No. 36,591. Furnace. (*Fournaise.*)

George Washington Ensinger, Elu Station, Pennsylvania, U.S.A., 12th May, 1891 ; 5 years.

Claim—1st. A grate formed of a number of independent parts or sections, comprising a fire pot, an inner grate, and an exterior grate substantially as set forth. 2nd. In combination, a fire pot and a grate surrounding said fire pot, which grate and fire pot consist of a number of independent parts or sections adapted to be fitted and held together, substantially as set forth. 3rd. In combination, with an enclosing furnace wall, a fire pot of less diameter than said wall, a grate surrounding said fire pot, which fire pot and grate consist of a number of independent parts or sections, and means for holding said parts or sections in proper position with reference to said wall, substantially as set forth. 4th. In combination, with an enclosing furnace wall, a fire pot of less diameter than said enclosing furnace, and supported within the same, a lower grate within the fire pot, and an upper grate surrounding the fire pot and detachable therefrom, substantially as set forth. 5th. In combination, with an enclosing furnace wall, a sectional fire pot, a grate within the fire pot, means for supporting the fire pot within the furnace and above the floor thereof, and a grate surrounding the fire pot, substantially as set forth. 6th. In combination, with an enclosing furnace wall, a sectional fire pot, means for supporting said fire pot above the bottom of the furnace, a lower grate within the fire pot, and an upper grate formed in sections and surrounding the fire pot, substantially as set forth. 7th. In combination, with an enclosing furnace wall a fire pot divided into sections, means for uniting said sections, supporting arms extending from said sections, a grate within said fire pot, and a sectional grate extending from said fire pot to the enclosing furnace wall, substantially as set forth. 8th. In combination, with an enclosing furnace wall employing internal ledges or supports, an open-topped fire pot formed in sections, means for uniting said sections, supporting arms extending from said sections to a ledge, and a sectional grate extending from the fire pot to a ledge, substantially as set forth. 9th. In combination, with an enclosing furnace wall embodying internal ledges or supports, an open-topped fire pot formed of sections, each of which embodies an external lug and an external arm which reaches to the ledge of the wall, the lug and arm of each section being respectively in registry with adjoining arm and lug of the adjacent sections, means for securing said meeting lugs and arms together, a shoulder formed upon the exterior of the fire pot, a grate supported within said fire pot, and a grate formed of sections, which sections rest upon the exterior shoulder of the pot and a ledge of the furnace wall, substantially as set forth. 10th. In combination, with an enclosing furnace wall embodying supports, such as ledges, an open-topped fire pot formed of sections dovetailed into each other, and each of which embodies an external lug and an external arm which reaches to the support or ledge of the wall, the lug and arm of each section being respectively in registry with the adjoining arm and lug of the adjacent sections, means for securing said meeting lugs and arms together, a shoulder formed upon the exterior of the fire pot, a grate supported within said fire pot, and a grate formed of sections, which sections rest upon the exterior shoulder of the pot and a ledge of the furnace wall, substantially as set forth.

No. 36,592. Separator for Potatoes.

(*Trieur à patates.*)

Janvier Michel Arsène Charest, St. Louis, Mile End, assignee of Janvier Joubert, Cote St. Michel, all in Quebec, Canada, 12th May, 1891 ; 5 years.

Claim.—1st, In a potato-separator, the crank g^2, gear wheel g^1, pinion G, shaft f, connecting rod H, bell crank I, piece i^2, hopper J, with its sleeve j, and flexible supports K, substantially as described and for the purposes set forth. 2nd. In a potato separator, the crank g^2, gear wheel g^1, pinion G, shaft f, flexible connecting rod E, sieve holder B, with its wire sieves b^6, b^9, b^{10}, and wooden one b^{11}, and flexible supports C, substantially as described and for the purposes set forth. 3rd. In a potato separator, the incline board l, having the handle T, and door l^5, ketch l^2, and piece l^6, substantially as described and for the purposes set forth. 4th. In a potato separator, the scale beam S, hanger s^1, and platform M, substantially as described and for the purposes set forth. 5th. In a potato separator, the combination of the crank g^2, gear wheel g^1, pinion G, shaft f, connecting rods H, and E, bell crank I, piece i^2, hopper J, sieve holder B, and flexible supports C, and K, with the chutes O, and P, receptacle L, inclined board l having the door l^5, and handle T, scale beam S, hanger s^1, platform M, and frame A, substantially as described and for the purposes set forth.

No. 36,593. Composition for Artificial Granite. (*Composition pour granit artificiel.*)

Archibald Graham, Hugh M. Douglass and Thomas N. Dunn, all of London, Ontario, 12th May, 1891 ; 5 years.

Claim.—The herein described composition of matter, for making artificial stone, consisting of ground granite, sand, barytes, cement, and water, substantially in the proportions specified and for the purposes set forth.

No. 36,594. Joint for Rain Water Conductors. (*Joint pour conduits d'eau de pluie.*)

John Davis, assignee of John William Abrahams, both of Allegheny, Pennsylvania, U. S. A., 12th May, 1891, 5 years.

Claim. Metallic tubing having an expansible projection and a joint or seam formed in the base of one side of the projection, and the fold of one of the members of joint or seam bent down to or near the body of the tubing, and the other member of the fold within the apex of the projection, substantially as described.

No. 36,595. Road Cart. (*Désobligeante.*)

Josephine Cristsinger, Flint, and Howard Clarence Turner, Mayville, both in Michigan, U.S.A., 12th May, 1891, 5 years.

Claim.—1st. In a two wheeled vehicle, the combination of the thill, the seat frame rigidly connected therewith, the axle hinged to the thills and capable of vertical motion independent of the seat frame, and the spring to maintain the axle in proper position relative to the seat frame, substantially as described. 2nd. In a two wheeled vehicle, the combination of the thills, the seat frame having its side bars rigidly secured to the thills, the bolts projecting laterally from the side bars, the bars 7, and 8, hinged by the bolts, the bars 7, being secured to the thills, the axle secured to the end of the bars 8, and the springs 13, coiled around the bolts and having one end engaging the adjacent side bar of the seat frame and the other end engaging the axle, substantially as described. 3rd. In a two wheeled vehicle, the combination of the thills the axle, the seat frame having its side bars rigidly secured to the thills, the bars 7, secured to the thills, the long bars 8, clipped to the axle, the bolts 6, projecting laterally from the side bars and hinging the bars 7, and 8, together, the sleeves 12, interposed between the side bars of the frame and the hinged bars 7, and 8, and the springs coiled upon the sleeves and having one end engaging an adjacent side bar and the other end engaging the axle, substantially as described.

No. 36,596. Holder for Twine. (*Porte-cordonnet.*)

Ethelbert Wareham, Winnipeg, Manitoba, Canada, 12th May, 1891, 5 years.

Claim.—In an automatic gravitating twine holder, the pinions, pivots, grooves, and ratchet, as are set forth in my specifications as adapted to a twine holder for the purpose heretofore described.

No. 36,597. Electro-Chemical Generator.

(*Générateur électro chimique.*)

Jean Baptiste Perreur Lloyd and Athanase Francois Xavier Marcel Perreur Lloyd, Paris, France, 13th May, 1891, 5 years.

Claim.—1st. In electro-chemical generators, a reservoir below the soluble electrodes thereof and communicating with the space which they occupy, as and for the purposes set forth. 2nd. In electro-chemical generators and batteries, carbon electrodes of tapering form as shown and described. 3rd. Electro-chemical generators having inclined covers and interior gutters beneath the lowest point of such covers and provided with suitable outlets, for the purpose set forth. 4th. In electro-chemical generators and batteries, &c., having a trough constructed of material inattackable by acids, and a number of elements each comprising a soluble electrode and a porous cell containing a carbon electrode, condensing columns and means for causing water to trickle through same, a depolarizing solution (nitric acid) and an exciting solution contained in separate vats, means for conducting such solutions respectively into contact with said porous cells and trough, and means for conducting vapours (nitrous) disengaged from such depolarizing solution to said condensing columns, for the purpose set forth. 5th. Electro-chemical generators, the elements of which allow and the operation of which comprises :—the action of the sulphuric, hydrochloric or other acid upon a soluble electrode, the oxidation of hydrogen disengaged by nitric acid with which a porous vessel containing a carbon, or other inattackable electrode, is filled, the oxidation in presence of air of nitrous products disengaged, and regeneration of the nitric acid by contact with trickling water moving oppositely to the passage of the gas, crystallization of the deposited salts by concentration of the solution to the desired degree by heat disengaged in the generator, and due to internal resistance, and the recharging of the generator with acidulated water on the one hand and regenerated nitric acid on the other, said acid being concentrated by means of a variable proportion of sulphuric acid, the whole effected as and for the purposes set forth. 6th. In combination, with a primary battery, a steam pipe passing through same for the purpose of heating its solutions, as described. 7th. The interposition of electrolytic refining vats between the electric generators and the point at which the current is utilized for the purposes of producing light, power, or heat, as described.

No. 36,598. Coin-Controlled Testing Machine. (*Appareil actionné par une pièce de monnaie pour faire l'epreuve de la force.*)

Legrand Ingersoll, Denver, Colorado, assignee of Leon Donne, Chicago, Illinois, U.S.A., 13th May, 1891 ; 5 years.

Claim.—1st. In a coin-controlled power testing machine, the combination, with a graduated dial, an index and a device to which the power is applied, of a part C^1, actuated by said device, a part C^2, for actuating said index said parts C^1, and C^2, being separable from each other and a trip depending for its operation upon the deposit of a coin for establishing said parts in operative relations to each other, substantially as described. 2nd. In a coin-controlled power testing machine, the combination, with a graduated dial, an index and a device to which the power is applied, of connections between said device and index for transmitting motion from the former to the latter, said connections comprising parts separable from each other means for separating said parts after each operation and holding them normally separated, and mechanism depending for its operation upon the deposit of a coin for re-establishing said parts in operative position, substantially as described. 3rd. In a coin-controlled power testing machine, the combination, with a graduated dial an index and a device to which the power is applied, of connections between said device and index for transmitting motion from the former to the latter, said connections comprising parts separable from each other, and a locking device for preventing the return movement of the index and of the parts connected therewith after each operation and until a coin is deposited, whereupon said lock-