Combustion Specialties Corporation

Walter S. Timmis, past president of the AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS has written an extensive report on COMBUSTO Draft System from which the following paragraphs are quoted. (Complete report will gladly be forwarded on request.)

Manufacturers of

DRAFT COMBUSTO REGULATING SYSTEM

250 West 54th Street, New York

FOR HEATING PLANTS
Saves coal and labor, maintains even heat with less draft.

FOR POWER PLANTS
Higher evaporation per pound of coal eliminates smoke

Mr. Timmis states, "To secure the most economical results in combustion for heating it is necessary to use the proper amount of air under the fuel bed for the distillation of the gases and the correct amount of air properly diffused, preferably heated and delivered over the fire bed in order to complete the combustion by burning the distilled gases—**in brief—an efficient boiler is a gas producer having means for consuming gas produced.**"

WHAT COMBUSTO IS

To quote Mr. Timmis further, "**Combusto** is a system carefully studied, tested and developed for each individually different case and provides means for supplying the necessary diffused and heated air (oxygen) over the fire to properly complete in the second stage the combustion begun in the fuel bed by distillation of gases."

UNIQUE AND FUNDAMENTAL REQUIREMENT FOUND IN COMBUSTO

"Perhaps the most important feature of **Combusto** is the resistance to the flow of air through the apparatus itself, which is made to equal the resistance of the fuel bed, thus producing a balanced condition above and below and through the fuel bed—**a fundamental requirement for correct and economical combustion which is ignored in regular furnace and boiler design.**

WHAT COMBUSTO DOES
(See illustration of COMBUSTO equipped plant below.)

"**Combusto** is of cast iron cellular structure, the air is heated on passing through this structure and is then discharged through a large number of small apertures over the fire bed. The amount of air thus admitted having been carefully computed for the required conditions, the result is practically perfect combustion, which to the user of **Combusto** results in—

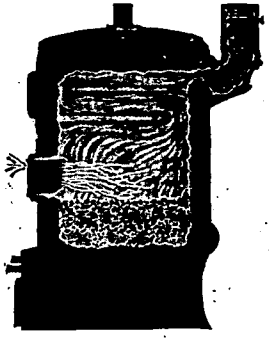
Economy of fuel
Fewer firings
Complete combustion of fuel, hence—
A finer ash and reduction of clinker
Elimination of coal gases
Means for producing a steady even heat."

COAL WASTED (Left)

Without **Combusto**, a checked fire produces no dependable results. The gases that distill from fuel bed are a total loss. Heat can be produced only by speeding up stack draft. This is wasteful and requires frequent attention.

COAL SAVED (Right)

With **Combusto**, all gases are burned completely with Bunsen blue flame with stack draft continuously checked to minimum. Hence, amount of gas made can be regulated to amount of heat needed by simple adjustment of the ash pit damper.



SPECIFICATION: The following clause adopted since 1916 by one of the largest railways in the United States is suitable as a standard specification in connection with low pressure hot water or heating boilers or warm air plants. "Equip all boilers (warm air furnaces) with **Combusto** of size recommended by Combustion Specialties Corporation's engineers."

STYLES: **Combusto** is manufactured in 28 basic styles—each style is capable of adjustment to meet specified conditions. Suitable styles are manufactured for practically any type of heating plant and for all sizes and grades of fuel.

PRICES: Prices range from $25.00 on small house-heating plants to $200.00 on largest low pressure heating boilers. Definite estimates can at once be submitted if manufacturer's name and number of boiler is sent to us.

A FEW NOTABLE INSTALLATIONS

Daniel Guggenheim Estate
Clarence H. Mackay Estate
Otto Kahn Estate
George Eastman (Eastman Kodak Co.)
H. R. Mallinson
U. S. Department of Labor
John J. Bausch (Bausch & Lomb)
Firestone Tire & Rubber Co.
Frederick G. Erbe (Yawman & Erbe)
Childs Co., 52 installations
D. L. & W. Railroad, 40 installations
Bank of the Manhattan Co., 26 inst.

G. M. Davis Regulator Company

Manufacturers of Automatic Valve Specialties
407 MILWAUKEE AVENUE :-: CHICAGO
New York Office, 71 Fulton Street—Sales Representatives in Principal Cities

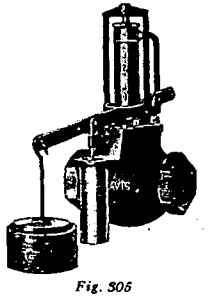


Fig. 305
Pressure Regulator—Piston Type

Fig. 305—The Davis Standard Regulator is constructed for automatic steam pressure reduction. It accomplishes its purpose in the most direct manner and with the least liability to go wrong. It has visible action—you can see it work—you can test it by hand. Good for any service pressure.

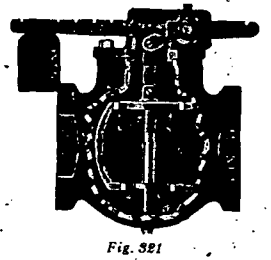


Fig. 321
Back Pressure Valve

Fig. 321—To automatically regulate the pressure of exhaust steam is the purpose of the Davis Noiseless Back Pressure Valve. The globe pattern may be used either horizontally or vertically. The piston disc is semi-balanced which results in reducing the size of the counterweight necessary to maintain a given pressure.

Fig. 311—This Regulator is for use on vapor, vacuum and low pressure heating systems. Having a diaphragm of large area and no stuffing box, it is very sensitive. Control pressure is taken from the service pipe 5 to 10 feet ahead of the valve where an accurate average pressure may be had.

Fig. 318—The Davis Float Valve will automatically maintain a constant water level in a tank or reservoir. A distinctive feature is its tight closing disc—it will not leak. Another feature is its loosely fitted piston—it will not stick. Frictionless operation insures accurate regulation.

Send for general catalog

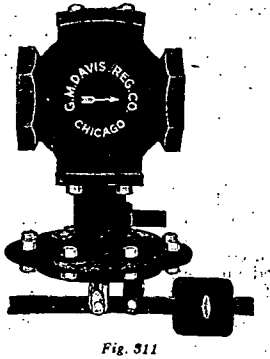


Fig. 311
Pressure Regulator—Diaphragm Type

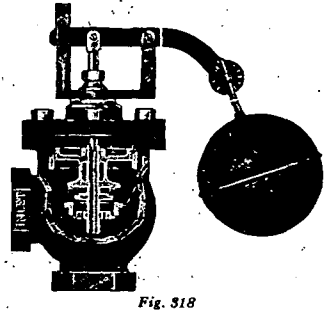


Fig. 318
Float Valve Globe or Angle