vibratory frame in a horizontal line parallel with that on which said frame swings, a tool carriage connected with the opposite free side of said parallelogram, and a guiding and a cutting tool supported by said carriage, substantially as and for the purposes set forth. 10th. In a carving machine, the combination, with a rigid vibratory frame, of a jointed parallelogram having a jointed connection therewith in a line parallel with that on which said frame swings, an oscillatory tool carriage mounted upon the free side of said parallelogram, and a guiding and a cutting tool connected with said carriage, substantially as and for the purposes set forth. 11th. In a carving machine, the combination, with a rigid vibratory frame hinged in a horizontal line to a fixed support, of a jointed parallelogram having a jointed connection therewith in a parallel line, an oscillatory tool carriage mounted upon the free side of said parallelogram, and connected guiding and cutting tools having jointed connections with said carriage, substantially as and for the purposes set forth. 12th. In a carving machine, the combination, with a rigid swinging frame having a jointed connection with a suitable fixed support, of vibratory arms having a universal joint connection with said swinging frame, a tool carriage hinged to the free end of said vibratory arms, and a guiding and a cutting tool, substantially as and for the purposes set forth. 13th. In a carving machine, the combination, with a universally movable tool carriage provided with a guiding and two or more cutting tools, of a pulley yoke capable of oscillation on a horizontal axis and provided with a weighted arm, two or more vertical pulley shafts journalled in said yoke, and forked arms hinged at their forked ends to said pulley yoke concentrically with said pulley shafts and provided at their free ends with sheaves which are connected with said cutting tools, substantially as and for the purposes set forth. 14th. In a carving machine, the combination, of a rigid frame capable of oscillation on a horizontal axis, a tool carriage provided with a guiding and one or more cutting tools, and vibratory arms having jointed connections at opposite ends with said oscillatory frame and with said carriage, substantially as and for the purposes set forth. 15th. In a carving machine, the combination, of a rigid frame capable of oscillation on a horizontal axis, vibratory arms having jointed connections with said frame, a tool carriage having jointed connections with the opposite ends of said arms, a guiding and a cutting tool carried by said carriage, and driving mechanism connecting the cutting tool with a suitable source of power, so as to conform to the movement of said carriage, substantially as and for the purposes set forth. 16th. In a carving machine, the combination, with a rigid frame capable of oscillation on a fixed horizontal axis, of a tool carriage connected with said frame by vibratory arms, tool holders provided with a guiding and a cutting tool and having jointed connections with said carriage, and driving mechanisn connecting the cutting tool with a suitable source of power in such manner as to conform to the movement of said carriage, substantially as and for the purposes set forth. 17th. In a carving machine, the combination of a frame capable of oscillation on a horizontal axis, a yoke carried by said frame and capable of oscillation on an an axis parallel to that upon which said frame swings, a tool carriage connected with said yoke by vibratory arms which have jointed connections therewith, and a guiding and a cutting tool carried by said carriage, substantially as and for the purposes set forth.

No. 41,822. Ironing Board. (*Planche à repasser.*)

George N. Simmons, Santa Cruz, California, U.S.A., 6th February, 1893; 6 years.

Claim.—1st. The combination, in an ironing table, with a wide support having cross bars, a pair of bars hinged to the upper cross bar, an arm hinged to the lower cross bar, and a board pivoted to the upper end of said support, of a narrow support to which the other ends of said bars are hinged, this support having transverse grooves, a pin in said arm moving in the grooves, the body of the arm passing between said bars and having a notch, and a staple in said bars adapted to be engaged by the notch when the pin in the arm is at the lower ends of said grooves, as and for the purpose set forth. 2nd. The combination, in an ironing table, with a wide support having cross bars, a pair of bars hinged to the upper cross bar, an arm hinged to the lower cross bar, and a board pivoted to the upper end of said support, of a narrow support to which the other ends of said bars are hinged, a pin through the arm moving in transverse grooves in this support, the body of the arm passing between said bars and having a notch, a staple on said bars adapted to be engaged by the notch when said pin is at the lower end of the grooves, and a spring catch carried by said narrow support and removably engaging the end of this arm at such time, as and for the purpose set forth. 3rd. The combination, in an ironing table, with the board, a wide support beneath one end thereof, a narrow support beneath the other end thereof and provided with a longitudinal slot and transverse grooves, bars connecting the supports, and an arm connected to the wide support and having a pin moving in said grooves as this end of the arm moves in said slots, of a catch comprising a base secured to the narrow support, a spring arm rivetted at one end of said base, a knob having a shank passing through said arm near its free end, and a catch face on the shank at the opposite side of the arm from the knob, said face engaging the arm which connects the supports when said arm stands at the lower end of the longitudinal slot, as and for the purpose set forth. 4th. The combination, in an ironing table, with a wide support having cross bars, a pair of bars hinged to the upper cross bar, an arm hinged to the lower cross bar, and a board hinged to the upper end of said support, of a narrow support to which the other ends of said bars are hinged, said support having a longitudinal slot and transverse grooves, in the former of which the other end of said arm moves, a pin through this arm moving in the grooves, the body of the arm passing between said bars and having a notch, and a staple in said bars adapted to be engaged by the notch when the pin in the arm is at the lower ends of said grooves, as and for the purpose set forth. 5th. The combination, in an ironing table, with a wide support having cross bars, a pair of bars hinged to the upper cross bar, an arm hinged to the lower cross bar, and a board pivoted to the upper end of said support, of a narrow support to which the other ends of said bars are hinged, said support having a longitudinal slot in which the other end of said arm moves, a pin through this arm moving in transverse grooves in the support, the body of the arm passing between said bars and having a notch, a staple on said bars adapted to be engaged by the notch when said pin is at the lower end of said grooves, and a spring catch carried by said narrow support and removably engaging the end of this arm at such time, as and for the purpose set forth. 6th. The combination, in an ironing table, with the board, a wide support beneath one end thereof, a narrow support beneath the other end thereof and provided with a longitudinal slot and transverse grooves, bars connecting the supports, an arm connected at one end to the wide support, having a notch in its body, and having its other end moving in said longitudinal slot, a staple which said notch engages when the supports are in use, and a pin through said arm loosely engaging said transverse grooves in the narrow support, of a catch comprising a sheet metal base secured to the outer face of the narrow support, an upwardly extending spring arm carried by said base, a knob having a shank passing through said arm, and a catch face on said shank engaging the free end of the arm which connects the supports when the said arm is at the lower end of the longitudinal slot, as and for the purpose hereinbefore set forth.

No. 41,823. Armatures for motors and Generators.

(*Armature pour moteurs et générateurs.*)

Norman C. Bassett, of Lynn, Mass., U.S.A., 6th February, 1893; 6 years.

Claim.—An ironclad armature having longitudinal holes or perforations near its periphery, or surface coils wound through and partly filling said holes, and wedge or wedges of insulating material driven into said holes, so as to compress the coils and bind them within the holes. 2nd. The combination of the armature core having longitudinal perforations near its periphery or surface, the coils wound in said perforations so as to leave a part thereof unoccupied, an insulating plate or follower placed against the coil, and a wedge driven into the perforation so as to take up the unoccupied space and bind the coil tightly in place. 3rd. The combination of an ironclad armature, having longitudinal perforations near its periphery or surface, insulating tubes within said perforations and projecting beyond the armature ends, end plates of insulating material supporting the inner sides of the projecting ends, and coils wound through said perforation and over said insulated end plates. 4th. The combination of the annular perforated armature core, the insulating tubes through and projecting from said perforation, the insulating end plates supporting the ends of such tubes, one or more insulating pieces on the inner side of the core, and armature coils wound over said insulated plates and pieces and through the perforations. 5th. The combination, with the annular armature core and the coil wound thereon, of the coil supporting end rings and the central raising piece or bridge projecting above the end rings and over which the coil is wound and tightened. 6th. The combination, with a laminated annular armature core, of end plates between which it is clamped, and the supporting spiders for said end plates, having shoulders or lugs overlapping one another, as described, for engaging and supporting the inner side of the armature core. 7th. The combination, with the annular laminated armature, of the clamping end plates therefor and the spiders supporting said end plates, having a hub and socket drive joint and faces brought into true or correspondent relation and projecting beyond the coils for engagement with a press table. 8th. The combination, with an armature core and a porcelain or equivalent insulating plate on which the wire is wound, of the cushion or bed sheet, substantially as described, interposed between the said insulating plate and the core. 9th. An iron clad armature having holes or perforations, coils wound through and partly filling said holes, and wedges driven into said holes so as to compress the coils and bind them therein. 10th. An ironclad armature having holes near its surface coils wound through and partly filling said holes, and wedges driven into said holes so as to bind the coils therein. 11th. An armature having an ironclad or continuous surface with holes near said surface, coils partly filling such holes, and insulating material tightly filling the space not occupied by the coils.

No. 41,824. Safety Ladder. (*Echelle de sûreté.*)

August Necker, Lippstadt, Prussia, 6th February, 1893; 6 years.

Claim.—A folding safety ladder, consisting of the hinged parts or links *a*, surrounded by an endless rope *l*, folded together into the smallest possible compass when at rest, and which when dropped from a position can only unfold until the parts form a straight line,