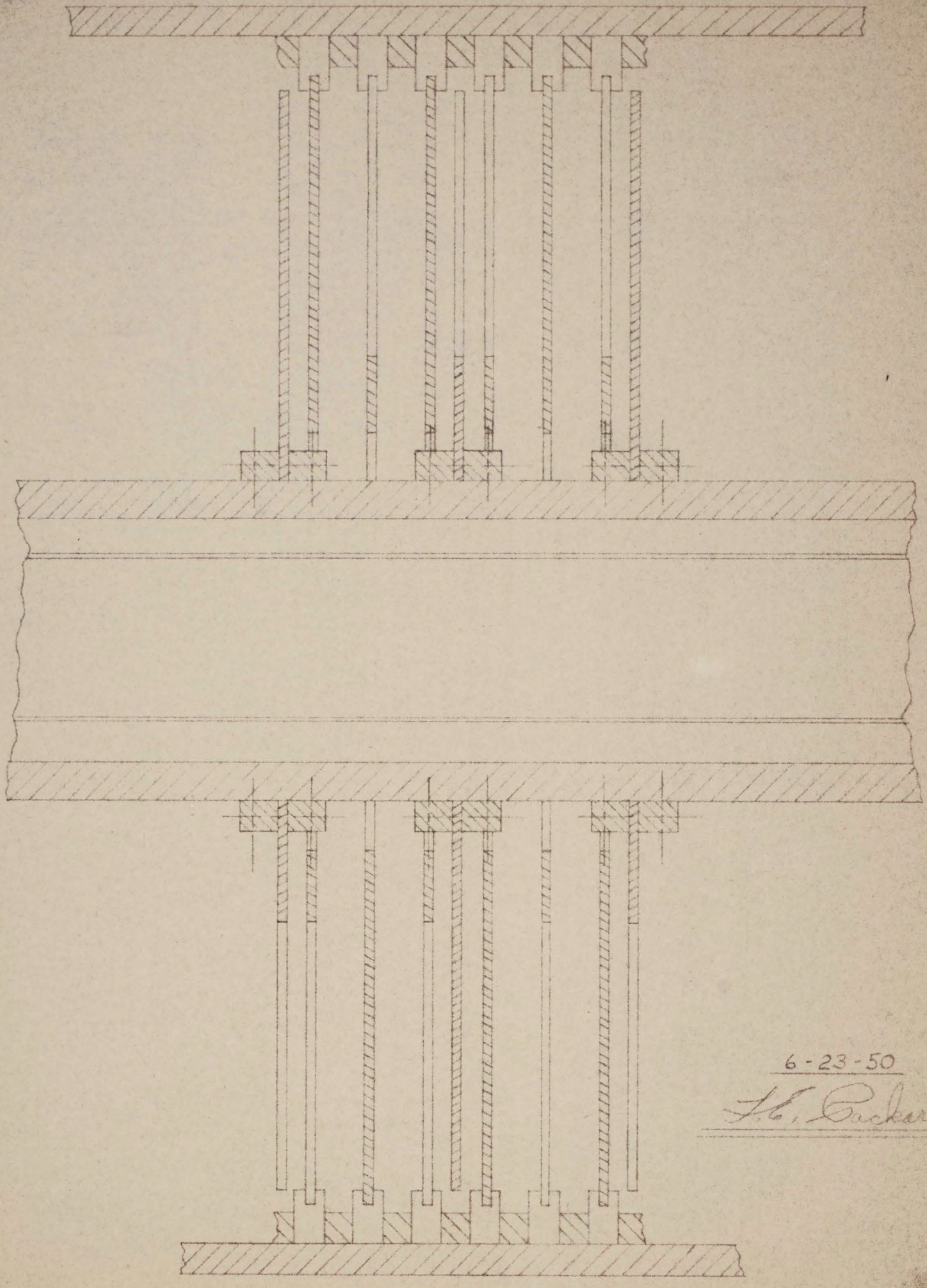

6-23-50

F. G. Packard

Method of Assembly

(References to "Left" and "Right" areas shown in assembly drawing)

1. Place left small bearing and snap ring on stationary shaft.
2. Secure all liquid supply tubes in place.
3. Clamp stationary shaft vertically in an assembly fixture, left end down.
4. Place left large bearing and snap ring on inner rotor shaft.
5. Lower inner rotor shaft into position over stationary shaft.
6. Assemble right small bearing and snap ring.
7. Drop largest left snap ring over assembly and then bring left end plate down into position—secure snap ring.
8. Position solid part of the inside cylinder of the outer rotor assembly (omitting removable segments).
9. Assemble outer rotor discs and inner rotor discs in order shown on drawing. Outer rotor discs are each positioned with three slotted pins which merely slip into position thru the inside cylinder and into the disc notches. Inner rotor discs are positioned with the two screws.
10. Slip flanged outside cylinder down over the assembly with left gasket in place and secure with 8 bolts.
11. Assemble right large bearing and snap ring in right end plate.
12. Position right end plate with right gasket and secure with 8 bolts.
13. Position left shaft support and left or heavy liquid collecting chamber on base.
14. Remove large assembly from fixture and put left end thru the left collecting chamber. Then slip large and small pulley wheels over left end and set that end on the shaft support.
15. Position the right or light liquid collecting chamber and then the right shaft support.

CLAIM ONE

An apparatus for carrying out solvent extraction comprising two coaxial rotating bodies, an annular gap between said rotating bodies, means for maintaining the two bodies in rotation at different angular velocities, and means for maintaining a counter-current flow of two liquids in the axial direction through the said annular gap.

CLAIM TWO

An apparatus for carrying out solvent extraction comprising a rotating body, means for periodically increasing and dedreasing the angular velocity of the said rotating body, and means for maintaining a counter-current flow of two liquids in the axial direction through the said rotating body.

CLAIM THREE

An apparatus for carryihg out solvent extraction comprising two coaxial rotating bodies, an annular gap between said rotating bodies, means for maintaining the two bodies in rotation at different angular velocities, and means for maintaining a counter-current flow of two liquids in the axial direction through the said annular gap, said means comprising an inlet adapted to admit a liquid through one of the two rotating bodies into the annular gap between the two rotating bodies and an axially displaced overflow adapted to admit the passage of a liquid from the annular gap between the two rotating bodies to the exterior of the rotating bodies, and a second inlet adapted to admit the passage of the liquid through the other of the two rotating bodies into the gap between the two rotating bodies and

an axially displaced overflow adapted to permit the passage of a liquid from the periphery parts of the annular gap between the two rotating bodies to the exterior.

CLAIM FOUR

An apparatus for carrying out solvent extraction comprising a rotating body, means for periodically increasing and decreasing the angular velocity of the said rotating body, and means for maintaining a counter-current flow of two liquids in the axial direction through the said rotating body, said means comprising an inlet adapted to admit a liquid through the axial shaft of the rotating system into the interior of the rotating system and an axially displaced overflow adapted to permit the passage of a liquid from the interior of the rotating to the exterior, and a second inlet adapted to permit the entry of a second liquid through the rotating system into the interior of the rotating system and an axially displaced overflow adapted to permit the passage of a liquid from the periphery parts of the inside of the rotating body to the exterior.

CLAIM FIVE

An apparatus for carrying out solvent extraction comprising two coaxial rotating bodies, an annular gap between said rotating bodies, partitions in the said annular gap adapted to divide the said annular gap into a series of axially displaced sections, means for maintaining the two bodies in rotation at different angular velocities, and means for maintaining a counter-current flow of the two solvents in the axial direction through the said sections in the said annular gap.

CLAIM SIX

An apparatus for carrying out solvent extraction comprising a rotating body, means for periodically increasing and decreasing the angular velocity of the said rotating body, partitions within the said rotating body dividing the interior of the said rotating body into a series of axially displaced sections, and means for maintaining a counter-current flow of two liquids in the axial direction through the said rotating body.