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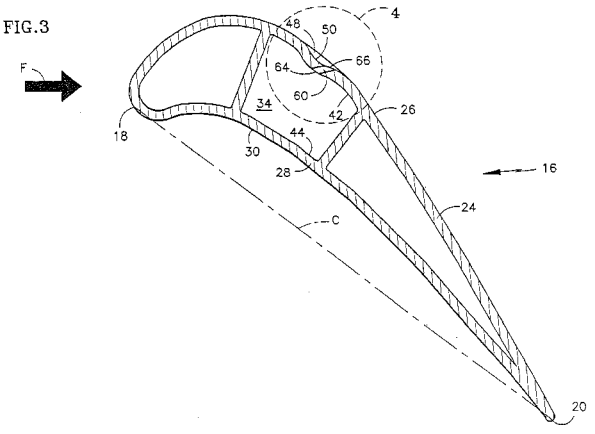
(54) Film cooled blade or vane

(57) The invention resides in a film cooled article such as a turbine engine blade or vane, having a wall with a hot surface **(26)** to be film cooled. The hot surface **(26)** includes a depression **(48)** featuring a descending flank **(52)** and an ascending flank **(54)**. Coolant holes **(60)**, which penetrate through the wall, have discharge openings residing on the ascending flank **(54)**. During operation, the depression locally over-accelerates a primary fluid stream **F** flowing over the ascending flank while coolant jets **(70)** concurrently issue from the discharge openings. The local over-acceleration of the primary fluid deflects the jets onto the hot surface and spatially constrains the jets thus encouraging them to spread out laterally and coalesce into a laterally continuous, protective coolant film. In one embodiment, the depression **(48)** is a trough **(50)**. In another embodiment, the depression is a dimple **(72)**.

FIG.3



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