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Throckmorton

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(54) **PLANING MACHINE**

(76) Inventor: **Reid R. Throckmorton**

Reid R Shrockmorton
Letters Patent

The Schedule referred to in these Letters Patent and Making part of the Same Containing a description in the words of the said Reid R Shrockmorton himself of his improvement in the Machine for planing boards, Flooring, and other Materials

To all to whom these presents Shall come Reid R Shrockmorton of the City and State of New York Sends Greeting, Be it known that I the said Reid R Shrockmorton have invented Made and applied to use a new and useful improvement in the Mode of planing boards floor Plank and other materials by Machinery of an operative by means of a plane called the Vibratory Eccentric plane Specified in the words following Viz. This improvement in the first place Consists of a frame of wood or iron of about 14 ft in length and 3 ft in breadth standing on Six legs about 3 ft high said frame to have about 4 or 6 cross pieces or girths and otherwise sufficiently ha=ved to make it firm and strong.

2d Across the frame are placed four or more rollers about five inches diameter of hard wood or iron turned true and more to mark and the same above the plank the under rollers having pullies of about Six or eight inches diameter or Cogg wheels attached to the end and are worked by means of belts or intermediate Cogg wheels from a small pulley about Six inches diameter or Cogg wheel on fast Shaft underneath the frame; the upper rollers are held down by weights and levers and the gudgeons of which rollers move in slots so as to admit of different thickness of board or plank said frame has in the centre immediately beneath the plane a cast plate of iron or hard wood or rollers to support the plank during the operation of the plane. On the fast Shaft there is a Crank or Ratchet wheel with its mover. If a Crank about

fifteen inches diameter of a ratchet wheel about two feet six inches diameter; the arms to receive a belt from the first Mover — which is a Drum of about twenty inches diameter placed about the same line on the Shaft of which is fixed a Pulley of about twelve inches diameter. The Drum to the ratchet wheel can be attached to the Crank Shaft or to the Plane Shaft by which latter Mode, may be most convenient to give it the forward and backward motion.

3d The Plane is in form of a Lozenge suspended on a Shaft or axis — supported by Pillar blocks resting on Gallows frames five feet high which said frames are firmly bolted on the frame of the Machine and braced with a triangular brace — or Truss.

4th The Plane (suspended by braces attached to eccentrics) is a Segment of a circle of about Eight feet diameter and the length of said Segment is about three feet and of a width suited to the Material to be operated upon. It has five or more plane irons or Cutters attached to the periphery set in a slanting position so as to make a smooth and clean cut and firmly fastened with screw-Keys and regulated to suit the grain.

5th Motion is given to the Plane by means of a Shackle bar or Connecting rod attached to the centre of the length of said Plane and about six or nine inches from its periphery said Connecting rod is attached by the other end to one of the arms of the Fly Wheel of about two feet six inches diameter — the Shaft of said fly wheel about three and a half feet in length and six in diameter

6th On the Shaft or axis of plane are two small eccentrics of about nine inches diameter to which the braces of the Plane are attached by means of Straps and short eccentric rods. The lowering and raising of the Plane to accommodate different thicknesses of Material to be planed is obtained by means of screws connecting the Plane braces and Eccentric rods

7th The Crank fastened to the Plane axis and extending downwards in a line with the centre of the Plane about two feet and nine inches in length and attached to the connecting rod which at its other end

Forks or an Eccentric about the first Cranks (and to be varied according to length of Crank or plane axis) on Fly wheel Shaft.

5th The operation of the Eccentrics on plane axis and on Fly wheel Shaft by means of the Crank and the Connecting Rod give a Vibratory & rectilineal Motion to the plane by means of which the plane in its forward Stroke cuts a part of its Course in a Straight line and the balance of the Cut Circular

6th The Side Cutters for grooving and tonguing in their construction and mode of operation do not Materially vary from those long in use: or they may be made on principles analagous to those of the plane above described

7th The Vibratory and rectilineal Motion above Mentioned may be obtained by Various other Modes, viz by means of rack and pinion - by Cams - by Slides - by parallel Motion &c &c Common to the use in Steam Engines by Arm and Plane Heads, or by dropping the near end of the plane by means of Screws in the extremities of the same - but Eccentrics as above described are preferable -

The said Reid R Throckmorton claims particularly as his invention the peculiar Construction of the plane and the Nature of its Motion being Vibratory and Rectilineal & which the same is obtained by means of Eccentrics on plane axis Connected by Crank and Shackle bar with Eccentrics on Fly wheel Shaft -

In testimony that the above is a true Specification of my Invention I have hereunto set my hand the twenty fourth day of May in the Year of our Lord one thousand Eight Hundred and Thirty five

Witnesses
James Schumacher
John I Vail Jabez

Reid R Throckmorton

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Ch J W