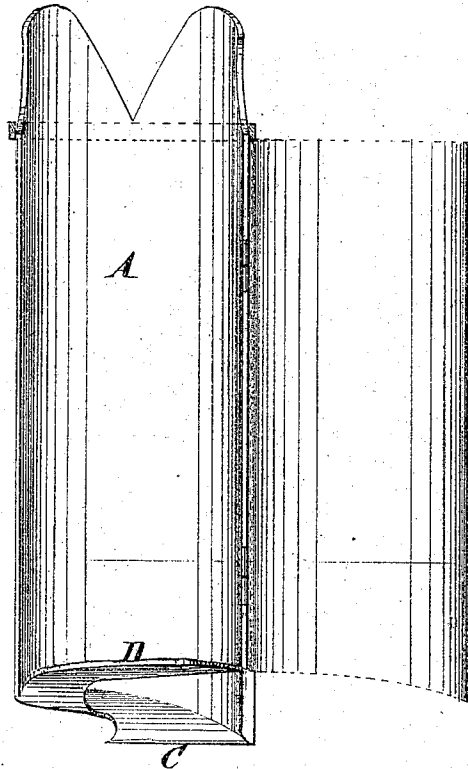
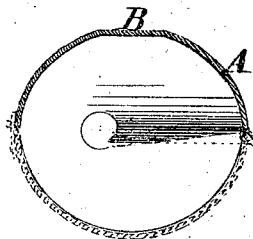


Fig:2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM WHEETEN JILZ, OF HAMILTON, MISSOURI.

IMPROVEMENT IN EARTH-BORING AUGERS.

Specification forming part of Letters Patent No. 117,542, dated August 1, 1871.

To all whom it may concern:

Be it known that I, WILLIAM WHEETEN JILZ, of Hamilton, in the county of Caldwell and State of Missouri, have invented a new and useful Improvement in Earth-Boring 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.

This invention relates to a new and useful improvement in augers for boring wells, whereby much valuable time is saved; and it consists in forming the auger of a longitudinal section of a hollow cylinder flattened on its back so as to admit air, and provided with a cutting-bit and circular lip, the whole constructed to operate as hereinafter more fully described.

In the accompanying drawing, Figure 1 represents a front view, having a swinging door or flap hinged to it, which door is used in certain kinds of boring. Fig. 2 is a cross-section of Fig. 1 taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A is the auger, which consists of a longitudinal section of a tube flattened for a small space its entire length, as seen at B. C represents the bit, which projects down below the end of the semicircular auger so as to enter the earth. D is a horizontal lip which receives and supports the column of earth when the auger is withdrawn.

The bit works downward as the auger is revolved, and the earth which is thus undermined is left stationary with the auger, and when the

pod or auger is full it is raised, and swinging, as it does, from a derrick, it is turned in a horizontal position with the open side down, when the earth drops by its own gravity. Water is used during the process of boring with this auger, which greatly diminishes the friction. Air is constantly admitted to the auger by means of the flattened space B on the back, which prevents a vacuum being formed to retard or obstruct the withdrawal of the auger. With this auger the earth is readily bored to the depth of a hundred feet or more. The auger is attached to the end of a wooden rod, to which the power is directly applied.

There is a band around the semi-cylinder near the top, two inches under, more or less, as indicated by dotted lines in the drawing, the object of which is to support the load in the auger (tenacious clay, for instance) and prevent its discharge from the auger before the proper time.

The advantages of this auger over the ordinary earth-augers in use are many, and must be obvious to all who are acquainted with the subject.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A semicircular auger, flattened at B to admit air, combined with bit C having the horizontal lip D to support the core of earth, as and for the purpose specified.

WILLIAM WHEETEN JILZ.

Witnesses:

L. E. LOW,
J. M. GOLBMON.

5 to words