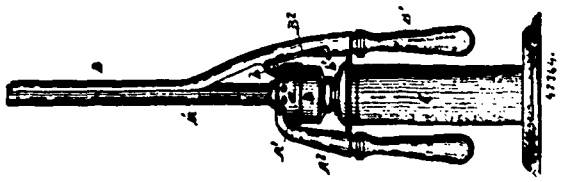
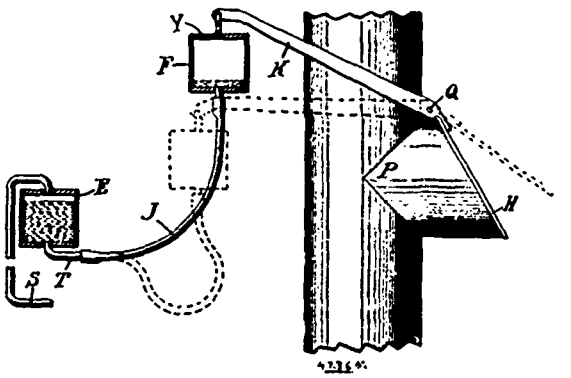
heater herein described, having in combination a heater, a tubular barrel provided with an open housing at its lower end removably engaged with the top of the heater, and a spring clamp connected with the barrel, said barrel and clamp each provided with an inde-



pendent operating handle separable from the heater whereby the barrel and clamp and their operating handles may be removed from the heater for use when the barrel is heated, substantially as set forth. 3rd. The curling iron and heater herein described, having in combination a tubular barrel provided with an open housing at its base, an operating handle permanently attached to said housing, a spring clamp connected with said housing provided with an operating handle, a heater provided with a removable supporting collar D to engage said housing at the base of the barrel, said housing having a removable engagement with said collar whereby the barrel and clamp and their operating handles may be removed from the heater for use when the barrel is heated, substantially as set forth. 4th. The curling iron and heater herein described, consisting of a heater, a supporting collar D removably engaged therewith, a tubular barrel provided with a housing removably engaged with said collar, and a spring clamp connected with said barrel, the interior of said collar and housing forming a combustion chamber, said barrel and said clamp each formed with an independent handle whereby the barrel and clamp and their operating handles may be removed from the heater for use when the barrel is heated, substantially as set forth. 5th. In combination a tubular barrel provided with an open housing at its base and with an operating handle, a spring clamp engaged therewith also provided with an operating handle, and a supporting collar D having a removable engagement with said housing, substantially as set forth. 6th. In combination a tubular barrel provided with an open housing at its base, a spring clamp connected therewith, a lamp having a burner provided with a burner tip and surrounding neck, and a supporting collar removably engaged with said neck and housing, said barrel and clamp each provided with a handle independent of the lamp whereby the barrel and clamp and their operating handles may be removed from the heater for use when the barrel is heated, substantially as set forth.

No. 47,365. Temperature Regulator.

(*Régulateur de température.*)

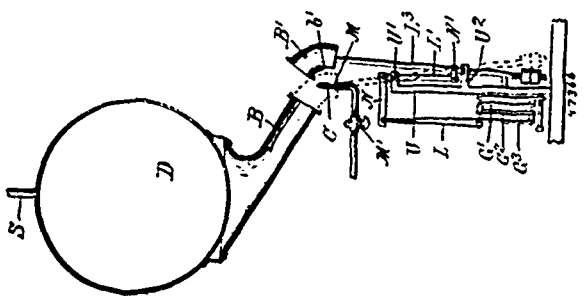


Thomas O. Perry, Chicago, Illinois, U.S.A., 2nd November, 1894; 6 years.

Claim.—1st. In a temperature regulator, in combination with a regulating valve or damper, an element adapted to be expanded and contracted by changes of temperature and connections therefrom which operate the valve or damper, a continuously operating heating device, and means for directing its heat toward or away from the expanding and contracting element, a thermostat, and mechanism by which it controls the relative position of the heating device and the heat-directing device, substantially as set forth. 2nd. In a temperature regulator, the regulating valve or damper, the chamber D, and a device to heat it and mechanism by which the expansion and contraction of the fluid contents of the chamber operates the damper, in combination with a device to direct the heat from the heating device toward or away from that chamber, mechanism which controls the relative position of the heating and heat directing devices, and a thermostat connected to and operating such mechanism, substantially as set forth. 3rd. In combination, substantially as set forth, the chamber D, containing air or other fluid, a continuously operating heating device to which such chamber is exposed, a shield adapted to be interposed between the heating devices and the chamber, a thermostat and connections therefrom adapted to control the relative positions of the heating devices and the shield, the valve or damper whose opening and closing affects the temperature of the room which contains the thermostat, and mechanism by which the expansion and contraction of the contents of the chamber operate the damper. 4th. In a temperature regulator, in combination with a chamber D, containing air or other fluid, a valve or damper whose opening or closing affects the temperature of the room to be regulated, connections by which the expansion and contraction of the fluid in the chamber operates the damper, a heating device to which the chamber may be exposed, a movable shield adapted to be interposed between the chamber and the heating device, a thermostat located in the room whose temperature is to be regulated, and connections therefrom to actuate the shield as the thermostat responds to changes in the temperature, substantially as set forth. 5th. In a temperature regulator of the general character described, the shield A, for the air chamber consisting of a plurality of discs located one above the other with intervals between them, substantially as set forth. 6th. In a temperature regulator of the character described, in combination with the chamber D, a fixed shield and a movable shield located below the fixed shield, and adapted to be shifted to and from a position vertically below the line of said apertures, substantially as set forth. 7th. In combination with the chamber D, the plurality of discs or plates B B B, constituting a shield below the chamber, a tubular hub B^1, which connects said shield and constitutes a flue leading through them, a heating device located in line vertically below said hub, and the movable shield A, adapted to be interposed vertically above the flame, and mechanism for moving it from that position, the thermostat, and connections by which it operates the shield A, substantially as set forth. 8th. In a temperature regulator of the general character described, the movable shield, the vertical stem upon whose upper end it is carried, having a counterpoise at the lower end whereby it tends to remain vertical, the bracket upon which said vertical arm is fulcrumed, the lever being provided with a rolling pivotal support upon said bracket, substantially as set forth. 9th. In a temperature regulator, a thermostat consisting of a plurality of bars composed each of two elements having different co-efficients of contraction and expansion, the first of said bars being rigidly secured at one end and succeeding bars being secured each at the otherwise free end of the preceding bar and extending thence back toward the fixed end, consecutive bars being placed with their respective elements in opposite order, substantially as set forth. 10th. In a temperature regulator of the general character described, in combination with the chamber D, the fixed shield B, and the movable shield A, the heating device located lower than the movable shield, the lever arm, which carries said movable shield, and the thermostat which actuates it, consisting of a plurality of compound bars G^1, G^2 and G^3, consecutive bars having their elements in opposite order, each bar having one end made rigid with the otherwise free end of the preceding bar, multiplying lever connections from the last bar to the lever which carries the movable shield, substantially as set forth. 11th. In a thermostat, in combination with the two elements, having different co-efficients of expansion and contraction secured face to face and to a fixed support at one end, an arm or finger extending rigidly from the free end in the direction of the length, substantially as set forth. 12th. In a thermostat, in combination with a compound plate comprising the two elements, having different co efficients of expansion and contraction, secured together and to a fixed support at one end, a rigid bar attached across the free end, and a lever armour finger extending rigidly from said free end in the direction of the length, substantially as set forth. 13th. In a temperature regulator, in combination with the valve or damper, the air chamber and the mechanism by which the expansion and contraction of its contents operates the valve or damper, a tube whose upper end stands underneath the air chamber, a heating device located at the lower end of said tube, and a shield adapted to be interposed between the same and the tube, the thermostat, and connections therefrom to operate the shield, substantially as set forth.

No. 47,366. Temperature Regulator.

(*Régulateur de température.*)



Thomas O. Perry, Chicago, Illinois, U.S.A., 2nd November, 1894; 6 years.

Claim.—1st. In a temperature regulator, in combination with the regulating valve or damper, a contracting and expanding element