circuit and one in the separate circuit, with which the said insulated parts of the armature are alternately in contact, substantially as described. 6th. In an apparatus for generating electric currents and charging storage batteries, the combination, with a dynamo arranged on a pivotal support, of a shaft carrying the armature of a dynamo, a wind wheel driving said shaft, a pivoted spring centered vane on the dynamo support, an electro-magnet mounted on the support and attracting an armature on the vane when energized to swing it to one side, a storage battery, a charging circuit for said battery, a battery circuit for the electro-magnet attracting the vane and a measuring instrument interposed in the circuit and provided with a contact traveling with the index and a contact fixed upon the dial, by which the circuit is completed and the vane swung when the battery is charged to a suitable tension, substantially as described. 7th. The combination, with the rigid and movable parts of the wind wheel support, of a guard casing rigidly mounted on the movable part or member and having a flange hooking under a flange or collar on the rigid member, the electrical connections being arranged within and covered and protected by said guard, substantially as described. 8th. In a mechanism for generating electric currents, the combination, with a wind wheel and a dynamo driven thereby, of a pivotal bearing for the operative parts, an upright support for the pivotal bearing, and arms projecting radially from the body of the upright support carrying the pivot, said arms having hinged members adapted to lie upon and be bolted to inclined posts on a tower, substantially as described.

No. 37,862. Braiding Machine.

(Machine à lacets.)

Joseph Thomas, New York, State of New York, U.S.A., 1st December, 1891: 5 years.

Claim.—1st. A braiding machine in which the axis of each revolving carrier head is inclined at a fixed angle towards the centre of the machine, substantially as shown and set forth. 2nd. A braiding machine in which the axis of each revolving carrier head is inclined towards a common center in a plane above the bed plate of the machine, substantially as shown and set forth. 3rd. A braiding machine in which the revolving carrier heads are so disposed that vertical lines drawn through the axis of each will converge at the point where the threads from the spools are interwoven or plaited to form the braid, substantially as shown and set forth. 4th. In a braiding machine, the combination of the ring shaped frame having inclined sides or bearings, and the revolving carrier heads journaled on spindles secured in and projecting at right angles from the inclined inner side of the frame, substantially as shown and set forth. 5th. In a braiding machine, the combination of the inclined ring shaped main frame, the revolving carrier heads journaled on spindles set in and projecting inwardly from said frame, and the intermeshing train of cog wheels whereby the carrier heads are simultaneously revolved in alternately opposite directions, substantially as shown and set forth. 6th. The combination, in a braiding machine, of the ring shaped frame having inclined sides, the series of carrier heads provided with automatic spring latches or switches for switching the spool carriers from one revolving head to another as they travel through the machine, and the drive mechanism for rotating the carrier heads in alternately opposite directions, substantially as shown and set forth. 7th. The combination, with the revolving carrier heads of a braiding machine, having seats adapted to receive and hold the spool carriers, of the yielding spring actuated latches or switches, adapted to grasp and interlock automatically with the carriers as these are transferred from one carrier head to another during their progress from one end of the machine to the other, and *vice versa*, substantially as shown and set forth. 8th. The combination, in a braiding machine, of the revolving carrier heads, the spring actuated switches, and the carriers having a recessed disk adapted to engage a hook upon the switch, substantially as shown and set forth. 9th. The combination, in a braiding machine, of the recessed carrier heads, the switches hinged in their appropriate recesses in the carrier heads and projecting therefrom with their free ends, and the spring actuated pins bearing against the free ends of the switches from the under side, substantially as shown and set forth. 10th. In a braiding machine, the combination of the ring shaped frame, the revolving carrier heads, the automatic latches or switches, the spool carriers, and the adjustable feed mechanism, all constructed and combined to operate substantially in the manner and for the purpose shown and set forth. 11th. In a braiding machine, a spool holder comprising a stem or spindle adapted to be screwed into the carrier, in combination with a hinged cage having a latch rod at its free end for locking it to the upper end of the spool spindle, substantially as shown and set forth. 12th. The combination, in a braiding machine, of the carriers, constructed as described, and the spool holder comprising a stem or spindle adapted to be inserted through the central bore in the spool, in combination with a hinged cage having a latch rod at its free end for locking it to the outer end of the spool spindle, and provided with a guard and tension device for regulating the tension on the thread as it is drawn from the spool in weaving or plaiting the braid, substantially as and for the purpose shown and set forth.

No. 37,863. Manufacture of Gas.

(Fabrication du gaz.)

David Harris Knapp, Norwich, New York, U.S.A., 1st December, 1891; 5 years.

Claim.—1st. The combination of the upright inner vaporizing retort, the outer decomposing retort and the furnace outside the latter of the oil pipe entering the inner retort, the upright pipe forming communication between the upper part of the said vaporizing retort and the lower part of said decomposing retort, and the outlet pipe at the upper part of the latter retort, substantially as and for the purpose set forth. 2nd. In an apparatus for manufacturing gas from oils, the combination of two retorts, one arranged within the other, a furnace outside of the outer retort, a pipe for the introduction of oil to the inner retort, a communication between the inner and outer retorts for the passage from the inner to the outer, of vapor generated in the inner, and a gas outlet pipe from the outer one, substantially as set forth. 3rd. The combination of the upright inner vaporizing retort, the outer upright decomposing retort, and the furnace outside of the latter, the oil pipe entering the inner retort and an upright pipe connected with the inner retort at its lower end and opening into the outer retort, and having its open upper end extending into the inner retort, and an outlet pipe for gas, communicating with the outer retort, substantially as specified.

No. 37,864. Heel Stiffener Machine.

(Machine à renforcir les talons de chaussures.)

Louis Coté, St. Hyacinthe, Quebec, Canada, 1st December, 1891; 5 years.

Claim.—1st. In a machine for shaping counter stiffeners for boots and shoes, the combination of a former approximating to the shape of the heel portion of a last and provided along the center of its tread surface with a downwardly projecting rib, leaving a recess on each side, a pair of moulds having their inner faces made to conform to the shape of the sides of said former and each provided with a lip to overlap or pass beneath a portion of the tread surface of said former, arranged one upon each side of said former and to be moved toward and from each other and said former, and a notched plate constructed and arranged to be reciprocated in the direction of the length of said former to turn the rear or heel portion of the flange of the stiffener while the side portions of said flange are turned by the lips on the moulds. 2nd. In a machine for shaping counter stiffeners for boots and shoes the combination of a former made in two parts pivoted together and to the table or bed of the machine at or near the center of the heel end and provided with a downwardly projecting rib extending from its pivotal connection towards its free or movable end, a pair of moulds arranged one upon each side of said former and mounted upon movable pivots, with their inner faces made to conform to the forward side portions of said former and each provided with a lip to project under the tread surface of said former to turn the side portions of the flange of the stiffener, springs for pressing said moulds toward the former, a reciprocating notched plate for turning the rear portion of the flange of the stiffener, a revolving wedge-like cam constructed and arranged to act upon the free or movable ends of the two parts of said former to separate them, and a spring to move said parts toward each other and said cam. 3rd. In a machine for shaping counter stiffeners for boots and shoes the combination with a divided former pivoted together and to a fixed part of the machine near one end a cam and spring for vibrating the two parts of said former toward and from each other and two moulds mounted upon movable fulcrums upon opposite sides of said former, of a notched flange turning plate, a carrier for said flange turner fitted to and movable in a suitable slide, a reciprocating rod passing through said carrier and provided with a notch to receive a locking latch, a locking latch lever pivoted to said carrier in position to engage with said notch when depressed, and a spring constructed and arranged to disengage said latch lever from said notch when the power that depresses it is removed. 4th. The combination of the former P, made in two parts pivoted together, the moulds O, O, provided with the lips *e*, *e*, and mounted upon movable fulcrum pins on opposite sides of said former, the movable pistons N, N, carrying said fulcrum pins, the springs Q, Q, enclosed between said pistons, the plugs N^1, N^1, and the cam X, all constructed, arranged, and operated substantially as described. 5th. The combination of the divided and pivoted former P, provided with the ribs f^1, the pivoted and yielding moulds O, O, each provided with the lip *e*, the notched flange turner S, the carrier R, the latch lever *k*, pivoted to said carrier, the spring *n*, for raising said lever, the rod T, provided near one end with the notch *l*, to receive the latch lever *k*, when depressed, the yoke T, formed in or connected to said rod T, and provided with the slot o^1, the revolving shaft V, and the crank pin *p*, for reciprocating said rod, the cam X, for moving the free ends of the divided former away from each other, and the spring Y, all constructed, arranged, and operating substantially as described.

No. 37,865. Rut Cutter for Logging Roads.

(Coupe-ornière pour chemins de chantiers.)

Lucious Gamaliel Rose and Daniel S. Mooers, both of Fort Ripley, Minnesota, U.S.A., 1st December, 1891; 5 years.

Claim.—1st. In a rut cutter for logging roads the combination with the runner of a sleigh of the frame A, of an elongated U-shaped frame pivoted to the said runner, a plow secured in said frame, between the two sides thereof, a point secured to the said plow, the box C, the shield D, attached to the said box, the side wings E, attached to said frame A, and means for raising or lowering the said frame, substantially as set forth. 2nd. In a rut cutter for logging roads the combination with the elongated U-shaped frame A, carrying the plow B, box C, shield D, and side wings E, of the standards F, F, and H, secured to the said frame A, the slotted guide plate G, carried by the said standards, the lever I, pivoted to the said standard H, a curved shoe or runner J, secured to the lower end of the said lever, the toothed segment K, and spring dog *h*, substantially as set forth.

No. 37,866. Fire Extinguishing Compound.

(Composé extincteur d'incendie.)

William Orme McRobie, Winnipeg, Manitoba, Canada, 1st December, 1891; 5 years.

Claim.—1st. A fire extinguishing compound, composed of chloride and nitrate of sodium, ammonium and potassium, and sulphate of sodium and potassium, in about the proportions stated. 2nd. A fire extinguishing fluid or liquid consisting of chloride and nitrate of sodium, ammonium and potassium, and sulphate of sodium and potassium, in about the proportions stated, dissolved in about two gallons of water.