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(54) **FINE CHANNEL DEVICE AND A CHEMICALLY OPERATING METHOD FOR FLUID USING THE DEVICE**

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(57) **ABSTRACT**

A fine channel device comprising a fine channel (19) provided with at least two inlet ports (11, 28, 29) for feeding fluid, inlet channels communicated with the inlet ports, a confluent portion (37) communicated with the inlet channels to feed the fluid, a branch portion (4) communicated with the fine channel, from which at least two outlet channels are branched to feed predetermined amounts of fluid, and outlet ports (12, 30, 31) communicated with the outlet channels, wherein the fine channel (19) is provided with a plurality of partition walls (22) along a boundary formed by at least two kinds of fluid (13, 14) fed from the inlet ports so as not to cause mutual contamination of fluid, whereby different kinds of fluid flowing in the fine channel in an adjacent state can form stably the fluid boundary and each kind of fluid can be discharged from a predetermined outlet port separately without causing the mutual contamination of fluid between adjacent flows of the fluid, is provided.

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By using such fine channel device, a chemical reaction can be accelerated by making two different kinds of fluid contact at the fluid boundary in a flowing direction of fluid in the fine channel of the fine channel device.

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