

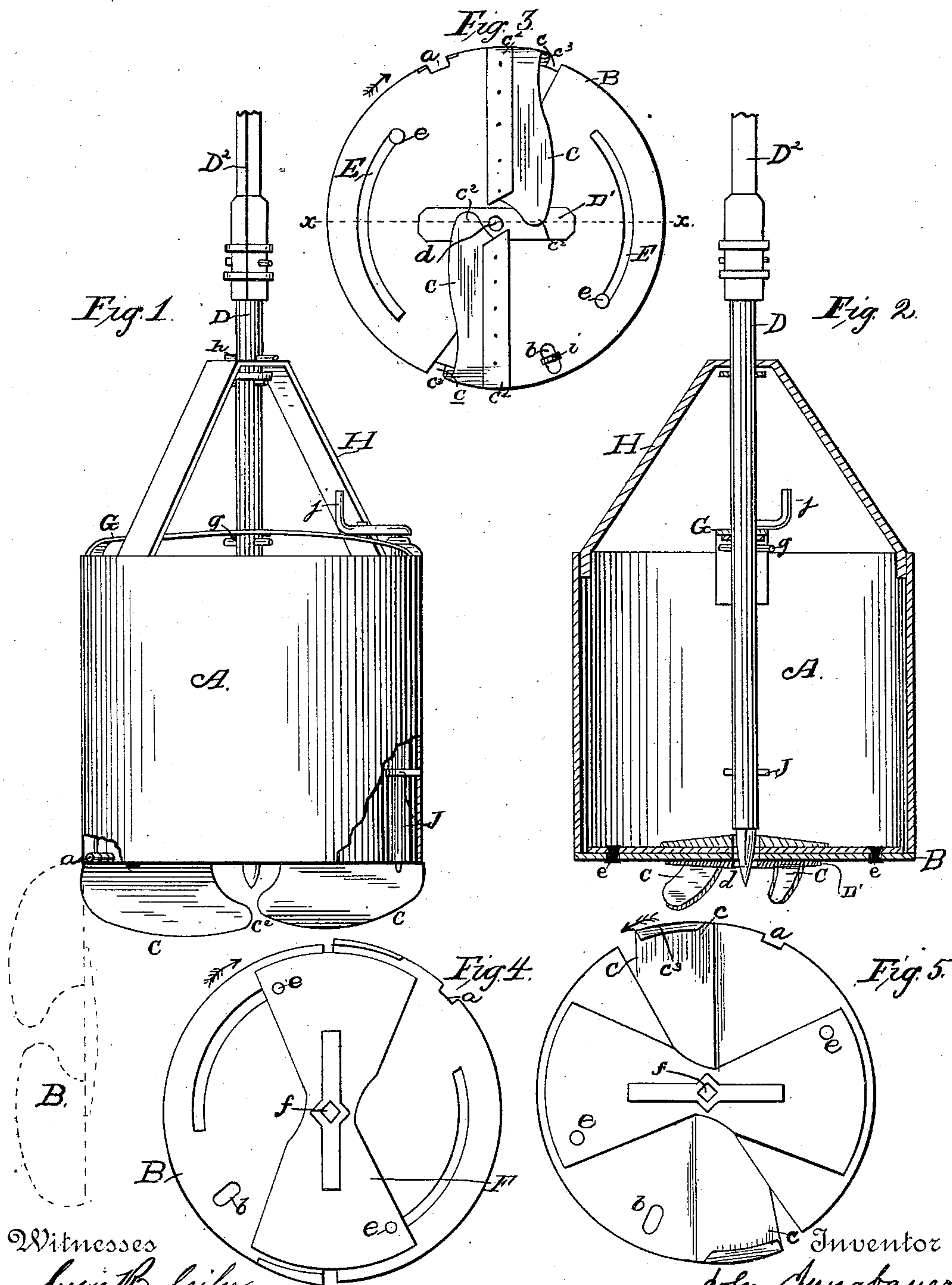
(No Model.)

J. JUNGBAUER & G. J. SEIELSTAD.

EARTH AUGER.

No. 351,703.

Patented Oct. 26, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN JUNGBAUER AND GILBERT JULIUS SEIELSTAD, OF JACKSON, MINN.

EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 351,703, dated October 26, 1886.

Application filed January 12, 1886. Serial No. 188,329. (No model.)

To all whom it may concern:

Be it known that we, JOHN JUNGBAUER and GILBERT JULIUS SEIELSTAD, citizens of the United States, residing at Jackson, in the county of Jackson and State of Minnesota, have invented certain new and useful Improvements in Earth-Augers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to augers of that class designed to bore into the earth, and particularly adapted for use in boring wells in sections abounding in sand and gravel; and it consists in details of construction and combinations of parts, as fully shown, and hereinafter more particularly pointed out and claimed.

In the drawings, Figure 1 is a side elevation of our improved auger, the bottom being shown swung open in dotted lines. Fig. 2 is a vertical section on the line *x x*, Fig. 3. Fig. 3 is a bottom plan view. Fig. 4 is a plan view of the bottom detached, showing the cut-off closed. Fig. 5 is a similar view.

The auger proper consists of the shell A, bottom B, provided with the bits or scoops C, and shaft D. The shell is cylindrical in form, and may be of any desired length and diameter and composed of suitable material, sheet metal being preferred, owing to its strength and durability as compared with the bulk of material. The bottom is hinged to one side of the shell at *a*, and opposite the hinge it is provided with an elongated opening, *b*. A V-shaped portion of metal is removed from diametric opposite edges of the bottom, forming openings *c*, which extend nearly to the center of the bottom. A portion of the bottom bordering on corresponding sides of the openings *c* is bent downward, forming lips *c'*, to which the bits C are secured in any suitable manner by either bolts or rivets. The bits have the lower portion of their inner ends extended toward each other, forming wings *c''*, and their outer ends curved upward, as shown at *c'''*. The center of the bottom is perforated, and this perforation *d* is surrounded by a re-

enforcing piece, D'. Between the bits slots E are cut through the bottom on the arc of a circle having the opening *d* for its center. A cut-off slide, F, works on the inside of the bottom and is held thereto by pins or rivets *e* working in the slots E, the heads of the pins being upset on the outside of the bottom to prevent the accidental displacement of the cut-off. The center of the cut-off is perforated to coincide with the opening *d* in the bottom. A re-enforcing piece surrounds this opening and has an angular opening, *f*. The shaft D passes centrally through the shell and is held therein by braces G and H. The lower end of the shaft projects through the opening *d* in the bottom, and that portion coinciding with the opening *f* in the re-enforcing piece is made to correspond therewith.

In operation, the shaft being turned in the direction of the arrows, Figs. 3 and 5, the cut-off will disclose the opening *c* and permit the borings to enter the shell. The latter being full, a reverse movement of the shaft (indicated by the arrow in Fig. 4) will close the bottom and prevent the dirt, &c., from falling out of the shell during its ascent, as will be readily comprehended.

To prevent vertical displacement of the shaft, it is provided with stops *g* and *h*, respectively, to engage with the braces G and H. A rod, I, journaled to one side of the shell has an upper bearing in the brace G and a lower bearing in a bracket, J, attached to the side of the shell. The lower end of the rod is flattened and has shoulders formed on each side. This flattened portion passes through the opening *b*, and by giving the rod a partial turn by means of the crank *j*, the shoulders *i* will be projected beyond the sides of the opening and lock the bottom in position. To release the bottom and permit its swinging open, as shown in dotted lines, Fig. 1, the rod is turned till the flattened portion registers with the opening *b*, when the bottom is free and will open, as just described.

The shaft D may have sections D² coupled thereto in any well-known manner.

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

The combination of the shell, the bottom having openings, bits secured to a side of the

openings, curved slots formed in the bottom, a cut-off held to the bottom by pins passing through the curved slots, a re-enforcing piece secured to the center of the cut-off and having an angular opening formed therein concentric with the center of the curved slots, and a shaft having an angular end to engage the opening in the re-enforcing piece, whereby the cut-off is moved to close the openings in the bottom when turned in one direction, and uncover

the same when turned in a reverse direction, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN JUNGBAUER.

GILBERT JULIUS SEIELSTAD.

Witnesses:

W. B. SKETCH,

ALEX. FIDDES.