[0017] Figs. 9A-9E show pocket media and support features of various pocket filter embodiments.

[0018] Figs. 10A-10B show the results of tests of pocket filters according to prior art benchmark and prototype embodiments of the disclosed subject matter.

[0019] Fig. 11 illustrates an application context of the disclosed pocket filter embodiments.

[0020] Fig. 12 shows a feature of pocket filter media construction according to embodiments of the disclosed subject matter.

[0021] Fig. 13 illustrates a pocket filter in cross-section for describing features for ensuring free gas flow through pocket filters according to embodiments of the disclosed subject matter.

[0022] Figs. 14A-14D illustrate various frame structures that contribute to ensuring free gas flow through pocket filters according to embodiments of the disclosed subject matter.

[0023] Figs. 15A-15C illustrate further features that contribute to ensuring free gas flow through pocket filters according to embodiments of the disclosed subject matter.

[0024] Figs. 16A and 16B show a structure and method of forming a pocket of a pocket filter according to embodiments of the disclosed subject matter.

DETAILED DESCRIPTION

[0025] Referring to Fig. 1A, a pocket filter assembly 6 has a plurality of pocket filters 9. Each pocket filter 9 includes a multiple of cascade pockets 10 and 12 as

than first filtration layer 310 may be employed. Other examples will be evident to those of skill in the art.

[0047] Fig. 9D shows another variation in which a backing layer 317 is provided on the second filtration layer 314. This backing layer 317 may be, for example, a non-woven cloth that is adhesively laminated to the filtration media of second filtration layer 314. The high tensile strength may permit the omission of the outer frame 302. The backing layer is advantageously provided on the outside and as such may permit a high efficiency material to be used at the point of exit of the second filtration layer 314. If such a backing were used in the first filtration layer 310 or upstream of the final layer of media, it may clog quickly and destroy the long filter life benefits of the disclosed embodiments, underutilizing the downstream media therefrom.

[0048] Figs. 10A-10B show the results of tests of pocket filters according to prior art benchmark and prototype embodiments of the disclosed subject matter. Referring to Fig. 10A, the chart shows the mass accumulated on various filter media formed into pocket filters as a function of the pressure drop. A filter that accumulates a great deal of filtrate mass for a given pressure drop will require less frequent replacement as the gain in pressure drop is usually the condition that forces filters to be replaced. It will be observed that a baseline media which lacks the multiple filtration layer characteristics of the foregoing embodiments loads with a low mass before the pressure drop increases to a level at which is changed which is indicated at five different total masses of accumulated filtrate (the mass here being cumulated between filter changes to illustrate the relative effectiveness of the inventive filter media examples). The following lists the structure of the various examples.