

Claim.—1st. The combination, with a scalloped rotary feed-wheel, of a sliding sleeve C provided with wings A B, one wing being arranged above, and the other in or near a horizontal plane passing through the axis of said sleeve. 2nd. A grain drill distributor having a peripheral sleeve wheel, a sliding sleeve C provided wings A B located above or near the centre of the peripheral seed wheel, and also provided with a division plate F.

No. 13,147. Improvements on Grain Binders. (*Perfectionnements aux lieuses à grain.*)

Alexander Kay, Ayr, Ont., 21st July, 1881: for 5 years.

Claim.—1st. The combination, with platform 1 having segmental slot 13, of the arms 7 9 secured to pivoted post 8, both arms moving laterally and vertical to each other, the arm 7 pivotally connected to head of the post 8 and operated vertically by latching cams 6 in posts 5 secured to the platform, said arm 7 carrying the binding wire 7 and the arm 9, the twister wheel 23 and the chisel cut-off 25. 2nd. The combination, with arm 9 of pivot post 8, arm 7 and spool 16, with the spring arm 20 for feeding and taking up the wire 17. 3rd. The chisel cut-off 25, operated by cam 26, in combination with the twister wheel 23 in the head of arm 9 for cutting the wire subsequent to the shears. 4th. The combination of presser arm 29, rod 30 and rods 31 32, and eccentric 33 for operating the same co-equally with the arm 7 for pressing the gavels. 5th. The spring presser 34 in combination with the presser arm 29, for directing the lay of the gavel. 6th. The combination of the spring shears 27 holding the end of the wire, the chisel cut-off 25 and twister wheel 23 in the head of arm 9, for cutting off the excess of twisted wire.

No. 13,148. Improvements on Churns. (*Perfectionnements aux barattes.*)

Frank M. Wright, Palmyra, N. Y., U. S., 21st July, 1881: for 5 years.

Claim.—1st. In combination with churn body A provided with corner shoulders B, the base or connecting bar C of the standards D, and the rear standards F forming a frame E, the said standards, at their lower extremities, being detachably secured to the churn body by means of the cams K. 2nd. In combination with the ends of the churn body and the projecting sides of the same, the standards D F recessed at L, and the cams K adapted to bear in said recesses. 3rd. In combination with the frame E, the cross M forming bearing for the driving shaft and provided with the lugs O having, pivoted between them, the boxes P slotted at their free ends and adapted to be secured over the shaft. 4th. In combination with the driving shaft and the fly wheels secured thereto, the adjustable wrist pins s secured to the wheels respectively, diametrically opposite each other. 5th. In combination with adjustable wrist pins s, the pitman T, dasher rods A slotted and embracing the crank shaft, and the divided top Bt provided with openings for the passage of the dasher rods. 6th. In combination with the driving wheel the adjustable wrist pin projecting beyond the pitman and provided with a winch or crank.

No. 13,149. Improvements on Devices for Carrying Fruit. (*Perfectionnements aux appareils à transporter les fruits.*)

George A. Cochrane, Liverpool, Eng., 21st July, 1881: for 5 years.

Claim.—1st. The packing, keeping or carrying of fruit in cases, arranged so that each piece of fruit shall be separated from the others, and be only obliged to support its own weight. 2nd. The packing, keeping, or carrying of fruit in cases arranged so that there shall be a thorough ventilation throughout the case. 3rd. As a new article of manufacture, a packing case with knobs A arranged so as to prevent another case coming right up to it, but so that there shall be a vacant space on every side of it, in combinations with slits or ventilating holes all over the case. 4th. As a new article of manufacture, a perforated packing case fitted with perforated shelves or trays with partitions to separate the various specimens of fruit from each other. 5th. The combination, with a case for holding fruit, of perforated trays C for carrying each layer independently of the others, and the notched or perforated partitions D for separating the fruits from each other. 6th. The combination, with a case for holding fruit, of the trays C for carrying each layer of fruit independently of the others, with the distance pieces E. 7th. As a new article of manufacture, the perforated trays glazed on their surface, so that they shall absorb as little moisture as possible from the fruit, while admitting through ventilation and separating the fruits one from the other. 8th. The method of carrying or stowing fruit on shipboard, or in warehouses, consisting in isolating each fruit from the other, in ventilating cases and placing these ventilating cases on perforated disks or floors above a vacant space from which the deleterious vapours can be removed. 9th. As a new article of manufacture, the strips of glazed perforated cardboard, millboard, or paper, for winding in and out among the fruit to form a partition. 10th. As a new article of manufacture, a packing case with double perforated sides, with one of the layers of the side free to slide on the other, so as to close the perforations to any reasonable extent.

No. 13,150. Improvements on Bark Cutting Machines. (*Perfectionnements aux machines à couper l'écorce.*)

Samuel R. Thompson, Brookline, and Samuel W. Johnson, West Medford, Mass., U. S., 21st July, 1881: for 5 years.

Claim.—1st. A rotary cutter having alternating long and short teeth, arranged in longitudinal rows, the alternating long and short teeth of said rows being respectively alternated with the short and long teeth of each adjacent row. 2nd. In combination with a rotary cutter having independent teeth and a chute or passage leading from such cutter, a rotary shaft D located in the chute, having a series of collars F and intervening pockets G, the diameter of said collar being about equal to the width of the chute, so that they arrest all fragments too small to enter the pockets, the latter carrying away the properly reduced particles. 3rd. The rotary shaft D having collars F, intervening pockets G and teeth I on said collars, combined with the fixed block having a grooved shoulder J. 4th. In combination with the chute or passage C and the shaft D, having collars F and pockets G, the sliding frame E supporting the shaft D and enabling said shaft to be removed from the machine. 5th. The combination of a frame or base B supporting a

cutter at its top, the hopper frame having the feed roll U, inclined bed plate Q and lugs P pivoted to the frame B, so as to permit the hopper frame and feed roll to be turned back.

No. 13,151. Improvements on Bee Hives. (*Perfectionnements aux ruches.*)

William S. Blaisdell, Randolph, Vt., U. S., 21st July, 1881: for 5 years.

Claim.—A bee hive constructed with the broad frames arranged in a circular form around a central standard, or common centre. 2nd. The combination of a circular series of broad comb frames with a central hollow standard. 3rd. A circular series of comb frames, the use of alternate wide and narrow frames allowing the circular arrangement of frames. 4th. The combination, with a circular series of comb frames, of removable separating bars. 5th. The combination of a circular series of broad comb frames, with a series of surplus honey boxes also arranged in a circular form and having plates J attached to the sides of each set. 6th. The combination, with the base and top of the line, of a binding rod. 7th. The combination, with the binding rod, of a cylindrical cup. 8th. The combination, of the hollow standard, of the circular series of broad comb frames, of the removable separating bars of the series of surplus honey boxes, and of the surrounding cylinder.

No. 13,152. Process of, and Apparatus for the Treatment of Ores. (*Procédé de traitement des minerais et appareil pour cet objet.*)

Thomas G. Walker, Morristown, N. J., U. S., 21st July, 1881: (Extension of Patent No. 13,061.)

No. 13,153. Process of, and Apparatus for the Treatment of Ores. (*Procédé de traitement des minerais et appareil pour cet objet.*)

Thomas G. Walker, Morristown, N. J., U. S., 22nd July, 1881: (Extension of Patent No. 13,061.)

No. 13,154. Improvements on Hydro-Carbon Gas Generators. (*Perfectionnements aux générateurs à gaz d'hydrocarburé.*)

Peter J. Fitzgerald, Sharon Hill, Penn., U. S., 25th July, 1881: for 5 years.

Claim.—1st. In a hydrocarbon gas generator, the combination, with a closed hydrocarbon reservoir provided with an air supply pipe, and a coil or fixing retort arranged for continuous operations, of a pipe leading from within and near the bottom of said reservoir, to and connecting with said coil or retort, whereby when air is forced into said reservoir above the level of a liquid hydrocarbon therein, practically the entire quantity of said hydrocarbon will be forced through said pipe to said coil or retort in continuous supply. 2nd. The combination, with the pipe connecting a hydrocarbon reservoir with a fixed gas holder, of a coil or fixing retort comprised of a coil intermediately connected, with said connecting pipe, and arranged for the vapours to pass through it, and suitable means for heating said coil. 3rd. The combination, with the coil or retort E and the burner below it, of the deflecting disk arranged immediately above said coil. 4th. The combination, with the continuously operating coil or retort and the gas holder, of a vertical pipe connecting said holder with a pipe leading from said retort, and terminating within and near the bottom of said holder. 5th. The combination, with the continuously operating coil or retort, and the gas holder, of the vertical pipe H connected with said retort terminating within and near the bottom of the holder and provided with the needle-point valve, the air passages and the injector cone arranged within said pipe below said air passages. 6th. The combination with the conical externally threaded sleeve embracing the shank of needle-point valve L, of the disk M having the central conical threaded aperture in its hub. 7th. The combination, with the hydrocarbon reservoir, and a pipe Q leading from its top to a service pipe, of the centrally perforated disk arranged horizontally over the entrance to a chamber arranged in said pipe Q, and somewhat smaller in diameter than said chamber. 8th. The combination, with the pipe H connected with the retort, and the top of the gas holder, of a valve to admit gas to the top of said pipe, the injector cone arranged below said valve, and the air supply tubes tt connected to the said pipe between the valve and injector cone.

No. 13,155. Improvements on Mittens. (*Perfectionnements aux mitaines.*)

Henry W. Price, Rockford, Ill., U. S., 25th July, 1881: for 5 years.

Claim.—In a mitten, the back and wrist portions formed of knitted or looped fabric, and made in a single piece of L-shape, and the palm, thumb side and tip overlapping portions made of leather. 2nd. In mitten, the back and wrist portions formed of knitted or looped fabrics and made in a single piece of L-shape, and provided with edge and top overlaps, of a palm joined thereto, having a welt inserted in the seam connections. 3rd. In an article of manufacture, the described mitten having a back and wrist of knitted, looped or other equivalent fabric, a palm having an upper edge overlapping portions, a lower edge overlapping portion, an overlapping tip, and a lined palm and thumb.

No. 13,156. Improvements in Plaiting Machines. (*Perfectionnements aux machines à plisser.*)

George W. Hendall, St. Albans, Vt., U. S., 25th July, 1881: for 5 years.

Claim.—1st. The combination of the perforated yoke C carrying the plaiting knife hinged thereto, and operating the roller G, the cylinder F and endless belt E. 2nd. The drum of cylinder F supported against the upper roller by means of the endless belt. 3rd. In combination with the rotary cylinder, the lamps arranged to extend through the cylinder, carried on shelf secured to the frame and moved in and out. 4th. The herein described arrangement of rotary-heating cylinder, endless belt, upper feed roll, vibratory knife and stops.