

Claim.—1st. The combination of a valve serving to control a steam or other passage, an expandable chamber whose movable walls operate said valve when steam, gas or water is admitted to said expandable chamber, and an electric valve adapted to admit steam, gas or water, under pressure, into the expandable chamber, whereby the main valve is operated whenever the electric circuit is closed or opened, substantially as set forth. 2nd. The combination of an expandable chamber and a main valve connected thereto, the former having an inlet and an outlet port controlled by an electric valve, with the armature of an electro-magnet, and the bar or lever of an electric valve, whereby when the electro-magnet operates the bar or lever of said valve, the inlet port is adapted to be opened at the same time that the outlet port is to be closed, substantially as set forth. 3rd. The combination of a valve serving to control a steam or other passage, and adapted to close against and open with the pressure of an expandable chamber, whose movable wall operates said valve when steam, gas or water is admitted to said expandable chamber, and an electric valve adapted to admit steam, gas or water, under pressure, into the expandable chamber, whereby the main valve is operated whenever the electric circuit is closed or opened, substantially as set forth. 4th. The combination of a valve serving to control a steam or other passage, an expandable chamber whose movable wall operates said valve when steam, gas or water is admitted to said chamber, an electric valve consisting of an electro-magnet, its armature, and valves operated by the movement of said armature, whereby the movement of the armature in one direction admits the steam, gas or water to said expandable chamber and prevents its exit therefrom, and operates the main valve in one direction, while a movement of said armature in the opposite direction prevents the admission of steam, gas or water to said expandable chamber, but permits its escape therefrom, whereby the main valve is operated in the opposite direction, substantially as set forth. 5th. In a temperature-regulator, the combination of a valve adapted to close a steam or other passage, an expandable chamber having a flexible wall and a rigid backing, a valve stem having a disk secured to the end opposite the valve, said stem passing through the packing-box of the valve body, and a spring interposed between the packing box and disk surrounding said stem, substantially as set forth.

No. 22,023. Extension Table. (*Table à Rallonge.*)

Albert E. French, East Tawas, Mich., U.S., 8th July, 1885; 5 years.

Claim.—1st. The combination of the middle part A having the ways I, and the end parts C, C, having the sectional extension arms H, each formed of two separate sections, and a means, substantially as described, for shifting one of the said sections out of alignment with the other, to allow the same to be brought to a position alongside of each other, as specified. 2nd. The combination of the way I, having the recesses N in one side thereof, the extensible arm H, a separable section H' and provided with the grooves S, T, Z, and inclines, and catch V on one side, and the hooked lever O pivoted in a recess at one side of the said way, and having projections Q, R, adapted to be engaged in turn by said inclines to oscillate the lever and cause its hooked end to shift the section H' by means of the catch V, substantially as shown and described. 3rd. The combination of the middle part A, the end parts C, having the extensible arms H, provided with rack bars on their under surfaces, and the two parallel transverse shafts L supported in said middle part, and having pinions J overlapping each other and gearing said shafts together, and engaging parallel rack bars on the arms H, substantially as shown and described. 4th. The web leaf section formed of boards G having oblique transverse mortises, and the flexible connecting strips H₃ passed through said mortises, substantially as shown and described. 5th. The combination, with the middle part A having guide ways, or passages, and the end parts C, C, of the extensible or sliding arms, each formed of two separate sections having catches for connecting them, whereby said sections are aligned when the table is extended, but are disconnected, and one of them forced laterally when the table is contracted, substantially as shown and described. 6th. The combination of the part A, having ways with lateral recess N, the extensible arms H with grooves S, T, separated by incline U, a separate sliding section H' having groove Z, catch V and recess Y, and the hooked levers O pivoted in a recess at one side of said way, and having projections Q, R, adapted to be engaged in turn by said inclines for the purpose of oscillating the lever and causing its hooked end to shift the section H' by means of the catch V, substantially as shown and described.

No. 22,024. Base Burning Steam Boiler.

(*Chaudière à Vapeur de Foyer de Base.*)

Michael E. Herbert, St. Joseph, Mo., U.S., 8th July, 1885; 5 years.

Claim.—1st. A base burning steam-boiler having a central fuel magazine through it, extending to and attached to the top of the boiler, with a downwardly projecting annular water-chamber B around it, and a pendant annular water chamber B₂ at its outer periphery, in combination with the separate annular water chamber C, interposed between the chambers B₁ and B₂ and connected with the same by circulating pipes, substantially as shown and described. 2nd. The combination of boiler B having central magazine H, and annular downwardly projecting chambers B₁, B₂, the separate annular chamber C, with pipes K and M, and the brick wall or casing D, as and for the purpose described.

No. 22,025. Gas Regulator. (*Régulateur à Gaz.*)

William H. Cothren, Farmington, Me., U.S., 8th July, 1885; 5 years.

Claim.—1st. A fluid gas-regulator consisting of a case subdivided into three compartments A₁, A₂, A₃, the supply pipe, its floated valve and the siphon drip, substantially as described. 2nd. The combination, in a fluid gas regulator, of a case A, provided with a diaphragm terminating at a passage a₁₁, the compartment A₁ having the supply and the delivery pipes and a floating valve therein, and a drip-chamber provided with a siphon and an outlet, substantially as described. 3rd. The combination, in an automatic gas-regulator, of the chambers A₁, A₂, and a siphon drip chamber with the supply and delivery pipes, a float and a valve guided by rods

substantially as described. 4th. In a fluid gas-regulator, a case subdivided as described, a supply pipe B, an automatic float-valve a delivery pipe B₁ and a compartment provided with a siphon and outlets, substantially as described. 5th. In a gas regulator having a float valve applied to the delivery-pipe, and two communicating fluid-chambers, an auxiliary chamber provided with a drip or draw-off inverted siphon, the longest limb of which has a horizontal portion, substantially as described. 6th. In a gas-regulator the combination, with the partitioned case A, of a supply pipe, a float, the horizontal guides therefor, the valve and valve-disc, a siphon in chamber A₁₁ and a delivery pipe, substantially as described. 7th. A fluid gas-regulator consisting of a case A subdivided by partitions a₁, a₁₁, forming three chambers A₁, A₁₁, A₁₁₁, a float having a flat guided valve, a supply and delivery pipe, a drip chamber provided with an inverted siphon and openings E₁, E₁₁, all constructed and adapted to operate substantially in the manner and for the purposes described. 8th. In a fluid gas-regulator, a floating valve and a supply and delivery pipe located between chambers A₁, A₁₁, in combination with a siphon and the outlets of the chamber A₁₁₁, substantially as described.

No. 22,026. Culinary Pan Ventilator for Cooking Stoves. (*Ventilateur de Cas-serole pour Poêles de Cuisine.*)

Mary S. Harding, Saint John, N.B., 8th July, 1885; 5 years.

Claim.—1st. The culinary pan ventilator A, consisting of a cover having two closed sides, an end and a top, the bottom and one end open, and with or without a damper C, as set forth for the purpose described. 2nd. The culinary ventilator A, consisting of a cover, open at the front end, and having the top front portion B, hinged as set forth for the purpose described.

No. 22,027. Process and Apparatus for the Manufacture of Gas. (*Procédé et Appareil pour la Fabrication du Gaz.*)

The United States Carbonous Oxide Illuminating Gas Company, (assignee of Robert B. Stapp,) Denver, Col., U.S., 8th July, 1885; 5 years.

Claim.—1st. The method, hereinbefore described, of operating the described apparatus, consisting in first generating carbonic oxide gas and passing the same to the reservoir, heating the retorts by the same operation, then shutting off the carbonic oxide gas and admitting hydro-carbon oil to the retorts, generating therefrom a gas, and finally mixing the same with the carbonic oxide gas, all substantially as described. 2nd. The method, hereinbefore described, of operating the described apparatus, consisting in first opening the pipes leading from the lower chamber and supplying air to the fuel for the combustion, and in operating the pump to draw the carbonic oxide gas and force it to the receiver, secondly, in allowing the pump to remain at rest to act as a washer, admitting the hydro-carbon-oil to the retorts while the carbonic oxide gas is shut off and the passage is open between the retorts and the pump, and, finally, in passing the hydro-carbon gas to the holder and mixing it with the carbonic oxide, substantially as described. 3rd. The hereinbefore described apparatus consisting of a closed chamber, provided with a suitable flue and fire pot, a partition at or near the top of the fire pot dividing the said chamber into an upper and lower part, provided with an opening from the upper to the lower chamber, openings into the ash pit to admit air to the grate below the fire pot retorts in the upper chamber, an oil supply pipe connected with said retorts, and suitable pipe leading from the upper and lower chambers to a pipe connecting the suitable apparatus for purifying, mowing and receiving the gases, substantially as described, the combination of two chambers, one adapted to the generation of carbonic oxide gas from the fuel, and the other to the generation of gas from hydro-carbon oil by means of heat from the fuel pipes leading from the two generating chambers to a three way cock, a pipe leading from the three way cock to a pump consisting of an outer fixed and an inner movable part, and a pipe leading from the pump to a suitable receiver, all substantially as described. 4th. In the described apparatus, provided with a furnace and retorts, substantially as described, the combination of two chambers, one adapted to the generation of gas from hydro carbon oil by means of heat from the fuel pipes, leading from the two generating chambers to a three way cock, a pipe leading from the three way cock to a pump consisting of an outer fixed and inner movable part, a pipe leading from the pump to a receiver and a suitable washing apparatus, all substantially as described.

No. 22,028. Saddle. (*Selle.*)

Myra L. Eckles, Northfield, Minn., U.S., 8th July, 1885; 5 years.

Claim.—1st. The combination, with the hinged saddle trees A, A, of the metal fork C, the V-shaped rear seat support D joined to the hinged saddle trees, as described, the rigid oval brace, F, the horn d and the seat E, sustained upon the said brace horn fork and support D, substantially as shown and described. 2nd. The combination, with the saddle having rigid strap attachments B, B₂, attached to its sides and separated or spaced from each other, of the converging independent straps H, H₁ having buckles and holes in them to render them adjustable in length, a girth secured to such rigid attachments, and a common connection for the two converging ends of the straps H, H₁ and the girth, as shown and described.

No. 22,029. Rein Holder. (*Acroche-Guide.*)

George O. Teeter, Teeterville, Ont., 8th July, 1885; 5 years.

Claim.—1st. In a rein-holder, the combination, with the spring strip A having open loops provided with prongs D, on the ends of the hook K, and the nut J, substantially as herein shown and described. 2nd. A rein-holder consisting of a strip having loops B formed of its ends, each loop having two prongs forming a fork on its free end, substantially as herein shown and described.