

No. 683,275.

Patented Sept. 24, 1901.

E. HARTUNG.

BORING INSTRUMENT FOR BUILDING OR MINING PURPOSES.

(Application filed Feb. 14, 1901.)

(No Model.)

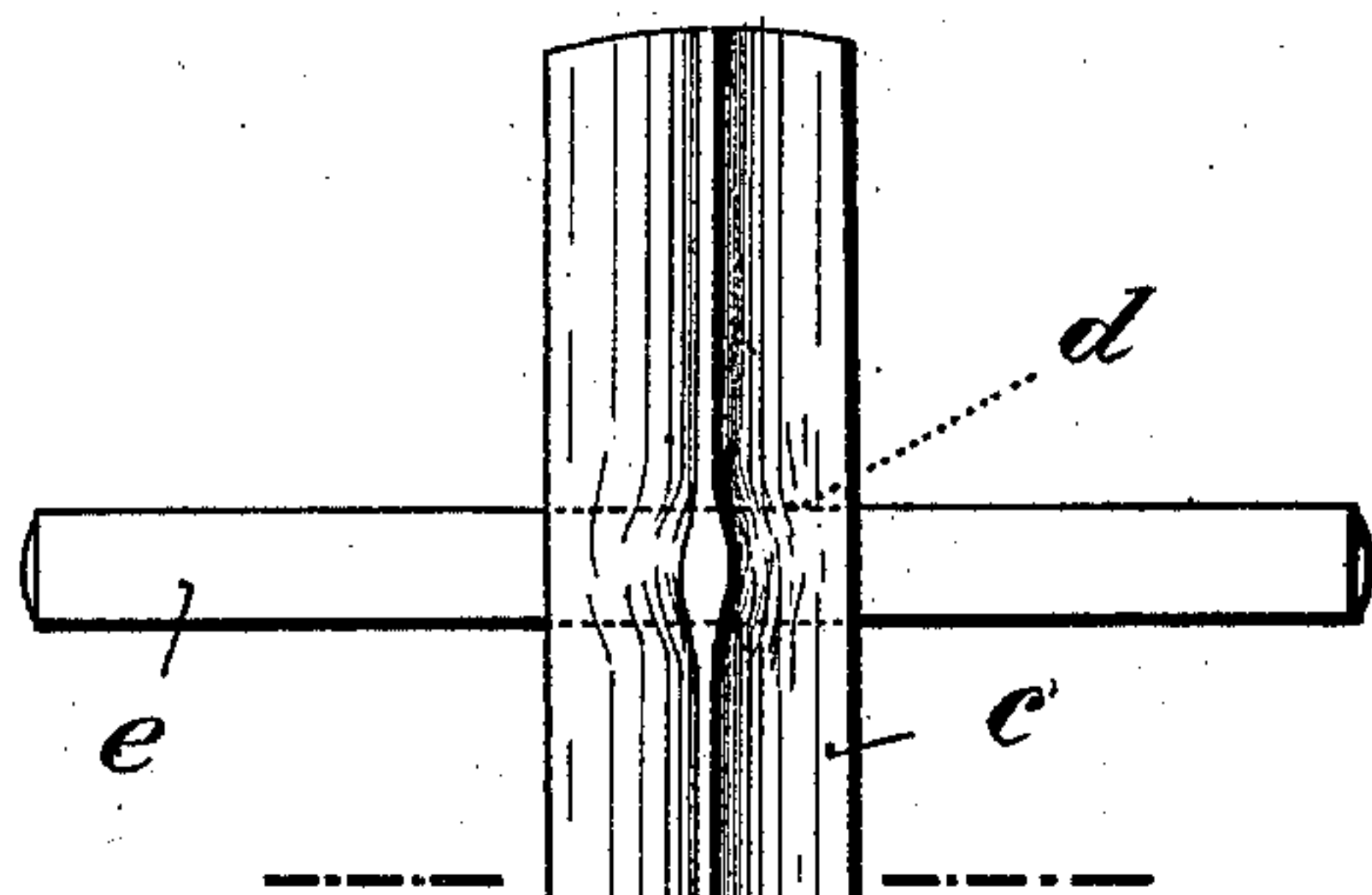


Fig. 1,

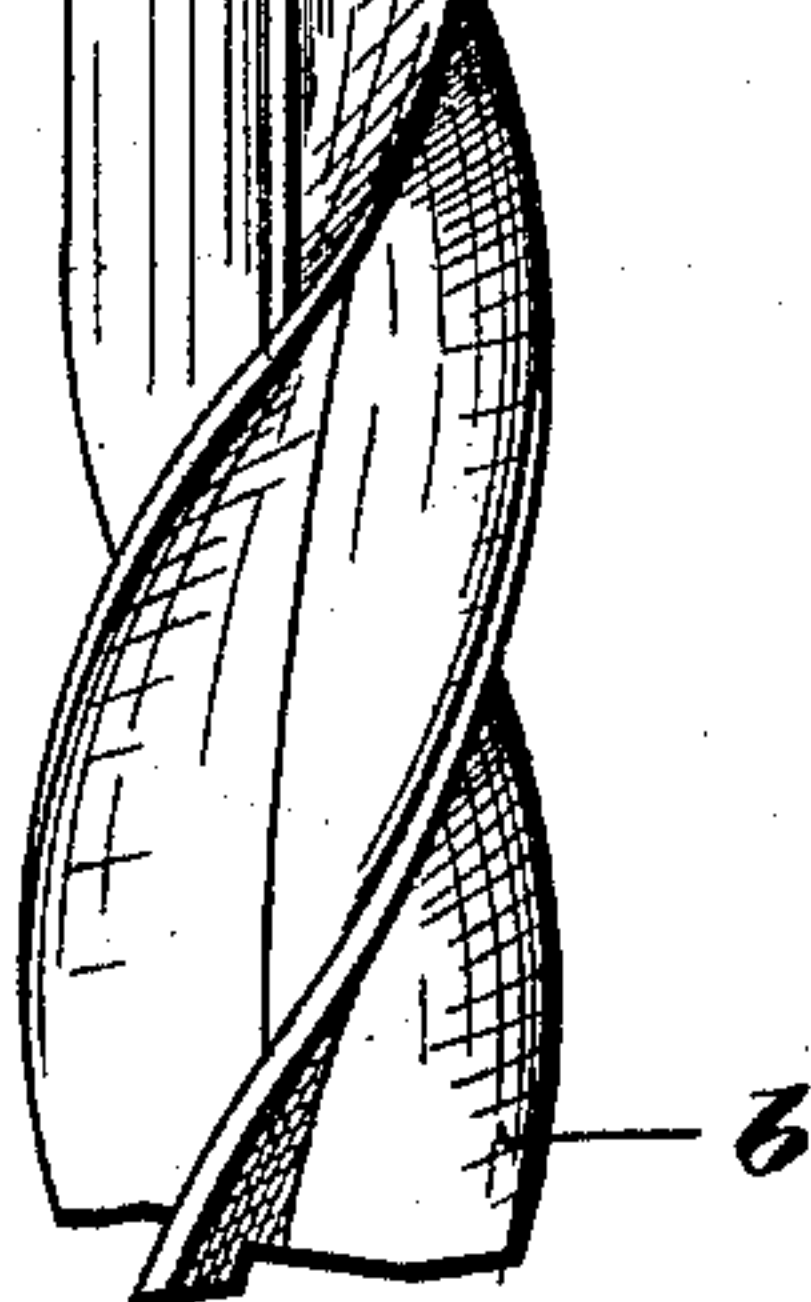


Fig. 2,

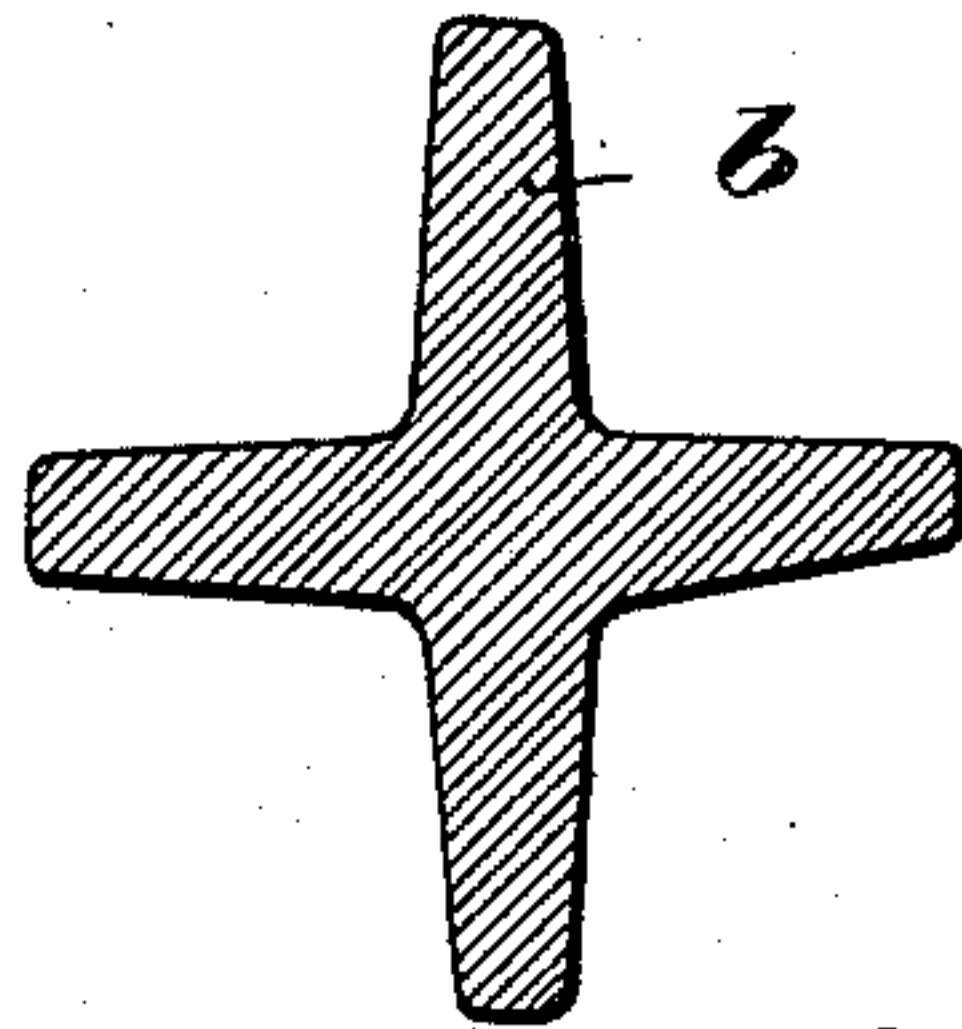
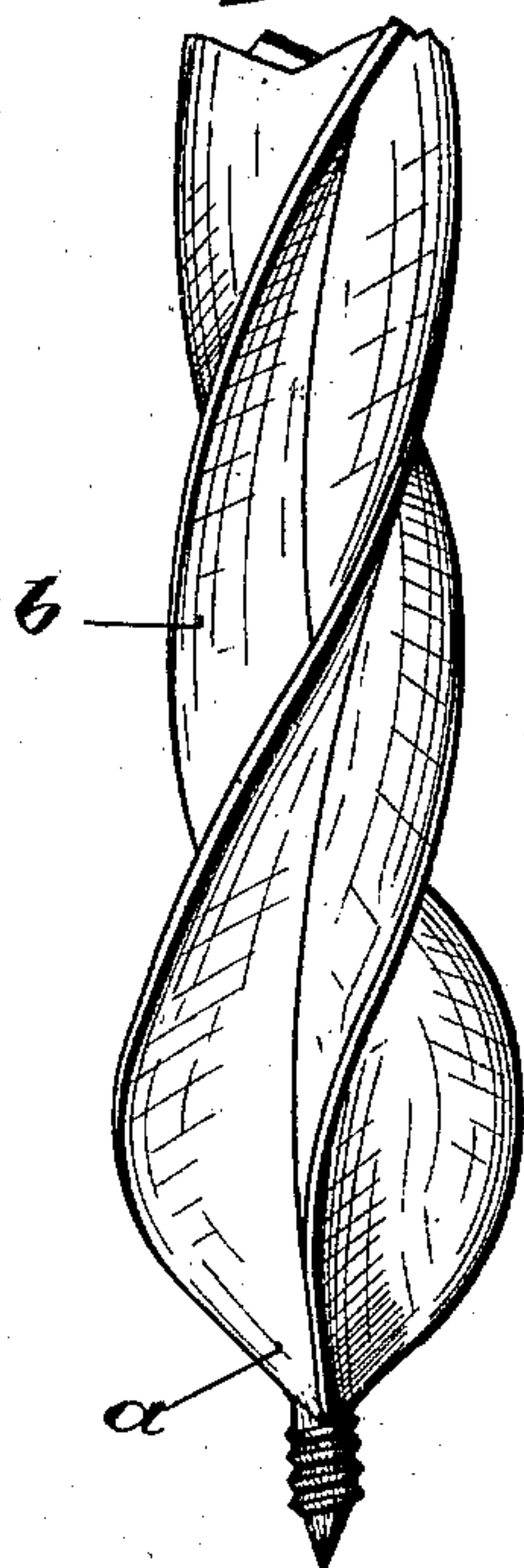
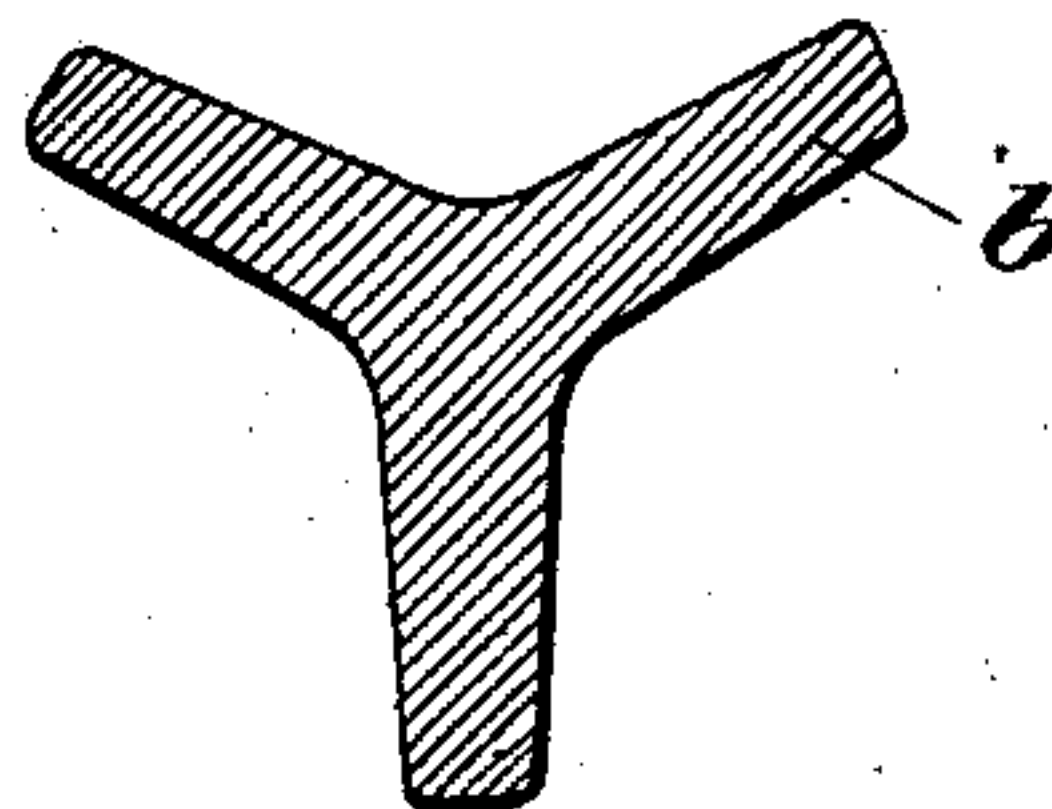


Fig. 3,



Witnesses

W.B. Keefe
Bruce D. Elliott

Inventor

Emil Hartung

By

James L. Norris
att'y

UNITED STATES PATENT OFFICE.

EMIL HARTUNG, OF MÜHLHAUSEN, GERMANY.

BORING INSTRUMENT FOR BUILDING OR MINING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 683,275, dated September 24, 1901.

Application filed February 14, 1901. Serial No. 47,296. (No model.)

To all whom it may concern:

Be it known that I, EMIL HARTUNG, manufacturer, a subject of the King of Prussia, Emperor of Germany, residing at Mühlhausen, Thuringia, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Boring and Like Tools, of which the following is a specification.

My invention relates to a new and improved boring device for builders' and miners' use, which shall be simple and durable in construction, effective in operation, and which will produce for the observation of the operator a specimen of earth in a smooth and practically integral condition in order that the same may be conveniently and satisfactorily examined.

To these ends my invention consists of the details of construction and arrangement herein more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings the tool is represented as follows:

Figure 1 is an elevation; Fig. 2 a, cross-section; and Fig. 3 represents a modification.

Referring to the accompanying drawings, *a* represents the point or lower portion of my improved device, and *b* the cutting-surfaces thereof, formed by taking a piece of suitable material cross-shaped in cross-section and twisting the same by a suitable heating process in any well-known manner, the upper portion of the said cross-shaped material, however, being left in its normal state, as shown at *c* in the drawings, and the twist immediately adjoining the straight or upper portion of the material being formed in a smooth and regular manner in order that the specimens of earth ascending along the cutting-surfaces *b* may smoothly and effectively form in the straight and unbroken grooves of the upper portion of the tool, so that the specimens of earth may be examined in a practically integral condition and in a very satisfactory manner. In constructing my simple, cheap, and very efficient instrument I provide the upper end of the shaft with an eye *d*, as shown, made when the rod is heated, through which a handle *e* is passed and firmly held in place. This eye *d* is made through the threads of the upper or straight portion of my device, so that the handle will be in-

closed by the threads and avoid abrupt projections into the exhibition-grooves.

The end or point of the tool can also be provided with a fine thread to guide the tool, if desired.

Such tools of sixty millimeters or more diameter are especially suitable for mining and like purposes.

The construction of the iron or steel used for these tools may also be of the shape represented in Fig. 3 or of any other shape by which a groove of a straight, smooth, and efficient character can be provided at the upper end of the shaft, all without departing from the spirit of my invention.

It will thus be seen that by my invention I have produced a simple, cheap, and very efficient instrument and one which has been long desired by the many poor and needy miners throughout the world, as well as builders.

The tool, as will be seen, is very readily constructed at almost no cost, and provision is made for the exhibition and examination of a specimen of mining earth in an almost integral and very satisfactory manner undisturbed and in a comparatively smooth condition.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The herein-described instrument constituting a combined boring-tool and earth-specimen exhibitor, having a portion of its length formed with a series of helical threads and the remaining portion of its length formed with vertical threads, the latter threads forming straight and undisturbed exhibition-grooves as described, the upper portion of the instrument having the vertical threads being provided with an eye formed through the threads, and a handle mounted in the said eye and inclosed by the threads, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EMIL HARTUNG.

Witnesses:

WILHELM BINDEWALD,
CARL KIND.