

minerai conducteur riche en enriché, de zinc ou de plomb, ou zinc ou un plomb eux-mêmes dans les couples voltaïques à liqueur alcaline, sodique ou potassique. 30. Les procédés de regeneration des electrolytes à base de soude ou de potasse caustique chargés d'oxyde de zinc, ou d'oxyde de plomb, soit par un courant d'acide carbonique ou de chlore, ou d'hydrogène sulfuré que précipite ces oxydes à l'état de carbonate, de chlorure, ou de sulfate, soit par un carbonate alcalin qui élimine le metal en reconstituant l'équivalent d'alcali manquant. 40. Les nouveaux vases poreux multiples communicants, en papier, tissus, feutres, peaux, membranes, ou autres septimes souples obtenus par des plagues rayonnantes et permettant de former des vases poreux, doubles, triples, quadruples, octuples, etc., et susceptibles d'enchevêtrements, étant entendu qu'il sera facultatif de faire varier les dimensions et proportions ainsi que les diverses combinaisons permettant d'appliquer les vases poreux aux différents usages indiqués.

No. 12,879. Improvements on Soaps, Pomades, Cosmetiques, &c. (*Perfectionnements aux savons, pommades, cosmétiques, &c.*)

Frederick J. Cleaver, London, Eng., 1st June, 1881; (Extension of Patent No. 6,638.)

No. 12,898. Improvements on Steam Fire Engines. (*Perfectionnements aux pompes à incendie.*)

Anson G. Ronan, Quebec, Que., 1st June, 1881; for 5 years.

Claim.—1st. A steam fire engine having a pump consisting of casing B provided with suction hose orifices D, air and vacuum chambers G H, cylinder C having fire hose tubes passing through casing B, and the chamber L connecting with water space F by valved apertures M, in combination with plunger P having barrel S working through end of cylinder C forming water space U connecting with chamber L by valved openings T. 2nd. A steam fire engine pump having air and vacuum tubes G H joined at top in arched form, and divided by partition I into two compartments. 3rd. The cover 2 hung by arms 4 journalled in eccentric sleeves 5 on bolts 6 to reaches A, and by shaft 3 having eccentric journals and lever 7.

No. 12,899. Improvements on Safety Automatic Railway Switches. (*Perfectionnements aux aiguillères automatiques de sûreté.*)

William T. Martin (Assignee of Orestes Pagan, Philadelphia, Pa., U.S., 6th June, 1881; for 5 years.

Claim.—1st. The combination, with a continuous permanently fastened main track and a stationary or immovable siding, of a movable switch rail separate and detached from said main track and siding and operating to effect the transfer of car wheels from said main track to said siding and vice versa. 2nd. In combination with a main track and siding, both stationary or permanently fixed in position, an extension D of said siding having a tread raised above the plane of said main track and inclining toward either end. 3rd. The movable switch rail E having incline ϵ_3 on its free or movable end, and on the side adjacent to the nearest rail A. 4th. In combination with the main track A and siding B, a movable switch rail E located inside of main track, having an incline ϵ_3 , the vertical side of which is a curve or approximate line ϵ forming a continuation of the line or curve of the siding. The movable switch rail E whose inner side is curved or bounded by two converging lines, so that at either end it recedes from the adjacent main rail, whereby it is capable of being opened by a car approaching in either direction on the main track, said switch rail being separate from and forming no part of either the main or siding track. 6th. The combination, with the permanent continuous main rail A and stationary siding rail B, of the extension D whose upper surface is above the plane of said main rail and is inclined at either end, and the movable switch rail E having an incline ϵ_3 whose vertical wall ϵ is in the same, or approximately the same, line or plane as the siding rail B. 7th. The permanently fixed siding extension D having two treads d d_1 , the former mainly in the same plane as the main rail tread, and the latter elevated there above and having an incline at either end. 8th. The combination, with the movable switch rail E located inside of the main rails and independent thereof, of a movable switch rail F also located inside of the main track and connected to said rail E so as to move therewith. 9th. In combination with movable switch rail E having incline ϵ_3 , stationary guide rail I serving to prevent the car wheels moving on said incline, from slipping laterally therefrom. 10th. The combination, with stationary guide rail I and with the permanent and immovable main track and siding, and a separate and detached switch rail E, of movable switch rail F, the former serving as a guard and cover to the latter. 11th. The combination, with the continuous stationary main rails A and permanently fixed siding, of siding extension D having an upper and lower tread, the former having an incline at either end, movable switch rail E having incline ϵ_3 movable switch rail F connected to rail E by braces G G and stationary guide, and guard rail I. 12th. The frog C having laterally extended base C₁ in combination with movable switch rail F pivoted thereon, and guide rail I bolted thereto. 13th. In combination with a continuous and stationary main track and a siding permanently fixed, a switch adapted to open or set itself right automatically to wheels moving in either direction over the main track, or off the siding to said main track, and when held by a switchman or attendant to effect the transfer of cars, &c., from the main track to the siding. 14th. In combination with a switch rail E, a separable or detachable shoe L fitted in said rail, its upper surface L₁ being inclined and forming a rising tread for the flange of a car wheel.

No. 12,900. Improvements on Churns. (*Perfectionnements aux barattes.*)

James M. Keen, Digby, N.S., 6th June, 1881; for 5 years.

Claim.—1st. The hollow plunger or air pump E having valve F, air holes G, guide spring D, projecting arm K. 2nd. In combination, the churn body A provided with the intermeshing drive or gear wheels L M and pitman H, hollow plunger E, provided with the laterally projecting arm K, valve F, guide springs D, air holes G and cover B recessed at B.

No. 12,901. Improvements on Polarization Galvanic Batteries. (*Perfectionnements aux batteries galvaniques de polarisation.*)

Camille A. Faure, Paris, France, 6th June, 1881; for 5 years.

Résumé.—Les batteries ou piles secondaires perfectionnées permettant d'emmagasiner, sous un faible volume et avec un faible poids, une quantité considérable d'énergie électrique, les dites piles secondaires étant principalement caractérisées par 10. Le procédé nouveau pour obtenir rapidement et économiquement des électrodes pouvant retenir et conserver une grande quantité d'énergie électrique, procédé consistant à recouvrir l'électrode ou support avec une couche de matière métallique, poreuse ou spongieuse, déposée à toute épaisseur voulue par galvanisation, précipitation chimique ou adhérence. 20. Des moyens indiqués pour recouvrir les supports en plomb, ou matière convenable d'une couche plus ou moins épaisse à volonté, de matière spongieuse ou poreuse, pouvant conserver l'énergie électrique à la disposition de celui qui veut l'employer. 30. De l'application nouvelle des garnitures de caoutchouc feutre, et autres matières convenables pour maintenir et conserver contre des lames-supports, l'enduit ou la couche de matières métalliques, telles que le plomb spécialement à l'état spongieux ou poreux ainsi qu'il a été exposé, ces substances métalliques pouvant être mélangées, ou non, avec des matières inertes. 40. Les dispositions ci-dessus décrites applicables au cas où les piles secondaires sont faites de lames de plomb simples et formées suivant la méthode de Mr. Gaston Plante. 50. La disposition de piles en élément combinées, à faces parallèles formant cloisons étanches entre chaque élément, de manière à constituer des piles ayant autant de couples que le nombre d'éléments moins un. 6. Des dispositions et moyens de construction qui permettent d'emmagasiner la force électrique en grande quantité sous un faible volume pour la transporter partout où on le jugera convenable et la faculté de l'employer soit ensemble, soit séparément.

No. 12,902. Improvements on Buggy Tops. (*Perfectionnements aux soufflets des voitures.*)

Thomas Smith and George J. Carty, London, Ont., 6th June, 1881; for 5 years.

Claim.—The combination of the side rail A provided with ring D and pin K, pointed brace C provided with cap F and slot I jointed brace G provided with cap I and bows B B.

No. 12,903. Improvement in Shovels. (*Perfectionnements dans les pelles.*)

Allen S. Fisher, Clinton, Ont., 6th June, 1881; for 5 years.

Claim.—The combination, with the shovel blade A, of the socket C C₁ fastened to said blade, and slip b b_1 secured to raise back part of shovel blade, and of handle d passing through clip b b_1 and secured thereto, and the end thereof fastened into socket C C₁ by screw or otherwise.

No. 12,904. Improvements on Signal Head Lights. (*Perfectionnements aux lanternes des locomotives.*)

Michael Nicholson, Baltimore, Md., U. S., 6th June, 1881; for 5 years.

Claim.—1st. A signal head light having its front projecting rim provided with colored signal panes located at either side and away from the face of the lantern, and adapted to be cancelled when desired by mechanism. 2nd. A signal head light having lateral openings in its front rim covered by colored glass plates, for the purposes of exhibiting side lights as signals. 3rd. A signal head light adapted to exhibit front and side signals, the latter consisting of glass plates, located opposite openings in the front rim, and away from the face of the lantern. 4th. A signal head light having at either side a side signal located opposite an opening in its front flange, and away from the face of the lantern, the said side signal being adapted to be concealed, when desired, and inclined to the sides of the lantern, whereby it is visible from a point dead a head as well as from the side.

No. 12,905. Improvements on Bark Cutting Machines. (*Perfectionnements aux machines à couper l'écorce.*)

Frank S. Dobson, Clifford and William I. Merritt, Niagara, Ont., 6th June 1881; for 5 years.

Claim.—1st. The combination of a revolving cylinder having longitudinally cutting knives 4, pressure bar G, feed rollers D D and table E mounted on frame A, whereby the bark is automatically fed and cut. 2nd. The revolving cylinder composed of disks or rings 14 having an irregular periphery forming depressions for recurring bars C, to which the knives 4 are attached. 3rd. The cylinder mounted on adjustable bearings moving to or from the table E. 4th. The pressure bar G provided with hinged levers H and sliding weight 13, for regulating the pressure. 5th. The pressure bar G having friction roller 12, and mounted between the cylinder and feed rollers D. 6th. The apron I.

No. 12,906. Improvements on Corner Fillings. (*Perfectionnements aux cornières.*)

Duncan McFee, Montreal, Que., 6th June, 1881; for 5 years.

Claim.—1st. As a new article of manufacture, a corner filling composed of a triangular plate with concave edges, and secured in place by turning in its points or apices.

No. 12,907. Improvements on Hydraulic Air Compressing Apparatus. (*Perfectionnements aux appareils hydrauliques pour comprimer l'air.*)

James M. Bois, Aurora, N. Y., U. S., 6th June, 1881; for 5 years.

Claim.—1st. The combination, with the syphon, reservoir and main supply reservoir, of separate and independent gates in the main supply reser-