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SQUEEGEE NOZZLE ATTACHMENT FOR VACUUM CLEANERS

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Fig. 1

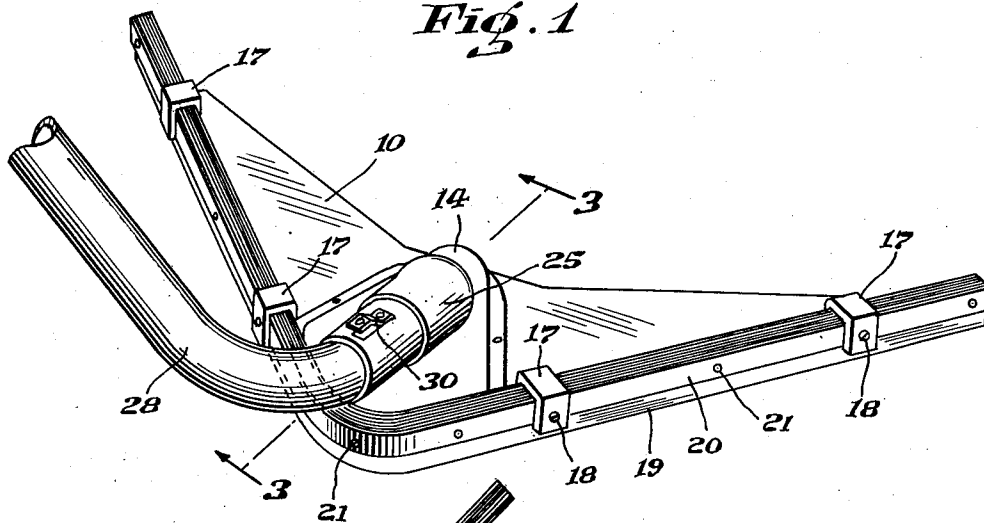


Fig. 2

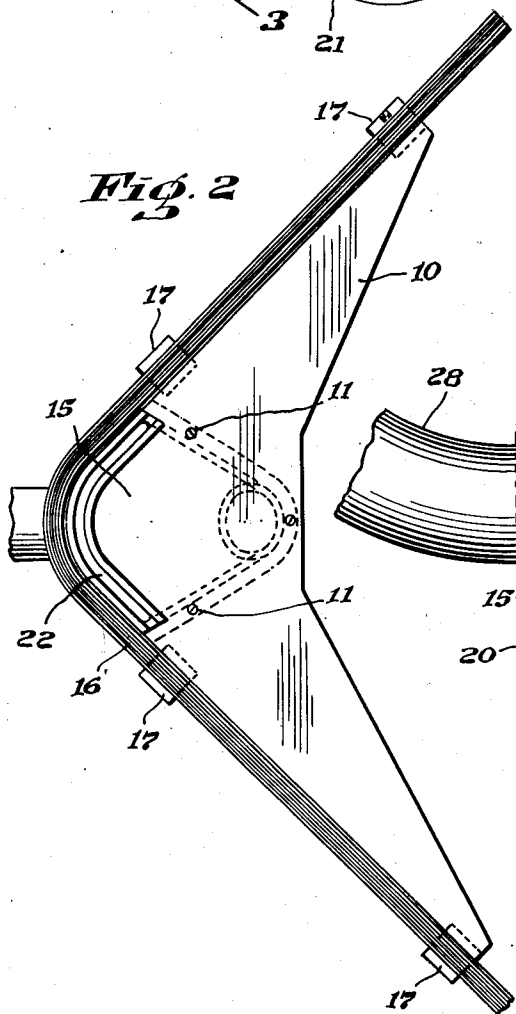
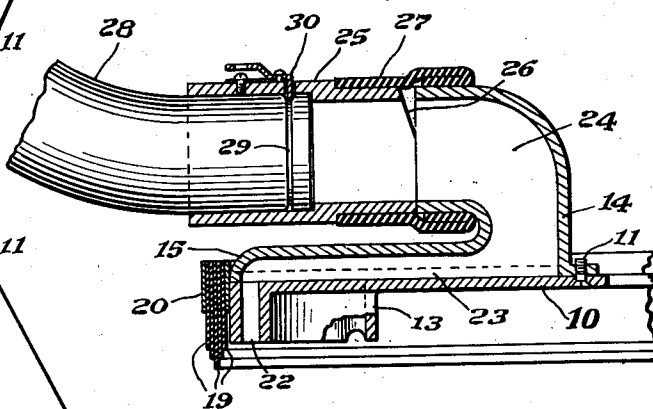


Fig. 3



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SQUEEGEE NOZZLE ATTACHMENT FOR VACUUM CLEANERS

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4 Claims. (Cl. 15-401)

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My present invention relates to squeegees, and more particularly to a squeegee adapted to be attached to a vacuum cleaner.

My invention is particularly adapted for cleaning a floor or other surface on which considerable water or other fluid has been poured. In such use, I provide a V-shaped squeegee to be pushed over the floor with the apex thereof at the rear so that the pushing action of the squeegee accumulates the water toward the apex of the V.

The principal object of my invention is therefore an improved squeegee for use on wet floors.

Another object is an improved V-shaped squeegee for use as an attachment on vacuum cleaners and in which the structure of the under surface of the apex of the squeegee cooperates with the vacuum producing means of the vacuum cleaner to pick up the water collected by the squeegee and withdraw it into the water tank of the vacuum cleaner.

Another object is an improved construction for automatically keeping the ends of the arms forming the V of the squeegee in continuous contact with the floor as the device is pushed over the floor, regardless of the irregularities in the surface of the floor.

Other objects and novel features of the construction and arrangements of parts comprising the invention will appear as the description of the invention progresses.

In the accompanying drawing illustrating a preferred embodiment of my invention:

Figure 1 is a perspective view of my novel squeegee connected to the suction hose of a vacuum cleaner.

Figure 2 is a bottom plan view thereof, and

Figure 3 is a vertical sectional elevational view, taken on the line 3-3 of Fig. 1 and looking in the direction of the arrows.

The squeegee and nozzle device comprises a V-shaped plate or frame 10 having arms extending forwardly from the apex of the plate at an angle of approximately 45° to the center line or axis. Adjacent the apex, the plate is formed with an arcuate contour, as shown in plan view in Figure 2.

Extending around the arcuate apex of the plate and outwardly along the arms is the squeegee unit 16. The squeegee is secured to the plate by means of yokes or housings 17, drilled and tapped as indicated in Fig. 1, to receive screws 18 for holding the squeegee unit in position on the device.

The squeegee unit comprises a pile-up of rubber strips 19, cemented together, and backed by

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the brass strips 20, screws 21 passing through the strips 19 and 20 to make a unit. When assembled, the unit is placed in the yokes or housings 17 and secured along the rear margins of the arms of the plate by the screws 18. Screws 18 and yokes 17 also enable the squeegee unit to be adjusted closer to the floor as the rubber strips 19 become worn.

Adjacent the apex of the plate and in close proximity to the squeegee is a narrow arcuate slot 22 which forms the suction inlet and water intake. The lower surface of the walls 13 defining channel 22 are open to and slightly spaced from the floor in the operation of the device and therefore, all water collected by the squeegee strips 19 is guided into the apex of the device and enters the channel 22 at the ends thereof. The channel 22 communicates with a forwardly extending passage 23 in fitting 14 secured to the top of plate 10 by screws 11, and this passage 23 is connected to a water-discharge passage 24 extending upwardly and rearwardly from the forward end of fitting 14.

Assembled to the exit end of passage 24 is a connector comprising a body 25 having one end reduced in diameter to equal the diameter of the exit end of passage 24. The upper portion of the inner end of the connector body is reduced and cut away as indicated at 26 at an angle of approximately 15° to permit the body 25 to tilt in a vertical plane. Fitting over the reduced end of the body 25 and the exit end of the member 14 is a coupling sleeve 27 of resilient material, such as rubber.

The outer end of body 25 is adapted to receive, as a rotating fit, the intake end of a metallic or other hose or handle member 28 leading to the water chamber of a vacuum cleaner (not shown). The intake end of hose 28 has formed therein a circumferential groove 29 adapted to be engaged by an arcuate hook 30 mounted on the body 25.

In operation, the squeegee connected to a vacuum cleaner by the metallic or other hose 28, which also may form the operating handle for the device, is pushed over a wetted floor with the open end of the V in advance, thus collecting any water encountered by means of the squeegee blades 19. The collected water is thus directed into the ends of the arcuate channel 22, and the suction created by the vacuum cleaner will draw such water through the channels 22, 23, 24 and hose 28 into the water collecting tank of the vacuum cleaner.

It will be noted that the point of fulcrum of

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the metallic hose or handle 23 relative to the squeegee unit is located forwardly of the center of the apex of the squeegee, and thus the far ends of the V are automatically kept in engagement with the floor as the device is pushed over the floor.

Various modifications in my device may obviously be made within the spirit and scope of my invention as defined by the appended claims.

I claim:

1. A squeegee nozzle device for vacuum cleaners comprising a V-shaped plate having divergent arms and an arcuate apex, a squeegee unit secured to the arms of the plate and extending around the arcuate apex, a narrow arcuate suction nozzle beneath the plate adjacent the apex thereof and in close proximity to the squeegee, means defining a suction passage communicating with the arcuate nozzle and extending forwardly from the apex of the plate, and means for mounting the attachment on a manipulating handle with the passage in suction communication with the handle, said means including a tiltable connection to permit relative movement between the device and handle at a point forwardly of the apex.

2. A squeegee attachment for vacuum cleaners comprising a V-shaped plate having an arcuate apex and arms diverging forwardly therefrom, a squeegee unit secured to said plate around the apex and outwardly along the arms and projecting below the underside of the plate, spaced walls open at their ends and depending from the underside of the plate adjacent the apex, said walls terminating in closely spaced relation to the floor to define an arcuate suction nozzle, means defining a suction passage communicating with the nozzle and extending forwardly from said nozzle, and means for mounting the attachment on a manipulating handle with the passage in suction communication with said handle, said means including a tiltable connection to permit relative movement between the squeegee attachment and the handle at a point forwardly of the apex of the plate.

3. A squeegee nozzle device for vacuum cleaners comprising a flat plate having arms diverging forwardly from an arcuate apex, a squeegee unit secured to the rear margins of said arms of the

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plate and around the arcuate apex with the squeegee projecting below said plate, a suction nozzle having spaced walls depending from the flat plate into close proximity to the floor forwardly of and in closely spaced relation to the arcuate apex of the squeegee, means defining a suction passage extending along the top of the plate from the nozzle forwardly from the apex, and means on the top of the flat plate and forwardly of the apex for mounting the device on a manipulating handle with the passage in suction communication with the handle.

4. A squeegee nozzle device for vacuum cleaners comprising a flat plate having arms diverging forwardly from an arcuate apex, a squeegee unit secured to the rear margins of said arms of the plate and around the arcuate apex with the squeegee projecting below said plate, a suction nozzle having spaced walls depending from the flat plate into close proximity to the floor forwardly of and in closely spaced relation to the arcuate apex of the squeegee, means defining a suction passage extending along the top of the plate from the nozzle forwardly from the apex, and means on the top of the flat plate and forwardly of the apex for mounting the device on a manipulating handle with the passage in suction communication with the handle, said means including a resilient sleeve connection to permit relative tilting movement between the handle and the squeegee nozzle device.

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