

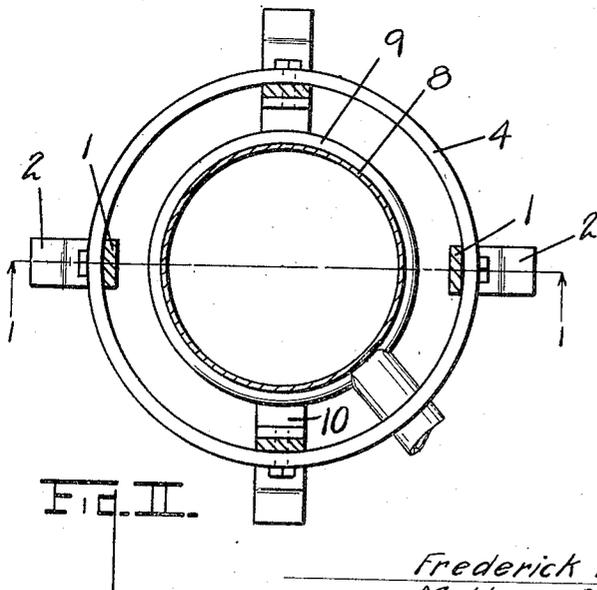
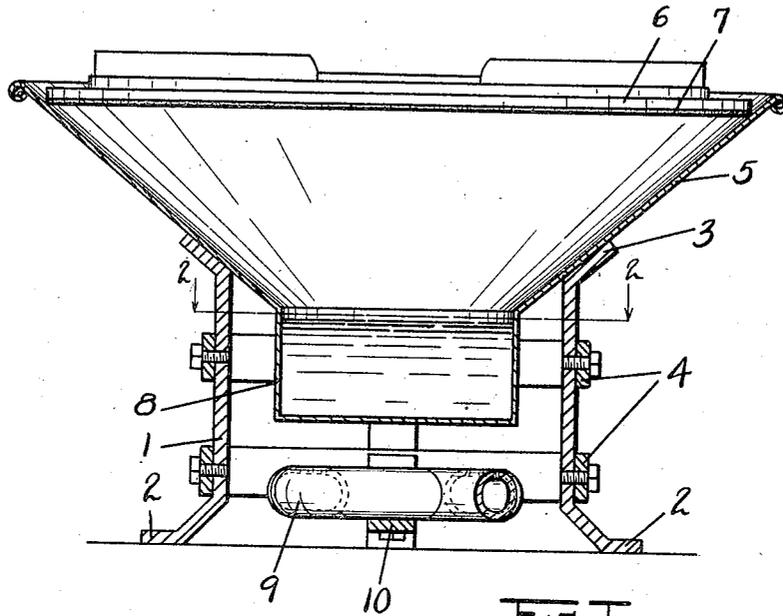
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F. A. WILLARD ET AL

APPARATUS FOR REMOVING ABRASIVE DISKS FROM GRINDING WHEELS

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR REMOVING ABRASIVE DISKS FROM GRINDING WHEELS.

Application filed May 8, 1922. Serial No. 559,500.

To all whom it may concern:

Be it known that we, FREDERICK A. WILLARD and MATHEW D. WILLARD, citizens of the United States, residing at the city and county of Jackson, State of Michigan, have invented certain new and useful improvements in Apparatus for Removing Abrasive Disks from Grinding Wheels, of which the following is a specification.

This invention relates to improvements in apparatus for removing abrasive disks from grinding wheels.

The main objects of the invention are:

First, to provide a simple apparatus by means of which the abrasive disks of disk grinding machines may be steamed to free the same from the grinding wheels.

Second, to provide an apparatus of the class described which leaves the grinding wheel smooth and clean and ready for a new disk.

Third, to provide an improved means for steaming abrasive disks of grinders to remove them from the grinding wheels or plates which applies the steam only to the disk to be removed.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

We accomplish the objects of our invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of our invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a vertical section through an apparatus embodying the features of our invention on a line corresponding to line 1—1 of Fig. II, a grinding wheel being shown in position to be steamed or treated by full lines.

Fig. II is a horizontal section on a line corresponding to line 2—2 of Fig. I.

In the drawings similar reference numerals refer to similar parts throughout both views and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawings, we provide a base comprising spaced uprights 1, the lower ends of which are bent outwardly to provide feet 2, the upper ends being disposed at an angle to provide rests 3. These uprights are connected by a pair of spaced an-

nular members 4. The work or disk holder 5 is shaped like a frustum of an inverted cone and is of such dimensions as to receive grinding disks of considerable size. It is equally well adapted to receive the smaller disks.

The grinding plate or wheel 6 is shown in position to be treated, the face or grinding disk 7 being conventionally illustrated. This holder 5 is arranged in the rests 3. At the lower end of the holder is a steam generating pan 8. In the structure illustrated it is shown formed integral with the holder although in practice the parts are formed as most convenient and suitably joined together.

The pan is supported centrally above the burner 9 mounted on the crosspiece 10 of the base. The pan is relatively small and when the burner is lighted is soon heated to vaporize the relatively small quantity of water in the pan, producing steam or vapor which quickly melts and loosens the glue or water glass or other adhesive employed for the abrasive or grinding disk 7. The upper part of the grinding wheel or plate is not subjected to the steam. It has been the common practice heretofore to soak the grinding wheels to loosen the abrasive. This is not satisfactory as it requires a considerable period of time. The grinding wheel is subjected to water and its surface needs cleaning after the abrasive has been removed.

By the aid of our improved apparatus abrasive is quickly loosened and when pulled off the face of the grinding wheel is comparatively clean and becomes dry in a few seconds and is ready to receive a new disk or sheet of abrasive.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. In a structure of the class described, the combination of a supporting base, an inverted frusto conical grinding disk holder adapted to receive and support grinding disks of varying sizes mounted on said base, a steam generating pan secured to the lower edge of said disk holder to deliver thereto, and a heating burner mounted on said base below said pan.

2. In a structure of the class described, the combination of a supporting base, an inverted frusto conical grinding disk holder adapted to receive and support grinding

disks of varying sizes mounted on said base, and a steam generating pan secured to the lower edge of said disk holder to deliver thereto.

5 3. In a structure of the class described, the combination of an inverted frusto conical grinding disk holder adapted to receive and support grinding disks of varying sizes, and a steam generating pan secured
10 to the lower edge of said disk holder to deliver thereto.

4. In a structure of the class described, the combination of an inverted frusto conical grinding disk holder adapted to receive and support grinding disks of varying sizes, and means for delivering steam into the lower end of said holder. 15

In witness whereof, we have hereunto set our hands.

FREDERICK A. WILLARD. [L. S.]
MATHEW D. WILLARD. [L. S.]