

L. B. Batcheller,
Wood Molding Machine
N^o 18,171 *Patented Sep. 8, 1857.*

Fig. 2.

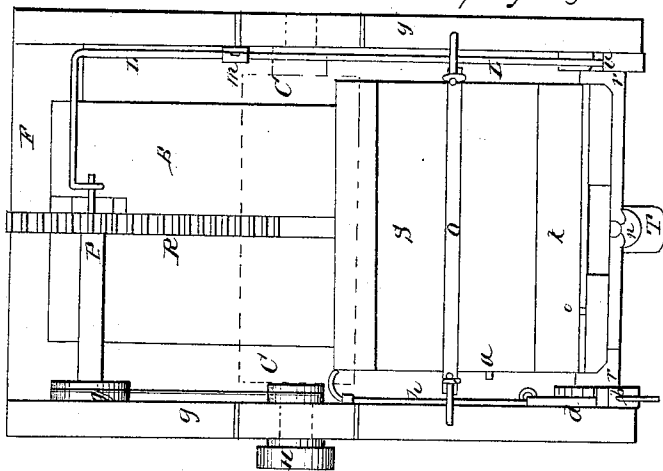


Fig. 3.

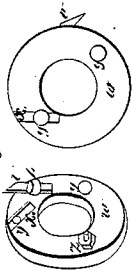
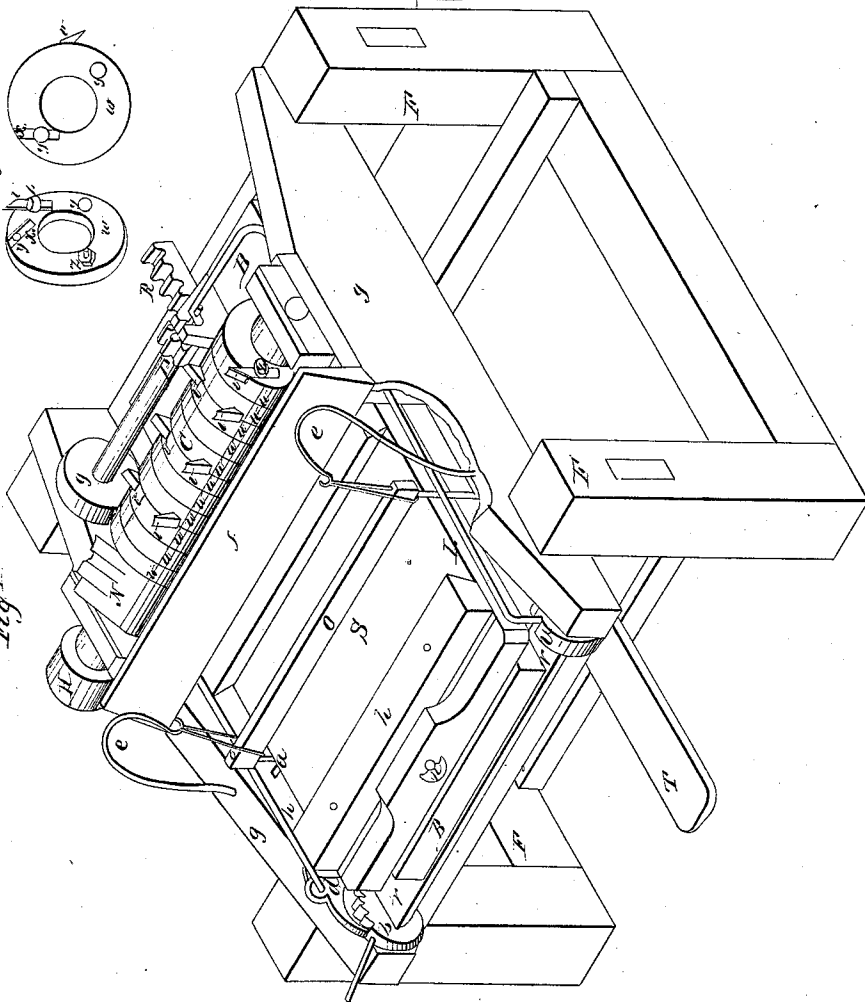


Fig. 1.



UNITED STATES PATENT OFFICE.

L. B. BATCHELLER, OF ARLINGTON, VERMONT, ASSIGNOR TO WEST, CANFIELD AND CO.

METHOD OF MANUFACTURING WOODEN WASHBOARDS.

Specification of Letters Patent No. 18,171, dated September 8, 1857.

To all whom it may concern:

Be it known that I, L. B. BATCHELLER, of Arlington, in the county of Bennington and State of Vermont, have invented a new and
5 Improved Method of Fluting or Grooving Washboards; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

10 The nature of my invention consists in providing a strong rectangular frame of suitable dimensions and having a firm bed-piece attached to the rear end of the frame,
15 and resting on a rocker in front, by which the end may be raised to accommodate the thickness of the board to be fluted. A carriage, to the face of which, the blank, or board to be grooved, is clamped, slides longi-
20 tudinally on the face of the bedpiece under a revolving cylinder, which extends from side to side of the frame, which cylinder is provided with cutters or chisels so constructed and arranged as to cut the desired
25 number of grooves at one operation, the carriage being drawn under the cylinder by a rack and pinion at the rear end of the frame. The grooving being performed, the
30 pinion is raised from the rack by the action of a lever, and the carriage drawn back to its starting point, by hand, and the finished board removed from the carriage. But to
35 enable others skilled in the art to make and use my said invention I will proceed to give a more particular description of its construction and operation by referring to the accompanying drawings and to the letters of reference marked thereon, viz:

40 Figure I, an isometrical perspective; Fig. II, a plan of the top of the machine, with the fluting cylinder shown only in dotted lines, the better to show the several appendages designated by letters; Fig. III, vertical sections of the fluting cylinder, showing the
45 manner of connecting the sections, and setting the chisels, or cutters in their proper position.

50 F, a strong rectangular frame of suitable height and dimensions to which the several appendages are connected; B, the bed piece—a substantial plank—about the width of the wash board—attached to the rear end of the frame, and resting at the front end,
55 on the rocker *r*, by rocking which laterally it is raised to accommodate any thickness of board to be fluted; S, the slide a plank of

suitable dimensions, fitted to slide on the bedpiece, longitudinally, on ways, at the rear end of which the rack R, is attached by which it is drawn under the fluting or grooving cylinder C; R, the rack, attached to the rear end of the slide S, which it draws back under the cylinder, by the action of the pinion P; L, the lever, which, at the front end, is bent down at right angles resting on a
60 hub at the right hand end of the rocker *r*, and extending back as far as the pinion P, where it is bent horizontally at right angles, to raise the pinion P, from the rack, the fulcrum of the lever being attached to the inside of the gable end *g*; *r*, the rocker—a half cylinder—on the front side, a little above the frame—the flat side up—on which the front end of the bed piece rests, and being turned
65 by an arm, brings the face of the blank (of whatever thickness) up to the desired distance from the periphery of the cylinder C; P, the pinion—near the rear end of the frame—is revolved by a cross band from the pulley on the shaft of the cylinder and acts
70 on the rack to draw the slide under the cylinder, and is raised by the lever L, from the rack, so that the slide may be moved back to its starting point by hand; *b*, the ratch on the left end of the rocker, having an arm
75 to turn it with the rocker, so as to raise the blank, clamped to the face of the slide, up to the cutters *v*, where it is held during the operation of fluting; *d*, the detent acting on the ratch to hold the rocker in place, having
80 an arm, rising at right angles above the pivot on which it turns and being connected to the hook *h*, which extends back under the cylinder and takes hold of the stop *a*, in the side of the slide *s*, to arrest its course back;
85 *h*, the hook attached to the arm, or angle of the detent, and extending back takes hold of the stop *a*, which in effect stops the slide, raises the detent from the ratch, drops down the slide and fluted board from the cylinder,
90 drops down the angle of the lever L, into the slot in the hub, by which the pinion is raised from the rack, and the slide liberated, so as to be drawn back to its starting point by hand; *a*, the stop in the edge of the
95 slide, which in its course takes hold of the hook, and raises the detent from the ratch; *o*, the cross bar, supported on elastic studs *e*, standing on the edges of the gable ends *g*, across and directly over the middle of the
100 blank, onto which it is pressed by the action of the treadle T, to take out the warp (if

any) in the blank before being confined by the beveled cleat *n*, and screw, to the slide *e*, the elastic studs on which the cross bar is suspended; T, the treadle resting on a bar which is attached, by connecting rods, on the sides of the slide, to the cross bar *o*, above which is thereby brought to bear on the blank; *k*, the beveled cleat extending across the front end of the slide, to which it is attached, by bolts, which move laterally in slots, by the front screw *n*, by which it is borne against the end of the blank when pressed level, by the treadle, to confine it firmly to the slide for fluting; *n*, the front screw by which the cleat *k*, is moved to confine the blank to the slide; *m*, the fulcrum to the lever L, on the inside of the gable end *g*; *u*, the hub on the end of the rocker, having a slot in the upper side, into which the arm or angle at the front end of the lever L, drops, by which the pinion is raised from the rack; *f*, the fender—a wide board extending across the frame in front of the fluting cylinder C, to defend the work and workmen from the chips thrown from the cutters; H, the rigger or drum at the end of the shaft, of the cylinder, by which the cylinder is rotated; C, the fluting cylinder, composed of a large cylindrical shaft extending across the frame, and revolving at a proper distance above the face of the slide S, in bearings at the top of the gable end *g*, and of annular sections, which encircle the shaft, equal in number to one-half the flutes or grooves, to be cut in the board; *w*, the annular sections (see Fig. III) fitted to encircle the shaft of the fluting cylinder (of which they make a component part) equal to one-half the number of grooves to be cut in the face of the board, having deep mortises cut in their sides in which the cutters are confined by screw bolts, and having holes to receive the heads and points of the bolts projecting from the sides of the adjoining sections and fitted and confined in their proper order on the shaft by a key; *v*, the cutters—in number equal to the flutes to be cut—of proper form and length, and embedded in deep mortises, one on each side of the sections *w*, tangent to the periphery of the shaft of the cylinder C, and are confined by screw bolts so as to project about one inch from its surface, and of a width to leave no space untouched between the adjoining cutter, and arranged in about six rows lengthwise and so distributed, on the surface of the cylinder as to equalize their friction, having their edges so fitted and arranged as to flute the face of the board, by their united agency into the de-

sired form; N, a broad cutter at the end of the cylinder to plane the face of the soap box; *z*, head and points of screw bolts projecting from the sides of adjoining sections; *y*, holes to receive the heads and points of the projecting screw bolts; *x*, shallow mortises or grooves, in the sides of the sections, fitted and arranged to receive that small portion of the cutters which project from the adjoining sections, extending on to the track of the cutterbox in order, and also adding firmness to the cylinder by interlocking and extending the cutters into two sections.

Operation: The several parts of the machine being arranged as herein specified, and the cylinder C, put in motion and the blanks or board to be fluted cut to the proper dimensions is placed on the slide S, and the warp, (if any) taken out by the action of the treadle T, on the cross bar O; it is confined to the face of the slide by pressing the screw *n*, against the cleat *k*. The front of the bedpiece is now raised by tilting the edge of the racks *r*, so as to bring the face of the blank to the desired distance from the periphery of the fluting cylinder, where it is held by the detent *d*, and the short end or angle at the front end of the lever L, is raised onto the periphery of the hub *u*, by which the rear end is lowered down with the pinion P, which takes hold of the teeth of the rack R, and moves the slide back the length of the blank, bringing the face of the blank into contact with the cutters which are so arranged as to flute, and finish the whole surface of the board by passing once through under the cylinder. At this point of time the backward motion of the slide is arrested by the stop *a*, taking hold of the rear end of the hook *h*, by which the detent *d*, is raised from the ratch *b*, the rocker *r*, turned back to a level, and the short arm, or angle of the front end of the lever, drops down into the slot in the hub *u*, raising the rear end of the lever, and with it the pinion P, from the teeth of the rack R, thereby liberating the slide, so that it may be drawn back, by hand, to its starting points, and the fluted board removed from the slide.

What I claim as my invention and desire to secure by Letters Patent is—

The machine, constructed, arranged and operated, substantially as set forth in this specification.

L. B. BATCHELLER.

Witnesses:

JOHN HASTINGS,
M. JUDSON,
FERNANDO WEST.