

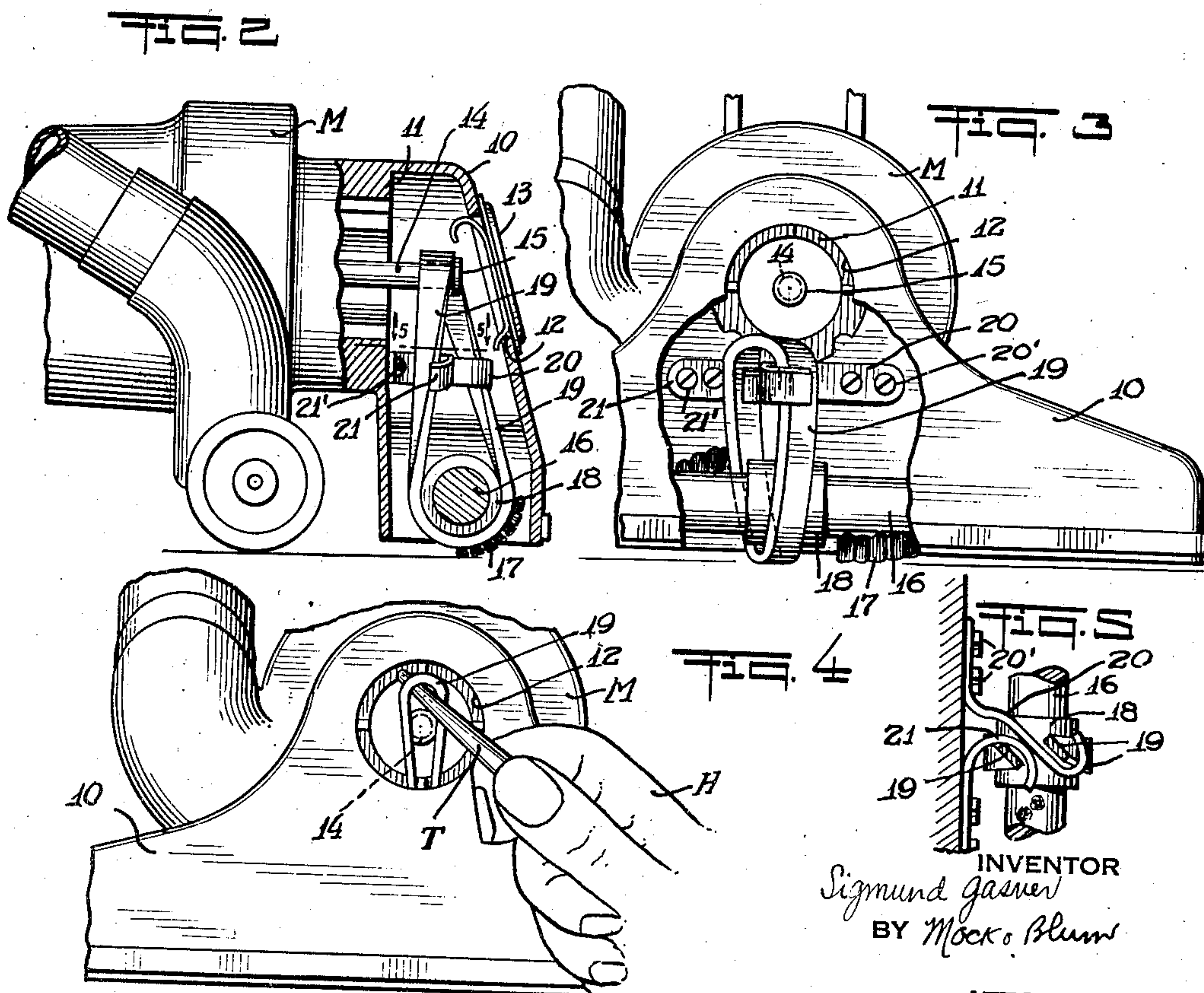
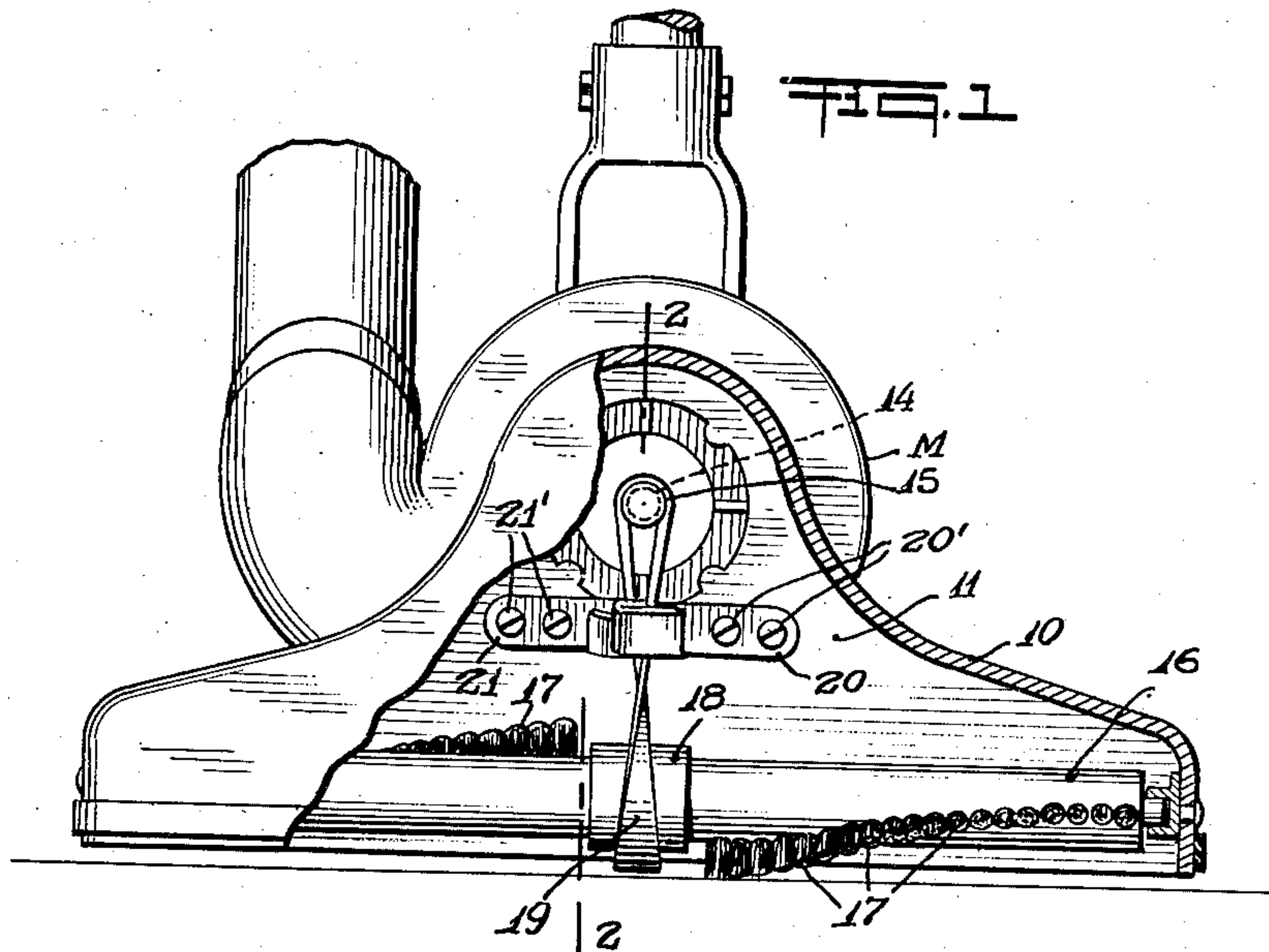
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BELT RETAINING DEVICE FOR VACUUM CLEANERS

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BELT RETAINING DEVICE FOR VACUUM
CLEANERS

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1 Claim. (Cl. 74—240)

My invention relates to a belt retaining device for vacuum cleaners.

One of the objects of my invention is to provide novel means for retaining a belt of a vacuum cleaner in an accessible position so that the belt can be readily and safely remounted when it slips off the motor shaft.

Another object of my invention is to provide a device for maintaining the belt of a vacuum cleaner in a certain twisted position whenever the belt accidentally slips off the motor shaft so that the belt can be remounted in its proper twisted form upon the motor shaft.

Another object of my invention is to provide a retaining device which will prevent the belt from becoming entangled with the brush or any other moving part of the vacuum cleaner when the belt slips off the motor shaft.

Other objects of my invention will be set forth in the following description and drawing which illustrate a preferred embodiment thereof, it being understood that the above general statement of the objects of my invention is intended merely to generally explain the same and not to limit it in any manner.

Fig. 1 is a front elevational view of the housing of a vacuum cleaner illustrating my invention, the nozzle being shown partially broken away.

Fig. 2 is a sectional view on the line 2—2 of Fig. 1, the motor housing being shown in elevation.

Fig. 3 is a partial front elevational view, similar to Fig. 1, showing the belt resting on the retaining device after the belt has slipped off the motor shaft.

Fig. 4 is a partial front view showing the belt being remounted upon the motor shaft.

Fig. 5 is a sectional view on the line 5—5 of Fig. 2.

Referring to the drawing, the vacuum cleaner may be of any suitable type and generally comprises a nozzle casing 10 and a motor housing M.

The rear inner wall of the nozzle casing 10 is designated by the reference numeral 11. There is an opening 12 located in the front wall of the nozzle casing affording limited access to the interior thereof. The opening 12 may be closed by a removable cap member 13 of usual construction.

A driving or motor shaft 14 having a head 15 is located within the nozzle casing 10. Likewise, there is located within said nozzle casing a brush shaft 16 having a brush 17 mounted thereon. A

pulley 18 is mounted upon the brush shaft 16

and said brush shaft 16 is driven by means of a belt 19 which is driven by the motor shaft 14.

It will be noted that the driven brush shaft 16 rotates in a plane which is perpendicular to the plane of rotation of the driving shaft 14. Hence the belt 19 must necessarily be twisted for the transmission of power.

My invention is best illustrated in Figs. 1 and 2. The retaining device consists of two brackets 20 and 21, one end of each being secured to the inner wall 11 of the casing nozzle 10 by means of screws 20' and 21' respectively. The brackets may be of metal or any other suitable material. The free ends of each of the brackets 20 and 21 are bent inwardly to form hook-like head portions as clearly shown in the drawing.

As shown in Fig. 5, the base portions of the brackets 20 and 21 are in alignment and the hook shape portions may abut each other, but this is not absolutely essential.

It will be noted from Figs. 1 and 2, that the belt 19 is in a twisted position. The significance of this is that ordinarily if the vacuum cleaner were not provided with my novel retaining means, the belt would fall onto the brush shaft and become entangled with the brush. The user in attempting to remount the belt would have to fumble about before locating the same through the small opening in the front wall of the nozzle casing and then there would be no assurance that the belt could be remounted in its proper original twisted position. If the position was incorrect, the belt would immediately fly off the motor shaft and the user would have to repeat this cumbersome operation until the belt was properly remounted.

My invention overcomes the foregoing difficulties and assures the remounting of the belt in its proper twisted position upon the motor shaft. For example, if the belt 19 accidentally slips off the motor shaft 14, the belt will fall in a resting position upon the brackets 20 and 21 as clearly shown in Fig. 3. It is impossible for the belt to become untwisted and the user may safely and easily remount the belt 19 upon the motor shaft 14 by slipping a tool T under the belt 19 through the opening 12 and raising the belt upon the motor shaft. It will be noted that the portion of the belt 19 which is encompassed by the hooked end of the bracket 20 cannot be moved to the left in restoring the belt to its operating position. Thus the position of the hooks effectively prevents an improper engagement between the belt 19 and the driving shaft 14. Conversely, the bracket 21 has a similar effect.

It is obvious that with the use of my retaining means, injuries to the fingers of the user will be avoided whenever the belt has to be reset upon the motor shaft.

5 Referring to Fig. 5, it will be noted that the brackets 20 and 21 are of different lengths to accommodate the distances of the respective portions of the belt 19 from the inner wall 11.

10 Numerous changes and omissions may be made without departing from the spirit of my invention. It may be possible to vary the shape and number of the brackets employed.

I claim:

In combination with a twisted belt for vacuum cleaners, means having hooked head portions through which spaced parts of said belt freely run, said means being adapted to catch said belt when- 5
ever said belt slips off the shaft of the driving means and to prevent said belt from becoming untwisted.

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