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S. SCHULMAN

2,196,365

MOP

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FIG. 1

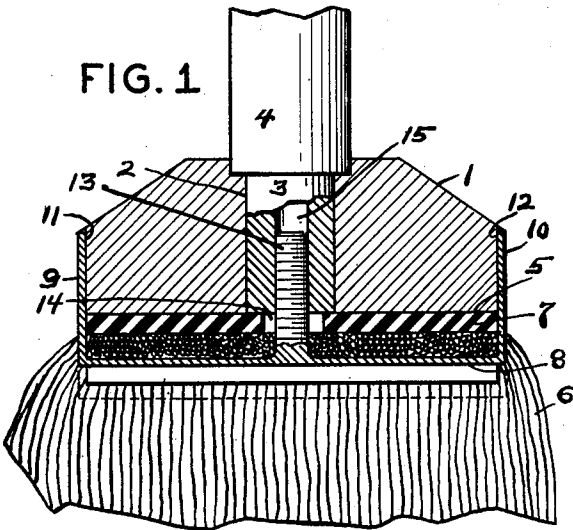


FIG. 2

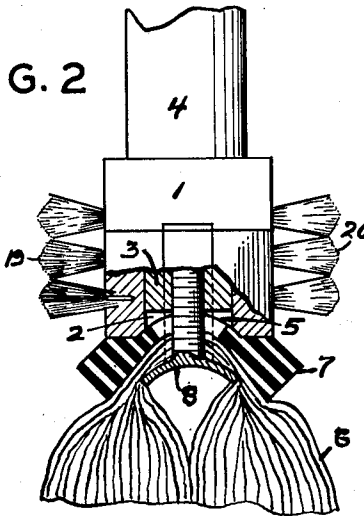


FIG. 3

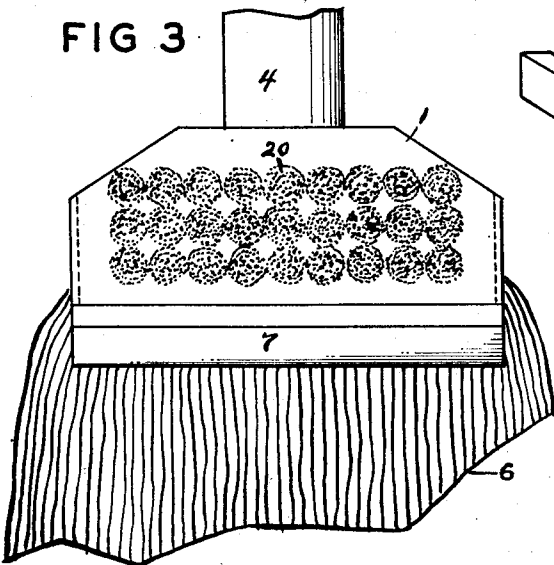


FIG. 4

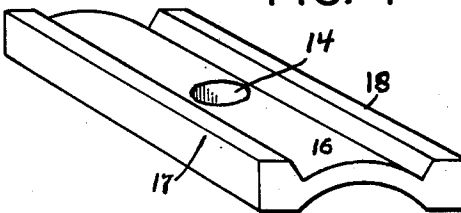
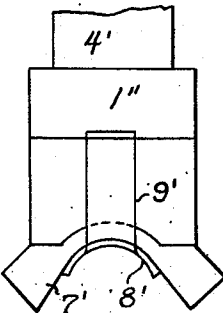


FIG. 5



INVENTOR.

BY

S. Schulman
Thomas Howe
ATTORNEY.

UNITED STATES PATENT OFFICE

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MOP

Solomon Schulman, New York, N. Y.

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6 Claims. (Cl. 15-153)

This invention relates to mops and like devices. The main object of the invention is to provide devices of the character described which shall thoroughly, efficiently and conveniently operate to clean a floor or other surface.

A further object of the invention is to provide, in devices of the character described, an improved form of scraper for loosening accumulations more or less securely stuck to the floor or other surfaces to be cleaned.

A further object of the invention is to provide a mop device comprising co-operative cleaning means including a mop proper, and a scraper.

Other and ancillary objects of the invention will appear hereinafter.

In the accompanying drawing which illustrates the invention:

Fig. 1 is a longitudinal section of a device embodying the invention.

Fig. 2 is an end elevation of the device of Fig. 1, being partly broken away, to show a transverse section at the center of Fig. 1.

Fig. 3 is a side elevation of the apparatus of Fig. 1.

Fig. 4 is a perspective view of an improved form of scraper or eraser.

Fig. 5 is an end view of a device provided with the scraper of rubber-like material only but without the thread mop.

Referring to the drawing, and first to Figs. 1 to 4 inclusive, the mop structure comprises a block or head 1, usually of wood but which may be of any suitable material, having a smooth bore opening 2 within which the reduced end 3 of a handle 4 may be inserted. The block has a longitudinally extending groove 5. Extending transversely of the groove is the usual mop 6 consisting of a body of threads such as cotton yarn, as is well understood, and between the body of threads and the block or head 1 is a plate 7 of rubber or suitable rubber-like material. The plate and mop threads are secured to the head or block by means of a transversely curved metal strip 8 having its ends 9 and 10 bent upwardly into grooves 11 and 12 in the head or block 1. Secured to the strip 8, as by welding or in other suitable ways, is a screw stud 13 which passes through the body of mop threads 6 and through the hole 14 in the plate 7 and engages in a threaded recess 15 in the portion 3 of the handle. By turning the handle in one direction the strip 8 is drawn toward the block or head 1 thereby clamping the body of threads 6 and the plate 7 securely against the bottom of the block 1, such plate and body being released by turning the

handle 4 in the opposite direction. In clamping the mop thread body and the rubber plate against the block by the strip 8, the intermediate portion 16 of the plate 7 which is thinner than the edge portions 17 and 18, will be flexed and enter the groove 5, the thinner intermediate portion permitting this flexing without undue force or damage of the parts. As clamped into the groove and against the bottom face of the block as described, the rubber plate and mop will be securely held in position with the edges of the rubber which are parallel to the block groove extending outside the block so that they may, by placing the handle at a suitable angle, be brought into contact with the floor and act as a scraper or eraser to remove substances stuck thereon. On one side of the block tufts of brush bristles 19 are set into the block and similarly bristles 20 are set into the other side of the block. The brushes upon either side may be brought into engagement with the floor by suitably inclining the handle, the handle being inclined in one direction to bring the brush upon one side into engagement with the floor and in the other direction to bring the brush on the other side into such engagement. The brushes, rubber and body of mop threads together co-operate to provide a thorough and complete cleaning operation, the rubber loosening and erasing substances stuck to the floor and hard to remove and the brush penetrating crevices and performing a scrubbing operation while the mop provides water for the scrubbing operation softens substances for facilitating the scraping operation of the rubber, and generally mops up the loosened and easily removable dirt.

In Fig. 5 is shown a construction in which the rubber scraper or eraser is employed without the mop threads or brush. The construction of this device is the same as Fig. 1 except that the mop threads are omitted. The device of Fig. 6 has the handle 4', the block or head 1' and the rubber plate 7' clamped to the block by a transversely curved strip 8' having its ends 9' turned upwardly into grooves in the ends of the block as described in connection with the structure of Fig. 1.

While the invention has been illustrated in what are considered its best applications, it may be embodied in other structures without departing from its spirit and is not therefore limited to the structures shown in the drawing.

What I claim is:

1. In a device of the character described, the combination with a mop holder comprising a

block having a groove in its face, of a plate of rubber-like material, means for securing said plate to said block whereby an intermediate portion of said plate is bent for entering said groove, the edge of said plate projecting beyond the side of said block, said intermediate portion being thinner than the edge portions of said plate.

2. In a device of the character described, the combination with a mop head comprising a block having a groove in its face, of a plate of rubber-like material, means for securing said plate to said block whereby an intermediate portion of said plate is bent for entering said groove, the edge of said plate projecting beyond the side of said block, said intermediate portion being thinner than the edge portions of said plate, said securing means having facilities adapted to also fasten a body of mop threads to said block, said plate being interposed between said body of mop threads and said block.

3. A mop comprising a block having a handle projecting from one side thereof said block having a groove extending along the opposite side thereof for a body of mop threads extending transversely across the groove, an elongated plate of rubber-like material interposed between said body of mop threads and the walls of said groove and having opposite longitudinal edge portions projecting beyond the opposite side surfaces of said block, said plate having an intermediate portion thinner than said edge portions, and a clamp strip connected with said handle and held to the block in clamped engagement against the body of mop threads serving thereby to clamp said threads tightly against the rubber strip and to thus clamp the said intermediate thinner portion of the said plate tightly into the groove whereby all of said elements are firmly connected together, said clamp strip extending lengthwise of the rubber strip and of the groove in substantial parallelism with the side edge of the

plate and of the block and in substantially uniform close proximity thereto and holding the mop threads and hence the rubber-like material against the block substantially uniformly throughout the length of the opposite longitudinal edge portions of the said plate.

4. In a device of the character described, a block having a groove in its lower surface, a handle extending into said block having means for fastening said handle to said block, a clamping bar and an elongated plate of rubber-like material, means to press said bar with said plate against the lower surface of said block, said plate comprising parallel bars, substantially the length of said block and a thin connector portion, integral with said bars and curved transversely when unattached.

5. In a device of the character described, a block having a groove in its lower surface, a handle extending into said block having means for fastening said handle to said block, a clamping bar and an elongated plate of rubber-like material, means to press said bar with said plate against the lower surface of said block, said plate comprising parallel bars, substantially the length of said block and a thin connector portion, integral with said bars, provided with a hole in substantially the middle part of said plate adapted for fastening said plate to said block.

6. In a device of the character described, a block having a groove in its lower surface, a handle extending into said block, a clamping bar and an elongated plate of rubber-like material, a thread in the extending part of said handle, a threaded stud on said bar for screwing said handle to said stud to press said bar with said plate against the lower surface of said block, said plate comprising parallel bars, substantially the length of said block and a thin connector portion, integral with said bars.

SOLOMON SCHULMAN.