July 15, 1930. A. GIAMBERTONI 1,770,643

FLOOR BRUSH WITH ELECTRICAL DRIVE

Filed March 23, 1928

Fig. 2.

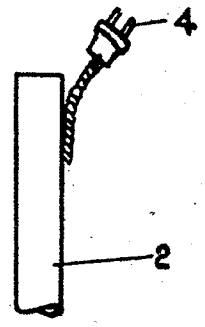
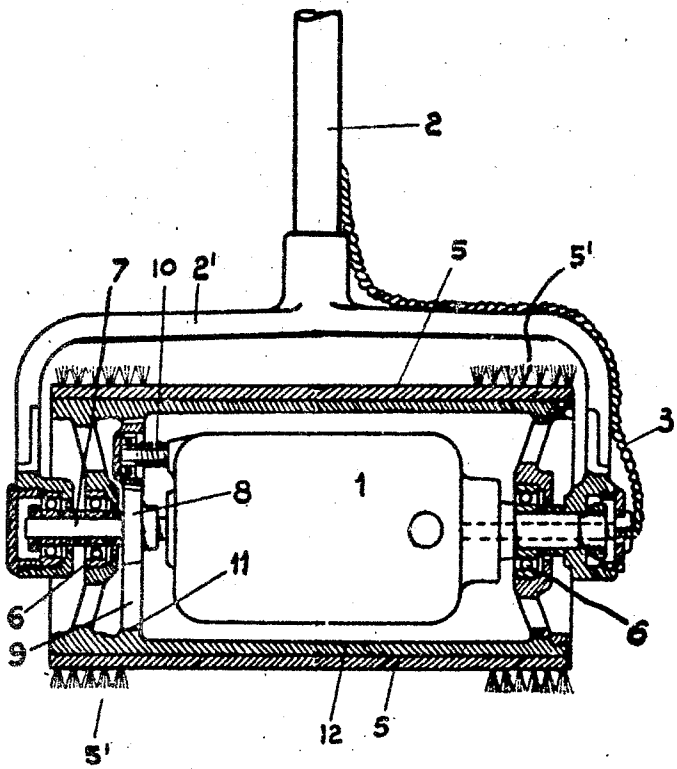
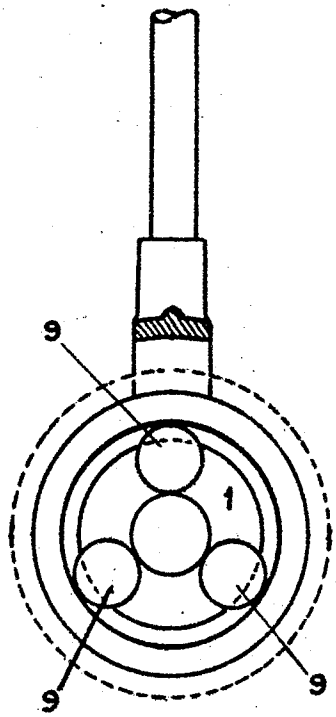


Fig. 1.







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UNITED STATES PATENT OFFICE

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FLOOR BRUSH WITH ELECTRICAL DRIVE

Application filed March 23, 1928, Serial No. 264,151, and in Italy March 29, 1927.

The present invention relates to a new type of floor-brush, driven by an electric motor forming a part of the said floor-brush, to which it is applied in such a way as to maintain to the device the simple appearance of a rotating hand floor-brush.

The electrical floor-brush forming the object of the present invention is characterized by the fact that the electric motor, which is mounted on a forked manœuvring stick, is disposed inside a cylindrical drum carrying the polishing roller (brush, or the like) which drum surrounds the said motor and is driven by the latter through a suitable friction or gear transmission or by other suitable means.

The object of the present invention, which mainly concerns the internal position of the motor with regard to the polishing roller, will be easily understood with reference to the joined drawing, showing, by way of an example, one of the possible practical forms of the floor-brush.

In the said drawing:

Fig. 1 is a middle longitudinal section of the device.

Fig. 2 is a side view of the same.

According to the drawing: —1— is the motor; —2— is the stick provided with a fork —2′—; —3— is the contact wire; —4— is the contact plug; —5— is a polishing roller provided with bristles —5′—; —6— are the ball bearings around which turns the brush carrying drum (or other polishing device); —7— is the driving shaft; —8— is the driving pulley connected to the driving shaft; —9— are the planets disposed for the transmission of the movement to the drum —12— carrying the polishing roller; —10— is a spring adapted to secure each planet frictionally to the driving pulley and to the drum; —11— is the friction crown disposed within the drum —12—.

As it appears from the drawing, the motor —1— is placed within a cylindrical drum —12— and this is the main characteristic of the invention. The said drum —12— rotates on ball bearings —7— and is driven by a frictional or gear transmission formed by a conical pulley —8— connected with the driving shaft of the motor and by two, three or more conical planets (in the example shown in the drawing there are three planets) applied on the motor cover. The said planets, which preferably have the frictional surface covered with elastic material, transmit the movement to the drum, by rotating in frictional engagement with a conical crown provided inside the drum in correspondence with the said planets.

The planets are kept in frictional engagement with the conical pulley of the motor and with the drum crown by a spring —10—.

On the said drum is fixed by any means the polishing roller —5— which may be of several types according to the use to which the device is destined. For example the said roller may be provided with bristles when it is used for waxing or glossing; with felt or the like when it is used for glossing only; with scraping line or the like, for the scraping of the wooden floor, and so on.

Of course the same object may be obtained by surrounding the motor with two cylindrical adjacent drums which in turn surround the two halves of the said motor, instead of surrounding the motor with one drum.

Detail of construction and form of the new type of floor-brush described may of course be varied from those ones represented and described without departing from the field of the invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

In a floor brush having an electrical drive in which the electrical driving motor is connected with a forked manœuvring device and

placed inside a cylindrical drum carrying the brushes, means for transmitting the rotating movement of the driving motor to the drum carrying the brushes comprising a conical pulley connected with the driving shaft of the motor, a plurality of conical planets covered with elastic material arranged at one end of the motor and engaging said conical pulley and transmitting rotating movement to said drum.

In testimony whereof I affix my signature.

ANDREA GIAMBERTONI.