on the side receiving heat. This includes the boiler, water walls, water screens, and water floor. (*A.S.M.E.* Power Test Codes, Series 1929).

Boiler Horsepower: The equivalent evaporation of 34.5 lb of water per hour from and at 212 F. This is equal to a heat output of 970.2 × 34.5 = 33,471.9 Btu per hour.

British Thermal Unit: The *mean* British thermal unit is $\frac{1}{180}$ of the heat required to raise the temperature of 1 lb of water from 32 F to 212 F. It is substantially equal to the quantity of heat required to raise 1 lb of water from 63 F to 64 F.

Calorie: The *mean* calorie is $\frac{1}{100}$ of the heat required to raise the temperature of 1 gram of water from *Zero* C to 100 C. It is substantially equal to the quantity of heat required to raise one gram of water from 14.5 C to 15.5 C.

Central Fan System: A mechanical indirect system of heating, ventilating or air conditioning consisting of a central plant where the air is heated and conditioned and then circulated by fans or blowers through a system of distributing ducts.

Chimney Effect: The tendency in a duct or other vertical air passage for air to rise when heated, owing to its decrease in density.

Coefficient of Transmission: The amount of heat (Btu) transmitted *from air to air* in one hour per square foot of the wall, floor, roof or ceiling for a difference in temperature of 1 deg Fahrenheit *between the air on the inside and that on the outside of the wall, floor, roof or ceiling.* (The velocity of air passing over the surfaces and the distances from the surfaces at which the temperatures are measured affect the coefficient of transmission).

Column Radiator: A type of direct radiator. (This radiator has not been listed by manufacturers since 1926).

Comfort Line: The effective temperature at which the largest percentage of adults feel comfortable.

Comfort Zone (*Average*)*:* The range of effective temperatures over which the majority (50 per cent or more) of adults feel comfortable. *Comfort Zone* (*Extreme*)*:* The range of effective temperatures over which one or more adults feel comfortable. (See Chapter 2).

Concealed Radiator: See *convector*.

Conductance: The amount of heat (Btu) transmitted from surface to surface in one hour through one square foot of a material or construction, whatever its thickness, when the temperature difference is 1 deg Fahrenheit between the two surfaces.

Conduction: The transmission of heat through and by means of matter unaccompanied by any obvious motion of the matter.

Conductivity: The amount of heat (Btu) transmitted in one hour through one square foot of a homogeneous material *1 in. thick* for a difference in temperature of 1 deg Fahrenheit between the two surfaces of the material.

Conductor (*heat*)*:* A material capable of readily conducting heat. The opposite of an insulator (or insulation).

Convection: The transmission of heat by the circulation of a liquid or a gas such as air. (Convection may be *natural* or *forced*).

Convector: A concealed *radiator.* A heating unit and an enclosure (or shield) located either within, adjacent to, or exterior to the room or space to be heated, but transferring heat to the room or space mainly by the process of convection. (If the heating unit is located exterior to the room or space to be heated, the heat is transferred through one or more ducts or pipes; see Chapter 30).

Decibel: The standard unit for noise or sound intensity. One decibel is the power supply to a telephone receiver which will produce approximately the smallest change in volume of sound which the normal ear can detect.

Degree-Day: A unit representing a difference of 1 deg Fahrenheit existing for one day between the average indoor and outdoor temperatures. The *standard degree-day* is based on an average indoor temperature of 65 F.

Density: The weight of a unit volume, expressed in pounds per cubic foot. ρ (rho) $= \frac{W}{V}$.

Dew-Point Temperature: The temperature corresponding to saturation (100 per cent relative humidity) for a given moisture content.

Diffuser: A vaned device placed at an air supply opening to direct the air flow.

Direct-Indirect Heating Unit: A heating unit located in the room or space to be heated and partially enclosed, the enclosed portion being used to heat air which enters from outside the room.

Direct Radiator: Same as *radiator.*

Direct-Return System (*Hot water*)*:* A hot water system in which the water, after it has passed through a heating unit, is returned to the boiler along a direct path so that the total distance traveled by the water is the shortest feasible, and so that there are considerable differences in the lengths of the several circuits composing the system.

Down-Feed One-Pipe Riser (*Steam*)*:* A pipe which carries steam downward to the heating units and into which the condensation from the heating units drains.

Down-Feed System (*Steam*)*:* A steam heating system in which the supply mains are above the level of the heating units which they serve.

Draft Head (*Side Outlet Enclosure*)*:* The vertical distance of a gravity convector between the bottom of the heating unit and the bottom of the air outlet opening.

Draft Head (*Top Outlet Enclosure*)*:* The vertical distance of a gravity convector between the bottom of the heating unit and the top of the enclosure.

Dry Air: Air with which no water vapor is mixed. This term is used comparatively, since in nature there is always some water vapor included in air, and such water vapor, being a gas, is dry.

Dry-Bulb Temperature: The temperature of the air indicated by