INEXPENSIVE APPARATUS FOR SPEEDY EVAPORATION

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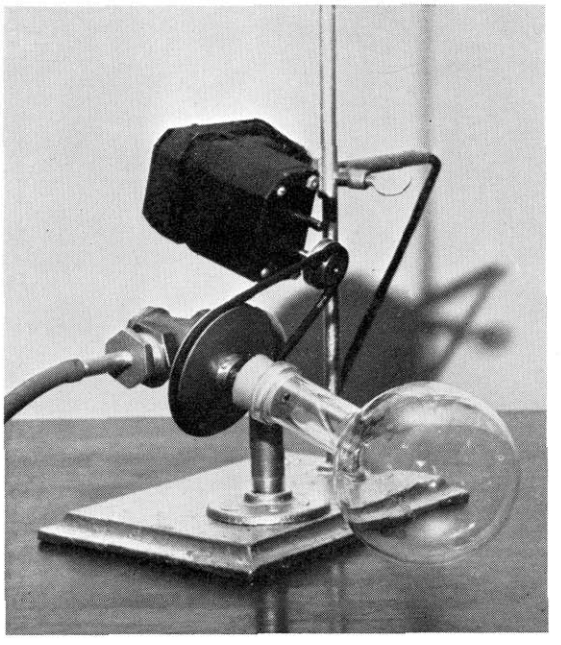
A ROTARY film type of evaporator has been constructed from materials available in the laboratories plus a few additional items costing less than three dollars. The accompanying figure shows the apparatus to consist of an ordinary three-speed stirring motor attached to a $^{7}/_{8}$-inch pulley connected by a $^{1}/_{4}$-inch round rubber sewing machine belt to a 3-inch pulley. To this latter pulley is fastened a $^{3}/_{4}$-inch brass gas stopcock valve closed on one end and drilled on the other end to insert a brass tube. The plug of the gas stopcock valve was grooved to allow continuous evacuation rather than intermittent action. A variety of flask sizes can be adapted by using different rubber stoppers on the brass tube. The axis of rotation of the moving flask is set at approximately 25°. Ordinary galvanized pipe connections are used to mount the gas stopcock onto the ring stand. Connection is made to a conventional trap and vacuum system through a $^{3}/_{4}$–$^{1}/_{8}$-inch pipe adaptor.



Evaporation Apparatus

A tank containing circulating water at a constant temperature may be placed around the rotating flask. The rate of rotation of the flask is controlled at any desired speed by the use of a Variac transformer.

The apparatus is particularly useful in concentrating solutions of heat sensitive substances. Greatly increased rates of evaporation without "bumping" can be attained by operating at the low pressures which are possible.

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