

ABSTRACT

FILTRATION MEMBRANE CARTRIDGE

FIELD OF THE INVENTION

A pair of filtering membranes 52 are solidly bonded to a membrane-supporting plate 51 by fusibly bonding each of the filtering membranes 52 to the resin membrane-supporting plate 51. A main fusible domain 14a is formed along peripheral edges of each of the filtering membrane 52. In addition, a plurality of subordinate fusible domains 14b are intermittently formed in plural locations on one side or on both sides of the main fusible domain 14a. By virtue of the above structure, bonding strength is secured by the main fusible domain 14a, and yet, bonding strength is reinforced by locally provided subordinate fusible domains 14b. A channel is formed in the membrane-supporting plate 51 so that permeated liquid can swiftly flow through the filtering system. In addition, a plurality of projections 53 are formed on peripheral edges of a filtration membrane cartridge 5 facing inner surface of each gutter 12 formed inside of each slit plate 11 by way of causing respective projections 53 to slidably come into contact with the inner surface of the gutter 12. This in turn effectively minimizes frictional force between the filtration membrane cartridge 5 and the gutter 12 to facilitate operator to easily insert and remove the filtration membrane cartridge 5 into and from the gutter 12 of the slit plate 11.

(Please note that Figure 1 should accompany the abstract when published)