

Title (en)  
Improved filter apparatus

Title (de)  
Filterapparat

Title (fr)  
Appareil de filtre

Publication  
**EP 0810333 A1 19971203 (EN)**

Application  
**EP 96108507 A 19960529**

Priority  
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Abstract (en)  
An improved filter apparatus (10) for removing debris from a free flowing water system (100) is described. The apparatus has a rail (12) which is mounted adjacent the water supply intake opening (102) and extends upward from the floor (100A) of the water system at an incline. The apparatus has a continuous belt (36) made of chain links (38) and connectors (44) which mounts around an upper sprocket cylinder (26) at the top (12B) of the rail and around a lower sprocket cylinder (32) spaced above the bottom (12A) of the rail. The chain links allow for openings (42) in the belt which enable the belt to collect debris from the water flowing through the belt. The connectors have lifters (50) which move the debris collected on the front side 36A of the belt. The belt is loosely mounted around the sprocket cylinders which allows the lifters to tilt and dump any debris of excess weight back into the water system. The size and length of the connectors and the lifters is varied in order to change the weight limit at which the lifters tilt. The belt is moved upward by a motor (54) which rotates the upper sprocket cylinder. As the belt moves upward, the debris collected on the belt and by the lifters is moved out of the water system toward the top of the rail. As the belt moves over the upper sprocket cylinder, the upper sprocket teeth (28A) of the upper sprockets (28) extend through the openings of the belt loosening the debris trapped on the front side of the belt which falls into the collection trough (104). The upper sprocket teeth also scrape the sides of the openings in order to remove all debris and built up deposits. As the connectors move over the first sprocket cylinder, the lifters are turned upside down which dumps the debris into the trough beneath the top of the rail. A water pressure jet (60) sprays the remaining debris from the belt as the belt moves downward back into the water system. <IMAGE>

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