March 22, 1927. 1,621,909

S. L. SMITH

DRYING MOP

Filed Sept. 21, 1925

FIG.1.

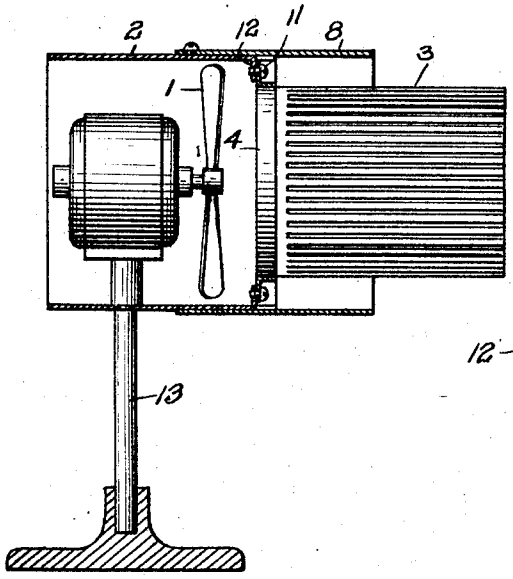


FIG.5.

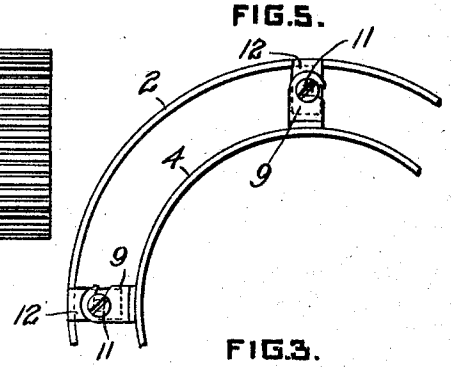


FIG.3.

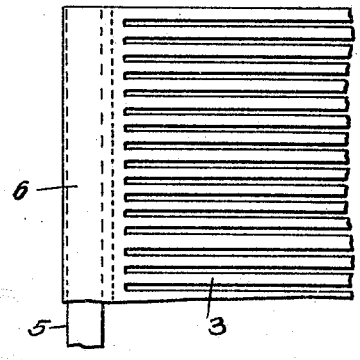


FIG.2.

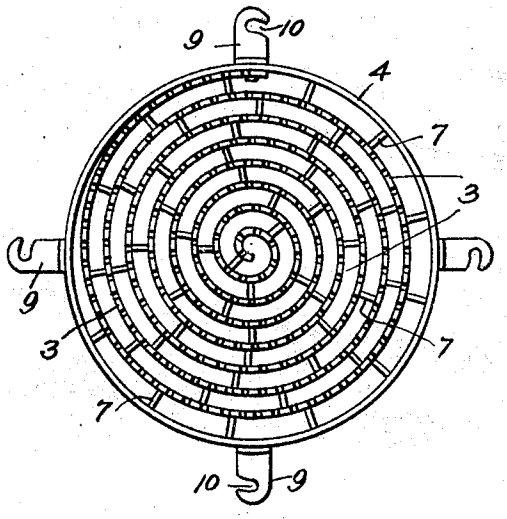
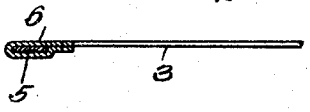


FIG.4.



WITNESSES

J. Hobart Bradley.

INVENTOR

Sidney S. Smith

by Dennis S. Wolcott

Atty

Patented Mar. 22, 1927. 1,621,909

UNITED STATES PATENT OFFICE.

SIDNEY L. SMITH, OF PITTSBURGH, PENNSYLVANIA.

DRYING MOP.

Application filed September 21, 1925. Serial No. 57,573.

The invention described herein relates to certain improvements in a drying device especially adapted to remove moisture from highly polished surfaces, such for example as those of automobile bodies. The invention has for its object the employment of an absorbent body consisting of strands of suitable fibrous material and streams or jets of air which will hasten the vaporization of the moisture on the polished surface and also the moisture absorbed by the material forming the body of the mop. The invention is hereinafter more fully described and claimed.

In the accompanying drawing forming a part of this specification, Fig. 1 is a view partly in section and partly in elevation, illustrating the improvement described and claimed herein; Fig. 2 is an elevation of a frame having the strands of absorbent material attached thereto; Figs. 3 and 4 are detail views illustrating a suitable means of attaching the absorbent material to the spider; and Fig. 5 is a detail view illustrating a suitable means of detachably securing the spider in operative position.

In the practice of the invention, an electrically driven fan 1 of suitable construction is enclosed in a cylindrical shell 2 open at both ends, the front or discharge end being preferably extended beyond the fan. In front of the fan is arranged a body 3 of absorbent material permeable by the air driven by the fan. This body can be conveniently formed of a strip of cotton of suitable width and divided transversely and slitted a sufficient depth to form strands. The unslitted side of the strip is attached to a frame or spider 4 arranged within the shell 2. A convenient manner of connecting the absorbent material to the frame consists in passing a strip of metal 5 through a sheath 6 formed along one edge of the material and then spirally bending such metal strip as shown in Fig. 2. One end of the spiral is secured to the frame and the adjacent convolutions are connected by clips 7. By thus shaping the absorbent material a cylindrical body is formed consisting of spaced elements between which air is forced by the fan. The air is driven by the fan through and around the body of absorbent material. The air does not flow in straight lines but tends to move outwardly at an angle to the axis of the fan and will cause a spreading or mushrooming of the strands rendering their contact with the surface of the object to be dried uncertain and irregular. In order to reduce such flaring and back and forth waving of the strands the shell is provided with a telescopic section 8. It will be observed that there is an annular space between the periphery of the frame 4 carrying the absorbent material. As this annular space receives air from the wider portions of the blades of the fan, such air will have a higher velocity than the air passing through the absorbent material. By adjusting the telescopic section out and in the annular stream of air will strike against any outwardly moving strands at different points and press them inwardly thereby rendering the body of strands more rigid and bear more firmly against the surface to be dried.

In order to permit of the renewal of the absorbent material, provision is made for the easy removal of the frame or spider, which in the construction shown is provided with radial lugs 9 having laterally open notches 10 which can be caused to engage pins 11 on inwardly projecting lugs 12 on the shell 2, by a partial rotation of the frame or spider. The apparatus is provided with a handle 13 whereby the mop may be moved over the surface to be dried.

As the strands strike against the wet surfaces, considerable moisture will be absorbed, and a further drying will be effected by the action of the air. In addition to its drying action on the wet surfaces the air will cause an evaporation of moisture absorbed by the strands.

I claim herein as my invention:

1. In an apparatus for removing moisture from surfaces the combination of a fan and a body of stranded absorbent material arranged in the stream of air formed by the fan whereby the strands are yieldingly held in contact with the moist surfaces.

2. In an apparatus for removing moisture from surfaces the combination of a fan, an open ended shell surrounding the fan, a body of stranded absorbent material having one end centrally supported in the shell whereby the strands are yieldingly held in contact with the moist surfaces.

3. In an apparatus for removing moisture from surfaces the combination of a fan, an open ended shell surrounding the fan, a frame having a diameter less than the diameter of the shell mounted in the shell, and a body of stranded absorbent material having one end connected to the frame.

4. In an apparatus for removing moisture from surfaces the combination of a fan, an open ended shell surrounding the fan, a frame having a diameter less than the diameter of the shell mounted in the shell, and a body of stranded absorbent material having one end connected to the frame, and a telescopic section mounted on the shell.

5. In an apparatus for removing moisture from surfaces the combination of a fan and a body of stranded absorbent material arranged in the stream of air formed by the fan, said absorbent material comprising a strip of fibrous material in the form of a plurality of spiral convolutions.

6. The herein described method of removing moisture from a surface which comprises passing a dry moisture-absorbing body upon the surface, and simultaneously therewith projecting a stream of air through said body and upon said surface to accelerate evaporation of the moisture absorbed by said body and the moisture on said surface.

In testimony whereof I have hereunto set my hand.

SIDNEY L. SMITH.