March 10, 1942. C. H. TAYLOR 2,275,663

SUCTION CLEANING APPARATUS

Filed July 27, 1940

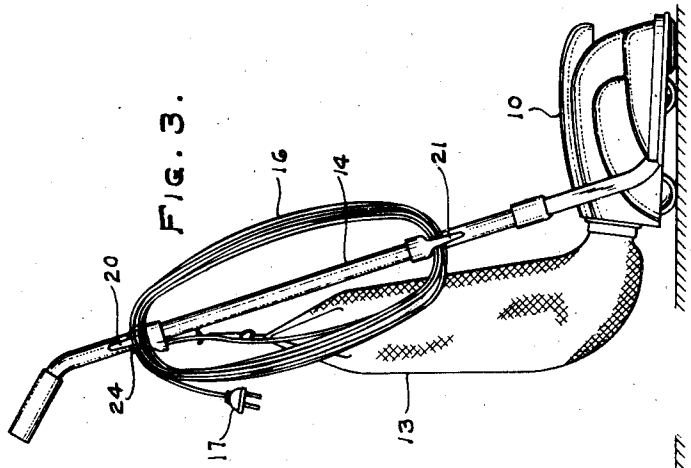


FIG. 3.

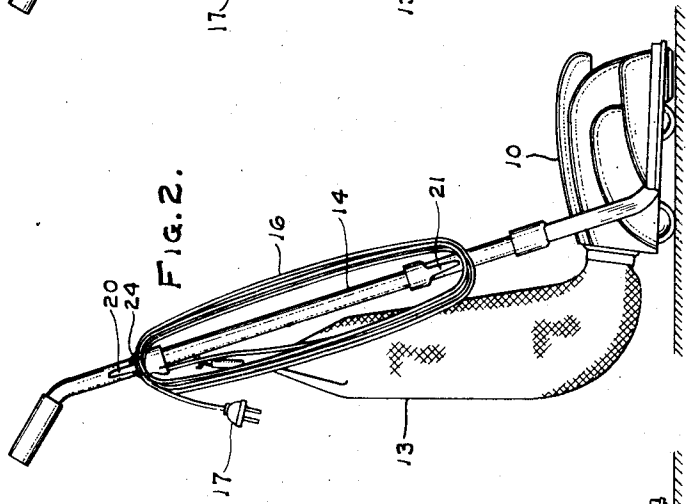


FIG. 2.

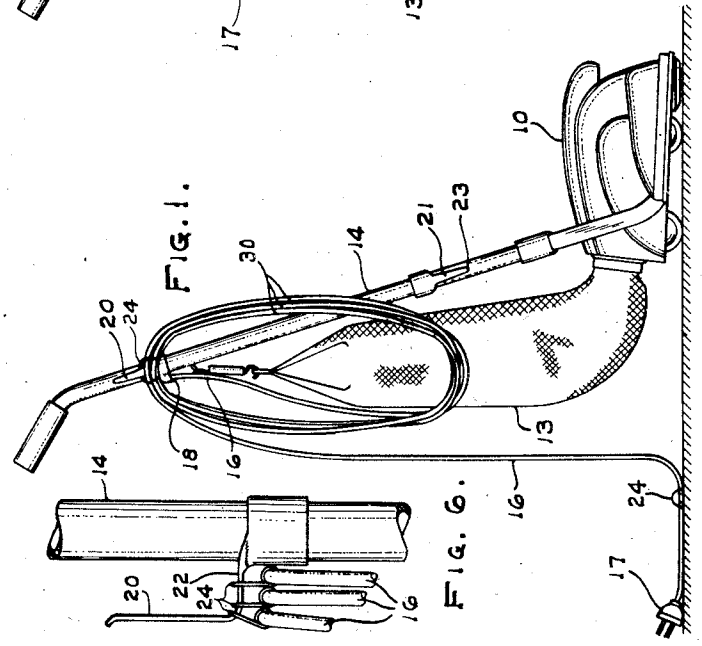


FIG. 1.

FIG. 6.

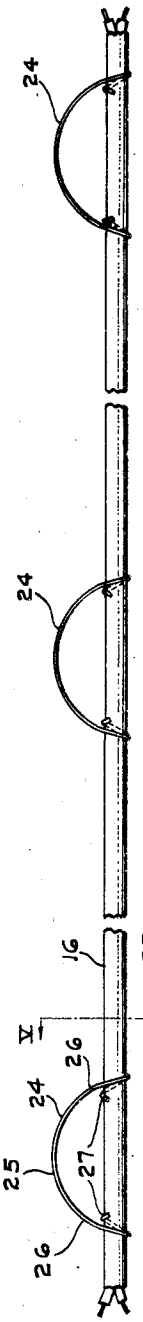


FIG. 4.

FIG. 5.

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SUCTION CLEANING APPARATUS

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6 Claims. (Cl. 15—257)

My invention relates to suction cleaning apparatus and has for an object to provide improved cord storing means for apparatus of this kind.

A further object is to provide means whereby the cord may be more conveniently reeled on the handle for storage than heretofore.

A further object is to provide an arrangement for insuring that all of the loops will be the proper length when the cord is reeled on the handle for storage.

A more specific object is to provide a cord having clips thereon in spaced relation for supporting the cord when reeled on the handle for storage, and for insuring that all the loops of the cord will be the proper length.

The above and further objects are effected by my invention as will be apparent from the following description and claims taken in connection with the accompanying drawing, forming a part of this application, in which:

Fig. 1 is a side elevation of a suction cleaner embodying my invention showing the cord reeled on the upwardly-facing hook;

Fig. 2 is a similar view showing the cord loops of Fig. 1 being placed behind the downwardly-facing cord hook;

Fig. 3 is a similar view showing the cord loops of Fig. 1 after they have been placed behind the downwardly-facing cord hook;

Fig. 4 is an enlarged detail view of the cord per se, showing the clips spaced thereon;

Fig. 5 is a detail sectional view taken on line V—V of Fig. 4; and

Fig. 6 is an enlarged fragmentary view of the cleaner handle showing the cord reeled on the upwardly-facing cord hook.

Referring to the drawing in detail, I show a motor-driven suction cleaner 10, which may be of any conventional type. Fastened to the cleaner 10 is a dust bag 13 which catches and holds the dirt taken up by the cleaner, and a handle 14 which affords a means for moving the cleaner over the surface to be cleaned. The inlet to the dust bag 13 is connected to the discharge of the cleaner fan chamber and the upper end is fastened to the upper end of the handle 14. A cord 16 having a plug 17 is provided for connecting the cleaner motor to a suitable source of power. The cord passes from the cleaner motor up through the handle and extends therefrom at 18 a sufficient length to permit the cleaner to be moved over the surface to be cleaned when the plug 17 is connected to a suitable source of power, such as a wall receptacle.

The handle 14, which is shown in Figs. 1, 2, and 3 in its upper operating position, is provided with an upwardly-facing cord hook 20 and a downwardly-facing cord hook 21. The cord 16 is reeled on the hooks 20 and 21 for storage.

The cord 16 is provided with a plurality of clips 24 which are equally spaced along its length. The distance between adjacent clips is less than twice the distance from the seat 22 of the upwardly-facing cord hook to the surface upon which the cleaner rests when the handle is in any position within its normal upper operating range or its storage position which is nearly vertical, but slightly greater than twice the distance between the seat 22 of the upwardly-facing hook 20 and the lower end 23 of the downwardly-facing hook 21.

The clips 24 are made of a single strand of wire and are fixedly attached to the cord 16 by wrapping their ends around the cord 16. Each clip includes a main body portion 25, legs 26, and end portions 27. The end portions 27 extend towards each other and terminate close to the legs 26 and directly under the main body portion 25 of the clips 24 as shown in Figs. 4 and 5. Consequently the legs 26 and main body portion 25 serve as a guard to prevent the ends 27 from snagging the clothes of the operator of the cleaner or other objects which they might contact. I have shown and described the clips 24 as being made of wire; however, it will be understood that they may be made of any suitable material such as plastics, or some material that may be molded onto the cord 16.

When it is desired to reel the cord 16 on the cord hooks 20 and 21 for storage, the clips 24 are placed over the upwardly-facing cord hook 20 as shown in Figs. 1 and 6, and the cord 16 will be formed into elliptical loops 30 which will hang vertically from the upwardly-facing cord hook. The loops 30 will all be the same length due to the fact that the clips 24 are equally spaced on the cord 16. The cleaner may be temporarily stored or wheeled from room to room with the cord in this position and the cord will not drag on the floor or become tangled with the operator's feet, because the clips are spaced on the cord less than twice the distance from the seat 22 of the upwardly-facing cord hook 20 to the surface upon which the cleaner rests when the handle is in an upper operating or storage position. Accordingly, when the handle is in the position shown in Fig. 1, the loops 30 will not touch the floor. The cleaner may be stored or wheeled from room to room with the cord in this position,

but if it is desired to place the loops 30 behind the downwardly-facing hook 21 this may be readily done by flatting the loops 30, as in Fig. 2 and placing them over end 23 of the downwardly-facing cord hook 21. When flattened as shown in Fig. 2, the loops 30 may be readily placed behind the hook 21 due to the fact that the clips 24 are spaced on the cord 16 a distance which is slightly greater that the distance between the seat 22 of hook 20 and the end 23 of hook 21. All of the loops 30 may be placed behind the hook 20 at one time. However, if it is desired, they may be placed behind the hook 20 one at a time. After the loops have been placed behind the hook 21 they will again assume a more elliptical shape, as shown in Fig. 3, due to the resiliency of the cord 16.

It will be seen from the foregoing that the operator may stand in a vertical position and very quickly properly reel the cord on the upper facing cord hook with very little effort. The equal spacing of the clips 24 assures that all of the loops will be the proper length and will not drag upon the floor, and eliminates the necessity of the operator having to carefully determine the proper length of each loop. They also eliminate the necessity of the operator having to bend over to place each loop behind the downwardly-facing cord hook, as has been necessary with all previous cord-reeling arrangements. With a cord equipped with clips 24 it is not necessary to place the cord loops 30 behind the downwardly-facing hook, but if it is desired, all of them may be placed behind the downwardly-facing hook at one time rather than one at a time as was necessary with previous reeling arrangements.

When it is desired to remove the cord from the hooks 20 and 21, the loops 30 are flattened, as shown in Fig. 2, and removed from behind the hook 21. The loops are then removed from the upwardly-facing hook 20 by lifting them upwardly far enough to remove the clips 24 from the hook. All of the loops may be removed from the hook 20 at one time or one or more may be removed, as found desirable. If the cleaner is used near a source of power and the entire cord length is not required, one or more of the loops as may be required to give a sufficient cord length may be removed, see Fig. 1, and the cleaner may be moved over the surface to be cleaned without tangling the loops remaining on the hook 20. Accordingly, if it is desired to use the cleaner near a source of power with the handle in its lowest position, the loops not required to give a sufficient cord length may be left behind the downwardly-facing cord hook 21 and they will not become tangled or drag on the floor.

From the above description, it will be seen that I have provided an arrangement whereby the cord of a suction cleaner may be more conveniently reeled on and off the handle than heretofore.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. In a motor-driven suction cleaner, the combination of an electric cord for connecting the motor of said cleaner to a source of power, and a handle having a cord hook thereon, said cord having a plurality of clips non-slidably attached thereto in spaced relation, said clips being adapted to be placed over said cord hook for supporting said cord looped on said cord hook.

2. In a motor-driven suction cleaner, the combination of an electric cord for connecting the motor of said cleaner to a source of power, and a handle for moving said cleaner over the surface to be cleaned, said cord having a plurality of clips equally spaced thereon and fixedly attached thereto and adapted to be supported by a portion of said handle for supporting said cord looped on said handle.

3. In a motor-driven suction cleaner, the combination of a handle having a cord hook thereon, and an electric cord for connecting the motor of said cleaner to a source of power, said cord having a plurality of devices attached thereon in spaced relation for supporting said cord on said cord hook, said devices being spaced on said cord a distance less than twice the distance from said cord hook to the surface on which the cleaner rests when the handle is in an upper position.

4. In an electrically driven device, the combination of a handle, said handle having an upwardly-facing hook on its upper portion and a downwardly-facing hook on its lower portion, an electric cord for connecting said device to a source of power, said cord having a plurality of devices attached thereon in spaced relation and adapted to be placed over said upper hook to reel said cord on said hook, said devices being spaced a distance less than twice the distance from said upwardly-facing hook to the surface on which the cleaner rests when the handle is in an upper position but greater than twice the distance from the seat of the upwardly-facing hook to the downwardly-facing hook.

5. In a motor-driven suction cleaner, the combination of a handle, an electric cord for connecting said cleaner motor to a source of power, and a plurality of equally-spaced clips attached to said cord for supporting said cord looped on said handle, said clips being so spaced that the lower ends of the loops will not contact the surface on which the cleaner rests when the handle is in an upper position, said clips including a main body portion and leg portions, said clips having their leg portions extending around said cord and terminating adjacent said legs and under said main body portion of said clip, said legs and main body portion of said clips thereby forming a guard for said ends.

6. In an electrically-driven device, the combination of a handle, said handle having an upwardly-facing hook on its upper portion and a downwardly-facing hook on its lower portion, an electric cord for connecting said device to source of power, said cord having a plurality of clips attached thereon in spaced relation and adapted to be placed over said upper hook to reel said cord on said hook, said clips being spaced on said cord a distance greater than twice the distance from the seat of the upwardly-facing hook to the downwardly-facing hook and fixedly attached thereto.

CHARLES H. TAYLOR.