



Hydraulic PRESSES

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William R. Perrin & Company
TORONTO, - CANADA

combustion. If comparatively cold surfaces, such as the sections of a hot-water heater, are too near the fire, the flame will be checked and smoke will be produced in exactly the same way as the flame of a lamp becomes smoky when held close to the bottom of a cup of water.

Certain substances are good conductors of heat, others are poor. Cast iron is a good conductor, and the amount of heat that will be transmitted through it depends upon the difference in temperature of the fire on one side and the water on the other. The hotter the fire and the cooler the water, the more heat will be transmitted. Soot is a very poor conductor of heat. A coating of one-half inch will almost entirely prevent the transmission of heat, while a very slight coating means a large waste of fuel.

The particles of water at the bottom of a pot over a fire expand as they become heated, and being therefore lighter than the remainder of the water, float to the top, the cooler particles descending. The same thing takes place in a hot-water heating system, the water as it is heated rising to the radiators in the rooms, the cooler water in the radiators descending to the heater. As already stated, the cooler the water the more heat it will absorb from the fire. It is therefore important that the motion of the water be as rapid as possible. The quicker the

heated water moves away, allowing colder water to take its place, the greater will be the economy and efficiency of the system. Any obstructions in the piping, radiators or heater which impede the circulation of the water are therefore a serious disadvantage. For instance, if the heater is so constructed that the water has to travel through crooked, narrow, horizontal passages, the circulation will be slow and the transmission of heat imperfect.

The book contains numerous illustrations having reference to the Robb heater as a whole, and its various constituent parts, with appropriate explanations thereof, price lists, etc., which will be sent on application.

VULITE.

The Vulite Syndicate, 40 Wilson St., Finsburg, London, E.C., England, have received a letter from the Virgemount Chemical Works, London, England, of whom Messrs. Boake, Roberts & Co. are proprietors, regarding their experiments with Vulite, in which they say:

We have now completed the series of experiments which we have had in hand for some time, in regard to bringing Vulite up to a standard of efficiency that must command general recognition, and we give you below the results.

A natural hard water was taken and

tried at the rate of one part of Vulite to 500 of water; the water was then boiled for two hours with this addition of Vulite, and after the above period, was allowed to settle and the clear supernatant liquor examined, with the following results:

	Original water.	After treatment with Vulite.	Salts Rem'd.
Silica.....	.84	.28	.56
Oxide of iron.....	.84	.28	.56
Calcium carbonate	17.95	1.05	16.90
Calcium sulphate.....	9.37	2.36	7.01
Magnesium carbonate...	4.56	.00	4.56
Magnesium sulphate...	15.99	7.56	8.44

The above figures represent grains per gallon.

The salts above mentioned are those which form incrustation in steam boilers, and it will be noticed that after same had been treated for two hours only, the Vulite removed seventy-six per cent. of these undesirable bodies, which shows the improvement of what would be equivalent to forty per cent., and we have every assurance that if Vulite is used regularly and according to requirements, it unquestionably would prove a most effective disincrustant.

The John Calder Co., Hamilton, Ont., has been incorporated with a capital of \$50,000, to manufacture clothing. The provisional directors include Arthur Horsfall, William Southam and John Calder.

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