A. BARBAGELAT.

STONE CUTTING TOOL.

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930,718.

Patented Aug. 10, 1909.

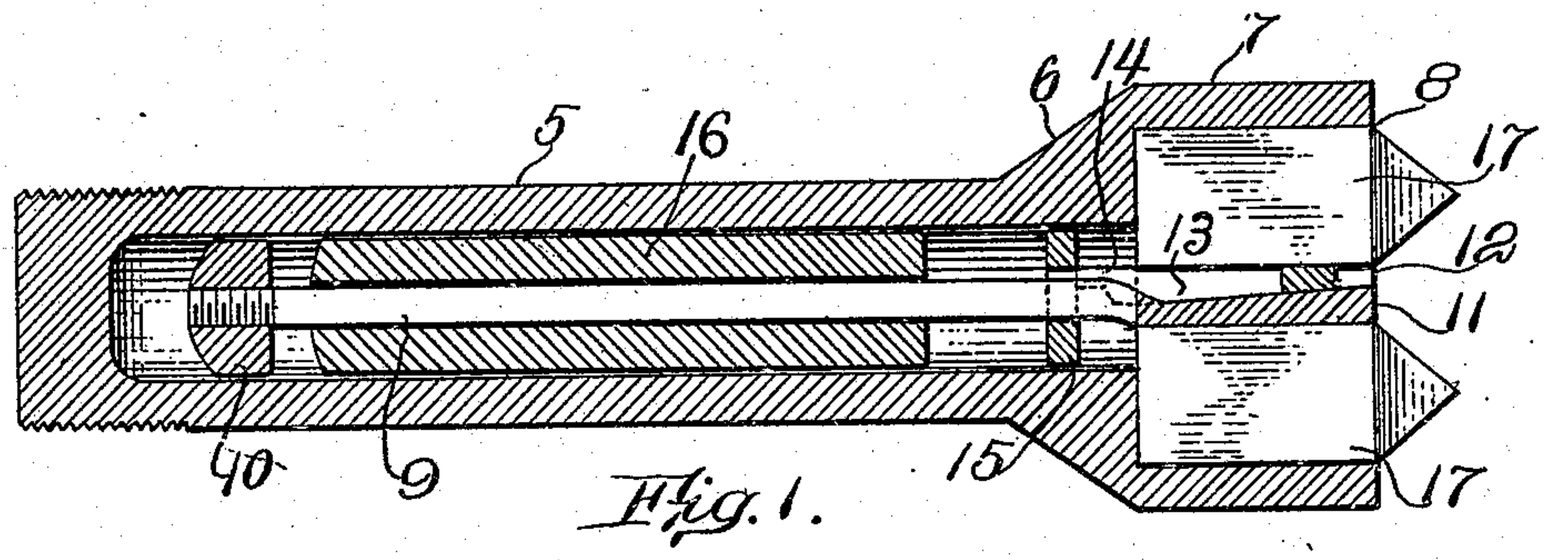

Fig. 1.

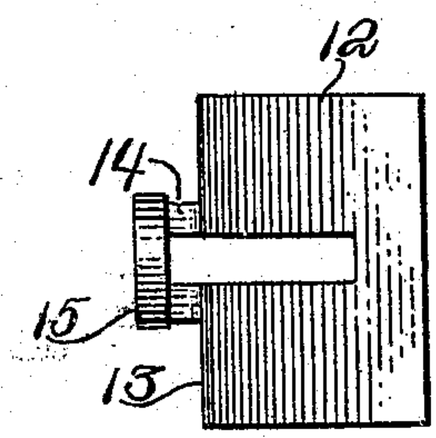

Fig. 2.

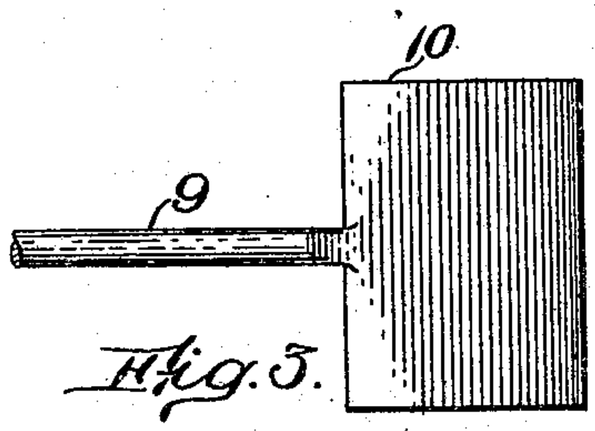

Fig. 3.

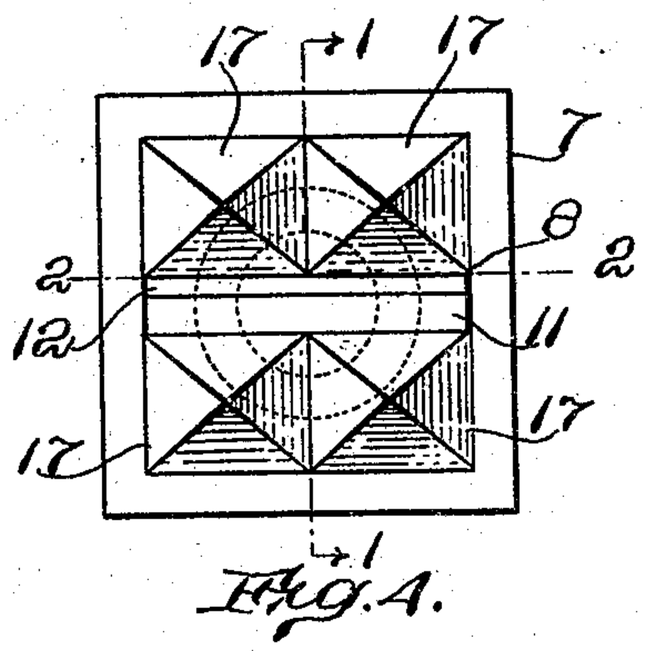

Fig. 4.

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UNITED STATES PATENT OFFICE.

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STONE-CUTTING TOOL.

No. 930,718. Specification of Letters Patent. Patented Aug. 10, 1909.

Application filed February 16, 1909. Serial No. 478,281.

To all whom it may concern:

Be it known that I, ANGELO BARBAGELAT, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Stone-Cutting Tools, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention has reference to improvements in stone cutting tools and particularly to drills.

The object of the invention is to so construct a stone cutting tool adapted for operation by a pneumatic hammer or similar reciprocating means that drill points movably mounted in said tool may be securely held from accidental displacement.

The invention consists in the peculiar means for holding the drill points from accidental loosening.

The invention also consists in such other novel features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claims.

Figure 1, represents a sectional view of the improved tool taken on line 1—1 Fig. 4. Fig. 2, represents a detail view of one of the wedge members in side elevation. Fig. 3, represents a detail view of the other of the wedge members in side elevation. Fig. 4, represents a bottom plan view of the tool.

Similar numbers of reference designate corresponding parts throughout.

As shown in the drawing in its preferred form 5 represents a tubular shank of suitable cross sectional shape and of substantial construction which is or may be adapted to be secured to an ordinary pneumatic hammer or other suitable reciprocating device of suitable and well known construction. One end of the shank 5 is preferably closed and to the other end thereof is secured, or made in part with said shank, the holding frame 6 having the wall 7 which embraces a suitably shaped compartment 8. The guide rod 9 has at one end the head 10, of a diameter less than that of the bore of the shank 5, and at the other end the wedge member 11 having its thinnest portion nearest the rod 9. The wedge member 12 has its thicker edge 13 adjacent the frame 14 which has the collar 15 integral with said frame 14 and freely movable on said guide rod 9 while the hammer 16 is slidably mounted on said guide and is adapted to be received by the bore of the shank 5. Drill points 17—17 of any suitable size and shape adapted to be received by the frame 6 are used with this tool and any number of said drill points or cutters may be utilized.

In preparing the tool for operation the frame 6 is preferably held uppermost and the hammer 16, with its guide rod, is inserted in the bore of the shank 5 and in such position the hammer 16 and the wedge member 12 slide toward the head 10, the movement of said wedge member being however limited by the frame 6 so that the thin edge of wedge member 12 is intermediate the length of wedge member 11. The drill points 17—17 are now inserted in compartment 8 between the wedge members 11 and 12 and the wall 7 and fit the same closely so that they are held in position by frictional contact. The position of the tool is now reversed and, preferably, is given a sharp blow in a direction to impel the hammer 16 against the collar 15 of wedge member 12 whereby said wedge member is driven between the series of drill points in contact therewith and the other wedge member 11 and tends to spread said parts and thus press outwardly all of the drill points against the wall 7 and thus more effectually secure the same.

In the operation of the tool under rapid reciprocation the hammer 16 is operated coincidently and as a result of such operation striking alternately the head 10 and the collar 15 and thus tending at each blow to so move said parts relatively as to the wedge members 11 and 12 one on the other.

The removal of the drill points from the compartment 8 is effected by driving the wedge member 12 inward sufficiently to release said drill points.

Having thus described my invention I claim as new and desire to secure by Letters Patent.

1. A tool having a compartment a series of cutting devices having parts located in said compartment, a wedge bearing against said cutting devices to press them against rigid members of said compartment, and movable means, adapted to be brought into action by the movement of the tool, to effect the tightening of said wedge, as described.

2. A tool of the nature described comprising means for embracing a series of drill points, such points, a wedge acting to spread said points into holding contact with said embracing means, and a hammer loosely

mounted and adapted to act on said wedge to drive the same in a direction to spread said drill points.

3. The combination with a tubular shank having at one end a holding frame adapted to receive tools, of a wedge movably mounted in said frame and adapted to effect the spreading of said tools into holding contact with said frame, and means freely movable in said tubular shank and adapted to bear on said wedge to tighten the same.

4. The combination with the tubular shank having the holding frame, of a wedge member having a rod located in the bore of said shank and having a head, a second wedge member movable with respect to the first mentioned wedge member and having an extension movably located in the bore of said shank, and a hammer slidably mounted in said bore and adapted to strike the head of said rod, when moving in one direction, and the extension of said second wedge member when moving in the other direction, substantially as described.

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