

W. W. JILZ.
Earth-Auger.

No. 162,825.

Patented May 4, 1875.

Fig. 1.

Fig. 2.

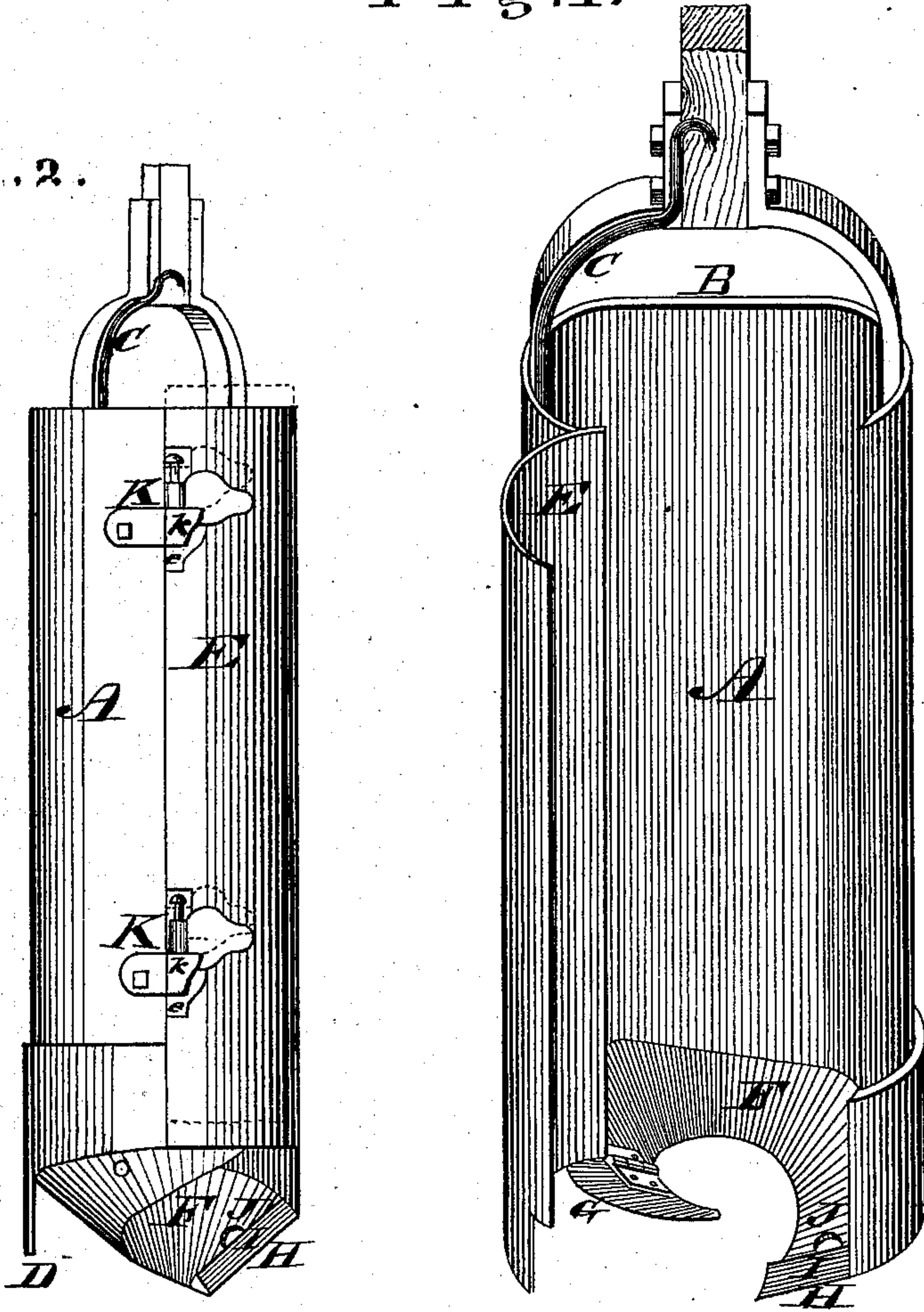
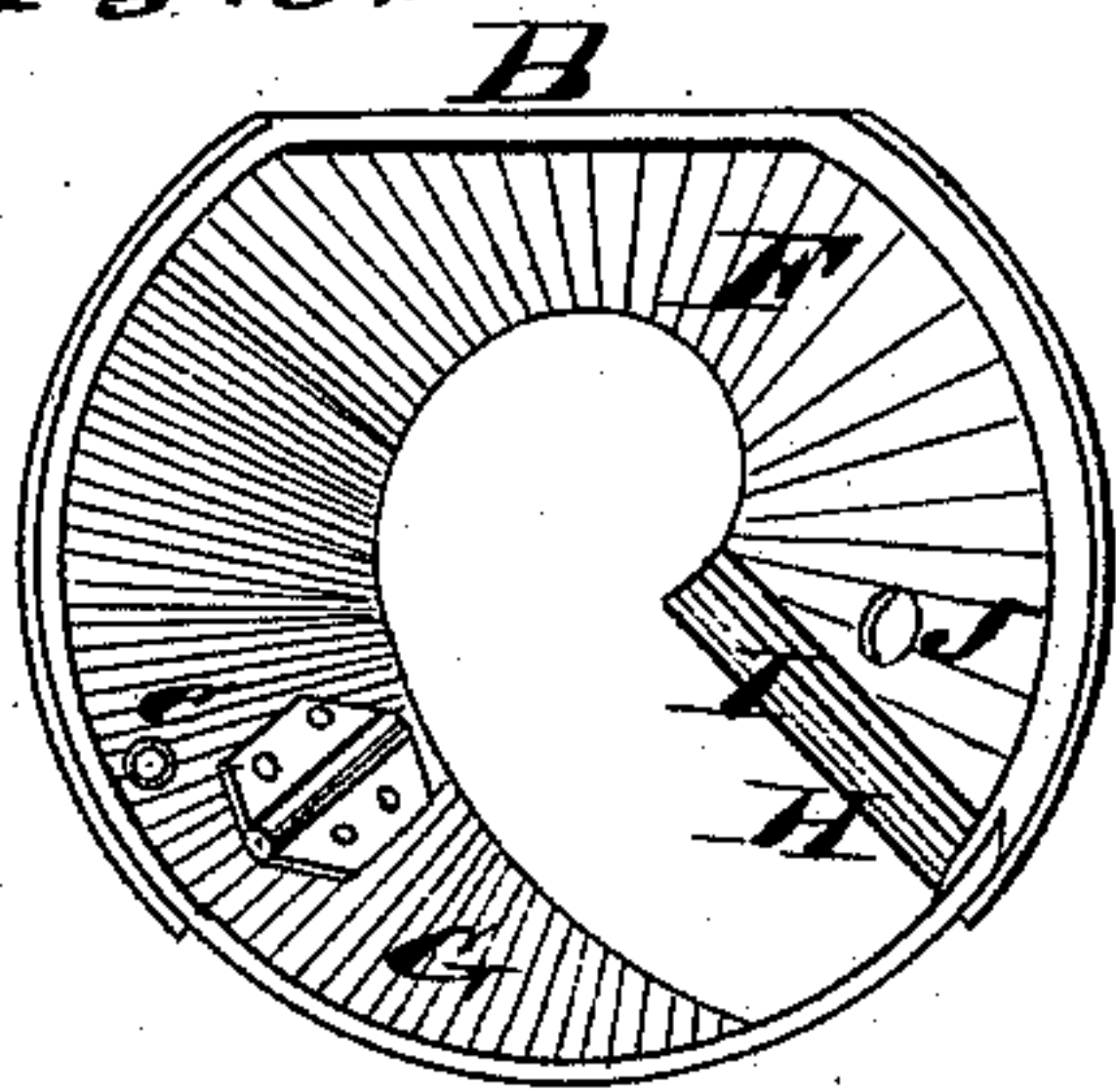


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **162,825**, dated May 4, 1875; application filed April 10, 1875.

To all whom it may concern:

Be it known that I, WILLIAM W. JILZ, of the city and county of St. Louis, and State of Missouri, have invented new and useful Improvements in Well-Augers, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, where—

Figure 1 is a perspective of the auger, its door being open; Fig. 2, a side elevation; and Fig. 3, a view of the bottom of the auger.

Like letters indicate like parts.

The present invention relates to improvements by means whereof the earth can enter the auger more readily, and be prevented from clogging therein. It also relates to an improvement in the door-hinges.

Referring to the accompanying drawing, A represents the form of auger which I preferably adopt, in connection with the present improvements, it being, in its general outline, cylindrical, and provided with a flattened side, B, an air-tube, C, a knife, D, door E, bottom F, and valve G, all which features are more fully described in patents previously granted me. It represents the cutting-lip, which, preferably, is of the form shown. Upon its upper side is arranged a peculiar projection, I. This projection, in cross-section, is triangular, its forward face forming a continuous bevel to the cutting-lip, but whose upper or rear face is at right angles, or thereabout, to the bottom F, thus forming an offset, over which the earth, after passing the lip, may fall. Above the projection I the bottom is perforated at J.

In Fig. 2 is shown the improved hinge K. That part thereof which is upon the body of the auger is provided with a lug, *k*, which ex-

tends so as to come over and upon the other part of the hinge when the door is closed. To enable the door to be opened it is arranged to have a vertical movement sufficient to clear the lug *k*. For this purpose the door is suitably cut away at *e e*.

In operation, the earth, after passing the projection I, falls down upon the bottom below. This breaks up the earth, and prevents its binding as it passes up into the cylinder. Generally, in boring, water is encountered. By means of the perforation J it can enter and lubricate the bottom at a point where the earth is apt to stick.

By using the form of hinge described, the need of a latch is obviated, and thus the number of projections on the outside of the cylinder is diminished and the friction reduced.

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

1. The auger A, bottom F, lip H, and projection I, combined and operating substantially as described.

2. The auger A, bottom F, and perforation J, combined substantially as and for the purpose set forth.

3. The combination of the auger A, bottom F, lip H, projection I, and perforation J, substantially as described.

4. The combination of the auger A and door E, provided with the hinges K K', constructed as described, with the lugs *k k'*, substantially as and for the purpose set forth.

WM. W. JILZ.

Witnesses:

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