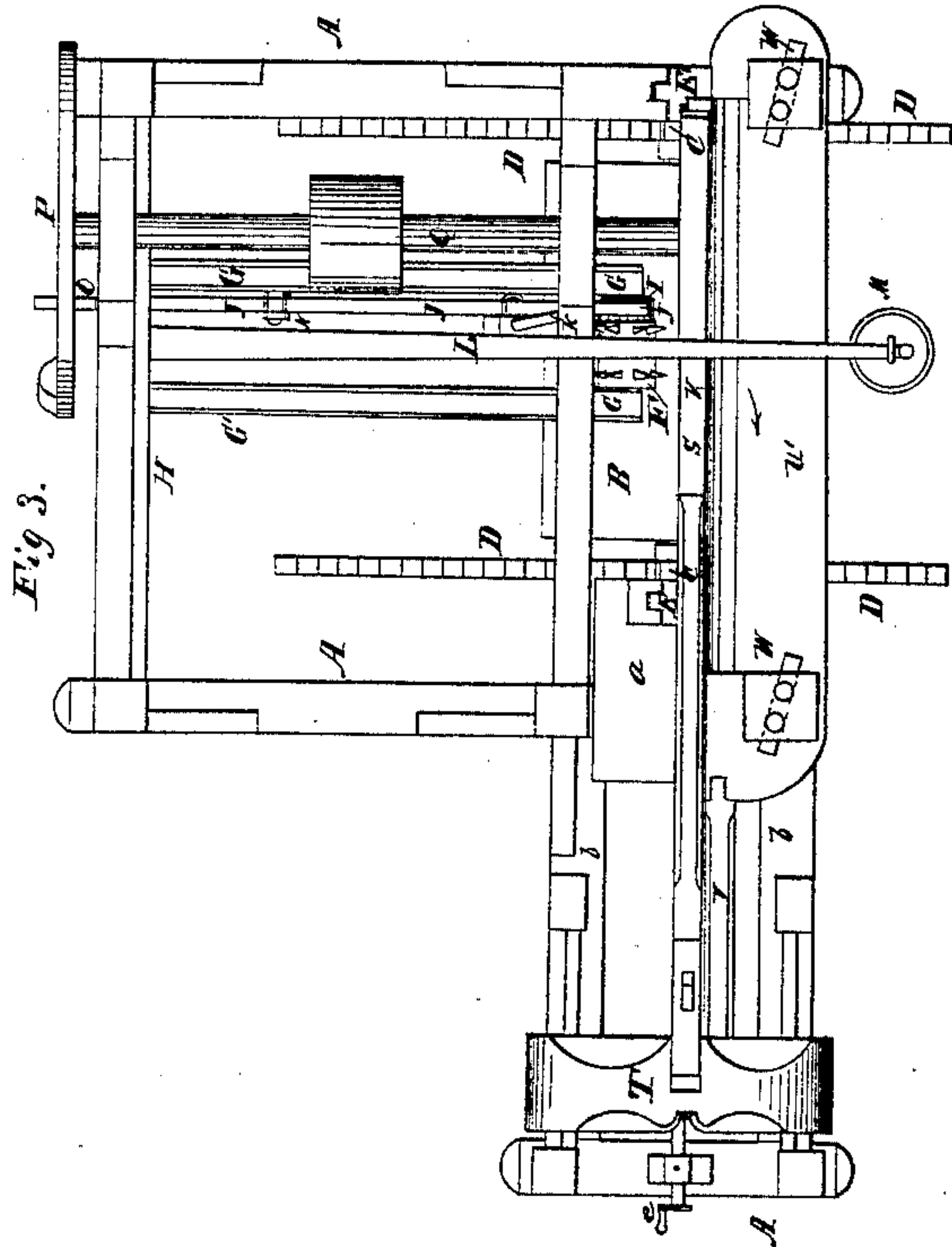
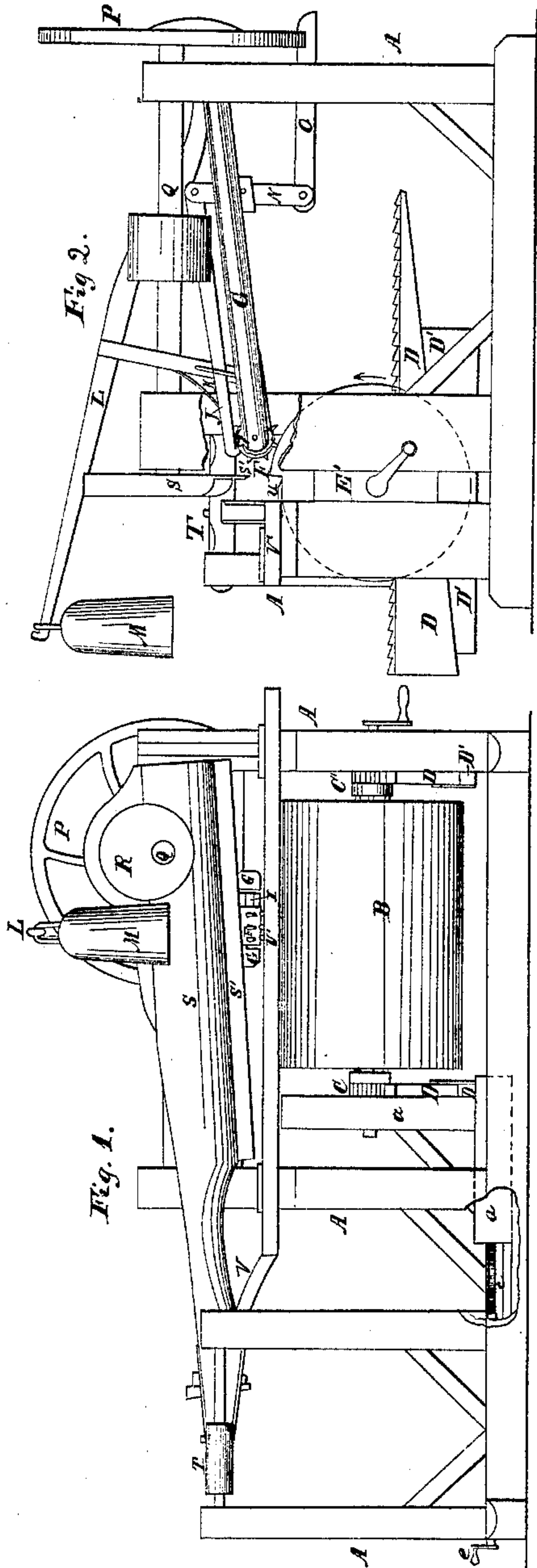


*J. Merison,
Making Laths.*

N^o 20,292.

Patented May 18, 1858.



UNITED STATES PATENT OFFICE.

JAMES NEVISON, OF MORGAN, OHIO.

IMPROVED METHOD OF FEEDING THE BOLT IN LATH-MACHINES.

Specification forming part of Letters Patent No. 20,292, dated May 18, 1858.

To all whom it may concern:

Be it known that I, JAMES NEVISON, of Morgan, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Lath-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved machine; Fig. 2, an end elevation, and Fig. 3 a plan view of the same.

Like letters denote like parts in the different views.

My improvement relates to a lath-machine with a wedge-rack for elevating the log. The wedge-racks heretofore used for elevating logs rest upon a horizontal plane, while the rack itself is inclined, so that the action of the knives tends to roll the log down the plane. This is a great objection, for machines thus constructed soon get out of order, and at best perform their work very imperfectly; but the greatest disadvantage of such a machine arises from cutting the lath at the same moment that the log is elevated, thus giving a great shock to the machine by requiring two important and incompatible functions to be performed simultaneously. These difficulties I have obviated by my improvement, which consists of a wedge-rack riding on an inclined plane, in combination with a spur-lever, to elevate and throw the log, and also to hold the log in place when the stroke of the knives is given.

The frame A may be constructed in any desirable manner suitable for the purpose designed. The log B is held in place by dogs at each end in the usual manner. Connected with each dog is a pinion C C'. These pinions work in the wedge-racks D D, Figs. 1 and 2. The wedge-racks slide upon ways, so that the log is raised and lowered as it revolves, as may be required. The journals or gudgeons of the dogs and pinions work in sliding boxes, as seen at E E', Figs. 2 and 3. The boxes E E' are provided with a tongue on each side, which works in a corresponding groove in the frame, as seen at E E', Fig. 3. The outer gudgeon is provided with a crank for the purpose of turning or adjusting the log independently of the other parts of the

machine. The log is rotated when being cut into lath or siding by means of the spur-roller F. This roller is supported by its journals in the arms G G', and the arms are attached to the shaft H, which works upon journals, so as to allow the roller F to adjust itself to logs of various sizes and to their decreasing dimensions as they are being cut up into lath. The devices for turning the roller, which are connected to the arms G G', are adjusted in the same manner.

By the side of the roller is a ratchet-wheel I, in which works the ratchet J, Figs. 2 and 3. The ratchet is kept in place in the ratchet-wheel by the spring K, which is fastened to an arm connecting the lever L with the arms G G'. One end of the lever L is attached to the shaft H, and to the other end is attached a weight M, by means of which the roller F is continually being pressed down onto the log without regard to its diameter. The ratchet J is connected by a joint to the lever N, and to the lower end of the lever is connected by a joint the arm O. This arm is worked by the eccentric wheel P, so as to give to the ratchet a reciprocating motion, by which means the ratchet-wheel is operated, so that the log is turned or a throw given to it requisite for the thickness of a lath.

On the driving-shaft Q, to which the eccentric-wheel P is secured, a driving wheel or pulley is keyed, and the eccentric R, Fig. 1, to which eccentric is connected the knife-beam S, which knife-beam is connected by a strap-joint to a wrist on the cross-head T, as seen in Fig. 3. This cross-head slides upon ways connected to the frame-work.

To the knife-beam S is secured the vertical knife S', and the horizontal knife U is secured to the knife-stock U'. This knife-stock is connected to the cross-head T by the connecting-rod V, there being a joint formed at its connection with the knife-stock and cross-head. As both the knife-beam S and the knife-stock U' are connected to the same cross-head it follows that the knives will have a simultaneous movement, horizontal and vertical. The motion given by the eccentric R is directly communicated to the horizontal knife U, which has a little lead of the vertical knife, so that the lath are cut horizontally a little in advance of their being cut off from the log

vertically. Thus alternately, the lath is cut off the log and then a throw given it by the roller, as before described.

By the compound movement of the eccentric R and cross-head T the knife S acquires a drawing cut, which is the case with the knife U, this being accomplished by the slots W W, Fig. 3, being placed in the stock in an angular position, which causes the knife to be forced into the log as the knife moves in the direction of the arrow, Fig. 3, and as the knife moves reversely it is withdrawn, its cutting direction being in line with the slots W W. This arrangement causes the knife to cut easily and effectively.

a is a sliding carriage or head-block, and forms a part of the general frame-work; but at the same time it is so constructed as to move independently of it as it slides upon ways between the two sills b b, Fig. 3, of the frame-work. Connected with the foot of this head-block is the screw c, Fig. 1. This screw is provided with a crank e for the convenience of turning the screw in sliding the head-block. The box E and pinion C are connected to the head-block, so that by sliding the head-block the log may be secured in place or detached, as the nature of the case may require. As the log turns by the action of the roller, the pinions turn with it and operate the wedge-racks D D, with which they are in gear, so

that at every throw or turn that is given to the log in the direction of the arrow, Fig. 2, the log is raised and turned simultaneously before the knives begin to cut. These wedge-racks slide on inclined planes D' D', Figs. 1 and 2, which renders it easy to detach the core or center of the log after the laths are cut off, and to replace it with a new log, as the wedge-racks can be moved back so as to render it convenient to roll the log into place, instead of lifting it, as in many cases is required.

By means of the adjustable carriage or head-block a and screw c logs of various lengths are secured in place for cutting with equal facility. The logs should not exceed the length of the knives.

What I claim, and desire to secure by Letters Patent of the United States, is—

The wedge-rack D, riding on an inclined plane D', in combination with the arms G, provided with the spur-wheel F, ratchet-wheel I, and ratchet J, for the purpose of elevating the log and giving it a throw and also for holding it in place during the stroke of the knives when arranged and operated, substantially as set forth.

JAMES NEVISON.

Witnesses:

P. O. COOK,
ED. A. WRIGHT.