

No. 8353. Improvement on Geographical Clocks. (*Perfectionnement des horloges géographiques.*)

William A. Cates, Union, Oregon, U. S., 26th January, 1878, for 5 years.

Claim.—A universal time piece, whose panoramic map or face plate revolves, is divided into twenty-four hours, as well as three hundred and sixty degrees, and is provided with an index adjustable on the h^o of hour wheel, independently of hour hand.

No. 8354. Improvements on Anchors. (*Perfectionnements aux ancres.*)

Fisher A. Buck, Eastport, Me., U. S., 26th January, 1878, for 5 years.

Claim.—An anchor formed of a shank with radial branching and upwardly curved arms, carrying at the outer ends an inclined and tapering fluke of circular shape.

No. 8355. Improvements in Seythe Fasteners. (*Perfectionnements dans les manches des faulx.*)

Miles Smith, Springfield, Vt., U. S., 26th January, 1878, for 5 years.

Claim.—1st. The combination of the pivoted vibrating plate E having one or more tapering or radial sockets recesses or slots, and having the rib *e* at its free end and the hooked retaining bolt F, with the snath, say the ordinary clamping device at the end of the snath. The combination of the clamping bolt, the swinging socket-plate having a roughened under surface at its free end and a plate arranged upon the snath, and having a roughened upper surface to clutch the swinging socket-plate from the action of the bolt, 3rd. The plate G having a roughened outer surface and an opening *e*, in combination with the swinging socket B having a roughened under surface, and the clamp bolt F passing through the opening of the plate G and arranged to clamp the parts as described.

No. 8356. Improvements on Disintegrating Machines. (*Perfectionnements aux machines à désagréger.*)

David C. Ebaugh, Charleston, S. C., U. S., 26th January, 1878, for 15 years.

Claim.—1st. The saucer shaped runner, having its concave face provided with a suitable dress or furrows, with a series of hammers, and with a raised ring or rim on its periphery. 2nd. The saucer-shaped runner constructed of cast metal, with a raised ring or rim of chilled iron or steel inserted therein. 3rd. The combination of horizontal oppositely-revolving concave or saucer-shaped runners, having raised rims or flanges and arranged with their concave faces opposite each other, whereby material may be fed in bulk between the runners and disintegrated by the attrition of one particle upon another, and by the action of the runners, and retained between them until sufficiently reduced to pass between the rims; 4th. The combination of saucer-shaped horizontal oppositely-revolving runners, having their concave faces opposite each other and being provided with furrows, hammers and raised rims, whereby the material fed to the runners is disintegrated by the attrition of one particle upon another and by the furrows and hammers, and retained by the rims until thoroughly pulverized; 5th. The combination of horizontal saucer-shaped oppositely-revolving runners, the hollow upper spindle through which the feed passes, the lower spindle stopped upon a bridge-tree and the driving gearing.

No. 8357. Improvements on Rock Drills. (*Perfectionnements aux forets de mines.*)

Henry C. Sergeant, New York, U. S., 26th January, 1878, for 5 years.

Claim.—1st. In combination with an adjustable tripod for a rock drill, guide rods for giving direction to the cylinder and drill; 2nd. A slide valve moving in a cylinder and upon a rod, passing through its centre, for guiding the valve and for reducing the wear there of. 3rd. The combination of a bolt passing through the centre of a steam induction and ejection valve, a steam chest, cushions for receiving the valve at the end of its stroke, and a valve for controlling the ingress and egress of steam. 4th. The combination and arrangement of the steam ports C and C⁵, D¹ and D², for regulating the exhaust of steam from the ends of an automatically operating valve; 5th. The combination of the exhaust ports D⁴ and D⁵, and the cavity F¹ in the body of the piston; 6th. A rod or bar for feeding the drill forward and revolving it, having a fluted surface upon a portion thereof and a screw thread upon another portion; 7th. The chuck for holding the drill of a rock drilling machine, when constructed with a screw thread and socket in its upper end, for attaching it to its operating rod, and a slit in its lower end for causing it to be made to firmly clasp and secure the drill in its position.

No. 8358. Improvements on Telephones. (*Perfectionnements aux téléphones.*)

George B. Richmond and Alfred Beamer, Lansing, Mich., U. S., 26th January, 1878, for 5 years.

Claim.—1st. In a hydro-electric telephone, the combination with the vertical diaphragm, of the horizontal platinum points and the water tube containing sufficient water, or other equivalent fluid to cover the platinum; 2nd. The flexible water tube, 3rd. The combination of the flexible water tube E, of the rigid tube E¹ upon which the flexible tube is mounted; 4th. The wire G projecting into the water tube and covered, except at its point G¹, with a non-conducting material. 5th. The combination of the platinum points D¹ G¹ projecting into the water tube, of the screw F carrying one of the points. 6th. The combination with circular diaphragm B, of the annular screw threaded frame A against the end of which the diaphragm is placed and the screw threaded ring b; 7th. The combination with the diaphragm of the flexible water tube and the platinum points passed through the walls, of the flexible tube on the opposite sides thereof, and an line with the centre of the diaphragm; 8th. The combination with the standard A¹ of the cap C having central opening and mouth piece for covering and protecting the diaphragm. 9th. The frame for a telephone, consisting of the base A, standard A¹ and cap C; 10th. In a telephone, a volume of water or other equivalent fluid placed between the platinum points D¹ G¹, 11th. The electro-magnet M in combination with the transmitting mechanism for receiving sounds. 12th. A hydro electric telephone worked by an electric battery W.

No. 8359. Improvements on Hay and Grain Elevating Cars. (*Perfectionnements aux voitures à élever le foin et le grain.*)

George A. Dickson, Shortsville, N. Y., U. S., 26th January, 1878, for 5 years.

Claim.—1st. The double open rail track B extending from end to end of building and inclined at the central or elevating point B¹ to a lower level, for the purpose of retarding the motion of the car when the tension on the rope is greatest, and to facilitate the return of the unloaded car to its central locking position; 2nd. An elevating and distributing car provided with the pendant frame, having a sheave pulley E, tripping levers and pawls, for retaining it in a temporary position while elevating the draft, and a draft rope cam a; 3rd. The combination of the elevating and distributing car having pendant frame carrying the sheave, tripping levers and pawls, and the rope cam a with the central locking, tripping and reversing plates G. 4th. The plates G provided with stop block g and curved slots e e, arranged in connection with an elevating and distributing car to lock it in position when elevating, to release the elevating rope when the car is returned to its central position, and to reverse the action of the cam lock on the elevating rope, in order to distribute to either end of the building; 5th. The combination of the elevating and distributing car C, locking, tripping and reversing plates G, and elevating ropes passing through suitable pulleys d d¹ d² of the small connecting line M, with depending haul lines N and weight O, whereby the position of the cam wheel locking the elevating rope, and the elevating rope, may be changed to allow the car to distribute its load to either end from the centre, the said combination also permitting the whole change to be made from the floor level; 6th. The tripping levers F provided with eyes F¹ at their lower end and jointed in order to direct the elevating rope into the sheave at any angle. 7th. The double locking pawls f f, in combination with the plates G; 8th. The cam locking wheel a provided with projecting-pins b, in combination with the elevating rope H, sheave P and plates G.

No. 8360. Improvement on Coasting Sleds. (*Perfectionnement des traîneaux côtiers.*)

Charles H. R. Triebels and Edward Henderson, (Assignees of Henry S. Miller,) Philadelphia, Pa., U. S., 26th January, 1878, for 5 years.

Claim.—The combination with the main frame of a sled, of a pivoted supplementary frame having guide runners, a segment gear secured upon the supplementary frame, concentric with its pivots and meshing with a segment gear pivoted to the main frame and longitudinal slide bars moving in guides upon the main frame, and engaging pins upon the sides of its segment gear.

No. 8361. Improvements on Steam Generators. (*Perfectionnements aux générateurs de vapeur.*)

William P. Trowbridge, New-Haven, Ct., U. S., 26th January, 1878, for 15 years.

Claim.—1st. In a steam generating apparatus, the combination of the fire box, cylindrical shell above it, an inner fuel cylinder, or reservoir arranged so as to leave a space between the said shell and reservoir, and a water coil around said fire box extending upward, and through said space between the shell and reservoir; 2nd. In combination with the subject matter of the first claim, an auxiliary chamber into which the upper end of the said coil conducts the steam. 3rd. The combination of the subject matter of the second clause of claim, with a circulating pump, taking the water from the said auxiliary chamber, and returning it to the lower part of the coil. 4th. The combination of the subject matter of the second claim, with an automatic water feeding device so as to maintain a constant and predetermined water level.

No. 8362. Improvements on Tonguing and Grooving Machines. (*Perfectionnements aux machines à rainures et languettes.*)

Warren S. Mayo, Ottawa, Ont., 26th January, 1878, for 5 years.

Claim.—1st. The combination of the cutters T T, rotating in opposite directions in the same plane upon independent arbours and feed rollers R R, and U U U, operated mechanically, whereby the material gripped by the rollers is fed automatically to the cutters; 2nd. The combination with the cutters Z Z, rotating in opposite directions in the same plane of bed pieces 7, adjustable inclinedly from the ends by screws 9, and having adjustable guide strips 8, to regulate the depth of the cut and to guide the stuff to the cutters; 3rd. The combination of the bed pieces 7 inclinedly adjustable from either end floor 11, having adjustable guide strips 12, feed rollers R R, and friction rollers U U U, automatically adjustable, whereby the material is held from tremulous motion. 4th. The combination of the rotary cutters Z Z, rotating in opposite directions in the same plane feed rollers R R, bevel gear wheels L M, shaft L, bevel gears O P and shaft M, for feeding the stuff to the cutters automatically.

No. 8363. Improvements on Water Motors. (*Perfectionnements aux moteurs hydrauliques.*)

Frederick W. Tuerk, Berlin, Ont., (Assignee of Frederick W. Tuerk, Jr., Chicago, Ill., U. S.) 26th January, 1878, for 5 years.

Claim.—1st. The partition E, between the edge of the case and the wheel, diverging about the opening G, and at its terminus approaching close to the rim of the wheel; 2nd. The passages F and F¹, whereby the pressure of the water acts at the same time and in the same manner upon opposite sides of the wheel; 3rd. The passage F and a part of the passage F¹, corresponding to the same, each made larger at its beginning than further on, the length of the narrower or shallower part being equal to the distance between two consecutive buckets, whereby the pressure of the water acts continuously upon each bucket in its turn until the said bucket reaches the opening G. 4th. In combination with the buckets b, working in recess in the rim of the wheel, and held in place by pivots which on one side pass through the said rim and on the other through cap-plates, the buckets being less in breadth than the rim of the wheel to the extent of the thickness of the said cap plates, and the ring flange c. 5th. In combination with the buckets b, the flange c, projecting inward from the outer edges of the said buckets, and