Nov. 5, 1940. E. FABER 2,220,224

MACHINE FOR OPERATING ON FLOORS

Filed May 3, 1938

Fig.1

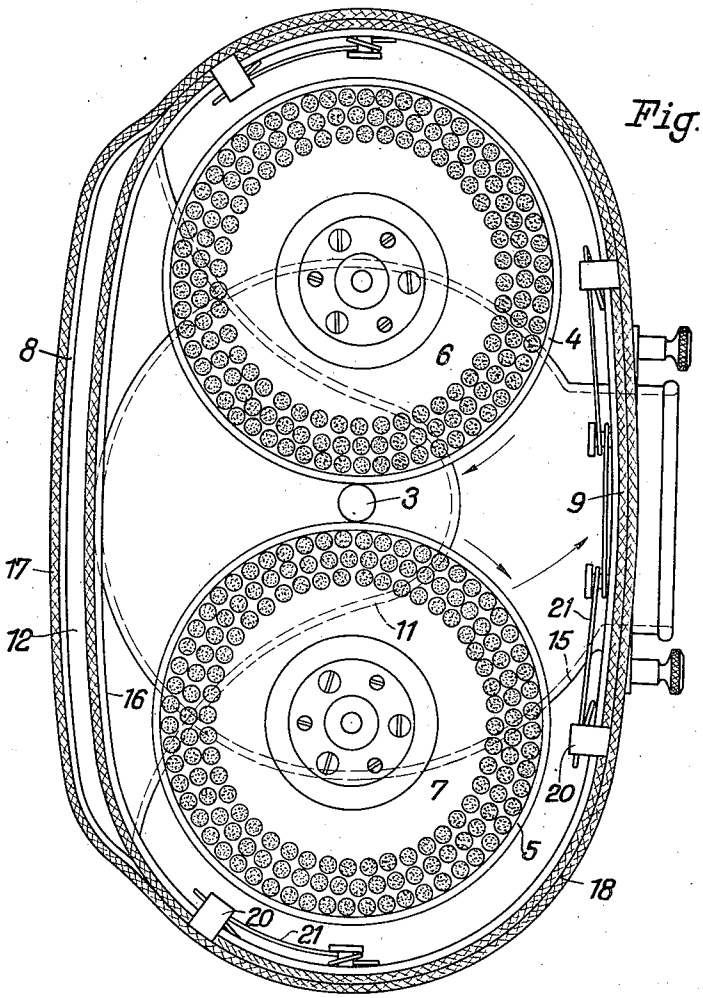
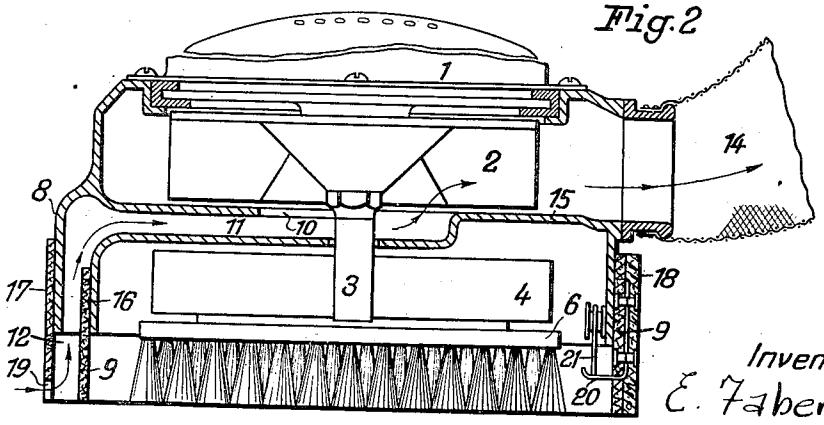


Fig.2



Inventor:
E. Faber

By: Glascock Downing & Seibold
Attys.

Patented Nov. 5, 1940 2,220,224

UNITED STATES PATENT OFFICE

2,220,224

MACHINE FOR OPERATING ON FLOORS

Ernst Faber, Stuttgart, Germany

Application May 3, 1938, Serial No. 205,840
In Germany December 19, 1936

3 Claims. (Cl. 15—4)

This invention relates to a machine for operating on floors and provided with a fan for sucking up dust, more particularly a waxing machine, in which the operating tool is surrounded by a shield arranged all round at the lower end of the machine housing and extending down to the floor.

In a known waxing machine of this kind, in which the shield consists of bunches of bristles fixed next to one another at the lower end of the machine housing and having their lower ends close together and in which the dust suction acts within the shield, the bunches of bristles, when the machine is being moved forwards on the floor, push a great amount of the dust lying on the latter along in front of them without sucking it up, since outside the shield, through which air is sucked from the outside, the suction force is only very slight, owing to its being spread over a large and entirely unenclosed peripheral surface.

This disadvantage is overcome in accordance with the invention through the provision of a suction nozzle in front of the shield. The invention also includes a particularly advantageous construction of the suction nozzle.

The accompanying drawing illustrates by way of example a constructional form of a waxing machine according to the invention with two brush discs.

Fig. 1 is a view from below and

Fig. 2 a view from the side in vertical section.

1 is an electric motor mounted on the top of the machine housing, which drives a fan 2 fixed on its shaft and by means of the bottom end 3 of its shaft, which is constructed as a friction wheel, two friction discs 4, 5 mounted so as to be capable of rotating in the machine housing and two brush discs 6, 7 fixed to the friction discs and bearing on the floor, so as to rotate in the same direction of revolution. The lower end 16 of the machine housing, which extends around the friction discs 4, 5 and the upper ends of the brush discs 6, 7 is closed at the top by an intermediate wall 15 which is disposed immediately below the fan 2 and is provided with a central opening 10 and carries, adjoining this opening, a suction passage 11 which widens considerably towards the front, is bent downwards at its forward end and is there formed by the front wall of the lower end 16 of the machine housing and a wall 8 disposed in front of the same. Above the intermediate wall 15 an air filter bag 14 is connected laterally to the machine housing. Over the part 16 of the machine housing is pushed from below with a tight fit a shield 9 of felt or some similar yielding, but relatively stiff material, which embraces the part 16 and reaches down to the floor. Over the front wall 8 of the suction passage 11 is pushed from below with a tight fit and so as to extend over the entire width of the passage a covering 17 of felt or some similar yielding, but relatively stiff material. This covering is continued at its sides as a covering 18 which surrounds the shield 9 at the sides and the back and is sewn to it or fixed to it in any other manner. At its bottom edge the covering 17 has a low cut away place 19 which extends across the entire width of the covering, but may be narrower. In order to ensure that, on the machine being placed in an inclined position on the floor, the felt strips will not be displaced on one side in such a manner as not to rest all round on the floor, there are inserted at a number of peripheral places of the strips or strip parts 9, 18 into the latter inwardly projecting bars 20, against which press springs 21 fixed to the inside of the housing part 16. The arrangement may also be made such in a simple manner that the felt strips are safely secured by the springs or other means against slipping down.

On the motor being supplied with current and the machine being moved forward on the floor, it will draw in air with strong suction through the opening 19 and consequently the dust lying on the floor in front of the machine. To the extent, to which the brush discs become worn through the machine being used, the shield 9 and the covering 17, 18 will be automatically pushed upwards on the part 16 of the machine housing and the front wall 8 of the suction passage as they sink downwards, so that they will suffer no damage, will always bear closely on the floor and will always ensure a good suction effect. Where the front wall 8 of the suction passage merges into the housing wall 16 the shield 9 is cut away at its upper part so as to enable it to slide upwards unhindered by the front wall of the suction passage. The covering part 18 may be omitted, in which case the lateral ends of the covering 17 are fixed to the shield 9. In place of felt strips or the like extended right down to the floor strips set with bristles at the bottom may used. The waxing tool may, if required, be replaced by a grinding, planing or polishing tool.

What I claim is:

1. A machine for operating on floors, comprising the combination of a housing, a tool in said housing for operating on the floor, a continuous

yieldable shield arranged around the lower end of the housing and reaching down to the floor, a suction conduit, and a suction nozzle arranged outside said shield and communicating with said suction conduit for sucking up dust from the floor in front of the machine.

2. A machine for operating on floors, comprising the combination of a housing, a tool in said housing for operating on the floor and a shield arranged around the lower end of the housing and reaching down to the floor, with a suction conduit having its front wall extending downwards in front of the front wall of said housing and a covering skirt depending from the front wall of said suction conduit and extending towards the floor over the entire width of the suction conduit, said covering skirt being fixed at both sides to the shield so as to form with the shield a suction nozzle communicating with the suction passage for sucking up dust from the floor in front of the machine.

3. A machine for operating on floors, comprising the combination as set forth in claim 2, the shield being movable upwardly and downwardly on the housing, and the covering skirt being movable upwardly and downwardly on the front wall of the suction conduit with springs arranged to urge the shield and the covering skirt downwards against the floor.

ERNST FABER.