

Oct. 21, 1941.

E. PRIMEAUX

2,259,941

SURFACE POLISHER

Filed May 4, 1940

2 Sheets-Sheet 1

Fig. 1.

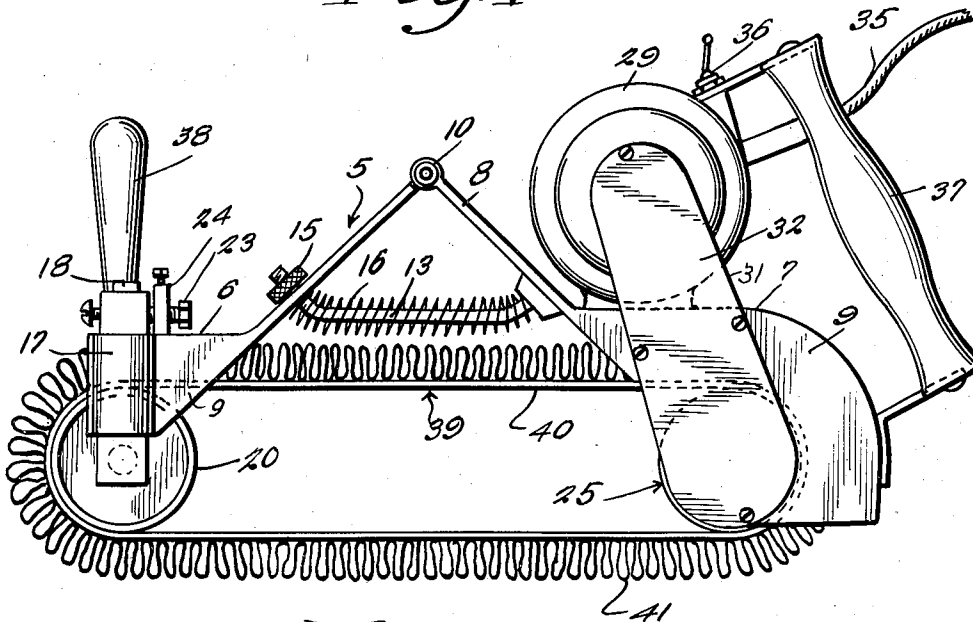


Fig. 2.

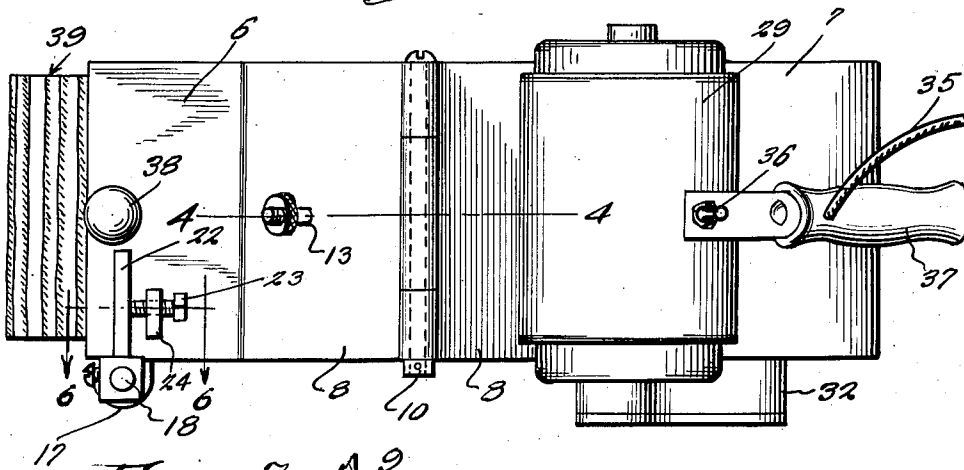
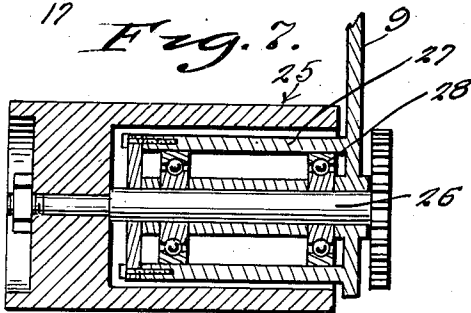


Fig. 3.



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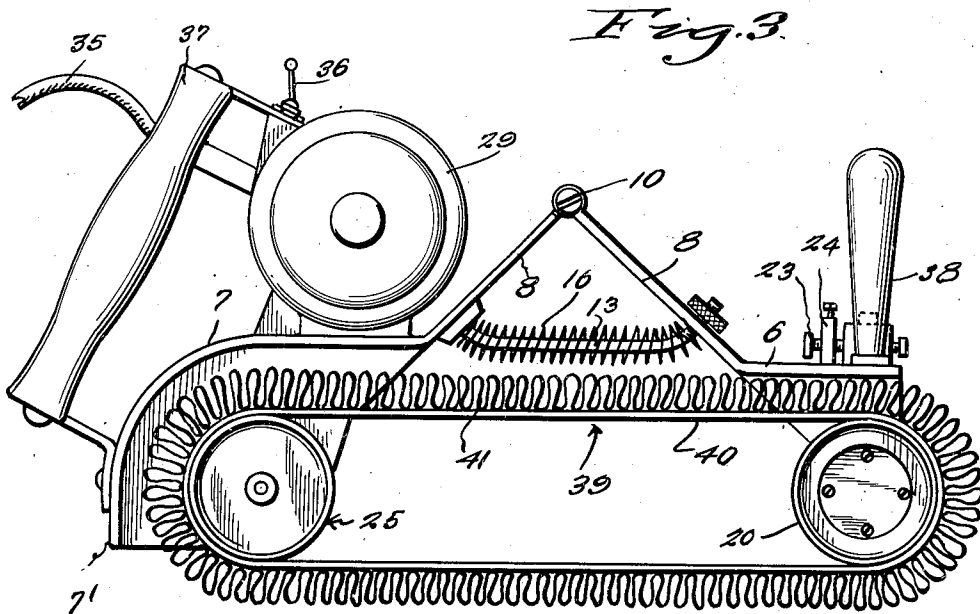
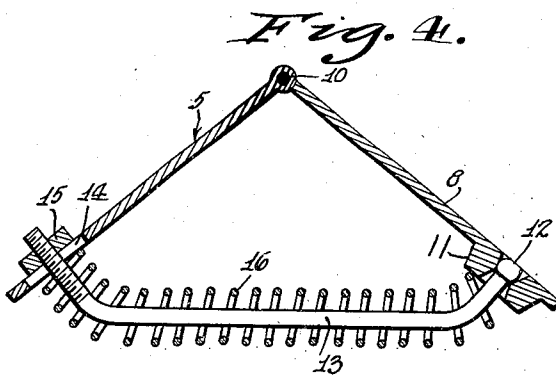
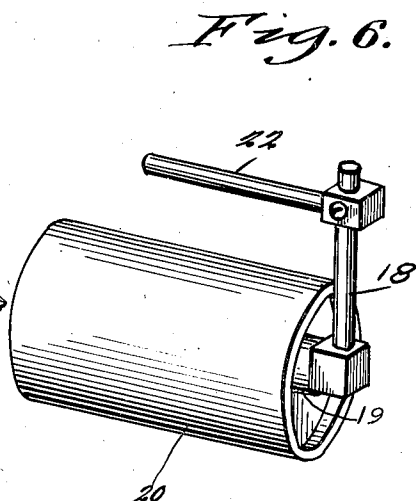
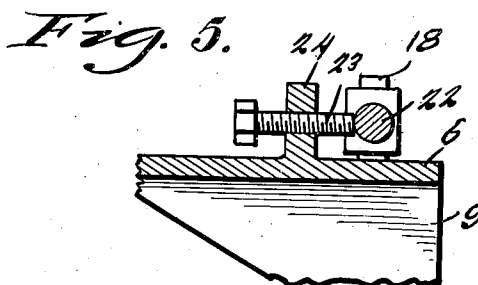
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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SURFACE POLISHER

Ely Primeaux, Alexandria, La.

Application May 4, 1940, Serial No. 333,379

1 Claim. (Cl. 15—97)

This invention relates to surface polishers, and has for the primary object the provision of a portable power driven device of this character which will be efficient and economical to construct and maintain in operation and will be extremely easy to handle and operate in small spaces and includes in its construction an endless polishing element and a self-adjusting mounting therefor as well as a support for the power means and which will maintain the endless polishing element with sufficient tautness to assure of its movement relative to a surface by said power means and still permit the endless polishing element to give and conform to the shape of the surface.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a side elevation illustrating a surface polisher constructed in accordance with my invention.

Figure 2 is a top plan view illustrating the device.

Figure 3 is a side elevation illustrating the opposite side of the device from that shown in Figure 1.

Figure 4 is a fragmentary vertical sectional view illustrating a portion of the mounting and the means of adjusting the mounting so as to maintain tautness on the endless polishing element, and taken on the line 4—4 of Figure 2.

Figure 5 is a detail sectional view taken on the line 6—6 of Figure 2.

Figure 6 is a perspective view illustrating the front drum and its axle construction.

Figure 7 is a detail sectional view illustrating the rear drum and its mounting.

Referring in detail to the drawings, the numeral 5 indicates an adjustable mounting and consists of front and rear plates 6 and 7 each including an angularly related portion 8 and a side depending portion 9. The angularly related portions 8 are connected by a hinge 10 and one of said portions has formed thereon a socket 11 to receive a ball-shaped head 12 of an adjusting rod 13. The other end of the adjusting rod which is screw threaded extends through an opening or slot 14 provided in the other angularly related portion of the mounting and has threaded there-

on a nut 15. The adjusting rod 13 includes a straight portion and angularly disposed end portions, as clearly shown in Figure 4, and has mounted thereon an expansion spring 16, one end of which bears against the part 11 of the plate 7 while the other end of the spring bears against the angularly related portion of the plate 6. The normal action of the spring 16 is to urge the angularly related portions of the plates 6 and 7 away from each other.

Formed on the depending portion 9 of the front plate 6 is a vertically arranged journal 17 rotatably receiving a vertical axle shaft 18 on which is formed a front axle 19 having journaled thereon a front drum 20.

Secured to the upper end of the shaft 18 is a horizontally arranged bar or rod 22 engaged by a set screw 23 threaded in a lug 24 formed on the front plate 6. The purpose of the set screw 23 is to adjust the angle of inclination of the front drum and for the purpose of aligning this drum with a rear drum 25 secured on a rear axle 26. The depending portion 9 of the rear plate 7 has formed thereon a horizontally arranged journal sleeve 27 in which the rear axle 23 is journaled. The rear drum 25 is cupped to receive therein the journal sleeve 27. Anti-friction bearings 28 are arranged between the bearing sleeve 27 and the rear axle 26.

An electric motor 29 is mounted on the rear plate 7 and is connected to the rear axle 26 by a train of gears (not shown) located within a housing 31 equipped with a removable cover 32. An extension cord 35 is connected to a control switch 36 of the electric motor and may be connected into an ordinary electric output. A rear hand grip 37 is provided for the device and is shown as having one end mounted on the rear plate 7 and the other end on the electric motor. A front hand grip 38 is secured to the front plate 6 whereby the operator may conveniently handle and operate the device.

An endless polishing element 39 is trained over the front and rear drums and includes an endless belt 40 on which is stitched a polishing fabric 41. It is preferable that the polishing fabric 41 be provided with a series of loop portions stitched to the belt 40 whereby the polishing fabric will maintain the series of loop portions entirely about the belt.

The mounting 5 being self-adjusting by the construction heretofore described in detail, it will be seen that the endless polishing element 39 will be kept with a desired tautness to assure

its drive by the rear drum relative to a surface when in contact therewith and still it will be seen that the endless polishing element can readily give to conform to the shape of the surface. Furthermore, it will be seen that the front drum can be readily adjusted as to its angle of inclination with respect to the rear drum for the purpose of aligning the front drum therewith to maintain the travel of the endless polishing element thereover. Further, it will be seen that the device is extremely compact, durable and may be conveniently gripped and handled by an operator so as to move over a surface with the endless polishing element in contact therewith at the will of the operator.

The rear plate 7 includes a downwardly curved portion 7' to provide a guard for the rear drum and the portion of the endless polishing element passing over said rear drum.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is:

In a surface polisher, front and rear plates having angularly disposed portions arranged in converging relation, a rod pivoted to one of said angularly disposed portions and slidable through the other angularly disposed portion, a nut threaded on said rod, a hinge connecting said angularly related portions, an expansion spring carried by said rod and bearing against the angularly disposed portions, a vertically arranged front axle shaft journaled on the front plate, a front axle fixed to said shaft and extending at right angles thereto, a rear axle secured on the rear plate, drums journaled on said axles and underlying said plates and arranged transversely thereof, an endless element trained over said drums and kept taut by said spring, an arm secured on the shaft and overlying the said front plate, adjusting means carried by the front plate and engaging said arm for adjusting the front drum relative to the rear drum, and means for driving said rear drum and supported by the rear plate.

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