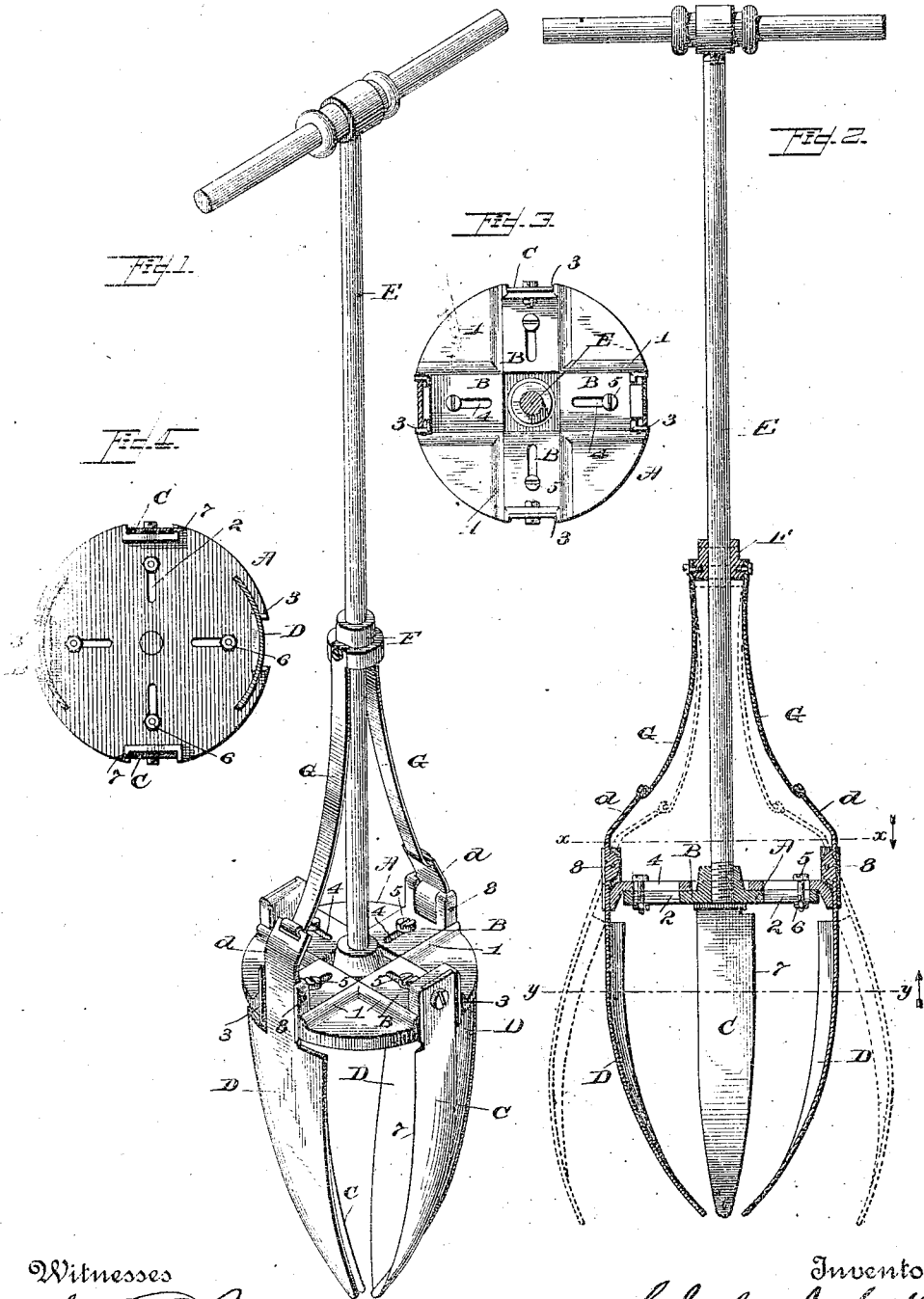


(No Model.)

C. A. SCOTT.  
EARTH AUGER.

No. 470,168.

Patented Mar. 1, 1892.



Witnesses

*A. J. Coleman*

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# UNITED STATES PATENT OFFICE.

CHARLES ALBERT SCOTT, OF LINCOLN, NEBRASKA.

## EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 470,168, dated March 1, 1892.

Application filed November 6, 1891. Serial No. 411,039. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES ALBERT SCOTT, a citizen of the United States of America, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Earth-Augers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to earth-augers of the variety technically called "pod-augers," those in which convergent blades depend from a head-plate.

The object of my invention is to produce an earth-auger having holding-blades of such width as to be capable of holding the earth cut loose by the cutting-blades and of such shape relatively to the shape of the cutting-blades as to present the minimum frictional surface to the wall of the hole being bored, to provide means whereby the holding-blades may be easily and conveniently opened to discharge the earth from the auger and then be automatically closed, and to provide for ready adjustment of all the blades in order to render the auger capable of cutting holes of varying sizes.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

Figure 1 of the drawings is a perspective view of my improved earth-auger. Fig. 2 is a vertical sectional view, partly in elevation, the open position of the holding-blades and their operating-springs being shown in dotted lines. Fig. 3 is a cross-section taken on the line *x x*, Fig. 2, looking in the direction indicated by the arrow. Fig. 4 is a cross-section taken on the line *y y*, Fig. 2, looking in the direction indicated by the arrow.

Referring to the drawings, A represents the head-plate, upon the upper side of which are formed four flanged guideways 1. Through the head-plate in each of these ways there is a slot 2, and in the periphery of the plate at the outer end of each of the ways is a recess 3.

B are four right-angle blocks, the horizontal portions of which are adapted to slide in the guideways 1 in the head-plate, the vertical portions being received in the recesses 3. These blocks are slotted at 4 to register with the slots 2 in the head-plate, and they are adjust-

ably secured to the plate by means of screws 5, which pass through the slots in the blocks and plate and engage with nuts 6, as seen in Figs. 2 and 4.

C are two cutting-blades secured opposite each other to two of the blocks B. These blades, which are comparatively narrow, are straight in cross-section and sharpened on one edge 7, as clearly shown in Fig. 4, and they, like the holding-blades hereinafter mentioned, converge toward the lower end, as seen in Figs. 1 and 2.

D are what I term the "holding-blades." They are preferably about twice the width of the cutting-blades, are spoon-shaped, and are blunt on both edges, as seen in the drawings. These blades have long integral shanks *d*, which are pivoted at 8 to the vertical portions of two of the blocks B, opposite each other, as clearly shown in Fig. 2.

E is the handle, the lower end of which is suitably secured in the head-plate.

F is a collar loosely mounted on the handle.

G represents two leaf-springs, which are secured at their upper ends to the collar F and at their lower ends to the shanks of the holding-blades. It will be observed that as the cutting-blades are straight in cross-section and the holding-blades are spoon-shaped, the whole outer surface of the latter, with the exception of the middle portion, falls within the line of cut of the cutters, so that the holding-blades present but slight surface exposed to frictional contact with the wall of the hole being bored and yet having sufficient width to retain the loose earth within the auger until the latter is withdrawn from the ground, when the earth can readily be discharged by simply pressing upon the springs G, thereby causing the holding-blades to swing open, they closing automatically when the springs are released from pressure. It will also be seen that as the blades are adjustable not only is the auger capable of being made to cut holes of different sizes, but its cutting-blades may be so adjusted with relation to the holding-blades as to make a thicker or thinner cut, as may be desired, when working in hard or soft ground.

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

1. An earth-auger having cutting-blades straight in cross-section and pivoted spoon-shaped holding-blades.
2. An earth-auger having cutting-blades straight in cross-section and pivoted spring-actuated holding-blades.
3. An earth-auger having cutting-blades straight in cross-section and pivoted spring-actuated spoon-shaped holding-blades.
4. In an earth-auger, the combination, with a head-plate, blocks adjustable on said plate, and a handle secured to the plate, of a plurality of cutting-blades straight in cross-section, each rigidly secured to one of said blocks, a plurality of spoon-shaped holding-blades, each pivoted to one of said blocks, and means for opening and closing the holding-blades.
5. An earth-auger comprising a head-plate, four blocks adjustable on said plate, two cutting-blades straight in cross-section, each rigidly secured to one of the blocks, two spoon-shaped holding-blades, each having a shank and pivoted to one of the blocks, a handle secured to the head-plate, a collar loosely mounted on the handle, and two leaf-springs, each secured at one end to said collar and at the other end to the shank of the holding-blades.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES ALBERT SCOTT.

Witnesses:

WILLIAM PAVEY,  
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