



DIAGRAM No. 4—Rural School and Camp Ventilation

Fresh air is brought in beneath the stove, which has a sheet-iron outer cover which enables the air to be warmed well around the stove before being delivered into the room. The foul air is extracted by an outer pipe around the upper portion of the stove pipe. The distribution of the warmed air in such a large room is thoroughly effected by connecting ducts leading from near the floor in each of the four corners of the room up to the exit duct around the stove-pipe. These pipes serve the double purpose of extracting the cold air from the corners of the room and so having warm air pass toward the outlets, while at the same time drawing the air off next the floor, thereby maintaining the lower air at a proper temperature.

#### MAINTAINING HUMIDITY OF INDOOR AIR

In each of the cases illustrated, nothing has been said about the necessity for maintaining the humidity of indoor air at normal. When it is remembered, however, that air at zero can only hold at saturation point 0.48 of a grain of water in a cubic foot and when it is realized that this outer air warmed up to 70°F. would hold approximately seven grains of water, the result of warming outer air without supplying it with some means of moisture is evident. In practice it is found that such indoor air in an ordinary dwelling does not have more than 25 per cent of relative humidity, with the consequence that it abstracts moisture from furniture, walls and the bodies of inmates, creating in such a sense of cold due to the insensible loss of body moisture through evaporation and so requiring a temperature of 70° to 75° F. in order to maintain comfort. To obviate such serious defects in house air, it is possible,