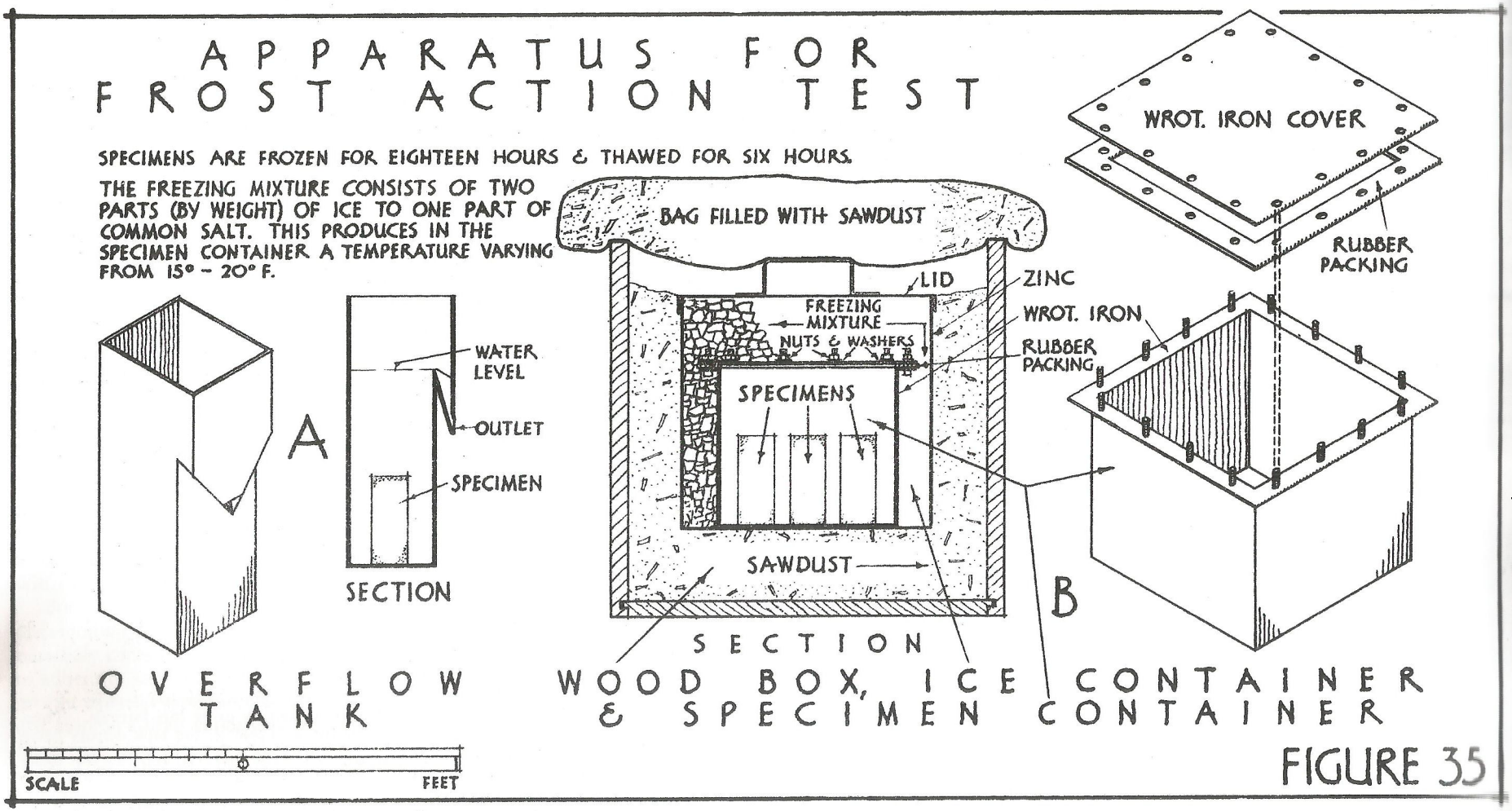

FIGURE 35

This test is carried out as follows: The stone specimen is dried in an oven, allowed to cool, weighed, soaked in cold water for twenty-four hours, removed and wiped with a cloth, and re-weighed. The difference between these two weights is that which is placed in the numerator (p. 99). The specimen is then returned to the water and boiled for five hours; it is then allowed to cool under water, removed, wiped and weighed; the difference between this latter weight and the dry weight is the figure which appears in the denominator.

The saturation coefficients supplied in Tables V and VI were obtained in this manner. Thus, taking the Portland stone listed in Table VI, the dry, soaking and boiling weights were 1,028, 1,084 and 1,111-gm. respectively, giving a saturation coefficient

$$= \frac{\text{(water absorbed after twenty-four hours' soaking)}}{\text{(total water absorption after five hours' boiling)}}$$

$$= \frac{\text{weight after soaking (1,084-gm.)} - \text{dry weight (1,028-gm.)}}{\text{weight after boiling (1,111-gm.)} - \text{dry weight (1,028-gm.)}}$$

$$= \frac{56}{83} = 0{\cdot}67 \text{ (see Table VI).}$$

This coefficient has a practical value as it is considered to be a helpful guide to the capacity of the stone to withstand frost action. As a general rule, it is regarded that a stone having a saturation coefficient of 0·80 and under should not be liable to