

ABSTRACT

METHODS AND APPARATUSES FOR SEPARATING TOLUENE FROM MULTIPLE HYDROCARBON STREAMS

Methods and apparatuses for separating toluene from multiple hydrocarbon streams are provided. A method includes fractionating a first hydrocarbon stream, which includes benzene-depleted fractionation bottoms from benzene fractionation, in a first fractionation zone into a first fractionation overhead stream that includes toluene and a first fractionation bottoms. A second hydrocarbon stream, which includes toluene and is substantially free of compounds having a higher vapor pressure than toluene, is fractionated in a second fractionation zone into a second fractionation overhead stream including toluene and a second fractionation bottoms. The second fractionation zone is in liquid isolation from and in vapor communication with the first fractionation zone. The first fractionation bottoms are removed from the first fractionation zone, and the second fractionation bottoms are removed from the second fractionation zone separate from the first fractionation bottoms. The first and second fractionation overhead streams are combined to produce a combined fractionation overhead stream.

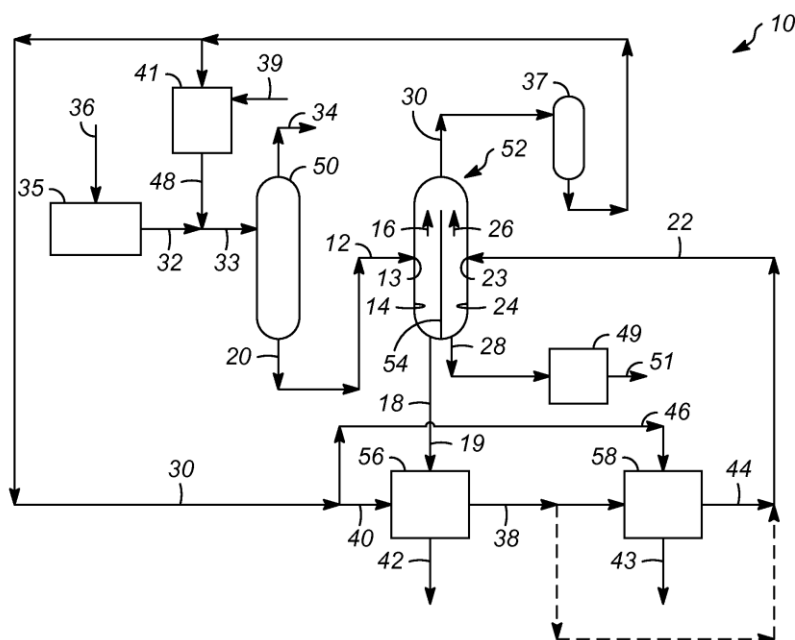


Fig. 1

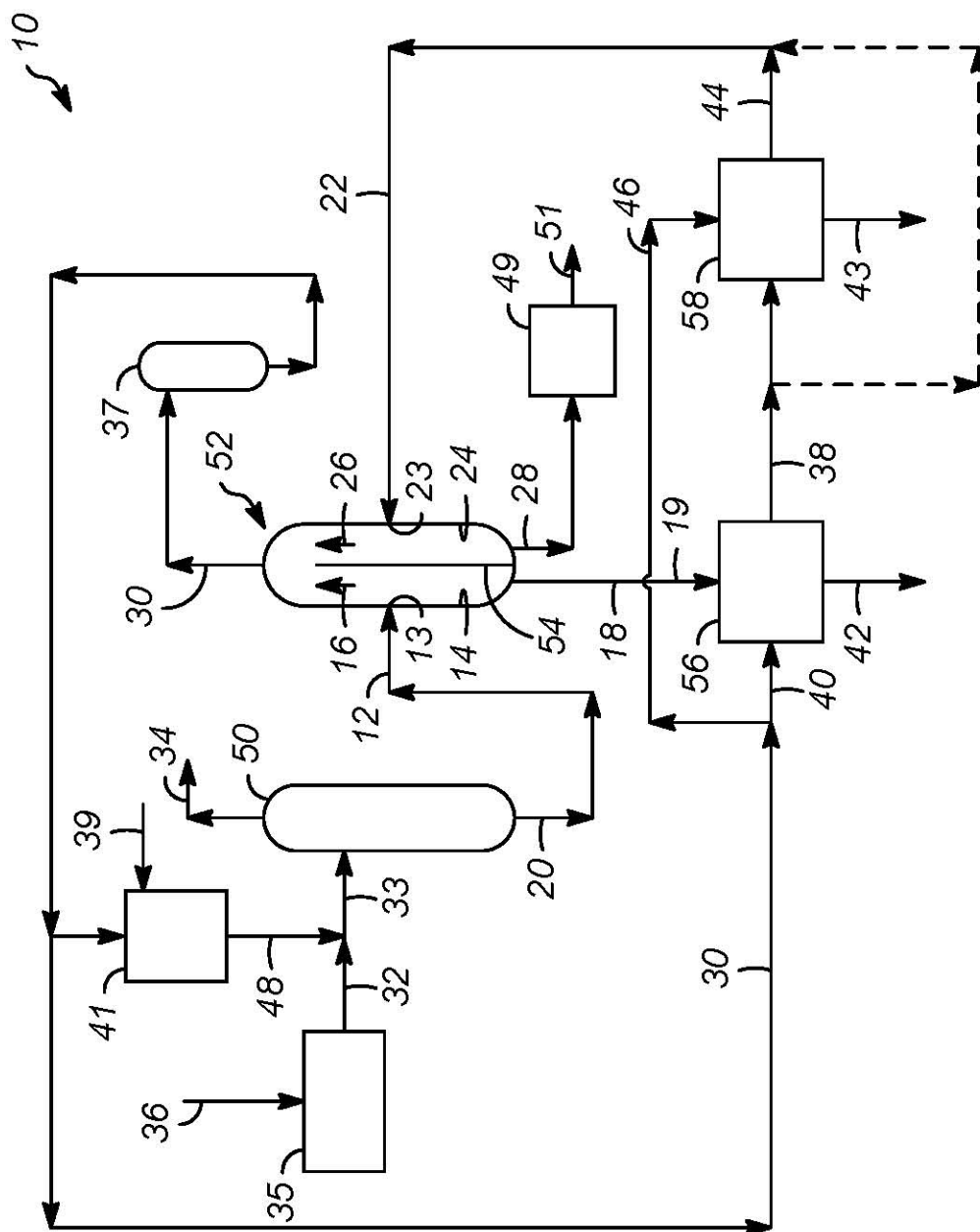


FIG. 1

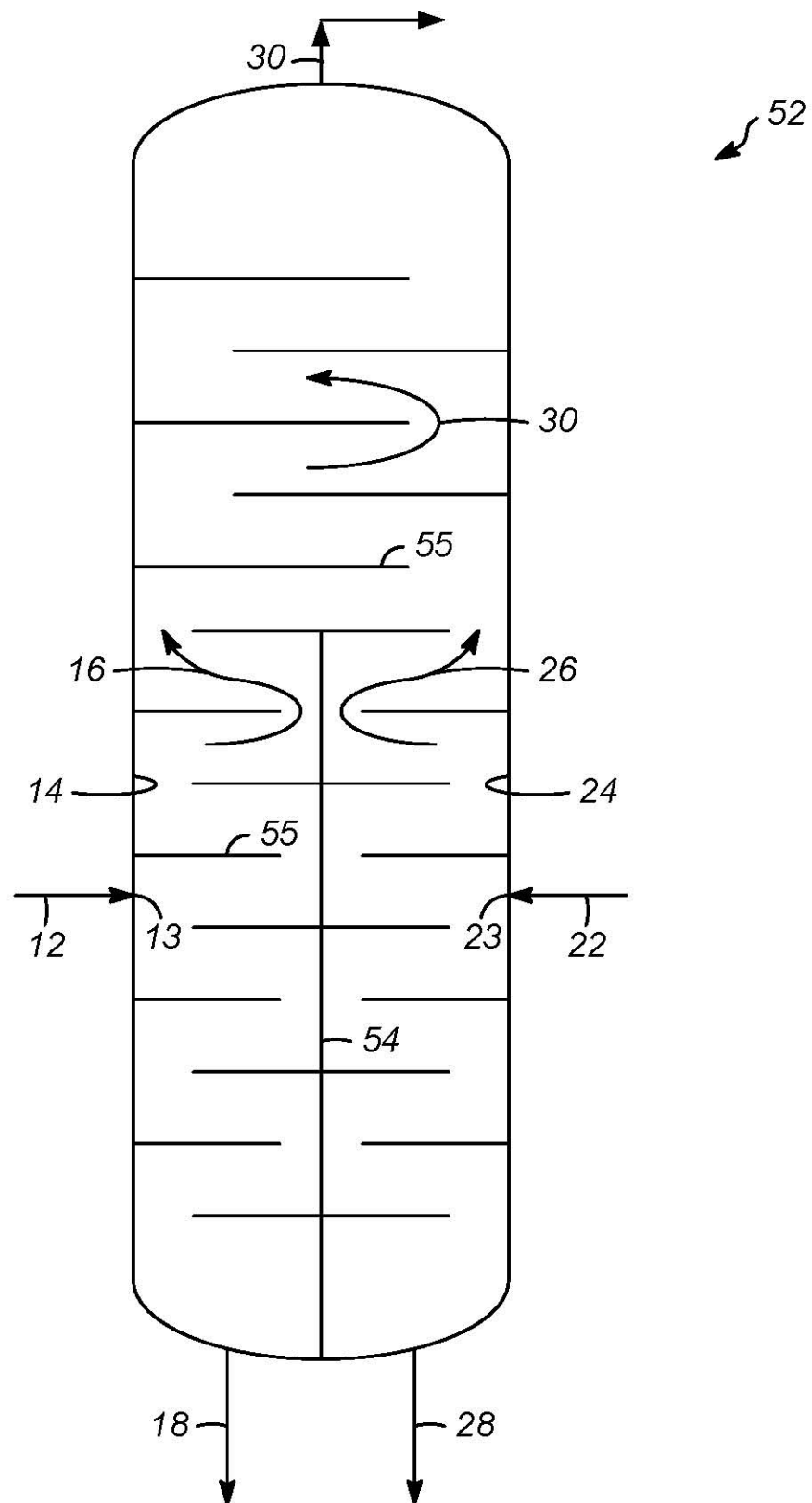


FIG. 2