

**Claim.**—1st. In a harvesting machine in which the axle of the main driving wheel is supported in bearings on the main frame on both sides of the said wheel, and the tongue flexibly connected to the main frame, a bracket E pivoted on the main frame D and having a vertical rectangular slot made in it to receive the post E, supporting the inner end of the finger beam G, in combination with a diagonal brace J extending from the main frame to the finger beam. 2nd. In a harvesting machine having a single driving wheel, a main frame D, the inner side of which is straight and runs at right angles to the axle B of the main driving wheel, a rectangular post F connected to the finger beam G and free to move vertically in a bracket on the straight side of the main frame, to which is also connected a diagonal brace J extending from the frame to the finger beam, in combination with the tongue K pivoted upon the straight side of the main frame and provided with a diagonal brace extending from the tongue to the outer side of the main frame, which extends out to form a support for the foot rest and driver's seat E. 3rd. In a harvesting machine in which the axle of the main driving wheel is supported in bearings on both sides of the said wheel and the tongue flexibly connected to the main frame upon which the said bearings are seated, a linker stirrups L formed upon the projecting end of the frame and encircling the tongue in combination with the braces J M.

**No. 14,939. Improvements in Coal Washing Machines.** (*Perfectionnements aux machines à laver le charbon.*)

Charles Sheppard, Bridgend, Wales, 10th June, 1882; for 5 years.

**Claim.**—The arranging or combining parts for use in washing and purifying coal, ashes, and other substances, in respect of figures 1, 2 and 3, whereby the coal or other matter is washed, purified and delivered in a semi-dry state without the use of separate settling ponds, and without the necessity of raising the water again to the machine, and without discharging foul water during the process.

**No. 14,940. Improvements on Self-Feeding Stoves.** (*Perfectionnements aux poêles à alimentation automatique.*)

Frank J. Gould, Sydney, Ohio, U.S., 10th June, 1882; for 5 years.

**Claim.**—1st. The combination, with shell B and magazine D having a vertical row of perforations *h* upon its front, of the tube G closed at top and open at bottom, and connected with the outside air by means of pipe K situated near the lower end of said tube G. 2nd. The combination, with the shell B and magazine D, of the annular collar E having its front cut away to form opening *g*. 3rd. The combination, with the shell B, the top I I' and the collar E having front orifice *g*, of the magazine D whose top is some distance below the top I I', and the chamber M, whereby the top of the stove is heated. 4th. The stove consisting of the bottom A, shell B, top I I', removable magazine D provided with perforations *h*, pipe K and tube G, annular collar E, double top F, handles F2 and flue K.

**No. 14,941. Improvement in Stone Dressing Machines.** (*Perfectionnement des machines à tailler la pierre.*)

Alexander McDonald, Cambridge, Mass., U.S., 10th June, 1882; for 5 years.

**Claim.**—1st. The combination of the cutter carriage and its guides, with the supporting frame and with the vertically movable said arranged within such frame and applied to the said carriage and provided with adjusting screws and nuts, such carriage being furnished, as represented, with friction rollers to bear against the rail. 2nd. The cutter carriage, provided with the series of stalls and adjusting screws to each arranged in it. 3rd. Each cutter carrier provided with the screw and its pivoted nut. 4th. The cutter carriage provided with the cutter carrier receiving stalls and their cutter carrier adjusting or clamping screws, in combination with the cutter carriers arranged in such stalls, and provided with screws and pivoted nuts to operate in and with the carriage. 5th. The cutter carrier having the screw and pivoted nut, and cutters projecting from one side of it and inclined to its axis, such being for use in the cutter carriage and for dressing the vertical edge of a stone.

**No. 14,942. Process for making lacing studs.** (*Procédé pour faire les boutons à lacer.*)

Mellen Bray, Newton, Mass., U.S., 19th June, 1882; for 5 years.

**Claim.**—Cutting a cylindrical blank from a wire of a diameter about equal to the desired diameter of the shank of the stud or hook to be made, bending one portion of said blank at right angles to the other portion, and embossing or swaging said bent-over portion by means of suitable dies, to give contour to the parts which are to constitute the neck and the outer or button head, bending the neck to bring the button head over the shank and inner head, and then drilling out the centre of the shank.

**No. 14,943. Apparatus for forming heel counters.** (*Appareil pour façonner les contreforts des talons.*)

Michael Hynes, (assignee of Etienne Solomon,) Montreal, Que., 10th June, 1882; (extension of patent No. 7550.)

**No. 14,944. Improvements on Grain Binders.** (*Perfectionnements aux lieuses à grain.*)

The McCormick Harvesting Machine Company, (assignee of William R. Baker,) Chicago, Ill., U.S., 12th June, 1882; for 5 years.

**Claim.**—1st. In a grain binder, the combination, with the grain receptacle and supporting bar which carries the tripping fingers, of

locking mechanism, which holds said bar positively against movement, away from the receptacle, until the tripping fingers, have started the binding mechanism. 2nd. The combination, with the trip-lever the yielding tripping-fingers and the spring supported bar which carries said fingers, of locking mechanism which positively stops the arm from yielding against the stress of the spring, until the trip lever has been actuated by the fingers. 3rd. The combination, with the vibrating binding arm, the tripping finger or fingers and the supporting bar which carries the latter, of a hinge connection between said binding arm and supporting bar rigid in one direction, whereby the bar is locked against yielding or sagging when the binding arm is down. 4th. The combination of the trip lever, the tripping fingers, the supporting bar which carries the latter, the vibrating binding arm and a hinge connection between said binding arm and supporting bar, adapted to lock the latter against yielding away from the grain receptacle until the trip lever has been actuated and the binding mechanism. 5th. A support E for the compressing and tripping fingers *c* hinged to the binding arm, in combination with a pin *e* on support E and a lips *e1* on the binding arm.

**No. 14,945. Improvements on Harvesters and Binders.** (*Perfectionnements aux moissonneuses-lieuses.*)

The Toronto Reaper and Mower Company, Toronto, Ont., (assignee of William N. Whiteley, Springfield, Ohio., U. S.), 12th June, 1882; for 5 years.

**Claim.**—1st. A single wheel side and rear cut mowing machine provided with a drag bar C, ratchet levers U U1 conveyer platform C combined with a revolving reel R1 and an extension C3 C4 for the support of the binding mechanism and the aforesaid reel. 2nd. A conveyer-platform C1 with rake teeth *b* and ways *b1* and extension rods *b2*, in combination with a binding table *b1* provided with the extended shoe C C1 C11 C111 C1111 for supporting the binding mechanism, and the rear end of the conveyer platform C combined with meter-gear *n1*, tumbling shaft *n*, universal joint *p* and spring clutch E. 4th. In a binder table C provided with a lever *d* combined with a connecting rod *d1*, spring *j*, clutch E, interposed finger H operated by projection H1 of binder arm *l*. 5th. A compress composed of parts *c f g* provided with extensions *e1 f1* and operated by crank *h*, link *i* and lever *e3*.

**No. 14,946. Improvements on Gas Regulators.** (*Perfectionnements aux régulateurs à gaz.*)

Griffin S. Lacey and Arthur B. Denning, New York, N.Y., U.S., 12th June, 1882; for 5 years.

**Claim.**—1st. In combination with the valve *c*, diaphragm *m*, inlet *a* and outlet *b*, the auxiliary valve *e* and its valve seat *f*, said valve *e* being arranged to slide vertically upon the rod *i* and its valve seat *f* being provided with the perforations *h*. 2nd. The combination of the *o*, ring *p* and annular plate *q* provided with the projections *r*, for the purpose of clamping the diaphragm.

**No. 14,947. Improvements on apparatus for transmitting heat to fluids, etc.** (*Perfectionnements aux appareils à communiquer la chaleur aux fluides, etc.*)

Alexander R. Fraser, (assignee of Thomas W. Duffy,) Liverpool, Eng., 12th June, 1882; for 15 years.

**Claim.**—1st. The use of corrugated concentric cylinders or casings united at their ends in pairs by end rings. 2nd. In apparatus of the kind referred to in the preceding claim making the joints between the end rings and the corrugated cylinders or casings. 3rd. In apparatus of the kind referred to in the first claim, the use to afford communication between the closed annular chambers and the outer sides of the tube plates of pipes formed in one with the end rings and secured by hollow set screws. 4th. In apparatus for condensing or cooling utilizing part of the energy of the entering steam to drive a fan for aerating the condensed water. 5th. The improved apparatus for transmitting heat to fluids, applicable also for condensing and cooling.

**No. 14,948. Improvements on Stock Cars.** (*Perfectionnement aux chars à bestiaux.*)

Jacob H. Shellabarger, Topeka, and Samuel A. Shellabarger, Beloit, Ks., U. S., 12th June 1882; for 5 years.

**Claim.**—1st. In combination with car A having double set of doors S arranged opposite each other, the adjustable longitudinally arranged stall partitions F and troughs *b1 b2* secured at each end and centre of the car, thereby forming aisles across the car from door to door through which the cattle enter the stalls. 2nd. The stalls or removable partitions F bound on their edges with metal and formed with notches *h k* and provided with pins *d*, in combination with cross piece *b*, stationary cleats *a1* and cleats *l*. 3rd. In combination with car A having double sets of doors S and provided with stationary cleats *a1*, the cross piece *r*, removable and interchangeable stall partitions F, troughs *t1 b1* and cross bar *p*.

**No. 14,949. Improvements on Rock Drills.** (*Perfectionnements aux tourets à rochers.*)

Aaron J. Mershon, Warsaw, Ind., U.S., 12th June, 1882; for 5 years.

**Claim.**—1st. The combination, in a rock drill to be driven by hand or other power, of a balance wheel C having upon its face segmentally formed lifting projections C1 C2, a lifting arm E1 for raising the drill and a drill stock, said arm being placed loosely upon the drill stock so as to turn thereon an arm E2 for giving impetus to the downward movement of the drill, and a spring E3 for aiding such movement. 2nd. The combination of the adjustable frame A, the column D, drill stock E and spring E3. 3rd. The combination of the pivoted lever F and the arm E1.