

No. 795,433.

PATENTED JULY 25, 1905.

J. H. FOUST.
BORING IMPLEMENT.
APPLICATION FILED NOV. 5, 1904.

Fig. 1.

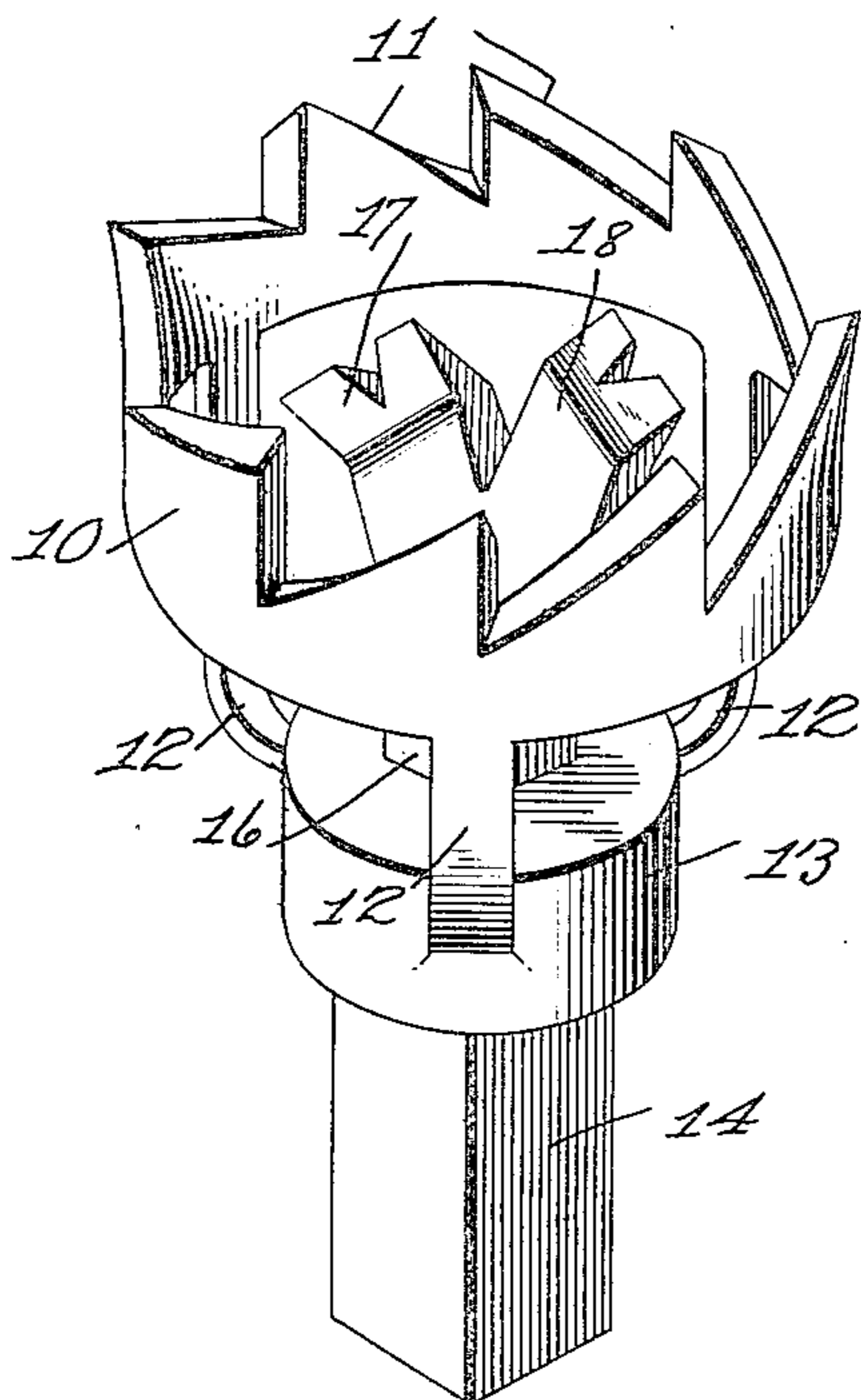


Fig. 2.

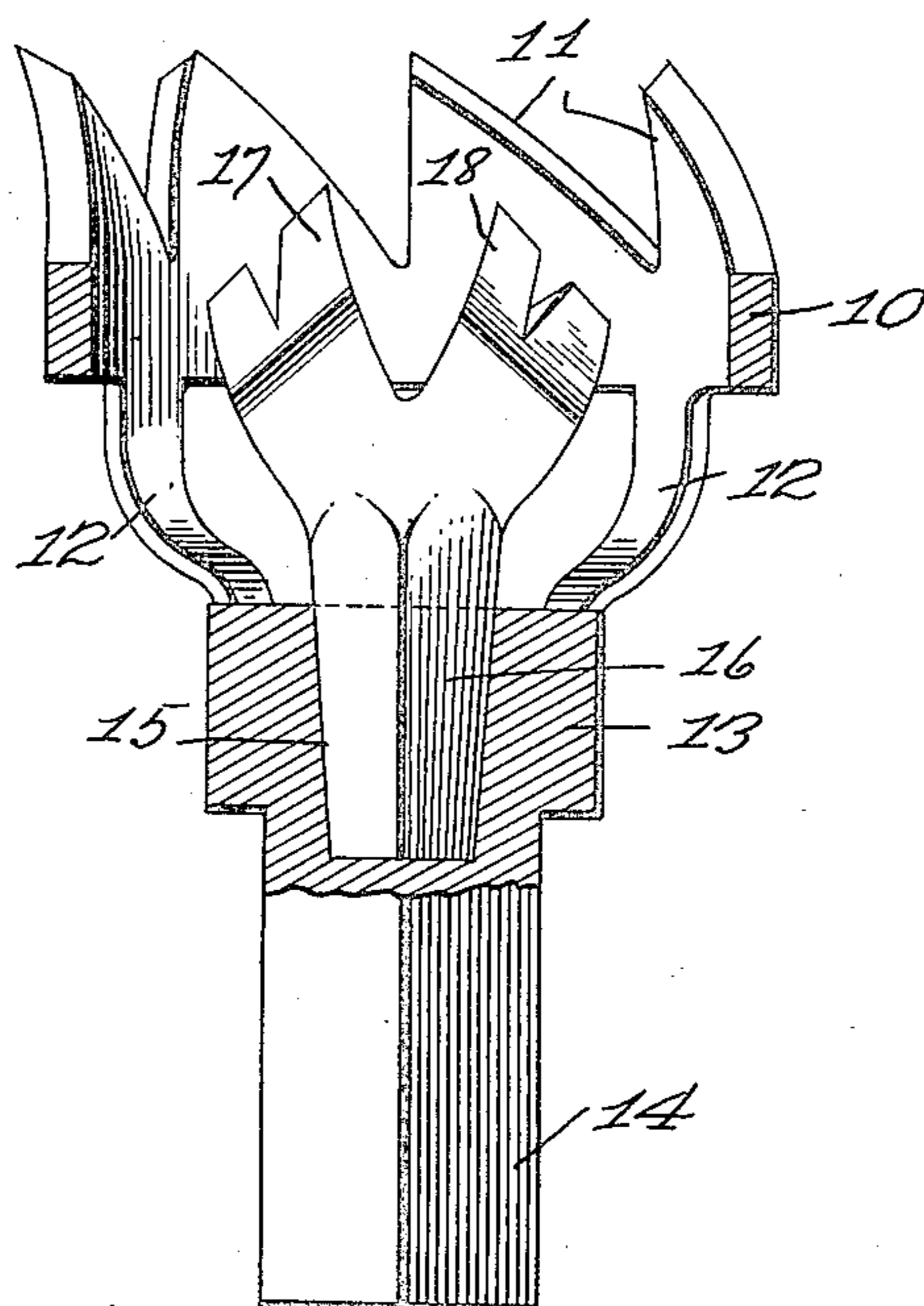
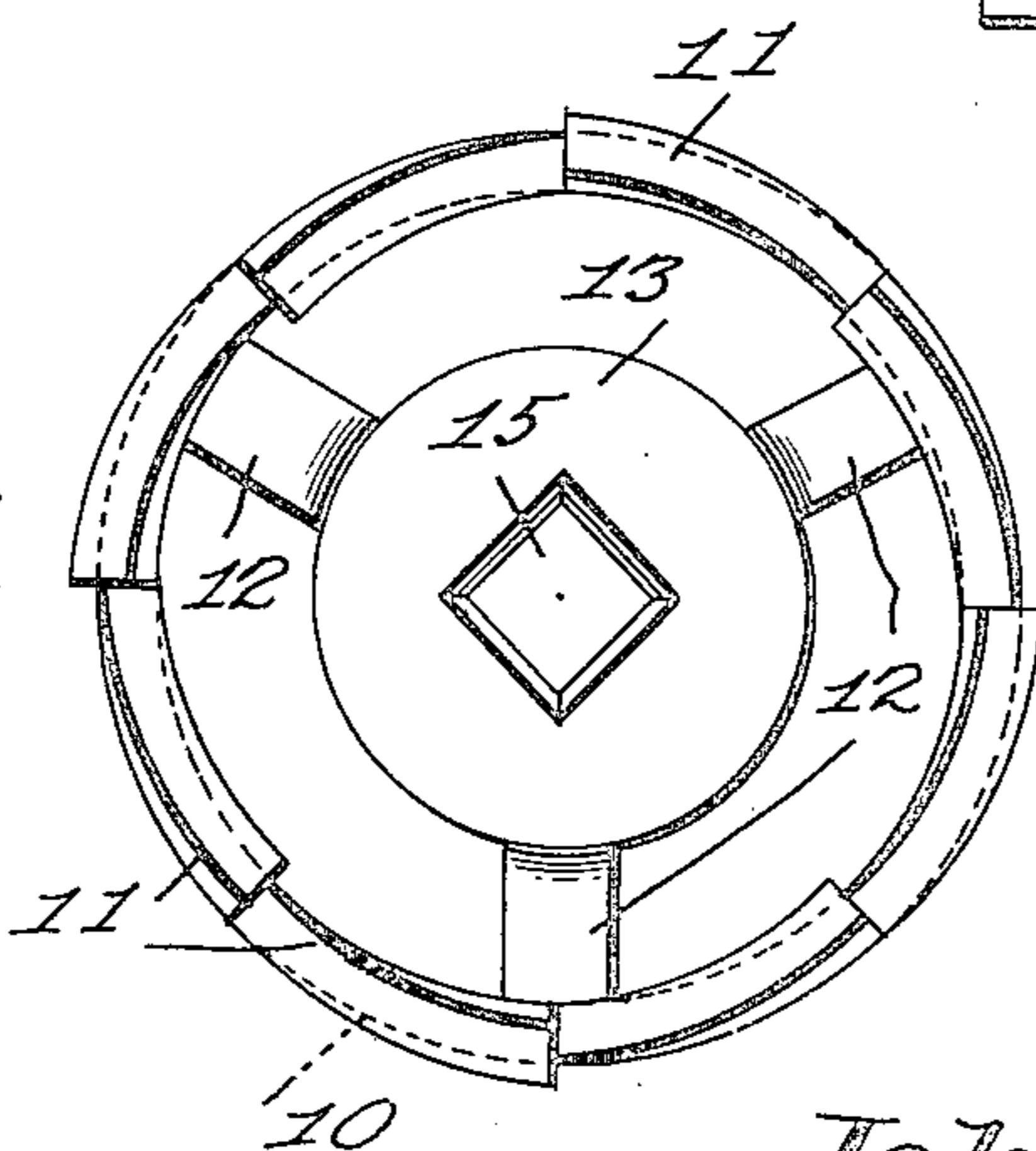


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. FOUST, OF MILTON, PENNSYLVANIA.

BORING IMPLEMENT.

No. 795,433.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed November 5, 1904. Serial No. 231,563.

To all whom it may concern:

Be it known that I, JOHN H. FOUST, a citizen of the United States, residing at Milton, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Boring Implement, of which the following is a specification.

This invention relates to boring implements or rotary drills, more particularly to implements of this class employed by coal-miners and for similar purposes, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings, Figure 1 is a perspective view of the improved implement. Fig. 2 is a sectional elevation of the same. Fig. 3 is a plan view with the central core-cutter removed.

The improved implement comprises an annular member 10, open at the ends and with spaced cutting-teeth 11 upon one end and connected at the other end by radial spaced arms 12 to a central head 13, the head being smaller than the annular member and provided with means, such as a square shank 14, for detachably coupling to a drill-stock or driving mechanism, the latter not being shown, as it forms no part of the present invention.

Formed in the end of the head member 13 is a socket 15, preferably square or any form other than round and tapering inwardly to receive the correspondingly-shaped stock or

shank 16 of a cutting member, the latter formed with diverging cutters 17 18, having their cutting edges reversely inclined outwardly and rearwardly or away from the cutting-teeth 11 of the annular member 10.

The forward faces of the cutters 17 18 are concaved, as shown, so that the cutting edges operate in the same direction as the annularly-arranged cutters 11 and move the severed material rearwardly and serve as a conveyor means to feed the severed material positively and effectively through the annular member 10.

It will be noted that the combined cutters and conveyers 17 18 are disposed for operation well into the member 10 and nearly in transverse alinement with the teeth 11, so that the cutters act upon the "core" of material released by the teeth substantially as soon as the same is formed, thereby rapidly pulverizing the core as fast as it is produced and feeding it rapidly to the rear through the member 10. This action very materially increases the speed of drilling and at the same time decreases the labor and time required to accomplish the drilling action.

As before noted, the stock 13 is smaller than the annular member 10, so that ample space is provided for the escape of the "chips" as they are fed rearwardly by the action of the cutter members.

The implement thus constructed is very rapid in its action and destroys the core of material as fast as formed and feeds it rearwardly through the interstices between the radial arms 12, and thereby effectually preventing any tendency to clog or become choked.

Having thus fully described the invention, what is claimed is—

A boring implement, comprising an annular member open at the ends with spaced cutting-teeth upon one end and with the other end connected by spaced radial arms to a head member having means for connecting to a drill-stock, and a cutting member having means for detachably connecting to said stock and projecting centrally into said annular member and terminating in spaced cutters having their cutting edges reversely and rearwardly inclined to the longitudinal plane of

the stock and with concaved forward faces, whereby the core of material produced by the action of the annular member is destroyed as fast as formed and fed rearwardly of the implement by the screw-like action of the concave-faced cutter members.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

JOHN H. FOUST.

Witnesses:

GEORGE M. STRINE,

THOMAS HAER.