

between the wire and the post, acting upon said bolt, to cause it to grip the wire between the head and the said bearing face. 2nd. A fence wire fastening consisting of a bolt, the head of which is hooked back far enough to reach over the wire and its bearing, said bearing consisting of metallic facing placed between the wire and the post. 3rd. A fence wire fastening consisting of a hook headed bolt, which hook reaches back far enough to reach over the wire and its bearing, in combination with a washer forming said bearing, which is provided with a slot for the passage of the point of said hook. 4th. A fence wire fastening consisting of a link or loop bent around the wire, and a wedge-shaped nail driven through the ends of said bent link and into the post.

No. 13,642. Improvements in Hand Seeders.

(*Perfectionnements aux semoirs à bras*)

Elijah Kemper, Thornville, Ohio, U. S., 9th November 1881; for 15 years.

Claim.—A hand seeder composed of a can or vessel provided with a valve for regulating the flow of the seed, and the spout having its outer end contracted, and holes made through opposite sides of the spout, near this contracted end.

No. 13,643. Improvements on Two-Wheeled Vehicles. (*Perfectionnements aux voitures à deux roues.*)

Peter Herdic, Philadelphia, Pa., U. S., 9th November, 1881; for 15 years.

Claim.—1st. The combination of the vehicle body, the shafts, the cranked axle, the main springs secured to the axle and having pivoted connection at both ends, with the vehicle body and the bracing springs, or their specified equivalents, secured at their rear ends to the axle cranks, and having pivotal connection at their front ends with the vehicle body. 2nd. The running gear for two-wheeled vehicles, consisting essentially of the combination of the cranked axle, the main springs secured thereto, at or about their middles, the braces or bracing springs located above the main springs, and secured at their rear ends to the axle cranks, the cross bars with which the front ends of both sets of springs have pivotal connection, and the bracket or brackets to which the rear ends of the main springs are jointed. 3rd. The combination of the cranked axle, the main springs, the braces or bracing springs, the cross bar to which the braces or bracing springs are jointed at their front ends, and the pendent brackets secured to said bar, and to the lower end of which the main springs are jointed. 4th. The combination of the vehicle body, the shaft, the cross bar and the braced pendent brackets. 5th. The two-wheeled passenger vehicle consisting of a body, the cranked axle, the main springs secured about midway their lengths to the axle and having pivoted connection at their front and rear ends with the body, the bracing springs rigidly connected at their rear ends with the axle cranks located above the main spring and having pivoted connections at front with the body, the shafts, the driver's seat and the rear door or doors.

No. 13,644. Improvements on Vehicles. (*Perfectionnements dans les voitures.*)

Peter Herdic, Philadelphia, Pa., U. S., 9th November, 1881; for 15 years.

Claim.—1st. The combination of the cranked axle, the main supporting springs secured thereto, and the braces located above said springs and having connection with the axle cranks and the vehicle body. 2nd. The combination of the cranked axle, main supporting springs rigidly secured thereto, and bracing springs located above said supporting springs and rigidly connected, at their rear ends, with the axle cranks. 3rd. The combination of the vehicle bed or body, trusses or brackets having rigid connection therewith, the cranked axle, the main supporting springs secured to said axle and having jointed connection, at their front ends, with the vehicle body, and the braces or bracing springs connected with the axle cranks located above the main supporting springs and having jointed connection, at the front ends, with the vehicle body through or by way of the said trusses or brackets. 4th. The combination of the cranked axle, the main supporting springs, the trusses or brackets, the frame or cross-bars to which these brackets are secured and with which frame said springs are jointed at their front ends, and the bracing springs rigidly connected at their rear ends with the axle cranks, and jointed at their front ends to the brackets or trusses. 5th. The combination of the vehicle bed or body trusses or brackets having rigid connection therewith, the cranked axle, the main supporting springs secured to said axle and having jointed connection at their front ends with the vehicle body, the braces or bracing springs connected with the axle cranks located above the main supporting springs and having jointed connection at their front ends with the vehicle through, or by way of the trusses or brackets, the non-turning front axle-tree, or axle proper, the front supporting springs jointed to the axle-tree and having rigid connection at their rear ends with the vehicle body, and the front braces or bracing spring having connection with the vehicle body, located above the front supporting springs and having jointed connection at their front ends with the axle-tree. 6th. The combination of the non turning front axle tree, or axle proper, the turning posts provided with axle arms, the front supporting springs jointed to the axle tree, the front bracing springs also jointed to the axle-tree, and the vehicle body with which all of said springs have rigid connections at their rear ends. 7th. The running gear consisting of the combination of the rear cranked axle, the rear supporting and bracing springs, frame or cross bars, the bracket or trusses thereon, with which frame and brackets the front ends of said supporting and bracing springs are respectively jointed, the non-turning front axle-tree or axle proper, the supporting and bracing springs jointed to said axle-tree at their front ends and, at their rear ends respectively, connected firmly with the bracket frame or cross bars and adapted for rigid connection with the vehicle body. 8th. The combination of the axle tree, or axle proper, having the pairs of struts or braces at its ends, provided with bearing seats or sockets, and the axle arm carrying turning posts formed with the rounded or semi-circular bosses at both ends, fitted in the strut sockets and secured in place. 9th. The axle arm carrying turning post provided with the bosses and the threaded studs at both ends. 10th. The vibrating bracket Q having

the arms or forks *q q q* and perforated lugs or sockets *m m*. 11th. The combination of the vibrating draft bar, the forked bracket Q connected therewith, the lugged clip P and the bolt O by which to connect the bracket and clip to the axle tree. 12th. The combination of the non turning axle-tree, or axle proper, its pairs of struts or braces, the axle arm carrying turning posts, the vibrating draft bar, the turning post braces with which said bar is jointed at its ends, the vibrating bracket and the lugged clips by which to pivot the bracket to the axle tree.

No. 13,645. Improvements in Pawl and Ratchet Devices. (*Perfectionnements aux appareils à dent et roquets.*)

Everett G. Passmore, Philadelphia, Penn., U. S., 9th November 1881; for 5 years.

Claim.—The combination, with the inclines on the sleeve or band and the slotted shaft, of a pawl having projecting lips.

No. 13,646. Improvements in Combination Tools. (*Perfectionnements aux outils à combinaison.*)

Culberson S. Garrigus, Landusky, Ohio, U. S., 9th November, 1881; for 5 years.

Claim.—1st. The bifurcated spring shank B having a screw point *b* and circular disks *d* provided with V-shaped depressions, in combination with the screw bolt *a* and a tang C having a circular disk or head C' provided with wedge-shaped projections *c*. 2nd. In a farm implement, a bifurcated shank serrated upon the inside with means for securing it to a wooden handle, a removable tool having a tang serrated on the outside adapted to enter between the bifurcations, and a bolt or equivalent for clamping the latter upon the former, whereby the tool may be adjusted recently at any angle. 3rd. The combination of a ferrule or socket secured to an edge, with a farm tool handle having a bevelled shoulder adapted to fit the same.

No. 13,647. Clothes Drier. (*Séchoir à linge*)

Thomas Laddon, Yorkville, Ont., 9th November, 1881; for 5 years.

Claim.—In connection with a stovepipe, a metallic band having an adjustable joint to enable the band to be fitted to any variation in the size of the pipe, in combination with wire arms radiating from the band and connected together by a wire hoop forming with the arms a support for carrying clothes and other articles.

No. 13,648. Improvements in Creamery Vats.

(*Perfectionnements aux boîtes à lait.*)

David H. Burrell, Little Falls, N. Y., U. S., 9th November, 1881; for 5 years.

Claim.—1st. The method of treating milk for raising cream, consisting in simultaneously applying heat beneath the milk vessel, and cold at the top of the contents of said vessel, whereby the cream or butter globules brought to the bottom of the vessel by the currents thus created therein, are caused to expand, and rapidly rise to the surface. 2nd. In a milk cooling apparatus, a perforated outlet tube, or strainer, adapted to permit the flow of milk and prevent the passage of cream. 3rd. The combination, with a milk pan, of a perforated skimmer arranged at the lowest point of the pan and connected with a faucet at one end, whereby it is adapted to draw off the milk from beneath the raised cream and retain the latter within the pan. 4th. In a milk setting apparatus, the combination, with an outlet vat having troughs, or funnels for the introduction of water, and outlet tubes, and faucets for the escape of the same, of one or more milk pans provided with adjustable conduits for the circulation of a cooling or heating medium, said conduits being connected by suitable tubes with a source of supply, and with the troughs or funnels at the end of the outlet vat, whereby a circulation is produced through said conduits and vat, and the contents of the milk pans brought to any desired temperature. 5th. In a milk cooling apparatus, the combination, with an outlet vat having inlets and over flow tubes, and milk vessels contained therein and provided with adjustable conduits having inlet tubes connected with a water supply, and exit tubes communicating with the space in the outer vat, surrounding the milk vessels, of one or more reservoirs for water and ice communicating with said conduits and vats, and a pump adapted to force the cold water through the same in a continuous circuit. 6th. In a milk setting apparatus, the combination with the outer vat A having covers E E, partition *a*, troughs *c*, and overflow tubes *k k*, of the milk vessels B B having adjustable conduits provided with vertical tubes *g g*, and the flanged cross pieces FF perforated for the passage of the vertical tubes *g g*, adjustable therein by means of the cap *i* and thumb screws *h*. 7th. The combination, with the vat A, having troughs *c* and overflow tubes *k k*, and the milk vessels B B provided with adjustable conduits having tubes *g g*, of the ice box I having tubes K, connecting with the conduits at one end, and the tube H connecting the opposite end of the conduits with the troughs *c*, whereby circulation is maintained through the conduits and in the space between the inner and outer vats. 8th. In a milk cooling apparatus, the combination, with a milk vessel, of an open ice receptacle or conduit. 9th. In a creamery or milk cooling apparatus, the combination, with the outer vat A divided by partition *a* into twin compartments and having shoulders *p p*, spaces *t* beneath the milk vessels, spaces or chambers *s s* above the shoulders *p p* on each side of said vessels, steam pipes *r r* in the lower space, and tight fitting covers E E, of the milk vessels B B resting on cleats *h h*, between the shoulders *p p* in either compartment, and provided with troughs or conduits *g g* adapted to contain ice or water.

No. 13,649. Improvements on Churns. (*Perfectionnements aux barattes.*)

Edward Seaman, New Minas, N. S., 9th November, 1881; for 5 years.

Claim.—1st. A body of a churn having concave interior walls, and a revolving dasher carrying rollers that are adapted to roll in contact with the said concave walls so as to press and break the butter glo-