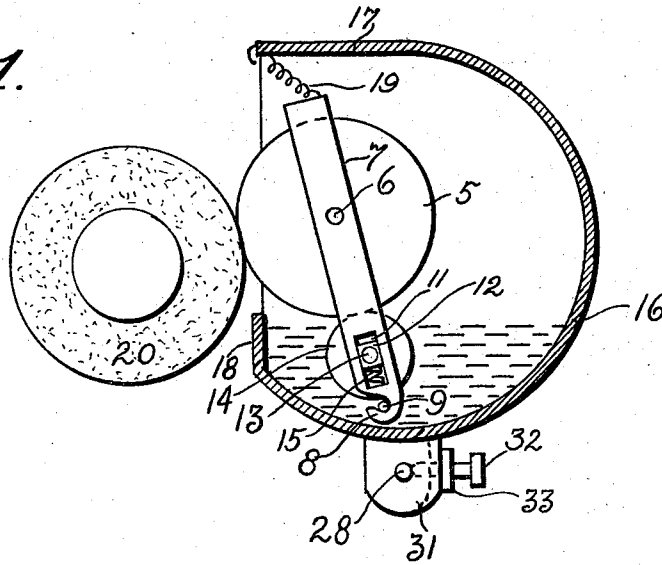


T. J. DAVIS.  
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 APPLICATION FILED JUNE 16, 1915.

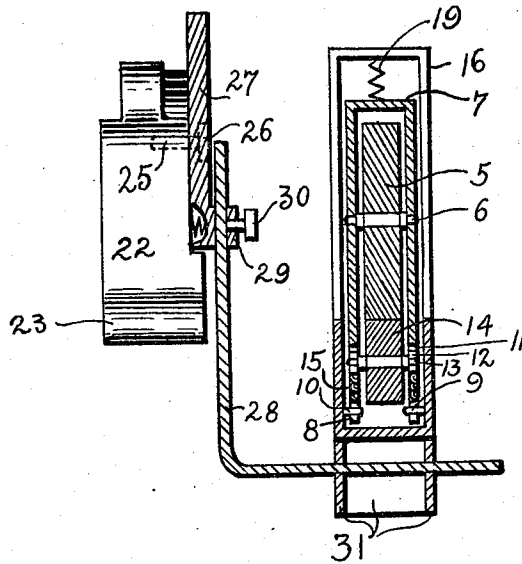
1,185,182.

Patented May 30, 1916.  
 2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*



Witness  
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Fig. 3.

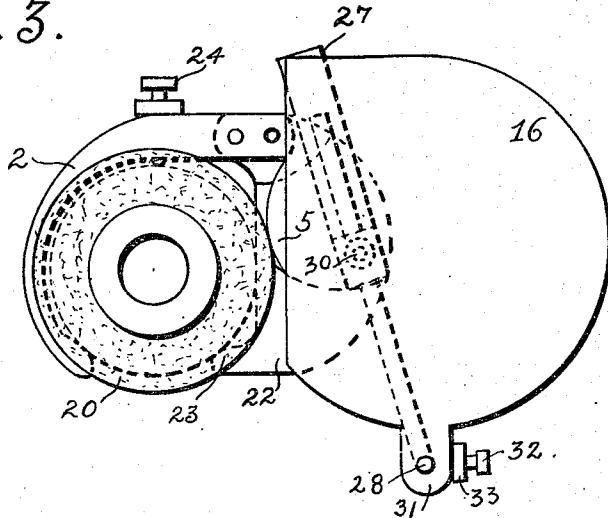
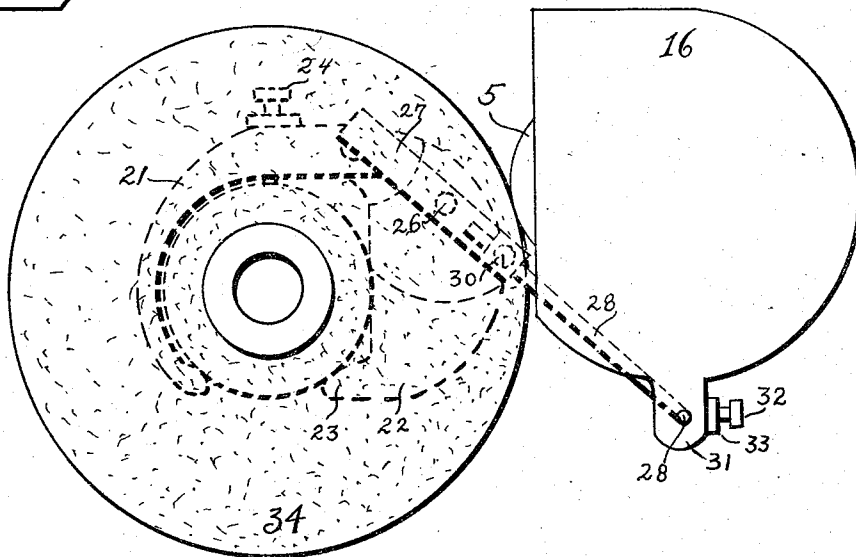


Fig. 4.



Witness :

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# UNITED STATES PATENT OFFICE.

THOMAS JAMES DAVIS, OF NEW YORK, N. Y.

MOISTENING DEVICE FOR ABRASIVE WHEELS:

1,185,182.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed June 16, 1915. Serial No. 34,495.

*To all whom it may concern:*

Be it known that I, THOMAS J. DAVIS, a citizen of the United States, and resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Moistening Devices for Abrasive Wheels, of which the following is a specification.

This application is one of a series of three wherein will be developed not only the moistening device here set forth but also a dust collector and clamping means for securing the moistener and dust collector adjacent to and in operative relation with a grinding or abrasive wheel.

This application will set forth the moistener and its method of operation.

It is my intention to provide a moistener which shall be kept constantly wet from a reservoir containing water or other suitable liquid, and I provide means whereby the moistener will remain in constant proximity to the abrasive wheel and although supplying sufficient moisture thereto will not wet it to an objectionable extent.

The moistener will be found to have means for adjustment so that abrasive wheels of any size may be employed with it, and it will also be found to be so constructed that the moistening wheel or disk, as it may be called, cannot throw off moisture but will receive and deliver only a quantity of the moistening fluid which will be found necessary for the best operation of the abrasive wheel.

I also provide means for compensating for the wear of the abrasive wheel or moistening wheel, a means automatic in its operation and well adapted to insure a constant operative relation of the parts.

The construction of each of the separate units of my device and their method of operation will be fully set forth as the specification progresses.

The following is what I consider a good way of carrying out my invention and the accompanying drawings form a part of this specification in which—

Figure 1 shows the moistener in operative position, the casing being in section so that the interior mechanism may be observed. Fig. 2 shows a central vertical section. Fig. 3 is a side elevation of a moistener used with an abrasive wheel of small diameter. Fig. 4 is a side elevation of a moistener used with an abrasive wheel of larger diameter.

Similar reference numerals indicate like parts in all of the figures where they appear.

One of the principal elements of my invention is what I may term a moistening wheel or disk and which is indicated at 5. This wheel may be made up of several layers of felt or of a single thickness of felt or fibrous material; in my development I have constructed it of woven cloth such as is used in the production of lamp wicks, the disks being cut from the cloth and being arranged upon a shaft 6 are secured thereon so as to produce a readily revolvable wheel.

The shaft 6 finds bearing in an open box section member indicated at 7. The upper end of this member 7 is closed or made to be formed integral with the long extending sides. The lower end of each of the sides is provided with a hook as indicated at 8 and these hooks engage short pins indicated at 9 and 10.

In the box member 7 and under the disk 5 I produce elongated slots directly opposite to each other as indicated at 11 and in these slots I may arrange a bearing member 12 in which the shaft 13 shall find bearing. The shaft 13 receives and supports a smaller wheel or disk 14 which may also be formed of felt or other fibrous material. The disk 14 should be in peripheral bearing with the disk 5, and to secure this I provide a spring 15 under each of the blocks 12 which will urge the blocks upward carrying the disk 14 resiliently impinged upon the disk 5.

The pins 9 and 10 before referred to, are secured in a casing 16 which may be approximately horizontal as indicated in the several figures. The upper side of this casing 16 may be flattened as indicated at 17 and the front side should be open for a short upwardly projecting barrier 18. Within the member 16 the disks 5 and 14 revolve and I place a quantity of liquid in the lower portion of the member 16, a quantity sufficient to almost completely cover the smaller disk 14. This liquid, which may be water, will keep the disk 14 constantly wet, and this disk, bearing against the larger disk 5, will wet it to an extent to allow it to deliver moisture to the surface of an abrasive wheel upon which it will impinge.

I provide a spring member 19 secured to the member 7 and to a convenient point in the casing 16, which spring will urge the

disk 5 to project from the casing 16 and to impinge upon the abrasive wheel which is indicated at 20. The rotation of the abrasive wheel will rotate the disks 5 and 14 with the desired result.

The drawings indicate that my device is adjustable. The adjustability is attained by means of a clamp formed of a finger member 21 to which is hingedly supported a block 22, having an inward projection 23. The finger member or projection 23 may be engaged upon the bearing of a motor or upon any other convenient support and when the adjusting screw 24 is forcibly impinged upon the supporting member the clamp will be secured thereto firmly though adjustably and removably.

The block 22 is provided with a screw-threaded perforation 25 into which a screw 26 may be introduced. The screw receives and retains an L-shaped block 27 the projection of which is perforated for the reception of an angled rod 28; this rod may be adjustable through the projection 29 and may be secured therein by the thumb screw 30.

Upon the angularly projecting portion of the rod 28 I may arrange a lug 31 which is shown as secured to or formed integral with the casing 16, and I may also provide a thumb screw 32 and lock nut 33 in the block 31 for adjustably securing this member to the rod 28.

When the moistener is to be used with an abrasive wheel of small diameter the screws 26, 30 and 32 are loosened, the upper end of the rod 28 forced upward, the block 27 partially rotated on the screw 26 and the casing 16 partially rotated on the rod 28. This will cause the disk 5 to impinge with a desirable pressure upon the small abrasive wheel indicated at 20. When, however, a large wheel, such as is indicated at 34 is to be used, the screws are again loosened, the rod 28 withdrawn to a desirable extent, the block 27 and casing 16 partially rotated, and when the disk 5 bears with suitable pressure upon the face of the larger wheel the parts may be again re-secured and the device operated in the same satisfactory manner and with the same effectiveness found in its operation with a smaller wheel.

It will be noted that in all positions the casing 16 is retained with its short straight open side vertically disposed and it will also be noted that the opening in the casing is contracted to an extent to forbid the discharge of great quantities of liquid therefrom. The only liquid leaving the casing is that carried by the disk 5.

It is obvious that the proportionate sizes of the several elements of my invention may be increased or decreased at will. It is further obvious that any suitable means may be employed for securing my device in operative relation to an abrasive wheel and it is further obvious that other modifications may be made within the scope of the appended claims without departing from the principle or sacrificing the advantages of this invention.

Having carefully and fully described my invention, to the best of my ability, what I claim and desire to secure by Letters Patent is.

1. A moistener for abrasive wheels comprising a casing, a plurality of disks within said casing one adapted to project from said casing and resilient means for securing an operative relation between said disks and an abrasive wheel as and for the purpose set forth.

2. A moistener for abrasive wheels comprising an approximately cylindrical reservoir, a frame pivoted therein, a stationary and movable bearing in said frame and a moisture transferring disk in said bearings and one adapted to be projected from said casing as herein specified.

3. A moistener for abrasive wheels comprising an approximately cylindrical reservoir and a rotatable and bodily movable disk arranged normally below the liquid in said reservoir, a larger disk upon which the first disk impinges and means for urging said larger disk toward an abrasive wheel.

4. A moistener for abrasive wheels comprising a casing, adjustably secured in relation to said wheel, a plurality of fibrous disks within said casing and resilient means for impinging one disk upon another and one of said disks upon said wheel as and for the purpose set forth.

5. A moistener for abrasive wheels comprising an approximately cylindrical reservoir, a plurality of pins projecting into said reservoir, a bearing supporting member provided with hooked ends adapted to engage said pins, a plurality of disks supported by said bearing supporting member and one of which is adjustable therein, and means for adjustably supporting said reservoir adjacent to said abrasive wheel as and for the purpose set forth.

Signed at New York city, county and State of New York, this 11th day of June, 1915.

THOMAS JAMES DAVIS.

Witnesses:

G. E. S. MARR,  
ARTHUR PHELPS MARR.