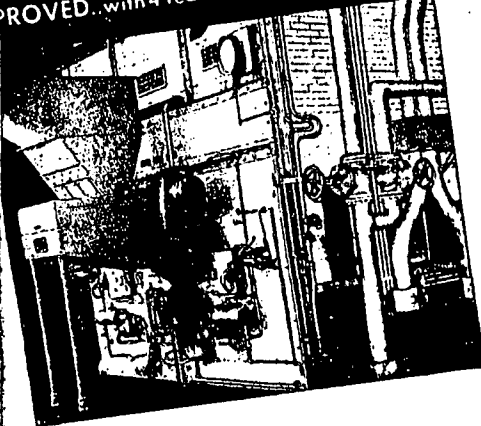


Now see the new CENTRAFIRE With the famous link

PROVED... with 4 Years Operating Experience



Four years of operating experience at one of America's widely known distilleries (above) has resulted in the design and construction refinements that make Centrafire the outstanding spreader-type stoker.

Every point of Centrafire's superiority is proved: high thermal efficiency; maximum fuel combustion; continuous, even coal feed and distribution; economical firing of any grade coal; ash discharged without reducing capacity.

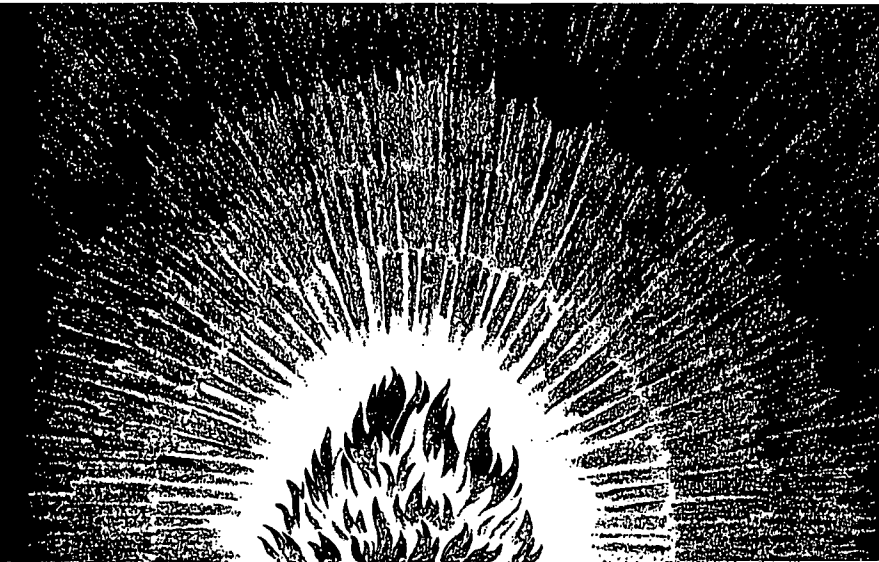
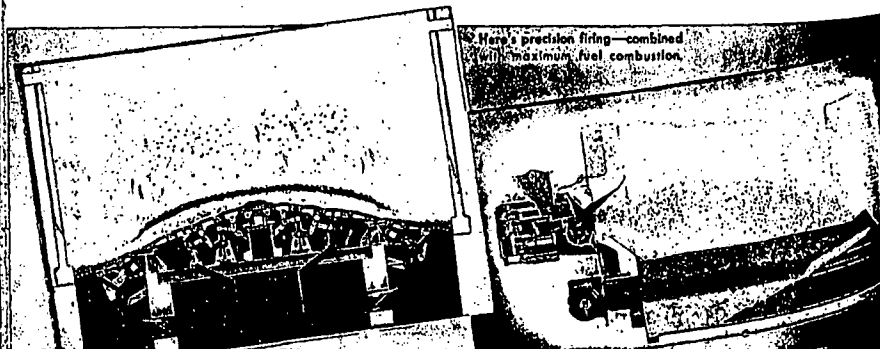
The spreader-type stoker that precisely arranges the elements of combustion for **HIGH THERMAL EFFICIENCY** and **MAXIMUM FUEL COMBUSTION**

Centrafire is so effective it burns even the lowest grade of coal . . . economically! Wet or dry coal is fed and distributed evenly and continuously . . . regardless of size consist.

A key feature of Centrafire's exceptional efficiency is the hydraulic drive that automatically maintains preset, fuel-air ratios. What's more, ash is discharged without reducing capacity—since the coal feed is not interrupted and fire is maintained—while ash is discharged at the sides of the furnace.

Centrafire will carry light loads or full loads for extended periods . . . or will respond to increased demand from light load to full load without sacrificing efficiency. Get all the facts from your nearest Westinghouse office. Ask for booklet B-3890. Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania.

How's precision firing—combined with maximum fuel combustion.



Fuels and Firing

By L. M. ROWLEY, Managing Editor, J. C. McCABE and S. G. A. SKOTZKI, Associate Editors

From those dawn times when our hairy ancestors squatted about a flame before a cave, fire has been an intimate associate. It gave cozy warmth and kept back the creeping dark. It smelted ores, made metal malleable for forging. In later days it generated steam and pushed mightily on engine pistons.

No wonder the ancients viewed fire as one of the "elements," along with the other cornerstones of their world—earth, air and water. No wonder fire has been and still is worshipped by savage peoples. No wonder traces of that age-old feeling appear in our sentimental appreciation of a glowing hearth.

Down through the centuries, as fire came ever to play a greater part in man's life and work, the nature of "burning" remained secret. Not until the classical experiments of Lavoisier, Priestley and other 18th-century scientists swept aside the mystical ideas of the Middle Ages did the process stand revealed as a reaction with oxygen from the air.

From that time on we have gained steadily in our

knowledge of burning. Learned that it is more complex chemically than we first thought. Learned that good combustion is mainly a mechanical problem. Learned many practical things about fuels and efficient firing. Learned above all how little we know.

Today the reaction by which fuel and oxygen combine and give off heat is still the most important single process in our universe. Heat is the power engineer's stock in trade and combustion a process he lives with daily. As fuels become ever more expensive to obtain, and as energy demands skyrocket, nothing is more necessary than an understanding of the manner in which fuels burn and how to put them to work with peak effectiveness.

To aid that understanding is the aim of this special section. Power's 70th. In 48 practical pages, it tells how fuels burn, gives facts about commercial fuels, describes firing equipment, shows how to select fuels wisely for new plants and old, and outlines short-cut methods for checking efficiency.

DECEMBER 1948 **POWER** P. W. SWAIN, EDITOR