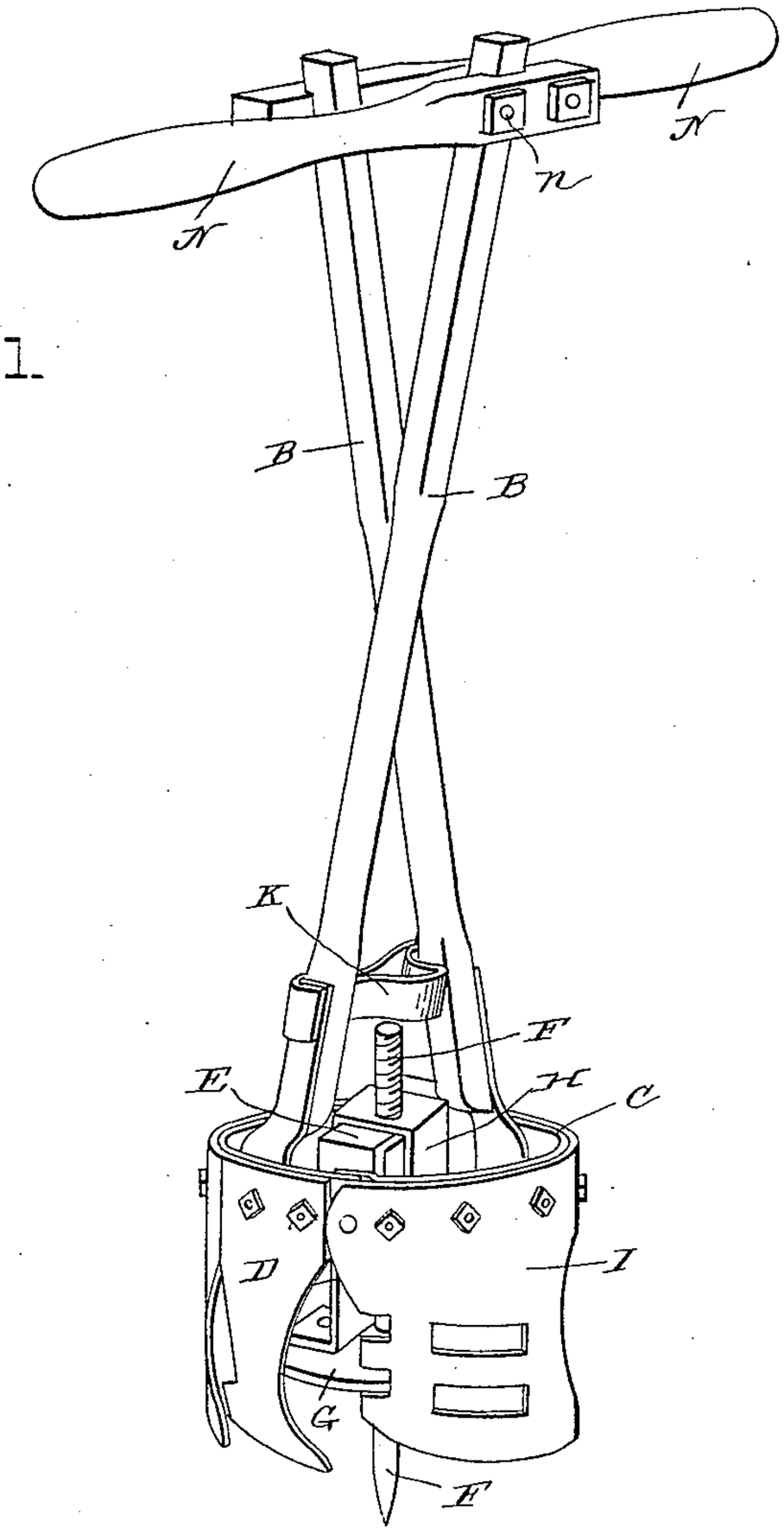
(No Model.) 2 Sheets—Sheet 1.

W. Z. BROWN.

POST HOLE DIGGER.

No. 481,688. Patented Aug. 30, 1892.

FIG. 1.



Witnesses
E. B. Smith
Thomas Durant.

Inventor
William Z. Brown
by Church & Church
his Attorneys.

(No Model.) 2 Sheets—Sheet 2.

W. Z. BROWN.

POST HOLE DIGGER.

No. 481,688. Patented Aug. 30, 1892.

FIG. 2.

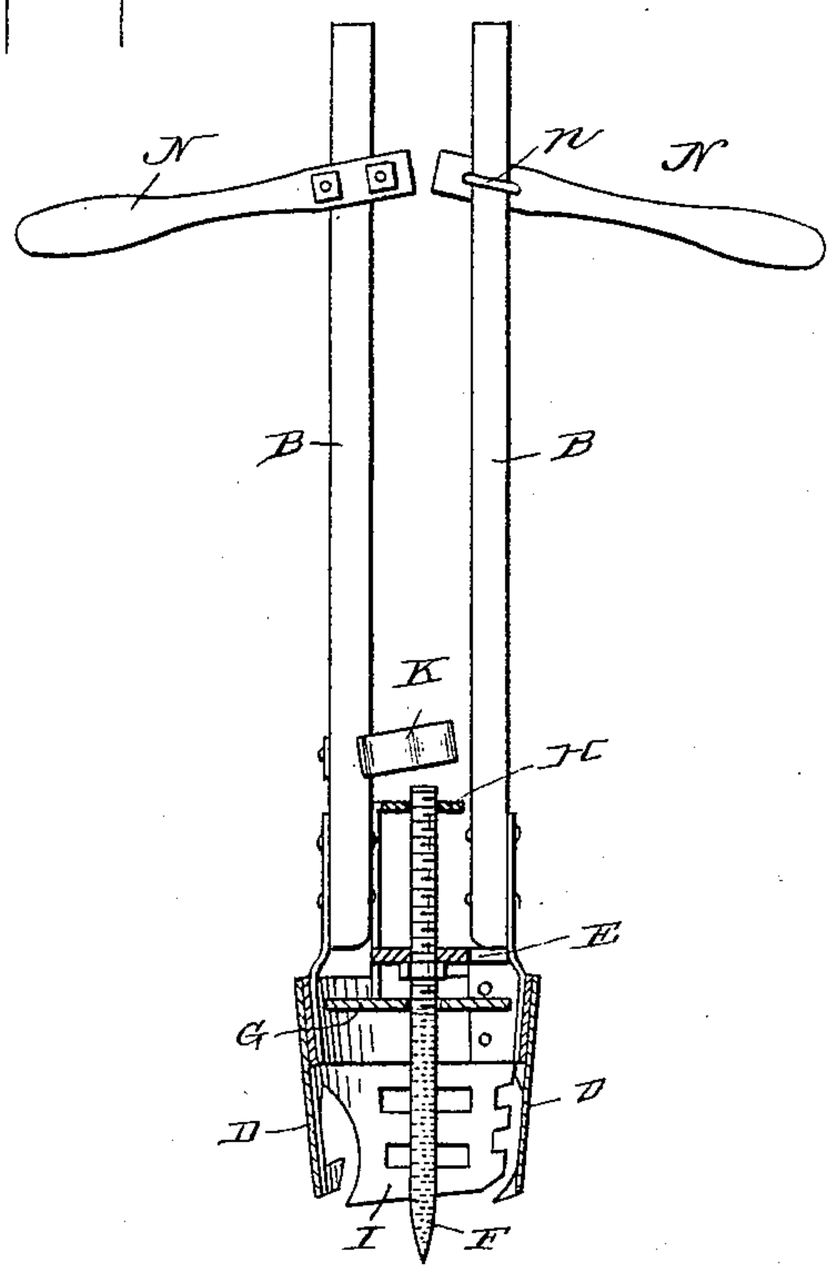


FIG. 3.

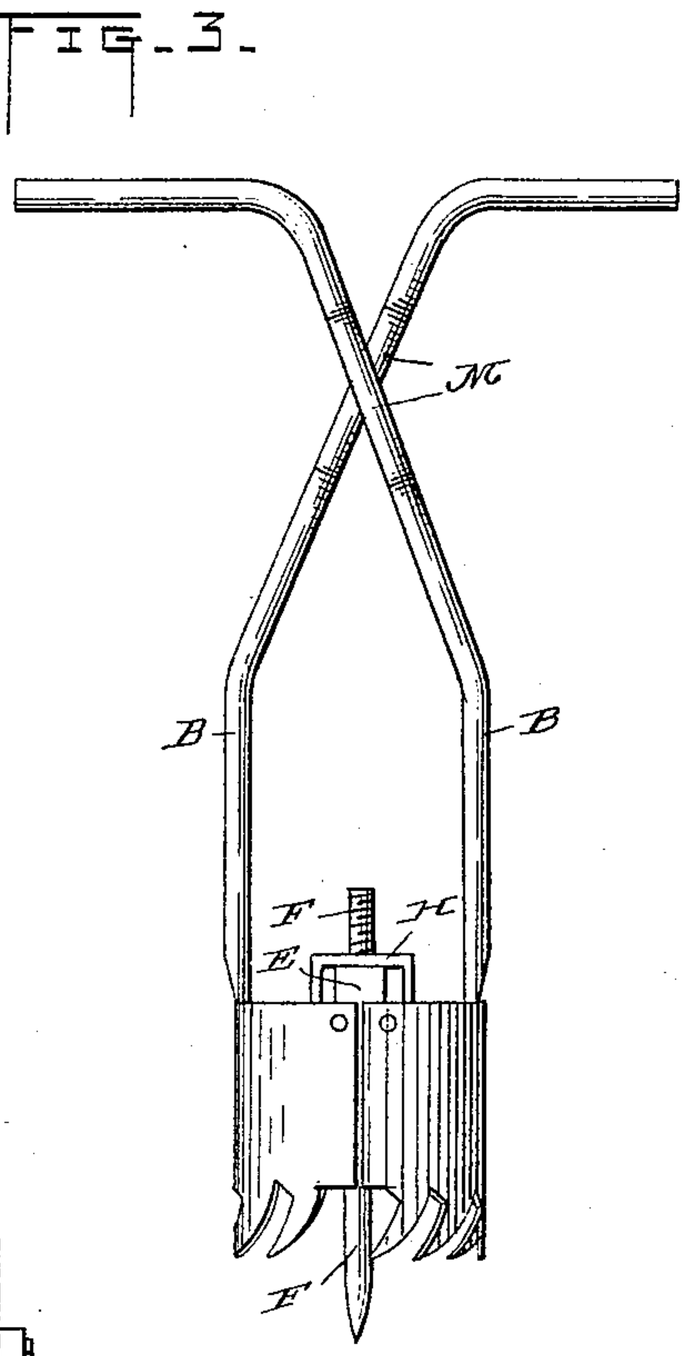
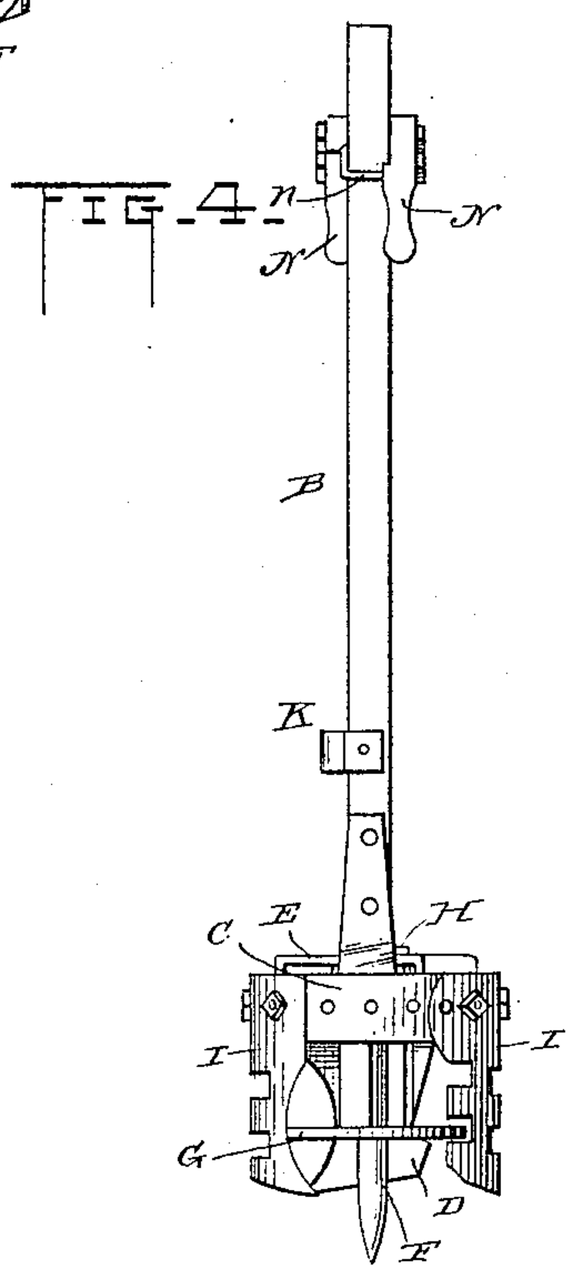


FIG. 4.



Witnesses
E. D. Smith
Thomas Durant.

Inventor
William Z. Brown
by Church & Church
his Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM Z. BROWN, OF ATLAS, ILLINOIS, ASSIGNOR OF ONE-HALF TO GEORGE MANEWAL, OF BUCKLIN, MISSOURI.

POST-HOLE DIGGER.

SPECIFICATION forming part of Letters Patent No. 481,688, dated August 30, 1892.

Application filed January 22, 1889. Serial No. 297,193. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM Z. BROWN, of Atlas, in the county of Pike, State of Illinois, have invented certain new and useful Improvements in Post-Hole Diggers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and the letters of reference marked thereon.

This invention relates to certain improvements in post-hole diggers which are more especially applicable to those in which two sections are employed, pivotally connected together, and adapted to be closed while being withdrawn from the hole and afterward opened to release the dirt held between them.

The invention consists in a peculiar construction of diggers of the class described, whereby they are adapted to be rotated to cause them to cut into the earth more rapidly and in providing improved cutting points and blades, with a plunger working between the blades to cause the discharge of the dirt at the proper moment.

The invention further consists in certain novel details of construction and combinations and arrangements of parts, to be hereinafter described, and pointed out particularly in the claims at the end of this specification.

In the accompanying drawings, representing my invention, Figure 1 is a perspective view of a post-hole digger constructed in accordance with my invention. Fig. 2 is a vertical sectional view. Fig. 3 is a side elevation showing a modification. Fig. 4 is a side elevation at right angles to Fig. 3, showing one of the cutting points or shares removed.

Similar letters of reference in the several figures indicate the same parts.

The digger is formed by two sections pivotally connected together at their upper ends, with a handle B extended upward from each section, by which the device is rotated and the sections opened and closed. In the preferred form the handles B are connected to the circular frame C, formed in halves pivoted together, with the blades and cutting points or shares D removably united thereto by bolts. Extending from side to side of the frame is a bridge-piece E, both ends of said piece, of course, being connected to the frame on one side of the pivoted points in order to permit of the free movement of the two sections, and rigidly mounted in this bridge-piece is the pointed rod or guide F, on which the plunger G slides. The downward movement of the plunger is limited by the piece H, connected thereto and extending above the bridge E, said piece also serving as a foot-rest for forcing the plunger down to discharge the dirt, as will be hereinafter more fully described.

The guide F may, if desired, be in the form of a screw, as indicated in dotted lines, to assist in forcing the cutting-edges into the earth; but such construction is not essential to the operation of the device.

As before mentioned, the pivoted sections are preferably formed by the frame with the blades and cutting-points removably secured thereto, and the preferred form of blades and cutting-points is as follows: The blades I are formed of circular sections of relatively thin steel with openings in them to enable them to grasp and hold the dirt more securely, and the cutting points or shares, while of relatively the same shape, are narrower and somewhat longer in order to cut in advance of the blade. The bottom edges of both the blades and shares are inclined upwardly toward the rear in order to always present a sharp point for cutting, and said edges being sharpened, when a root or other similar obstruction is met with, by reversing the rotation of the tool it may be cut through without difficulty, as will be readily understood. When the tool is rotated backwardly, as described, it will be noted that there are no projecting points to catch against the roots or other obstruction, the heels of all the blades being above the level of the points.

By employing the construction described it will be seen that the cutting points and blades may be readily removed for sharpening or renewal when broken, thus greatly prolonging the life and utility of the implement.

The handles are so connected to the sections as that when the sections are open in position for being forced into the earth they will cross at a point about midway of their length and form braces for each other while the implement is being turned, thus relieving

the frame of a large part of the strain which would be thrown thereon and rendering it practical to rotate diggers in which the two sections are pivoted together without employing cumbersome braces. The outward movement of the sections is limited by a stop K on one of the handles, which extends into position for engaging the other handle, this stop also serving in some measure as an additional brace while rotating the implement.

If desired, instead of providing a stop, the handles may be located directly opposite each other and the upper ends bent, as shown in Fig. 3, so as to pass, thereby forming abutments M on both handles which engage and limit their movement. Where straight handles are employed, I preferably provide supplemental handles N, which are removably secured thereto by clips *n*, and project horizontally on each side, forming levers for rotating the digger.

The operation is as follows: The sections are opened and the device rotated in the direction to cause the blades to enter the ground. This causes the blades to sink in pushing the plunger, which rests on top of the dirt, up, and when in sufficiently deep the sections are closed, grasping the dirt firmly on all sides. The implement is then withdrawn from the hole and the sections opened to allow the dirt to fall out; but should the dirt stick between the sections it may be easily pushed out by forcing the plunger down by the foot, as before described.

It is obvious that the details of construction of the device may be changed without departing from the spirit of my invention.

Having thus described my invention, what I claim as new is—

1. In a post-hole digger, the combination, with the sections pivoted together, of the bridge extending across one section and the plunger carried by the bridge, substantially as described.

2. In a post-hole digger, the combination, with the frame formed in halves pivoted together and an operating-handle connected to each half, of the blades secured to the frames and the relatively small removable cutting-points independently secured to the frame in advance of the blades, substantially as described.

3. In a post-hole digger, the combination of the sections pivoted together and formed of relatively small removable cutting points or shares and the perforated blades, substantially as described.

WILLIAM Z. BROWN.

Witnesses:
J. C. HEBKEY,
W. P. BROWN.