No. 814,850.

PATENTED MAR. 13, 1906.

I. D. KEMMERER.

TOOL FOR DIGGING HOLES.

APPLICATION FILED DEC. 23, 1905.

Fig. 1.

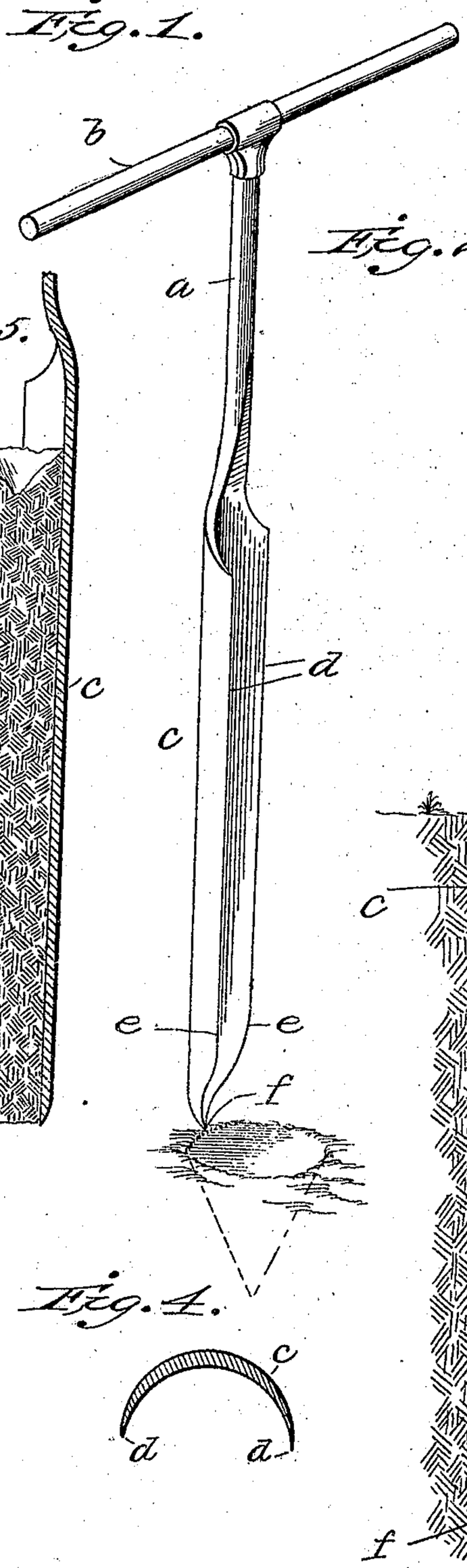


Fig. 5.

Fig. 4.

Fig. 2.

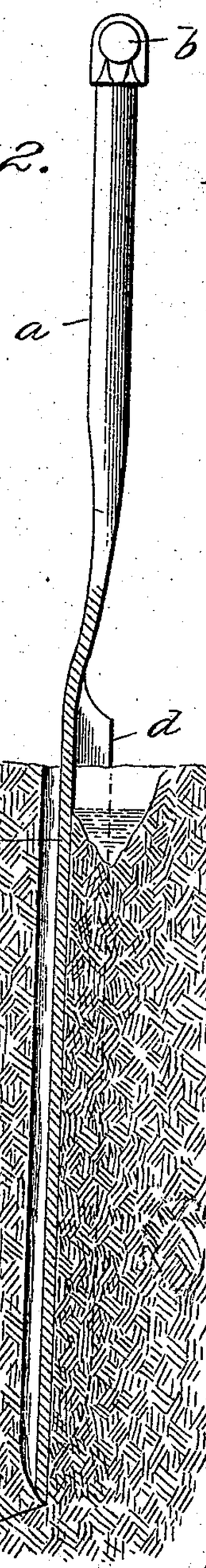
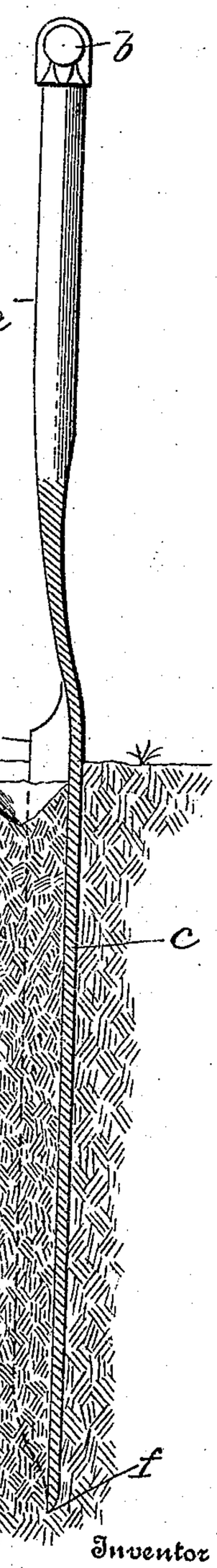


Fig. 3.



Witnesses

Edwin L. Yewell

L. B. Bridgen

Inventor,

Ira D. Kemmerer,

By Davis & Davis,

Attorneys.

UNITED STATES PATENT OFFICE.

IRA D. KEMMERER, OF LINCOLN, NEBRASKA.

TOOL FOR DIGGING HOLES.

No. 814,850. Specification of Letters Patent. Patented March 13, 1906.

Application filed December 23, 1905. Serial No. 293,128.

To all whom it may concern:

Be it known that I, IRA D. KEMMERER, a citizen of the United States of America, and a resident of Lincoln, county of Lancaster, State of Nebraska, have invented certain new and useful Improvements in Tools for Digging Holes, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the tool I employ, showing it in position to be thrust into the earth; Fig. 2, a vertical longitudinal section showing the tool thrust into the earth and the core partly formed; Fig. 3, a similar view showing the tool after it has been rotated at least once to complete the formation of the core; Fig. 4, a detailed transverse section of the tool, and Fig. 5 a vertical section showing the tool removed with the core adhering to it.

The object of my invention is to provide a simple and inexpensive tool for carrying out the method of digging holes for the reception of posts, pipes, &c., covered by my copending application, serially numbered 277,494.

Referring to the drawings annexed, *a* designates the shank of the tool, *b* a cross-bar attached to the upper end thereof, and *c* the blade formed on the lower end of the shank. This blade is approximately crescent-shaped in cross-section, its longitudinal edges *d* being sharpened and lying parallel with each other to points *e* near the lower end of the blade, where said sharpened edges are tapered to a point *f*. It will thus be observed that the cutting edges extend the full length of the blade along each edge thereof from the point to the upper termination of the blade. The outer face of the blade is uniformly convex to a point near the lower end of the blade, at which point the convex surface rounds nicely into the point *f*.

In carrying out my method with the above-described tool I first scoop out a depression, preferably having the shape of an inverted cone, in the earth where the hole is to be dug and pour a quantity of water therein. Then the tool is forced downward into the soil at the edge of this water-filled hole, as shown in Figs. 1 and 2. In forcing the tool into the earth it is vibrated by means of its cross-bar handle to facilitate its entrance. When the tool has been forced into the earth to the desired depth, it is rotated one or more times, (preferably one and one-half times,) after which operation the core is formed and may be withdrawn by means of the tool. During the act of forcing the tool into the earth the water follows the edge of the tool and causes the tool to give to the walls of the hole and the core even sleek surfaces. It is essential that sufficient water be employed to make the surface of the core sticky enough to adhere to the concave surface of the tool with sufficient tenacity to permit the core to be removed with the tool in a single piece, as shown in Fig. 5.

It will be observed that by my tool the holes may be formed with great expedition, the process requiring for the ordinary post-hole but a single operation of a few moments duration. In forming the hole I have found it advantageous to have the concave or channel part of the tool face the operator while the tool is being thrust into the earth. Then when it has been forced to the desired depth the operator rotates it one and a half times or more, thereby bringing the convex surface of the tool next to the operator.

What I claim, and desire to secure by Letters Patent, is—

A tool for digging holes consisting of a shank provided at one end with means for handling it and at its other end with a blade substantially crescent-shaped in cross-section and having its longitudinal edges parallel and sharpened and its lower or entering end brought to a point, this point having cutting edges which are continuous with the side edges, the back of the tool being convex.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 11th day of December, 1905.

IRA D. KEMMERER.

Witnesses:
JAMES J. BRIDGES,
LEW MARSHALL.