

(No Model.)

H. & L. IWAN.

HOE.

No. 287,027.

Patented Oct. 23, 1883.

Fig. 1.

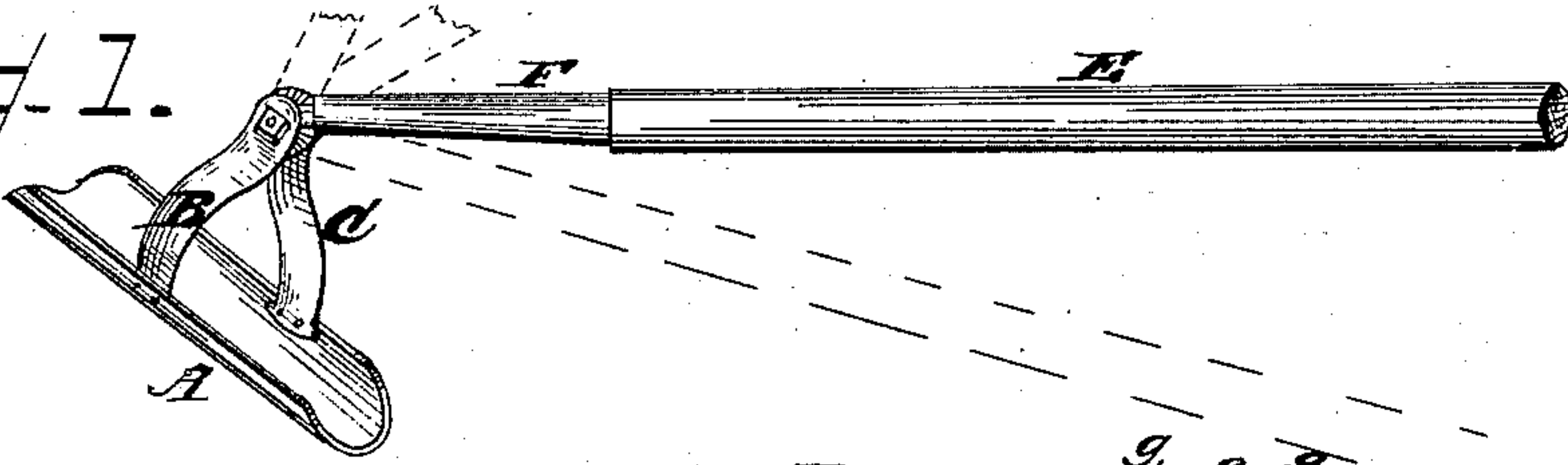


Fig. 2.

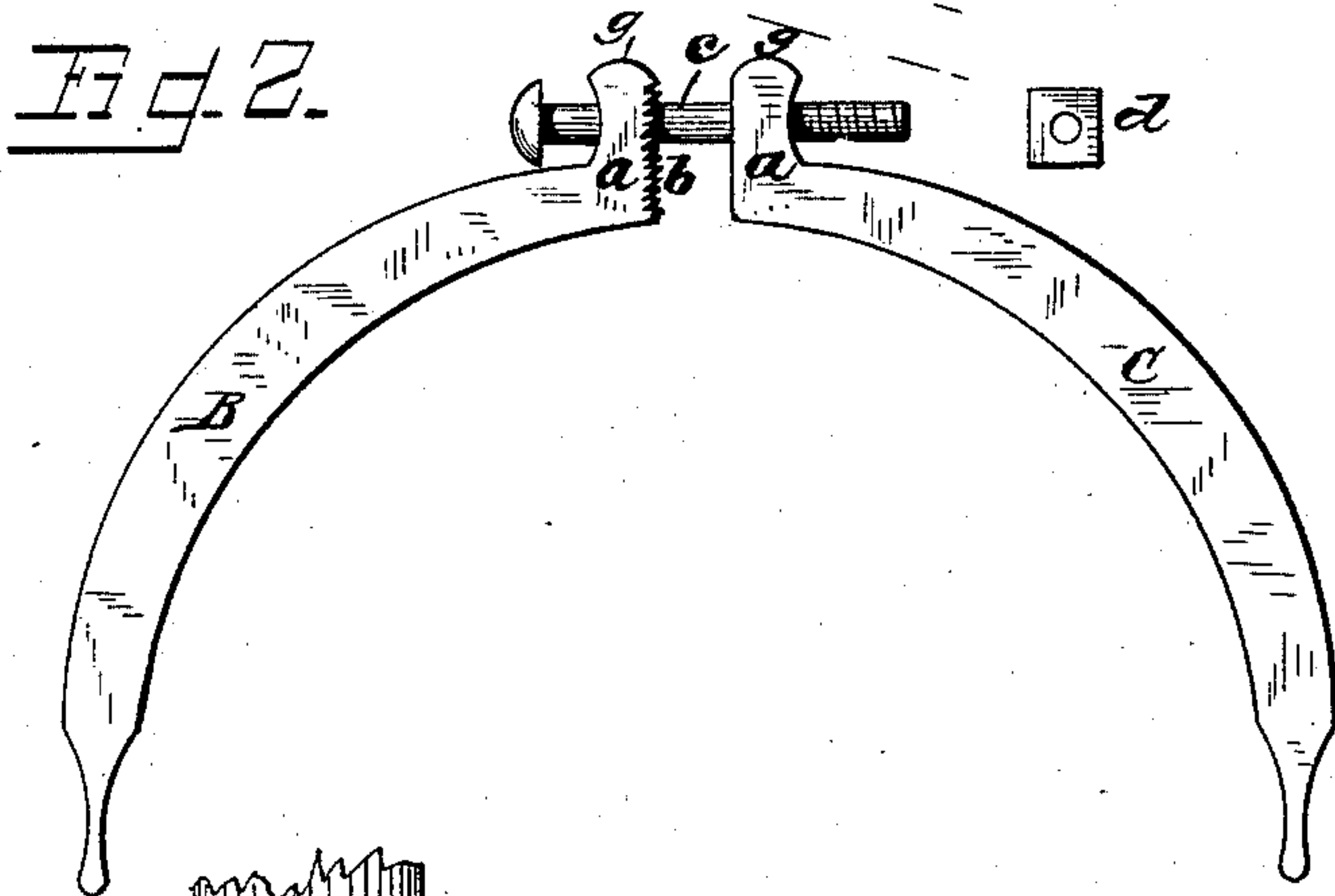


Fig. 3.

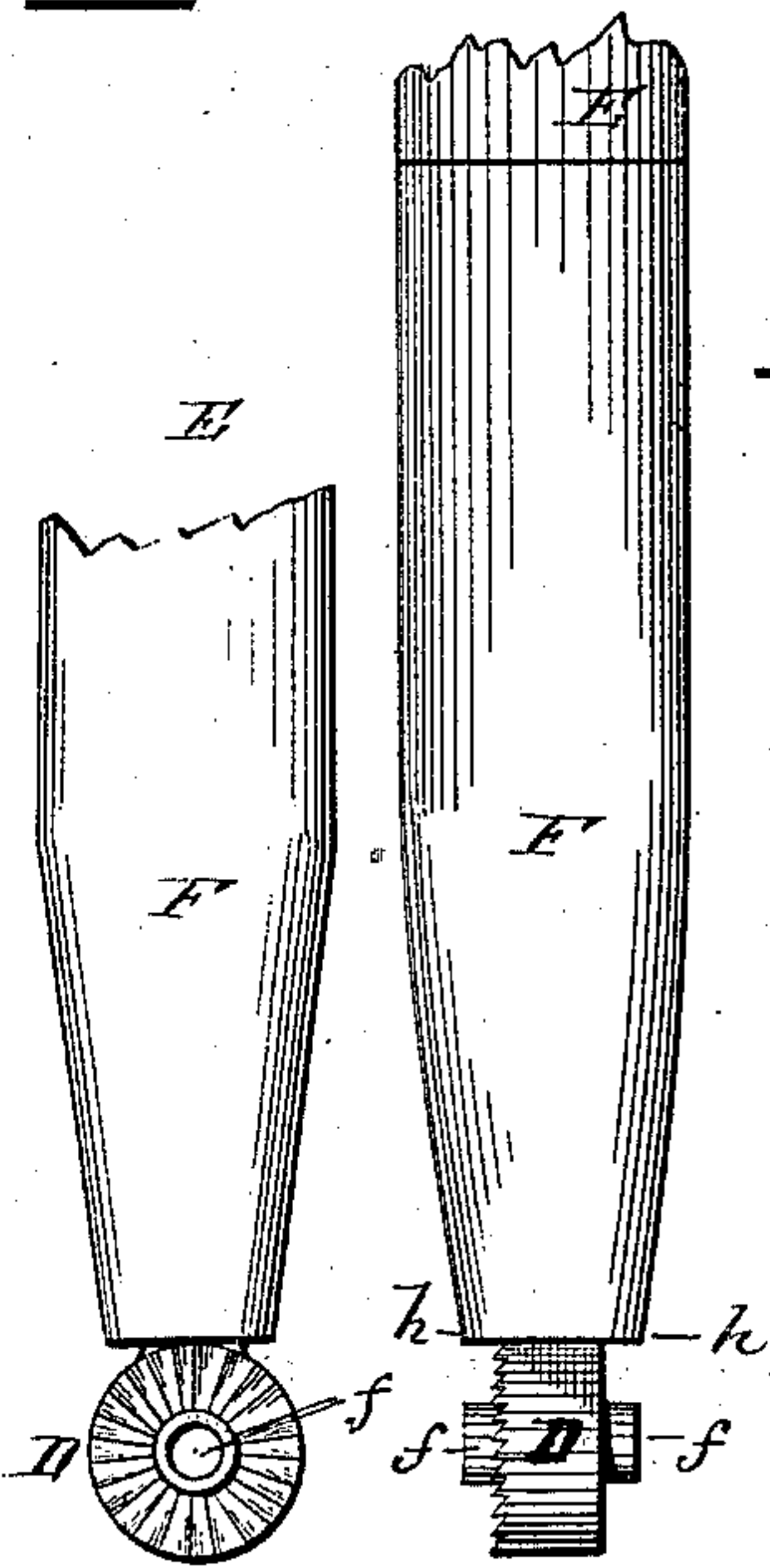
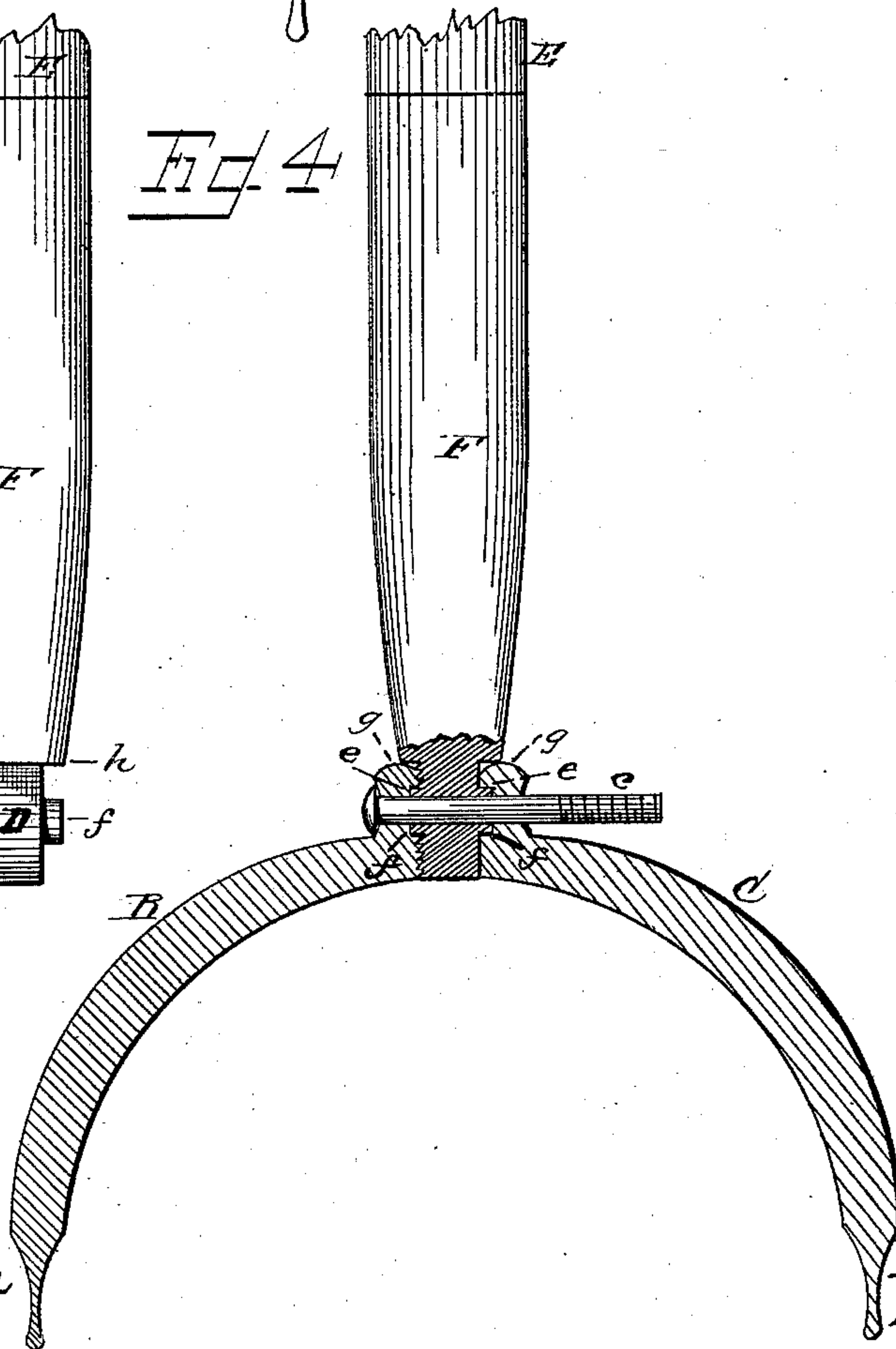


Fig. 4.



WITNESSES  
J. L. Curran,  
N. E. Oliphant

INVENTORS  
Henry Iwan,  
Louis Iwan,  
per Chas. H. Fowler,  
Attorney



# UNITED STATES PATENT OFFICE.

HENRY IWAN AND LOUIS IWAN, OF STREATOR, ILLINOIS.

## HOE.

SPECIFICATION forming part of Letters Patent No. 287,027, dated October 23, 1883.

Application filed June 18, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY IWAN and LOUIS IWAN, citizens of the United States, residing at Streator, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Ditching-Hoes; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of a ditching-hoe constructed in accordance with our invention. Fig. 2 is a detail view, on an enlarged scale, of the divided shank; Fig. 3, a similar view, partly in section, showing the manner of connecting the handle to the shank; and Fig. 4, detailed views of the handle.

The present invention has relation to that class of ditching-hoes provided with adjustable handles, to admit of the blade and handle being set at the desired angle with relation to each other to adapt the hoe to certain class of work.

The objects of the invention are to form the shank of two separate sections, each of which is rigidly connected to the hoe-blade, and in constructing the upper or free ends of the shank-sections and the lower end of the handle, whereby the latter is firmly held between the section at any desired angle. These objects we attain by the construction, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the blade of a ditching-hoe, of the usual spring metal from which blades of this character are usually made, and is concavo-convex in form.

To the blade A, midway of its ends, or nearly so, are riveted, or otherwise rigidly secured, the lower ends of a bifurcated shank, formed in two separate sections, B C. Each section at its free or upper end is formed with clamps *a*, one of which, upon its inner face, has a ratchet, *b*. The clamps *a* have holes passing horizontally through them for

a screw-bolt, *c*, headed at one end and secured by a nut, *d*.

The interior faces of the sections B C have each a mortise, *e*, to receive circular pins or tenons *f*, projecting from the sides of a ratchet-head, D, upon the hoe-handle E, the ratchet-head engaging with the ratchet-face *b* upon the clamp *a* of the section B. The clamps *a* have convex ends *g*, to present as little surface as possible for the shoulders *h* to rest upon or come in contact, in order that the parts will not bind.

When it is desired to adjust the handle, the nut upon the bolt is loosened, and the spring metal from which the hoe-blade is made will cause the shank-sections to separate, and also the clamps upon the ends thereof, to a sufficient degree to disengage the ratchet-face of one of the clamps with the ratchet-head upon the handle, thus allowing the latter to be turned to the desired angle with the hoe-blade, after which the nut is again screwed up upon the bolt and the clamp brought and held tightly against the ratchet-head. The ratchet-teeth, as will be understood, prevent the handle from turning, and hold it in its adjusted position with relation to the hoe-blade, while the pins or tenons upon the ratchet-head form a pivotal center upon which the handle turns.

We do not desire to confine our invention to the ratchet-teeth as shown in the drawings, as the same result may be obtained by a series of pins arranged in a circle entering a series of holes, and in place of providing the head D with pins or tenons, mortises may be substituted, and the pins or tenons formed on the clamps, these changes being made without departing from the principle of our invention.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A ditching-hoe having connected thereto a bifurcated shank formed in sections, the upper or free ends thereof terminating in clamps and formed with mortises, and one of said clamps having a ratchet-face, in combination with a handle provided with a suitable head cast with

tenons extending from its sides and a ratchet-  
face to engage with that on the clamp, said  
mortises and tenons forming a pivotal center,  
and a bolt passing through the clamps and  
5 heads, substantially as and for the purpose  
set forth.

In testimony that we claim the above we

have hereunto subscribed our names in the  
presence of two witnesses.

HENRY IWAN.  
LOUIS IWAN.

Witnesses:

THEODORE ROCKENFELLER,  
H. F. HOWLAND.