

## PART II.

### DOMESTIC HEATING.

**Temperature.**—The heat required to maintain a house at a definite temperature, varies directly as the difference between that temperature and the temperature of the outside air. If, during a heating season, the mean outside temperature is 30° F., and seven tons of coal are used to keep the temperature inside at 70° F., then about one ton more will be used to maintain this temperature than would be required to maintain the house at only 65° F. It is most important, therefore, not to over-heat a house.

Experience shows that the average person feels no discomfort in a house heated only to 60° F., at the beginning of the heating season, and he does not require a temperature greater than 68° F. to 70° F. in the middle of winter.

**Humidity in the house.**—When the outside temperature falls below 45° F., the house may be rendered more comfortable and healthy to the occupants, by partially saturating the air with steam. This process is known as humidifying or moistening the air, and when used it is possible to keep the house comfortable at a temperature several degrees lower than when it is not used.

While schemes for humidification of the air are undoubtedly desirable, they are not necessarily a means of saving coal. This is because, in the average house, the heat used to evaporate the water to moisten the air, is greater than that gained by maintaining the house at a lower temperature. To save coal it would be necessary for evaporating this water to use the hot flue gases leaving the furnace instead of the heat which would otherwise be used to raise the temperature of the house.

**Air leakage into the house.**—All air should as far as possible be excluded from entering the house through crevices, by means of weather strips and other devices. In bedrooms and living rooms air may be admitted through the window when required; but when these rooms are not in use they should be closed as tightly as possible.

At night, when the bedroom window is open, cover up the radiators with rugs or close the hot air registers, and so avoid using up heat which would go otherwise to warm the remainder of the house. All rooms not required during the winter should be sealed up, and little or no heat supplied to them.

**Regulating the furnace.**—The furnace should be so regulated that the temperature in the house remains fairly constant. It may be possible to have the temperature somewhat lower in the morning when the occupants of the house are moving about, than later in the day, but this change should neither be very great nor should it be suddenly raised by burning coal in the furnace rapidly for short periods.