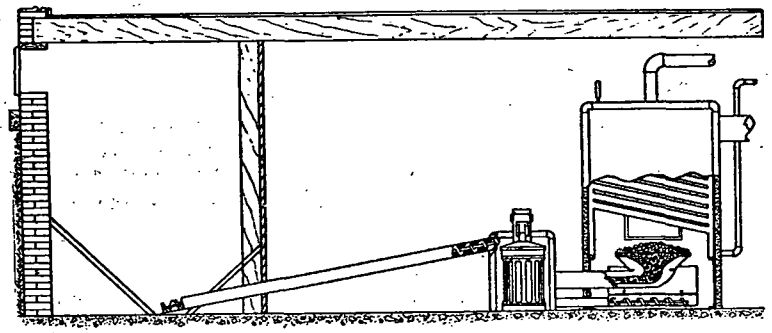

FIG. 3. UNDERFEED ANTHRACITE STOKER WITH AUTOMATIC ASH REMOVAL, BIN TYPE

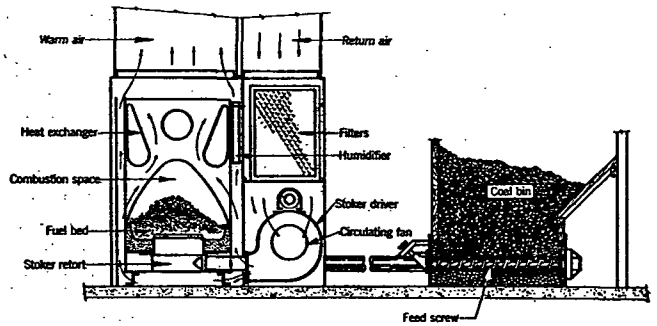

FIG. 4. STOKER-FIRED WINTER AIR CONDITIONING UNIT

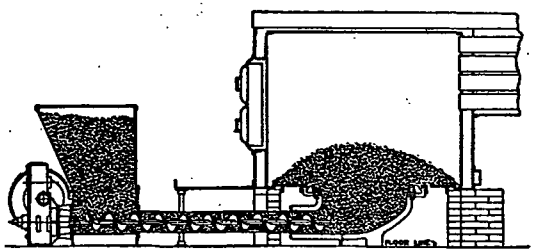

FIG. 5. UNDERFEED SCREW STOKER, HOPPER TYPE, CLASS 2, 3 OR 4

A rapid evolution of the combustible volatile matter occurs during and directly after the plastic stage. The distillation of volatile matter continues above the plastic zone where the coal is coked. The strength and porosity of the coke formed will vary according to the size and characteristics of the coal. While some of the ash fuses into particles on the surface of the coke as it is released, most of it remains on the hearth or grates and, as this ash layer becomes thicker with time, that portion exposed to the higher temperatures surrounding the retort fuses into a clinker. The

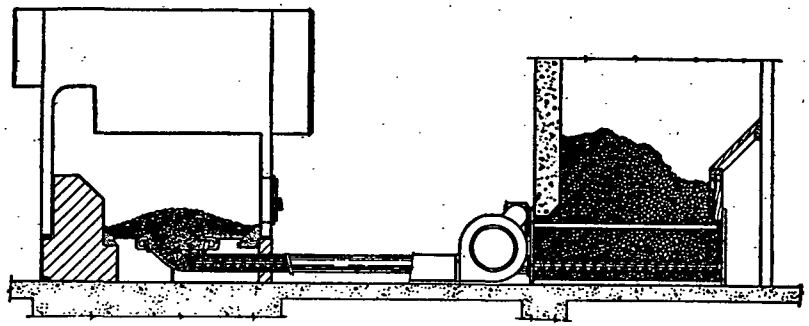

FIG. 6. UNDERFEED SCREW STOKER, BIN TYPE, CLASS 2, 3 OR 4

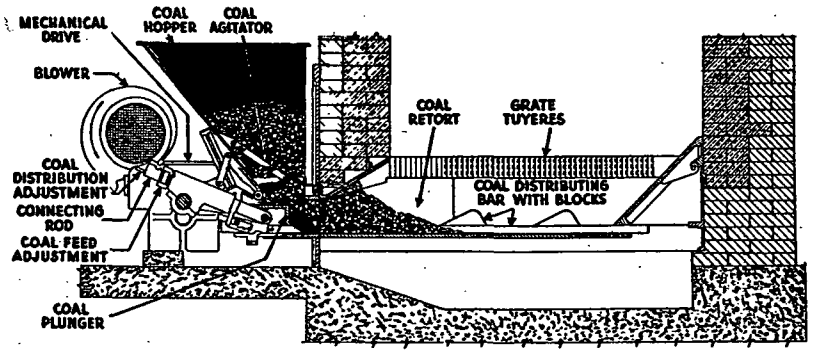

FIG. 7. UNDERFEED SIDE CLEANING STOKER

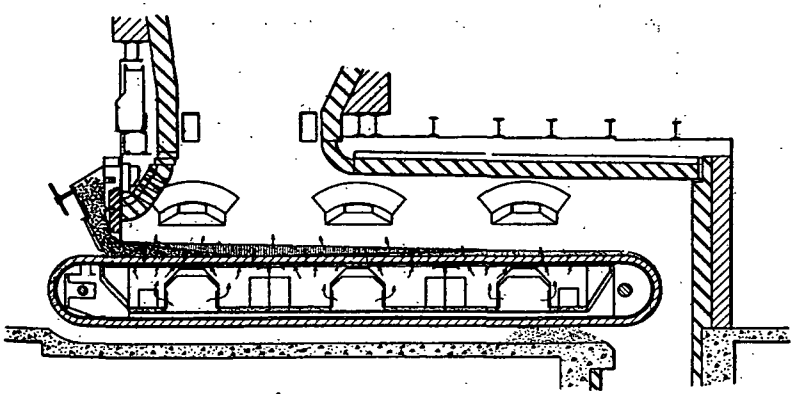

FIG. 8. OVERFEED TRAVELING-GRATE STOKER

temperature in the fuel bed, the chemical composition and homogeneity of the ash, and the time of heating govern the degree of fusion.

Most bituminous coal stokers of Classes 1, 2, 3 and 4 require manual removal of the ash in clinker form.