

No. 16,319. Improvements on Steam Ploughing Machines. (*Perfectionnements aux charrues à vapeur.*)

George Greig, Edinburgh, Scotland, 19th January, 1883; for 15 years.

Claim.—1st. The combination of two or more plowing machines C O with a single operating rope or chain A, and impelling means B for the latter. 2nd. In steam plowing machines adapted to operate in pairs or sets, moving one behind another, the wheel or pulley D and controlling means G H adapted to hold and release the rope A, so as to increase or diminish the distance of the machines apart.

No. 6,320. Improvements on Car Wheels and Axles. (*Perfectionnements aux roues et aux essieux des chars.*)

Orson T. Southworth, Chicago, Ill., U. S., 19th January, 1883; for 5 years.

Claim.—1st. The annular groove F encircling the axle arm in the centre of wheel seat. 2nd. The extension of the oil chamber E to the inner shoulder of the wheel D.

No. 16,321. Improvements on Saw Jointers. (*Perfectionnements aux estampes des scies.*)

John A. Church, Nevada, Cal., U. S., 19th February, 1883; for 15 years.

Claim.—The improved saw jointer composed of a single plate A of metal, having the upper portion formed as shown in Fig. 4 and provided with hooks b₁ jointly with the bolt a, having a projection a₂ and tightening nut a₁, and file B.

No. 16,322. Improvements in Spark-Arresters. (*Perfectionnements aux arrête-flammèches.*)

Richard M. Howling, Ballarat, Victoria, 19th February, 1883; for 5 years.

Claim.—1st. The combination of two or more concentric cylinders with a cover or hood to the outer of them, so arranged as to produce an annular space or spaces through which the draught is deflected into an outer annular space between them and the sides of the cage, the diameter of the innermost cylinder being always larger than that of top of the funnel. 2nd. The construction of such cylinders, save the outer one, with outward and downward flanges at the bottom, and with a horizontal and inward flanges at the top of the second one. 3rd. The special method of constructing and connecting the sides, bottom and internal fittings of the apparatus.

No. 16,323. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

John K. Harris, Springfield, Ohio, U. S., 19th February, 1883; for 15 years.

Claim.—1st. The combination, with a base plate, a ship over slide carrying an oscillating cloth clamp and a feeding device for said cloth clamp arranged to be adjusted with said ship over slide, of a device connected to the base plate ship over slide and feeding device, to effect the reversal of the feed in the middle of the ship over movement. 2nd. The combination, with the feed clutch I for the cloth clamp having pin p and the ship over slide J, of a lever H having a cam for working the said slide, and a groove or slot n having its end sections about different radii and running into each other in the middle.

No. 16,324. Improvements on Running Gear for Waggon. (*Perfectionnements aux trains des voitures.*)

Allen J. Beach, Flint, Mich., U. S., 19th February, 1883; for 5 years.

Claim.—1st. The reach C pivotally secured to the draw-bar D, in combination with the circle I below the bar D, the bolster G and the bolster barrier F above said draw-bar, and the bent bearing brackets I secured to the bolster and adapted to act against the circle I and the axle E. 2nd. In combination with the draw-bar D, bolster G and axle E, the circle I secured to the axle, and the bent bearing plate I₁ secured to the bolster and adapted to act against the circle. 3rd. In combination with the axle E thereof, the bolster carrier F and the draw-bar D provided with the double shouldered thimble d, adapted to support the centre of the bolster barrier. 4th. In combination with the circle I provided with the hanger J, in which is partially hung the tongue K, the sliding sleeve L and shaft rods M.

No. 16,325. Improvement in Washboards. (*Perfectionnement des planches à savonner.*)

George H. Van Dyke, Grimsby, Ont., 19th February, 1883; for 5 years.

Claim.—1st. The combination of the metal or wooden frame A B and the metal bars, or rods D. 2nd. One, two, or more of the metal rods or bars D constructed to pass through the sides A and secured by nuts E.

No. 16,326. Improvements on Belt Pulleys. (*Perfectionnements aux poulies à courroies.*)

Elijah B. Martindale, Indianapolis, Ind., U. S., 19th February, 1883; for 5 years.

Claim.—1st. The use of a web or body, made of paper paste board or other like material, combined with a metal hub and a metal or paper rim, in the construction of pulleys, or wheels. 2nd. A combination pulley or wheel, made of a cast iron hub, or web, or body of paper paste board, or such like material, a rim of metal or paper, the parts being fastened together with flanges, rivets or bolts. 3rd. A

composite pulley with a metal rim resting upon, and attached to a body, or web, made of paper paste board, or other like material, with a cast iron hub, the parts being fastened together with flanges, rivets or bolts.

No. 16,327. Improvement on Apparatus for Separating Refined Petroleum or its Distillates into Different Gravities, Grades and Fire Tests. (*Perfectionnement des appareils pour séparer le pétrole épuré ou ses produits, par pesanteur, qualité et épreuve de feu différents.*)

Davenport Rogers, Galion, Ohio, U. S., 19th February, 1883; for 5 years.

Claim.—1st. An apparatus for dividing or separating refined petroleum oils or their distillates into different grades, specific gravities and fire tests, and removing the odor, which apparatus consists of a separator or cylinder C, drums E provided with perforations, and drum G having an open top forming air chambers b and b₁, eduction oil pipes O and N₁, induction feed pipe N, and slide valves B₁, in combination with drum H with a foraminous bottom or system of air brakes, eduction gas and air pipe I, spiral imperforated incline passage F and drum L connected to separator C by means of air pipes. 2nd. In combination with the separator, an air vessel in communication therewith by the pipes 1 2 3 4 5 and 6 arranged in relation to the separator so as to discharge blasts of fresh air between the coils of the inclined passage into the air cells d, immediately below the foraminous openings or plates c therein. 3rd. In combination with the separator, the slides B₁ having openings on opposite sides of the drum E respectively corresponding to the openings 1 2 3 4 on one side, and 1 2 and 3 on the other of the separator. 4th. The combination of the heater A with its coil of supply pipe, separator C having an internal concentric arrangement of drums, helical inclined plane and foraminous plates c, air cells d, outlets O and N and pipe connection with the air vessel L, condenser with its condensing coil J provided with discharging cocks au bu cu. 5th. The heating of the oil to a degree just below the vaporizing point, and passing the same in bulk from over a spiral imperforated inclined plane having openings covered with wire gauze or foraminous plates, for the admission of blasts of air into the bulk oil, as it passes over the said spiral inclined plane. 6th. The process of fractional separation of petroleum oils or their distillates, by means of currents of air force through the oils in bulk when heated to a point just below vaporizing. 7th. The herein described oil, a product of fractional separation resultant of the process.

No. 16,328. Improvements on Cutting Machines. (*Perfectionnements aux coupe-racines.*)

Marion C. Morts, Mohawk, N. Y., U. S., 19th February, 1883; for 5 years.

Claim.—The combination of the detachable teeth I having triangular shanks, with the transverse bar H having corresponding shaped recesses, in which the teeth are secured by top and bottom plates K K₁.

No. 16,329. Improvements in Railway Switches. (*Perfectionnements aux aiguilles des chemins de fer.*)

Franz S. Scheffler, Richmond, Que., 19th February, 1883; for 5 years.

Claim.—1st. The combination, with the main line rails A A₁ and switch rails B B₁, of the shifting rails C C₁ and guard or check rail D. 2nd. In combination with the main line rails A A₁ and switch rails B B₁ of the shifting rails c c₁ and guard or check rail d. 2nd. In combination with the main line rails A A₁, switch rails B B₁, shifting rails c c₁ and guard or check rail d, the double acting spring lever F having suitable fastenings at either end. 3rd. The double acting spring lever F made up of the shoulder i i₁, the centre shaft j, the outer casing m m and the spring l, in combination with each other.

No. 16,330. Improvements on Cigar Bunching Machines. (*Perfectionnements aux machines à empaqueter les cigares.*)

George Moeb, Detroit, Mich., U. S., 19th February, 1883; for 10 years.

Claim.—1st. A curved table supported between and hinged or pivotally secured to bars of coincident curvature, which are provided with stops to arrest the fall of the free end to the table and an apron secured to the underside of said table. 2nd. The combination of a curved table hinged or pivoted and an apron or bunching cloth with a ratcheted roller, and a spring for holding said roller in locked position until the force of said spring is overcome. 3rd. The curved table D having trough b and hinged as shown, combined with the curved frame C having stops a and with the apron E secured to the underside of said table D. 4th. The combination of the apron E and roller c with the roller d having rack m, the pawl n, nut h and spring i. 5th. The combination of the curved hinged table D, frames C a, roller c and apron E with the roller D having rack m, pawl n, nut h and spring i.

No. 16,331. Improvements on Grain Separators. (*Perfectionnements aux séparateurs des grains.*)

Neil McLean, Watsonville, Cal., U. S., 19th February, 1883; for 5 years.

Claim.—The supplemental attachment to the straw carrier of a grain separator consisting of the spout formed by side boards c c, having the inclined floor A₁ and revolving shafts B B₁ provided with fingers f t, and reels A A, the screw conveyor I, spout J, perforated screen K and revolving shaft M provided with fingers a a.