Feb. 13, 1945. H. B. BARBER 2,369,519

SWITCH ACTUATING HANDLE FOR VACUUM CLEANERS

Filed Aug. 7, 1940

Fig. 1

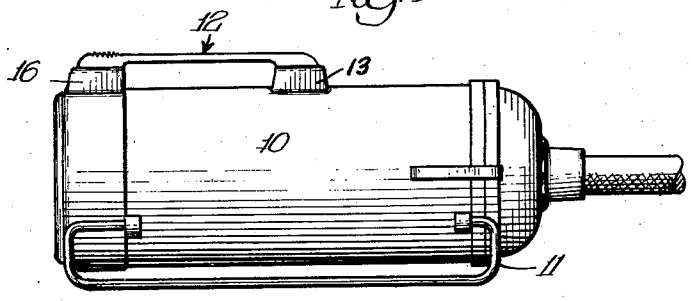


Fig. 2

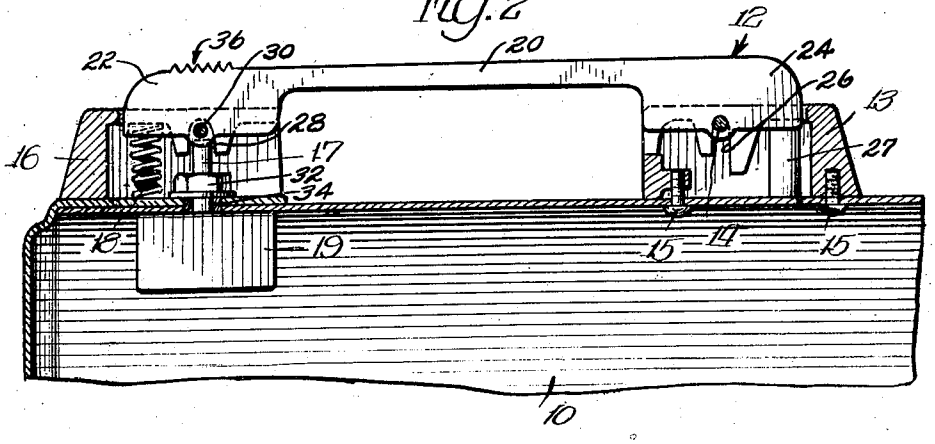
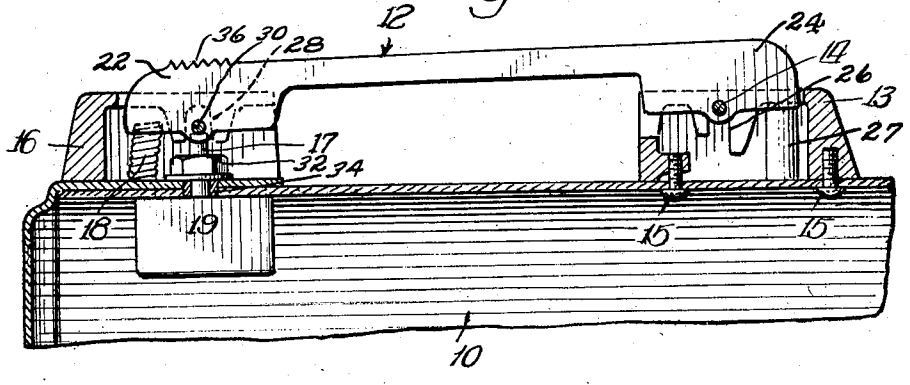


Fig. 3



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SWITCH ACTUATING HANDLE FOR VACUUM CLEANERS

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Application August 7, 1940, Serial No. 351,671

1 Claim. (Cl. 200—157)

This invention has to do with the combination of handle and switch means for a tank type vacuum cleaner such as is now available on the market.

It is an object of the present invention to provide an arrangement wherein the switch which operates the vacuum cleaner motor is combined with a handle that may also act as a switch actuating treadle.

In this connection, when the tank type vacuum cleaner is used it ordinarily is comparatively close to the floor and rests on the floor during use. In reaching the switch of the tank type cleaners now on the market, other than applicant's, it is normally necessary for the operator to bend over and press the switch manually, an awkward and inconvenient operation.

In the present device it is merely necessary to actuate the handle of the vacuum cleaner as a foot treadle, or otherwise, and the switch is thereby operated conveniently and without special effort.

It is also a further object of the invention to provide a rigid handle movably journaled at least at one end and so arranged as to operatively actuate a toggle switch plunger.

It is also another object of this invention to provide a handle means and switch means for a vacuum cleaner which has a pleasing appearance, the switch being entirely hidden and protected from breakage by a rugged handle arrangement.

It is still further the object of the invention to provide an arrangement which is relatively simple, easily manufactured and assembled, and inexpensive, the component parts being readily procured on the market or readily manufactured by economical methods.

Other objects and advantages of the invention will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel construction, combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing, and finally pointed out in the appended claim.

In the drawing—

Figure 1 shows a tank type of vacuum cleaner having a handle of the preferred type as disclosed in this application;

Figure 2 shows a fragmentary longitudinal section through said vacuum cleaner, illustrating the details of the handle and switch arrangement in enlarged form as compared to Figure 1; and

Figure 3 is a view similar to Figure 2, except that the handle is shown as depressed as it is after moving the switch plunger downward and actuating the switch.

Referring to the drawing and particularly Figure 1, there is illustrated in side elevation a vacuum tank such as employed in tank type horizontal vacuum cleaners. The tank is provided with skids 11, and a convenient handle 12 located on the top side.

As illustrated in Figures 2 and 3, the handle comprises a rugged floating hand grip member 20 of metal or plastic, or the like with enlarged end portions 22 and 24 mounted at each end telescopically in hollow brackets 13 and 16, secured to the tank. Each bracket is provided with opposed vertical slots or grooves 26 and 28 in the inside side walls, in which the end of pins 14 and 30 passing through and projecting from the enlarged ends 22 and 24 of the handle ride thereby providing floating pivotal movement of the grip member 20 toward and away from the tank.

The bracket 16 may be secured to the outside of the tank by a nut 32 threaded on the shank 34 extending through the tank of a suitable switch 19 located within the tank, the switch having a switch operating plunger 17 extending through the shank and engaging the underside of the enlarged end 22 of the grip member 20. A spring 18 is applied to exert pressure upwardly against the member 20.

The grip member 20 is preferably knurled or otherwise provided with a tread 36 so that by pressing the member downwardly by the weight of the operator's foot, the plunger 17 of the switch may be actuated to either turn the vacuum producing apparatus of the vacuum cleaner on or off at will as desired.

As will appear from the drawing, the enlarged end portions 22 and 24 of the grip member 20 are adapted to cooperate with the bracket members to provide a rugged handle structure of pleasing appearance, and yet, without appreciably interfering with the strength of the member and its brackets; the member is adapted to operate as a treadle, to operate the switch, the relative range of movement in such operation being illustrated in Figure 3 wherein the left end of the grip member is shown depressed to operate the plunger 17 of the toggle switch. The handle is held resiliently away from the tank in the bracket 13 by the resilient means 27.

Although one embodiment of the invention has been illustrated and described it is to be understood that the invention is not limited thereto but may be embodied in various mechanical forms and arrangements. As various changes in con-

struction in form may be made without departing from the spirit of the invention as is apparent to those skilled in the art, reference may be had to the appended claim for a definition of the limitation of the invention.

I claim:

In combination with a portable vacuum cleaning apparatus comprising a horizontal vacuum tank, an elongated carrying handle for said tank said handle having a central grip portion and end connecting portions, spaced brackets on said tank adjacent each end connecting portion of said handle for supporting said handle spacedly from said tank and substantially parallel therewith, means for securing one end connecting portion of said handle in one bracket for pivotal motion of the grip portion toward and away from said tank, means in said other bracket for securing said other end connecting portion to said bracket while affording limited movement thereof toward and away from the tank, means within said last named bracket for urging the last named end connecting portion to the limit of its movement away from the tank into carrying position and normally maintaining the handle in such position, a switch associated with said last named bracket and tank and means responsive to movement of the handle toward the tank in opposition to said resilient means for actuating the switch.

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