No. 10,795. Improvements on Elevators. (*Perfectionnements aux élévateurs.*)

Samuel A Bates, Pittsburg Penn U S 10th January 1880 for 5 years

Claim —1st In a self loading barrel hoist the combination of platform frame c having downwardly bent projections c_2 springs e and skid *b*, 2nd In a self discharging elevator, the combination of platform frame n, tilting platform n_1 pivoted to, and carried by said frame two or more rollers n_2 journalled in the tilting platform and mechanism for tilting the platform at the desired point, 3rd As a device for tilting the platform of a self discharging elevator and in combination with such platform, a rock shaft *S* having a projecting stop S_1 attached thereto adapted to engage with, or clear the platforms by the rotation of the shaft and having suitable mechanism for imparting such rotary motion at the will of the operator 4th The combination of endless belt B carrying one or more elevating platforms, guide bars *a* arranged across the belt at or near the platforms and side grooves *a* in the main frame on either side of and in line with the belt and adapted to receive the ends of the bars 5th In an elevator apparatus, the combination of an endless and continuously operating belt, and a passenger car having main platform H_2 secured to the belt and supported by extended back H_3 and brackets or braces H 6th The combination of endless belt B frame c secured to the belt and supported by braces o bucket S pivoted to the frame, rear support o_3, tappet t and a suitable stop or trip for engaging the tappet and tilting the bucket

No. 10,796. Improvements on Trusses for Bridges and Roofs. (*Perfectionnements aux fermes de ponts et de toits.*)

Edward Wasell, London, Ont., 10th January 1880 (Extension of Patent No 4,379), for 5 years.

No. 10,797. Oil Treating Process. (*Procédé de traitement des huiles.*)

Donald D. Cattanach Providence R I U S. 10th January, 1880 (Extension of Patent No. 4,297), for 5 years

No. 10,798. Improvements on Mowing Machines. (*Perfectionnements aux faucheuses.*)

Rudolf Eickemeyer, Yonkers, N. Y., U. S., 11th January, 1880, for 15 years.

Claim.—1st A triangular frame E and the shoe G of a mowing machine combined with the coupling arm H which is jointed to said shoe by a pin I, the axis whereof is parallel with the line of the machine's progression, and to said triangular frame by a pin *g*, the axis whereof is oblique to the line of progression, whereby said shoe and the cutting apparatus, attached thereto, may be rotated upon the pin I to raise the outer end of said cutting apparatus from the ground, or may be independently rotated upon the pin *g* to raise or depress the points of the fingers and cutters 2nd A triangular frame E, shoe G and the connecting coupling arm H, combined with the lifting lever L and coupling rod O, connecting the crank end of said lever with the coupling arm H, whereby said coupling arm may be rotated upon the pin *g*, 3rd. The shoe G connected with the frame of the machine by a longitudinal joint pin I combined with the bale B, the end whereof is jointed to said shoe in front and rear of the cutter bar, and the lever K provided with the hook *k*, wherewith said bale is engaged and whereby said shoe is caused to rotate upon said joint pin I; 4th. A shoe G connecting with the frame of the machine by a coupling arm H, one joint whereof is in the line of the machine's progression and the other joint oblique thereto, so that the cutting apparatus attached to said shoe may be raised or lowered at its outer end, or raised or lowered at the point of the fingers and cutters, and the lifting lever K provided with the hook *k* combined with the bale B constructed with a longitudinal curved slot *b*, to receive and confine said hook *k*, whereby said shoe may be rotated upon its oblique axis while being supported wholly or partly above the ground by the lever K 5th. The inner shoe of a mowing machine hinged to one side of a brace or arm which arm in turn is hinged to one end of a vibrating frame by a hinge diagonal to the shoe hinge, and bisecting the axis thereof at or near the pitman joint at the heel of the cutter bar

No. 10,799. Improvements on Grain-Binding Machines. (*Perfectionnements aux machines à lier les grains.*)

Moses A. Keller, Brockport, N Y, U S., 11th January, 1880, for 5 years.

Claim —1st The rectangular main frame composed of the metallic end piece A and sills B C D, whereby one part of said frame is substantially on a level with the axes of the supporting wheels and another part is upright, and the remainder is horizontal and above the wheels and extended further toward the grain side. 2nd A combined gleaner and binder, the main frame whereof is mounted and balanced upon two wheels and provided with a flexible tongue or thills, and a slotted arm projecting backward from said tongue or thills, combined with a bell crank tilting lever I, wherewith said slotted arm engages, and a segment rack J, whereby said lever may be locked in any desired position for the purpose of enabling the driver to lift the front of the machine, up or down and hold it in any desired position; 3rd. A combined gleaner and binder, provided with an elevator to gather the grain stalks and carry them upward, combined with a cylinder L which rotates in the direction of, and at a speed greater than the machine's advance, whereby the projecting fingers *b* are caused to disturb the grain stalks upon the ground and render them substantially parallel prior to being taken up by the elevator, 4th. A combined gleaner and binder and elevating device to take the grain stalks from the ground and carry them upward, combined with a gatherer L mounted upon a horizontal shaft in front of said elevator and gatherer revolving with the same speed or thereabouts, and in opposite directions. 5th. The revolving gatherer L mounted in bearings suspended from the front sill B, combined with a slotted apron also secured at its upper edge to said sill and with its lower edge curved under said gatherer, 6th. The endless elevator N and the revolving gatherer L, combined with the yielding grain compressers or guard slats *w* attached at their lower ends to the lower edge of the apron, to guide and compress the ascending grain upon the elevator and strip the same from the teeth *l*; 7th. The endless elevator N and the yielding compresser or guard slats *w* combined with a cut-off capable of being thrown forward against said guard slats, to arrest the upward flow of grain without arresting the movement of the elevator; 8th. The endless elevator N, another yielding compresser or guard slat *w* combined with the cut-off slats or apron, hinged at the lower edge and capable of being thrown forward at its top against the slats *w* to cut-off the forward flow of grain; 9th. The endless elevator N, with the yielding compresser or guard slats *w* and a cut off capable of being projected forward against said guard slats combined with the rock shaft D_2 and its crank arms *d* and links *b* for the purpose of actuating said cut-off. 10th In a gleaner and binder an endless elevator to gather and elevate the grain stalks combined with boxes for the lower roller, movable up and down, and depressing springs V, for the same to render said lower roller flexible the more easily to pass obstructions. 11th The rectangular main frame, the upper horizontal part whereof is extended laterally beyond the lower and upright part combined with an elevating device to gather the grain upon the ground and a grain wheel located immediately adjacent to, or in rear of the elevator and clearly within the parts cleared thereby. 12th The driving pulley sprocket wheel M_2 having a ratchet clutch on one side and a cam projecting from said side, combined with the lever O_2 or stop, which may be caused to engage with said cam and thereby move said wheel sidewise out of engagement with said clutch at the will of the driver, 13th. The driving pulley or sprocket wheel M_2 having a ratchet clutch on one side, combined with a pivoted lever O_2 and a foot rod P_2, whereby the driver can, at will, cause said lever to engage with said cam and cause said wheel to go out of engagement with said clutch. 14th The driving pulley or sprocket wheel M_2 having a ratchet clutch upon one side, and a cam *g* combined with the pivoted lever O_2 provided with a stop *h* and the rock shaft R_2, the entire end whereof rests upon the upper part of the receptacle or thereabouts, so that it will be raised up by the passage of a mass of grain over the elevator and thereby trip said lever O_2, to release the driver M_2 automatically, 15th A gleaning and binding machine having an endless elevator and gatherer to gather the grain and elevate it from the ground, a concave receptacle V and a rotating binder arm revolving in the direction of the machine's advance, so as to secure the bundle during the descent of said arm and bind it upon the surface of said receptacle, 16th A revolving binding arm A_2 combined with a fixed cam *k* to impart said arm an irregular movement of advance and temporary pause; 17th. A revolving binding arm A_2 and a secondary arm *m* pivoted thereto, combined with a stationary cam wheel *g* when the knotting of the band has been completed said arm *m* is caused to advance more rapidly than the arm A_2 and thereby discharge the bundle in advance; 18th. The revolving binding arm A_2 pivoted to the arm W, combined with a pin *a*, slot c and cam *k*, whereby the irregular movements of said arm A_2, in advance and pause, are actuated and limited, 19th The revolving binding arm A_2 provided with a pointed end or head, and on the side thereof with a detachable finger *q* and roller *r*, to properly gather the binder cord and present it to the knotting device 20th The rotating binding arm A_2 combined with the compresser Y_2 pivoted at the end of the rod T_2, and made elastic or yielding by a spring *y* and arm *z* likewise fastened upon said rod T_2, 21st. A spool *t*, the spindle whereof is mounted upon a suitable supporting standard, and provided with a pulley at one end, combined with a belt *n*, and a corresponding pulley on the shaft K_2, said belt being adjusted to rotate said spool backwards and thereby produce a constant tension and take up, 22nd The spool *t* provided with a tension to prevent all undue discharge of the binding cord, combined with the tension *v* controlled by a spring *w* and screw nut, the end whereof is made angular and is locked by the reactionary pressure of said spring, 23rd. The tubular shaft K_2 bearing, at one end, the revolving binding arm A_2 and its connected parts, and at its other end, the pulley or sprocket wheel N_2, which receives its motion from the wheel M_2, and the rod T which bears the compresser Y_2, at one end, and the pinion v_2 at the other combined with the cam v_2 and slitted rack bar d_2, for the purpose of imparting to said rod T_2 a vibratory rotation at the proper times 24th The shaft K_2 which actuates the binding arm and its connected devices, provided with an arm a_2 combined with the connecting rod E_2, rock shaft D_2 and cut-off V, 25th. The pulley or sprocket wheel N_2 provided on its inner face with a cam, and a vibrating rack h_2 pivoted to the frame g_2 and pinion at the end thereof, whereby a vibratory reciprocation is periodically imparted to said shaft to actuate the knotting mechanism, 26th. A binder wherein the gavel is compressed, bound and discharged from a binding table or receptacle the horizontal horn or arm m_2 projecting rearward from said table or receptacle combined with a stationary upright horn or stop n_2, to arrest one end of the bundle while being discharged, whereby the discharging mechanism causes the bundle to swing around and fall upon the ground, with its length in the direction of the machine's advance or thereabouts, 27th. The binding arm discharging mechanism of a binder and the supporting arm m_2 combined with an upright stop n_2 attached at its upper end and free at its lower end 28th. The rectangular main frame constructed with the end iron A, at one end of the same, extending around over the sill D_2 and at a distance above it, to constitute a bracket J_2 integral with said end iron, 29th. The binding and discharging mechanism of an automatic binding machine and the supporting arm m_2 combined with an upright stop n_2 attached at its upper end and free at its lower end.

No. 10,800. Improvements on Barrel Stands.

(*Perfectionnements aux chantiers des barils.*)

Léonidas D. West, West Valley, N.Y, U S., 11th January, 1880, for 5 years

Claim.—1st. The caster D consisting of the prong *a* and hook claws *b*, the lug *c*, the sleeve socket *d* extending vertically through said lug and provided with a stop shoulder d_2, and the spindle d_3 having its bearings in said socket, 2nd. The caster consisting of the clip prongs *a b*, the adjustable spindle c_2, the socket *d* and a roller at the lower end of said spindle 3rd The combination of a cover having the pivots or journals at one side of its diameter, and the adjustable hangers G depending from a suitable support and affording bearings to said pivots a barrel eccentrically supported upon a pivot and casters, 4th. The combination with the hangers or hooks G and the cover having pivots at one side of its diameter of the bearing blocks J adjustable vertically on said hooks, and the eccentrically pivoted and horizontally vibrating barrel A; 5th The combination with a counter or shelf and a barrel supported upon casters of a recessed chock receiving one of the rollers of said casters, 6th The chock consisting of the U shaped section *g* having points upon its underside and provided with inclined ways *r*, and the section g_2, received in said ways designed to be secured to the flow and forming with section *g* a recess *x*.

No. 10,801. Improvements in Fanning Mills.

(*Perfectionnements aux tarares-cribleurs.*)

John R. Mitchell, Milton, Ont., 11th January, 1880, for 5 years.

Claim.—1st The sieve A provided with a drip slide B, in combination with the spout C; 2nd. The sieves A F G contained in the frame K, in com