

(No Model.)

G. MEADER.
WELL BORING AUGER.

No. 419,055.

Patented Jan. 7, 1890.

Fig. 1.

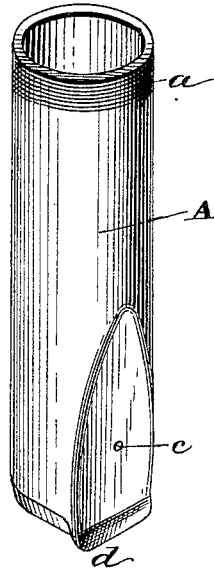


Fig. 2.

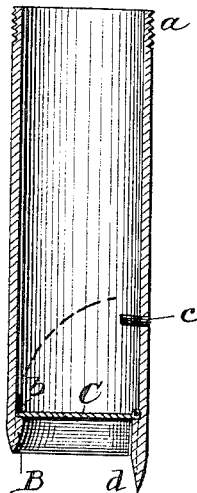
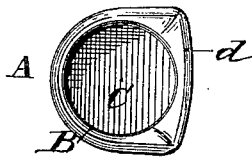


Fig. 3.



Witnesses:

F. L. Curran.
G. P. Chisholm.

Inventor:

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By *his* Attorneys
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UNITED STATES PATENT OFFICE.

GEORGE MEADER, OF FOWLER, INDIANA.

WELL-BORING AUGER.

SPECIFICATION forming part of Letters Patent No. 419,055, dated January 7, 1890.

Application filed August 28, 1889. Serial No. 322,237. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MEADER, a citizen of the United States, and a resident of Fowler, in the county of Benton and State of Indiana, have invented certain new and useful Improvements in Well-Boring Augers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to well-boring augers, and has for its object to provide a simple and inexpensive hollow auger for cutting tubular wells, and one which shall be adapted to remove the interior earth which it cuts or bores away.

With this object in view my invention consists in the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my device, and Fig. 2 is a vertical sectional view of the same. Fig. 3 is a cross-sectional view.

Like letters of reference denote corresponding parts in all the figures.

Referring to the drawings, the letter A designates a tube of steel pipe, having a thread *a* at the top, by which it may be coupled above to the sinker-bar or auger-stem. The lower end of this tube is preferably D-shaped, and has a flat lip *d* extending below the rounded portion. This lip may be either welded on or may be formed from the tube itself. Both the lip and the rounded portion are furnished with an interior bushing B, of soft iron, which serves the double purpose of strengthening the tube and forming a narrow interior circumferential shelf *b*. Just above this shelf and against the flat side of the tube is hinged a plate or valve C. As the auger is thrust or turned into the ground, this valve is raised, and when pulled out the valve falls to the shelf *b* and the tube brings the earth up with it. In order that the valve C may not be forced back against the interior of the tube, in which case it might sometimes fail to fall when the tube was raised, a pin *c* is inserted through the side of the tube back of the valve and

holds the valve when raised a little distance from the side of the tube. Thus a certain amount of earth will go in behind the valve and force it to fall. The bushing B being of soft iron, it will wear away and the tube and lip sharpen themselves from the inside, and they may be ground from the outside.

It may be desired in some cases to dispense with the shelf *b*, in which case the valve can be made to strike against the side of the tube as it falls and before it comes to a horizontal position.

It is not necessary for the purposes of my invention that the tube or auger be of the exact shape illustrated in the drawings; but my object is to provide a tool in which the valve shall occupy little room and in which there shall be little interior obstruction to the entrance of the earth.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The herein-described well-boring auger, consisting of a steel tube having a sharpened end and lip, an interior valve, and a pin adapted to limit the motion of said valve, substantially as shown and described.

2. The herein-described well-boring auger composed of the following elements: a steel tube cylindrical and screw-threaded at the top, substantially D-shaped at the bottom, the flat portion having a lip extending below the rounded portion of the tube, said lip and rounded portion being adapted to be sharpened on the exterior, an interior bushing of soft iron forming a shelf, a valve hinged above said shelf, and a pin adapted to limit the play of said valve, all constructed and combined to operate substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE MEADER.

Witnesses:

GEORGE W. BERRY,

GEORGE WADSWORTH.