

R. J. MASON.
BORING BAR.
APPLICATION FILED JUNE 1, 1909.

955,180.

Patented Apr. 19, 1910.

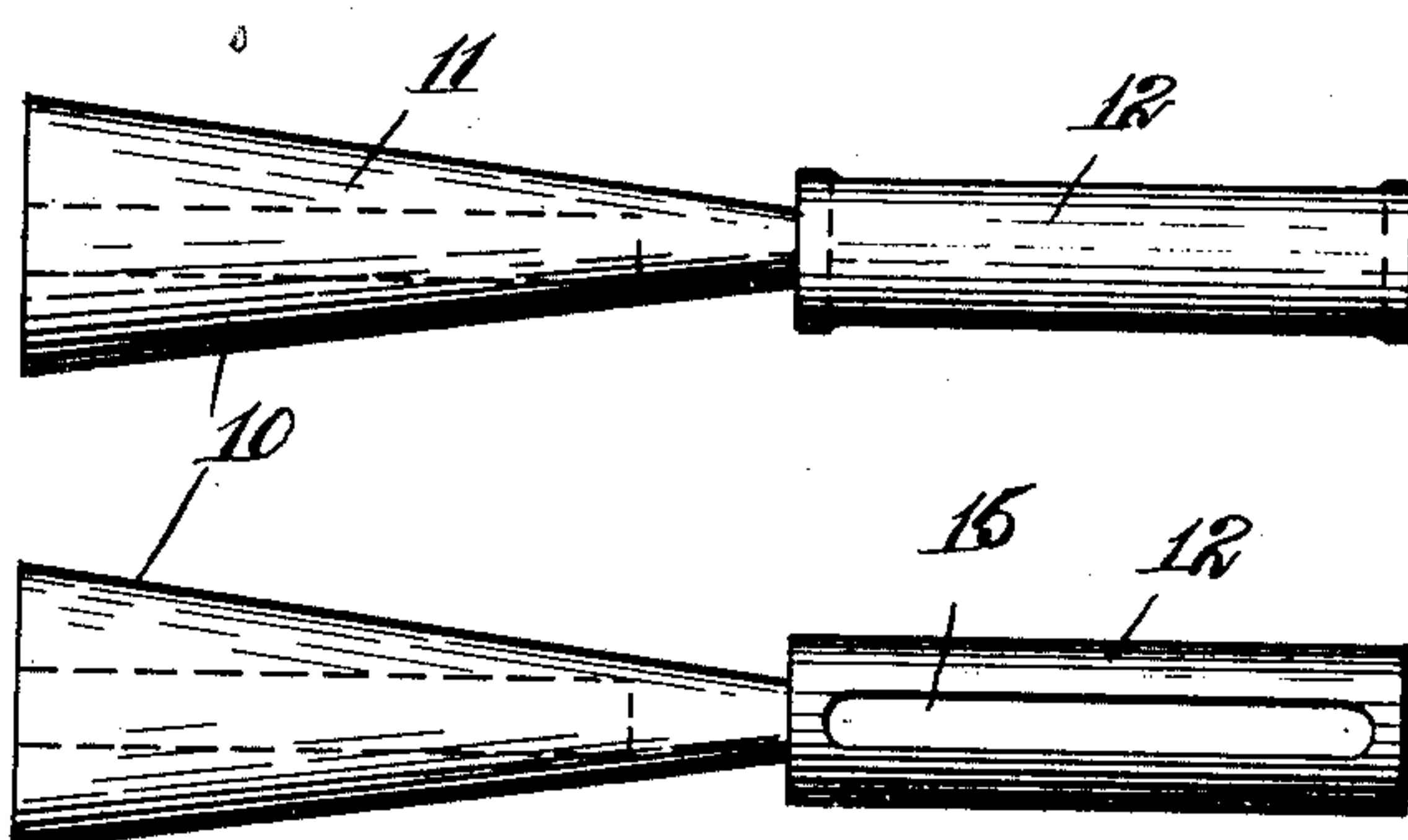
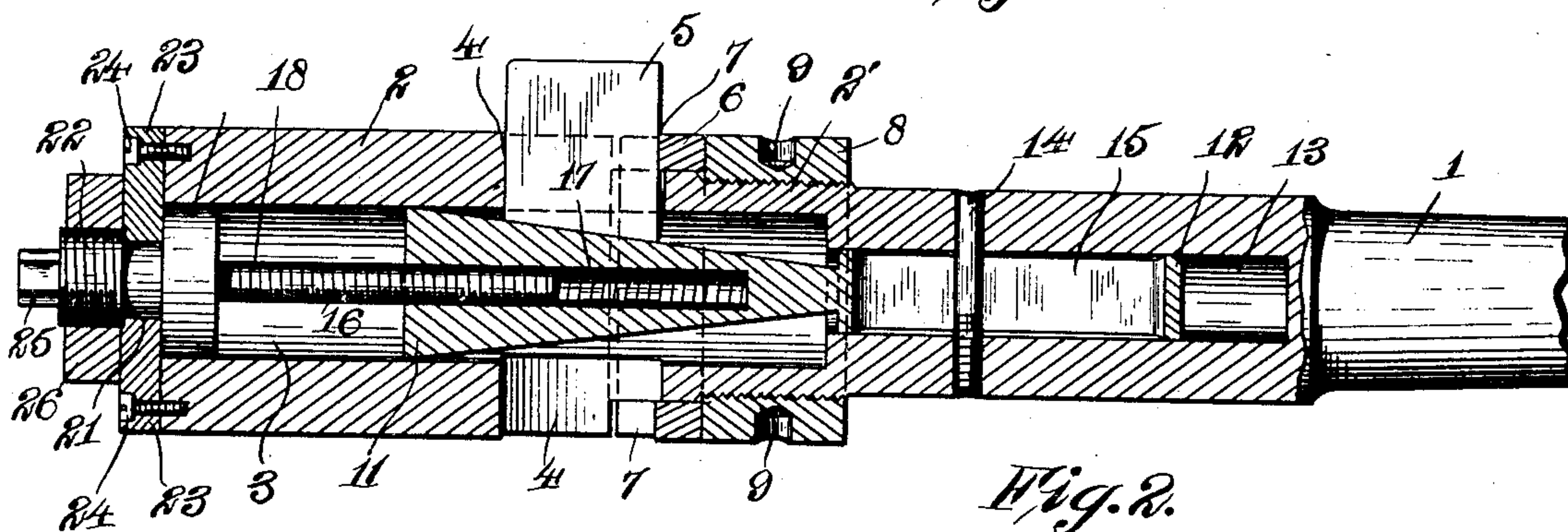
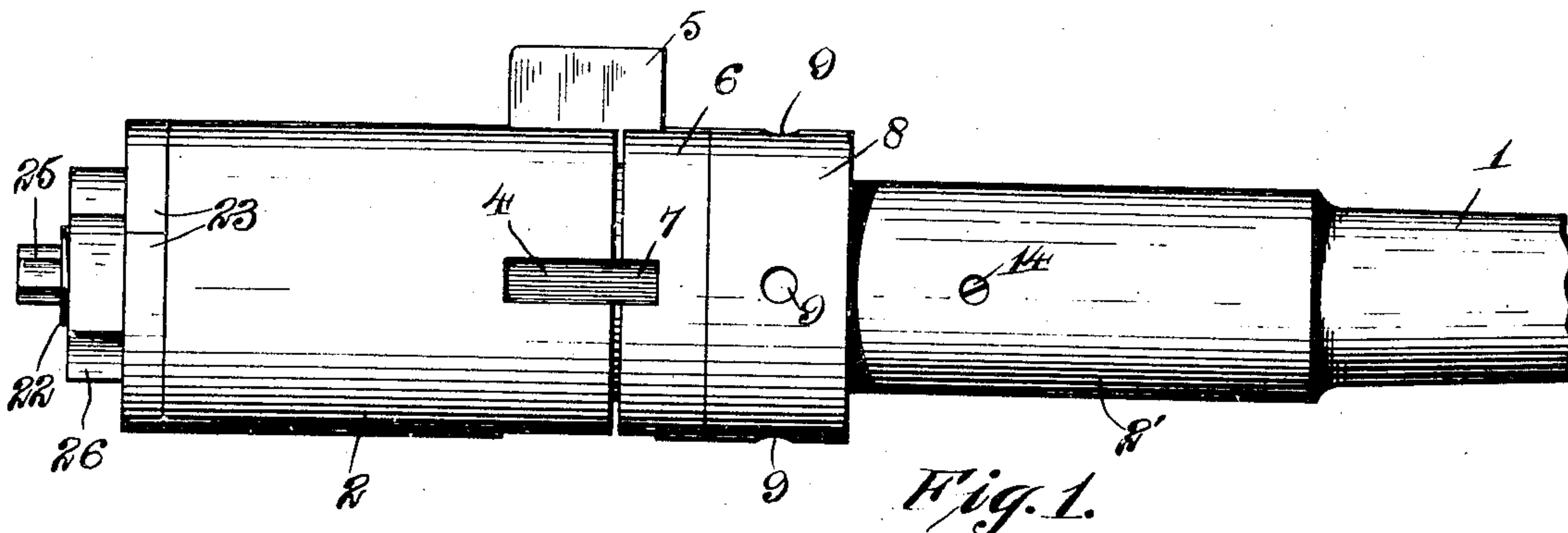
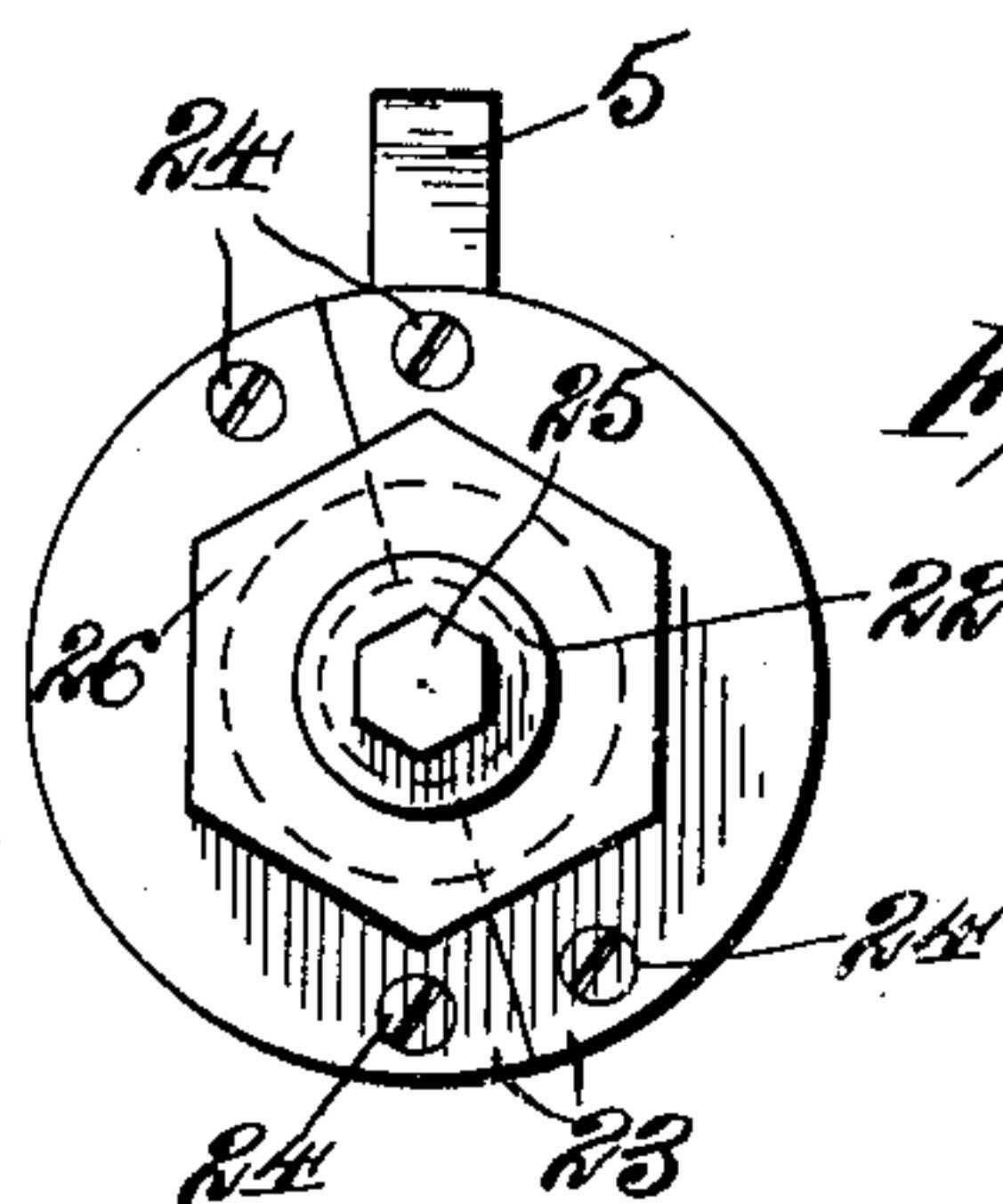


Fig. 5.



Witnesses:

A. G. Olson
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by Joshua A. Forre
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UNITED STATES PATENT OFFICE.

ROBERT J. MASON, OF HAMMOND, INDIANA, ASSIGNOR OF ONE-HALF TO JOHN KOVACSY, OF HAMMOND, INDIANA.

BORING-BAR.

955,180.

Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed June 1, 1909. Serial No. 499,408.

To all whom it may concern:

Be it known that I, ROBERT J. MASON, a citizen of the United States, and a resident of the city of Hammond, county of Lake, and State of Indiana, have invented certain new and useful Improvements in Boring-Bars, of which the following is a specification.

My invention relates to boring bars and the object of my invention is to provide a tool of such character which will be of improved and novel construction, and in which the cutter blade or blades employed therein may be readily and accurately adjusted radially with minute exactness.

A further object is to provide a tool of the nature stated in which the cutter blade or blades may be easily and expeditiously arranged in or detached from the blade support, and in which the blade, when arranged for operation, will be rigidly and securely held.

With these objects in view my invention consists in a boring bar characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the appended claim.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of my device in its preferred form, Fig. 2 is a central longitudinal section thereof, Fig. 3 is an end elevation thereof, and Figs. 4 and 5 are a side elevation and a top plan view respectively of the cutter adjusting head embodied in my invention.

Referring now to the drawings 1 indicates the tool shank and 2 the cylindrical head thereof in the forward end portion of which is provided a longitudinally extending cylindrical chamber or socket 3. Provided in the peripheral wall of said chamber, the same being positioned therein preferably in circumferential alinement are a plurality of radially extending preferably rectangular slots 4 of such dimensions as to be adapted to snugly receive the cutter blade 5. In order to effect the rigid locking of said blade in operative position in head 2, I provide a ring 6 loosely mounted upon the reduced rearward portion 2' of said head, said ring

being provided in the forward edge thereof with a plurality of recesses 7 spaced apart therein so as to be adapted to register with the rearward portions of the slots 4 of the head 2, the same being of a width coextensive with that of the last named slots. A nut or ring 8 threaded upon the portion 2' of said head adapted to abut the member 6 obviously effects the clamping of the blades 5 in position. Apertures 9 in the peripheral surface of the nut 8 are provided to facilitate the rotation thereof by means of an ordinary spanner wrench (not shown). With the purpose in view of effecting the radial adjustment of the cutter blades, I provide a member or head 10 slidably mounted in the chamber 3. Said member is comprised of a forward conically formed portion 11 upon the peripheral surface of which is adapted to travel the inner extremities of the cutter blades 5, and a rearward longitudinally slotted cylindrically formed portion 12 slidable in the reduced rearward end portion 13 of the chamber 3. A transversely extending pin 14 threaded in the head portion 7 extending through the slot 15 provided in said portion 12 permits only of longitudinal movement of the member 10.

Having its inner end portion 16 threaded into a central longitudinally extending socket 17 provided in the rearward end portion of the member 10 is a stem 18. Formed at the forward extremity of the stem portion 16 is a cylindrical enlargement or collar 19 preferably of a diameter such that the same fits snugly in the chamber 3. Having its inner edge portion resting in a groove 21 formed between the collar 19 and the threaded enlargement 22 formed forwardly of the collar 19, the same also serving as a closure for the forward extremity of the chamber 3, is a split or two-part ring 23 secured to the forward extremity of the head 2 by means of screws 24 passing there-through and threaded into said head. Forwardly projecting from said enlargement 22 is a polygonally formed extension 25 adapted to be engaged by a machine wrench (not shown), by means of which the stem 10 may obviously be rotated. With such construction the longitudinal adjustment of the member 10 and hence the radial adjustment of the blades 5 may evidently be effected by simply rotating the stem 18. In order to effect the locking of the latter when in ad-

justed position, a lock nut 26 threaded upon the portion 22 is provided.

By the provision of a boring bar of a construction as shown and described, the provision of one of great efficiency and of strong, durable and economical construction will be effected. While I have shown what I deem to be the preferable form of my boring bar, I do not wish to be limited there-
10 to, as there might be many changes made in the details of construction and arrangement of parts without departing from the spirit of my invention comprehended within the scope of the appended claim.

15 Having described my invention what I claim as new and desire to secure by Letters Patent is:

20 In a boring bar, the combination of a suitable shank; a head on said shank having a central longitudinal chamber and radial slots leading therefrom; a wedge member slidable in said chamber; means for pre-

venting rotation of said wedge member; a rotary stem in threaded connection with said wedge member; an annular flange on said stem within said chamber, an annular threaded flange on said stem and spaced from said first mentioned flange to form an annular groove between them; a split plate fitting within said groove and secured to the end of said head; means whereby said stem may be turned; a lock nut on said threaded flange and adapted to jam against said split plate; cutter blades extending through said radial slots and bearing on said wedge member; and means for locking said blades in said slots, substantially as described. 25 30 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT J. MASON.

Witnesses:

THEO. SCHERER,
I. I. MODJESKA.