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INVENTIONS PATENTED.

NOTE.—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 33,822. Thill Coupling.

(Armon de limonière.)

Robert W. Campbell, Hamilton, Ont., 1st March, 1890; 5 years.

Claim.—1st. In a thill coupling, the thill (i formed with a plane I. in combination with the combined plate cl and spring c, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, in a thill coupling, of an axle clip having jaws F, the thill spring c, substantially as and for the purpose hereinbefore set forth.

No. 33,823. Sleigh Knee. (Courbe de traîneau.)

William H. Spear, Humboldt, Iowa, U.S., 1st March, 1890; 5 years. William H. Spear, Humboldt, Iowa, U.S., 1st March, 1890: 5 years. Claim.—1st. A sleigh knee composed of two parts, the first terminating in a firellar disk united to the part at one side by a narrow neck in its own plane, and the 'second having a recess receiving and manner permitting limited motion in a single vertical plane only, C and the beam K, of the plate I secured to said beam and bearing the integrally formed neck J and disk H, the knee body A provided lower end to said runner, and the plate F retaining said disk in said recess, substantially as set forth.

No. 33,824. Grate for Burning Saw Dust and other Fuel. (Grille pour brûler le bran de scie et autre combustible.)

James M. R. Kennedy, Shepherd, Mich., U.S., 1st March, 1890; 5

Claim.—1st. In a grate for burning sawdust, the combination of the imperforate bed B. the distributing air chamber C having the annular rows of perforations c, the distributing pipes D underneath the bed, the vertical connections E with the distributing chambers, described. 2nd. In a grate for burning sawdust, the combination of the imperforate bed B, the air distributing chambers C supported with the annular row of perforations c, the annular flange b, the bed plate c and the air feeding connections with the fan or blower, all substantially as described.

No. 33,825. Hot Water Apparatus. (Calorifére à eau.)

Thomas Doherty, Sarnia, Ont., 1st March, 1890; 5 years. Thomas Doherty, Sarnia, Ont., 1st March, 1890; 5 years.

Claim—lst. In a hot water apparatus, the above described regulating cover plates G. G. constructed and arranged so as to control the admittance of the heat of the fire through suitable apertures to fied. 2nd. In a hot water apparatus, the herein described arrangement of sections B. B. for securing the system of surface heating to shown and specified.

2 of the section of the section of surface heating to shown and specified.

No. 33,826. Washing Machine.

(Machine a blanchir.)

James H. Coleman and Jacob S. Shafer, Hamilton, Ont., 1st March, 1890; 5 years.
Claim.—In a washing machine, the combination of a cap C having fastening I and button E, substantially as and for the purpose hereinbefore set forth.

No. 33,827. Treadle. (Marche.)

Jno. B. Grimes, (assignee of Leonidas G. Woolley,) Grand Rapids, Mich., U.S., 1st March, 1890; 5 years.

Mich., U.S. 1st March, 1890; 5 years.

Claim.—1st. The combination of two parallel shafts provided with cranks at each of their ends, two treadles each one connected to the two cranks at one end of the two shafts, gear wheels secured to the two shafts, a driven shaft and a wheel secured to the driven shaft and which meshes with the two gear wheels, substantially as shown. 2nd. The combination of two driven shafts provided with cranks, gear wheels attached to the driven shafts, and a driven shaft provided with a pinion which meshes with both of the gear wheels, substantially as described. 3rd. The combination of a suitable frame work provided with suitable bearings, the two driving shafts. C and the driven shaft by the cranks secured to the driven shaft and meshing with the two gear wheels and a band wheel secured to the driven shaft, substantially as specified. 4th. The combination of the driving shafts, cand the treadles provided with bearings through which the cranks pass, the bearings of the treadles being cut away as shown at J, substantially as set forth.

No. 33,828. Storage Battery and Cut Out for the Same. (Accumulateur et commutateur.)

Phoebus H. Alexander, Hyde Park, Mass., (assignee of Harry E. Dey, New York, N.Y..) U.S., 1st March, 1890: 5 years.

Phoebus H. Alexander, Hyde Park, Mass., (assignee of Harry E. Dey, New York, N.Y..) U.S., 1st March, 1890: 5 years.

Claim.—1st. In a secondary or storage battery, the combination with the plates, of a sheet of flexible insulating material formed with grooves or corrugations into which the edges of the plates extend forming separate compartments or cells between each pair of plates and means for clamping the same sheet and plates together to form water tight joints, as set forth. 2nd. The combination, with an outer box or cell. of a lining or inner cell composed of the corrugated or grooved rubber sheet A on the bottom and two opposite sides, and the insulating sheets on the other sides, battery plates with their lower and side edges entering the grooves in the sheet A, and means for clamping or binding together the grooved sheet of rubber applied to the bottom and to opposite sides, of the cell, the plates E with their lower and side edges entering the grooved sheet of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and to opposite sides of the interior of rubber applied to the bottom and the plates and side edges entering the grown and the plates to form watertight joints, as set forth. 4th. The improvement in the art of forming secondary battery plates, which consists in preparing lead plates for secondary batteries, which consists in preparing lead plates for secondary batteries, which consists in preparing