

scribed. 7th. The combination, with a series of wheels having teeth projecting therefrom, of a corresponding series of crushing devices, and a series of adjustable spring arms adapted to engage the space between said teeth, substantially as herein described and for the purpose set forth. 8th. The combination, with a series of wheels having teeth or projections extending therefrom, of an adjacent series of crushing devices, a laterally adjustable bar mounted in the main frame, and a series of adjustable spring arms extending from said bar and engaging the spaces between the teeth, substantially as and for the purpose described.

No. 26,801. Self-Binding Harvester.

(Moissonneuse-lieuse.)

Alexander Turnbull, London, Ont., 1st June, 1887; 5 years.

Claim.—1st. A sleeve G formed with a feather G¹, in combination with a ratchet F and shaft D₂ for the purposes of conveying motion to the binding mechanism, when said binding mechanism is adjusted to any position required to suit different lengths of grain. 2nd. The feathered sleeve G and ratchet F, in combination with the dog o₆ and chain wheel B₃, for the purpose of conveying motion to said chain-wheel. 3rd. A notched crank o₂, in combination with the compressor-shaft o₁, connecting rod P₂, compressor cam P₁ and lever o₃ for the purpose of engaging the latter with or disengaging it from the dog o₆, which throws the binding mechanism in and out of gear. 4th. A lever o₃, friction roller o₄ and crank o₂ in which a notch o₅ is formed, in combination with a compressor shaft o₁, compressor arm o and compressor cam P₁, substantially as shown and described and for the purpose set forth. 5th. The carrier operating shaft D₁, provided with a double crank I, for the purpose of operating the cutter bar. 6th. A projecting arm or butt packer K attached to and operated by the pitman T₁ which operates the cutter bar, said packer being for the purpose of freeing the elevators and straightening the grain on the binding table while the sheaf is being formed. 7th. A hinged flap L, in combination with the binding table L₂, spring L₁ and stationary bar L₂, for the purpose of freeing the butt packer when the table is adjusted to bind short grain. 8th. The opening between the elevators at the outer end, which opening permits the heads of long grain to be carried up and through the elevators, without being bruised and also prevents the elevators from being choked. 9th. In a twine knitter, a stripper A⁵ having an oblique movement, for the purposes specified. 10th. A stripper formed with an aperture T₁ and lip T₂ for the purpose of holding the cord, substantially as described. 11th. A blade T attached to the stripper A⁶, in combination with a cord or twine guide A⁵ formed with a cutting notch Z for cutting the cord, substantially as described. 12th. A twine or cord guide A₅, the outer face of which is shaped to guide the cord to the knotting hook, substantially as described. 13th. A stripper A₅ formed with an arm T₁, in combination with a breast plate T₃, formed with a slot W having an oblique angle W₂ which governs the motion of the stripper, substantially as described. 14th. A cord or twine guide A₅, formed with a curved face a₃ to guide the cord to the knotting hook, and with a cutting notch Z to assist in severing the cord, substantially as set forth. 15th. The cam A₄ for operating, the elbow A₃ and stripper A₅, substantially as set forth. 16th. A wheel D₄, formed with cog segments a₁ and a₂ for operating the knotting hook D₅, and the cord holding disk A₂ respectively, substantially as set forth. 17th. In combination with the bevelled D₆, a pitman D₉, or its substantially equivalent, for the purpose of operating the cord holding disk A₂, substantially as set forth. 18th. A pitman D₉, formed in two parts for the purpose of lengthening or shortening the same, substantially as shown and described and for the purpose specified. 19th. A swinging link D₁₀, in combination with a pitman D₉, for the purpose of holding a dog D₁₂, and operating a ratchet A₁ and cord-holding disk A₂, substantially as described.

No. 26,802. Hitching Gear for Vehicles.

(Appareil de dételage instantané.)

James L. Turnbull, Bellwoods Station, Ont., 1st June, 1887; 5 years.

Claim.—1st. The spring bolts A, designed to secure the traces C, as indicated, in combination with the cords D, arranged substantially as and for the purpose specified. 2nd. The spring bolts A, designed to secure the traces C, as indicated, in combination with the cords D passing around the pulleys E and connected to the cord F, carried through the dash-board G, substantially as and for the purpose specified. 3rd. The grooved brackets F, connected to the shafts I, in combination with the eye-bolts K, to which the breeching-straps H are attached, substantially as and for the purpose specified.

No. 26,803. Self-Acting Car-Coupler.

(Attelage de chars automatique.)

Thomas Turnbull, West Luther, Ont., 1st June, 1887; 5 years.

Claim.—The draught-pin B, located within the draw-head A and actuated by the spring E, in combination with the block F located within the draw-head A and operated by the spring G, substantially as and for the purpose specified.

No. 26,804. Car-Coupling. (Attelage de chars.)

John W. Jackson, North Haverhill, N. H., U. S., 1st June, 1887; 5 years.

Claim.—1st. The combination, with the lifter D having a central bend, and a crank d, of the inclined loop E permitting the lifter to slide back and supporting the same, the slotted fastening plate J and the link B, as set forth. 2nd. The combination, with the coupling-pin C, of the chain H, the segment I, having groove i and weight i, the rock-shaft J and weighted cranks K, K, as set forth.

No. 26,805. Automatic Clothes Washer.

(Laveuse mécanique à linge.)

William H. Perrin and James O. Church, Smith's Falls, Ont., 1st June, 1887; 5 years.

Claim.—An automatic clothes-washer, having the base A, wings J, pipe C and zinc plate d, all substantially as shown and described and for the purpose set forth.

No. 26,806. Device for Detaching Horses from Vehicles. (Appareil pour dételier les chevaux.)

Hezekiah Lathaw and Henry J. Stiefelmeyer, New Hamburg, Ont., 1st June, 1887; 5 years.

Claim.—1st. The combination, with the shafts A, of the whiffletree C provided with levers E, E, at the ends, and having a fish-tail projection to receive the trace, covered ways H having locking slides J engaging with the inner end of the levers, straps L connecting the slides and strap M to be pulled by the driver to disengage the slides simultaneously, whereby the levers will then offer no resistance to the traces, as set forth. 2nd. The combination, with the shafts A, of the plate P provided with barrel Q and hook R, and having a piston T and spring U to retain and release the breeching, as set forth.

No. 26,807. Car Brake. (Frein de char.)

Earl A. Westcott and Edmond R. Bristol, Minneapolis, Minn., U.S., 1st June, 1887; 5 years.

Claim.—1st. The combination, with the air-pipes of an atmospheric brake provided with valves, of a truck having a series of vertically-operating rods hung in guides thereon, the upper end of each rod connected directly with the levers of an air pipe and longitudinal beams secured to the lower ends of said rods, as set forth. 2nd. The combination, with the air-pipes of an atmospheric brake, provided with valves, of a truck, having a series of vertically-operating rods, the upper end of each rod connecting with an air pipe valve, and longitudinal beams convex upon their under sides and secured to the lower end of said rods, as set forth. 3rd. The combination, with the air pipes of an atmospheric brake provided with valves, of a truck having a series of inwardly-projecting guides upon its pedestal brace, a series of rods vertically operative in said guides and connected to the air-pipe valves, and longitudinal beams having their respective ends each secured to a rod, and provided upon their under faces with fender plates, as set forth.

No. 26,808. Harrow and Pulverizer.

(Herse brise-motte.)

Samuel Rothchild, Pendleton, Oregon, U.S., 1st June, 1887; 5 years.

Claim.—1st. The combination, with the diagonal toothed side bars A, of the revolving wheels C, having teeth whose length exceeds that of the teeth of said bars, and arranged and secured at the angle specified between the separable parts or sections of said bars, as shown and described. 2nd. The improved harrow and pulverizer, consisting of the diagonal sectional frame A, having vertical stationary teeth, the series of frames D and revolving wheels C arranged at an angle of 45° to said diagonal frame, and having teeth, whose length exceeds that of said vertical teeth, as shown and described. 3rd. The improved protector for the toothed wheels, the same consisting of a flexible band and a series of hoods attached to its inner side, as shown and described.

No. 26,809. Harrow. (Herse.)

John Evans, Cayuga, Ont., 1st June, 1887; 5 years.

Claim.—1st. The combination, with the bulls 1, of the tooth-holder 3 sleeved thereon, tooth 2 intersecting the bull pipe 8 intervening the bulls and bolt, and nut 10, 11, whereby the tooth will be clamped in the holder by the bull, and the bulls firmly connected by screwing the nut and the tooth be capable of adjustment to any desired height, as set forth. 2nd. The tooth-holder 3, having an opening to receive the bull, sockets 4 in the sides of the opening to partly intersect the bull and receive the tooth bar 5 at one end, and bearing 6, provided with socket 7 surrounding a bolt hole to clamp the holder and tooth to the bull, in the manner set forth.

No. 26,810. Heat Producing Apparatus.

(Appareil pour produire la chaleur.)

George E. Benninghoff and Collin F. Jewell, Kindall Creek, Penn., U.S., 1st June, 1887; 5 years.

Claim.—1st. The combination of the forge or furnace having a combustion chamber, the air and gas supply pipes, the oxygenizers or chambers for mixing the air and gas passed through the air and gas supply pipe, and the conduits extended thence through the forge or furnace wall to the combustion chamber, in a manner to conduct the mixed air and gas into the combustion chamber, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of a forge or furnace, having a combustion chamber, the air and gas supply pipes, the oxygenizers or chambers for mixing the air and gas passed through such pipes, and the conduits extended thence through the furnace wall for conducting currents of mixed air and gas concentrically into the combustion chamber, and distributing the combustion to all parts of or locating the heat of the same in any desired part of the chamber, substantially as specified. 3rd. The combination, with a forge or furnace having a combustion chamber, air and gas supply pipes, oxygenizers and conduits arranged to deliver mixed air and gas horizontally into the combustion chamber, and air and gas supply pipes, oxygenizers and conduits arranged to deliver mixed air and gas horizontally into the combustion chamber, and air and gas supply pipes, oxygenizers and conduits arranged to deliver mixed air and gas concentrically into the combustion chamber, of the conduit connected with the lower air supply pipe, and suitably extended thence through the body of the forge or furnace to the combustion chamber for assisting the blending of the different currents introduced into the combustion chamber through the other conduits, and giving vertical direction to the heat accruing from the combustion of the air and gas in the combustion chamber, substantially as specified.