g^3, and provided with the screw C^4 for holding the slide at any desired position, substantially as described. 25th. The combination, with the grooved measure B^2, of the pusher C^3 having projections e^3 that fit the groove, substantially as described. 26th. The method, herein described, of supplying and determining the exact quantities of lime deposited in the saccharine juice, which consists in applying the outer end of the lime-filled calcimeter above the mouth of the graduator, and then moving the pusher to the desired degree or mark upon the calcimeter, thereby discharging the lime into the graduator, and at the same time indicating the quantity of lime so discharged, substantially as set forth. 27th. The shell S of the agitator K carrying hollow arms R, and provided with the central partitions s and small openings s^1, substantially as and for the purposes set forth. 28th. The receiver A^1 provided with the trunnions h^1, whereby it is adapted to rest upon the carriage H^1, to be moved to and from the screw F, substantially as described. 29th. The screw F held in a stationary socket, combined with the receiver A^1 adapted to be raised and lowered by the screw, substantially as described. 30th. The carriage H^1 provided with the drum I^4 and suitable gearing for revolving the drum, in combination with the receiver A^1 formed with the flange j^3, the flange and drum being connected by the chain I^3, substantially as and for the purposes set forth. 31st. The combination, with the elevating screw for elevating and lowering the receiver, of suitable worm gear G^1 arranged for operating the screw F, substantially as set forth. 32nd. In a vacuum pan, the combination of the shell S enclosing the pipe T and carrying the agitator arms R, provided with steam spaces R^2 and short pipes T^1, the pipe U, pipe T^2, nut W, coupling and clutch nut W^1, packing W^2, ring k^1, gear wheel V and pinion V^1 driven by suitable means, substantially as and for the purpose set forth.

No. 19,635. Means of Ventilating Roofs and Houses. (*Moyens de Ventiler les Toits et les Maisons.*)

George Yon, Montreal, Que., 21st June, 1884 ; 5 years.

Réclame.—1o. La combinaison, dans une toiture de maison ayant un vide ou circule un courant d'air formé par les ouvertures d'entrée et de sortie E E^1 et des tubes aspirateurs G, le tout combiné tel que décrit et pour les fins indiquées. 2o. La combinaison, dans une toiture ayant un vide ou circule l'air, des tubes aspirateurs G et des ouvertures d'entrée et de sortie E E^1, tel que décrit.

No. 19,636. Rack for Holding Barrels.

(*Chantier à Futaille.*)

William Walter and James B. Brown, Latrobe, Pa., U. S., 21st June, 1884 ; 5 years.

Claim.—The combination of a suitable frame or rack, with the two separate tilting devices L which are pivoted at their centres and arranged end to end, with the operating lever N, connecting-rods O, pivoted levers P, substantially as shown and described.

No. 19,637. Metallic Oil Barrel.

(*Baril Métallique à Huile.*)

James W. Cuthbertson and James D. Anderson, Bothwell, Ont., 21st June, 1884 ; 5 years.

Claim.—1st. The body A of a metallic oil barrel, constructed in one or more sections, in which corrugations A A1 are formed, in combination with one or more ring braces F, F, either on the inside or outside of the barrel, or both, as required, substantially as described. 2nd. The body A of a metallic oil barrel, constructed in one or more sections, and provided with corrugations A^1, A^2, overlapping edges A^3, A^3 and concaved heads C provided with flange C^1, in combination with one or more ring braces F, F, substantially as described.

No. 19,638. Belt for Money, &c.

(*Ceinture pour Monnaie, &c.*)

Ada H. Kepley, Effingham, Ill., U.S., 25th June, 1884 ; 5 years.

Claim.—A belt for carrying money, diamonds or other valuables, consisting of a yielding belt or band adapted to be secured around the body, provided with pockets, as described, and having shoulder straps, the belt or band provided with buckles, whereby the belt and straps may be adjusted, all substantially as set forth.

No. 19,639. Chain Sawing Machine.

(*Scierie à Chaîne.*)

Frederick L. Magaw, Flatlands, N. Y., U. S., 25th June, 1884 ; 5 years.

Claim.—1st. A saw composed of a number of teeth made in the form of links and having mortised and rounded ends provided with integral pivots, and a number of intermediate connecting links severally composed of longitudinal sections having rounded ends, mortised and perforated to fit the integral pivots of the toothed link and secured together by rivets or like devices, substantially as specified. 2nd. A saw comprising a number of links, each forming the stock of a tooth, detachable faces secured to the projecting portions of the stocks by means of dove-tailed tongues and grooves, and intermediate links connecting the links on which are the teeth, substantially as specified. 3rd. A saw comprising a number of links, each forming the stock of a tooth, detachable faces secured to the projecting portions of the stocks by means of dovetailed tongues and grooves which are tapered longitudinally, and intermediate links connecting the links on which are the teeth, substantially as specified. 4th. The combination, in an endless chain-saw, of a number of saw teeth links, a number of intemediate connecting links and intermatching tongues, and grooves on the saw-teeth for steadying the saw-teeth laterally, substantially as specified. 5th. The combination, in an endless chain-saw, of a number of saw-teeth links, a number of intermediate links and pins inserted through and secured in the intermediate links, and passing through arc-shaped slots in the saw-teeth links for the purpose of steadying the saw teeth laterally, substantially as specified. 6th. The combination, in an endless chain-saw, of a number of saw-teeth links, a number of intermediate links intermatching tongues and grooves on said teeth, and pins inserted through and secured in the intermediate links and passing through arc-shaped slots in the saw-teeth links for steadying the saw teeth laterally, substantially as specified. 7th. The combination, with a number of saws made in the form of chains, of drums for supporting the same composed of a number of peripherally-grooved disks for receiving the several saws, and secured together on shafts upon which they fit, whereby provision is afforded for readily arranging the saws at different distances apart so that they will produce boards of different thickness. 8th. The combination, with a number of saws made in the form of chains, of drums for supporting and operating the same, and means for holding the stock or log and for automatically feeding it to the chain saws, all substantially as and for the purposes described. 9th. The combination, in a chain sawing machine, of a number of chain-saws and drums for supporting and operating the same, having a lateral adjustment in relation to each other, and means for holding the stock or log and for feeding it to the saws, all substantially as and for the purposes described.

No. 19,640. Vehicle Wheel. (*Roue de Voiture.*)

James J. Bush, Tacoma, W.T., U. S., 25th June, 1884 ; 5 years.

Claim.—1st. In an adjustable and expanding vehicle-wheel, as described, the inner and outer flanges g, g^1 of the half hub sections C, C constructed to form tapering oval sockets g^2, in combination with the tapering oval-shaped spokes E, and the bolts F arranged to pass in between the spokes and free of them, substantially as specified. 2nd. The hub sections C, C having inner and outer flanges g, g^1 forming sockets for the spokes of the wheel, constructed or provided with outer annular lips or branch flanges g^3 arranged to close the dividing space between said hub sections, essentially as and for the purpose herein set forth. 3rd. The set screw s, in combination with the hub sections C, C, the box B, the hollow screw cone G and the axle A, substantially as specified. 4th. The metallic half hubs C, C, having bodies of shell-like construction stiffened internally by end brackets h, h^1, and constructed with inwardly bent outer end flanges f, f^1, essentially as described.

No. 19,641. Grapnel. (*Grapin.*)

Hubbard C. Chester, Noawk, Ct., U. S., 25th June, 1884 ; 5 years.

Claim.—The combination, with the shank and hinged and folding arms or flukes, of the recessed or cupped slide adapted to receive the points of the folded arms and to rest upon the unfolded or spread-apart arms and the locking-device, whereby the slide is held in either of its two positions, substantially as hereinbefore set forth.

No. 19,642. Car-Coupling.

(*Accouplage de Wagon.*)

William H. Thurmond, Forsyth, Ga., U. S., 19th June, 1884 ; 5 years.

Claim.—1st. The combination, with the thrust bar and its operating means, of the locking jaw having hook part c, tail c^1 and bevel c^2, and the gravital plug D having the bevel d, substantially as described. and for the purpose set forth. 2nd. In combination with the draw-bar A having inclines a, a^1 and shoulder a^2, and with the pivoted jaw c having tail c^1, with rebate c^3 and bevel c^2, the thrust bar F having inclines f, f^1 and shoulder f^2, and the gravital plug D having bevel d, as set forth. 3rd The combination of the draw-bar A, as described, and the detachable mouth-piece M, substantially as described and for the purposes set forth.

No. 19,643. Machine for Sifting Soil from Potatoes. (*Machine à Cribler les Patates.*)

Isaac V. Puterbaugh, Vaughan, Ont., 25th June, 1884 ; 5 years.

Claim.—1st. A combined cleaning and grading machine for potatoes, consisting of a frame or shoe A, flexibly supported from a frame B and divided into two compartments separated by the partition E, in combination with netting grade d, as described, and placed on top of the shoe A with a grated bottom F, placed at the bottom of one of the compartments, substantially as and for the purpose specified. 2nd. A shoe A, flexibly supported by hangers C and divided into two compartments by the partition E, the grate F placed at the bottom of one of the compartments, and the spouts G and H extending from the said compartments, as specified, in combination with netting placed on top of the shoe, the netting over the grating bottom F being of a finer mesh than the grating over the other compartments, substantially as and for the purpose specified. 3rd. The frame or shoe A, flexibly supported and divided into two compartments by the partition E, the spouts G and H leading from the said compartments, in combination with graded netting placed on top of the shoe and partially surrounded by the sides L, substantially as and for the purpose specified.

No. 19,644. Steam Cooking Utensil.

(*Ustensile de Cuisine à la Vapeur.*)

Allen S. Fisher, Clinton, Ont., 25th June, 1884 ; 5 years.

Claim.—1st. In combination with vessel A, Fig. 1, partition f or f^1 forming stem chamber D or D D^1, holes i^1 or i and cover g, constructed substantially as herein shown and described. 2nd. In combination with vessel A, Fig. 1, disk C, partition f or f^1 forming steam chamber D or D D^1, holes i or i^1 and cover g, substantially as shown and described. 3rd. In combination with vessel A, Fig. 2, partition f or f^1 forming steam chamber D, holes i^1 and cover g, substantially as shown and described. 4th. In combination with vessel A, Fig. 2, partition f or f^1 forming steam chamber D D^1, holes i and cover g, substantially as shown and described. 5th. In combination with a vessel A, Fig. 2, disk c, partition f or f^1, forming steam chamber D or D D^1, holes i or i^1 and cover g, substantially as shown and described.