Oct. 11, 1960 H. D. RENCH ET AL 2,955,303

TRAY FOR ELECTRIC BRUSH

Filed May 7, 1958

Fig. 1

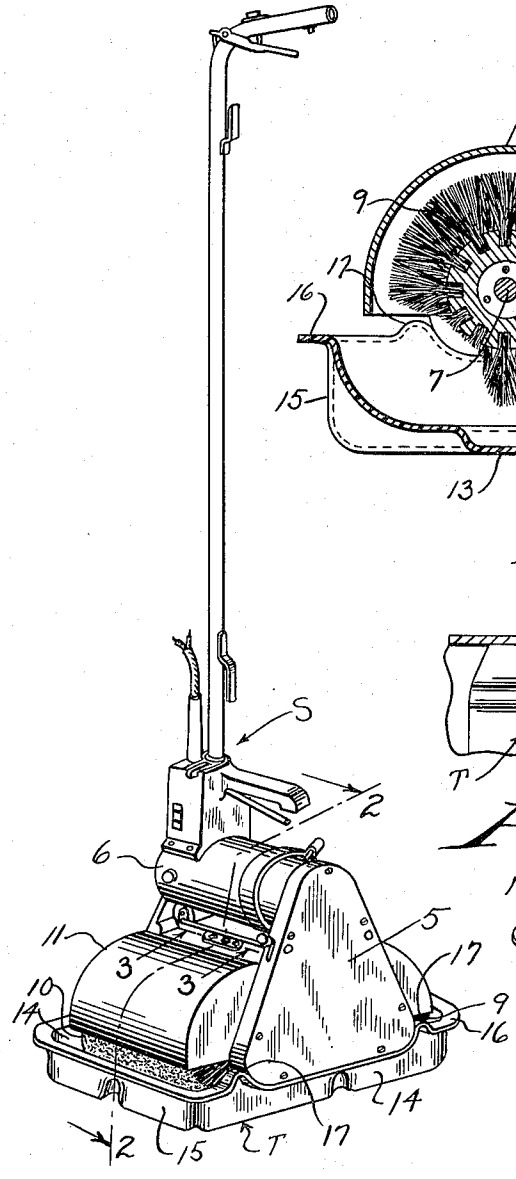



Fig. 2

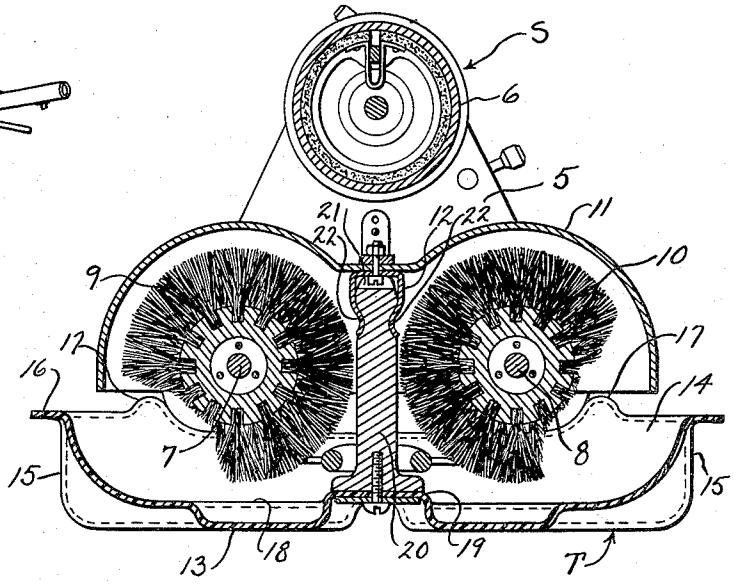



Fig. 3

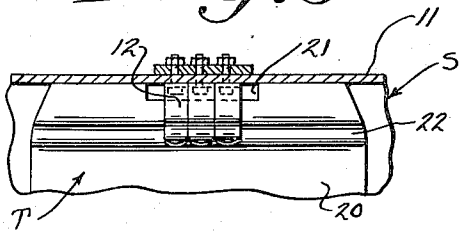
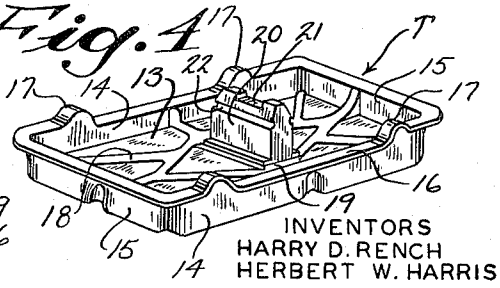



Fig. 4




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# TRAY FOR ELECTRIC BRUSH

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5 Claims. (Cl. 15—49)

This invention appertains to portable dry cleaning scrubbing machines of the type shown and claimed in the Patent No. 2,842,788 issued July 15, 1958, and more particularly to an attachment for the protecting and supporting of such machines, when such machines are not in use.

Carpet scrubbing machines of the type mentioned include a frame having spaced parallel motor driven shafts or spindles on which are detachably mounted the scrubbing brushes, and the machine is supported solely on the carpet by the brushes. Likewise, the machine during storing, transporting and shipping rests on the brushes. The brushes, when resting for a considerable length of time on a surface, are liable to take an undesirable set, and during shipping and carrying the spindles or shafts and associated parts are subjected to injury from shocks, vibrations, etc. transmitted thereto from the brushes. Also during the carrying of the machine from one place to another, after a cleaning operation, cleaning powder, dirt etc. is liable to drop from the brushes which causes undesirable debris.

It is therefore, one of the primary objects of the present invention to provide a tray for detachable association with the scrubbing machine for movement therewith for housing the brushes and for forming an effective base or support for the scrubbing machine when the same is not in use with the brushes spaced from the tray, whereby the tray will receive and hold debris falling from the brushes and whereby the tray will form an effective guard to prevent the transmission of shocks from outside sources to the brushes and associate parts.

A further important object of the invention is the provision of novel means for constructing the tray, whereby the same will be possessed of some resiliency and flexibility and whereby a central support will be had for direct detachable connection with the frame of the machine, so that the brushes will be out of contact with the tray at all times, the tray being of such a construction and shape as to fit within a packing carton with the machine and thus protect the machine against injury during shipping.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter described and claimed, and illustrated in the accompanying drawing, in which drawing,

Figure 1 is a perspective view of a dry cleaning carpet scrubbing machine with the improved tray associated therewith;

Figure 2 is an enlarged central vertical sectional view taken on the line 2—2 of Figure 1, looking in the direction of the arrows through the lower portion of the machine with the tray attached thereto, parts of the scrubbing brushes being shown broken away to illustrate tray construction;

Figure 3 is an enlarged fragmentary transverse sectional view taken on the line 3—3 of Figure 1, looking in the direction of the arrows illustrating a means for



detachably connecting the tray with the scrubbing machine; and

Figure 4 is a perspective view of the tray removed from the machine.

Referring to the drawing in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter S indicates the scrubbing machine and T the novel guard and tray for the machine.

The machine S has been thoroughly described and illustrated in the mentioned patent, but from the present drawings, it can be seen that the machine includes a frame 5 supporting an electric motor 6 for driving a pair of spaced parallel shafts 7 and 8 in opposite directions and toward one another. The spaced shafts 7 and 8 detachably receive the scrubbing brushes 9 and 10. The upper portions of the brushes 9 and 10 are protected by a hood 11 carried by the frame. Secured to the central portion of the hood 11 between the brushes 9 and 10, are depending U-shaped leaf springs 12 which form means for connecting the tray T with the machine, as will later appear.

The tray T is preferably formed from thermoplastic material or thermosetting material, and is preferably formed into shape by the vacuum mold process. As illustrated, the tray T includes a bottom wall 13, spaced side walls 14 and connecting end walls 15. The upper edges of the side and end walls 14 and 15 have formed thereon outwardly extending marginal flanges 16 which add rigidity to the tray. The flanges also form means for supporting certain parts of the scrubbing machine S. The flanges 16 on the side walls 14 are formed to provide spaced upstanding shoulders 17 and the shoulders and the flanges between the shoulders form seats for receiving the side portions of the frame 5 of the scrubbing machine. These seats prevent accidental movement of the machine in the tray when the tray is associated with the machine. The bottom wall 13 of the tray has formed thereon upstanding strengthening ribs 18. These ribs extend generally from a central raised portion 19 on the bottom of the tray to the side and end walls.

The central raised portion 19 rigidly carries a transversely extending supporting block 20. The block 20 terminates short of the side walls 14 of the tray. The upper edge of the block is cut away at its central portion as at 21, to receive the base portions of the U-shaped springs 12 and the fastening means for such springs. The opposite sides of the block 20 adjacent to its upper end are provided with grooves 22 for receiving the flared terminals of the springs 12.

In associating the tray T with the machine S, the block 20 is inserted in the base of the machine between the brushes 9 and 10 until the springs 12 snap into the grooves 22. At this time, the sides of the base of the machine will engage and rest on the side wall flanges 16. As best shown in Figure 2, the weight of the machine rests on the block 20 and on the side wall flanges 16. The brushes 9 and 10 are supported in a raised position above the bottom wall 13 of the tray. Thus the brushes do not rest on the tray and the brushes do not support the weight of the machine. It can be seen that with the tray associated with the machine, the same actually becomes a component part of the machine and is carried or transported with the machine and forms a stable base for supporting the machine when the machine is not in use.

The tray actually performs the following functions:

(1) To protect the brushes 9 and 10 by supporting the weight of the machine, when the machine is not in use. If the machine is stored with the weight thereof on the brushes, the bristles are bent over and will be-

come set in this bent condition. Thus, a flat spot will be formed on the brushes resulting in bumpy operation of the machine. The tray eliminates this.

(2) The tray itself becomes a part of a shipping case when the machine is packed for shipment and the tray will absorb shocks incident to the rough handling of the machine and carton.

(3) The tray serves as a smooth base on which the machine can be slid, when the machine is put into and taken out of automobiles, trucks etc.

(4) The tray collects any loose powder or dirt that may become dislodged from the brushes while the machine is being carried or stored.

Various changes in details may be made without departing from the spirit or the scope of this invention, but what is claimed as new is:

1. In combination with a machine for the dry cleaning of carpets, rugs etc. of the type embodying a frame and a pair of motor driven brushes on which the machine rests when in use, a detachable tray and base for the machine when the machine is not in use including a body for receiving and housing the brushes having a lower wall and upstanding end and side walls, means associated with said frame and tray for guiding and aligning the machine into the tray before the machine actually rests on the tray and for securing the tray to the machine whereby the machine and tray can be transported as a unit, and means for supporting the frame of the machine on the tray with the brushes in a raised position above the bottom wall and spaced from all parts of the tray.

2. In combination with a portable machine for the dry cleaning of carpets and the like of the type including a frame and a pair of spaced motor driven brushes carried by one side of the frame, a tray and supporting base for the machine when the same is not in use including a body having a bottom wall, upstanding side and end walls, and outwardly projecting flanges on the side walls having central depressed portions forming seats for receiving the opposite sides of the frame with the brushes spaced from the bottom wall, and a supporting block secured to the central portion of the tray and extending between said brushes and engaging a central portion of the frame of the machine, the block being located between said flanges.



3. In combination with a portable machine for the dry cleaning of carpets and the like of the type including a frame and a pair of spaced motor driven brushes carried by one side of the frame, a tray and supporting base for the machine when the same is not in use including a body having a bottom wall, upstanding side and end walls, and outwardly projecting flanges on the side walls having central depressed portions forming seats for receiving the opposite sides of the frame with the brushes spaced from the bottom wall, a supporting block secured to the central portion of the tray and extending between said brushes and engaging a central portion of the frame of the machine, the block being located between said flanges, and interlocking means between the frame and the block for detachably connecting the tray with the machine.

4. A protecting and supporting base for carpet cleaning machines of the type embodying a frame and rotary brushes comprising a body including a bottom wall, upstanding side and end walls, outwardly projecting flanges formed on the side walls defining seats for receiving the opposite sides of the frame of the machine and a central block disposed between said flanges and carried by the bottom wall for engaging an intermediate portion of the machine and means for detachably connecting the block with the machine.

5. A tray and supporting base for a cleaning machine including a frame and motor driven brushes as defined in claim 4 and said bottom wall being provided with struck up ribs and a central raised portion, certain of said ribs extending outwardly from the raised portion to the walls, and said raised portion receiving and supporting the block.

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