

One heat equipment in this way takes the place of two.

A steam heating coil with an automatic control valve may also be added to hot-water tank so that the water in the tank may be heated by steam so long as any steam is present in the boiler, thus avoiding the contingency of having to run the burner for heating the water by the slow process of heat transfer from the water in the boiler to the water in the tank at such times as steam is not required in the house.

An aquastat may also be added to a steam heating boiler for limiting the temperature of the water in the boiler to a degree below the boiling

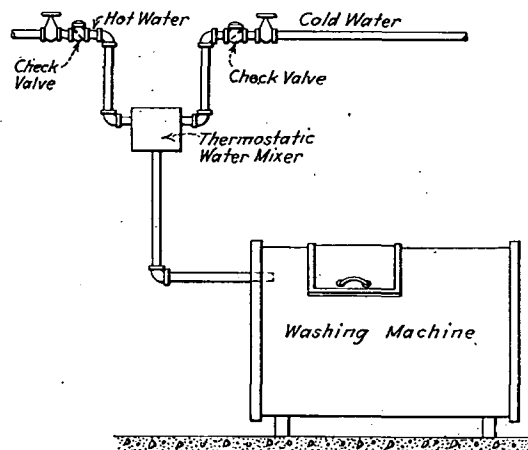


FIG. 9. WATER TEMPERATURE CONTROL FOR LAUNDRY MACHINERY

Note.—WASHING OF WOOLENS BY LAUNDRIES. A Thermostatic Water Mixer installed on the pipe line to a wash wheel will automatically deliver water of the exact temperature required properly to wash woolens. No matter how hot or how cold the water is admitted to the mixer, or whether the pressure of either varies, the temperature of the water delivered to the wash wheel will remain constant. Woolens should not be washed with water warmer than 80 deg. fahr.

point so that the apparatus may be used for heating the hot water at such times as steam is not required in the house. The connection between this aquastat and the electric control of the burner is arranged with a cut in and out switch so that its functioning may be cut in and out at will and in this way the heating boiler is used for heating water in summer or spring and fall without furnishing heat to the house.

An unique arrangement of control for a heating boiler is to have a coal fire operated from one end of the boiler furnace and controlled from a general thermostat operating the drafts and an auxiliary oil burner installed at the opposite end of the furnace controlled from an aquastat in the water of the boiler. With this system of control the coal fire may be made to take the burden of the load, but in case the coal fire is neglected or fails otherwise to meet the demand the oil burner automatically comes in. This makes a very reliable and economical arrangement where it is not desirable to use oil for the entire load on account of its cost.

Central Station Heating Control

Central plants should always be governed by thermostats as a measure of economy, and many public service companies require the installation of automatic heat control for this reason. Where economy is of greater consideration than comfort, it often suffices to install one unit type thermostat in a representative room, this controlling a main valve at the entrance to the building.

Where steam at appreciable pressure is furnished from a central station, a combination of pressure reducing valve and cut-off valve, controlled by a thermostat in a representative room, gives excellent results,

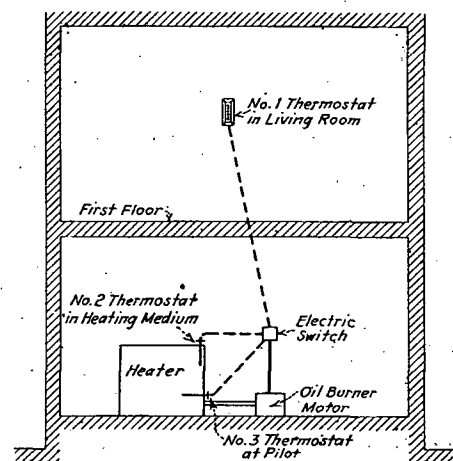


FIG. 10. TYPICAL ARRANGEMENT FOR OIL BURNER

as it automatically varies the steam pressure in the radiating surface within a considerable range, giving excellent regulation as well as economy. (See Chapter XI for further data on central heating system control).

Laundry Machines

Many laundry machines, especially for washing woolens, are improved wonderfully in service by the installation of automatic heat control.

By using automatic water mixers on the water supply pipe lines, water at the exact temperatures desired will always be delivered, no matter how hot the warm water may be, thus preventing the aggravating and expensive shrinking of woolen goods so common when water over about 80 deg. is used.

There is also a tremendous fuel saving by preventing overheating of all laundry water, while still insuring, by use of thermostats, that the water always shall be hot enough for each specific condition.

Refrigerating Units

In most buildings where refrigeration is used, common practice until recently at least, has been to install a central system, where cold brine is