J. Black,

Making Laths.

No. 22,058. Patented Nov. 16, 1858.

Fig. 3.

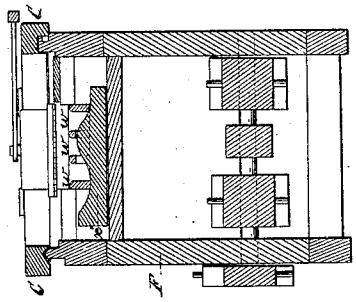


Fig. 4.

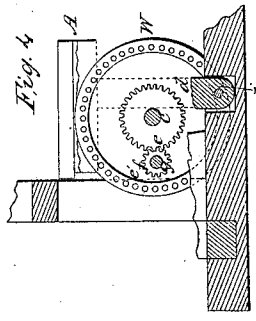


Fig. 7.

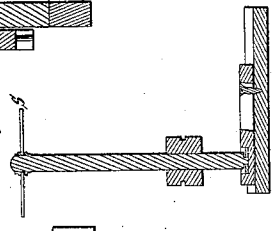


Fig. 2.

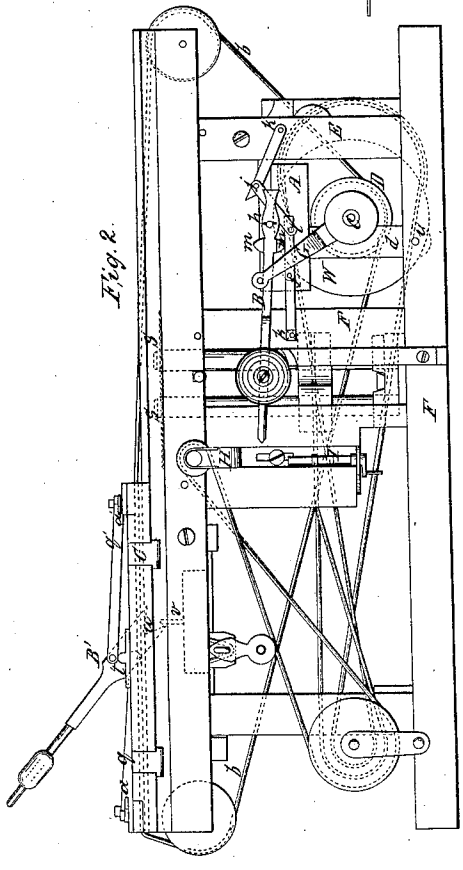


Fig. 6.

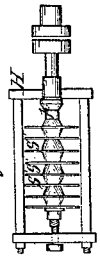


Fig. 5.

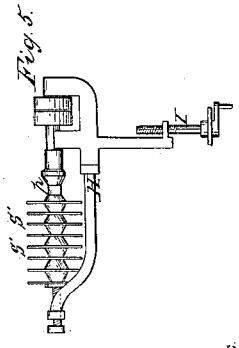
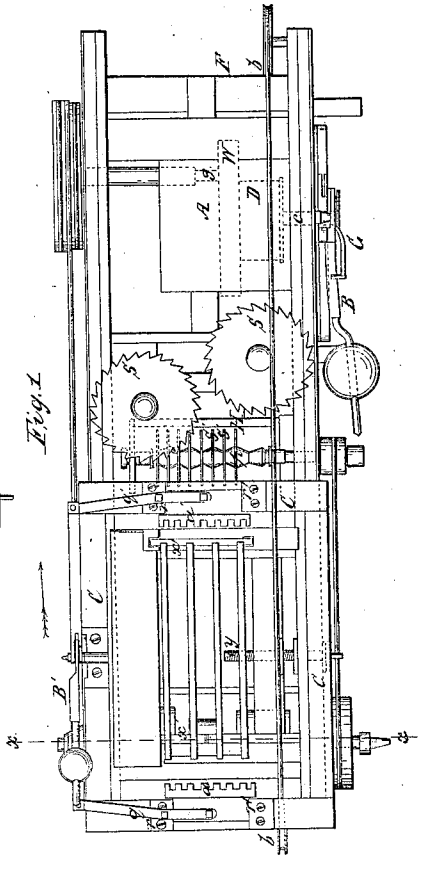


Fig. 1.



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JOSIAH BLACK, OF MEMPHIS, TENNESSEE.

LATH-MACHINE.

Specification of Letters Patent No. 22,058, dated November 16, 1858.

To all whom it may concern:

Be it known that I, JOSIAH BLACK, of the city of Memphis, in the county of Shelby and State of Tennessee, have invented a new and Improved Mode of Sawing Laths; 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.

The nature of my invention upon which I claim a patent consists in the peculiar combination of machinery for the purposes as set forth, which machine may be propelled by steam, water or horse power, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of the machine. Fig. 2 is a side view of same. Fig. 3 is a vertical section on *x x*. Fig. 4 is a section view showing manner of reversing movement of carriage. Fig. 5 is a side view of the system of vertical saws. Fig. 6 is a top view of the same. Fig. 7 is a section through shaft of horizontal saw.

Similar characters of reference in the several figures denote the same part.

This machine is designed to act automatically from the reception of the bolt, until it is cut into laths.

F is the main frame.

C is the carriage in which the bolt is secured between dogs *a a'*, and which is made to traverse the upper portion of the frame F by connection of cords *b b'* with drum D on shaft *c*, the opposite rotation of the drum giving the opposite movements of the carriage. This reverse of motion of drum D is effected as follows. The shaft *c* has its bearings upon the side of upright *d* of the vibrating table A, and carries a wheel W provided with both internal and external gear *e e'*, as shown in Fig. 4, so that by the vibration of the table A about its connection *i*, with the main frame, this double system of gearing will alternately engage the pinion *f* on shaft *g*. And as this latter named shaft revolves constantly in one direction, the motion of drum D will be changed each time table A moves about *i*.

The movement of table A is effected from the rotation of shaft *c* as follows: Attached to the table and capable of moving about point *h* is a weighted lever B. Under this lever is a system of jointed rods connecting the table A with the uprights E E of the main frame. These rods being jointed at *j j*, and attached to uprights E by pins *k k*, their attachment to table A being by pin *l*. A lever B is turned upward about its attachment *h*, one of its points *m* will depress one of joints *j* and lift the other, and thus produce the movement of table A necessary to alternate the gear meshing with pinion *f*. The lever B is turned about *h* by being lifted by an arm G of shaft C. This arm is loose upon the shaft, and only moves with it when it encounters a stop on the shaft.

S S are the horizontal saws driven by bands, and S' S' the vertical saws, upon shaft *p* held in frame H, capable of vertical adjustment by screw I.

The dogs *a a'* are attached to levers *q q'*, and move under guides *r r'* by the action of these levers. The levers *q q'* are connected with a weighted lever B', above and below its fulcrum *t* (Fig. 2), so that when the lever is in position of drawing, the dogs will be projected forward into the bolt, and when turned in the opposite position the bolt will be released. This movement of lever B' is produced by notch *u* catching on projection *v* of the frame as the carriage traverses. The bed under the carriage when at the head is made up of the bars *w*, contained in a frame moved vertically by wedges *x' x'* driven forward by a screw *y* as seen in Figs. 1 and 3. This gives a mode of adjusting the thickness to be cut by horizontal saws S S. As the carriage moves in direction of arrow (Fig. 1) after the cut has been made, the lever B' will turn into its other position by the encounter of notch *u* with projection *v*, dropping the bolt upon bars *w*. Then as the motion reverses lever B' will be forced into position of Fig. 1 by the movement of the carriage. This tightens the dogs *a a'* and the bolt is carried forward to the saws. In this manner the carriage is made to traverse back and forth until the bolt is cut into laths. The dogs opening and permitting a new feed at the termination of each back-

ward movement; while they are tightened as the carriage again moves forward. The entire operation is thus automatic.

I claim—

The vibrating table and lever B together with mechanism connected therewith for giving change of motion to carriage in combination with the lever B′ and the mechanism for opening and closing the dogs; the whole being arranged for joint operation substantially as and for the purpose set forth.

JOSIAH BLACK.

Witnesses:
M. H. BALDWIN,
G. A. JUNKERMANN.