Nov. 6, 1945. M. E. LEDERMAN 2,388,486

SURFACE WAXING AND POLISHING MACHINE

Filed Oct. 15, 1943 3 Sheets-Sheet 1

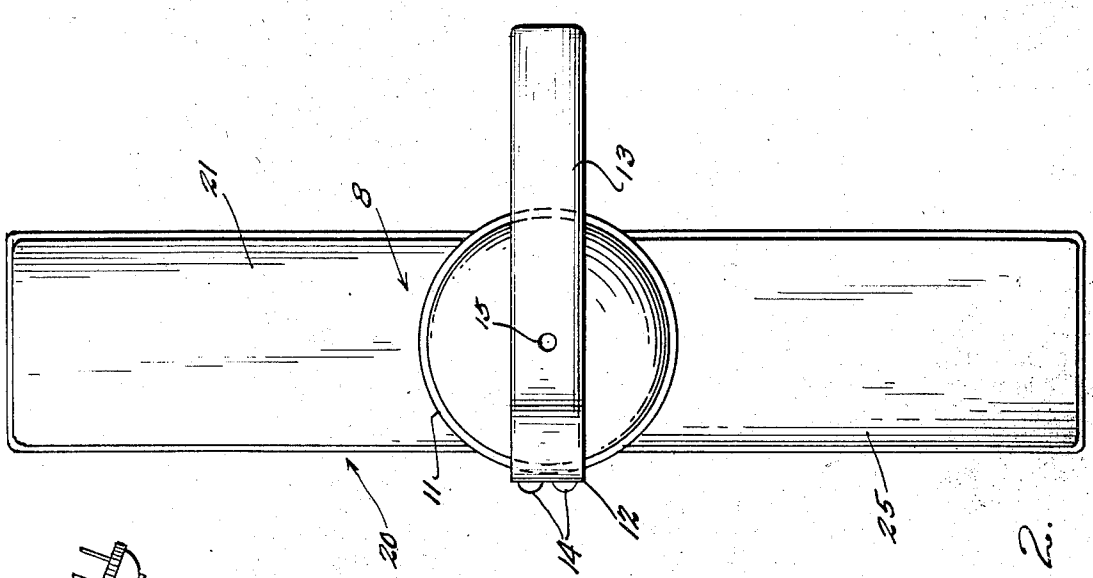


Fig. 2.

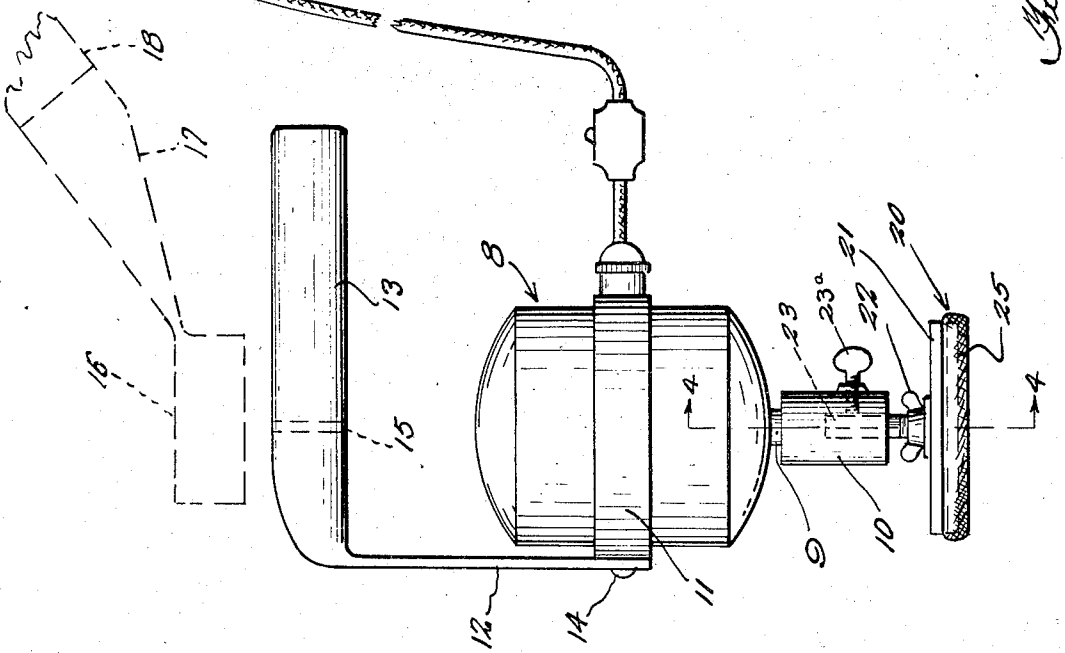


Fig. 1.

Inventor

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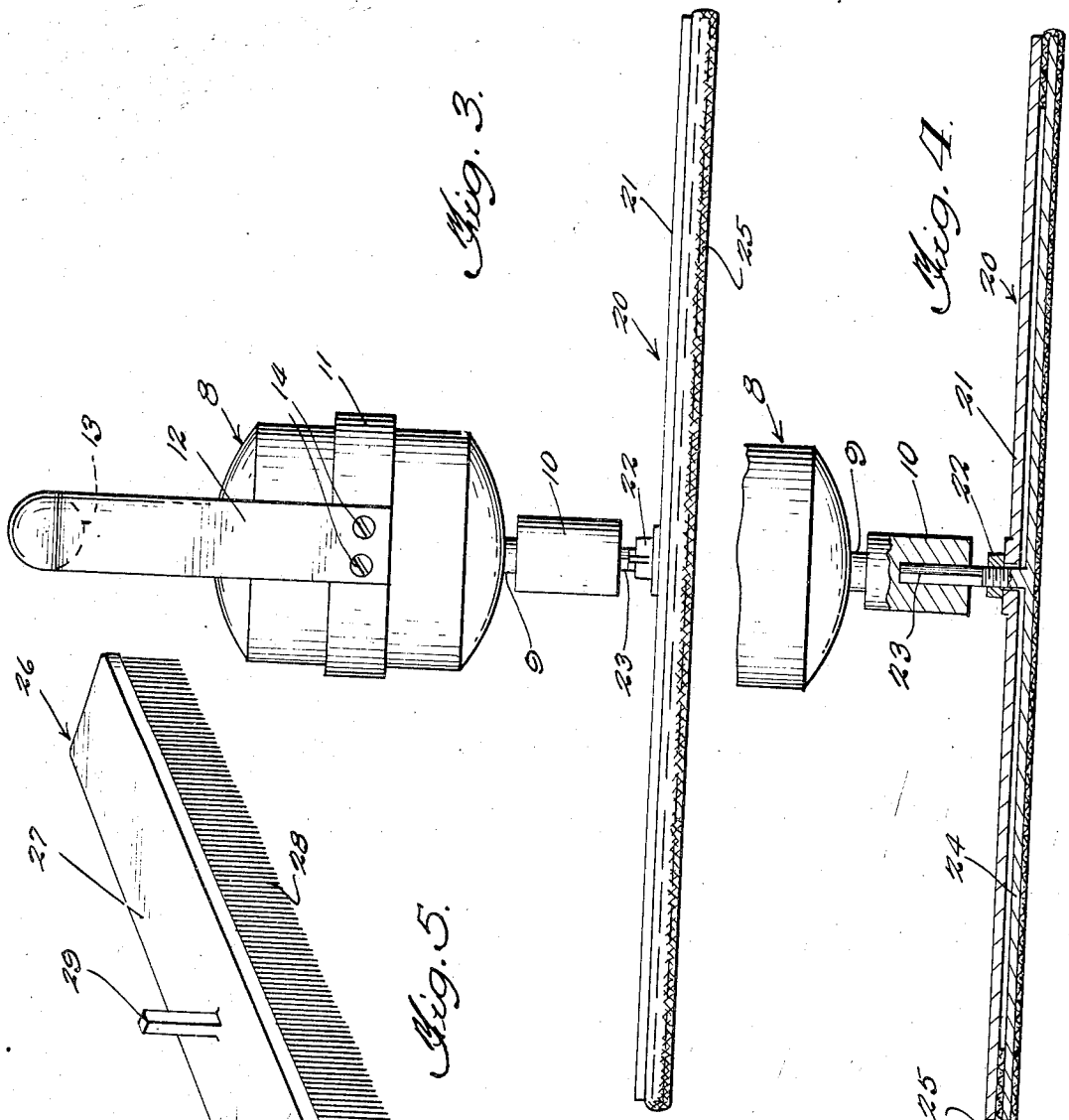
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SURFACE WAXING AND POLISHING MACHINE

Filed Oct. 15, 1943 3 Sheets-Sheet 2



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SURFACE WAXING AND POLISHING MACHINE

Filed Oct. 15, 1943 3 Sheets-Sheet 3

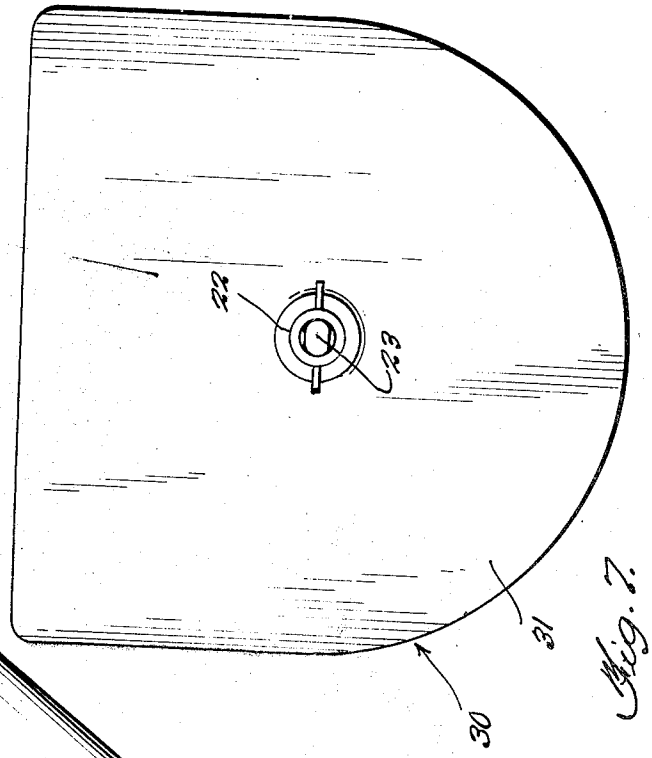


Fig. 7.

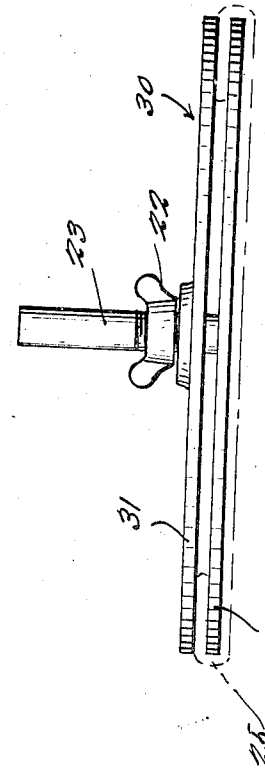


Fig. 8.

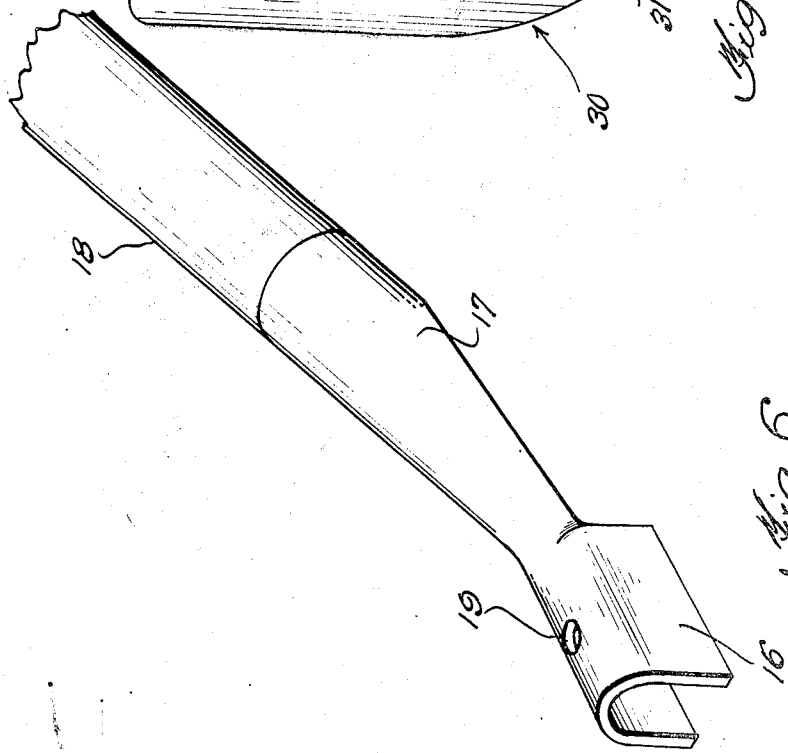


Fig. 6.

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Patented Nov. 6, 1945

2,388,486

UNITED STATES PATENT OFFICE

2,388,486

SURFACE WAXING AND POLISHING MACHINE

Mack E. Lederman, Seattle, Wash.

Application October 15, 1943, Serial No. 506,430

1 Claim. (Cl. 15—97)

This invention relates to what is believed to be a novel type motorized machine to facilitate the waxing and polishing of virtually all types of metal and wood surfaces, for example, surfaces on floors, furniture, automobiles and the like.

Briefly, the preferred embodiment of the invention is characterized by interchangeable standardized applicator units such as brushes and pads, these parts being attached to an electric vibrator motor and the latter being equipped with handling means, whereby to facilitate shifting it over and around the surface being treated.

In carrying out the principles of this invention I aim to generally improve upon other types of floor waxing and polishing machines by providing a structure in which virtually no manual labor is required and desired results are obtained by a novel head and vibratory motor assemblage producing quick intermittent hammer-like blows, these impacts being transmitted to the surface by way of the applicator head whereby to cause the latter to sufficiently pounce upon the surface to produce substantially imperceptible pounding blows which, in conjunction with back and forth swabbing or mopping motion of the applicator head as it is pushed from place to place, produces a high gloss finish.

The invention is not to be confused with rotary type brush waxers as there are no relatively moving parts susceptible of getting out of order or requiring frequent repair and replacements. On the contrary it is a simple and expedient structure which is effective and aptly useful for the intended purposes.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is an elevational view of the vibrator or pouncer-type waxing and polishing machine constructed in accordance with my idea.

Figure 2 is a top plan view of the structure seen in Figure 1.

Figure 3 is an elevation, that is, a view observing Figure 1 in a direction from left to right.

Figure 4 is a longitudinal section on the plane of the line 4—4 of Figure 1.

Figure 5 is a perspective view of an alternate type of applicator of a brush form.

Figure 6 is a perspective view of an extension handle.

Figure 7 is a top plan view of a different type of applicator.

Figure 8 is an end view of the applicator seen in Figure 7.

The vibrator-type electric motor, which may be of any suitable conventional form and construction is referred to in the drawings by the numeral 8. It is of suitable dimensions and weight to function in a surfacing machine of the type here-in under consideration. The shaft, that is, the quick reciprocating shaft is indicated at 9 and this is provided with a socket 10 to accommodate the various applicator accessories. A band or similar adapter 11 constitutes a part of the harness which is fitted on the motor and the vertical shank 12 of the handle 13 is fastened to the band as at 14. This part 13 may be used as a short hand grip when it is found advisable to utilize the structure, for instance, in polishing vertical surfaces, or automobile surfaces, or other parts conveniently close at hand. A bolt hole is indicated at the point 15. This is to accommodate a U-shaped saddle 16 on one end of a ferrule 17 carried on the lower end of a reach or extension handle 18. The handle 18 is used, obviously, when the device is shifted about a floor or other surface where the attendant is standing or walking to do the job. A bolt hole 19 in the saddle or stirrup serves to join the parts 16 and 13 together. Any appropriate bolt or fastening (not shown) may be used.

There are different types of applicators or heads which can be used in connection with the structure. One type is disclosed in Figures 1 to 4, inclusive, this being an elongated rectangular form as denoted by the numeral 20. It comprises a head and assembling plate 21 centrally apertured and provided with a nut 22 to engage the threaded part of a pin or stem 23 on the complemental backing plate 24, that is, the backing plate for the cloth or other covering 25. Incidentally, the part 23 may be cylindrical and held in place by a set-screw 23a as shown in Figure 1, or it may be polygonal (with said set-screw omitted) to fit into a correspondingly-shaped socket in the part 10.

In certain instances the applicator may be in the form of a brush 26 (see Figure 5) which includes a back 27 and bristles 28 and a driving shank or stem 29 on the central part of the back. Furthermore, a different type of applicator as indicated at 30 in Figures 7 and 8 may be used. This is the same as the applicator 20 except that the plates 31 and 32 are of the shape or contour shown. One end is somewhat rounded into semi-

circular form and the other end straight across or substantially rectangular whereby to adapt the structure for use in places which would not be readily accessible to the long type applicator **20** already described. Correspondingly parts of the applicator **30**, that is, parts which correspond with those indicated in reference to the part **20** are designated by like reference characters. The marginal edges of the polishing cloth clamp between the plates or a draw-string (not shown) is used to insure a more perfect assemblage of parts.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthly description is regarded as unnecessary.

Minor changes in the shape, size and arrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having described the invention, what is claimed as new is:

A floor waxing machine comprising a portable electric motor of the vibrator type having a vertical shaft longitudinally reciprocable to have rapid, substantially imperceptible short strokes, said shaft having a projecting lower end, a handle carried by the motor, and a floor polishing or waxing applicator of the rigid type carried by the projecting lower end of said shaft for rapidly striking the surface being treated while being manually moved over the latter, the active surface of said applicator being flat and of relatively large area and disposed at right angles to the axis of reciprocation of said shaft.

MACK E. LEDERMAN.