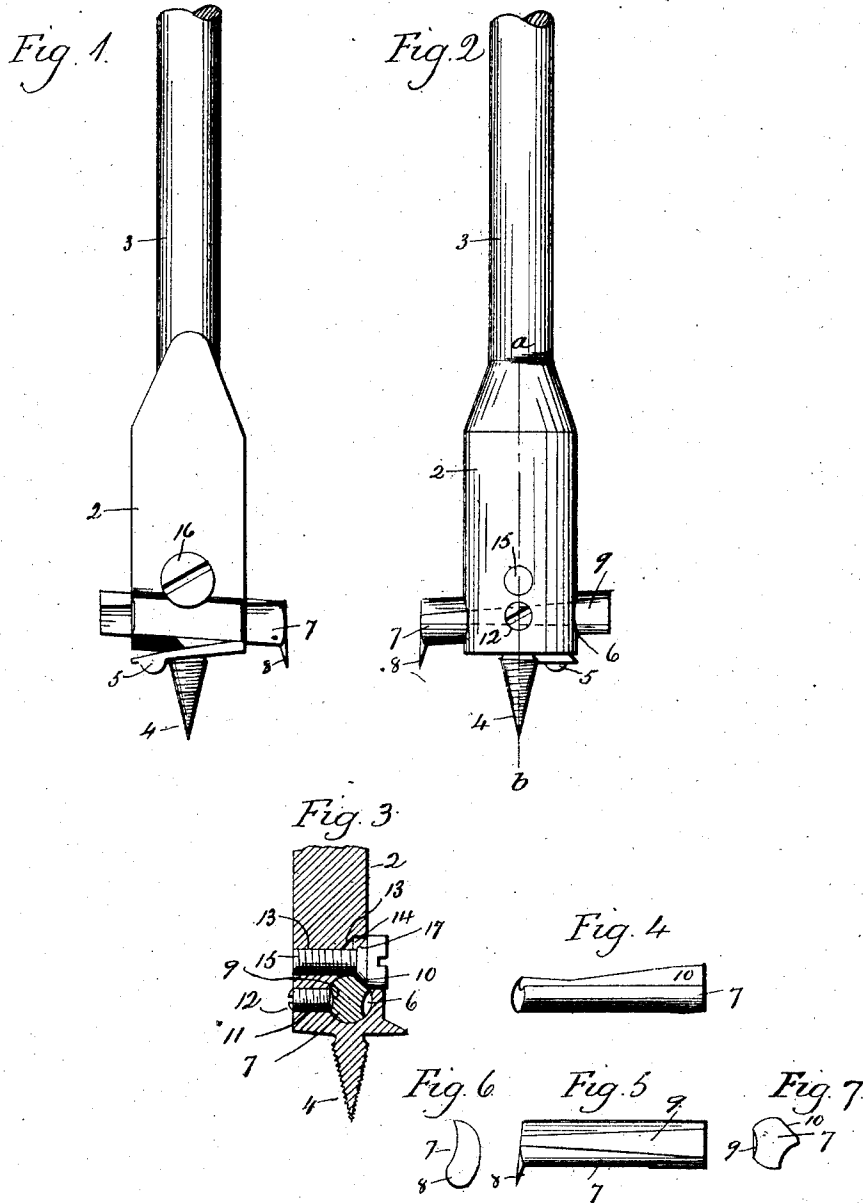


No. 879,309.

PATENTED FEB. 18, 1908.

E. PASTORE.
EXPANSIBLE BIT.
APPLICATION FILED JUNE 10, 1907.



Witnesses.
J. H. Humming
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UNITED STATES PATENT OFFICE.

ERNEST PASTORE, OF NEW HAVEN, CONNECTICUT.

EXPANSIBLE BIT.

No. 879,309.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed June 10, 1907. Serial No. 378,193.

To all whom it may concern:

Be it known that I, ERNEST PASTORE, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Expansible Bits; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a face view of an expansible bit constructed in accordance with my invention. Fig. 2 a rear view of the same. Fig. 3 a sectional view on the line *a—b* of Fig. 2. Fig. 4 a top view of the cutter, detached. Fig. 5 a rear view of the same. Fig. 6 a view looking at the left hand end of Fig. 5. Fig. 7 an end view looking at the right hand end of Fig. 5.

This invention relates to an improvement in expansible bits, and particularly to those which comprise a solid head in which an adjustable cutter is clamped in contradistinction to bits in which a clamping plate is arranged on one side of the head to clamp the cutter, the object of the invention being the cheap construction of a strong bit which permits the ready adjustment of the cutter, yet securely holds the same in place; and the invention consists in the construction hereinafter described and particularly recited in the claims.

The head 2 of the cutter is formed integral with a shank 3 and is provided with the usual gimlet point 4 and floor lip 5. Extending transversely through the head but slightly inclined from the horizontal, is a hole 6 into which an adjustable cutter 7 is adapted to be entered, the cutter being formed from a steel rod corresponding in diameter to the diameter of the hole 6 and of a length according to the diameter of the hole to be cut. These cutters are formed with the usual spur 8 and at what I will term the rear, with a grooved surface 9 this grooved surface being inclined from the cutter end to the opposite end. The opposite side of the cutter is also formed with a face 10 inclined to the plane of the surface 9 and beveled in the opposite direction.

Entering the head from the rear is a

threaded opening 11 which intersects the hole 6 and is adapted to receive a screw 12 which bears against the surface 9. Extending through the head from the front is a threaded hole 13 in line above the hole 6, the face of the body having a recess 14 around the hole 13 the recess intersecting the hole 6. Into this hole 13 a screw 15 is inserted, the screw having a notched head 16 and a beveled face 17 below the head which is adapted to engage with the surface 10 of the cutter. The cutter is adjusted to project to the desired extent from the head and then the screw 12 turned against it. This screw prevents the inward movement of the cutter. The screw 15 is then turned into the head so as to bring the beveled face 17 against the inclined surface 10 of the cutter which prevents the outward movement of the cutter and clamps the same in the head. By forming the cutter with two opposite bevels and arranging the screws to bear against them the cutter is securely held by these screws against movement in either direction, and as the head is formed in a single piece it follows that a very strong bit is produced, and one in which the cutter may be readily adjusted or replaced and firmly held in position.

I claim:—

1. The herein described expansible bit comprising a head having a transversely arranged inclined hole, a cutter adapted to be entered into said hole and formed with oppositely inclined surfaces, and screws entered into opposite sides of the head and adapted to bear against said cutter.

2. The herein described expansible bit comprising a solid head, a transversely arranged hole extending through it, a cutter arranged in said hole and formed at its rear with an inclined grooved surface, and with an oppositely inclined surface opposite said grooved surface, a screw entering the rear of the head and engaging said cutter, and a screw entering the face of the head and having a beveled surface to engage with the cutter.

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

ERNEST PASTORE

Witnesses:

WM. W. SCOTT,
EDMUND J. HOUE.