

O. W. May,
Planing Shingles.
No. 1,138.
Patented Apr. 29, 1839.

Fig. 1.

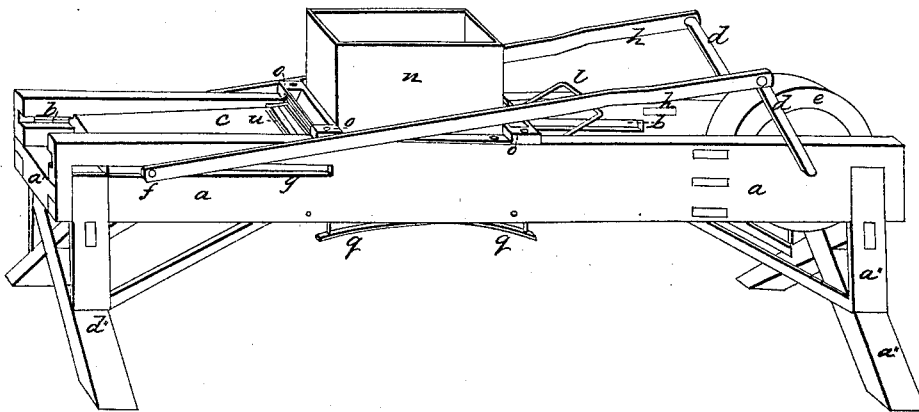
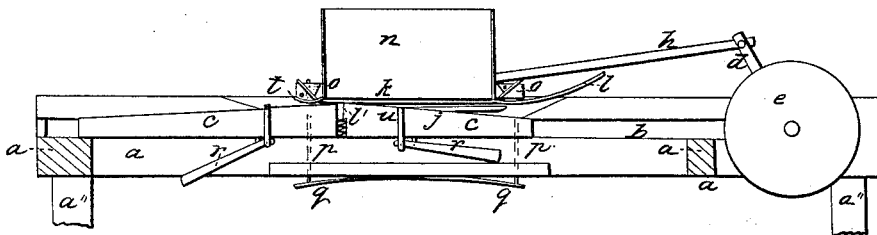


Fig. 2.



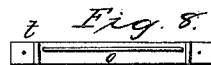
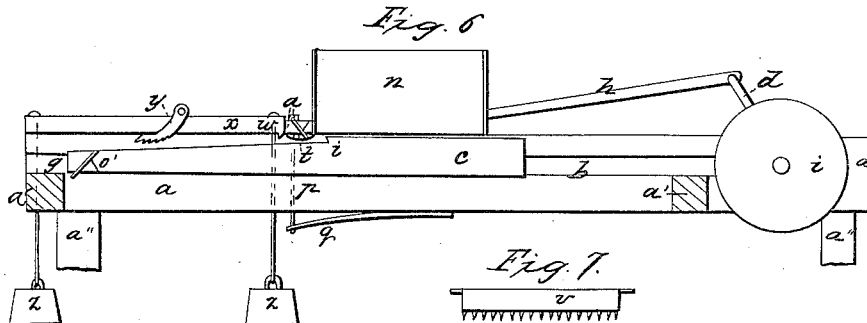
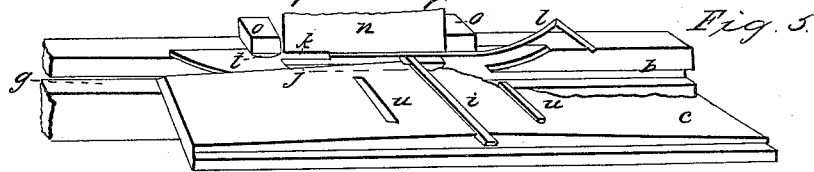
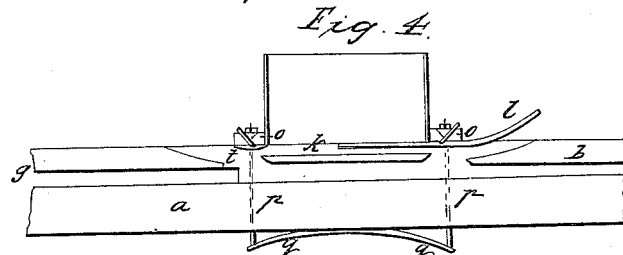
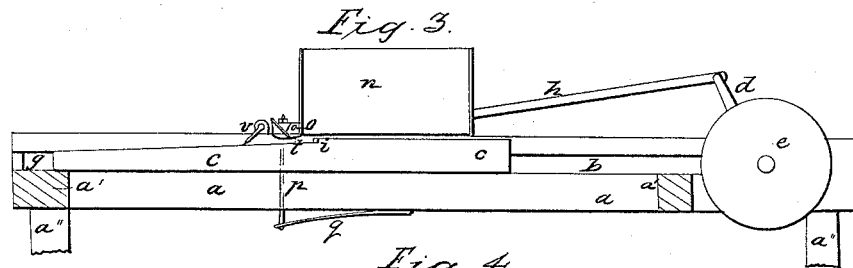
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UNITED STATES PATENT OFFICE.

OLIVER N. MAY, OF WINDSOR, NEW YORK.

MACHINE FOR PLANING OR DRESSING SAWED SHINGLES.

Specification of Letters Patent No. 1,138, dated April 29, 1839.

To all whom it may concern:

Be it known that I, OLIVER N. MAY, of Windsor, in the county of Broome and State of New York, have invented a new and useful Improvement in Machines for Planing or Dressing Sawed Shingles, and that the following is a full and exact description thereof, reference being had to the drawings accompanying and making part of this specification, in which the same parts are designated by the same letters of reference in all the different figures.

Figure 1 represents a perspective view of the machine in which both ends of the carriage are used for planing shingles. Fig. 2 a longitudinal section of Fig. 1, through the carriage and other parts of the machine; Fig. 3, a section view of a machine in which only one end of the carriage is used for planing shingles. Fig. 4, exhibits the position of the grooves on the inside of the frame, and Fig. 5 a perspective view of a part of the inside of the frame and carriage, exhibiting the bar within the upper groove.

The sides of the frame *a*, Figs. 1, 2, 3, 4 and 5, is formed of two longitudinal pieces of timber, about ten feet in length, three inches thick, and eight wide, framed together by two or more transverse timbers *a'*, about one foot long within the sides of the frame *a*, Figs. 1, 2 and 3. The longitudinal timbers *a*, rest and are connected to posts or frames *a''*, Fig. 1, which are of the requisite length to give the desired height to the machine. On the inside of the pieces *a*, Figs. 1, 2, 3, 4 and 5, about two inches below the top is formed a groove *b*, of sufficient length and size to receive the flanges of the carriage *c*. This carriage is about four feet long, with flanges projecting laterally from its lower edges which move in the before mentioned grooves *b*, parallel with the top of the frame. The carriage at the center or middle distance between the two ends, is about four inches thick, and about three at the ends, the upper surface slanting downward toward the ends, at an angle in accordance with the taper of the shingle, that when a shingle is placed upon the carriage, with its point toward the center, its upper surface is parallel with the sides *a*, in which the carriage *c*, moves, and the cutting instrument operates uniformly upon the upper surface of the shingle.

The carriage *c*, is put in motion by a

double crank *d*, placed near one end of the machine, with a crank at each side of the frame, the axle of which extends through the frame, and its journals move in boxes secured within the side pieces *a*, on a line with the grooves *b*, Figs. 1, 2 and 3. Within the frame, there is attached to the axle of the cranks, a gear wheel or pulley *e*, to which the motive power is applied. Pitmen or shackle bars *h* are attached to each of the cranks *d*, and extend to the opposite end of the carriage *c* and are connected to it by projecting studs *f*, secured to the carriage and passing through the side pieces *a*, at the grooves *b*, by being formed into slots or mortices *g*, in length sufficient for the cranks *d*, to propel the carriage *c*, the requisite distance for planing the shingles, as shown at Fig. 1. Transversely at the center of the carriage *c* a groove is formed, in which a metallic bar *i* is inserted for propelling the shingles. This bar is about one inch longer than the groove in which it is placed, the ends of which move in parallel grooves *k*, formed above the grooves *b*, in which the carriage move. The grooves *k*, raise the bar *i*, sufficiently above the carriage to which it is attached, to force the shingles beneath the plane stock *o*, which performs the planing operation, and the projection *j*, or intermediate piece between the grooves *k* and *b*, terminates and the two grooves are united at such a position with the machine that when the bar *i* has arrived at the plane stock and comes in contact with the projection on the under side of the plane stock this intermediate piece *j* here terminates and the two grooves are here united, and the bar *i* descends beneath the projection, and brings the shingle without the planing instrument.

When both ends of the carriage *c*, and both plane stocks *o* are used, the bar *i*, returns in the same groove *k*, in which it moved in the last operation, but when only one end of the carriage *c* is used the bar *i*, instead of returning in the upper groove *k*, is caused to descend to the lower groove *b* by the action of the spring *l*, Figs. 1, 2, and 3, which is brought down by the hand or the application of a weight. The bar *i*, is about one inch square and secured in the carriage, by projecting arms, that extend downward at right angles and are firmly secured to the under side of the bar *i*, and the bar *i* is susceptible of a vertical movement and is forced

up by the springs *s*, as shown at Fig. 2. The principal object of the springs *l*, which are applied to one or both ends of the machine, is to stop the operation of the machine, in case of misplacing of the shingles, or by the bar *i* slipping from the point of a shingle, by which the bar *i*, is brought to operate against the butt of the shingle, in such case by depressing the bar *i* by the spring *l* and commence the operation at the opposite end the operation is again correct.

At the under side and at each end of the plane stocks, within the side pieces *a*, and directly above the groove *k*, are formed projections, *t*, that extend down a sufficient distance to depress the bar *i*, that in passing under the plane stock, it will not come in contact with the cutting instrument connected thereto as shown at Fig. 8. Beneath the timbers *a*, are placed the springs *g* to which are attached a rod or bolt *p*, that extends upward through the side pieces *a*, and are firmly secured to the ends of the plane stocks *o*, and guide them in a vertical direction, if they are raised from their seat, by a shingle passing beneath them, that is thicker than the plane stock will admit in its lower position, and is forced down with a sufficient degree of pressure to perform the operation of planing by the action of the springs *g*, Figs. 1, 2 and 3.

At each side of the bar *i* a transverse groove is formed in the carriage in length a little more than half the width of the carriage, in which is placed a movable bar *u*, connected to the short end of a lever *r*, placed beneath the carriage by a projection extending downward from the under side of the bar *u*, to which it is secured. In the operation of the machine, when the shingles are removed from the hopper *n*, (in which they are placed previous to the operation of planing), by the bar *i*, and remain upon the carriage without the plane stock, they are prevented from returning by the action of the bar *u*, by raising the tip of the shingle so that it strikes against the back of the plane-stock, and as the carriage returns, the shingles fall off at the end of the carriage. The levers *r* are so arranged that when the bars *u* are without and advancing toward the plane-stock, they are made to assume a level with the carriage before they arrive at the plane-stock, by the long end of the lever coming in contact with a piece of timber extending across the frame, at the lower edge of the timbers *a*, Fig. 2, which raises the long arm of the lever, and depressing the short arm and the bar *u*, to which it is connected as seen at Fig. 2, and remains in that position, while the bar *u* is within the plane-stock, but as soon as the bar *u* passes out beneath the plane-stock, the long end of the lever *r*, passes off the transverse timber and pulls by its gravity, and

raises the tip of the shingle as soon as it leaves the plane stock.

Fig. 3 represents a sectional view of a single machine in which only one end of the carriage is used and one plane-stock for planing shingles. The end of the carriage that supports and moves the shingle is made tapering, inclining downward from the bar *i*, to the end; the bar *i*, is raised a sufficient height to take hold of the tip of the shingle, and the opposite end of the carriage is parallel with the frame *a*, and even with the top of the bar *i*, as seen at Fig. 3. In this machine the spring *l*, and groove *k*, are dispensed with, and the bar *i*, in passing under the plane-stock *o*, strikes the projection *t*, and raises the plane-stock, sufficient for the bar to pass the cutting instruments, without coming in contact with the edge as represented at Fig. 3. The bar *i*, is secured to the carriage in any applicable manner. Upon the upper edge of the timber *d*, are secured two stands, that support the axis of the comb *v*, that extends across the frame, with a row of projecting teeth inserted at the lower edge as seen at Figs. 3 and 7.

Fig. 6 is a longitudinal section of a machine, with a planing instrument *o'* secured to the carriage near the outer end, which carriage is similar to the one described in Fig. 3, with only one end that is used for planing shingles. As the shingles are brought out from the plane-stock *o*, by the bar *i*, it brings the tip of the shingle within the catch *w*, attached to the end of the timber *x*, and the shingles are prevented from returning by the points at the under side of the lever or dog *y*. When the carriage has commenced its retrograde movement and the bar *i*, is brought from under the catch *w*, the timber *x*, and catch *n*, are forced down by the action of the weights *z*, the catch *w*, preventing the shingle from moving back, and the timber *x*, confining the shingle to the surface of the carriage, while the cutting instrument *o'*, at the end of the carriage, planes the under surface of the shingle, while the carriage is returning, thus completing the operation, by planing the upper surface of the shingle when it is removed from the hopper *n*, beneath the plane-stock *o* and planing the under side when the carriage returns.

The plane-stock is formed of metal, in the ordinary form, and the planing instrument secured therein by screws and wedges, and the projections *t*, before described may be attached to the upper surface of the bar *i*, instead of the plane-stock.

The invention claimed, and desired to be secured by Letters Patent, is—

1. The carriage *c*, inclining downwardly from the middle, toward one or both ends, at an angle of about two degrees in accordance with the taper of the shingle, in combina-

tion with the movable, or stationary bar *i*, that propells the shingle, all being constructed substantially as herein before described.

- 5 2. I also claim the projection *t*, secured to the under side of the plane-stock *o*, that depresses the movable, and is raised by the

stationary bar *i*, as herein set forth and described.

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Witnesses:

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