(No Model.)

S. L. MADDEN.

POST HOLE DIGGER.

No. 375,556. Patented Dec. 27, 1887.

Fig. 1.

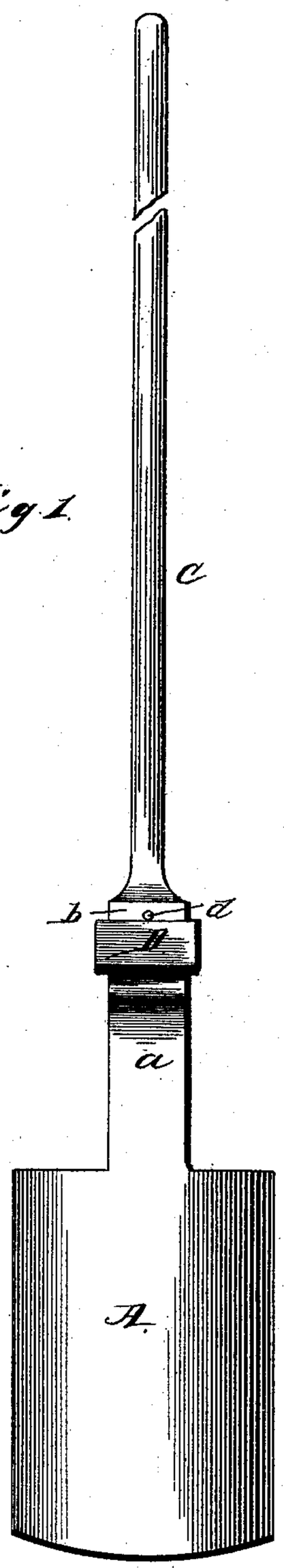


Fig. 3.

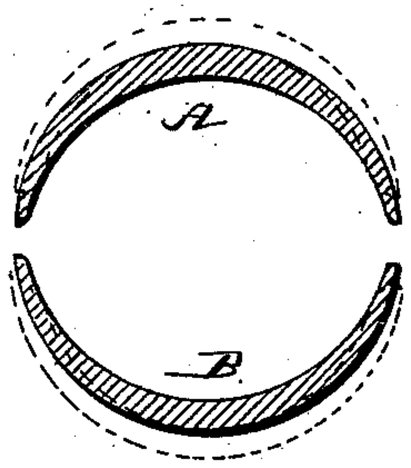
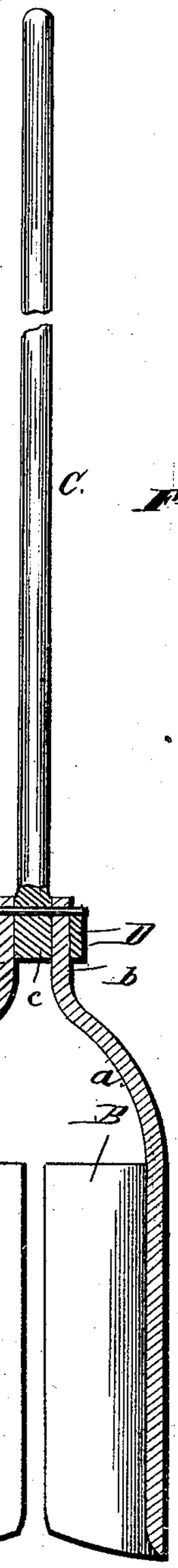


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL LAWRENCE MADDEN, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF TO JOHN H. SUMSER, OF SAME PLACE.

POST-HOLE DIGGER.

SPECIFICATION forming part of Letters Patent No. 375,556, dated December 27, 1887.

Application filed July 6, 1887. Serial No. 243,571. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL LAWRENCE MADDEN, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Post-Hole Diggers, of which the following is a specification.

My invention has reference to post-hole diggers; and it consists in certain improvements hereinafter fully set forth, whereby the construction is simplified and its effectiveness increased.

In the accompanying drawings, forming part of this specification, Figure 1 is a view in elevation of a post-hole digger embodying my improvements, and Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a horizontal sectional view representing by dotted and full lines the spring capacity of the cutting portion.

Prior to my invention many constructions of post-hole diggers have been devised wherein the desideratum consisted in making the cutting portion spring, in order that it would readily receive and retain the earth and be capable, when struck or jammed, to contract, and thus compress the earth, so that upon the reflex action of the spring portion the earth would readily be disengaged and drop from the implement.

A prominent example of an attempt to carry out the purpose above stated is disclosed by the construction set forth in United States Patent to Leeds and Hollowell, No. 52,180, dated January 23, 1866, wherein the cutting portion was formed by a cylinder of spring metal, slotted at one side, and connected to the lower ends of shanks or yoke-arms by means of rivets. Personal experience with this patented construction has shown that, owing to the form of the cutting portion, it is necessary to force or strike it into the earth for a considerable number of times, which soon causes the arms or shanks, which are of iron, to become bent out of place, thus holding the spring-cutter under such tension as to render its spring capacity ineffective. Furthermore, the rivet-connections are liable to become broken.

By my improved device the above objections are obviated and certain new advantages attained. The cutting portion of my post-hole digger consists of two semi-cylindrical sections, A B, which are of spring metal, arranged relative to each other as shown, and each of which carries integrally a curved shank or arm, *a*, likewise of spring metal. The free portion *b* of each shank is bent parallel with the axis of the tool and is perforated transversely. The handle C of the digger is provided at one end with a block, *c*, which has two flat faces, against which the portions *b* of the shanks are designed to bear. An opening in the block *c* registers with those in the portions *b* when the latter are in position. A band, D, of wrought metal is adapted to be forced down over the block *c*, so as to clamp the portions *b* rigidly therewith, and thereby hold the sections A B in proper operative position. Displacement or movement of the band D is prevented by means of a pin, *d*, which passes through the perforations in the block *c* and portions *b*, and whose primary function is to lock the parts together against longitudinal movement.

It will be noticed that the inner face of each of the sections A B at its lower portion is rounded or curved toward its edge. This feature enables each section A B to be deflected when it contacts with a stone, and thus prevents undue jar or strain.

From the foregoing it will be seen that the arrangement devised by me is not only simple and durable, but is best calculated to secure and retain the spring effect of the cutting portion, and also insure the ready compacting and dropping of the earth so much desired.

I am aware of the construction disclosed in the patent of Cluxton, No. 196,195, dated October 16, 1877, wherein two or more shovels having integral shanks are connected by a sheet-metal band to a block on the end of a handle; but my invention will be readily distinguished from such patented construction, in that I specifically form both my cutting sections and shanks of spring metal, and additionally provide the sections with rounded inner faces, in lieu of the straight or plain faces disclosed in said patent.

Having thus described my invention, I claim—

As an improvement in post-hole diggers, the combination of the semi-cylindrical sections A B, made of spring metal and having integral spring-shanks *a*, the free portion *b* of which is bent into a vertical position and perforated transversely, the handle C, provided at the lower end with a block, *c*, having two flat faces, against which the portions *b* of the shanks *a* are adapted to bear, said block *c* having an opening registering with the openings in the portions *b* of the shanks, a rectangular band, D, adapted to be forced over the block *c* to clamp the portions *b* rigidly to the said block, and the pin *d*, passing through the perforations in the block *c* and portions *b*, and arranged above the band D, said pin serving the double function of holding the band from displacement and also locking the shanks to the handle, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL LAWRENCE MADDEN.

Witnesses:

JOHN PRINZ,

CORNELIUS BURTEL.