CLAIMS

What is claimed is:

1. A contact tray for use in a mass transfer column, said contact tray comprising:

a tray deck for receiving a liquid stream; and

a plurality of valves distributed across the tray deck, each of said valves comprising:

an opening in the tray deck to allow for passage of fluid through the tray deck for interaction with the liquid stream when it is received on the tray deck, said opening having a circular central segment and rectangular extensions that extend outwardly from opposite ends of the central segment;

wall segments that extend upwardly along opposite sides of the central segment of the opening; and

a valve body comprising a valve cover positioned in covering relationship above said opening and legs that are attached at their upper ends to opposite ends of the valve cover and extend downwardly through said extensions in the opening,

wherein each of said legs has a lower portion that extends below said tray deck, the legs and the extensions of the opening are constructed so that the legs are vertically moveable within said extensions of the opening to allow the valve cover to move up and down, each of the legs has a width less than that of the valve cover, and the width of one of the legs is greater than the other leg, and

wherein said valve cover has sides that extend outwardly beyond the sides of the opening.

2. The contact tray as set forth in claim 1, wherein the lower portion of each of said legs includes a stop for contact against said tray deck to limit said vertical movement of the legs within said extensions of the opening.

3. The contact tray as set forth in claim 2, wherein the lower portion of at least one of said legs includes a pair of said stops positioned in laterally spaced-apart relationship to each other.

4. The contact tray as set forth in claim 3, wherein the lower portion of each of said legs includes the pair of said stops positioned in laterally spaced-apart relationship to each other.

5. The contact tray as set forth in claim 4, wherein the sides of the valve cover extend downwardly.

6. The contact tray as set forth in claim 5, including deflectors that are positioned adjacent opposite sides of the legs and that extend downwardly below the sides of the valve cover to restrict vapor passage around the legs and a vent positioned in one of said legs to allow passage of vapor through said one leg after vapor passes through the opening.