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(71) Applicant: **IDALEX TECHNOLOGIES, INC.**  
[US/US]; 4700 West 60th Avenue, #3, Arvada, CO  
80003 (US).

(72) Inventors: **MAISOTSENKO, Valeriy**; 5628 South Idalia  
Street, Aurora, CO 80015 (US). **GILLIAN, Leland,**  
E.; 3124 West 62nd Avenue, Denver, CO 80221 (US).

**HEATON, Timothy, L.**; 10875 West 77th Avenue, Ar-  
vada, CO 80005 (US). **GILLAN, Alan, D.**; 3556 West  
62nd Avenue, Denver, CO 80221 (US).

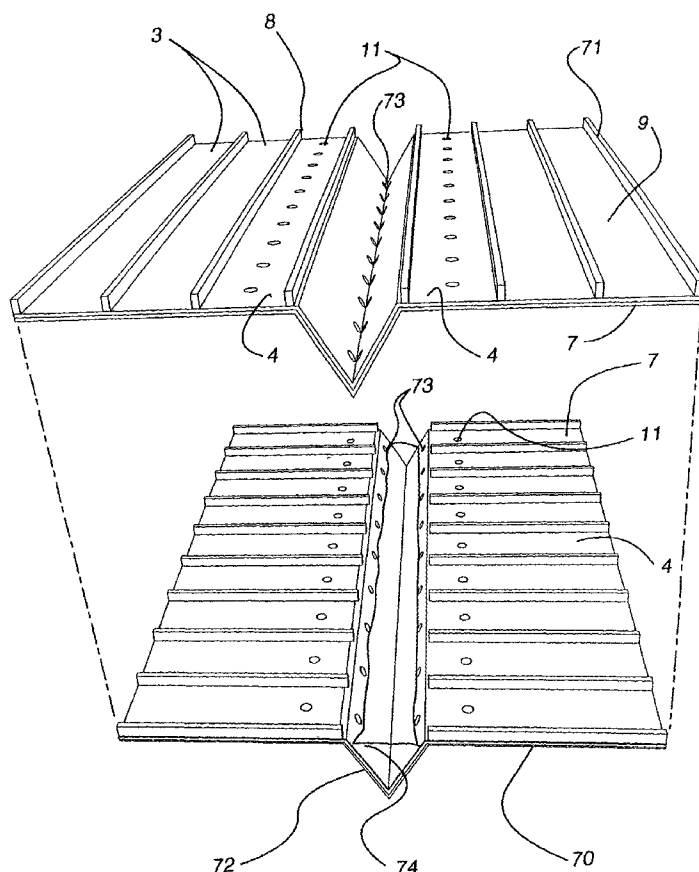
(74) Agents: **CARSON, Scott, W.** et al.; Dorr, Carson, Sloan &  
Birney, P.C., 3010 E. 6th Avenue, Denver, CO 80206 (US).

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(54) Title: METHOD AND PLATE APPARATUS FOR DEW POINT EVAPORATIVE COOLER



(57) Abstract: An improved method and apparatus for indirect evaporative cooling of a fluid stream to substantially its dew point temperature. Plate heat exchanger has perforations (11) and channels (3, 4 and 5) for gas on a dry side and wet side. There is a trough formed in a portion of the plate that temporarily holds evaporative fluid which is in contact with the wick material on the wet side surface of the plate. The evaporative fluid flows through the trough by way of liquid perforations into the next trough. The trough of a plate with a wet side up, the liquid perforations are on the side creating a reservoir to wet the opposing wick materials. As streams flow across the dry side (9), transferring heat to the plate. Working gas stream (2) flows across the dry plate. Working gas stream (2) flows across the dry side and through perforations to channels (5) on wet side (10), which it then cools by evaporative cooling as well as conductive and radiative transfer of heat from plate.

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