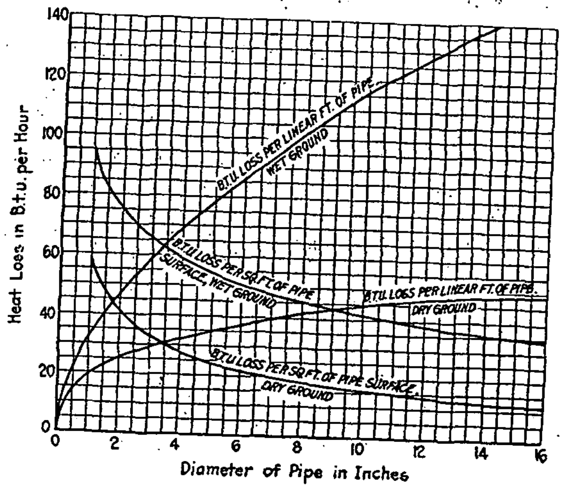

FIG. 3

In determining r_2, the author derives the equation for any isothermal t, in the ground at the distance r which will have the temperature t.

$$t = \frac{t_1 \log \frac{r_2}{r} + t_2 \log \frac{r}{r_1}}{\log \frac{r_2}{r_1}}$$

Fig. 3 shows similar curves for a pipe covered with 1 in. infusorial earth buried deeply in the ground for steam temperature of 225 deg. fahr. with a conductivity factor of 0.04 for the covering.

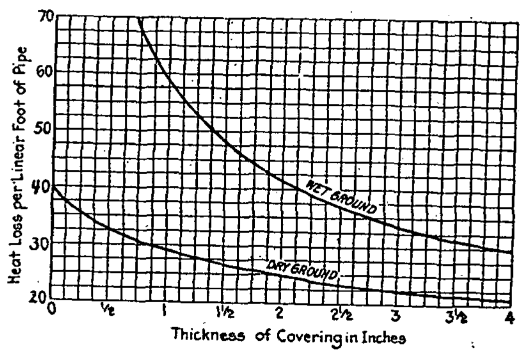

Fig. 4 shows heat losses for various thickness of covering for a 3 in. pipe buried deeply in the ground; using for the basis for calculation, $T = 225$, $K = 0.89$ for wet earth and 0.212 for dry earth and a conductivity factor of 0.04 for covering material. The curves show that for wet ground, the heat loss reduces very rapidly as the thickness of the covering increases up to 2 in. and from 2 in. up, the increase is quite gradual. For dry ground, the effect of increasing the thickness of covering, is much more gradual and above 1½ in. it becomes almost nothing.

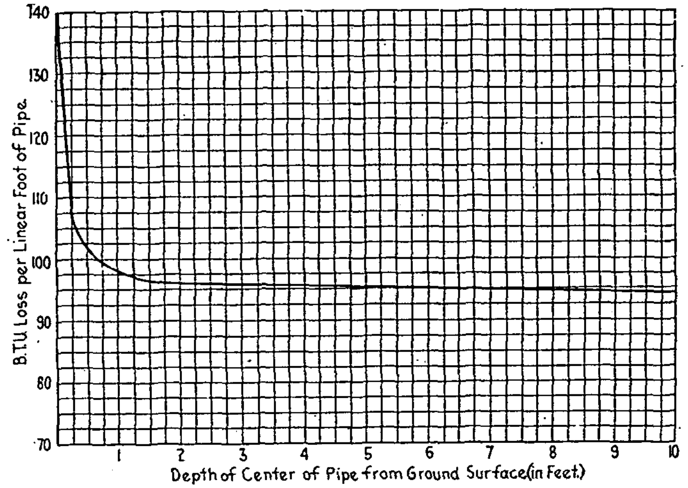

Fig. 5 shows the effect of burying pipes at different depths and shows that below 3 ft. there is little effect on the heat loss.

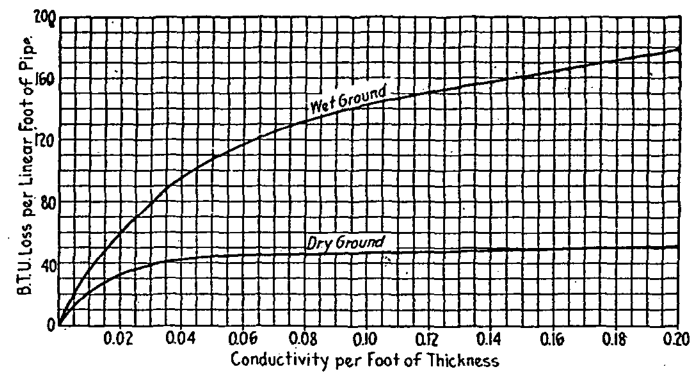

Fig. 6 shows the relation of coverings of different conductivity to the heat loss in dry and wet ground.