Jan. 15, 1957 L. J. GOMBAR 2,777,144

ROTATABLE HEAD DUST MOP

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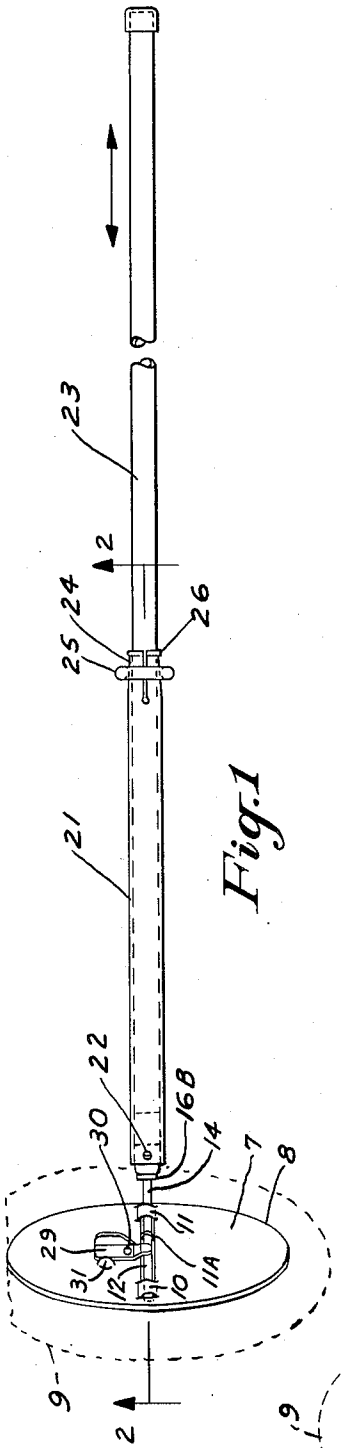


Fig. 1

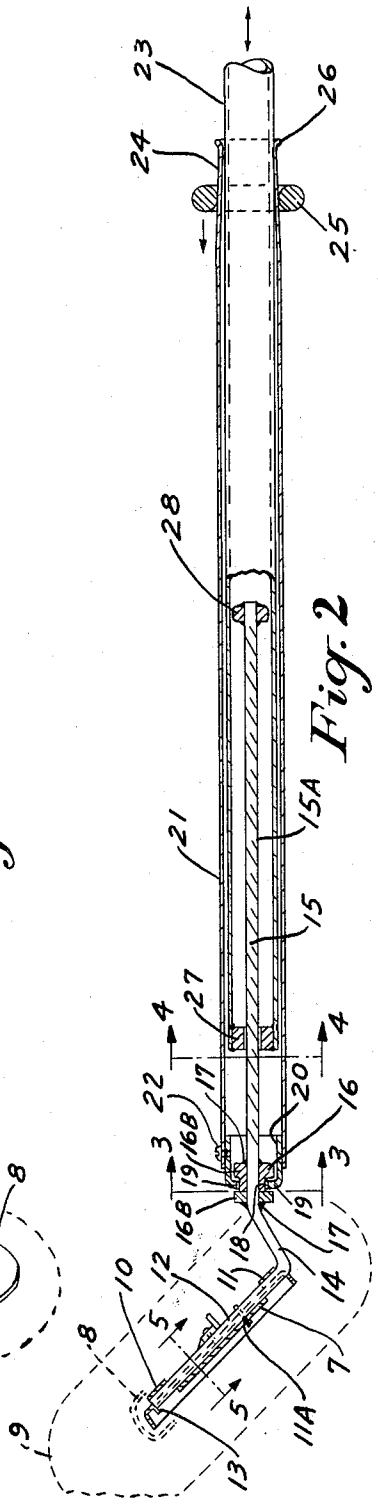


Fig. 2

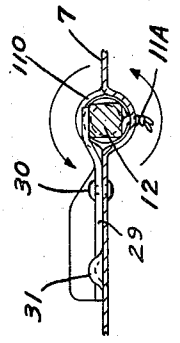


Fig. 5

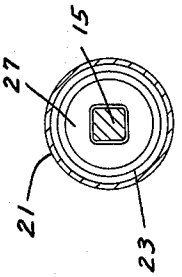


Fig. 4

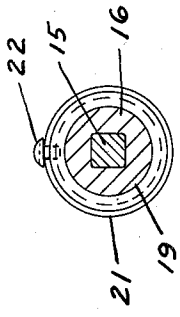


Fig. 3

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# ROTATABLE HEAD DUST MOP

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5 Claims. (Cl. 15—147)

This invention relates to dust mops for domestic purposes and has particular reference to a dust mop which is provided with a head, which may manually be rotated, whereby the accumulated dust, dirt, lint and other foreign substances may be ejected from the mop head by centrifugal force.

An object of the invention is to provide a dust mop which is constructed and arranged, so that the head may be rotated with a distinctive critical, wobbling action, whereby to eject the dust therefrom, by the simple expedient of telescopically moving one section of the dust mop handle with respect to the other.

Another object of the invention is to provide a dust mop head which may be manually rotated about a predetermined axis, while at the same time it is given a critical wobbling action.

Another object of the invention is to generally improve devices of the character indicated and to provide a rotatable head dust mop which is simple in construction, economical to manufacture and efficient in use.

The foregoing and other objects and advantages of the invention will become more apparent as the description proceeds, reference being made from time to time to the accompanying drawing forming part of the within disclosure, in which drawing:

Fig. 1 is a plan view of a dust mop embodying the invention.

Fig. 2 is a section taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a section taken substantially on the line 3—3 of Fig. 2.

Fig. 4 is a section taken substantially on the line 4—4 of Fig. 2.

Fig. 5 is a section taken substantially on the line 5—5 of Fig. 2.

Referring now more particularly to the drawing, it will be understood that in the embodiment herein disclosed, the reference character 7 indicates a substantially oval metal plate, on which is mounted a conventional fabric mop element 8, which preferably consists of a glovelike canvas member, to which is sewed or otherwise secured, strands of cotton 9 as in conventional practice. The plate 7 is lanced as at 10 and 11, to provide tunnel-like members for receiving a square in cross section, spindle member 12, about which the plate 7 may be rotated. The plate 7 is also lanced to provide an inturned stop member 13, which rides against the end of the spindle 12 to prevent the longitudinal displacement, in one direction, of the plate 7 with respect to the spindle 12.

A wire ring 11A may also be employed to rotatably support the plate 7 on the spindle 12. The spindle 12 is formed integrally with an angular extension 14, which terminates in an elongated straight portion 15, which said elements 12, 14 and 15 are formed of a continuous length of square bar stock, which is twisted along the portion 15 to form a continuous thread, or archimedean, quick pitch screw section 15A.

Secured to the rod beyond the threaded section 15A



by welding or other suitable means is a bearing element 16, which is provided in order to facilitate the assembly of the device and is formed of a hollow T-shaped member 16A and a washerlike element 16B, which are secured to the member 15 by welding as at 17. The member 16 has a peripheral channel 18 which is arranged to receive the inturned lips 19 of a short tubular element 20, which tubular element 20 telescopes the end of another tubular element 21, which forms part of the mop handle and to which it is secured by a set screw 22. A third tubular member 23, also forming a part of the mop handle, telescopes the tubular member 21 and is adapted to be manually reciprocated therein. The rear end of the tubular member 21 is split longitudinally for a short distance, in order to form a collet 24, which may be squeezed against the member 23 by means of the locking ring 25 when moved in the direction indicated by the arrow. The extreme end of the element 21 is flared as at 26, to prevent the locking ring 25 from being dislodged from the collet 24. When the locking ring is forced to the left as shown in Fig. 2, the collet 24 tightly grips the tubular member 23 and prevents the tubular member 21 and the tubular member 23 from being moved relative to each other.

Secured to the forward end of the tubular member 23 by crimping or the like, is a nut 27 which has a square hole therethrough. The nut 27 is arranged to engage the twisted portion 15A of the member 15 and serves as a means for rotating the member 15 and its connected parts as the tubular member 23 is reciprocated inside of the tubular member 21. A guide block 28 is secured at the opposite end of the member 15 and slidably engages the inside of the tubular member 23 to prevent the wobbling of the end of the member 15 inside of the tubular member 23.

In order to hold the plate 7 in various pre-determined positions on the square spindle 12, I provide a locking arm 29 which rotates about a pivot 30. A stop 31 prevents the arm 29 from making a complete revolution on the pivot 30. When the arm 29 is in the position shown in Fig. 1, the plate 7 is prevented from rotating freely about the spindle 12. When the arm 29 is released from the spindle 12, the plate 7 may rotate freely about the spindle 12 as an axis. When in such unlocked condition, and the member 15 is then rotated, by the reciprocation of the tubular member 23, the spindle 12 with its extension 14, will also be rotated about the axis 15, to effect a wobbling and rotating action on the plate 7 and mop head 8. The free rotation of the plate 7 on the spindle 12, and the wobbling motion of the spindle 12 and the extension 14 gives highly erratic motion to the fabric mop head, whereby to eject all the dust and dirt particles from the mop head by centrifugal force. By this means the operator may eject the dust from the mop simply by reciprocating the handle parts with reference to each other, and without the necessity of violent arm action as is customary with conventional dust mops.

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

1. In a device of the character described in combination, a plate mounted for rotation about a spindle, an angular extension on said spindle terminating in a long archimedean or quick pitch threaded rod, tubular elements forming sections of a mop handle telescopingly housing said threaded rod, a bearing member secured for rotation with said rod, said bearing member being in rotatable relation with the leading end of one of said tubular members, a nut secured to the leading end of the other of said tubular members, said nut being in slidable engagement with the threaded portion of said rod, whereby to rotate said rod upon the reciprocation of the last named tubular member with respect to the other of said tubular members.

2. The structure of claim 1, including means for locking said plate in various positions about said spindle.

3. The structure of claim 1, including means for locking said tubular members against relative movement with respect to each other.

4. In a device of the character described, a pair of tubular elements comprising a mop handle reciprocably mounted with respect to each other, a rod rotatably mounted in said tubular members, said rod having an archimedean or quick pitch threaded section, a nut secured to one of said tubular members and in threaded engagement with said rod, whereby upon reciprocation of said last named tubular member said rod is rotated, an angular extension on said rod, a spindle on said extension, and a plate mounted for rotation on said spindle, there being means on said plate for locking said plate against rotation on said spindle.



5. The structure defined in claim 4, including means for locking said tubular elements against relative motion with respect to each other.

**References Cited** in the file of this patent

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