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(54) **Title:** MICROFLUIDIC APPARATUS AND METHODS OF USE THEREOF

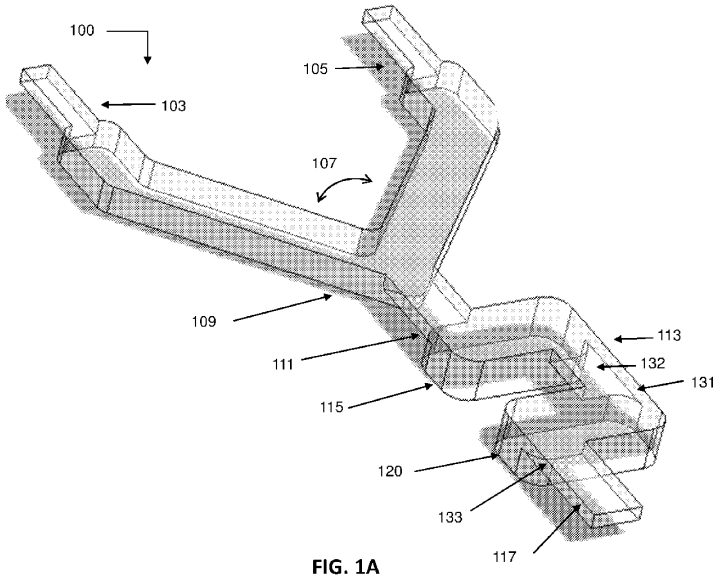


FIG. 1A

(57) **Abstract:** The application relates to microfluidic apparatus and methods of use thereof. Provided in one example is a microfluidic device comprising: a first fluidic input and a second fluidic input; and a fluidic intersection channel to receive fluid from the first fluidic input and the second fluidic input, wherein the fluidic intersection channel opens into a first mixing chamber on an upper region of a first side of the first mixing chamber, wherein the first mixing chamber has a length, a width, and a depth, wherein the depth is greater than about 1.5 times a depth of the fluidic intersection channel; an outlet channel on an upper region of a second side of the first mixing chamber, wherein the outlet channel has a depth that is less than the depth of the first mixing chamber, and wherein an opening of the outlet channel is offset along a width of the second side of the first mixing chamber relative to the fluidic intersection.

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