

No. 14,931. Belting Leather and Leather Stuffing and Fulling Machine.
(*Cuir à courroies et machine à bourrer et fouler le cuir*)

John A. J. Shultz, St. Louis, Mo., U.S., 9th June, 1882; (Extension of Patent No. 7555.)

No. 14,932. Improvements on Harvesters and Binders. (*Perfectionnements aux moissonneuses-lieuses.*)

George Draper, Mayo, Maine, Wis., U.S., 10th June, 1882; 5 years.

Claim.—1st. The packers *c* or their equivalent, located between a harvester and a binding apparatus, and constructed to be capable of transferring cut grain from one to the other. 2nd. In a deflector *S* or its equivalent, against which the cut grain may be packed in a suitable manner to cause said deflector to change its position, in combination with a suitable coupling device, whereby the binding mechanism is put in motion. 3rd. A binding mechanism capable of being adjusted by means of a rack and pinion, or other suitable mechanism, in combination with a harvester so constructed and arranged in relation thereto, that the binding apparatus can be regulated to encircle the cut again in the centre of its length, so as to insure satisfactory binding where the cut grain is of uneven lengths. 4th. In a binder arm *B* having an intermittent rotary motion and making a complete revolution while assisting in compressing binding and ejecting a sheaf, in combination with a compress finger *C*. 5th. In a combined harvester and binder capable of adjustment, whereby their relative positions are changeable provided with a tumbling shaft *b* *11*. 6th. In a combined harvester and binder mounted upon the wheels *W* *1*, *W* *2*, each of which are adjustable vertically, and *W* *1* and *W* *2* castor wheels. 7th. A rotary binding arm *B* provided with wheels *e* *1*, *e* *2*, cutter *e* *3*, and gearing *h* *1*, *g*, in combination with binder head *m* having teeth *e* *4*, and projections *f* *1*. 8th. A pivotal deflector *S*, in combination with crank *a* *1*, tappet *B* and mowing track *e* *4*, whereby the spring clutch *e* *4* may be thrown in or out of gear. 9th. A rotary binding arm *B*, in combination with a spring compress *C* *M* *1*. 10th. A rotary binding arm *B* and a binding head *M*, in combination with a pivotal compress finger *C* *M* *1* that slides upon rods *N* *O* and controlled by spring *d* *1*, roller *l* *1*, and cam track *d* *h* *c*. 11th. A side and rear cut harvesting machine provided with a overhanging binding apparatus with its grain receptacle nearly on a level with the horizontal conveyor, thus obviating the passage of the grain over the master wheel, in combination with an intermediate conveying and packing mechanism for transferring the cut grain from the conveyor to the binding receptacle. 12th. The lever *d* *1* working with, and actuated by the self-starting mechanism *S* *1* and by which it is caused to raise and obstruct the passage of grain up the incline *J* during the time the binding arm is making its revolution to bind the grain and to retreat, when the binding of a sheaf has been completed. 13th. In a combined harvester and binder capable of adjustment one to the other to suit varying lengths of grain, a telescoping receptacle *I* to receive loose and straggling grain. 14th. A side and rear cut harvester and binder so arranged and constructed that the passage of the cut grain over the master wheel is dispensed with, and having its binding mechanism supported on the main frame of the harvester leaving an unobstructed space in the rear thereof for the free discharge of the gavel. 15th. A side and rear cut harvester and binder constructed to support the weight of the binding mechanism between the main drive wheel and the outer carrying wheel, in order to provide for the discharge of the bound grain in the rear of the main supporting and driving wheel.

No. 14,933. Improvements on Meat Cutters.
(*Perfectionnements aux hache-vande.*)

John Zimmerman and William D. Alford, Cincinnati, Ohio, U.S., 10th June, 1882; for 10 years.

Claim.—1st. The knife collars constructed with one or more radial dovetailed recesses, one face to receive the dovetailed shank of a knife, and of a depth equal to the thickness of said shank. 2nd. The knife collars constructed with radial dovetailed recesses in one face, of different depths, to receive thick or thin knives. 3rd. The combination, upon a single shaft, of a series of collars having one or more radial dovetailed recesses in one face of each, with a series of knives constructed with dovetailed shanks to fit within said recesses, the whole being damped upon the shaft between a fixed head and a nut, with the non-recessed faces of the collars bearing against the shanks of the knives in adjoining collars. 4th. In a machine for cutting meat, the combination of a series of collars, having radial dovetailed recesses in one face, with a series of radial knives having dovetailed shanks to fit within said recesses, the whole being clamped upon a shaft between a fixed head and a nut with the collars so fitted upon a spline or key as to give the knives a spiral arrangement upon the shaft. 5th. In combination with the series of rotary cutters, the cutting comb *I* composed of a metal plate formed with teeth on one edge, which are each shaped longitudinally to produce a raised cutting edge *K*. 6th. The combination of the curved knives formed with one flat side, with the comb teeth *J* formed with a raised cutting edge *K*, said knives and teeth operating with close contact to form a shearing cut. 7th. The combination, with the rotary knives of the cutting comb plate *I* having raised edges *K* and placed on one side of the knife shaft, and suitable clearing comb *L* placed on the opposite side of the shaft. 8th. The combination of the separately removable knives and sliding collars provided with recesses in one side, with the cutting comb-teeth *J* *K*. 9th. The combination of the trough *M* with the frame, the spirally arranged knives and the cutting and clearing combs. 10th. The combination of the heaters, placed with one or both comb plates for the purpose of preventing oleomargarine material from adhering to them, and at the same time preventing the hopper from becoming too highly heated as to melt the material within it.

No. 14,934. Improvements on methods of, and apparatus for filtering water and cleaning filter beds.
(*Perfectionnements aux méthodes et aux appareils pour filtrer l'eau et nettoyer les filtres.*)

The Newark Filtering Company, Newark, (assignee of Patrick Clark, Rahway.) N. J., U.S., 10th June, 1882; for 5 years.

Claim.—1st. In cleansing filtering-beds the upper parts of which are composed of sand, or other material, in granular form, the method of separating from the granular material obnoxious particles of less specific gravity than the granular material, which consists in agitating the latter from above by means of jets of water, and then causing the obnoxious particles which rise above the filter bed to be conducted off by a current of water. 2nd. In cleansing filtering-beds, the upper parts of which are composed of sand, or other material in granular form, the method of separating from the granular material obnoxious particles of less specific gravity than the material, which consists in agitating the latter by means of jets of water travelling over the same, and then causing the obnoxious particles which rise above the filter-bed to be removed by a current of water. 3rd. An apparatus for purifying a filtering bed in which a hollow arm or pipe, provided with apertures upon its lower sides, is actuated horizontally by means of internal hydraulic pressure. 4th. An apparatus for purifying a filtering bed, in which an arm or pipe having apertures in its lower side, is rotated, and water forced through the apertures by internal pressure, the rotation being effected by unbalanced pressure. 5th. In a filtering apparatus consisting of a filter-bed composed of the perforated floor *D*, wire cloth *E*, layer of sand *G* and the revolving perforated distributing pipe *L* connected with a supply pipe. 6th. In a filtering apparatus, the distributing pipes *L* *L* supplied with the apertures *O* *P* *Q* and connected with a supply pipe, in combination with a filtering-bed. 7th. In a filtering apparatus, a bed composed of sand resting upon fine wire-cloth, in combination with the pipes *L* *L* provided with the apertures *O* *P* and connected with, and turning on the pipe *II*.

No. 14,935. Improvements on Process and Apparatus for the Filtration of Water. (*Perfectionnements aux procédés et appareils de filtration de l'eau.*)

The Newark Filtering Company, (assignee of John W. Hyatt,) Newark, N. J., U.S., 10th June, 1882; for 5 years.

Claim.—1st. A series of independent filter beds of granular or reduced material and a washer or agitator, the beds being each provided with inlet and outlet ports connected with a common supply and delivery pipe, and the washer, or agitator, consisting of a series of subordinate agitators upon a common shaft, whereby the separate beds are simultaneously agitated to effect a separation of obnoxious material and permit of a removal of the same. 2nd. In a casing containing a bed of filtering material in reduced or granular form, the washer pipe *H* having a pipe or pipes *i* containing an outlet, or outlets, protected with wire-cloth, or analogous material, the pipe or pipes being arranged to enter the bed. 3rd. In a receptacle containing a series of beds of sand, or other suitable filtering material, separated by hollow perforated partitions provided with inlet and outlet ports connecting with a supply and delivery, in combination with washer pipes adapted to be rotated and issue jets of water in each of said beds. 4th. In series of sections *B* forming hollow partitions between beds of filtering material, the central washer pipe *H* passing through the partitions and supplied in the compartments between them with shorter pipes *i*. 5th. The sections *B* cast with the lugs *a*, upon which screens *b* are placed, and forming the compartments *J* containing filter beds, in combination with the rotating pipe *H* and pipes *i*.

No. 14,936. Improvements on Provision Safes. (*Perfectionnements aux garde-manger.*)

Leroy J. Osborne, New York, and Claudius F. Bently, Brooklyn, N.Y., (assignees of Aaron Osborne, Georgetown, Ct.,) U.S., 10th June, 1882; for 5 years.

Claim.—1st. As a new article of manufacture, a provision safe having its sides hinged, and adapted to fold together without being detached one from another. 2nd. A provision safe having its several sides jointed together by hinges applied to the joints alternately inside and outside of the body, whereby said body is adapted to fold together without separation, of the sides one from another. 3rd. In combination with a collapsible body of a provision safe, a board or stretcher adapted to fit within the body and to hold the same in an expanded condition. 4th. The collapsible body for a provision safe consisting of parallel sides, and of a front and back extending to the outer faces of said sides, the part being connected by hinges applied to the joints inside and outside of the body alternately.

No. 14,937. Improvement on Harvester Finger Bars. (*Perfectionnement des barres de faucilles des moissonneuses.*)

William N. Whiteley, Springfield, Ohio, U.S., 10th June, 1882; for 5 years.

Claim.—1st. In an angle iron finger beam for harvesting machines, the floor connected to the lower angle, and roller bearing connected to the upper angle, in combination with a guard finger seated in the groove or corner in the finger beam. 2nd. The combination of an angle iron finger beam, with the guard finger seated in recess or angle in a finger beam for the purpose of steadying guards to its place. 3rd. The combination of an angle iron finger beam, the guard finger, seated in a recess or corner of the upward projecting portion of the angle finger beam, with a cap or support for the knife, also located upon upper angle, attached to the said support, fastened directly upon the upper flange of said angle. 4th. The combination, with an angle iron finger beam, of the floor attached to the lower angle, and roller bearing, roller and conveying apron supported upon the upper angle of the finger beam, and a recess or seated guard finger on the upper angle of the finger beam.

No. 14,938. Improvements on Harvesting Machines. (*Perfectionnements aux moissonneuses.*)

William N. Whiteley, Springfield, Ohio, U.S., 10th June, 1882; for 5 years.