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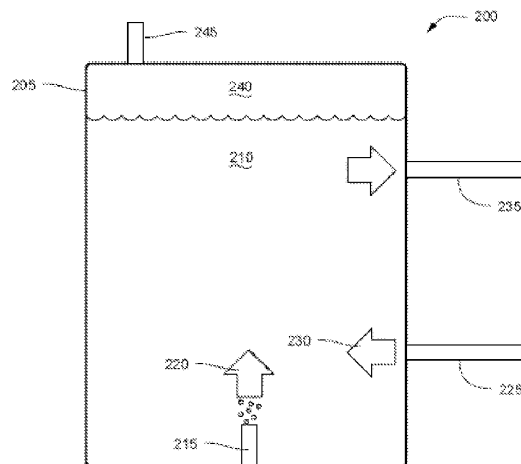


Figure 2

(57) Abstract: Aquafeed, animal feed, and other food products, as well as nutritional and pharmaceutical compounds, chemicals and biomaterials are important commodities that can be produced at commercial scale by fermentation of microorganisms. The present invention provides a method for producing these valuable multi-carbon compounds from simple gas feedstocks, such as carbon dioxide, hydrogen and oxygen, by cultivating a consortium of microbial cells specially selected for this purpose in an aqueous culture medium. In addition to exploiting inexpensive feedstocks, such as waste industrial gas for this cultivation, the platform described herein also provides the advantage of removing carbon dioxide and other waste gases from industrial emissions, which would otherwise contribute to global climate change. Furthermore, the cultivation of a microbial consortium can provide highly nutritious components to a feed blend that might not be available from a monoculture.

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