Nov. 20, 1923. 1,474,994

W. H. A. BROWN

CLEANING DEVICE

Filed April 16, 1921

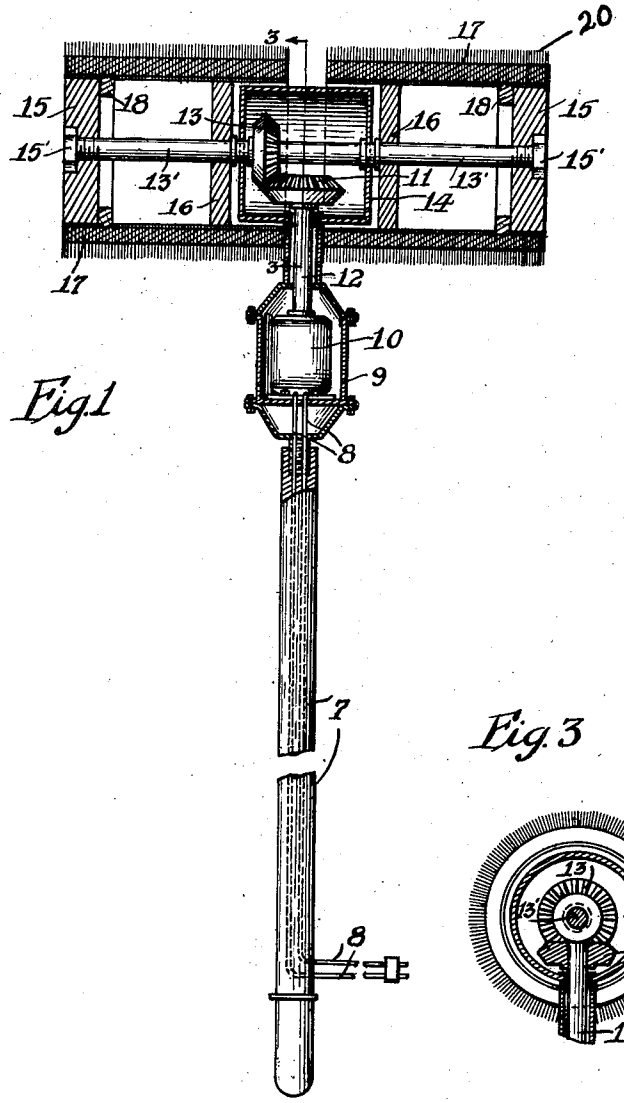


Fig. 1

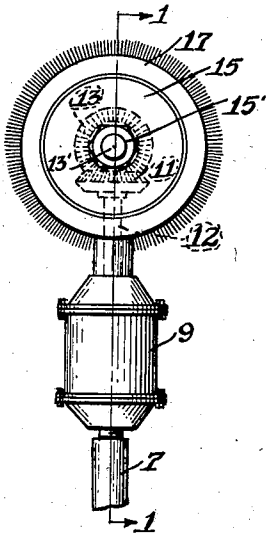


Fig. 2

Fig. 3

Fig. 4

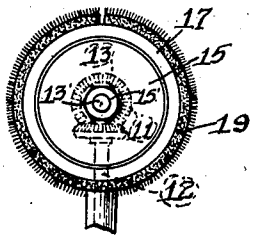
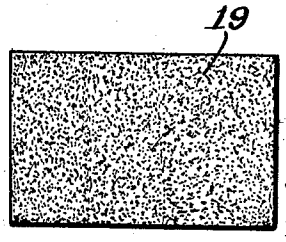


Fig. 5



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. A. BROWN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO HENRY G. CLARK AND ONE-HALF TO JOHN H. BENTLEY, BOTH OF CHICAGO, ILLINOIS.

CLEANING DEVICE.

Application filed April 16, 1921. Serial No. 461,987.

To all whom it may concern:

Be it known that I, WILLIAM H. A. BROWN, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Cleaning Devices, of which the following is a specification.

My invention relates to cleaning devices, and is especially designed for cleaning windows or the like, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use. The present invention constitutes an improvement over the construction disclosed in my prior application dated March 10, 1921, Serial No. 451,341.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is an elevational view partly in section, showing the construction of a cylinder embodied in the invention;

Fig. 2 is a fragmentary end elevational view of the invention;

Fig. 3 is a sectional view taken substantially on line 3—3 of Fig. 1;

Fig. 4 is an end elevational view similar to that shown in Fig. 2 but showing a modified construction; and

Fig. 5 is a plan view of the same.

The preferred form of construction as illustrated in the drawings comprises a supporting member 7 which serves as a handle and conduit for electric wires 8, and is formed of any suitable material. Rigidly fixed to one end of the supporting member 7 is a housing 9, formed of sheet metal or the like, in which a motor 10 is mounted. A bevel gear 11 is rigidly fixed to one end of the motor shaft 12, arranged to mesh with a bevel gear 13 secured to a shaft 13′ rotatably mounted in a housing 14 which is supported by the housing 9. Mounted on the shaft 13′ are discs 15 and 16 which support a pair of removable cylinders 17, the outer surface of which is covered with fine steel bristles or the like and serving as contact cleaning members. Each end of the shaft 13′ is provided with a threaded nut 15′ arranged to hold the disc 15 rigid against a shoulder 18 provided on the inner surface of each of the cylinders 17. The discs 16 are rigid with the cylinders 17 and loose on the shaft 13′ serving to support the adjacent ends of the cylinders.

As illustrated in Figs. 4 and 5 of the drawings, a pad 19 formed of heavy felt or the like and having a number of fine pieces of steel wires 20 woven thereon is secured in any suitable manner around the cylinders 17. By this method, in the corners of a window pane or the like or any place which will not permit the cylinder 17 to enter, the pad 19 can be easily removed and operated with the hands.

In operation, the motor 10 rotates the bevel gear 11 which engages with the bevel gear 13 and rotate the cylinders 17 rigidly fixed on the shaft 13′. In positioning the cylinders 17 into operative position, the disc 16 passes into the bore of the cylinder and is rigidly fixed to the shaft 13′ supporting the inner end of the cylinders 17 when applied against the surface of a window pane or the like. The disc 15 is then mounted on the shaft 13′ and tightened against the shoulder 18 holding the cylinder 17 rigid. The cylinder 17 or cleaning contact surface is then placed against the surface of a window pane or the like and the rotation of the said cylinder is so great that dirt, grease spots or the like can be easily removed. By the use of the device, as herein set forth, it is not necessary to climb out onto a window sill, which is dangerous, when cleaning the outside surface of a window pane. The device can be used for cleaning tile, hard wood floors, marble and woodwork.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of the construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

A window cleaning device comprising an

operating handle; a motor casing mounted on one end of said handle; a tubular support on said casing; a motor shaft journaled through said support; a housing on said tubular support; a shaft journaled through said housing and operatively connected to said motor shaft; disc shaped supporting members loosely mounted on said shaft adjacent the end walls of said housing; cylindrical cleaning members secured to said members; stops formed on said cleaning members; and retaining members removably mounted on said shaft for engagement with said stops retaining said cleaning members in an operative position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. A. BROWN.

Witnesses:

JOSHUA R. H. POTTS,

FREDA C. APPLETON.