

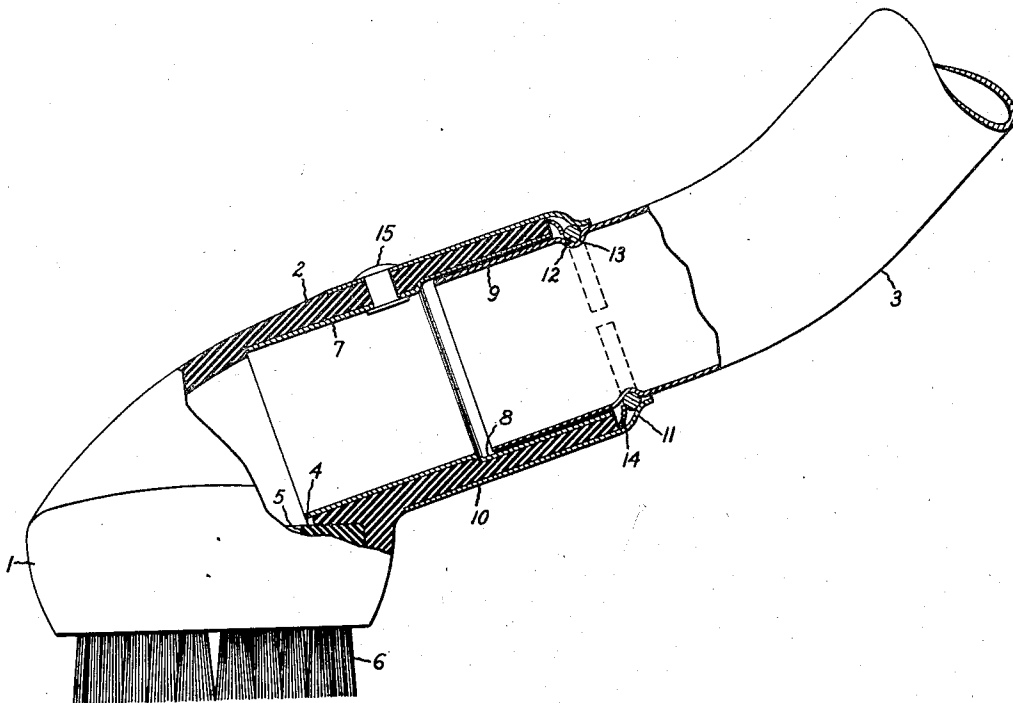
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COUPLING

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COUPLING

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2 Claims. (Cl. 285—97.3)

The present invention relates to swivel couplings for use in vacuum cleaners and the like.

The object of my invention is to provide an improved construction in swivel couplings, and for a consideration of what I believe novel and my invention, attention is directed to the following description and the claims appended thereto.

In the accompanying drawing the single figure is a sectional view of a coupling embodying my invention applied to a vacuum cleaner tool.

Referring to the drawing, there is shown a vacuum cleaner tool comprising a body of molded rubber having a suction nozzle 1 and an integral tubular portion 2 connecting the nozzle with a rigid metal suction tube 3. Fixed within the suction nozzle is a brush back 4 having a central aperture 5 carrying bristles 6 surrounding the aperture, the lower ends of which project below the suction nozzle for contact with the surface being cleaned.

Extending within the tubular portion 2 is a rigid metal sleeve 7 having an enlarged portion 8 rotatably receiving the end 9 of the suction tube 3. A rigid metal sleeve 10 surrounds the outer surface of the tubular portion 2. The walls of the tubular portion 2 are accordingly confined between the inner and outer sleeves 7 and 10. The outer sleeve 10 is provided with an inwardly extending flange 11 which cooperates with a shoulder formed by a ring 12 secured in a groove 13 in the suction tube 3 to prevent removal of the suction tube. A spring washer 14 arranged between the end of the tubular portion 2 and the ring 12 maintains the ring in engagement with

the flange 11 so as to prevent rattling. The coupling is held in assembled relation by a rivet 15 which secures the sleeves 7 and 10 to the tubular portion 2. Upon removal of the rivet the coupling can be disassembled by sliding the outer sleeve 10 off the end of the tubular portion 2.

In the above described construction leakage of air in through the coupling is prevented by the relatively close fit between the enlarged portion 8 of the sleeve 7 and the end 9 of the suction tube 3. Leakage is also prevented by the engagement of the flange 11 with the ring 12. Due to the absence of gaskets or packing the suction tube 3 can be easily turned relative to the floor tool.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. A swivel coupling comprising a flexible tube having its walls confined between rigid inner and outer sleeves, a rigid tube rotatably telescoped within the inner sleeve and having an outwardly extending shoulder beyond the end of the flexible tube, and an inwardly extending flange on the outer sleeve cooperating with said shoulder to prevent removal of the rigid tube.

2. A swivel coupling comprising a flexible tube having its walls confined between rigid inner and outer sleeves, fastening means extending through the walls of said tube and cooperating with said sleeves, a rigid tube rotatably telescoped within said inner sleeve, and relatively rotatable inter-engaging parts on the outer sleeve and said rigid tube for preventing removal of the rigid tube.

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