

No. 12,164. Improvements on Ploughs. (*Perfectionnements aux charrues.*)

Malcolm McLean, Guelph, Ont., 31st December, 1880; for 5 years.

Claim.—1st. A sectional plough beam A composed of two iron plates connected together. 2nd. The plough standard C, provided with a recess to receive the plate D and pivoted thereon, in combination with the sectional plough beam A, secured thereto by the bolt B, passing through the plates B, D, and plough standard C. 3rd. The jointer L, provided with a plate N, in combination with the sectional plough beam A, secured thereto by the bolt M, passing through the plates N O, and jointer L. 4th. The block K bolted between the plates A, in combination with the bolt E passing through a hole in the said block and through a lateral slot in the cross piece F. 5th. The device casting I, bolted between the plates A, and having a longitudinal slot through it, in combination with the standard of the regulating wheel J.

No. 12,165. Improvements on Machinery for Cutting Pile Fabrics. (*Perfectionnements aux appareils à tisser les tissus à poils.*)

Reuben H. Plass and Myron H. Chapin, New York, U. S., 31st December, 1880; for 5 years.

Claim.—1st. The combination of an endless band knife mechanism for operating said knife, means for feeding material to the knife, rollers for stretching the fabric laterally before it is subjected to said knife, and mechanism for operating said rollers. 2nd. The combination of an endless band knife, mechanism for operating the same, rollers for feeding material thereto, rollers arranged at an angle to each other and capable of adjustment at different angles, for the purpose of stretching the material laterally before it is subjected to the knife, and mechanism for driving the said feeding and stretching rollers. 3rd. The combination of the endless band knife A, its supporting pulleys and guides, and the rollers G supported on shafts, arranged in outer pivotal bearings and inner adjustable bearings. 4th. The combination, in a machine for cutting material, of a knife and rollers, for feeding material thereto, provided with pins or fingers, eccentrics for adjusting the said pins or fingers outwardly, and springs for adjusting them inwardly. 5th. The combination of an endless band knife for separating material, means for imparting motion thereto, a cross knife or cutter for dividing the material longitudinally after it leaves said band knife, and means for feeding material to said knives. 6th. The combination with an endless band knife and mechanism for operating the same, of an emery wheel and a pulley, deriving motion from said knife, whereby a rotary motion is imparted to said emery wheel, in approximately the same plane as that of the motion of the knife. 7th. The combination with an endless band knife and mechanism for operating the same, of a pulley deriving motion from said knife, and an emery wheel rotated by said pulley acting on one side of the knife, and a stationary bed or base piece acting upon the other side thereof.

No. 12,166. Improvements on Door Knobs. (*Perfectionnements aux boutons des portes.*)

William H. Gonne, Chatham, Ont., George W. Oliver, M. Hidden and Frank H. Blackman, Bay City, Mich., U. S., 31st December, 1880; for 5 years.

Claim.—1st. The combination of the notched spindle B, plate E, engaging with said notches, and set screw d. 2nd. The combination of the knob A, rivet h, spindle B, bolt K and slot L.

No. 12,167. Improvements on Steam Boiler Injectors. (*Perfectionnements aux injecteurs des machines à vapeur.*)

Looren E. Hogue and Wallace E. Macdonald, Sandy Lake, Pa., U. S., 31st December, 1880; for 5 years.

Claim.—The combination of three or more sets of grading tubes B E, the two or more sets of tubes J J, the steam chambers A H, the water chambers D F, the valves K and the stop cocks L, with each other.

No. 12,168. Improvements in Steam Engines. (*Perfectionnements dans les machines à vapeur.*)

James N. Lauder and Nathan P. Stevens, Concord, N. H., U. S., 31st December, 1880; for 5 years.

Claim.—The valve A, provided with the standards G G, and the auxiliary valve seat E, in combination with the valve C and lifter springs D.

No. 12,169. Improvement in the Process of Manufacturing Paper. (*Perfectionnement dans les procédés de fabrication du papier.*)

John Manning and Charles W. Knowles, Windsor, N. S., 31st December, 1880; for 5 years.

Claim.—In the manufacture of paper, the combination of anhydrous gypsum with the paper pulp.

No. 12,170. Improvements on Wire Sewing Machines. (*Perfectionnements aux machines à coudre au fil métallique.*)

The Wagner Wire Sewing Machine Company, (Assignee of Jacob Wagner, jr., and Louis Wagner,) Chicago, Ill., U. S., 31st December, 1880; for 5 years.

Claim.—1st. The method of manufacturing wire sewed brooms, which consists in securing separate cross wires or stitches to the retaining band consecutively and continuously, during the binding of the band upon the broom. 2nd. The method of manufacturing wire-sewed brooms, which consists in severing each successive stitch from the same continuous wire thread, and clinching it around the band in consecutive order, until the entire breadth of the broom has been traversed or sewed. 3rd. The combination, with a re-

ciprocating needle bar and a stitching needle secured thereto, of the broom clamp, or carriage moving intermittently forward across the path of the needle. 4th. The combination, with a reciprocating needle bar and a stitching needle secured thereto, of the broom clamp or carriage moving intermittently forward across the path of the needle, and pivoted tension guides. 5th. A broom machine provided with guides to hold the band wires, said guides pivoted so that as the band is being formed about the broom, they will bend the wire, thereby causing it to be drawn tightly about the broom. 6th. The combination, with the pivoted guides H H' and with the clamp, of bell cranks or stops H⁵ H⁵, engaging with said guides and clamp. 7th. In a pivoted wire guide, the combination, with a perforated sleeve, of a grooved rod entering and adapted to turn in said sleeve, whereby the said wire is locked. 8th. In a wire guide pivoted as described, the combination, with a tapering rod provided with a longitudinal groove, of a sleeve correspondingly perforated to receive said rod. 9th. The combination, with the horizontally movable clamp, of perforated guides for the band wire, whereby the perforations in said guides may be brought in line with each other to thread the wire and then turned to form the loop by the broom being pressed against it, as the clamp with the broom is being fed to the stitching needle. 10th. A needle bar provided with a longitudinal groove or perforation, and mechanism to reciprocate it, in combination with a perforated or grooved needle, whereby the wire is fed in a direct line and intermittently to the broom. 11th. A needle bar for sewing machines provided with longitudinal grooves or perforations guiding the wire to a needle. 12th. A sewing machine needle provided with a longitudinal perforation extending from end to end, said perforation forming a passage for the stitching wire or thread. 13th. The needle provided with the central longitudinal perforation or wire passage, and the point C formed at one side of said central longitudinal perforation. 14th. The combination, with a needle bar and needle, and devices for reciprocating the same, of a feeding cam lever, secured to said bar, and operated so as to hold the stitching wire during the forward, and release it during the backward movement of the bar and needle, whereby said wire is automatically fed through the material to form the stitch. 15th. A reciprocating needle bar longitudinally grooved and perforated, and provided with a friction cam, whereby the wire fed through said needle bar is prevented from slipping, when the bar is moving forward to feed it. 16th. A reciprocating needle bar, in combination with an open end perforated or slotted needle having said perforation or slot in line with and contiguous to said needle bar, whereby the wire is fed in a direct line to the broom to form the stitch in the same. 17th. A perforated or grooved needle bar having secured thereto and operating in said groove, a friction cam lever, in combination and contiguous with the groove or perforation in the needle bar. 18th. The combination with a needle bar having an automatically operating friction cam, of a supporting frame upon which said bar reciprocates, provided with a contiguous groove or perforation, and with one or more friction cams. 19th. The combination with the needle bar and its cam lever, of a beveled plate secured to a stationary support, for operating said lever, so that it will be held from contact with the stitching wire during a portion of the forward movement of the bar and its needle, whereby said bar and needle will slide over the wire and cover the projecting end of the same. 20th. The combination, with the needle bar C and its needle, of the cam lever L, adjustable, bevelled plate C' and cam levers C, D. 21st. The combination, with the reciprocating blocks and the binding arm or lever pivoted thereto, of the operating lever and cams. 22nd. The combination, with the reciprocating blocks and the shear arm or lever pivoted thereto, of operating lever and cams and the cutting blade. 23rd. The combination, with the cutting and clinching levers e, levers G G', bell crank g g' and cam wheel B₃, of a rod engaging with said wheel and connecting the bell cranks together, whereby the cutting and clinching levers are simultaneously operated to sever and clinch the stitching wire. 24th. The combination, with the lever e, levers G G' and lever G₂, of the bell cranks g g' pivoted to the levers G G' and to the supporting frames, and adjustably secured to levers G G₂, whereby the up and down stroke of the cutting and clinching levers may be varied. 25th. The combination, with the sliding blocks E' E₂, and the levers e₃ e₄ e₅, pivoted as described, of a lever E₃ connecting said levers. 26th. The blocks E' E₂ and levers e₃ e₄ e₅, connected to the blocks and with each other, in combination with the cutting levers E' E₂ and levers G G', bell cranks g g', lever G₂ and cam wheel B₃. 27th. The combination of clamp for holding a broom to feed it to sewing mechanism with an adjustable supporting plate carrying a part of said mechanism, and to which said clamp is attached, whereby the clamp and said plate may be simultaneously adjusted for brooms of differing thicknesses. 28th. The combination, with cutting and clinching levers e₁, block E₁ and lever e₃, of the sliding plate E, lever F, pivoted to the frame and to the lever e₃, and actuating mechanism, whereby the entire cutting and clinching mechanism is adjusted simultaneously with the clamp to articles of differing thicknesses and maintained in the proper position to sever and clinch the stitching wire. 29th. The combination, with the reciprocating blocks, the binding arm or lever pivoted thereto, and operating levers and cams, of the broom clamp or carriage. 30th. The combination, with a clamp and cutting and clinching mechanism, of a reciprocating needle carrying a stitching wire. 31st. The combination, with the reciprocating blocks, the bending arm or lever operating levers, and a reciprocating needle of the broom clamp or carriage. 32nd. The combination, with the reciprocating blocks, the bending arm or lever, operating levers and cutting blade, of a reciprocating needle and broom clamp or carriage. 33rd. The combination, with the reciprocating blocks, the bending arms or levers, cutting blades and operating levers, of a sliding and supporting plate, a broom clamp or carriage engaging with said plate, and a reciprocating needle. 34th. In a broom clamp or carriage, the combination, with a stationary jaw, of a movable jaw operating toward and from the stationary jaw and in a line parallel with the face of the same and an operating lever. 35th. In a clamp having a rigid jaw, a parallel horizontal sliding jaw, a transverse sliding jaw and an actuating lever connected with the horizontal jaw, and detachably connected with the transverse jaw, and operating said jaws independently or simultaneously to vary the thickness or breadth, or both of the articles held in said clamp. 36th. The combination, with a sliding jaw a₂, of a lever 6 secured to the shaft 5, and provided with a sliding block 9 engaging with pawl and with the gear wheel 14, a rod 10 and a handle 11. 37th. In levers for operating the jaws of a clamp, the slotted and recessed sleeve 6 secured to the shaft 5, rod 10 secured at its upper end to the handle 11, provided with lug 12 and, at its lower end, with a sliding block 9, recessed and provided with a pin 13, engaging with the notched flange of the wheel 14 and with pawl E. 38th. The combination, with the sliding clamp or feeder of a sewing machine, of an eccentric journal secured upon the main shaft and connected with the bar A₃ and with said clamp or feeder.