

stoker has a wide application on small sized fuels and on fuels such as lignites, high-ash coals, and coke breeze.

Overfeed Inclined Grate Stokers

In general the combustion principle is similar to the flat-grate stoker, but this stoker (Fig. 4) is provided with rocking grates set on an incline to advance the fuel during combustion. Also this type is provided with an

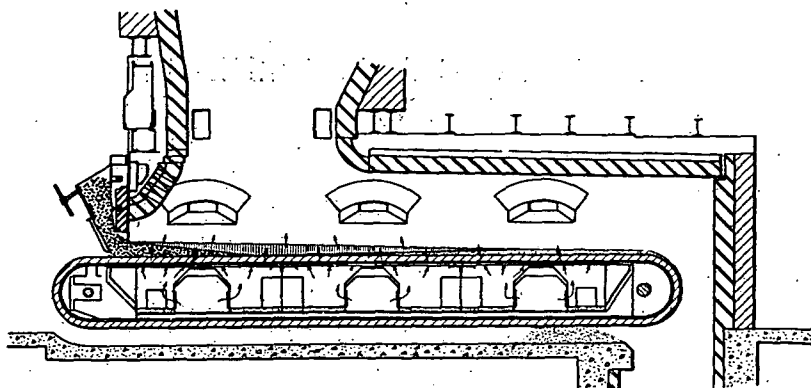


FIG. 1. OVERFEED TRAVELING-GRATE STOKER

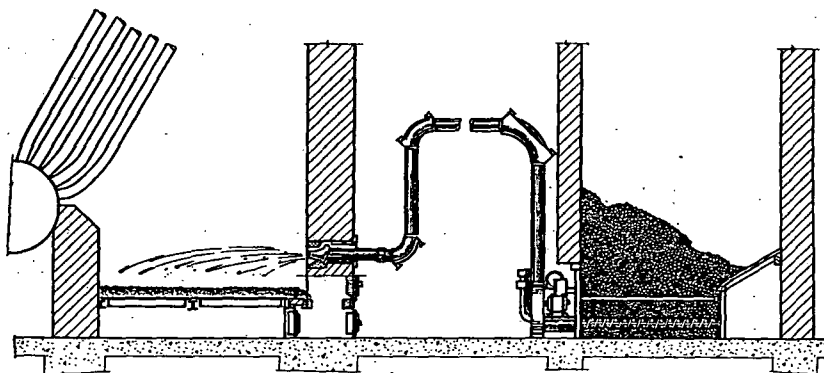


FIG. 2. OVERFEED SPREADER STOKER, PNEUMATIC TYPE

ash plate where ash is accumulated and from which it is dumped periodically. This type of stoker is suitable for all types of coking fuels but preferably for those of low volatile content. Its grate action has the tendency to keep the fuel bed well broken up thereby allowing for free passage of air. Because of its agitating effect on the fuel it is not so desirable for badly clinkering coals. Furthermore, it should usually be provided with a front arch to care for the volatile gases.

Underfeed Side Cleaning Stokers

In this type (Fig. 5), the fuel is introduced at the front of the furnace to one or more retorts, and is advanced away from the retort as combustion progresses, while finally the ash is disposed of at the sides. This type of

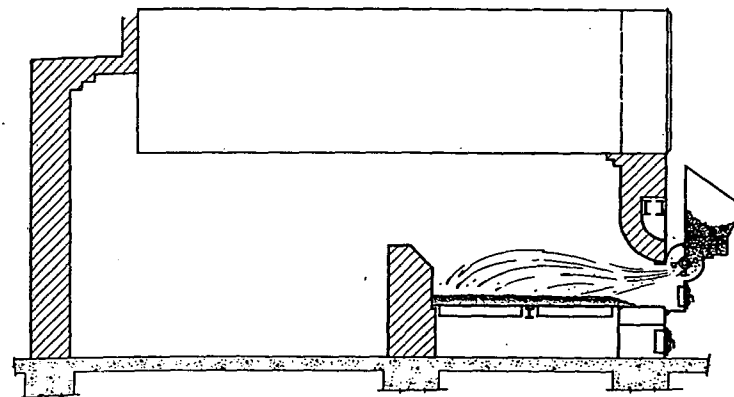


FIG. 3. OVERFEED SPREADER STOKER, ROTOR TYPE

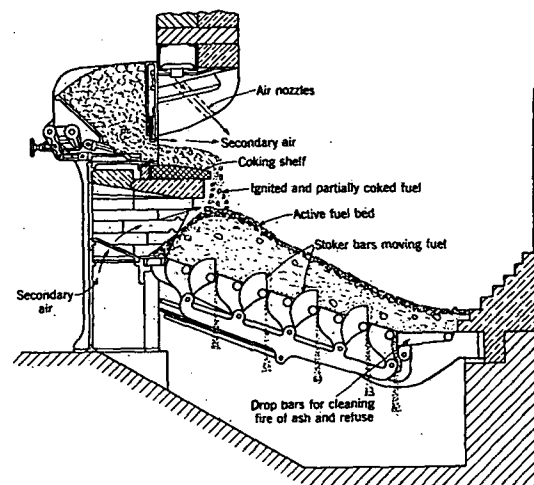


FIG. 4. OVERFEED INCLINED GRATE STOKER

stoker is suitable for all bituminous coals while in the smaller sizes it is suitable for small sizes of anthracite. In this type of stoker the fuel is delivered to a retort beneath the fire and is raised into the fire. During this process the volatile gases are released, are mixed with air, and pass through the fire where they are burned. The ash may be continuously