

wires led to the motor and the various terminals. When electric contact was made, at a position corresponding to the highest temperature, the current would flow in a certain direction and cause a magnet to release a pawl, which would start a motor revolving in the proper direction for closing the valves when the temperature fell below a certain point the thermostat would make electric connections so that the current would flow in an opposite direction and cause the motor to reverse its motion and open the valves. If the motor was operated by water, the electric current would open and close a valve in the supply pipe. If the motor was operated by electricity the current from the battery would move a switch on the wires leading to the motor.

Many systems of heat regulation are in use and are doubtless worthy of extended notice, but the systems most in extensive use and giving the best satisfaction are the Nash, the Johnson and the Power systems. In any of these three systems the motive force for operating or closing the valves which regulate the heat supply is obtained from compressed air, which is stored in a reservoir by the action of an automatic motor. The thermostat acts with change of temperature to turn off or on the supply of compressed air. When the air pressure is on, the valves supplying heat are closed, when if they are opened by a strong spring placed on the spindle of the valve the compressed air is supplied at a pressure of about 15 pounds to the square inch, which is operated automatically to maintain a given pressure. An air pipe leads from the air compressor to the thermostat and another from the thermostat to the diaphragms in connection with valves or dampers. The action of the thermostat is simply to operate a minute valve for supplying or wasting compressed air in the pipe leading from the thermostat to the diaphragm valves.

The expense of constructing a perfect system of heat regulation is met in a short time by the saving in fuel bills. The cost of maintenance is light when the system is properly installed and attended to and repairs made at the proper time.

The manufacturers of Nash, Johnson and Power systems of heat control have also designed instruments, which move adjusting dampers in any indirect system of heating slowly and hold it in any intermediate position as desired. This is considered an advantage for systems of ventilation in which it is always desired to admit the same volume of air, but in which the relative amounts of hot and cold air are varied to maintain the desired temperature.