

described air valve or vent for temperature regulators, consisting of a shell provided with a flexible diaphragm *e*, pipe or outlet *f*, and inlets *g*. 6th. In combination, with a shell open at one side for communication with an exhauster, a pipe or outlet *f*, and inlets *g*, at the opposite side of the shell, an intermediate, flexible diaphragm *e*, and a spring *K*, bearing upon the diaphragm and tending to press the same upon the mouth of the outlet *f*. 7th. Two or more expandible and contractible chambers, each operating, by such contraction or expansion, one or more valves, dampers, &c., an exhausting apparatus, and an air inlet communicating with each of the said expandible and contractible chambers, a thermal valve controlling each of said inlets, a second expandible and contractible chamber communicating with each of said exhausters, a valve operated by each of said expandible and contractible chambers, each of said valves serving to control an air inlet to another expandible and contractible chamber, said last named chamber operating the valves, dampers, &c., of a heat generator, and having an exhauster in communication with it.

No. 37,121. Temperature Regulator.

(*Régulateur de température.*)

Lucien F. Easton, La Crosse, Wisconsin, U.S.A., 7th August, 1891; 5 years.

Claim.—1st. In a temperature regulating apparatus, the combination of a fluid main common to two or more apartments and communicating with apparatus for varying the pressure with the main, a chamber containing a central diaphragm or piston and communicating on opposite sides of said diaphragm or piston with said main, two chambers, each containing a movable diaphragm or piston and respectively communicating with opposite sides of the first mentioned chamber, a warm air valve or damper connected with the piston or diaphragm of one of said chambers, a cold air valve or damper connected with the piston or diaphragm of the other of said chambers, air inlets communicating with said chambers respectively, air vents communicating with said chambers respectively, and a thermostat arranged, substantially as set forth, to act upon said valves and to open or close them alternately as the temperature rises above or falls below the prescribed limits. 2nd. A temperature regulator, consisting of the following elements, a service main communicating with a pumping apparatus for producing pressure or suction as required, a chamber containing a central diaphragm or piston passages opening from opposite sides of the piston or diaphragm into the main valves or disks carried by the central diaphragm or piston, and serving to open one and close the other side of the chamber alternately, a second chamber containing a flexible diaphragm or partition, a cold air valve or damper connected with and movable by the diaphragm or partition of said second chamber, a third chamber also provided with a flexible diaphragm or partition, a warm air valve or damper connected with and controlled by said diaphragm or partition, two air vents, each communicating with one side of the first chamber, and with the second or the third chamber valves controlling said vents, and a thermostat arranged and operated, substantially as set forth, to actuate said valves alternately and to open one or the other according to variations in the temperature of the apartment in which the thermostat is located. 3rd. In a temperature regulating apparatus, the combination of a fluid main *M*, a chamber *F*, provided with a central diaphragm or piston *Q*, pipes *L*, connecting opposite sides of said chamber with the main *M*, stem *I*, carried by the piston or diaphragm *Q*, and provided with disks or valves *J*, pipes *O*, and *P*, provided respectively with vents *c*, and *d*, valves *e*, and *f*, applied to said vents chambers *C*, and *D*, provided respectively with diaphragm or pistons *a*, and *b*, cold air valve *B* connected with the piston or diaphragm *b*, warm air valve *A*, connected with the piston *a* and thermostat *Q*, arranged, substantially as shown and described, to actuate the valves *e*, and *f*. 4th. In a temperature regulator, the combination, with a hot air valve or regulator and a cold air valve or regulator, of movable diaphragms or pistons for actuating the same, a service main, an intermediate chamber containing a central diaphragm or piston, air vents arranged, one to admit air to one side of the intermediate chamber, and to the piston controlling the cold air valve, the other to admit air to the other side of the intermediate chamber and to the piston of the warm air valve, valves controlling said vents, and a thermostat adapted to actuate said valves alternately as the temperature rises above or falls below the predetermined point. 5th. In a temperature regulator, such as set forth, an air vent *c*, a valve *e*, provided with a stem *h*, a spring *g*, encircling said stem and serving normally to seat the valve and close the vent, and a thermostatic bar *Q*, arranged to act upon said stem and to open the valve when the bar moves in the proper direction. 6th. In a temperature regulator, the combination of a chamber, a movable partition within said chamber, four ports, two on each side of the said partition, one port on each side communicating with the atmosphere, and at the other with a main or reservoir, two valves, one on each side of and operated by the partition to control the passage of fluid through the chamber, a thermally-controlled valve applied to each of the ports communicating with the atmosphere, an expandible and contractible chamber communicating with one of the ports opening to the atmosphere at a point between the thermal valves, and the partition-actuated valve and a damper valve or like device connected with a movable part of the expandible and contractible chamber. 7th. In a temperature regulator, the combination of a chamber, a movable partition therein, four ports, two on each side of said partition, one port on each side communicating with the atmosphere, and the other communicating with a main or reservoir, two valves, one on each side of and operated by the partition to control the passage of fluid through the chamber, a thermally-controlled valve applied to each of the ports in communication with the atmosphere, two expandible and contractible chambers, each communicating with one of the ports opening to the atmosphere at a point between the thermal valve thereof, and the partition-actuated valve and two valves dampers or like devices, each connected with a movable part of one or the other of said expandible or contractible chambers.

No. 37,122. Support for Caskets.

(*Support pour cercueils.*)

Herbert John Breeze, Olean, New York, U.S.A., 8th August, 1891; 5 years.

Claim.—1st. The herein described casket support, consisting of a conical body having a retaining point at its lower end, and tapering up to a sharpened point, substantially as set forth. 2nd. The herein described casket support, consisting of a conical body having a retaining point at its lower end, and tapering up to a sharpened point and formed immediately below this point with an inverted conical bearing, substantially as set forth.

No. 37,123. Reverberatory Furnace.

(*Fourneau à réverbère.*)

William Stubblebine, Bethlehem, Pennsylvania, U.S.A., 8th August, 1891; 5 years.

Claim.—1st. In a furnace, the heating or producing chambers communicating with the rear end of the puddling chamber, combined with the mixing flues which have discharge ports in juxtaposition to the bridge-wall and fire chamber, and the blast-pipes passing through such heating or producing chambers and discharging into the mixing flues, substantially as and for the purpose described. 2nd. In a furnace, the combination, with a puddling chamber and a fire chamber, of the producing or heating chambers communicating with said puddling chamber, the mixing flues and blast pipes discharging into said mixing flues, substantially as described. 3rd. In a furnace, the combination, with a puddling chamber a take-up and a fire-chamber, of the producing or heating chambers located on opposite sides of the take-up, and communicating directly with the rear end of the puddling-chamber, the mixing flues opening into said producing chambers and the blast-pipes having their discharge ends terminating in the mixing flues, substantially as described. 4th. In a furnace, the combination, with a puddling chamber and a take-up of the longitudinal mixing flues arranged on opposite sides of the puddling chamber, the producing or heating chambers situated on opposite sides of the take up and communicating with the mixing flues, the gas-flues or passages intermediate of the puddling chamber and the heating or producing chamber, and the blast-pipes having their discharge ends terminating in the mixing flues in advance of the gas-flues or passages, substantially as described. 5th. In a furnace, the combination, with a puddling chamber and a fire chamber, of the producing or heating chambers connected by gas-passages with the rear end of the puddling chamber, the mixing flues extending longitudinally of the puddling chamber and connected to the producing chambers at their rear ends, the front ends of said flues having their discharge parts above the bridge wall, and the coils of pipes located in the producing or heating chamber and having the discharge-jets terminating in the mixing flues in advance of the gas-passages, substantially as described.

No. 37,124. Guide for Saws. (*Garde-scie.*)

Joseph A. Mayer, Muskegon, Michigan, U.S.A., 8th August, 1891; 5 years.

Claim.—1st. In a saw-guide, the combination of the slide-bar moving on the bed-plate and the head-block secured to the end of the slide-bar, the fulcrum-pin seated in the central recess in the outer face of the head-block, the jaws of the saw-guide mounted centrally on the fulcrum-pin so that they can have their directions reversed in relation to the head-block, and means, substantially as described, whereby the said jaws can be secured in position on the head-block. 2nd. In a saw-guide, the combination of the slide-bar moving on the bed-plate, the head-block secured to the end of the slide-bar and provided with a central circular bearing recess on its outer side, and curved slots arranged similarly on each side of equally distant from and concentric with said recess, the fulcrum-pin having an end bearing in said recess, the guide-jaws mounted on the fulcrum-pin and the bolts and nuts connecting the inner of said jaws to the head block, substantially as specified. 3rd. The combination with the slide-bar *D*, moving in a guide-casing *C*, on the bed-plate, the wear plate *d*¹, and set-screw *d*², of the adjusting-bar *E*, moving in the guide-casing *c*, and having an inclined shank seated in corresponding groove in the bar *D*, the wear-plates *e*³, *e*⁴, the set-screws *e*¹, *e*², and means, substantially as described, whereby the bar *E*, is moved in its guide-casing, substantially as specified. 4th. The combination, with the head-block and fulcrum-pin having a bearing in its inner end in a central recess of said block, and its outer end flattened and perforated, and having convex shoulders inward of said flattened end, of the inner saw-guide jaw mounted on the cylindrical portion of the fulcrum-pin, the outer saw-guide jaw pivoted on the flattened end of said pin, and means, substantially as described, whereby the outer jaw can have its inclination to the inner jaw adjusted to separate or bring together the wearing-blocks in the beaks of the jaws, substantially as specified. 5th. The combination of the head-block, the fulcrum-pin, the saw-guide jaws mounted on said pin, the outer of said jaws pivoted on the flattened end of the fulcrum-pin and capable of lateral motion thereon, the lever passing through and pivoted in a slot in the head-block, the adjusting-plate on the outer end of the said lever, the adjustment-plate riding on the said adjustable-plate, and means, substantially as described, whereby the lever can be moved, substantially as set forth. 6th. The combination, with the fulcrum-pin having a bearing on the head-block and the jaws pivoted on said pin, of the pivoted lever the adjusting-plate on the end of the lever, the flanged adjustment plate riding on the adjusting-plate, and the adjusting-screws passing through a threaded opening in the outer jaw impinging on the adjustment-plate, substantially as specified. 7th. The combination, with the slide-bar *D*, and the head-block *d*, provided with the recess *d*¹, and slots *d*², *d*³, of the fulcrum-pin, the inner jaw *G*, having the central opening for the fulcrum-pin and provided with the slots *g*⁴, *g*⁵, the lugs *g*⁶, the supporting-bar *g*⁷, for the outer jaw, the bolts *g*⁸, the screws *g*⁹, and the outer jaw pivoted to the end of the fulcrum-pin, substantially as specified.