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[54] **CRYOGENIC DISTILLATION WITH UNBALANCED HEAT PUMP**

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[51] **Int. Cl.**[5] **F25J 3/02**

[52] **U.S. Cl.** **62/24**; 62/40

[58] **Field of Search** 62/9, 11, 24, 40

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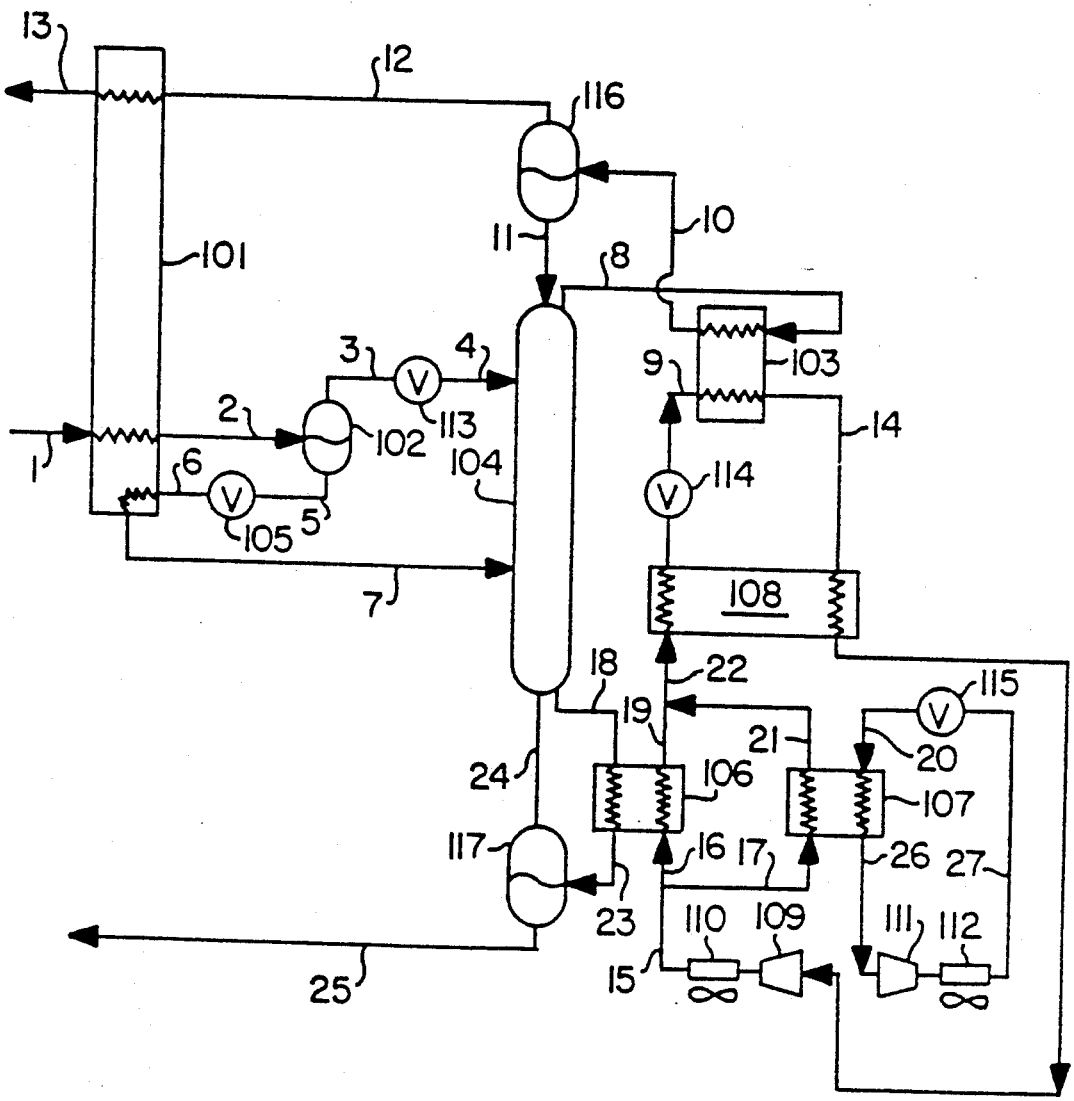
[57] **ABSTRACT**

A cryogenic distillation system wherein a first heat exchange fluid transfers heat in part from a process stream to the bottom of a column, and in part from a process stream to a second heat exchange fluid and out of the system, thus generating net refrigeration.

21 Claims, 1 Drawing Sheet