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E. FABER

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VACUUM CLEANER NOZZLE

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Fig. 1

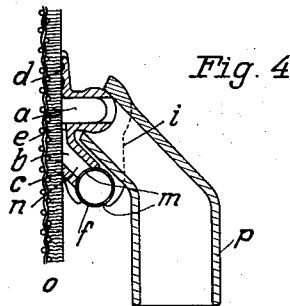
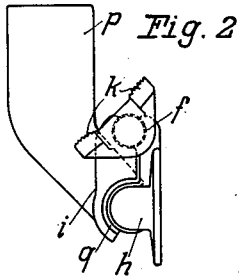
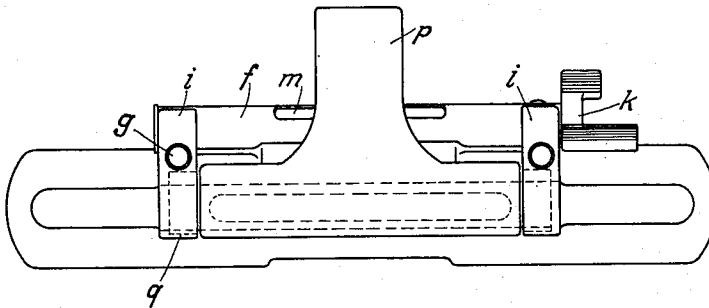


Fig. 3

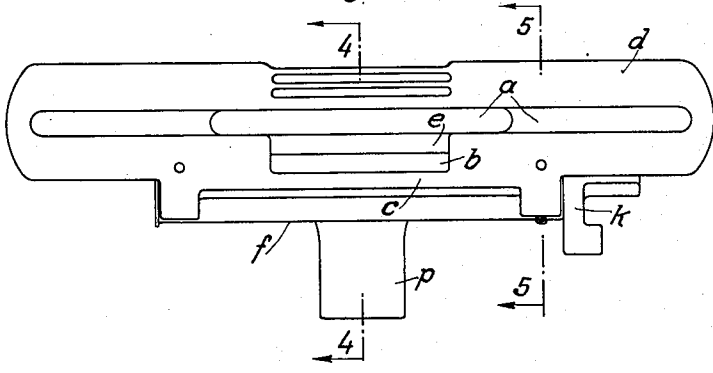
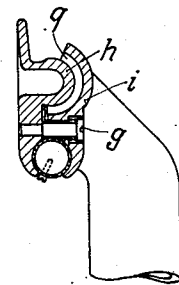


Fig. 5



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## UNITED STATES PATENT OFFICE

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## VACUUM CLEANER NOZZLE

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4 Claims. (Cl. 15-155)

This invention relates to a vacuum-cleaner nozzle, with two suction apertures, which can be switched on alternatively by means of an air-control member, one for sucking away dust, and one, located beside it, for sucking away threads. Ordinarily in one position of the control member, the dust suction aperture comes into operation, owing to the fact that the air is sucked into this aperture underneath the contact margin of the dust-suction nozzle and through the carpet fabric. With the control member in the other position, however, air flows over the surface of the carpet, taking with it into the thread-suction aperture any fibres, filaments, hairs or the like loosely adhering to the carpet.

In known vacuum cleaners of the aforementioned kind the control member is located both in the dust-suction air current and in the thread-suction air current, that is, where the two corresponding suction passages unite inside the nozzle. This has the disadvantage that the control member may become displaced or obstructed owing to deposits of dust or threads.

According to the present invention this is remedied by arranging the thread-suction aperture with its outer margin in the contact margin of the dust-suction aperture and with its inner margin lying above it, the control member being mounted before it on the outside of the nozzle, so that in one position, namely the open position, it lets air enter the thread-suction aperture, and pass below its inner margin and over the surface of the carpet into the dust-suction aperture, whereas in the other position, that is, when closed, it only lets the dust-suction nozzle come into action.

One form of construction of the invention is illustrated by way of example in the accompanying drawing, in which

Figure 1 shows a plan view of the nozzle,  
Figure 2 a side view,  
Figure 3 an underside view,  
Figure 4 a cross section on the line 4-4 in Fig. 3; and Figure 5 a section on the line 5-5 in Figure 3.

By *a* is denoted the dust-suction aperture, and by *b* the thread-suction aperture. The latter is located near the former, so that its outer margin *c* falls within the contact surface *d* of the dust-suction aperture, whereas with its inner margin *e*, forming the partition between the two apertures, it lies somewhat higher than the surface *d*. By *f* is denoted the air-control member, which is constructed as a tubular rotary valve, and is supported between two bearing bridges *i*,

mounted by means of screws *g* upon the nozzle body *h*, and the nozzle body itself. For the rotating thereof there serves a double-armed foot lever *k*, secured to one of its ends. In the position shown in Figure 4 air passes through two longitudinal apertures *m* in the rotary valve into a passage *n* connected with the thread-suction aperture *b*, and then flows away under the partition *e* between the two apertures and over the carpet *c* into the vacuum dust-suction aperture *a* and thence into the nozzle tube *p*.

In the Figure 4 position just described, the nozzle acts, as hereinbefore stated, as a thread-suction nozzle. If however the pedal *k* is thrown over, so that no air can enter the thread-suction aperture *b* from above, only the dust-suction aperture *a* comes into operation.

The nozzle tube *p* is so supported on the nozzle as to be rotatable about the longitudinal axis of the latter, to enable the nozzle to be more conveniently pushed underneath articles of furniture when the vacuum cleaner is working. The widened tube end then engages with plug-like bearing extensions *q* between the nozzle body *h* and the bearing bridges *i* of the rotary valve.

What I claim is:—

1. A vacuum cleaner nozzle comprising a nozzle head, formed with two suction apertures, one for dust and one for loose threads and the like, a contact surface surrounding the suction apertures and adapted to bear against a carpet or the like to be cleaned, a partition between the two suction apertures, extending nearly but not quite into the contact surface, a source of suction communicating directly with the dust suction aperture and communicating only through the gap under the said partition with the thread suction aperture, an air control member mounted on the nozzle head, the nozzle head being formed with a passage whereby the air control member communicates with the thread suction aperture, the cross-sectional area of the thread suction aperture, and of the air gap below the partition being substantially less than that of the dust suction aperture, means for supplying air to the air control member, and means for operating the air control member in such a way that in one position a current of air from the air control member flows through the passage and underneath the partition into the dust suction aperture, whereas in the other position of the air control member no air is supplied through the said passage.

2. A vacuum cleaner nozzle, comprising a nozzle head having a contact surface formed with a

- suction slot, and with a second slot from which a current of air can flow over the surface to be cleaned to the suction slot, the nozzle head being formed with a passage of elongated cross section through which a supply of air can reach the second slot, the length and breadth of the cross section of the said passage being substantially equal to those of the second slot, a rotatably mounted air control member capable of closing and opening the said passage for the admission of air as required, a double foot lever for opening and closing the air control member, and two bearing bridges on the nozzle head, the air control member and the double foot lever being journaled in the said bearing bridges, in such a position that the operator can actuate it while using the vacuum cleaner.
3. A vacuum cleaner nozzle as claimed in claim 2, the air control member being a slotted tube, rotatable about its longitudinal axis.
4. A vacuum cleaner nozzle, comprising a

nozzle head having a contact surface formed with a suction slot, and with a second slot from which a current of air can flow over the surface to be cleaned to the suction slot, the nozzle head being formed with a passage of elongated cross section through which a supply of air can reach the second slot, the length and breadth of the cross section of the said passage being substantially equal to those of the second slot, a rotatably mounted air control member capable of closing and opening the said passage for the admission of air as required, a double foot lever for opening and closing the air control member, two bearing bridges on the nozzle head, the air control member and the double foot lever being journaled in the said bearing bridges, and an outlet tube for air charged with dust communicating with the suction slot, the said outlet tube being oscillatably mounted in the same two bearing bridges.

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