

and lateral motion, and mechanism to lock out of action the longitudinal feed and bring into action the lateral feeding movement; 4th. The roughened feeding plate 8, mounted upon the slide 7, in a notch, in the feed bar 7, so as to slide laterally and to which feed bar the ordinary feed movement is communicated, in combination with mechanism acting, periodically to give a lateral movement to the feeding surface 8; 5th. In the double acting lever 15, and finger or fingers 16, in combination with the feeding surface 8, and actuating stop 17, 6th. The cam 15 revolved progressively in combination with the finger 16, or 17, double acting lever 4, and feed plate 8; 7th. The revolving cam 15, 16, in combination with the feed bar 7, lever 18 and its fingers 17, 8th. The lever 18 attached to and swinging upon the feed bar 7, to which latter a reciprocating and rising and falling motion is given, in combination with the cam on projections 17, 16, that act to swing the lever 18, laterally at the latter portion of the reciprocation of the bar 7, 9th. The cam 15, connected with the feed wheel 4, in combination with the cylinder 14, and the respective actuating mechanisms for revolving the cylinder 14, and for turning the feed wheel; and 10th. The locking lever 19, in combination with the feeding wheel 4, the cam 15 and the mechanism for giving a lateral movement periodically to the feed-wheel, while its rotation is suspended.

No 1712. GEORGE DAVEY, London, Eng., 22nd. October, 1872, for 5 years: "Art of manufacturing artificial or Marezzo Marble." (Art de faire du marbre artificiel ou Marezzo.)

Claim.—1st. The novel art of manufacturing artificial Marble by arranging on a plate or plates of glass portions of cement mixed with color, in imitation of the forms and colours of the natural marble, in combination with a superincumbent layer of cement and backing; 2nd. The manufacture of artificial marble, the novel use of silk or other fibres impregnated with colouring matter, and on a plate or plates of glass, in combination with the cement forming the artificial Marble; 3rd. The novel use with the plate or plates of glass heretofore described of moulds of suitable forms, in combination with the colored cement and backing and with or without the fibres; 4th. The novel use of moulds of various parts, in combination with coloured cement, with or without fibres and backing, the colours or fibres or both arranged so as to be continuous when the moulds are put together; 5th. The novel art of imitating any substance, ornament, or design formed with bevelled slotted indent or roughened edges, in the artificial Marble; 6th. The novel art of embedding in brick, cement, or imitation marble while in a plastic condition suitable ornaments or designs of heat-resisting substances or of attaching to either of the above substances, a veneer of artificial marble.

No. 1713. WALTER H. LAURIE, Montreal, Que., 22nd October, 1872, for 5 years: "A Bolt Cutting Machine." (Une machine à fileter les boulons.)

Improvement on that class of bolt cutting machines working automatically, as regards the cut of the dies upon the bolt, so that when the bolts have been cut a given distance down, the dies will remove back from the bolt.

Claim.—1st. The hollow spindle e, spindle c, and collar t, in combination with levers R, and Q, collar L, with groove p, and rollers n, head F, die levers G, and spring o; 2nd. The lever p, with parallel surfaces T, incline H, and spring o, in combination with collar L, and rollers n; and 3rd. The spindle e, collar L, head F, levers G, R, and Q, in combination with rod Z, collar v, lever x, slide v, projection ai, or their equivalents.

No. 1714. HORACE H. BIGELOW, Worcester Mass., U. S., 22nd October, 1872, for 15 years: "A Boot and Shoe heel compressing Machine." (Machine à presser les talons de chaussures.)

Improvement in forming and pressing the heels, and in the manner of forming the awl holes and partially inserting the nails.

Claim.—1st. An improved blank heel, composed of a series of hollow lifts B, and central filling B', formed under pressure from all sides; 2nd. A compressed boot or shoe heel having the rand F, united and compressed with the bottom lift a, at the time the body of the heel is pressed and formed; 3rd. The hollow lifting B, formed by cutting out the centre of the lifting so as to leave the exterior portion of the lifting in the shape of a continuous or endless strip; 4th. The combination of the follower L, with the die H; 5th. The combination with the forming die of the head plate D; 6th. The combination with the head plate D and sleeve c, of the discharging pin f; 7th. The combination with the sleeve c and discharging pin f, of the discharging punch a, provided with a spring centre g; 8th. The combination with the discharging pin f, of the spring centre g; 9th. The combination, in a machine for forming pressed heels for boots and shoes, of the following elements, viz. A die for pressing the heel into proper form, provided with holes, for the passage of the heel perforating awls, nails, and nail drivers a series of perforating awls and a series of nail drivers; 10th. The combination with die K, and follower block L, of the elevating disc O; 11th. The combination with disc O, and bearing U, of the slide 4 and pins 5; 12th. The combination with the disc O, and receiving table Z, of the slide Z', and fork Z'; 13th. The combination with the disc O, and follower block L, of the screw Y, and fork Z'; 14th. The combination with the fork Z', of the stop pin or stud S; 15th. The combination with the bed or table G, and cylinder o, of a forming die K, and follower block L; 16th. The flanged head K, on the pintle bolt M; 17th. The combination with the cylinder J, of the stop dog 12, and the mechanism for rotating the cylinder; 18th. The combination with the table G, and cylindrical receptacle Z1, of the bed piece Z', spring Z'', plate Z-3, and adjusting screw Z 2; 19th. The combination of the stop dog 12, the bell crank lever Y2, the guard lever Z3, and the spur 14; 20th. The combination

with the ratchet wheel 1, arm V, and swinging stud Y, of the dog V, trip lever V1, spring W, finger 1, and guard pin t; 21st. The nail holding device, composed of the parts 16, 17, 18, 19 and 20; 22nd. The combination of the arms 20, of the nail holder with the studs 1, on the forming disc; and 23rd. A machine for forming compressed heels for boots and shoes, the mechanism of which is constructed and arranged so that the heel is compressed on all sides, and held under continued pressure during the operation of perforating the heel and driving the nails.

No. 1715. AUGUSTUS F. MARSHALL, Black River N. Y., U. S., 22nd October, 1872, for 5 years: "A wood bending machine." (Machine à plier le bois.)

Improvement in machines for bending wood for chairs which consists in combining with the "former" or forming block of a metal spring board and attachment's, the band confining the ends of the bar and bending the latter around the "former."

Claim.—The former a, screw F, spring Q, adjusting blocks S, screws F, blocks P, push bars I, J, L, and K, the latter provided with rollers M, the cross-bar E, frame sides U, C, and grooved guides ways N, and D.

No. 1716. EDWIN L. BUSHNELL, Poughkeepsie, N. Y., U. S., 25th October, 1872, for 5 years: "Improvements in spring mattresses." (Perfectionnements aux matelas à ressorts.)

The springs are connected by a band of webbing passed through them and held by a clasp of metal around the outside—the cross straps being secured to the face of the mattress by loops which connect the springs together.

Claim.—1st. The combination with the spring a, of the straps or bands B, and the metal clasps C; 2nd. The straps D, arranged across the ends of the springs and held by the loops A, which unite the springs.

No. 1717. JAMES THORNTON, Hamilton, Ont., 25th October, 1872, for 5 years: "An improved Cabinet Organ." (Un orgue de salon perfectionné.)

Claim.—A chamber fitted in the case of the organ over the bellows chamber (behind the action) formed of thin wood or other suitable material, with or without back swell, and so that the sound passing from the reeds into it causes vibration and gives tone and power to the instrument, the chamber being removable when required to tune the instrument, also the combination and arrangement of the several parts operating as set forth.

No. 1718. JOHN K. COLLETT, Canton, New Cardiff, South Wales, 25th October, 1872, for 5 years: "Process of packing and preserving butter and an apparatus therefor." (Méthode de conservation du beurre.)

Claim.—The process of packing and preserving butter, into vessels or boxes b, c, d, e, and f, by immersing them into brine contained in a c. sk A.

No. 1719. ALEX. HOWIE, Hamilton, Ont., 25th October, 1872, for 5 years: "Improvements in Sewing Machines." (Perfectionnements aux Machines à coudre.)

An improved tuck-marker.

Claim.—1st. The arrangement of the flat spring B, riveted to the underside of the body A, by the rivets D; 2nd. The arrangement of the slot E, in the front part of the spring B, and 3rd. The arrangement of the rubber band F, covering the end of the spring B.

No. 1720. FREDERICK O. TUCKER, Chelsea, Mass., U. S., 25th October, 1872, for 5 years: "A loom shuttle." (Une navette de tisserand.)

A device within the body of the shuttle and at one side thereof arranged to be set free by an imperfect warp shed or other extraneous cause, and so adapted, when set free as to swing towards the bobbin spindle and in the line of travel of the warp thread therefrom, so that in the further feed of said thread a sufficient strain will be brought to cause its severing.

Claim.—1st. A web obstructing device for loom shuttles; 2nd. The guard or arm a, in combination with the pawl p, trigger 1, spring-wire c, relatively constructed and arranged within a shuttle body at one side of same for operation of the guard a; 3rd. The trigger 1, or its equivalent formed to allow the web thread to pass off or escape from it; and 4th. The cavities o, in combination with trigger 1, or its equivalent.

No. 1721. ISAAC L. STRONG & JNO. GRAY, both of Patterson, Ont., 25 October, 1872, for 5 years: "An improved Horse-power." (Une machine pouvoir de cheval.)

Relates to a peculiar construction of the frame for carrying and the boxes for covering the guides, rod and cross-head through which the reciprocating motion is conveyed to the drag saw, and to the connection of an attachment when rotary motion is desired for the purpose of driving threshing machines straw cutters, &c.