Aug. 2, 1938. H. S. HILL 2,125,566

SHARPENING TOOL FOR PAPER DRILLS

Filed March 2, 1936

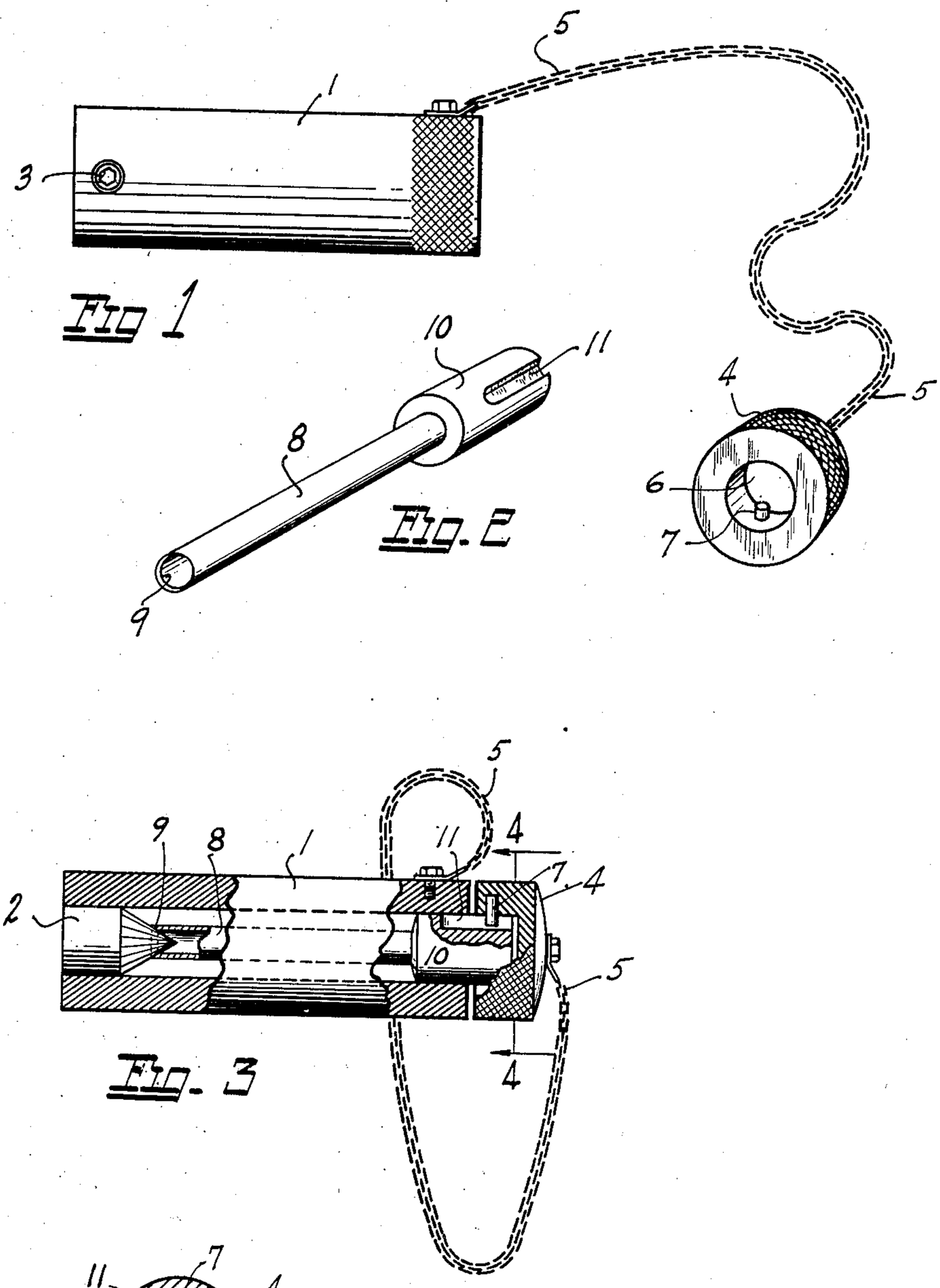

Fig 1

Fig. 2

Fig. 3

Fig. 4

HARRY S. HILL

INVENTOR

BY James H. Gilman.

ATTORNEY

Patented Aug. 2, 1938 2,125,566

UNITED STATES PATENT OFFICE

2,125,566

SHARPENING TOOL FOR PAPER DRILLS

Harry S. Hill, Portland, Oreg., assignor to Harry Hill Manufacturing Co., Portland, Oreg.

Application March 2, 1936, Serial No. 66,693

2 Claims. (Cl. 76—82)

This invention relates to improvements in sharpening tools and more particularly to a tool especially adapted to sharpening paper drills.

The principal object of this invention is to provide a device of this character which is of simple, efficient, durable, and inexpensive construction and wherein the several parts are readily accessible.

Another object of the invention is the provision of a tool of this character which may be conveniently carried in the pocket of a workman and readily used in sharpening drills of the various machines under his supervision. The tool is of such character that it may be also conveniently attached to a machine and within convenient reach of the operator.

Still another object of the invention is the provision of means within the body of the tool for centralizing and stabilizing the drill with respect to the sharpener during the sharpening operation.

These and other objects will appear as my invention is more fully hereinafter described in the following specification, illustrated in the accompanying drawing and finally pointed out in the appended claims.

In the drawing.—Figure 1 is a side elevation of the main body of the tool and an actuating cap for engagement with a drill to be sharpened.

Figure 2 is a perspective view of a conventional paper drill.

Figure 3 is a view showing a paper drill in the process of being sharpened.

Figure 4 is a sectional end elevation taken on the line 4—4 of Figure 3.

Referring now more particularly to the drawing.—Reference numeral 1 indicates the main body of the device which is of cylindrical form and open at both of its ends. In one end, I secure a reamer or any other approved form of sharpening tool or cutter indicated at 2 by means of a set-screw 3. To the opposite end of the main body 1, I attach a cap 4 by means of any suitable form of flexible connection such, for instance, as a chain 5 or the like. The interior of the cap is formed with a cavity 6 having a stud 7 projecting inwardly with respect to the side wall of the cavity.

As previously stated, the form of paper drill shown in Figure 2 is more or less of conventional design and comprises a shank 8 which is hollow for a portion of its length and its outermost end is formed into a circular cutting edge 9. The opposite end of the shank is enlarged into a head 10 within which is formed an elongated slot 11 adapted to receive the stud 7 when engaged by the cap and presented to the main body 1 for the sharpening operation.

For sharpening the cutting edge 9 of the shank 8, the paper drill is inserted in the main body 1, as shown in Figure 3, with the cutting edge in contact with the reamer 2. The head 10 of the shank 8 is preferably of equal diameter to that of the interior of the main body 1 so as to stabilize the paper drill when being rotated. The head 10 of the paper drill extends beyond the main body 1 in order to receive the cap 6 in such a way that the stud 7 will become engaged with the elongated slot 11. By this arrangement, rotary motion of the cap will impart rotary motion to the paper drill. Thus it will be seen that rotary motion applied to the drill under pressure will cause the reamer 2 to act upon the cutting edge 9 of the drill.

While I have shown a particular form of embodiment of my invention, I am aware that many minor changes therein will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention. What I claim as new and desire to protect by Letters Patent is:—

1. A sharpening tool for paper drills comprising a hollow cylindrical body member whose inside diameter is equal to the outside diameter of the head of a paper drill, a sharpening element mounted on the interior of the body member at one of its ends, rotatable means disposed at the opposite end of the body member and adapted to impart rotary motion to a paper drill disposed within the body member.

2. A sharpening tool for paper drills comprising a hollow cylindrical body member whose inside diameter is equal to the outside diameter of the head of a paper drill, said body member adapted to rotatably embrace a paper drill, a sharpening element secured within the body member at one of its ends, a cap adapted to be rotated at the opposite end of the body member, and means within the cap for engaging one end of the paper drill and imparting rotary motion to said drill.

HARRY S. HILL.