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A. ROBERTSON
FLOOR FINISHING MACHINE

1,752,965

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Fig. 1.

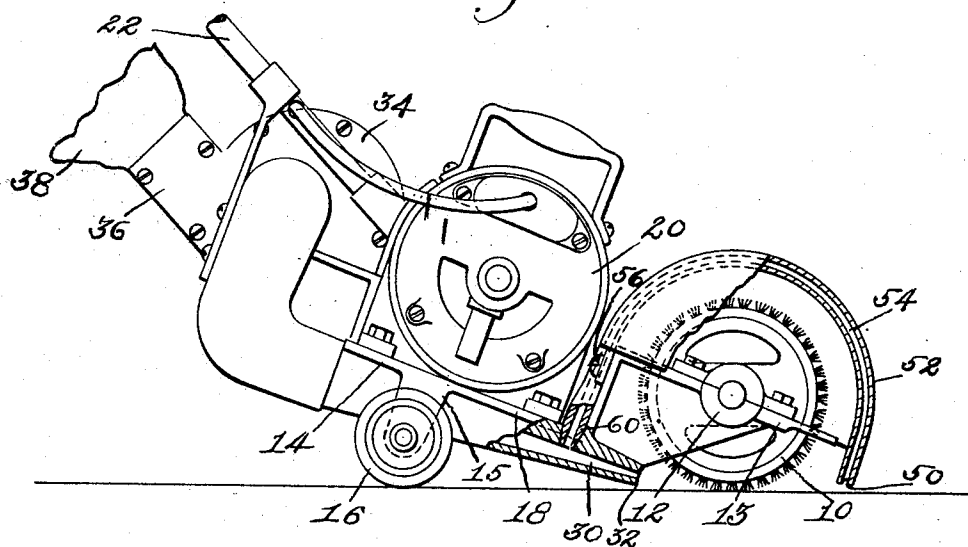
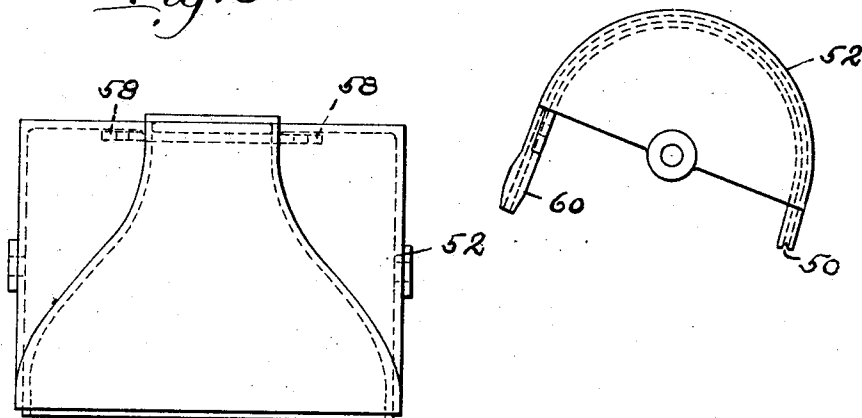


Fig. 2.

Fig. 3.



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FLOOR-FINISHING MACHINE

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This invention relates to a floor finishing machine.

The object of the invention is to provide a novel and improved construction of floor finishing machine which is particularly useful as a floor polishing machine of the general type having a rotary floor finishing member adapted to be rotated in contact with the floor as the machine is pushed thereover.

With this object in view and such others as may hereinafter appear, the invention consists in the floor finishing machine hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention, Figure 1 is a side elevation with portions broken away, illustrating the improved floor finishing machine; Fig. 2 is a plan of the combined hood and auxiliary suction conduit for the floor finishing member; and Fig. 3 is a detail in side elevation of the same.

The present invention aims to provide an improved floor finishing machine of the type which forms the subject matter of my co-pending application Serial No. 228,661, in which the floor finishing operation is performed by a rotary abrasive or polishing member such as a sandpapering roll or a rotary polishing brush. In the use of a machine of this general character, it has been found that under some conditions of use the most efficient operation of the floor finishing member is interfered with by small pieces of paper, dirt and various other obstacles upon the floor to be finished. This is particularly true when the machine is used as a polishing machine, and in accordance with the present invention in order to overcome this condition in the use of the machine, the present floor finishing machine is provided with means for automatically removing such obstacles from a position immediately in front of the floor finishing member and sufficiently near the floor to insure the picking up of such small obstacles as paper, dust, dirt, and the like. In the preferred machine the forward suction nozzle is preferably connected to the main suction conduit by a suction conduit formed within a hood extended

over the floor finishing member and the hood is preferably removably connected to the main suction conduit whose nozzle is arranged to terminate in the rear of the floor finishing member.

Referring now to the drawing, in the illustrated machine, 10 represents a floor finishing element which may comprise any usual or preferred form of sandpapering wheel or a polishing wheel, and which is journaled in suitable bearings 12 in a yoke 13 at the forward end of a metal frame 14. The metal frame 14 is provided with depending arms 15 in which casters 16 are mounted so that the machine is operatively supported upon the casters 16 and the floor finishing wheel 10 as illustrated in Fig. 1. The metal frame 12 is provided with a base portion 18 which forms a support for an electric motor 20, and provision is made for operatively connecting in any usual or preferred manner the electric motor 20 with the floor finishing wheel 10 to cause rotation of the same. The machine is arranged to be pushed over the floor to be finished by means of an operating handle 22. Provision is made for collecting the dust formed during the finishing of a floor, and for this purpose the frame is provided with a main suction conduit 30 preferably cast integrally with and beneath the base plate 18 and having the forward end thereof elongated laterally and terminating in a suction nozzle 32, the latter being located immediately behind the finishing wheel and adjacent the floor in a position such as to insure the collection of the dust formed during the finishing operation. The end of the suction conduit is connected to the suction side of a suction fan 34 and the discharge side of the fan is connected to a discharge pipe 36 onto which the mouth of a collection bag 38 is removably clamped in a convenient manner. The details of the machine as thus far described comprise those illustrated in my co-pending application Serial No. 228,661 above referred to and of themselves constitute no part of the present invention.

In certain conditions of use of the floor finishing machine it is desirable that small obstacles reposing upon the floor such as paper,

dirt and the like, be automatically removed from in front of the floor finishing element in order that the machine may operate with maximum efficiency. As herein shown this result is accomplished by the provision of an auxiliary suction nozzle 50 disposed in front of the floor finishing wheel and located sufficiently near the floor to insure the sucking up of the obstacles. The suction nozzle 50 is preferably formed in the forward end of a hood 52 and is connected by an auxiliary suction conduit 54 formed within the hood to the main suction conduit 30. As herein shown the hood 52 is removably secured to the frame of the machine by screws 56 cooperating with ears 58 formed upon the hood. The hood is preferably provided with a tapered end portion 60 adapted to fit into a tapered slot in the base plate of the machine thus connecting the auxiliary and main suction conduits 54, 30 as illustrated in Fig. 1 and providing suction at both the forward and rear suction nozzles.

The provision of the forward and rear suction nozzles assists materially in the most efficient operation of the machine as a polishing machine in which the effect of the rotary brush has been in the absence of the forward suction nozzle to blow the dirt, paper and other obstacles continually in front of the polishing wheel.

While the preferred embodiment of the invention has been illustrated and described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:—

1. A floor finishing machine having, in combination, a frame, a floor finishing member rotatably mounted upon the frame, motor driven means for rotating said member about its own axis, and a suction device mounted upon the frame and provided with suction nozzles disposed immediately in front and in the rear of said floor finishing member and adjacent the floor.

2. A floor finishing machine having, in combination, a frame, a rotary floor finishing element mounted thereon, a suction conduit mounted on the frame and provided with a suction opening located in the rear of said floor finishing element, and an auxiliary conduit removably connected with said first suction conduit and having a suction opening disposed in front of said rotary floor finishing element.

3. A floor finishing machine having, in combination, a frame, a rotary floor finishing element mounted thereon, a suction conduit mounted on the frame and provided with a suction opening located in the rear of said floor finishing element, and an auxiliary conduit connected with the aforesaid suction conduit and extended over the floor finishing

element to form a hood therefor and provided with a suction opening disposed in front of said floor finishing element.

4. A floor finishing machine having a rotary polishing element mounted at the forward end thereof, a suction device provided with a suction nozzle terminating immediately in the rear of said floor finishing element, a collection receptacle connected with said suction creating device, a hood extended over the upper portion of said floor finishing element and having the forward end thereof terminating near the lower part of and immediately in front of said floor finishing element and provided with a suction opening, and a suction conduit formed in said hood and connected with the first mentioned suction conduit.

In testimony whereof I have signed my name to this specification.

ALEXANDER ROBERTSON.