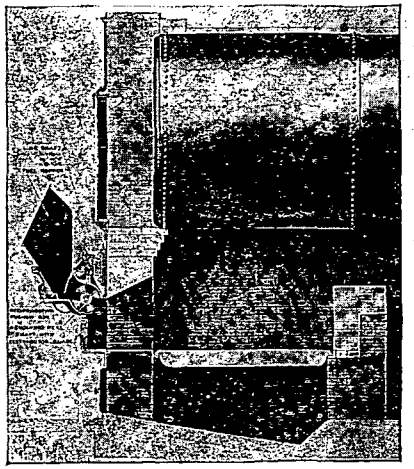
The Automatic Furnace Co.

Dayton, Ohio

Branch Offices

NEW YORK, N. Y. CHICAGO, ILL. ST. PAUL, MINN.
PITTSBURGH, PA. ATLANTA, GA. DETROIT, MICH.

Manufacturers of Smokeless Furnaces, Chain and Shaking Grates



Showing Dayton Coal Feeder Applied to Horizontal Fire Tube Boiler

PRODUCTS

Model Automatic Smokeless Furnaces; Model Chicago Chain Grate; Dayton Coal Feeder; Culver Shaking and Dumping Grate; Model Acme Steam Engine.

THE DAYTON COAL FEEDER automatically feeds the coal onto any grate. It gives an even distribution of fuel over the entire grate surface and the fuel saving never amounts to less than 15%.

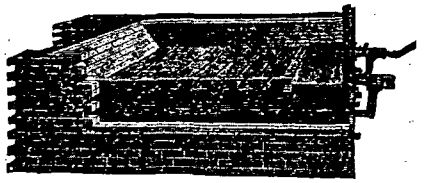
Burns the lower grades of fuel that usually go to waste at the mines.

The saving in fuel will repay the installation cost in a short time. It is simple in design and practically foolproof. It reduces the amount of labor required.

Practically no maintenance cost.

It is easily and quickly installed without change in the boiler setting at comparatively small cost.

CULVER SHAKING AND DUMPING GRATE has both a shaking motion, which is sufficient to clean the grate surface of ash and clinker, and a



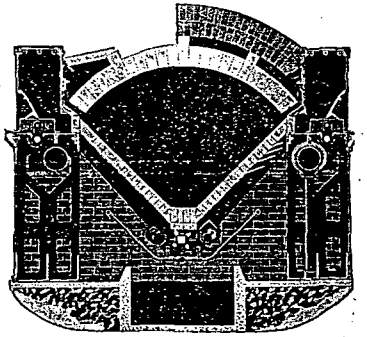
Culver Shaking and Dumping Grate

dumping motion in which every other grate raises up and the others drop down. When in this position the grates can be rocked, which breaks up the largest and hardest of clinker, and as an 8-inch opening is afforded everything on the grates is dumped into the ash pit.

THE MODEL AUTOMATIC SMOKELESS FURNACE is of the well-known side feed inclined grate type and is suitable for the larger heavy duty units. It is entirely automatic, cleaning the ash and clinker from the fire as well as feeding the fuel to the fire. Heavy overloads can be carried due to the fact that the fire is always clean and as the cleaning mechanism will handle the dirtiest of coal the refuse from the mines can be burned instead of wasted.

The design is simple, strong and durable and no parts, except the grate bars, are exposed to the heat of the fire.

Shown below.



This Company also manufactures the MODEL CHICAGO CHAIN GRATE. It is of rugged, heavy construction and is designed to stand the trying service of boiler room equipment. Detailed description will gladly be sent on request.

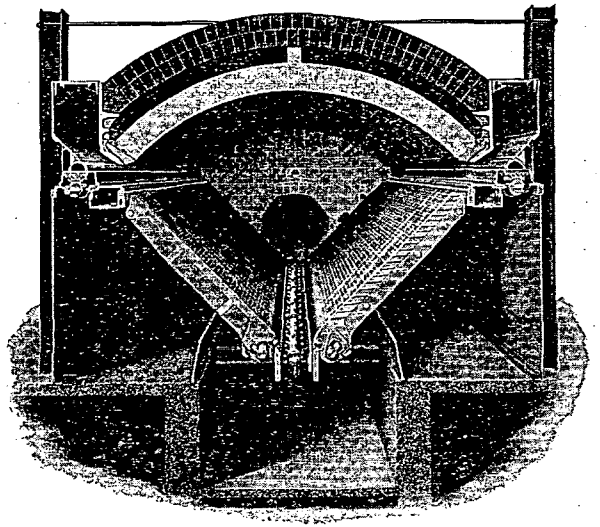
Murphy Iron Works

Founded 1878

Detroit, Michigan

Branch Offices:

Boston, Worcester, New York, Philadelphia, Pittsburgh, Buffalo, Cleveland, Cincinnati, Chicago, St. Paul, Denver.



General

The Murphy Automatic Furnace is particularly adapted for use in office buildings, hotels and schools. It saves 15 to 25% of coal over hand-fired methods—it eliminates the smoke problem. The labor saving depends on the number of men employed. Where only one man is employed there is, of course, no saving, but he can devote more of his time to other duties.

Description

The correctness of the principle upon which the construction of the MURPHY AUTOMATIC FURNACE is based has been demonstrated by 44 years of stoker experience. Improvements have been made from time to time which have increased its efficiency and durability. With the MURPHY AUTOMATIC FURNACE, complete combustion prevents smoke and ensures high CO_2 results. All ash and refuse are removed automatically. This means a clean fire and high efficiency at all times. The MURPHY FURNACE does away with the necessity for opening furnace doors and thereby eliminates the admission of cold air; the coal supply to the furnace is under absolute control and automatic regulation; it is a Natural Draft Furnace and requires no expensive fan or blower equipment.

Adaptability

The Murphy Furnace is designed for any type of boiler in units from 50 h.p. up. It is exceedingly flexible and efficiently handles variable loads and overloads up to 200% of boiler rating with minimum attention and without forced draft.

Maintenance

Maintenance cost is low; averaging about 10 cents per B.H.P. per year. The magazines and fronts are protected by fire brick; the coking plates by air passing under them; and the clinker grinder, grate bearer and grates by exhaust steam and air, thus ensuring ample protection to all working parts.

Installations

A few of the many Murphy installations in office buildings, hotels and schools.

Hamm Building, St. Paul, Minn.
Cleveland Discount Bldg., Cleveland, O.
State Office Building, Lansing, Mich.
Parliament Buildings, Ottowa, Canada.
Edison Building, Chicago, Ill.
Lafayette Hotel, Buffalo, N. Y.
Blackstone Hotel, Chicago, Ill.
Union Bank Bldg., Pittsburgh, Pa.
Congress Hotel, Chicago, Ill.
Statler Hotels, Cleveland, O., Detroit, Mich., and Buffalo, N. Y.
University of Michigan, Ann Harbor, Mich.
76 School buildings in Detroit.
33 Schools in Cleveland.