No. 12,603 Improvements on Saw Sets.

(Perfectionnements aux fers à contourner.)

Charles Morrill and Asa Farr, New York, U. S., 7th April, 1881; for 5 years.

Claim.—1st. The adjusting plate B in combination with the slotted frame work G and die D.

No. 12,604. Improvements on Churns. (*Perfectionnements aux barattes.*)

William Spence, Arnprior, Ont., 7th April, 1881; for 5 years.

Claim.—A churn A of rectangular construction, having partial partition B, wheel D and gate G.

No. 12,605. Machine for Thrashing Grain.

(*Machine à battre les grains.*)

John H. Elward, St. Paul, Min., U. S., 7th April, 1881; (Extension of Patent No. 7,442.)

No. 12,606. Machine for Thrashing Grain.

(*Machine à battre les grains.*)

John H. Elward, St. Paul, Min., U. S., 8th April, 1881; (Extension of Patent No. 7,442.)

No. 12,607. Improvements in Thrashing Machines. (*Perfectionnements aux machines à battre.*)

John McCloskey, Strathroy, Ont., 8th April, 1881; for 5 years.

Claim.—1st. In a thrashing machine, the combination of concave 5 provided with projecting bearing C, and rock shaft 8 having cam 7 for adjustment of the concave. 2nd. The combination, with fan case 12, of the end doors 15, connecting rods 16, pull rod 17, cross handle 50 and rack bar 18 to regulate the blast of the fan. 3rd. The hinged casing 19 in combination with the main frame for guarding belt 20. 4th. The hinged casing 21 secured to the elevator 22 for guarding belt 23. 5th. The combination of the straw deck 25, hangers 53, double throw crank shaft 24, pitmans 31 and reciprocating grain deck 26. 6th. The straw deck 25 constructed of longitudinal bed pieces 32 carrying triangular sided cross bars 33 and notched longitudinal rails 34 7th. The reciprocating grain table or deck 26 having flaring sides 29 operated independently of the shoe by pitman 31 from a crank shaft 24. 8th. The combination, with band wheel 28, of the jointed pitman 45, rock shaft 38 having arms 37 39 and bar 40 for shaking the shoe 14. 9th. A continuous belt 20 in combination with band wheel 28 pulleys 42 43 and 44 for operating the straw and grain decks 25 26, fan 11 and straw apron 35 connected by their respective shafts and shoe 14, and elevator belt 23. 10th. In a separating machine, the fan case 12 provided with hinged and drop doors 15 at both ends. 11th. The reciprocating grain deck 26 in combination with a reciprocating straw deck 25.

No. 12,608. Improvements in the Manufacture of Wood Pulp. (*Perfectionnements dans la fabrication de la pâte à papier de bois.*)

Charles B. Carter, Lawrence, Mass., U. S., 8th April, 1881; for 5 years.

Claim.—1st. The method of treating vegetable fibres or wood for removal therefrom of matters detrimental to the conversion of such wood or vegetable fibres into paper pulp, the said method consisting in introducing the raw wood, or material, into a suitable vessel or retort, and while therein applying to it (the said wood or material) dry heat and the vapours expelled thereby from such wood or material, so as not only to partially or sufficiently decompose the wood or material without in the meantime injuriously charring or carbonizing it, but to extract from it the said detrimental matter, or matters, and remove the same by the said vapour or vapours on such being allowed, or caused to pass out of the vessel or retort through the educt thereof. 2nd. A new or improved manufacture in the fibrous material, resulting from wood or vegetable fibres after treatment thereof, by means, as specified, so as to separate from such wood, or vegetable fibres, matters detrimental to the conversion of such into paper pulp. 3rd. In combination with the process of treating wood or a vegetable fibrous material, in a retort or vessel, by heat and by vapour extracted thereby from the wood, or charge the subsequent passage of steam through to the retort or vessel and upon, or about the charge, so as to prevent the accumulation on, or remove from it condensed vapours of the products eliminated from it.

No. 12,609. Improvements in Portable Fences.

(*Perfectionnements aux clôtures portatives.*)

Eli Miller, Kalamazoo, Mich., U. S., 8th April, 1881; for 5 years.

Claim.—A fence composed of panels having boards with the holes in which the ends of the panel hook are located, the brace hook and pin, the hooked end of which brace is caught around the body portion of the pawl hook coupling the panels.

No. 12,610. Improvements on Post Hole Diggers. (*Perfectionnements aux sondes pour les pieux de clôture.*)

Joseph Scheidler, Coldwater, Mich., U. S., 8th April, 1881; for 5 years.

Claim.—The combination of bar B provided with footrest c and shovel A, pivoted lever E, pivoted scoop D and parallel connecting bar C provided with spring S.

No. 12,611. Machine for Forming Heel Counters. (*Machine à former les contreforts des talons.*)

Joseph Kieffer, Montreal, Que., 11th April, 1881; (Extension of Patent No. 5,955.)

No. 12,612. Improvements on Hose and Pipe Nozzles. (*Perfectionnements aux lances des boyaux et des tuyaux.*)

The Eaton and Burnham Company, Bridgeport, Conn., (Assignee of Melville Clemens, Worcester, Mass., U.S.), 11th April, 1881; (Extension of Patent No. 6,046.)

No. 12,613. System of Electric Lighting. (*Système d'éclairage électrique.*)

St. George L. Fox, London, Eng., 11th April, 1881; for 5 years.

Claim.—1st. The novel combination of the globe A, bridge *a*, block *d*, clips *c*, block *d*, platinum wires *e c*, mercury tubes *f f*, stopper *g*, mercury *i* and glue *j*. 2nd. The bridge *a* in combination with the block *l*, clip *c*, block *d*, platinum wires *e e* and mercury tubes *f f*. 3rd. The novel combination of the globe A, bridge *a*, spirals *m m* into which the ends of the said burner are united, platinum wires *e e* fused into pieces *n n* of lead glass and mercury tubes *f f*. 4th. In electric lamps, in which the light results from the incandescence of continuous conductor, the employment, for the luminous bridge, of vulcanized fibre. 5th. The process of manufacturing bridges for electric lamps, by bending into the form of loops approximately shaped, strips *a* of a suitable material containing a substance of a highly refractory character, submitting them when so bent and by means of an appliance, such as that described, to a white heat and then carbonizing them by raising them by means of an electric current or otherwise to a white heat in benzole vapour, or other suitable carbon compound. 6th. The use, in the manufacture of bridges for electric lamps, of a suitably shaped block *o* with a projecting cutting edge *p*. 7th. The method or process of producing incandescence in the baked threads, strings or tapes, when manufacturing them into bridges for electric lamps, by connecting the said baked threads, strings or tapes with a dynamo electric machine or other electric generator, by then momentarily short circuiting the machine and suddenly breaking contact through the short circuit, repeating the operations as often as required. 8th. The method or process of thickening the ends of the threads, strings or tapes by connecting the two sides at a short distance from their ends by a wire or metal clip and then continuing to send a current through. 9th. The novel combination of the tube B, bulb C, neck D, rod E, bulb F, neck G, cup H, flexible tube I, vessel K filled or partly filled with mercury or other liquid, and tube M N O, all working together in the manner explained. 10th. The novel combination of the tube B, bulb C, neck D, rod E, bulb F, neck G, cup H, flexible tube I, vessel K filled partly with mercury or other liquid, tube P and valve Q. 11th. The novel combination of the vessel A, neck D, bulb or cup C, rod K, pipe T, vessel B, valve G, tube E communicating with a pump, air drier U and tube P having a valve V and communicating with electric lamps. 12th. The vessels A B communicating with each other by the pipe T, the vessel A being provided with a bulb or cap C and closing rod D, and the vessel B communicating with a pump, in combination with the tube P fitted with a valve V and communicating with the lamps to be exhausted. 13th. The electric magnets *n n* connected with the earth, and with an electro-meter or electro-dynamometer, in combination with the armatures *o o*, arms P P and rocking shaft *q* for controlling the action of the engines which work the electric generators or for controlling the action of rheostats or resistances in systems of electric lighting. 14th. The method of turning on or off the current for lighting and extinguishing a number of lamps, without lighting or extinguishing other lamps which derive their current from the same electric main, by sending a current through a line wire so as to act through apparatus upon each lamp, in the series to be lighted or extinguished by turning on or off the current from the electric main between which and the earth the said lamps are joined. 15th. The permanent magnet E and electro-magnet F, in combination with the line wire A and with the lamp B joined between the main C and the earth D. 16th. The method of turning on and off the currents for lighting and extinguishing a number of lamps without lighting or extinguishing other lamps which derive their current from the same electric main, by employing, in connection with every lamp to be lighted or extinguished, an electric magnet of very high resistance, its circuit being always closed so that a feeble current is always passing through it from the main to the earth, by providing this electro-magnet with a spring armature, the tension of the spring exactly balancing the attraction of the magnet at the normal electro motive force of the main, and by employing in connection with the said electro-magnet and armature, two other electro-magnets whose circuits are respectively closed and respectively turn on and off the lamp current, when the armature respectively approaches or recedes from its magnets owing to an increase or decrease in the electro motive force and by momentarily increasing or decreasing the electro-motive force according as the lamp current is to be turned on or off. 17th. The electro-magnet F of very high resistance, with its circuit between the main C and the earth always closed, in combination with the spring armature H, electro-magnets I K, bar L connected with the main C, contact peg G and lamp B.

No. 12,614. Improvements on Netting Machines (*Perfectionnements aux machines à filets.*)

Edward Keeler, Boston, (Assignee of Albert T. Anderson, Chelsea,) Mass., U. S., 11th April, 1881; for 5 years.

Claim.—1st. The combination of the single warp roller B and take up B_1 B_2 B_3 B_4 with the bar C and warp carriers C_5 C_5. 2nd. The combination of the four way movement bar C and the carriers C_5 with the cord and loop-holders D and the loop-holder pins E E_1. 3rd. The combination of the overlapping looper holder pins E E_1. 4th The combination of the shuttle H with its inclined carriers H_1. 5th. The cord-holder and looper D formed as shown with the broad looper holder *d* and the cord holding notch d_1. 6th. The combination of the shuttle carrier bars H_2 with the levers H_4 H_7 and the cams H_5 H_8, whereby an alternating lateral motion is given to the shuttle carriers.

No. 12,615. Improvements on Thrashing Machines. (*Perfectionnements aux machines à battre.*)

Archibald Filshie, Elora, Ont., 11th April, 1881; for 5 years.

Claim.—The combination, with the elevating belt for carrying the straw