

No. 715,385.

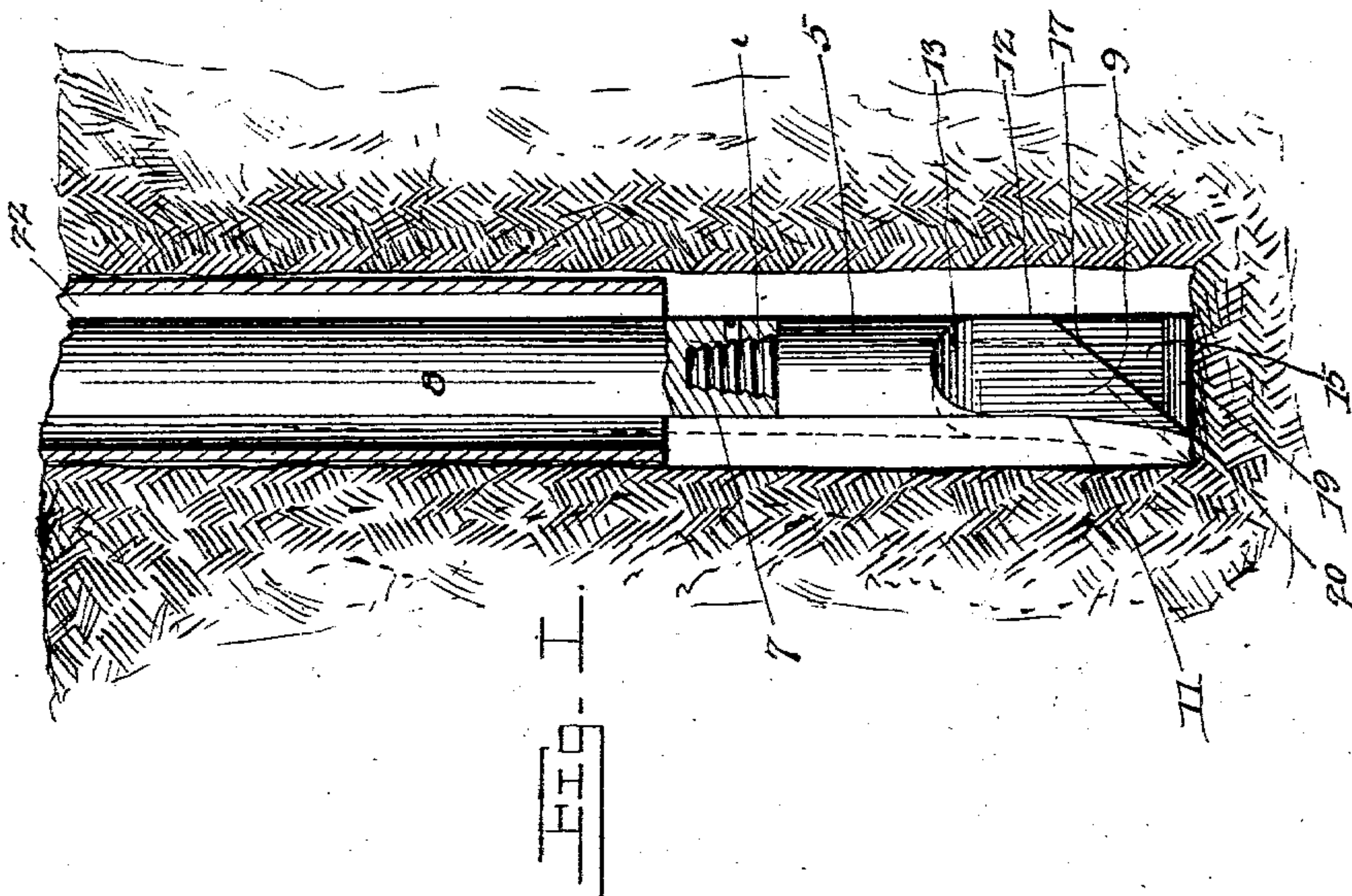
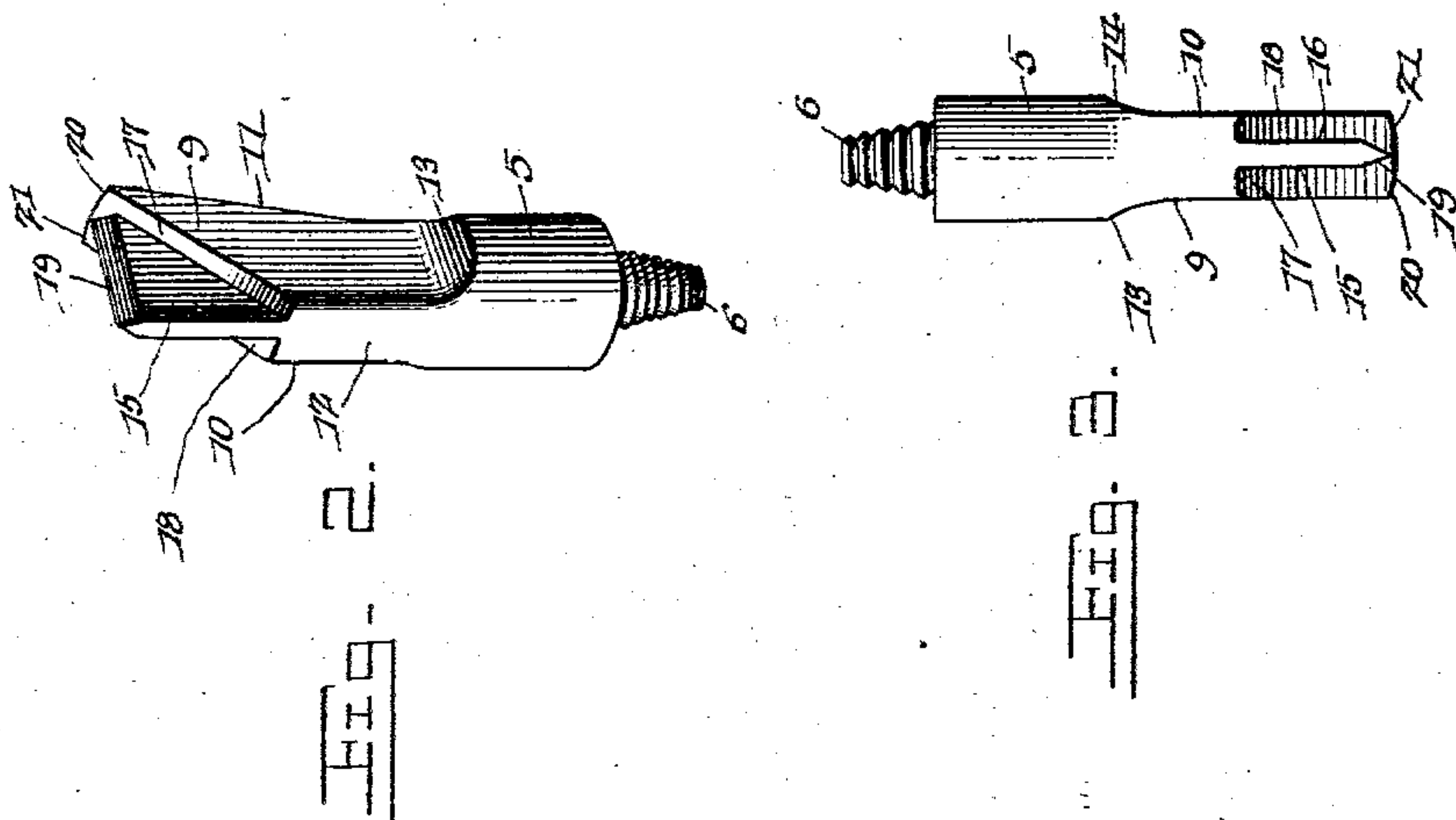
Patented Dec. 9, 1902.

A. S. JONES.

DRILL BIT.

(Application filed Feb. 10, 1901.)

(No Model.)



Witnesses
F. E. Alden.
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UNITED STATES PATENT OFFICE.

AMOS S. JONES, OF CLIFTON, KANSAS.

DRILL-BIT.

SPECIFICATION forming part of Letters Patent No. 715,385, dated December 9, 1902.

Application filed February 19, 1901. Serial No. 48,006. (No model.)

To all whom it may concern:

Be it known that I, AMOS S. JONES, a citizen of the United States, residing at Clifton, in the county of Washington and State of Kansas, have invented a new and useful Drill-Bit, of which the following is a specification.

This invention relates to drill-bits, and more particularly to that class of bits used in drilling wells; and the object of the invention is to provide a bit which when reciprocated will be deflected laterally upon striking the rock or soil and will thus cut a hole of a diameter greater than the greatest width of the blade.

As well-drill bits have heretofore been made the hole that is drilled is not of sufficient diameter to permit of driving of the casing directly after the drill, as the casing that can be fitted into the hole is not of sufficient diameter to permit of withdrawal of the drill through it. With the present construction, however, a hole is drilled or boring is made the diameter of which is so great that a casing may directly follow the drill and yet be of sufficient diameter to permit of withdrawal of the drill therethrough.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view showing a portion of a boring as made by the present bit and showing in section a portion of a casing following the drill, the bit being shown in elevation and the deflected position thereof being indicated in dotted lines. Fig. 2 is a detail perspective view showing the bit in inverted position. Fig. 3 is a side elevation of the bit.

Referring now to the drawings, the drill-bit consists of a body portion 5 of cylindrical form, having the usual screw-stem 6 for engagement with the screw-socket 7 of the drill-shaft 8, the lower end of the bit being flattened on opposite sides to form the faces 9 and 10. Of the opposite sides 11 and 12 of the bit, between the said faces, the side 12 is straight and is parallel with the axis of the bit, while the side 11 diverges downwardly therefrom at its lower portion and below the

shoulders 13 and 14, resulting from the flattened portions at 9 and 10. The lower portions of the faces 9 and 10 are further cut away to form parallel faces 15 and 16, which are bounded at their upper ends by shoulders 17 and 18, which result from this further cutting of the bit, and which shoulders lie in a common diagonal plane transversely of the bit and extend from the lower edge of the deflected or diverged side 11 to a point spaced upwardly from the lower end of the side 12, it being understood that the lower end of the bit lies at right angles to the axis thereof, and this lower edge is provided with the usual double bevel to form a chisel edge 19, which is in the same plane with the lower ends of the shoulders 17 and 18, which also form cutting edges and lie at right angles to the edge 19.

With this construction it will be seen that as the drill is reciprocated the cutting edge 19 cuts the hole, while the edges 20 and 21 at the lower ends of shoulders 17 and 18 also attack the virgin soil or rock and not only assist the edge 19, but urge the drill laterally, so that it will make a boring greater than its own diameter to permit the casing 22 to directly follow the drill. By forming the cutting edges in the same plane they attack the soil or rock simultaneously, and in consequence the drill is urged with greater force than if the edges 20 and 21 were located higher up on the drill, where they would engage only the loose material dislodged by the lower cutting edge 19.

What is claimed is—

A drill having a T-shaped entering-point comprising a chisel and a reaming edge terminating in the same plane, the reaming edge being projected laterally beyond one side of the drill-shank, and shoulders extending from the reaming edge obliquely across the drill on opposite sides of the chisel edge.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AMOS S. JONES.

Witnesses:

WM. H. TAYLOR,
S. L. LASHBROOK.