CHAPTER XVII.

Various Types of Ventilators

Much ingenuity has been brought to bear in the designing of ventilators for buildings of various descriptions. Frequent use is made of ventilators that are put out by various manufacturers, many of which are protected by patents. In Fig. 214, Nos. 1, 2, 3, 4 and 5 illustrate simple ventilators that can be made in any shop. The Emerson ventilator shown in No. 6 is a popular form not patented. There are also many forms of revolving ventilators that are not protected by patents. One form of these is shown in No. 7. It is made of four pieces, the pipe, the swing, the conical top and the wing. A steel rod is filed to a point at the top and allows the swing to revolve on a piece of thick glass secured with a notched metal strip on the under side of the cone top.

A ship's ventilator usually has a round inlet and elliptical outlet as shown in No. 8.

Some of the plain types of ventilator heads offered by manufacturers are shown in Nos. 9 to 14. Two examples of the several styles of ventilators with wire glass tops securely imbedded to make waterproof are shown in Nos. 15 and 16. In Nos. 17 and 18 are illustrated how, in two types of ventilators, a self-closing device is installed as a means of fire retarding. It will be noted that the fusible links shown, which melt at a very low temperature; will, in case of fire, melt and automatically close the

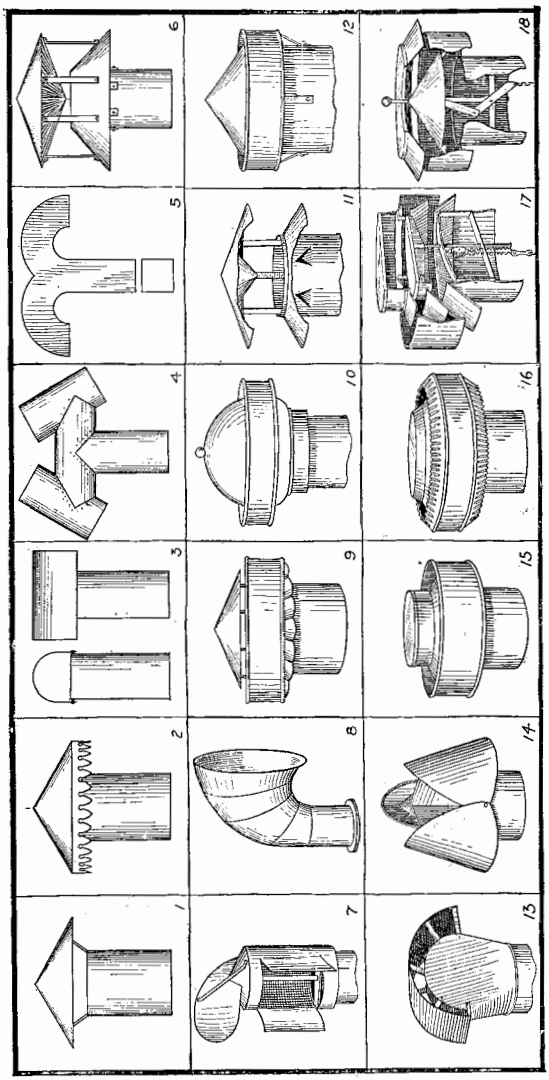

Fig. 214—Types of Ventilators

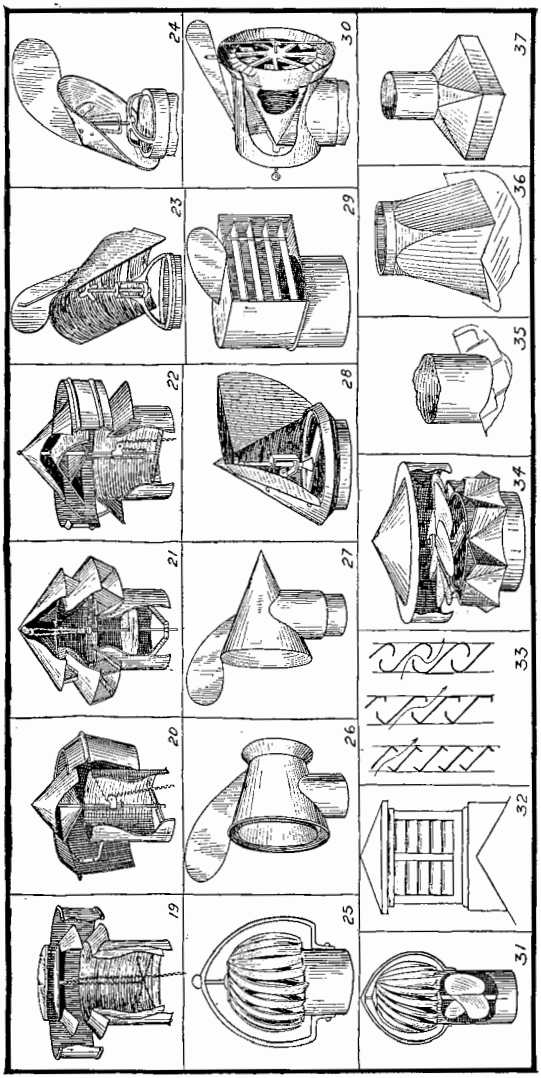

Fig. 214-A—Types of Ventilators

damper. Other forms of ventilators with dampers are illustrated in Nos. 19, to 22, in Fig. 214 A. To the chains operating the dampers in these, fusible links can be attached if desired. Various types of revolving cowls and ventilators are shown in Nos. 23 to 29.

In No. 34 is illustrated a ventilator with a fan placed under the cap. This fan is operated by the wind pressure and creates a suction. Another means employed to form suction is shown in No. 31, in which the fan inside the pipe is operated by the revolving of the top. No. 30 shows another patented construction in which the fan is placed on the outside. It is propelled by the wind passing through the hood and striking the outer blades. The revolving of the fan causes the suction.

In ventilating hospitals, stables and public buildings louvred ventilators are frequently employed. These may be either round, square or octagonal and similar to that shown in No. 32. These ventilators can be placed on either flat or pitched roofs and make an ornamental finish to the ridge or deck. When large ventilators of this style are used, the ventilating pipes leading to it are usually connected to a sheet metal drum under the ventilator, the drum being connected to the ventilator at the roof line. Sometimes an electric fan is placed inside of the ventilator to create suction. The forms of louvres usually employed are of the three styles shown in No. 33, the ventilation being secured as indicated by the arrows.

When round ventilators are connected to square or rectangular openings in flat roofs, a transition base, as shown in No. 37, is utilized. If a round

ventilator is connected directly to a double pitched roof, a separate joint is cut to fit over the pitched roof, as shown in No. 35, allowing a flange around the miter cut to solder to the metal roof or a small flange on to which a roof flange is soldered to form a flashing over a slate, tile or shingle roof.

When the base of the ventilator is square and is set over a double-pitched roof, the joint or connection can be made as shown in No. 36. The proper bevel of the roof is cut in the sides of the base and flanged out to receive the roof flange. The ventilator is then riveted over the collar.