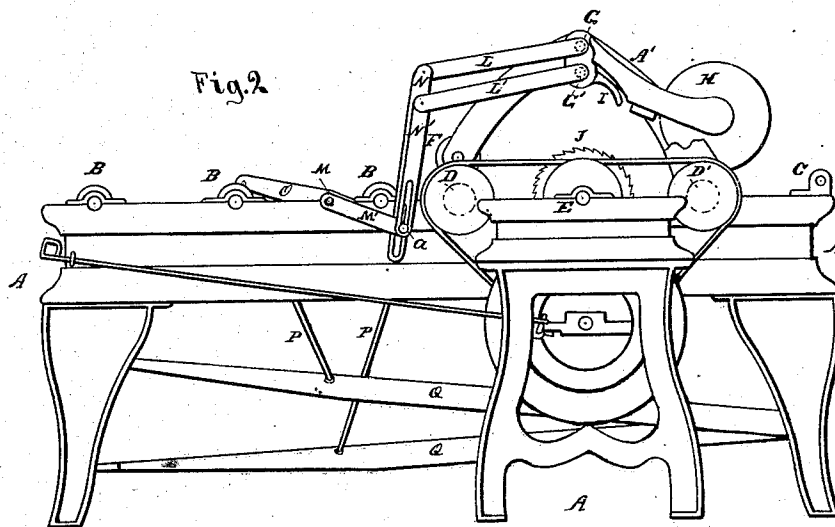
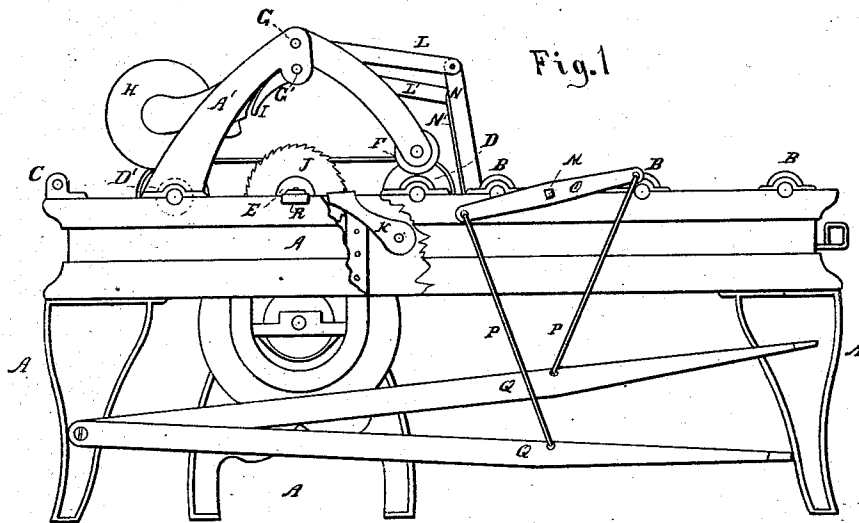


J. C. MACKEY.
Lath-Bolting Machine.

No. 159,591

Patented Feb. 9, 1875.



WITNESSES

John W. Collins
Matthew T. Chapman

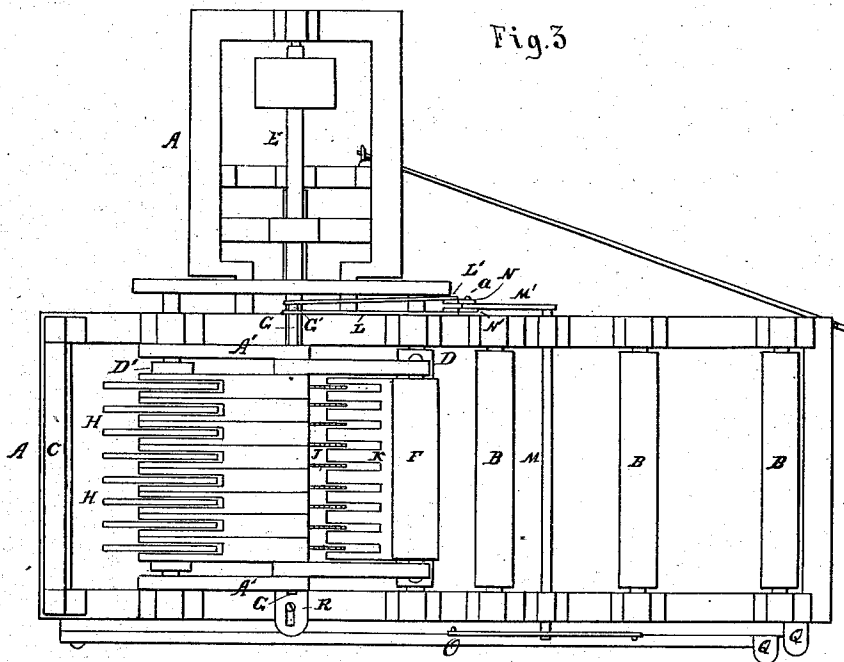
INVENTOR

John C. Mackey
By Gidley & Warner
Attys.

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WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN C. MACKEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LATH-BOLTING MACHINES.

Specification forming part of Letters Patent No. **159,591**, dated February 9, 1875; application filed November 16, 1874.

To all whom it may concern:

Be it known that I, JOHN C. MACKEY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lath-Bolting Machines, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the said improvements, reference being had to the accompanying drawing, forming a part hereof, and in which—

Figure 1, Sheet 1, is an elevation of one side of a bolting-machine embodying my invention. Fig. 2, Sheet 1, an elevation of the other side; and Fig. 3, Sheet 2, a top or plan view of the machine.

Like letters of reference indicate like parts.

My invention relates to that class of bolting-machines employed to cut lath-bolts, and for similar purposes. My object is to provide improved means for raising the roller which presses the slab, to furnish the machine with independent bolt-presses, and with means for raising the same together; to provide the saws with adjustable steady-blocks, and the shaft of the saws with an adjustable bearing, all substantially as hereinafter specified.

In the drawing, A represents the frame of the machine. B B are idle-rollers, on which the slabs ride; and C is a like roller, on which the bolts ride. D is a feed-roller to carry the slabs to the saws, and D' is a like roller to draw the bolts therefrom. These rollers may be driven by mechanism actuated by the saw-shaft E. F is a roller suspended in hangers mounted rigidly on a shaft, G, turning in bearings in the fixed arms A' A'. H H are rollers suspended in hangers mounted freely on the shaft G. I is a rocker rigidly attached to a shaft, G', turning in bearings in the arms A. J J are the saws. K is a rocking piece, held in place by friction or other suitable means, and cut to receive the saws, thus performing the function of steady-blocks. L is a crank-arm on the shaft G; and L' is a like arm on the shaft G'. M is a shaft turning in bearing in the frame, and M' is a crank-arm on this shaft. This crank-arm is provided with a pin, *a*, extending into slots in the lower ends of connecting-arms N N', pivoted to the arms L

L', respectively. These arms differ from each other in length, as is clearly shown in Fig. 2, while the slots are of equal length. When the upper ends of the arms N N' are at the same height, the pin *a* rests in the top of the slot in the arm N, and in the bottom of the slot in the arm N'; hence the upward movement of the free end of the arm M' will raise the roller F, and the downward movement of the said arm will raise the rocker I, the latter extending from its shaft in the opposite direction from which the hangers of the roller F extend from their shaft. The movement of the roller F and rocker I will also be independent of each other, and the upward movement of the latter will raise the rollers H H. O is a double crank-arm extending both ways from the shaft M, and P P are connecting rods or cords attached to each end of this arm, and to the independent treadles Q Q pivoted at their rear ends to the frame A. When the machine is not in use, the rollers F and H H rest on the idle-rollers next beneath them, respectively. R is an adjustable bearing, in which one end of the shaft E rests. This bearing is adjustable in the direction in which the shaft lies, and for the purpose of being rendered so adjustable is slotted longitudinally, and held in its place by means of a set-screw passing through the said slot into the frame A, as shown.

In order to use the machine, the slabs to be cut are arranged on the idle-rollers B B, and pushed toward the roller F. This roller is then raised by pushing downward on the proper treadle until the slabs will pass between the roller F and the roller D. The treadle is then released, and the slabs will be fed toward the saws.

In order to raise the rollers H H, if it shall be necessary to do so, the other roller is depressed until the bolts pass beneath them, and then released. The roller D' will then draw the bolts from the saws. Each bolt will be pressed independently of the other, however uneven the top of the slab from which they were cut may have been.

When it is necessary to remove or repair the saws, the piece K may be tilted or rocked downward from them, so that the latter may be more conveniently reached; and if it is desirable to remove the saws and their shaft,

this operation is facilitated by drawing the bearing R away from the end of the shaft resting in it.

I am aware that light rollers having toothed peripheries have been suspended and arranged for contact with the upper faces of the bolts, for the purpose of thereby preventing the rearward movement of the latter; and I do not here claim such, my rollers having smooth peripheries, and being free and sufficiently heavy to exert a downward pressure sufficient to prevent the bolts from being crowded upward; but

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a bolting-machine, of the independently-yielding rollers or bolt-

pressers H H, the rocking or tilting piece I, and the treadle mechanism, substantially as and for the purposes specified.

2. The adjustable tilting-piece or steady-block K, cut to receive the several saws of a gang of bolting-saws, and mounted on the frame, substantially as and for the purposes specified.

3. In combination, the treadles Q Q, connecting-rods P P, crank-shaft O M M', connecting-arms N N', crank-shafts G G', roller F, piece I, and rollers H H, all substantially as and for the purposes specified.

JOHN C. MACKEY.

Witnesses:

F. F. WARNER,

F. H. HERRING.