A. J. STECKER,
HANDLE CONNECTION FOR VACUUM CLEANERS,
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2 SHEETS—SHEET 2.

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Attorney
To all whom it may concern:

Be it known that I, ALFRED J. STECKER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Handle Connections for Vacuum-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to handle connection for vacuum cleaners, and it is one of the objects of the invention to provide a construction which may be either stationary or movable in relation to the machine. It is a further object to provide a simple and durable construction of electrical terminal connections, and one which will not interfere with the mechanical movements of the handle.

In the drawings:

Figure 1 is a plan view of the vacuum cleaner showing my improved handle and electrical connector attached thereto;

Fig. 2 is a side elevation thereof;

Fig. 3 is a section on line $x-x$ Fig. 1;

Figs. 4 and 5 are sections on line $y-y$ showing respectively the fixed and movable position of the handle; and

Fig. 6 is a section through the inner end of the handle showing the connection of the prongs and the electrical conductors.

A is a vacuum cleaner of the type in which the electric motor and fan are housed in a single casing, which is also provided with a suction tool B and a dust bag (not shown). The tool B has rolls C at its opposite ends and the casing A is further supported by a caster wheel D at the rear end thereof.

For moving the machine over the floor it is provided with a handle E, which also forms a support for the dust bag. Ordinarily it is desirable to have this handle at a fixed angle in relation to the machine, this being the most convenient one for proper manipulation and for supporting the dust bag. There are, however, occasions when it is preferable to have the handle movable to permit of using the machine under furniture and in other places where there is not clearance for the handle at its usual angle. It is further necessary to provide electrical connections to the machine, the conductors being conveniently arranged within the handle and leading from the latter to terminals on the motor casing. Thus it is necessary to provide an electrical connection that will permit of the flexing of the handle.

I have devised a construction which fulfills the necessary conditions as above described, and which specifically is as follows:

F designates a pair of prongs constituting the inner end portion of the handle, which prongs embrace the casing A with sufficient clearance for angular movement. The ends of the prongs are attached to the casing by studs G which are threaded for engagement of clamping nuts H. The prongs are apertured to slidably fit the threaded studs, and the end portions $F'$ thereof are fashioned to extend substantially horizontally when the handle is at its usual angle. I are parallel ribs for embracing the portions $F'$ when the latter are clamped against the casing by tightening the nuts H. In this position, as shown in Fig. 4, the handle is rigidly connected to the casing A, as the ribs I will hold the portions $F'$ from any angular movement. When, however, the nuts H are loosened there is sufficient resiliency in the prongs F to cause them to spring outward beyond the ribs I, in which position, as shown in Fig. 5, the handle is free to pivot upon the studs G, and to be adjusted to any desired angle.

The electrical conductors for supplying the current to the motor pass through the hollow handle E to the point of connection between the same and the prongs F. Here the two conductors $J$ and $J'$ are separated and pass around the inner faces of the respective prongs F, to which they are secured by clips K. At a point but a short distance removed from the studs G, the conductors $J$ and $J'$ extend inward and pass into an insulator housing L where they are connected to binding posts M. The inward connection is provided with sufficient slack to permit the maximum angular movement of the handle, and this portion is preferably guarded by a resilient metallic helix N surrounding the same.

In operation when the parts are in the position shown in Fig. 4, the machine may be moved about by the handle which is stationary in relation thereto. To release the handle the nuts H are loosened permitting the prongs F to spring outward, so as to clear the ribs I, after which the handle is
What I claim as my invention is:

1. In a vacuum cleaner, the combination with a casing provided with a suction nozzle and adapted to travel over a surface to be cleaned, of a handle for said casing, bifurcated to straddle the casing, pivot studs upon the casing engaging apertures in said furcations, a pair of ribs upon the casing at one side thereof, and clamping means engaged with the stud at said side for retaining the corresponding furcation engaged between said ribs, said furcation having a resiliency disengaging it automatically from engagement with said ribs when released from said clamping means.

2. In a vacuum cleaner, the combination with a casing provided with a suction nozzle and adapted to travel over a surface to be cleaned, of a handle for said casing bifurcated to straddle the casing, pivot studs upon the casing engaging apertures in the furcations, means for establishing an interlock between one of said furcations and the casing, and clamping means engaged with the corresponding stud to retain the last-mentioned furcation interlocked with the casing, said furcation having a resiliency displacing it to automatically break the interlock when released from said clamping means.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED J. STECKER.

Witnesses:

JAMES P. BARRY,

GEORGE E. MOORE.