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(54) Title: PROCESS TO REMOVE IMPURITIES FROM TRIACYLGLYCEROL OIL

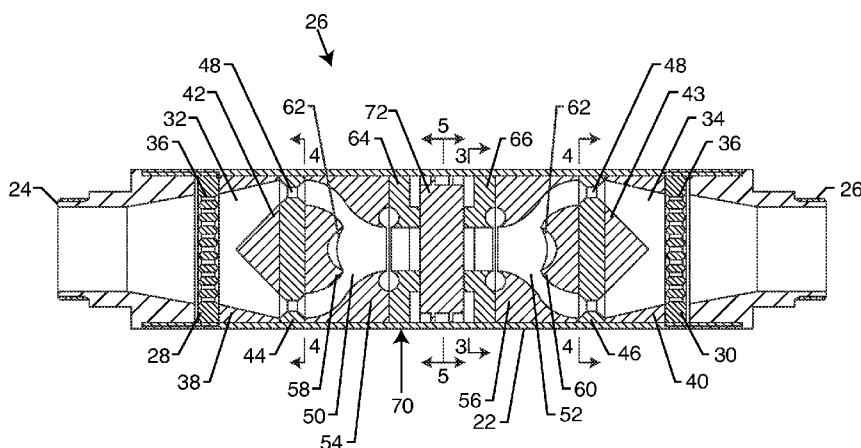


FIG. 2

(57) Abstract: The present invention is directed to a process to remove impurities from triacylglycerol oil including mixing the oil and a fluidic agent, pumping the mixture through a flow-through hydrodynamic cavitation apparatus at a pre-determined inlet pump pressure, creating hydrodynamic cavitation in the mixture, maintaining the hydrodynamic cavitation for a pre-determined period of time, moving the impurities from the oil to the fluidic agent, and then separating the fluidic agent from the oil. The impurities can include phytosterols, sterol glucosides, acylated sterol glucosides, in which case the fluidic agent is water, an alkali hydroxide, an inorganic base, an organic base, phosphoric acid, citric acid, acetic acid or a mixture thereof. The impurities may also include phosphatides, in which case and the fluidic agent comprises water and an enzyme such as phospholipase, a lipid acyl-transferase or a mixture thereof.