

the cooling element, this unit gives controlled temperature, humidity, air cleaning, and air movement in both summer and winter. Air washing may be connected in summer, or in intermediate season to remove room odors. Excess water is run to waste. Acoustical treatment of the housing and outlet baffles permits installation where noise requirements are exacting.

One of the recently developed units, designed particularly for low cost installation is shown in Fig. 12. Twin fans with wheels mounted on extensions of the motor shaft take the air from the floor, send it downward

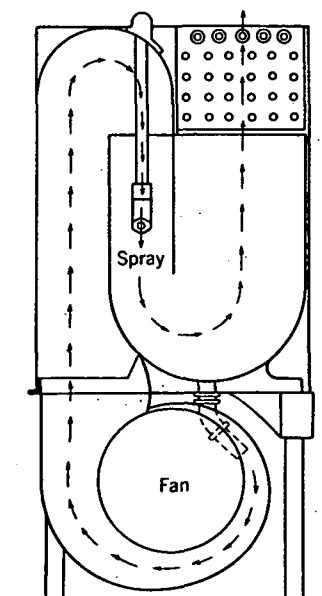


FIG. 12. SIMPLE SPRAY AND COIL UNIT CONDITIONER

through a passage containing a water spray and then upward through a double set of coils for cooling and heating, the air leaving the cabinet through a top grille. The spray nozzles are supplied with city water, the excess collecting in the air reversal chamber and running to the drain. The cooling coil uses water either from city mains or from other low temperature sources, or a special direct expansion coil may be provided. This unit like others may be equipped with automatic controls.

Fig. 13 illustrates a common type of suspended type unit conditioner for exposed location utilizing a propeller type fan and suitable for summer conditioning only. Such units are equipped with either a direct expansion coil or one for chilled water or brine circulation. The outer cabinet is commonly of wood-grained steel or baked enamel and is insulated from the cool air chamber to prevent external condensation. The drip from the coil is collected in an insulated drip pan and carried to a drain. The inlet to the unit is provided with a lint screen to protect the cooling

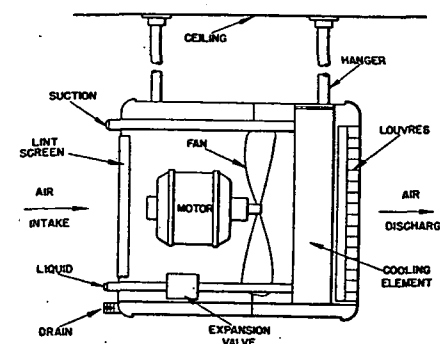


FIG. 13. SUSPENDED PROPELLER FAN TYPE UNIT CONDITIONER

surface. Such units are normally used for recirculation only but may be connected for ventilation through short full-size ducts. Similar units are available with twin housed fans of the same general construction, although usually such fans draw the air instead of blow it through the coils.

A self-contained completely portable unit conditioner is illustrated in Fig. 14. For the operation of this unit, it is only necessary that it be located adjacent to a window or shaft to which air connections can be made and to plug in the motors to a convenient light socket. In this unit, the conditioned air enters on the side, passing through a grille, filter, and cooling coil and is delivered vertically to the room through a special motor and fan assembly. Refrigeration is furnished by a reciprocating compressor driven from a motor located in the base. This compressor utilizes an air cooled condenser. Air is drawn into the base by a fan mounted on the compressor motor, so arranged that the air passes through the refrigeration condenser and is again discharged out through the window connection. A novel feature of this design is that the condensate

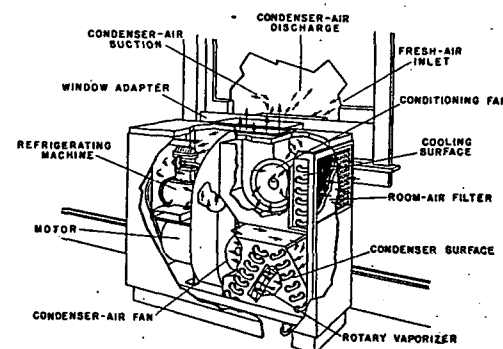


FIG. 14. PORTABLE SELF-CONTAINED AIR COOLED CONDITIONING UNIT