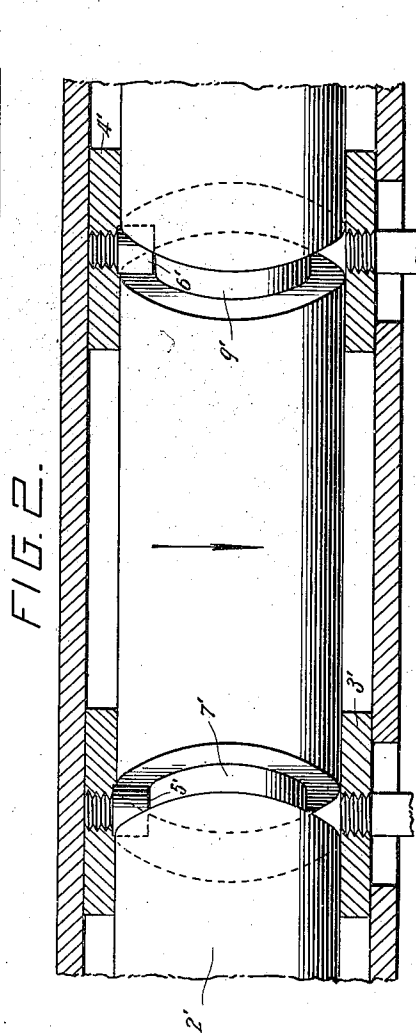
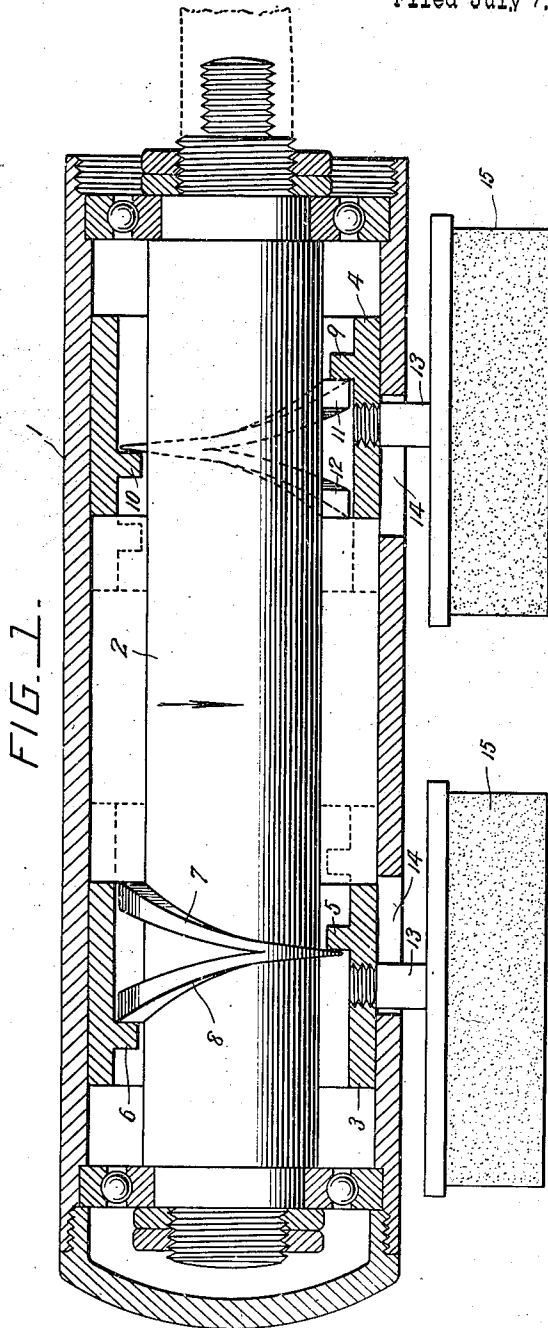


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PORTABLE POLISHING TOOL

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# UNITED STATES PATENT OFFICE.

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## PORTABLE POLISHING TOOL.

Application filed July 7, 1926, Serial No. 121,003, and in Germany July 31, 1925.

Our invention consists in a new and useful improvement in frictional treatment devices and is intended more particularly for a polishing tool for the treatment of painted, varnished, or lacquered surfaces of automobile, street and railway cars, etc., to produce a high degree of polish. The particular advantage of our device is its light and compact structure providing for power driving and sensitive hand control. The device comprises a power shaft and polishing elements driven thereby. The particularly novel and useful feature of our device is the mechanism provided for driving the polishing elements by the power shaft. This mechanism is both simple and light in construction and is so designed and operative as to cause the polishing elements to move complementarily, in such a way that while they oscillate upon the surface to be treated, the oscillation is not imparted to the tool to interfere with its manipulation during the polishing operation.

In the drawings submitted herewith we have illustrated specific embodiments of our invention but it is distinctly to be understood that we do not consider our invention limited to such specific embodiments so illustrated and described herein but refer for its scope to the claims appended hereto.

In the drawings:

Fig. 1 is a sectional view of one form of our device.

Fig. 2 is a view similar to Fig. 1 of a portion of a modified form of our device.

As illustrated in the drawings, our device comprises a tubular shell 1 which may be provided with any suitable form of handle for the manipulation of the tool. Suitably journaled in the shell 1 is a power shaft 2 which may be driven by any suitable means, as a flexible driving shaft. Loosely fitted in the shell 1 and surrounding the shaft 2 are the sleeves 3 and 4. The sleeve 3 is provided on its inner surface with the projecting studs 5 and 6. Suitably disposed relative to the studs 5 and 6, upon the surface of the shaft 2, there are mounted the semi-circular cam shoulders 7 and 8. The relation of the studs and shoulders is such that the rotation of the shaft 2 causes reciprocation of the sleeve 3. The sleeve 4 has studs 9 and 10 similar to the studs 4 and 5, and cam shoulders 11 and 12 similar to shoulders 7 and 8

are provided therefor upon the shaft 2. It is to be noted that the shoulders 7 and 8 are positioned upon one side of the axis of the shaft 2 and shoulders 11 and 12 on the opposite side of said axis.

It is to be particularly noted that the parts are so disposed that the rotation of the shaft 2 causes the sleeves 3 and 4 to reciprocate complementarily, that is to say, when the sleeve 3 moves in one direction, the sleeve 4 moves in the opposite direction. Thus the oscillation of the sleeves is not transmitted to the shell 1 to interfere with the manipulation of the tool.

Each of the sleeves 3 and 4 is provided with a stud 13 extending outwardly through a slot 14 in the shell 1, and upon each stud 13 is suitably mounted a rubbing or polishing element 15, adapted to carry a suitable surface for the accomplishment of the work to be performed by the tool.

In the modified form of our device illustrated in Fig. 2, the sleeve 3' is provided with a single stud 5' which is received in a continuous, sinuous cam slot 7' in the face of the shaft 2'. It is obvious that the rotation of the shaft 2' causes the reciprocation of the sleeve 3'. The sleeve 4' has a single stud 6' received in a cam slot 9' similar to the slot 7'. It is to be noted that the configuration and disposition of the slots 7' and 9' is such that the sleeves 3' and 4' are caused to reciprocate in a manner similar to the sleeves 3 and 4 of the first mentioned form of our device, that is, when the sleeve 3' moves in one direction, the sleeve 4' moves in the opposite direction.

Having described our invention, what we claim is:

1. In a polishing tool, the combination of a casing; reciprocable sleeves mounted in and guided by said casing; a revoluble shaft carried by said casing and surrounded by said sleeves; driving connections between said shaft and said sleeves; polishing elements mounted on said sleeves; and means for applying power to revolve said shaft.

2. In a polishing tool, the combination of a casing; an interior ring fixed at each end of said casing; a second ring mounted for rotation in each of said fixed rings; a revoluble shaft carried in said rotatable rings and provided at each end beyond the rings with a threaded portion; nuts on said

threaded portions so disposed as to bear sleeves; and means for supplying power to  
against said rotatable rings; reciprocable revolve said shaft.  
sleeves fitted in and guided by said casing In testimony whereof we affix our signa- 10  
surrounding said shaft; polishing elements tures.  
5 carried upon studs projecting through said  
casing and attached to said sleeves; driving  
connections between said shaft and said

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