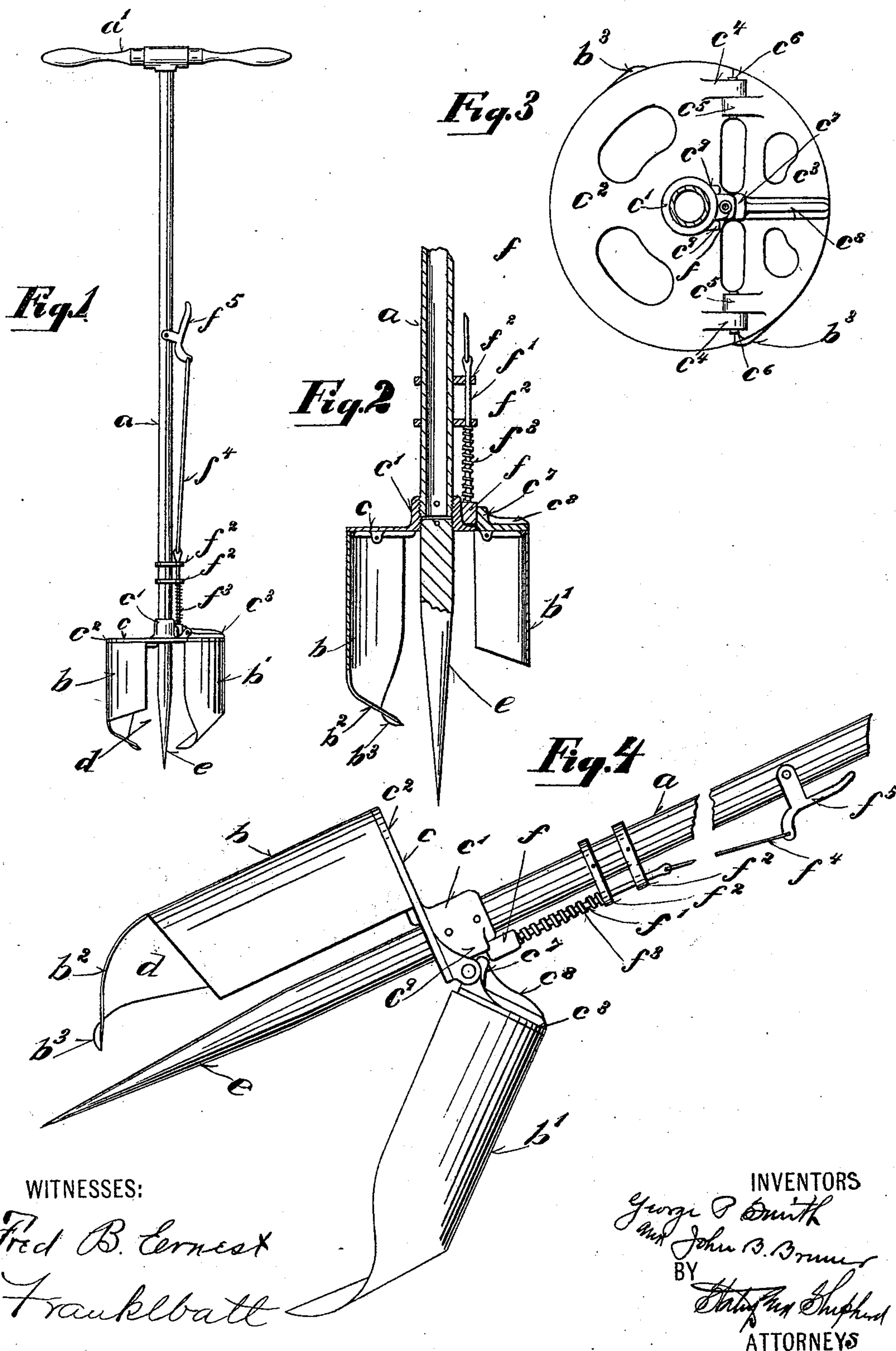


(No Model.)

G. P. SMITH & J. B. BRUNER.  
POST HOLE AUGER.

No. 517,892.

Patented Apr. 10, 1894.



WITNESSES:

Fred B. Ernest  
Franklball

INVENTORS

George P. Smith  
and John B. Bruner  
BY  
Shepherd & Shepherd  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

GEORGE P. SMITH AND JOHN B. BRUNER, OF SPRINGFIELD, OHIO.

## POST-HOLE AUGER.

SPECIFICATION forming part of Letters Patent No. 517,892, dated April 10, 1894.

Application filed June 21, 1893. Serial No. 478,390. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE P. SMITH and JOHN B. BRUNER, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a certain new and useful Improvement in Post-Augers, of which the following is a specification.

Our invention relates to improvements in post augers; and the object of the invention is to provide a post auger of simple construction, adapted to readily enter the ground and retain the earth loosened thereby; the constructions being such that the earth may be readily removed therefrom when the auger is removed from the hole formed thereby.

Our invention consists in the various constructions and combinations of parts hereinafter described and pointed out in the claims.

In the accompanying drawings Figure 1 is a side elevation of a device embodying our invention. Fig. 2 is a sectional view of the lower portion of the same. Fig. 3 is a top or plan view of the auger proper, and Fig. 4 is a side elevation on an enlarged scale, showing the parts in the position for discharging.

Like parts are represented by similar letters of reference in the several views.

In the said drawings  $a$  represents the supporting shaft or standard, surmounted at the top by a cross bar or handle  $a'$ ; this shaft or standard  $a$ , being preferably formed tubular to secure the proper strength without excessive weight. At the lower end of the shaft or standard  $a$ , is the auger proper, which consists essentially of two semi-circular blades  $b, b'$ , preferably of steel, and formed at their lower ends with a downwardly and inwardly projecting portion  $b^2$ , having on one side a curved projecting lip  $b^3$ . These blades  $b, b'$  are each supported at the top by a circular plate  $c$ , having a central boss  $c'$ , bored out and preferably screw-threaded to receive the tubular standard  $a$ , which is correspondingly screw-threaded. This plate  $c$ , is formed in two parts  $c^2, c^3$ , and the blades  $b, b'$ , are secured to the respective parts; one blade being secured to one part and the other blade to the other part. The part  $c^2$ , of this circular plate, carries the boss  $c'$ , and is provided with projecting lugs  $c^4$ ; the parts  $c^3$ , being provided with similar lugs  $c^5$ , hinged to the lugs  $c^4$ , by suitable pivot pins  $c^6$ , thus forming a hinged

connection between the parts  $c^2, c^3$ . Each of the blades  $b, b'$ , is formed on the arc of a circle less than a semi-circle. When the parts are in their operative position they are adapted to form a pocket  $d$ , within which the earth, removed by the downwardly and inwardly projecting portions  $b^2$ , is received.

Extending downwardly from the supporting plate  $c$ , is a central shaft or spindle  $e$ , which extends to a suitable distance below the lower extremities of the blades  $b, b'$ . The hinged portion  $c^3$ , of the plate  $c$ , is provided at the top with a projecting spur  $c^7$ , supported by a radial rib  $c^8$ . This projecting spur  $c^7$ , is adapted, in its normal position, to stand at a short distance from the outer periphery of the boss  $c'$ , and is preferably formed at its inner side on the arc of a circle concentric with that of the said boss  $c'$ . The boss  $c'$  is provided with projecting lugs or ways  $c^9$ , and between the said lugs or ways a bearing block  $f$ , is adapted to slide; said bearing block being of such a size and shape to fit snugly between the projecting spur  $c^7$ , and the boss  $c'$ , and thus hold the hinged portion  $c^3$ , firmly in its operative position. This block  $f$ , is further provided with a stem  $f'$ , which extends up through suitable bearing supports  $f^2$ , on the standard  $a$ ; a spring  $f^3$ , being arranged on said stem and adapted to force the bearing block  $f$ , into its normal position when the blades are in their normal position. The stem  $f$ , is connected by a suitable connecting rod  $f^4$ , to a thumb-latch  $f^5$ , also pivoted to the standard  $a$ , and within convenient reach of the operator.

The operation of the parts as thus described is as follows: The device is placed in the position which the hole is to occupy, with the central spindle  $e$ , extending into the ground, so that the points of the blades  $b, b'$ , rest on the ground. By turning the handle the cutting edges are forced into the ground in the manner of an ordinary auger; the earth being raised into the pocket  $d$ . When said pocket is full, the device is removed from the ground and placed in the position shown in Fig. 4, the spring latch  $f^5$ , operated so as to withdraw the bearing block  $f$ , when the hinged blade  $b'$ , drops to such a position as will allow the earth to fall out of the pocket  $d$ . The auger is turned half around, when



the blade  $b'$ , falls by gravity to its normal position, and the spring  $f^3$ , forces the bearing block  $f$ , back to its seat, thus locking the parts, when the device is again ready for use.

- 5 The cutting edges  $b^3$ , are curved outwardly and inwardly so as to project slightly beyond the outer periphery of the main portions of the cutting blades, thus forming an opening slightly larger than the periphery of the plate  
10  $c$ , and of the blades attached thereto, which permits the ready removal of the auger from the hole formed thereby, when desired.

It will be seen that by the above constructions we produce an auger which is at once  
15 simple both in construction and operation and which permits the ready removal of the earth or dirt from the opening made by the auger, and further permits the ready discharge of the said dirt or earth from the auger  
20 itself.

Having thus described our invention, we claim—

1. A post auger having a central standard, a supporting plate thereon with depending  
25 blades, said plate being formed in two parts with one blade connected to each part, and said parts being connected together, a locking device adapted to hold the respective parts in their normal position, and a thumb latch on  
30 the central standard connected to said locking device and adapted to operate the same to unlock the parts and permit one of said parts to turn by gravity to an unusual position, substantially as specified.

- 35 2. A post auger, consisting essentially of a central standard, and a supporting plate having depending blades therefrom, said plate

being formed in two parts hinged together, and a bearing block adapted to extend between projections on the respective parts, and  
40 means for withdrawing said block, substantially as specified.

3. In a post auger, a central standard and the circular supporting plate, the circular blades depending from said plate and having  
45 downwardly and inwardly projecting cutting edges, as described, said plate being made in two parts and hinged together, a spring actuated block adapted to fit between projections on the respective portions of said  
50 plate, and a thumb latch for operating said block, substantially as specified.

4. In a post auger, a central standard, a supporting plate having depending blades, said blades being curved downwardly and inward-  
55 ly at their lower ends to form cutting edges and also to form a pocket, and a central projecting spindle secured to said central standard and adapted to project downwardly  
60 through said pocket to a point below said cutting edges, a hinged connection in said supporting plate between said depending blades, a locking device adapted to hold said blades in their normal position, and thumb-latch for  
65 operating said locking device to permit one of said blades to turn by gravity to an unusual position and thus discharge the contents of said pocket, substantially as specified.

GEORGE P. SMITH.  
JOHN B. BRUNER.

In presence of—  
OLIVER H. MILLER,  
FRANK WATT.