

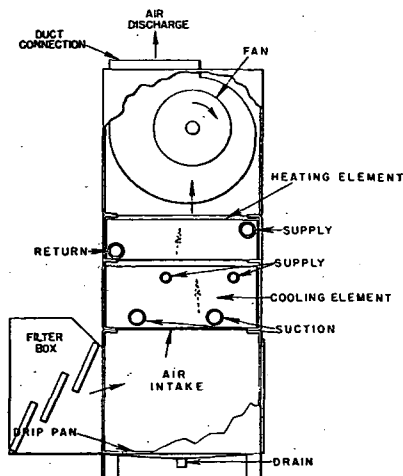


FIG. 15. VERTICAL REMOTE TYPE ALL-YEAR-ROUND CONDITIONING UNIT

from the cooling coil is sprayed over the condenser surface and there vaporized, thus eliminating the need for drain connections. One advantage of this type of conditioning unit is that it may be removed from the occupied space during the winter season when cooling is not needed.

Another type of portable unit for occupied space locations differs from the former in that the compressor is water cooled and a connection to water and drain must be provided in addition to the electric connection. Water and drain lines are carried in a composite hose, especially built for this purpose and connections are usually made to a nearby washbowl. In order to reduce the starting load, one model has two separate motors brought on to the line at delayed intervals thereby decreasing the initial

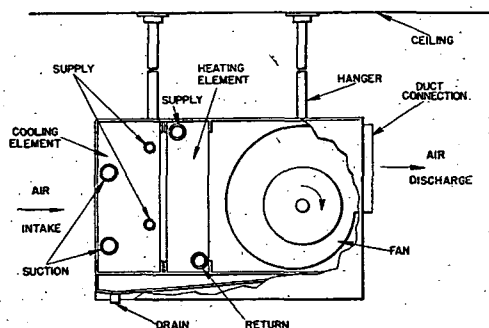


FIG. 16. HORIZONTAL REMOTE TYPE ALL-YEAR-ROUND CONDITIONING UNIT

line surge and reducing light flicker. These water cooled units either eliminate or reduce the need for out-door air connections. Due to the necessity of water and drain connections they are not as portable as the air cooled type.

Remotely located conditioning units vary widely in details of construction. Fig. 15 and 16 indicate one type built in sections thereby permitting interchangeability of application with a minimum change in parts. The vertical unit shown in Fig. 15 consists of a fan section, housing one or more fans, mounted on a coil section in which are located a heating coil and a cooling coil, which may be built for either direct expansion refrigerant, chilled water, or brine. These two sections are supported on a third or drip-pan section. The distributing duct system is attached to the fan outlets and returned fresh air connections are made to the drip pan. A filter box is illustrated attached to the drip pan section. By

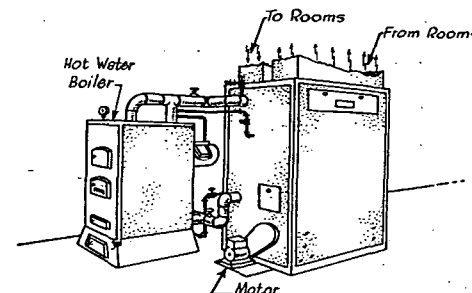


FIG. 17. RESIDENTIAL CONDITIONING UNIT WITH HOT WATER BOILER

eliminating the vertical type-drip pan and substituting a horizontal drip pan, this unit is converted into a horizontal suspended type conditioning unit for connection to duct work, both with and without filters.

The previous figures have largely confined themselves to the illustration of all-year-round or summer conditioning units for office or commercial application. The smaller conditioners have, of course, been applicable to residences. There remains a field of unit conditioners primarily adaptable to residence work. They are in general the outgrowth or adaptation of mechanical warm air systems to conditioning, which are covered in Chapter 23. However, the following illustrations will cover details not included in that chapter.

Fig. 17 illustrates a conditioning unit attached to a hot water or steam boiler and as shown may furnish winter conditioning or, by connecting a cooling coil to a source of refrigeration, will supply year-round conditioning. Such a system lends itself particularly to the so-called *split* system from which a portion of the residence may be conditioned summer and winter, while the garage or servants' quarters will have only heating in winter, the heat being furnished directly from the boiler and not through the conditioning unit.

Fig. 18 shows a gas fired furnace unit equipped with an air washer, and represents a winter conditioning unit furnishing filtering, heating, and