

the rotation of the wheel is prevented when the arm is moving in the other direction, or gathering the grain, and until the resistance offered by the collected grain is greater than that offered by the spring or friction devices when the wheels are allowed to rotate pass over the gavel, substantially as and for the purpose specified. 8th. A packer for a harvester and binder, consisting of a vibrating arm having its free end provided with toothed wheels, adapted to turn when passing the pivoted collecting-arm, and having pawls to prevent said wheels rotating when the arm is moved in the other direction, and projecting arms arranged in front of the wheels, and provided with gravitating pawls, whereby as the packer-carrying arm is moved the toothed wheels move the grain forward, and upon the next movement in the same direction the pawls push the grain still farther forward, thereby keeping each gavel separate and causing an extended movement of the grain with a limited throw of packer-carrying arm, substantially as and for the purpose specified. 9th. A packer for a harvester and binder, consisting of a vibrating arm, having its free end provided with toothed wheels adapted to turn when passing the pivoted collecting-arm, and having pawls to prevent said wheels rotating when the arm is moved in the other direction, and projecting arms arranged in front of the wheels and provided with gravitating pawls, whereby as the packer-carrying arm is moved the wheels move the grain forward and upon the next movement in the same direction, the pawls receive and push the grain still farther forward, thereby keeping each gavel separate and causing an extended movement of the grain with a limited throw of packer, in combination with a vibrating butting-board adapted to act upon the grain while in transit to the binder, substantially as and for the purpose specified. 10th. A packer consisting of the vibrating arm N, having toothed wheel X, provided with ratchet wheels X' and spring pawls Y, in combination with the arms W having gravitating pawls W', substantially as and for the purpose specified. 11th. The packer consisting of vibrating arm N, provided with toothed wheels X and arms W, provided with gravitating pawls W', in combination with the vibrating butting-board L hinged to links L', operating rod K', and crank K, substantially as and for the purpose specified. 12th. The packer consisting of vibrating arm N, provided with toothed wheels X, and arms W armed with gravitating pawls W', in combination with the vibrating butting-board L, hinged to links L', means to adjust the butting-board to or from the packer, operating rod K' and crank K, substantially as and for the purpose specified. 13th. The packer consisting of vibrating arm N, provided with toothed wheels X, and arms W armed with gravitating pawls W', in combination with the vibrating butting-board L hinged to links L', means to adjust the butting-board to or from the packer operating-rod K' and crank K, and means to vary the throw of the said butting-board, substantially as and for the purpose specified. 14th. The packer consisting of vibrating arm N, provided with toothed wheels X and arms W, provided with pawls W', in combination with vibrating butting-board L hinged to links L', operating rod K', and crank K, the platform P, vibrating collecting arm M provided with teeth m, gearing M' N' connecting the packer-carrying arm N, collecting arm M, crank O and link O' to vibrate said collecting arm, substantially as and for the purpose specified. 15th. The packer consisting of toothed wheels X and the projecting arms W, provided with pawls W' forming two sets of teeth to act upon the grain, in combination with the binder or needle arm, and the guard U' under which the packer works and through which the needle arm descends, substantially as and for the purpose specified. 16th. The packer consisting of toothed wheels X, and the projecting arms W provided with pawls W', forming two sets of teeth to act upon the grain, in combination with the binder or needle arm, the vibrating collecting arm M adapted to sweep the grain across the platform to the packer, and tooth Z on the platform over which the grain is swept by the gathering arm, and by which it is prevented from moving back while the packer carrying and gathering arms recede to gather and carry a fresh gavel to the binder, substantially as and for the purpose specified. 17th. The combination of the collecting arm M, the packer-carrying arm N and the needle arm, and the devices for starting said needle arm and operating mechanism whereby the collecting the packer-carrying and the binder arms are caused to work in unison, so that the needle-arm shall descend between the arms W, W, W while holding the complement of grain for one bundle, and before the first gavel for the next bundle is delivered to the binder, substantially as and for the purpose specified.

### No. 24,891. Fifth-Wheel for Carriages, etc.

(*Rond d'Avant-train de Voiture, etc.*)

Joseph V. Alexander, Taylor's Chapel, Tenn., U. S., 6th September, 1886; 5 years.

**Claim.**—1st. The combination, with the socket having end openings or slots, and the ball having a radial slot extending through it, and outward from centre to periphery of the axle, and its attached block having a segmental form which adapts it to fit in and fill said slot, as shown and described. 2nd. The combination, with the ball having a slot or recess, of the axle having a corresponding construction which adapts it for detachable connection with said ball, as shown and described. 3rd. The combination, with socket and ball having a radial slot, of the axle having a central portion which fits in said slot and whose ends coincide and are flush with the spherical surface of the ball, as shown and described for the purpose specified.

### No. 24,892. Metal Fencing, etc.

(*Closure Méallique, etc.*)

William Orr, Glasgow, Scotland, 6th September, 1886; 5 years.

**Claim.**—1st. In metal fencing standards and droppers, composed of pieces of incomplete section, or having a slot extending throughout the whole or a portion of the length, the wires or bars and staves or thrust plates being held by fasteners passing out through the slot from within the tube, substantially as hereinbefore described and illustrated under several examples on the appended drawings. 2nd. In metal fencing, the several standards or fasteners hereinbefore described with reference to the drawings annexed, for the wires or bars when such fasteners are used with standards or droppers, con-

structed as set forth. 3rd. For telegraphic and telephonic purposes, posts and fasteners for the arms carrying the wires, constructed substantially as hereinbefore described. 4th. In conjunction with straining posts or standards for metal fencing, the several straining or winding drum arrangements hereinbefore described with reference to Figs. 20 to 25 inclusive of the drawings.

### No. 24,893. Car-Coupling. (*Attelage de Chars.*)

George L. Walton, Bouqoro, La., U. S., 6th September, 1886; 5 years.

**Claim.**—1st. A coupling for cars, constructed, arranged and operating substantially as herein described and shown, consisting of the combination with the draw-head B, the elliptic springs C and pivoted draw-bolt D, as and for the purpose set forth. 2nd. In a coupling for cars, the elliptic springs C placed longitudinally in the draw-head B on either side of a draw-bolt D, and secured to the upper side of the draw head so that their lower ends may bear upon the coupling link H, and to swing on its pivot to automatically couple the connecting link, substantially as herein described and shown.

### No. 24,894. Washing Machine.

(*Machine à Laver.*)

Nelson C. Baughman, U. S., 6th September, 1886; 5 years.

**Claim.**—1st. The combination, with the tub or box, of the vibrating handle, the arms extending down into the box, the rubber hung by a pivotal connection upon said arms, and the other rubber pivoted to the sides of the box, and connected to the first named rubber by the arms, whereby when the handle is operated, a back-and-forth and slightly oscillatory motion is given the first-mentioned rubber, and a reciprocating circular motion is given the other rubber, substantially as described. 2nd. The combination, with the tub, of the vibrating handle, the arms connected to the handle and extending down into the tub, the rubber C having the rear sockets on its heads for receiving the pivots of the levers, and having the forwardly extended arms, and the rubber D having its heads pivoted to the sides of the box, and having the socketed arms with which the forwardly extended arms of the rubber C are connected by a jointed connection, substantially as described.

### No. 24,895. Protector for the Soles and Heels of Boots and Shoes. (*Protecteur pour les Semelles et les Talois des Chaussures.*)

Eleazer Kempshall, New Britain, Ct., U. S., 6th September, 1886; 5 years.

**Claim.**—1st. An imbedded protector having an enlarged base, as described, situated inward, as described, with a heel, substantially as described. 2nd. An imbedded protector having an enlarged base, as described, situated inward, as described, with a sole, substantially as described. 3rd. The improved protector, provided with a filling, constructed and arranged substantially as described for the purposes set forth. 4th. In the construction of protectors, for the purposes set forth, the combination of the hollow portions a, necks b and projections c, substantially as described. 5th. The improved form of protector having body a, and flange a' constructed and arranged substantially as described for the purposes set forth.

### No. 24,896. Combined Flour Box and Sifter.

(*Berniquet et Sas Combines.*)

William C. Marr, Onawa, Iowa, U. S., 6th September, 1886; 5 years.

**Claim.**—1st. A combined flour box and sieve, comprising the casing A provided with the slot b', the adjustable cover b'' arranged to close the slot, the removable partition B adapted to be inserted through the slot and to fit closely against the walls of the box, the sieve-drawer C constructed to fit closely against the walls of the box, and the agitator B' arranged above the sieve, all substantially as and for the purpose described. 2nd. A combined flour box and sieve comprising the casing A, having the slot b', the adjustable cover b'' arranged to close the slot, the removable partition B adapted to be inserted through the slot and fit closely against the walls of the box, the sieve-drawer C constructed to fit closely against the walls of the box, the agitator B' arranged above the sieve, and the worm-conveyor D arranged in a chamber below the sieve, substantially as and for the purpose described.

### No. 24,897. Knitted Cap. (*Casquette Tricotée.*)

Carl Freschl, Milwaukee, Wis., U. S., 6th September, 1886; 5 years.

**Claim.**—A cap composed of a single piece of circular or hose-like knitted fabric, having a loose stitch throughout except in that part of the fabric which forms the top of the cap, which part has a close stitch, the end of the fabric being closed up at the top of the cap, which top of the cap is flat, or nearly flat without plaits, seams or puckering wrinkles, the sides of the cap being double (the fabric being doubled upon itself) and provided with a band thereabout, the double fabric being doubled upon itself forming this band and a lining, which is attached to the knitted fabric on the inside, all substantially as described.

### No. 24,898. Krotophone. (*Krotophone.*)

Samuel A. Barnes, Philadelphia, Penn., (assignee of Edward S. Spaulding, New York, N. Y.), U. S., 6th September, 1886; 5 years.

**Claim.**—The method, herein described, of transmitting sounds electrically, which consists in conducting an electrical current to a given point, and then dispersing said current radially so as to produce and amplify the crepitations, substantially as herein described.