Oct. 27, 1953 L. C. SMITH 2,656,560

DUAL PURPOSE VACUUM CLEANER NOZZLE

Filed Feb. 24, 1950

Fig. 1.

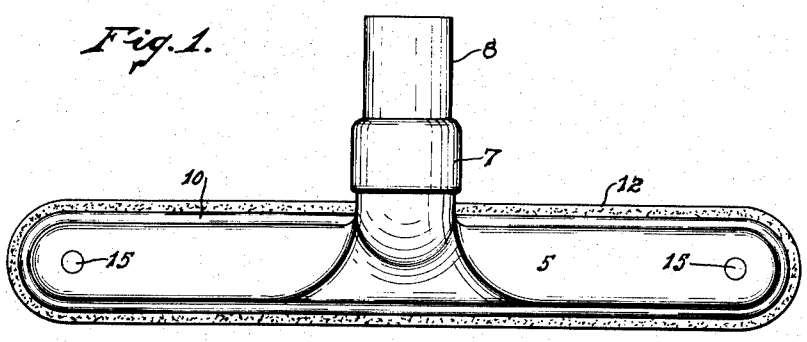


Fig. 2.

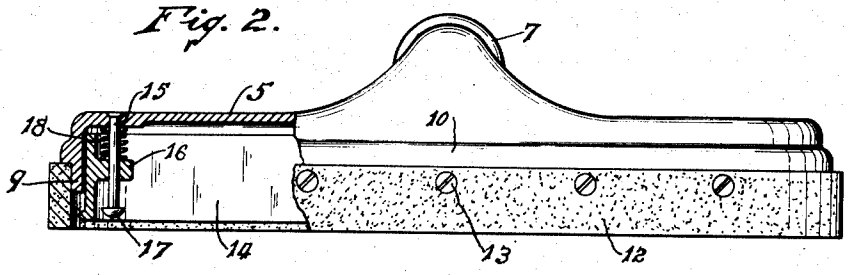


Fig. 3.

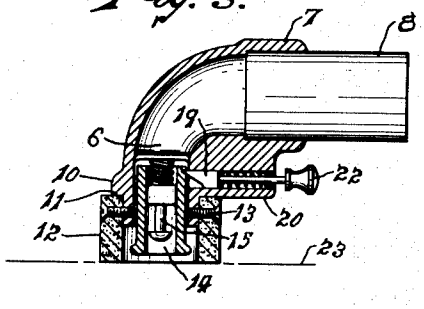


Fig. 4.

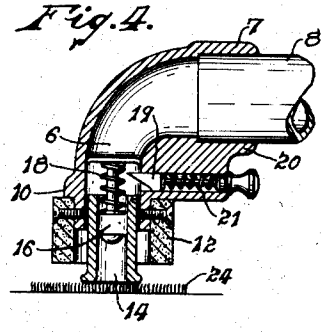
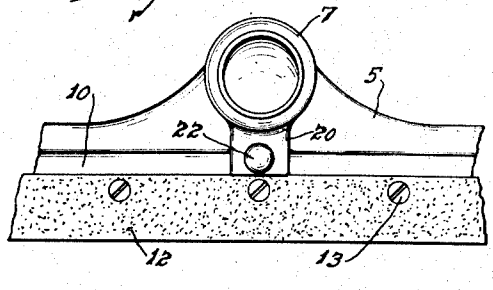


Fig. 5.



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Patented Oct. 27, 1953

2,656,560

UNITED STATES PATENT OFFICE

2,656,560

DUAL PURPOSE VACUUM CLEANER NOZZLE

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Application February 24, 1950, Serial No. 145,935

3 Claims. (Cl. 15—373)

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This invention relates to a dual purpose vacuum cleaner nozzle and more particularly to such a nozzle which is primarily intended for use on both bare floors and carpets.

An object of this invention is to provide a nozzle which can be readily converted for use on either a bare floor or a carpet.

A further object of the invention is the provision of a nozzle, for vacuum cleaners, having soft and hard contact tips which may be selectively positioned to adapt the nozzle for use on either bare floors or carpets.

Further objects and advantages of this invention will be more clearly understood from the following description and the accompanying drawings in which:

Fig. 1 is a plan view of the nozzle embodying my invention.

Fig. 2 is a front view of said nozzle with a portion thereof shown in central vertical section.

Fig. 3 is a side view of the nozzle, in central vertical section, showing the same as conditioned for use on bare floors.

Fig. 4 is a similar view showing the nozzle as conditioned for use on carpets.

Fig. 5 is a rear view of the central portion of the nozzle.

In the embodiment illustrated in the drawings, my improved nozzle comprises an elongated body in the form of a shell 5 having a mouth 6 with a neck portion 7 to which is connected a suction tube 8.

The mouth of said nozzle is surrounded by a depending flange 9 which has parallel portions at the opposite side of the mouth and a ridge 10 is provided to form a surrounding shoulder 11 adjacent to said mouth for supporting an elongated sleeve of felt material, or the like, forming the soft tip 12 which surrounds the flange 9 and abuts the shoulders 11. The said sleeve extends below the free edge of the flange 9 and is preferably secured to the shell 5 by a series of screws 13 which are threaded to the flange 9.

In order to adapt the said nozzle for use on carpets, I provide a hard tip in the form of an elongated sleeve 14 which is contained within the mouth 6 of the nozzle and is slidably mounted therein upon vertical posts 15—15 which are secured to the top of the shell and depend into said mouth adjacent the ends thereof. The said sleeve 14 has, at each of its opposite ends, a boss 16 which extends across the inner end portion thereof and has an opening therethrough which slidably receives the post 15 so as to permit vertical movement of the sleeve 14 within the mouth

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of the shell 5. Each of the said vertical posts is provided with a head 17 which abuts the boss 16 to limit the outward movement of the sleeve 14 and thereby locate the said sleeve, when it is extended from the mouth 6, to position it for use on carpets as illustrated in Fig. 4. A spring 18 is provided upon each of the posts 17, between the top of the shell 5 and the boss 16, to urge the said sleeve outwardly from the shell 5 and thereby retain it in its extended position.

In order to retain the sleeve 14 in its retracted position within the mouth 6, as shown in Fig. 3, so as to permit the use of the soft tip 12 for bare floors, I provide a latch 19 which is slidable in a boss 20 at the rear of the shell and is urged forwardly therein, by means of a spring 21, to cause the tip of said latch to engage a detent on the sleeve 14 and thereby retain the said sleeve in retracted position against the tension of the springs 18. A knob 22 is provided for the latch 19 so that it may be manually retracted when it is desired to release the sleeve 14 to permit it to be projected from the mouth 6 by the springs 18.

It will be noted that, when the soft tip sleeve 12 is used, the hard tip sleeve 14 is retracted to a position wherein it is spaced above the free end of the soft tip so that the said sleeve 14 will not contact with the surface of the bare floor indicated at 23. When the hard tip is used, the sleeve 14 will project outwardly beyond the free end of the soft tip so that it will not contact the surface of the carpet indicated at 24.

I claim:

1. A nozzle for vacuum cleaners and the like comprising a body in the form of a shell having an elongated mouth opening downwardly in said body, an elongated outer sleeve of a soft material surrounding said mouth and projecting beyond the lower edge thereof, an inner sleeve of hard material vertically slidable within said mouth, spring means normally urging said inner sleeve outwardly from said mouth and adapted to retain the inner sleeve in extended position relatively thereto, abutment means for limiting the outward movement of said inner sleeve and positioning it with the lower end thereof extending below the bottom of the outer sleeve, a latch slidable in said shell and adapted to project into said mouth, a detent on said inner sleeve engageable with said latch to retain the sleeve in retracted position within the mouth against the tension of the spring means and with the lower end of said inner sleeve positioned above the bottom of the outer sleeve, a spring

urging said latch into engagement with the detent, and a knob on said latch for manually retracting it against the tension of the said spring to permit the inner sleeve to be moved into projected position relatively to the outer sleeve.

2. A nozzle for vacuum cleaners and the like comprising a body in the form of a shell having an open mouth surrounded by a depending flange, an outer sleeve of soft material secured to said flange and surrounding said mouth, an inner sleeve of a hard material slidably mounted within said mouth, spring means urging said inner sleeve outwardly from said mouth, means for limiting the outward movement of said inner sleeve, a boss on said body having an opening therein which communicates with the interior of said body, a latch member slidably mounted in said opening and adapted to project into said mouth into engagement with said inner sleeve, spring means urging said latch member into said engagement to retain said inner sleeve within said mouth and means for retracting said latch member to release the inner sleeve.

3. A nozzle for vacuum cleaners and the like comprising a body in the form of a shell having an elongated mouth opening downwardly in said body and a neck portion extending perpendicularly therefrom intermediate the ends of said body, an elongated outer sleeve of soft material surrounding said mouth and projecting beyond the lower edge thereof, an inner sleeve of hard material vertically slidable within said mouth, a detent on said inner sleeve, spring

means normally urging said inner sleeve outwardly from said mouth and adapted to retain the inner sleeve in extended position relatively to the mouth, abutment means for limiting the outward movement of said inner sleeve and positioning it with the lower end thereof extending beyond the bottom of the outer sleeve, a boss on said body depending from said neck portion and having an opening therein communicating with the said mouth, a latch slidable within said opening and extending into said mouth and being adapted to engage the detent on said inner sleeve to retain said sleeve within the mouth against the tension of said spring means, a spring within said opening for urging the latch into engagement with said detent, and a knob on said latch for manually retracting it against the tension of said last mentioned spring to permit the inner sleeve to be projected from the mouth.

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