

W. J. ABRAHAM.
DRESSING TOOL FOR ABRADING STONES.
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990,027.

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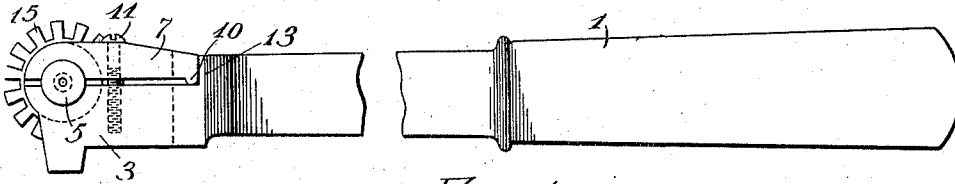


FIG. 1

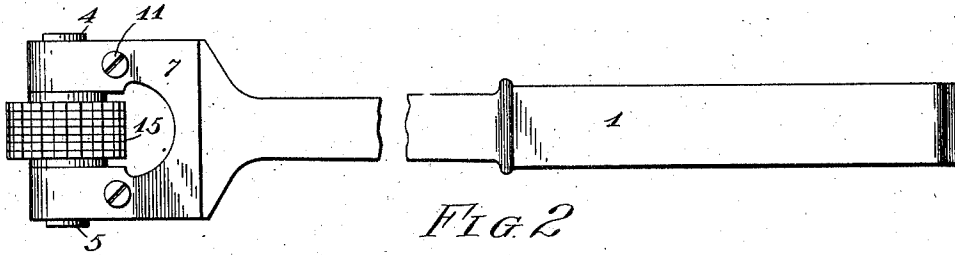


FIG. 2

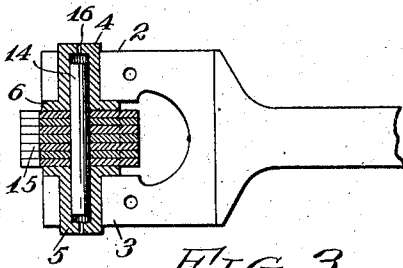


FIG. 3

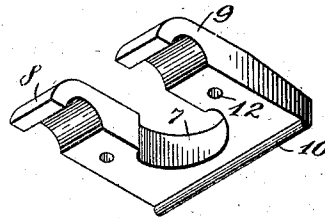


FIG. 4

WITNESSES:

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DRESSING-TOOL FOR ABRADING-STONES.

990,027.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM J. ABRAHAM, a citizen of the United States, residing at Canton, in the county of Fulton and State of Illinois, have invented a certain new and useful Improvement in Dressing-Tools for Abrading-Stones, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to a dressing tool which is intended for use with abrading structures such as emery wheels and grind stones.

The object of the invention is to provide a dresser having the cutters so mounted on the handle of the dresser that the wear incident to the use of the device may be compensated for; also to provide a structure such that the cutters may always be kept in proper position and free from wobbling when in use.

Generally speaking, the invention comprises the elements and combinations thereof set forth in the accompanying claims.

Reference should be had to the accompanying drawings forming part of this specification, in which—

Figure 1 is the side elevation of a dressing tool embodying certain features of my invention; Fig. 2 is a top plan view of the showing in Fig. 1; Fig. 3 is a top plan view of the dresser with the cap removed, which cap holds the cutter spindle, and also showing the bushings and cutters in section; Fig. 4 is a perspective view of the cap.

The handle of the dresser as shown in Figs. 1 and 2 is indicated at 1. The forward part or head of the dresser is formed with two projecting arms 2 and 3 as shown in Fig. 3. These arms are provided with semi-circular bearings for the purpose of receiving bushings or sleeves 4 and 5. The bushings are circular, although they may be made of any desired shape, rectangle, hexagonal, or other. Upon the inner side, each of the bushings is provided with a flange 6 which, when in position, will lie against the inner part of the arm upon the head.

In order to hold the bushings in place, I provide a cap 7 which is shown in perspective in Fig. 4. The cap is provided with projecting arms 8 and 9 and the space between the arms is the same in extent as the space between the arms 2 and 3 upon the

head of the dresser. The forward parts of the arms are provided with semi-circular bearings which are adapted to engage with the top part of the bushings to hold the same in place.

At the back portion the cap is provided with a rib 10 which will rest upon the head of the dressing tool and gives the cap a greater leverage to hold the bushings in place. Of course it will be obvious that the same effect would be obtained if a rib similar to the rib 10 were formed upon the head of the dresser at the rear portion thereof.

The cap is held in position by means of screw bolts 11 which project through suitable openings 12 in the arms and into other openings in the head of the dresser. By screwing these bolts into position the sleeves or bushings will be securely held in place and prevented from rotation or from any movement whatsoever. It will be observed that the handle of the dresser is provided with a notch at the forward portion thereof as indicated at 13 which is of the same height as the thickness of the cap so that when the cap is in position the rear end thereof is flush with the upper part of the handle.

The bushings or sleeves are provided with circular openings for the reception of a spindle or arbor 14 upon which are carried the cutters 15. The openings in the bushings do not extend through the outer side thereof but are closed except for a small oil hole 16. Furthermore, the spindle 14 is made a little shorter than the distance between the deepest parts of the openings in the bushings when in assembled position for the purpose of permitting the bushings to move for taking up wear, as will be shortly explained.

The cutters which are here designated may be of any desired shape or size, no invention being claimed in the same, and the cutters here shown are merely for the purpose of illustration.

When in assembled position, the flanges upon the bushings are practically in contact with the cutters so that the same will be held in a true position and the axis or spindle upon which they are mounted will be at right angles with respect to the handle of the dresser. The cap 7 being held securely in place there can be no movement of the

bushings or sleeves, and consequently, there can be no wobbling or side-movement of the cutters.

The bushings are constructed of any desired material preferably of some material that will wear well, such as white iron or hardened steel. However, when due to extended use the flanges upon the sleeves become somewhat worn so that there may be a tendency for the cutters to wobble, the cap 7 is loosened and the sleeves 4 and 5 adjusted toward each other to compensate for the wear, thus insuring that the cutters will be held in proper position.

In tools of this character the greatest wear upon the bushings or sleeves would come, at the rear portions thereof, due to the pressure which is exerted by the operator, to push the cutters into engagement with the abrading stone that is being dressed. In order to compensate for this unequal wear the bushings or sleeves may be rotated slightly by loosening cap 7 so that wear from this cause may also be compensated for.

The bushings may be made very cheap, permitting that they may be frequently replaced and will thus save the entire wear upon the handle of the tool, at the same time always insuring that the cutters will be held in their best position for cutting.

From the foregoing description it will be apparent that the dressing tool here described possesses the characteristic of durability, yet combining simplicity of structure and provides a tool wherein the wear is brought upon such parts as may be readily adjusted to insure the proper positioning of the cutters at all times.

Having thus described my invention, what I claim is:

1. A dressing tool comprising a handle formed with a head, sleeves oppositely mounted in said head and adapted to slide longitudinally in the head, means for holding the sleeves in an adjusted position, a spindle supported by the said sleeves, and cutters mounted upon the said spindle the said sleeves being formed with the flanges upon their interior portions which bear against the cutters, substantially as described.

2. A dressing tool comprising a handle formed with a head, sleeves mounted in said head, a spindle mounted in said sleeves, cutters mounted upon the said spindle, said sleeves being provided with flanges upon their interior portions which bear against the cutters said sleeves being longitudinally adjustable in the head, and a cap secured upon said head for holding the sleeves in adjusted position.

3. A dressing tool comprising a handle and a head provided with spaced arms each of the said arms having an end circular groove, a sleeve supported in each of said arms, a spindle mounted in the said sleeves and having longitudinal play in said sleeves, cutters carried by the said spindle, each of the said sleeves being provided with a flange at its interior end which flange bears against the cutters and forms a wear plate, a cap formed with spaced arms, a groove in each arm of the cap the groove portion of each arm engaging with a sleeve, means for holding the said cap in place.

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

WILLIAM J. ABRAHAM.

Witnesses:

HENRY J. STEKETEE,
A. J. ALLTON.