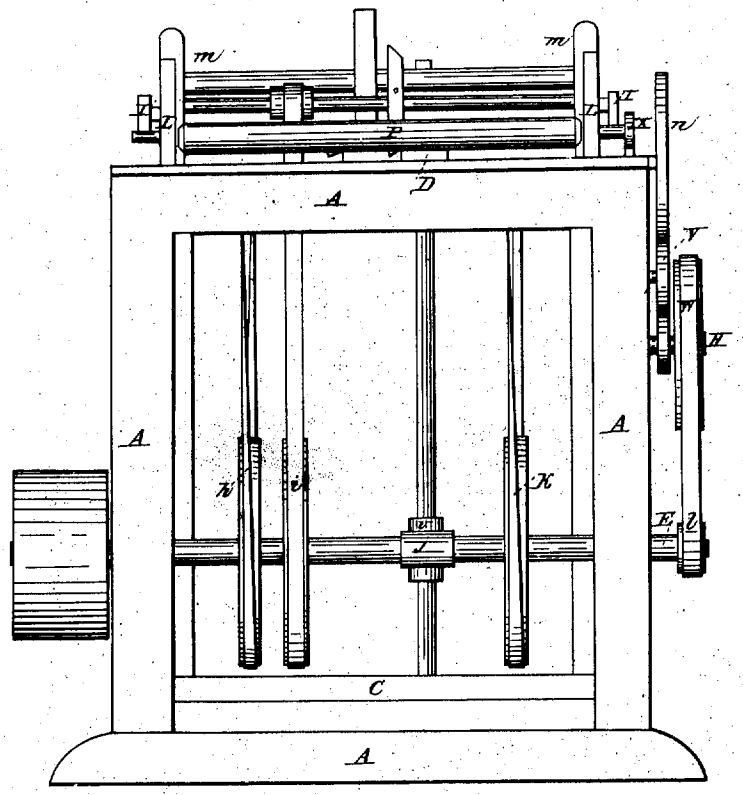
NO PRINTED SPECIFICATION AVAILABLE

9035X

F. Stedman,

Planing and Matching Machine.

Patented Aug. 17, 1835.



9035X Aug. 14. 1835 149.

Fisher Steadman
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 Fisher Steadman himself of his improvement in the method and machinery for matching & dressing boards and plank for floors roofs & other purposes

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To all persons to whom these presents shall come: Be it known that I Fisher Steadman of Aquackanock in the County of Essex and State of New Jersey have invented a new and useful improvement in the method and machinery for matching and dressing boards & plank for floors roofs and other purposes. And that the following is a full and exact description of the construction and operation of the said machine as invented by me. This machine consists of a substantial frame 8 feet long 2 1/2 feet wide and 2 1/2 feet high formed by connecting 4 corner posts at the top by plates and beams all round and by connecting the posts at the bottom by two girths on each side of the frame and by framing the lower ends of the posts into two cross pieces which projecting 6 in feet beyond the posts forms a wide support to keep it steady on the floor. This frame work is represented on the drawings and by the model accompanying this specification and is marked A. And in the following description of this machine that end having on it the driving shaft and from which the boards when dressed are delivered will be called the front end and the opposite the back end. And the side having on it the driving pully will be called the pully side and the opposite the gear side. On the outside of the front posts one foot upwards from the cross piece or foot are bolted the bearings or caps to sustain the main shaft marked a. From the inside of each plate 6 feet from the front end a slitted stand is projected upwards the first forward of the slit rising perpendicularly about 6 inches the other is turned back at the top to receive the pin of the pressing lever. the bottom of the slit serves as a bearing for the moving roller which carries forward the board to be dressed and dovetailed and the upper part of the slit serves as a guide to the pressing roller these stands are marked b, about 5 1/2 feet from the

the front of the frame a post is secured to the girths and plates of the frame on the inside and perpendicular to them rising 5/12 of a foot above the top of the plate. And 14 1/2 feet from the posts are similar ones in all respects the upper end of each is connected with its fellow on the same side of the frame by two girths one at the top and the other 5/12 of a foot down leaving a space of 5/12 of a foot between them and arranged with keys to adjust them. in these girths are the bearings of the shafts of the two dove tail cutters marked c,c. and the shaft of the pressing roller marked d,d. and the shaft of the straightening saw marked e,e. 6 1/2 feet from the front and a bridge tree rests on and is secured to the plates to form and hold the upper bearing of the upright cutter shaft marked B. and directly under and perpendicular to this is a similar piece resting on and seamed to the girths below to sustain the step of the upright shaft. this piece is marked C. seven feet from the front end are projected stands similar in all respects to three marked b. to sustain a like roller and pressing roller near the back end of the machine to carry out the board when finished. these stands are marked f,f. A piece of plank is then secured to the top of the end beams raising them to a level with the upper surface of the bridge tree. On the top of the plate as many beams as are necessary (say three) to support the frame and work are placed extending across the frame with their upper surfaces level with the last mentioned pieces. On the back beam and on the bridge tree is a stand fitted to hold a roller to press the board edgeways to the guide hereafter mentioned. these stands are moveable to admit different sized boards and project towards the front of the machine and are marked g,g. 9/12 of a foot from the geer side and parallel with the plate, and on the upper surface of the beams and bridge tree a guide is extended the whole length of the frame to govern the lateral motion of the board and is marked D. When all these parts and pieces are thus adjusted, the main shaft marked E. is entered in its bearings having on the pulley end outside the frame a fast and loose pulley 12 inches in diameter and at 2 inches from the post inside the frame a pulley 15 inches in diameter marked b, to drive the circular straightening saw and 2 inches from this pulley another pulley marked i. 15 inches in diameter to drive the upper dove tail cutter. and 2 inches from this

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this pully a pully marked j 9 inches in diameter to drive the upright cutter or transverse wheel shaft. Three 3 inches from this a pully marked K. 15 inches in diameter to drive the under dove tail cutter and on the gear end of the shaft outside of the frame is a pully 3 inches in diameter marked L, to drive the gearing & carrying roller extending across the frame 1½ inches in diam^r^ marked m, m, is placed in each of the slides stands so that the board when entered upon them will just clear the bridge tree and beams having on each near their gear ends a cog wheel of 18 teeth and on the extreme ends a cog wheel of 60 teeth marked n, n, The upper and lower dove tail cutter shafts are then entered in their bearings having on them each a pulley 4 inches in diameter and in a line with their respective driving pullies on the main shaft. And each a dove tail cutter with their irons so formed as to shape the dove tail as required these cutters are marked o, o, and are situated as to form the dove tail on each edge of the board in opposite sides and each to cut the board half through. The friction roller shaft is then placed in its bearings having on a friction roller 4 inches in diameter bearing on the board to keep it steady to the action of the cutters and saw. this roller is marked p. The shaft of the straightening saw is then entered on its bearings having on it a pully 4 inches in diameter in a line with its driving pully on the main shaft. and also a common circular saw which cuts the board to its proper width. This saw is marked q, The upright cutter shaft is then placed in its step and bearing marked R. and has upon it a pully marked r. 9 inches in diameter and in a line with its pully on the main shaft marked j and on the top a horizontal cutter wheel marked G. 13½ feet in diameter and 3 inches thick having four or more cutter rests projecting from its periphery 1½ inches and standing diagonally, say 45 degrees to its perpendicular. in these rests is cut a female screw to hold the cutter in place. These cutters are formed with a slit through which the said screw passes and are held by its head firmly to the rests and are circular on the edge that when they pass or traverse the board they cut like a gouge and are marked t. An upright stand marked H. to hold a pully & gear

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geer wheel is then secured to the girth & place 4 feet from the front end on the geer side outside of the frame. And in this piece 1 ½ feet from the girth a stud is fixed to hold a pully 9 inches in diameter marked w, having on the inside and connected with it a cog wheel of 18 teeth directly over this and at such a distance as to geer properly into it is a stud holding a geer wheel of 60 teeth marked v. and on each side of the last mentioned wheel is an intermediate or stud wheel on studs secured to the plates of 60 teeth marked w, and geering also into the wheels on the mooving rollers marked n, n. The pressing rollers are then placed in the slotted stands having on their geer ends a cog wheel of 18 teeth marked XX to geer into the small wheels on the mooving roller shaft and having a score turned in the bearing on side of the stand to receive the pressing levers. Which levers are marked I. and are secured to the curved part of the slotted stands by a bolt on which they play freely and rest on the scores of the pressing rollers and are then projected to any suitable length and weighted at each end as shewn by the model on the pully side or they may be continued coil to coil as shown on the geer side of the model and weighed between the rollers. The horizontal guiding pullies marked y, y, 4 inches in diameter are then placed in their stands y, y, so as to bear against the edge of the board opposite to the rest and compell it to keep close to it. When all these parts and pieces are thus formed and adjusted pass a belt from the first pully mentioned on the main shaft inside of the frame and around the pully on the shaft of the circular saw, then a belt round the next pully mentioned and round the pully on the shaft of the upper dove tail cutter shaft. Then a belt around the next pully mentioned on main shaft and around the pully on the upright shaft then a belt around the next pully on main shaft and around the pully on the under dove tail cutter shaft, then pass a belt around the pully on the geer end of the main shaft and around the pully marked w, having on it the geer wheel. Then pass a belt from the mooving power of the mill around the fast pully on the main shaft and all will be in motion. Then enter a board between the front mooving and pressing rollers taking care to keep it up to the

guide

guide until it is fairly on board and it will be drawn in by the motion of the rollers until it reaches the dove tail cutters when a dove tail will be cut on each edge or opposite sides. the saw will cut it to a width at each end and the cutters on the wheel G. will traverse the upper side and dress it to a thickness and by passing over it will leave it perfectly dressed and smooth on the surface and it will be passed out of the machine in form of the miniature piece marked K. in the model and as soon as one board is fully on board another may be put in and the machine be kept constantly at work and all the boards will match truly and form with each other perfect joints when laid together. The advantages of this machine consists when dressing boards for roofs is that each dove tail will form a trough by which the water will always be passed without leak to the end of the board and for whatever purpose they may be used this mode of matching has this advantage that the joints become closer instead of opening by a slight shrinking of the board which must give a decided advantage in floors and for all purposes where the object is to keep out cold and wet. and by traversing the cutter across the board I am enabled to dress boards of the hardest timber as well as of the softer kind. What I claim as new in this improvement is the whole of the apparatus and combination of machinery by which the board is traversed by the cutters in dressing the surface and by which the edges are matched in the dove tail form as described above and is the invention for which a Patent is now prayed. In witness that the foregoing is a true description and specification of my said improvement I have hereunto set my hand this 12th day of June 1835.

Witnesses
Henry W. Havens
Elisha P. Abel

Esther Stedman

Ex. & Ch. Ill.

Drawing

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