Oct. 30, 1928. 1,689,511

W. J. WISE ET AL

SWITCH PLUG

Filed Jan. 19, 1922

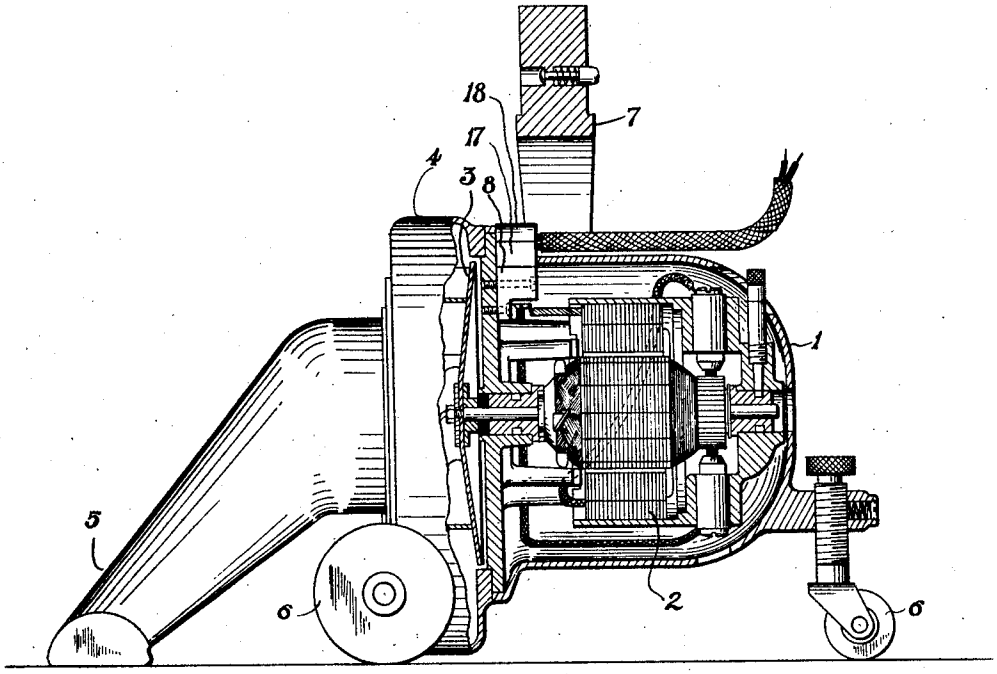


Fig. 1

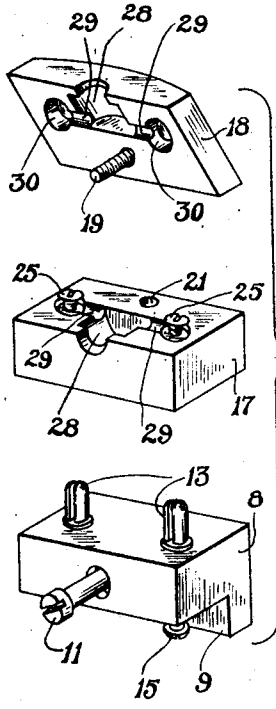


Fig. 5

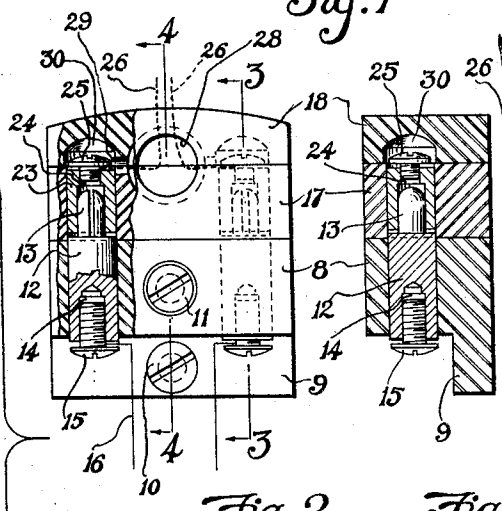


Fig. 2

Fig. 3

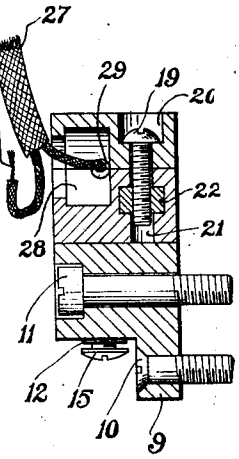


Fig. 4

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UNITED STATES PATENT OFFICE.

WILLIAM J. WISE AND THOMAS O. ADAMS, OF NEW PHILADELPHIA, OHIO, ASSIGNORS, BY MESNE ASSIGNMENTS, TO WISE-McCLUNG CORPORATION, OF NEW PHILADELPHIA, OHIO, A CORPORATION OF OHIO.

SWITCH PLUG.

Application filed January 19, 1922. Serial No. 530,293.

This invention relates to suction cleaners and more particularly to a switch plug for connecting the electric supply wires with the motor of the suction cleaner.

The objects of the invention are to provide a switch plug of this character formed of two separable parts, one part being fixed to the casing of the motor and being provided with two terminals connected with opposite sides of the motor, the other or removable part being provided with two sockets to receive said terminals, the electric supply wires being connected to said sockets, the plug being so formed that the removable portion of the plug will be normally held in engagement with the stationary portion thereof, but so arranged that the removable portion may be easily detached from or attached to the stationary portion of the plug.

With these objects in view, the invention consists in the construction and arrangement of parts, hereinafter described and illustrated in the accompanying drawings, it being understood that various changes in the form and details of contruction may be made within the scope of the appended claim.

A preferred embodiment of the invention thus set forth in general terms is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a suction cleaner having the improved switch plug attached thereto, the motor casing being shown in section to illustrate the invention;

Fig. 2, a front elevation of the switch plug, parts being broken away for the purpose of illustration;

Fig. 3, a section on the line 3—3, Fig. 2;

Fig. 4, a section on the line 4—4, Fig. 2; and

Fig. 5, a perspective view of the several parts of the switch plug separated from each other.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawing.

In carrying out the invention, the motor casing 1, motor 2, fan and fan chamber 3 and 4 respectively, nozzle 5, wheels 6 and handle bail 7 may be of any usual and well known construction of either the horizontal motor type of vacuum cleaner as shown in the drawing, or of the usual vertical motor type.

The body of each portion of the plug is made of hard rubber or other suitable insulating material, the metal parts being cast therein as will be hereinafter described. The stationary portion of the plug comprises the insulated block 8 having the reduced flange 9 at its lower end through which a screw 10 or the like may be passed, attaching the same to the motor casing, a longer screw being also preferably located through the central portion thereof and into the motor casing.

The terminal pins 12 are cast in opposite end portions of the stationary block 8, each of said pins being provided with the bifurcated reduced contact portion 13 extending above the upper surface of the block and with the internally threaded lower portion extending through the lower portion of the block as shown at 14 to receive the binding screw 15 by means of which the wires 16 leading from the motor are connected thereto.

The removable portion of the switch plug comprises the block 17 formed of suitable insulating material and covered by the block 18 also formed of insulating material and connected thereto as by the screw 19, the head of which is received in a socket 20 in the portion 13, said screw extending through a bore 21 in the block 17 and engaging the nut 22 which is cast in said block.

The terminal bushings 23 are cast in the block 17 in alignment with the terminal pins of the lower block, said bushings extending entirely through the block 17 and being provided with the internal screw threads 24 at their extremities which receive the binding screws 25 by means of which the wires 26 leading from the source of electric supply are connected to the upper or removable block.

The wires 26 are carried in a cable 27 in the usual manner and extend through the socket 28 formed in the blocks 17 and 18, the oppositely disposed sockets 29 communicating with the socket 28 and extending to the sockets 30 which are located above the binding screws 25.

It will be seen that the reduced flange 9 upon the insulated block 8 will serve as a protection to prevent the bare end portions of the wires 16 from coming into contact with the metal base upon which the switch plug is fastened, thus preventing short circuiting of the same.

We claim:—

A separable switch plug comprising a

fixed insulated block and a movable insulated block, means for attaching the fixed insulated block to a support, terminal pins molded in the fixed block and extending entirely through the same, a binding screw at one end of each terminal pin, a reduced, bifurcated shank at the opposite end of each terminal pin, terminal bushings molded within the movable block and arranged to receive said bifurcated shanks and binding screws located at the opposite extremities of the terminal bushings, an insulated cover for the movable block, said cover and movable block being provided with corresponding sockets to receive the supply wires, the axes of the sockets being at right angles to the terminal bushings, a nut molded in the movable block and a screw carried by the cover and arranged to engage said nut.

In testimony that we claim the above, we have hereunto subscribed our names.

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