

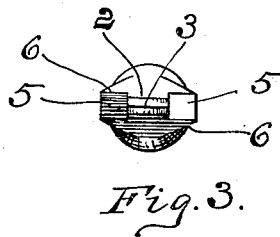
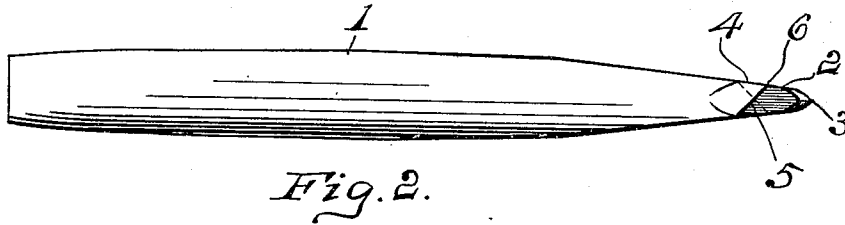
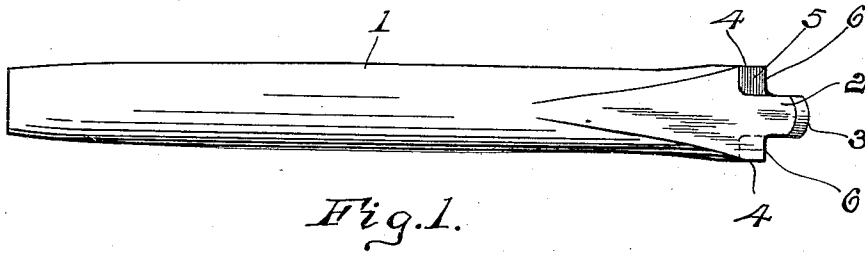
A. J. MacDONALD.

DRILL.

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1,007,037.

Patented Oct. 24, 1911.



Inventor

Witnesses

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DRILL.

1,007,037.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALLAN J. MacDONALD, a citizen of the United States of America, residing at Port Huron, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Drills, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in rock drills and more particularly to a drill especially adapted for forming holes in concrete or cement structures.

The object of the invention is to provide a simple and cheap device which may be quickly and easily sharpened or repaired and which is so formed as to provide the several advantages of the construction, all as hereinafter more fully described reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of a tool embodying the invention; Fig. 2, an edge view of the same; and Fig. 3 an end elevation.

As shown in the drawing the body or shank 1 of the tool is flattened at each side toward its cutting end or tapered into a narrow projecting end portion or lead point 2 which is formed with a beveled end forming an extreme cutting edge 3. Extending laterally from each side of the lead 2 is a shoulder 4, said shoulders extending to the full width of the tool and determining the size of the hole cut in the concrete. These shoulders are each formed with an inclined surface 5 which surface meets one side surface of the shank at an acute angle to form a sharp cutting edge 6. The surface 5 of the shoulder at one side of the tool is formed at an angle to the longitudinal axis of the shank and the surface of the shoulder at the other side is oppositely inclined so that the cutting edge 6 of one shoulder is formed by the meeting of the inclined surface 5 of the shoulder with one side surface of the tapering end of the tool, and the cutting edge 6 of the other shoulder is formed by the meeting of the inclined surface of that shoulder with the opposite side surface of the tapered end of the shank. The narrow extended portion 2 forms a lead point for

the tool to guide the same so that a straight hole will be formed, and this point, being formed with a chisel edge 3, will readily cut into the concrete and clear itself. The sharp cutting edges 6 of the shoulders extending laterally from the lead point at right angles to the axis of the tool, may be readily ground when they become dulled and rapidly cut and chip off the concrete around the center hole formed by the lead. These shoulders being formed with surfaces which are inclined in opposite directions, the tendency of the tool will be to turn when driven into the concrete because of the inclination of these surfaces and to chip off the stone or concrete and clear themselves instead of embedding themselves in it.

By forming the cutting edges in the manner described with oppositely inclined surfaces at the opposite sides of the tool, the tendency of the tool is to turn as it is driven and thus cut and loosen up the concrete around the center opening formed by the lead. The tool is thus prevented from sticking in the hole formed by it so that it may be readily turned by the operator, in the usual manner of manipulating tools of this class each time it is driven in, and the cutting shoulders will rapidly break away or chip off the concrete at each turn.

What I claim is:

A tool for the purpose described comprising a shank portion formed with a flattened tapering end provided with a projecting center end lead portion having a transverse cutting edge extending in the axial plane of the tool, and a laterally extending shoulder at each side of the lead portion provided with a transverse cutting edge, the cutting edge of one shoulder extending parallel with and at one side of said plane of the tool and the cutting edge of the other shoulder extending parallel with and at the opposite side of said plane of the tool.

In testimony whereof I affix my signature in presence of two witnesses.

ALLAN J. MacDONALD.

Witnesses:

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