

extension, a seat and a rocking frame supporting said seat and pivoted to said standards, and provided with a projection engaging the slot in said extension, substantially as and for the purposes set forth. 3rd. In an opera-chair, the combination, with the standards and the back pivoted thereto and provided with slotted extensions, of a seat having its brackets pivoted to said standards, and provided with projections engaging the slots in said extensions, and springs secured to said standards and bearing against the projections on the seat, as set forth. 4th. In an opera-chair, the combination of the standards, brackets E pivotally secured to said standards, seat D supported thereby, an oscillating back having sliding connection with said seat, and a spring secured to the standard, and bearing against the pivot of said sliding connection, substantially as described. 5th. In an opera-chair, the combination, with the seat having rocking frames E, B and bosses N, N', of the stops G, G' and spring O, O' arranged to automatically rock the seat by their tension, substantially as described. 6th. The combination with the standards, brackets E, E' pivoted to said standards and supporting the seat D, and bosses N on said brackets, of the back pivoted to said standards and having slotted extensions engaging said bosses, substantially as described. 7th. The combination, with the standards, brackets E, E' pivoted to said standards and supporting the seat D, and bosses N on said brackets, of the back pivoted to said standards and having slotted extensions engaging said bosses, and springs attached to the said standards and bearing against the bosses, substantially as and for the purpose set forth. 8th. The combination of the frame A, joints F, seat D, brackets E, projections N and back extensions M, substantially as set forth. 9th. The combination of the frame A, brackets E, seat D, joint F, projections N, springs O, stops G, back H, extension M, slot B, lugs I, connection C, and loops P, substantially as set forth.

No. 26,613. Nail Extractor. (*Tire-clou.*)

George J. Capewell, Cheshire, Conn., U.S., 6th May, 1887; 5 years.

Claim.—1st. In a nail-extractor, the combination of a stock and movable hammer attached thereto, and sliding jaws that alone receive the direct impact of the hammer, and a jaw closing device, all substantially as described. 2nd. In a nail-extractor, in combination with a stock and movable hammer attached thereto, lengthwise sliding jaws that receive directly the impact of the hammer, and a jaw closing lever *e* pivoted to the stock and having a cam faced short arm in contact with the back of one of the jaws, and a projecting arm that forms the fulcrum in extracting a nail, all substantially as described. 3rd. In combination with the stock *a* having a jaw socket *a*₂, and sliding hammer *b* with handle *b*₁, and a lower and wormlike *a*₂, in contact with the upper ends of the jaws, the sliding jaws *c*, *d* secured in the jaw socket and the jaw closing lever *e*, all substantially as described. 4th. In a nail-extractor of supporting stock, and movable hammer attached thereto, and sliding jaws located and moving at an angle with the axis of the stock, all substantially as described. 5th. In combination with a stock *a* having a jaw socket *a*₂, and sliding hammer *b* with handle *b*₁, and stop *b*₂, and notch *b*₃, and spring latch *f* seated in a socket in the handle, the sliding jaws *c*, *d* with respective slots *d*₃, the pins *e*₂ and *d*₂, the V-shaped spring *i* with out-turned ends taking into notches in the adjacent faces of the jaws, and the lever *e* with arms *e*₂ and *e*₃, all substantially as described. 6th. In a nail-extractor, in combination with a stock *a*, and movable handle *b* attached thereto, the lengthwise moving jaws normally in contact with the end of the hammer, and the jaw closing lever *e*, with arm *e*₂, and cam-faced arm *e*₃, the latter by contact with the face of the wall *a*₄ forming a stop that limits the rotary movement of the lever, all substantially as described. 7th. In a nail-extractor, the stock *a* having a loop *h*, jaw socket *a*₂ with walls *a*₃, *a*₄ with wider faces at an angle with the axis of the stock, the sliding hammer *b* with handle *b*₁ and stop *b*₂, the sliding jaws *c*, *d* with slots through which retaining pins pass the length of the hammer beyond the stop *b*₂, being such that the stop *b*₂ will come in contact with the end *a*₁ of the stock before the pins *e*₂, *d*₂ reach the end of the slots *d*₃ and the lever *e* with arms *e*₂ and *e*₃, the latter by contact with the wall *a*₄ forming a stop to limit the rotary movement of the lever, all substantially as described.

No. 26,614. Locking Attachment for Door Knobs. (*Appareil de fermeture pour boutons de portes.*)

Henry H. Humphrey, Detroit, Mich., U.S., 6th May, 1887; 5 years.

Claim.—1st. In combination with the spindle of a door knob, a rose the inner face of which is channelled or recessed to receive a slotted sliding yoke F between such rose and a plate G, substantially as and for the purpose set forth. 2nd. In combination, with the spindle A provided with an adjustable knob or knobs, a slotted sliding yoke F confined between the rose E and plate G, when constructed, arranged and operating substantially in the manner and for the purposes specified.

No. 26,615. Lawn Mower. (*Faucheuse de pelouse.*)

Oscar Zistel, Sandusky, Ohio, U.S., 6th May, 1887; 5 years.

Claim.—1st. In a grass-collecting device, the combination, with a lawn mower, of an endless carrier secured in a detachable frame in rear of the knives, and having supporting rollers with a drive connection for the carrier, substantially as described. 2nd. In a grass-collecting device, the combination, with a lawn mower, of an endless carrier secured in a frame in rear of the knives, and having an independent drive connection, of a detachable connection between the side frames of the lawn mower, and the sides of the carrier frame, and of a detachable connection between the carrier frame and the handle of the lawn mower, substantially as described. 3rd. In a grass-collecting device, the combination, with a lawn mower, of the following elements: an endless carrier in rear of the knives and provided with independent drive-connection, of a carrier frame arranged to form a rearward extension of the frame of the lawn mower, and having detachable connection therewith, and of a receptacle detachably secured in rear of the endless carrier, all arranged sub-

stantially as described. 4th. In a grass-collecting device for lawn mowers, the combination of an endless carrier secured in a detachable frame in rear of the knives, of supporting rollers journaled in slots of the frame of the carrier, substantially as described. 5th. In an attachment to lawn mowers, the following elements combined: an endless carrier arranged in rear of the cutting knives, a shield or deflector for throwing the cut-off grass on to said carrier, and a basket under the rear end of the carrier, all arranged substantially as described. 6th. In an attachment to lawn mowers, the combination of the side frames C, C', rolls D, E, endless apron F, wheels G, friction wheel K, basket O and shield P, all arranged and combined substantially as described.

No. 26,616. Steam Generator.

(*Générateur de vapeur.*)

Victor Colliaux, Detroit, Mich., U.S., 6th May, 1887; 5 years.

Claim.—1st. The combination, with the outer shell, the boiler within said shell extended above the top thereof and terminating in an annular steam drum, a system of tuyeres affording communication between the exterior and interior of the furnace, a feed-hole above the boiler proper and a blast pipe connected with the outer shell above the upper tuyere, substantially as and for the purpose specified. 2nd. In a steam generator, the combination of the outer shell E, annular boiler D within said shell, and extending above the top thereof, and terminating in an enlarged annular steam drum, a system of tuyeres affording communication between the exterior and interior of the furnace, a blast pipe G communicating with the space between the outer shell, and the boiler above the upper tuyere, a feed opening above the top of the drum, and a feed pipe J and slag hole O near the bottom of the furnace, substantially as described.

No. 26,617. Art of Preparing Moulds for the Electro-Deposition of Metals.

(*Art de Préparer les Moules pour l'Electro-Déposition des Métaux.*)

Lewis H. Rogers, New York, N.Y., U.S., 6th May, 1887; 5 years.

Claim.—1st. The method herein described of preparing forms for the manufacture of metallic vessels, or fac-similes, in whole or in part, consisting of first making a rigid male form approximating to the form of the article desired to be reproduced, then forming upon the outer surface of said male form an auxiliary form of wax or equivalent substance of the exact size of the article to be reproduced, and rendering the surface of said auxiliary form conductive by the application of black lead or its equivalent, and then immersing said form in a metallic solution, or bath, in which bath are placed anodes connected electrically with a suitable electro machine or generator. 2nd. The herein described method of treating forms for the electro-deposition of metals, consisting, first, of making a male form approximating to the size of the article desired to be manufactured, and then covering said form with an auxiliary form of wax or equivalent substance, and then inclosing said form and the wax formed thereon in a female form of the exact size of the article to be manufactured, and subjecting said form to a suitable temperature, for the purpose described. 3rd. The herein described method of treating forms for the electro-deposition of metals, consisting of first making a male form approximating the size of the article desired to be manufactured, and treating said form to a solution of melted wax or its equivalent, then inserting said form in a female form of the exact size of the article to be manufactured, and enclosing the extreme surface of said female form in a reservoir subjected to application of the heating and cooling agents, as and for the purposes specified.

No. 26,618. Extinguishing Apparatus for Oil and Spirit Lamps. (*Eteignoir pour Lampes à Huile et à Esprit de Vin.*)

Edward Phillips, London, Eng., 6th May, 1887; 5 years.

Claim.—1st. In oil or spirit lamps having flat wicks, the extinguishing apparatus, consisting of the cap C, the sliding plate E, the weighted rod D jointed or not and passing through the body of the lamp, the cross-bar D₂, with or without the sliding boss T, the tube I, with or without the ring J, the whole arranged, combined and operating substantially as hereinbefore described and illustrated in Figs. 1, 2, 3, 4, 5 and 8 of the accompanying drawings, and for the purposes specified. 2nd. In oil or spirit lamps, having cylindrical wicks and flame spreaders, the extinguishing apparatus, consisting of the improved forms of flame spreaders connected with the weighted rod D, jointed or not, and passing through the body of the lamp, the cross-bar D₂, with or without the sliding bars T, in combination or not with the sliding cylindrical tube M, the rods N and levers Q, the whole arranged and operating substantially as hereinbefore described and illustrated in Figs. 6, 7, and 8 of the accompanying drawings and for the purposes specified.

No. 26,619. Carding Machine.

(*Machine à Carder.*)

John Robb, Oxford, N.S., 6th May, 1887; 5 years.

Claim.—1st. The combination, with the finishing card of a carding machine, of a spool holding finished rovings, a cylinder in contact with such rovings leading rolls, and means for imparting to such cylinder and rolls simultaneous intermittent motion, in order to draw off the rovings from the spool and lay them regularly or irregularly in the lap, all as herein described. 2nd. The combination, with the cylinder G and rolls J, J', simultaneously actuated, of bobbin K resting in forks f, f', as and for the purposes described. 3rd. In a carding machine, the combination, with the doffer spindle, of disc mounted on same and perforated at irregular intervals to receive pins, actuating the free end of a pivoted lever, carrying on its other end a pawl intermeshing with ratchet wheel on spindle of cylinder G, as and for the purposes set forth.