

J. MOORE.

AUGER.

APPLICATION FILED APR. 27, 1908.

904,796.

Patented Nov. 24, 1908.

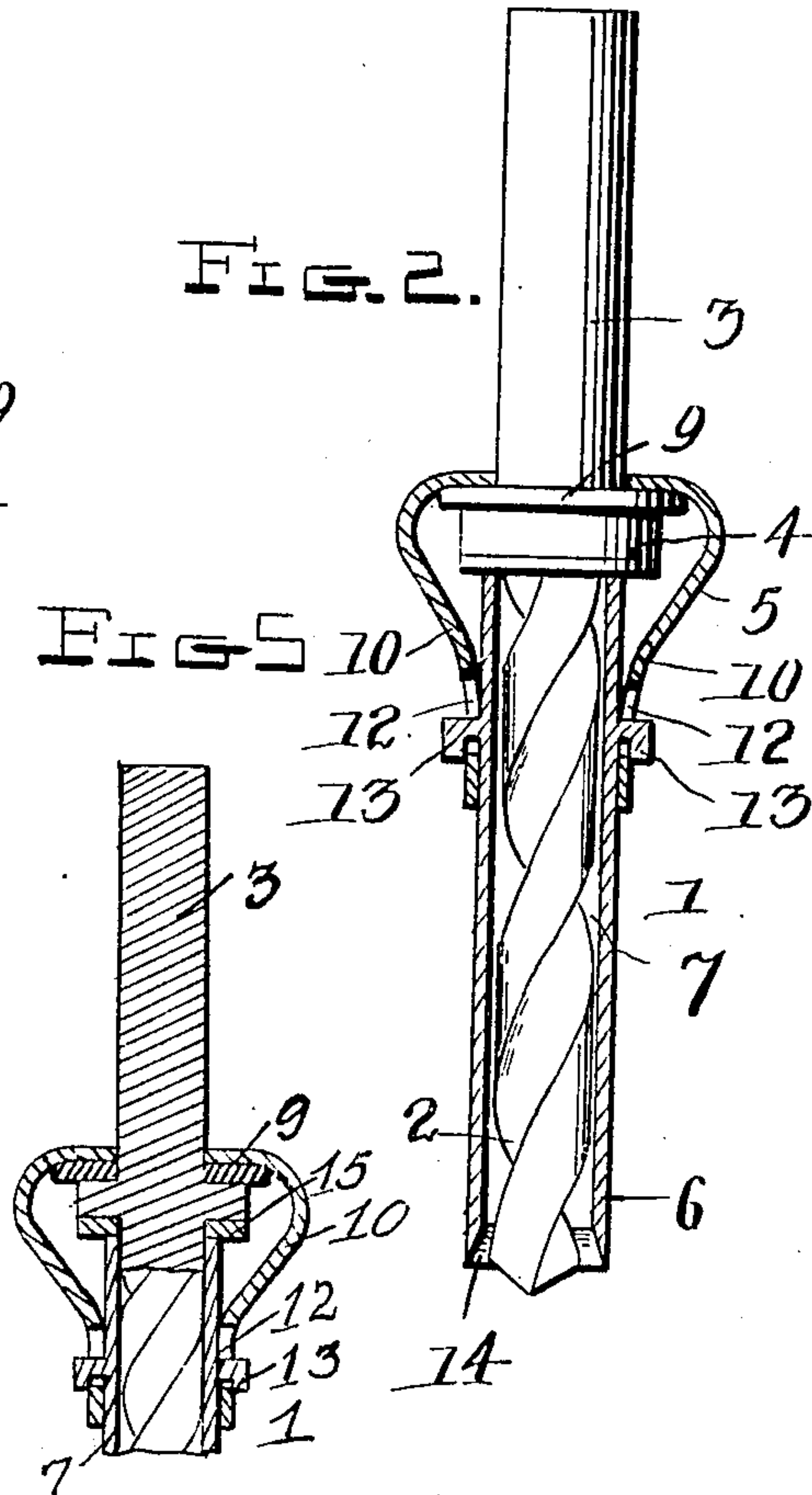
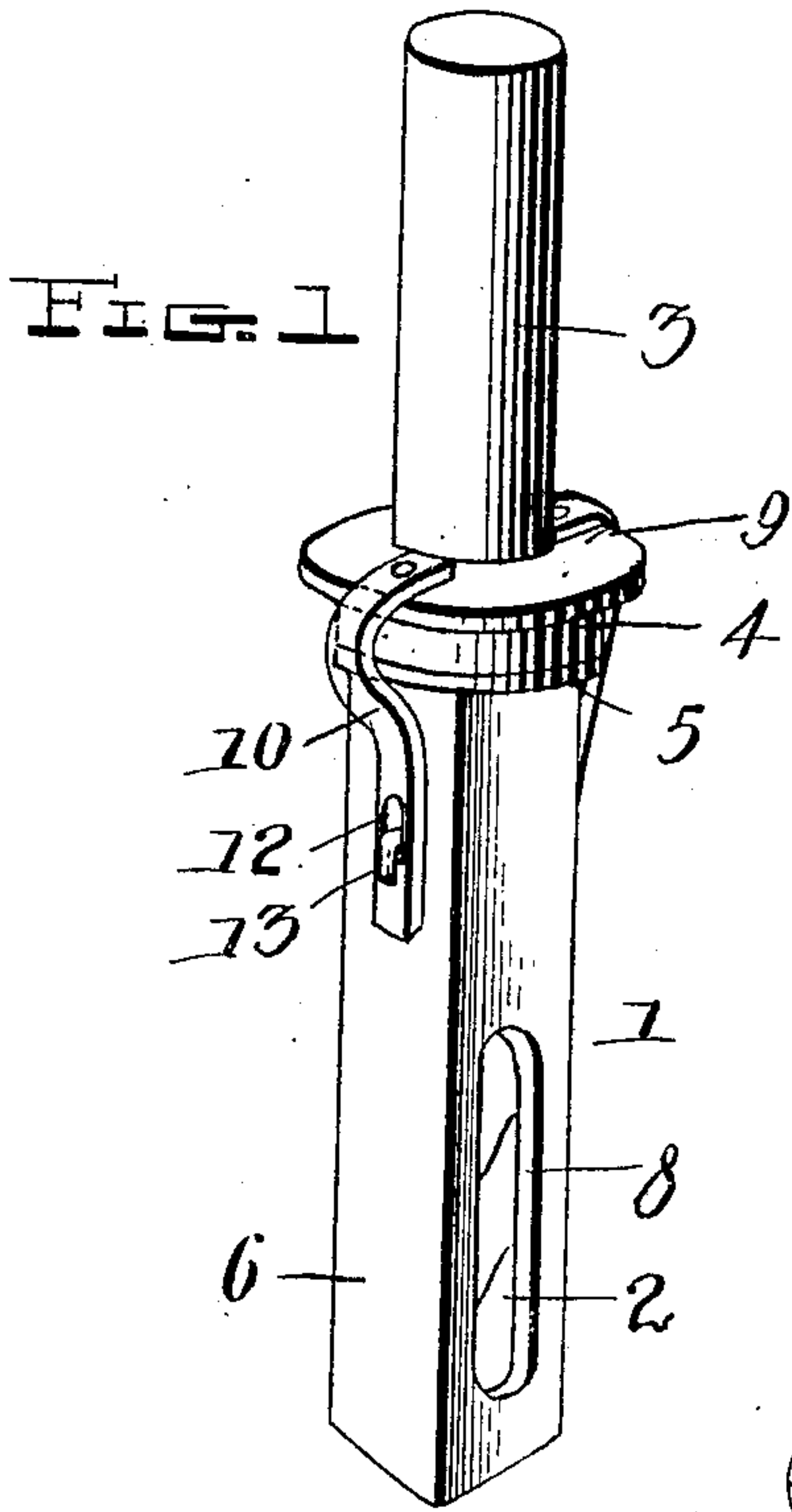


FIG. 3.

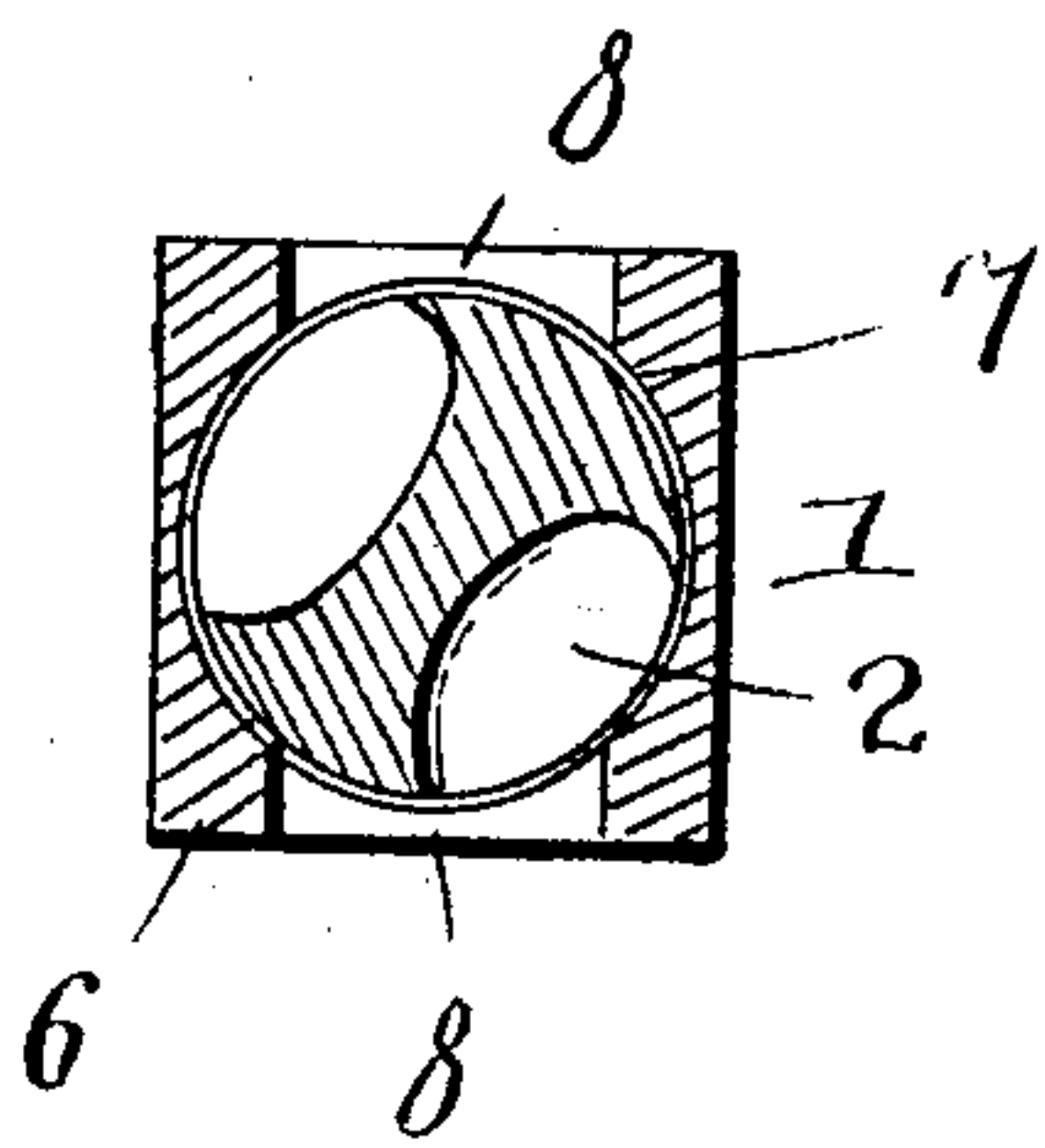
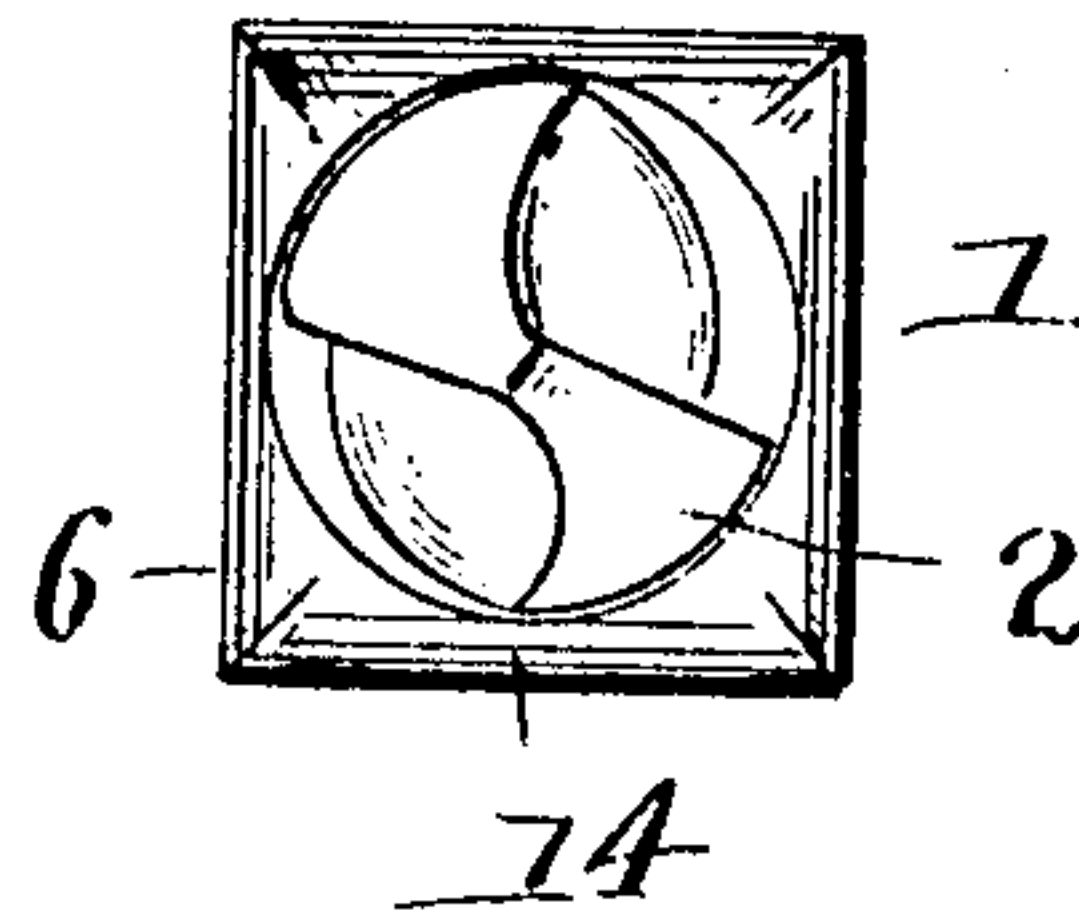


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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AUGER.

No. 904,796.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed April 27, 1908. Serial No. 429,443.

To all whom it may concern:

Be it known that I, JOHN MOORE, a citizen of the United States, residing at East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Augers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in square hole augers.

The object of the invention is to provide an auger of this character by means of which a square hole may be formed simultaneously with the boring of the round hole by the main auger.

Another object is to provide a square hole auger which will be simple, strong, and durable in construction, efficient in operation and well adapted to the purpose for which it is designed.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings,—Figure 1 is a perspective view of an auger constructed in accordance with the invention; Fig. 2 is a side view of the same partly in section; Fig. 3 is a cross sectional view; and Fig. 4 is an end elevation of the working end of the auger. Fig. 5 is a vertical sectional view of the auger.

Referring to the accompanying drawings for a more particular description of my invention, 1 denotes the auger, 2 denotes the round hole bit having an integral shank 3, between which and the bit 2 is formed an integral annular flange or collar 4. On the bit 2 adjacent to and engaging the underside of the collar 4 is a wear plate or washer 5, against which is adapted to bear the upper end of a square hole or chisel bit 6 arranged on the drill bit 2 of the auger.

The square hole or chisel bit 6 is provided with a central longitudinally-disposed cylindrical bore or passage 7, through which the drill bit 2 projects and is adapted to turn. In two of the opposite sides of the chisel bit 6, near its outer end, are formed longitudinally-disposed slots 8, through which the

borings are adapted to pass from the grooves of the drill or bit.

On the shank 3 of the bit is loosely mounted an apertured swivel plate or washer 9, which bears on the upper side of the collar 4 and is connected to the chisel bit 6 by means of spring metal strips or plates 10, in the lower ends of which are formed elongated openings 12 adapted to be engaged with headed lugs 13 arranged on the opposite sides of said chisel bit near the upper end of the same, as shown, whereby the bit 2 is revolubly and detachably held in engagement with the chisel bit. The edges of the lower end of the four sides of the chisel bit are beveled and sharpened to form cutting edges 14.

An auger constructed as herein shown and described is adapted to be used in connection with a drill press or brace, the cutting edges or chisels 14 of the chisel bit 6 cutting a square hole simultaneously with the forming of the round hole by the drill or bit 2. The auger is intended to be constructed and used for boring in wood or metal.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is,—

1. An auger of the character described comprising a round hole bit having a shank, a tubular square hole bit engaged therewith, a bearing flange formed on the shank of said round hole bit, a wear plate arranged between said flange and the upper end of the square hole bit, a swivel plate loose on the shank of said round hole bit, bowed spring metal connecting plates rigidly secured to said swivel plate and having a detachable engagement with said square hole bit, substantially as described.

2. In an auger of the character described, the combination of a tubular square hole bit,

of a round hole bit revolubly mounted there-
in, a shank on said round hole bit, a bearing
flange on said shank, a swivel plate loose on
said shank and engaging said bearing flange,
5 outwardly-curved resilient connecting plates
rigidly connected to said swivel plate and
having in their outer ends elongated open-
ings, and fastening lugs on said square hole
bit, said lugs having offset heads adapted to
10 be engaged by the slotted ends of said con-

necting plate, whereby said square hole bit
is detachably connected to said round hole
bit to permit the latter to revolve therein.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JOHN MOORE.

Witnesses:

DAVID CHITWYND,
GEORGE BENFORD.