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LIST OF INVENTIONS (attached to letter of September 28, 1946)

1. A method and apparatus for liquid extraction in which the two solvents are contained in an annular gap in a rotating body and have a different tangential velocity while they are passed through the rotating body in a counter-current flow. ✓

2. A method and apparatus for producing an air stream by means of rotating bodies, the air stream being perpendicular to the axis of the rotating bodies. This principle may be used in building an electric fan and also may be used in the designing of airplanes. In the case of airplanes, the air stream created would be directed vertically downwards and might perform the same function as at present performed by the propeller of the helicopter. The axis of the rotating bodies would however be horizontal and might coincide with the axis of the propeller which drives the airplane forward. *act 7*

3. A method for separating compounds which differ in molecular weight without differing in chemical composition. This method is based on a difference in diffusion velocity and operates without the use of barriers. While the method utilizes ~~the~~ rotating system, it is not based on centrifugation.

4. A method for accelerating electrically charged particles by the betatron principle which permits the charged particle to be accelerated not only through one-half phase of the alternating current which is used for excitation of the magnet but permits the utilization of a number of half-cycles.

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Conception date.

LIST OF INVENTIONS (attached to letter of September 27, 1946)

1. A method and apparatus for liquid extraction in which the two solvents are contained in an annular gap in a rotating body and have a different tangential velocity while they are passed through the rotating body in a counter-current flow.
2. A method and apparatus for producing an air stream by means of rotating bodies, the air stream being perpendicular to the axis of the rotating bodies. This principle may be used in building the electric fan and also may be used in the designing of airplanes. In the case of airplanes, the air stream created would be directed vertically downwards and might perform the same function as at present performed by the propeller of the helicopter. The axis of the rotating bodies would however be horizontal and might coincide with the axis of the propeller which drives the airplane forward.
3. A method separating isotopes which is based on the diffusion process but does not require the use of diaphragms. The method is based on the utilization of a rotating system but the action is not based on centrifugation. This invention will be communicated to the Atomic Energy Commission as soon as the Commission is appointed and as soon as a detailed description can be perfected.
4. A method for accelerating electrically charged particles by the betatron principle which permits the charged particle to be accelerated not only through one-half phase of the alternating current which is used for excitation of the magnet but permits the utilization of a number of half-cycles.