

### No. 12,622. Improvements on Eave Trough Formers. (*Perfectionnements aux machines à former les auge des toits.*)

James Dunn, Port Hope, Ont., 13th April, 1881; for 5 years.

*Claim.*—1st. A bed plate A provided with adjustable gauges, and having hinged to it a forming block B furnished with a handle E, in combination with a forming block F hinged to the block B and having a handle G. The said parts being arranged to operate as described, for the purpose of making metallic eave troughing. 2nd. A forming block B provided with receivers J, in combination with the hinge blocks B F for the purpose of forming the edge of the eave troughing. 3rd. A block B having an ogee-face, and hinged to the bed plate A by the arms C, the spiral springs H and adjusting levers I arranged and operating in combination with the forming blocks B F.

### No. 12,623. Improvements on Thrashing Machines. (*Perfectionnements aux machines à battre.*)

James Gladstone, Salem, (Assignee of George McKinlay, Elora), Ont., 13th April, 1881; for 5 years.

*Claim.*—1st. In placing two fans F F, one on each end of the cylinder C, with their wind passages connecting with the box or chamber G. 2nd. Making the main carrier of one continuous length with two or more breaks in its upper side. 3rd. Connecting the main carrier at the two breaks or pulleys S S with the ends of the rocking rake frame K, to be placed immediately behind the cylinder and on the top of the lower rakes to be operated in the manner specified. 4th. An upper back rake running in fixed bearings made in the manner set forth.

### No. 12,624. Improvements on Hay Unloaders. (*Perfectionnements aux décharge-foin.*)

Frank Patrick, Brownville, N. Y., U. S., 13th April, 1881; for 5 years.

*Claim.*—1st. The car consisting of the frame G, having rollers H, pulleys I I and break levers K, having cross-bars L L. 2nd. The combination with the car G having pulleys I I and brake levers K K with cross-bars L L, of the frame G having spring ball R, catches T T, inclined guides U U and slides V V. 3rd. The combination, with the car G having pulleys I I, brake levers K K and block J, of the draft rope M having hook H, small ropes P P and pulleys N O. 4th. The spring X consisting of ropes Y Z, having latch boxes B B, catches J J, and operating ropes H H. 5th. The hay unloading device consisting of track A, frame L, car G, string X, draft rope M, ropes P P and pulleys N O.

### No. 12,625. Improvements in Furnaces. (*Perfectionnements dans les fourneaux.*)

John A. Rafter, Montreal, Que., and Hugh McBratney, Kingston, Ont., (Assignees of Charles McWilliams, Montreal, Que.), 13th April, 1881; for 5 years.

*Claim.*—1st. In combination with the furnace of any steam generator, a chamber surrounding the boiler space into which air is admitted, and a transverse chamber connected therewith, into which the products of combustion mingled with steam are exhausted, the whole mixture being discharged above or below the grate. 2nd. The combination, in a steam generating furnace, of the chamber F communicating with fire chambers steam pipe and injectors H h, ducts G and chamber C, with outlet L.

### No. 12,626. Improvements on Spring Teeth for Harrows. (*Perfectionnements aux dents élastiques des herses.*)

Aaron J. Nellis, Pittsburg, Pa., U. S., 13th April, 1881; for 5 years.

*Claim.*—1st. A spring tooth, for harrows and cultivators, composed of two reversely coiled spirals, the ends of which terminate at the centre, where they are united with the tooth. 2nd. The combination of the spiral coiled tooth spring, with the curved bearing spring arranged between the coiled spring and the beam. 3rd. The combination of the spirally coiled tooth spring, with the curved bearing spring and the interposed bearing block. 4th. The spirally coiled tooth spring having a stirrup to engage with a notch in the tooth, in combination with a twisted tooth having longitudinal grooves, and a notch for the reception of the stirrup, of the coiled spring.

### No. 12,627. Improvements on the Means of Splicing Traces. (*Perfectionnements dans le moyen d'épissier les traits.*)

Joseph E. Curd, Charleston, Ill., 13th April, 1881; for 5 years.

*Claim.*—1st. A splice for harness formed of a thin metal blade perforated and adapted to fit between the leathers of the trace, and to be secured thereto. 2nd. The combination, with the sections of a trace, of a metal blade inserted between the leathers of the band and secured as described.

### No. 12,628. Improvements on Bolt Clippers. (*Perfectionnements aux cisailles à boulons.*)

Henry K. Porter, Boston, Mass., 13th April, 1881; for 5 years.

*Claim.*—1st. The levers a a and jaws b b, the combination therewith of auxiliary arms c, connected therewith and laterally adjustable relatively to levers a. 2nd. The levers a a and jaws b b, the pivoted connecting arms c c and means for adjusting them relatively to, and parallel with levers a. 3rd. The levers a a and jaws b b, the adjusting arms c and links h pivoted to said arms and to levers a, and means for adjusting said arm relatively and parallel with said levers a. 4th. In a compound lever clipper, the combination of the levers a, jaws b, and the supplemental arms c c pivoted at one end to levers a, and at the other end to jaws b, and provided with means of divergent adjustment relatively to jaws a. 5th. The combination of levers a, jaws b, arms c, bolts e and plates j, all combined and arranged to effect the adjustment of arms h relatively to and parallel with levers a. 6th. In a compound lever clipper, the interlocking teeth 2 2, formed and arranged upon arcs of a circle, whose centre is the pivot bolts K K of jaws b. 7th. In a bolt clipper and in combination with levers a a, an elastic buffer p, ar-

ranged upon said levers to arrest their converging motion by a cushioning resistance as the opening jaws are brought together. 8th. The combination of jaws b b, pivot bolts K K with their supporting straps l in the nuts x with their teeth y, and the locking plate Z formed with the corresponding internal teeth S. 9th. In combination with jaws b b, the pivot bolts K K, straps l m, the toothed nuts x and toothed locking plate z, and the pins t inserted in bolts K, and straps l to interlock the same. 11th. The arms 4 bolted to jaws b and formed with the hollow hubs 3 enclosing the nuts x in bolts K, and having the inwardly extended segmentary gears 2.

### No. 12,629. Improvements in Tanning Process. (*Perfectionnements dans le procédé de tannage.*)

Christian Heizerling, Frankfort on the Main, Germany, 13th May, 1881; for 5 years.

*Claim.*—1st. As a new article of manufacture, in leather made from skins which have been soaked in a chrome solution and then treated with stearine or an equivalent compound, and afterwards submitted to the action of light before use. 2nd. A leather made from skins which have been treated with a chrome solution, an aluminous solution, a solution of soap, chloride of barium, or other material having a decomposing action on the aluminous solution (causing hydrate of alumina or barium sulphate, or both, to be deposited in the pores of the skin) then treated with stearine or its chemically equivalent compounds mentioned and exposed to light before use. 3rd. The process of tanning leather by soaking it in a chrome solution, an aluminous solution, a fixing solution acting upon the aluminous material, so as to form a precipitate in the pores of the leather, and their treating it with stearine, or its chemical equivalent and exposing it to light before use. 4th. The process of converting skins into leather by soaking them in a chrome solution, and then treating them with stearine or the herein described equivalent materials, and then exposing them to light before use. 5th. The process of converting skins into leather by means of chromium compounds, the employment of a soluble salt of alumina and aluminous matter successively. 6th. The process of converting skins into leather by means of chromium and aluminum compounds, treating the said skins with sulphate of copper, sulphate of zinc, sulphate of manganese, chloride or borate of zinc, protoxide or sesquioxide of iron in the uncrystallized state, or oxide of manganese, or tungstate of sodium, or potassium. 7th. The combination, in the tanning of leather, of the chromium process and the tanning process, that is converting a hide into leather by treating it with a solution of a chrome compound, and also with materials containing tannic acid.

### No. 12,630. Improvements on Whiffletrees. (*Perfectionnements aux palonniers.*)

Edward Warren, Jackson, Mich., U. S., 13th April, 1881; for 5 years.

*Claim.*—The combination, with a double or single whiffletree A, of a brace or truss rod B, of greater length than the tree, impinging upon the back edge of the tree, and doubled to overlap the ends of the same, and secured thereupon by the end collars C C.

### No. 12,631. Process of Restoring Waste Vulcanized India Rubber and Gutta Percha. (*Procédé de révivification des rebuts de caoutchouc et de gutta percha vulcanisés.*)

Henry A. Clark, Boston, Mass., U. S., 13th April, 1881; for 5 years.

*Claim.*—1st. In restoring waste vulcanized India rubber, first moistening and dampening the material with water and evaporating such water, and then moistening and dampening the material with turpentine, camphine, or equivalent substances, and then heating or evaporating the turpentine, etc. 2nd. The treatment of waste vulcanized India rubber or gutta percha and the compounding of a vegetable oil or oils, or a resinous material, or materials, or both with the same. 3rd. The combination either of a vegetable oil or oils, or of a resinous matter, or matters, or of both with restored waste vulcanized India rubber or gutta percha.

### No. 12,632. Improvements on Shovels, Spades and Forks. (*Perfectionnements aux pelles, bêches et fourches.*)

William Chisholm, Cleveland, Ohio, U. S., 13th April, 1881; for 5 years.

*Claim.*—1st. In a shovel, spade, or fork, the combination with a handle of a body or blade having a tang formed integral therewith and bent upward or forward and secured to the front or lifting face of the handle, and a separate and independent pad provided with a tang, said pad being secured to the rear surface of the body or blade, and the tang secured to the rear side of the handle, the body or blade being formed with a shank portion A<sup>2</sup> which is folded around the upper portion of the pad.

### No. 12,633. Improvements on Drag Sawing Machines. (*Perfectionnements aux machines à scies traînantes.*)

Cyrus S. Dean, Crowland, and William Rainsford, Fort Erie, Ont., 15th April, 1881; for 5 years.

*Claim.*—1st. The combination, with a drag saw F and a stationary frame A A B, of the treadle I, connecting rod n, hand lever K, rock shaft t, rock lever H and connecting rod g. 2nd. The combination, with the drag saw F, and mechanism for actuating the same of the stationary frame A A B, and the supporting bar C pivoted with its rear end to the stationary frame and connected adjustably with the front end of the stationary frame.

### No. 12,634. Improvements on Apparatus for Heating and Ventilating Cars. (*Perfectionnements aux appareils à chauffer et à aérer les chars.*)

Henry A. Gouge, New Rochelle, N. Y., U. S., 15th April, 1881; for 5 years.

*Claim.*—1st. In a hot air heating apparatus, having a cold air duct and a hood for supplying fresh air under pressure, while the car is in mo-