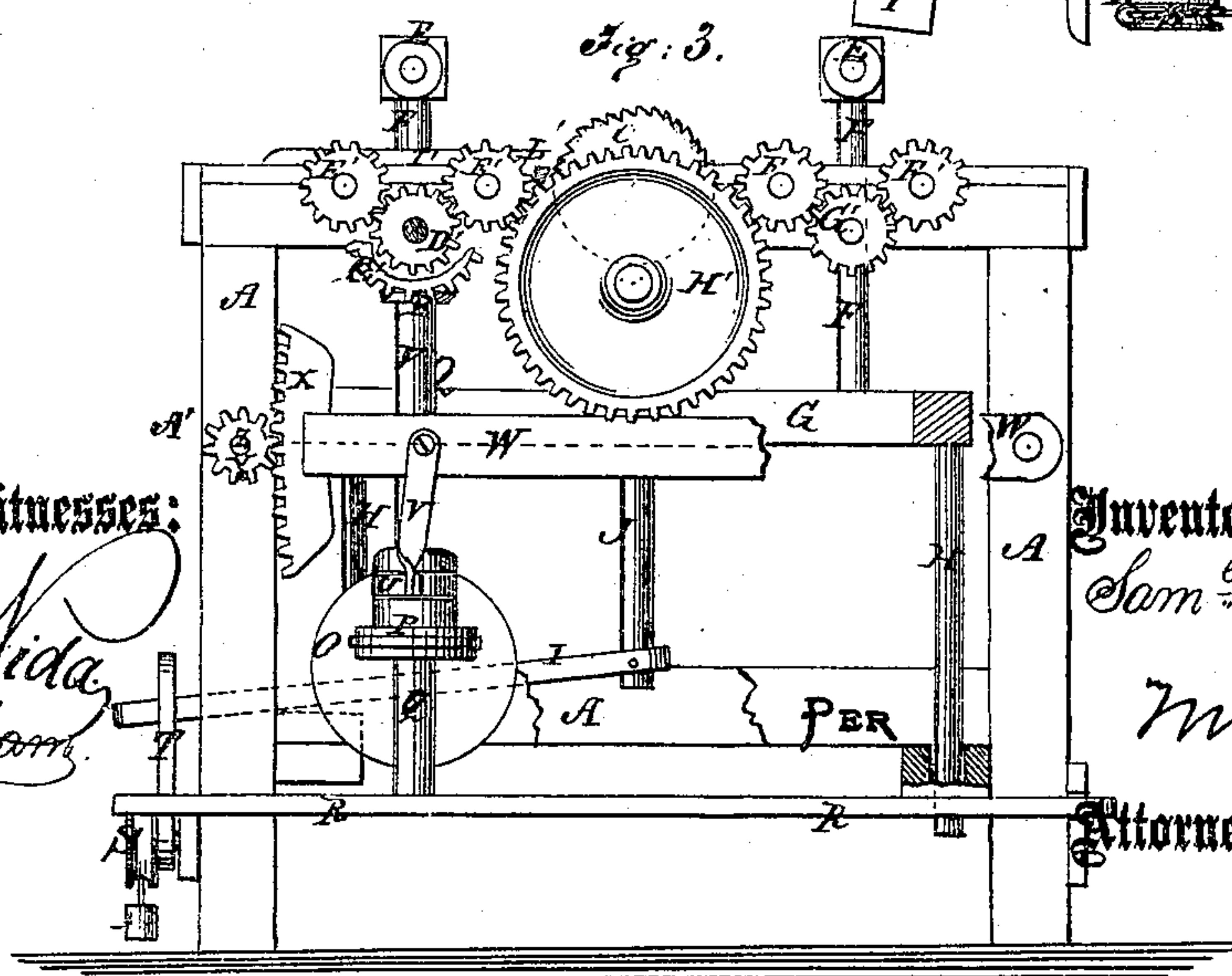
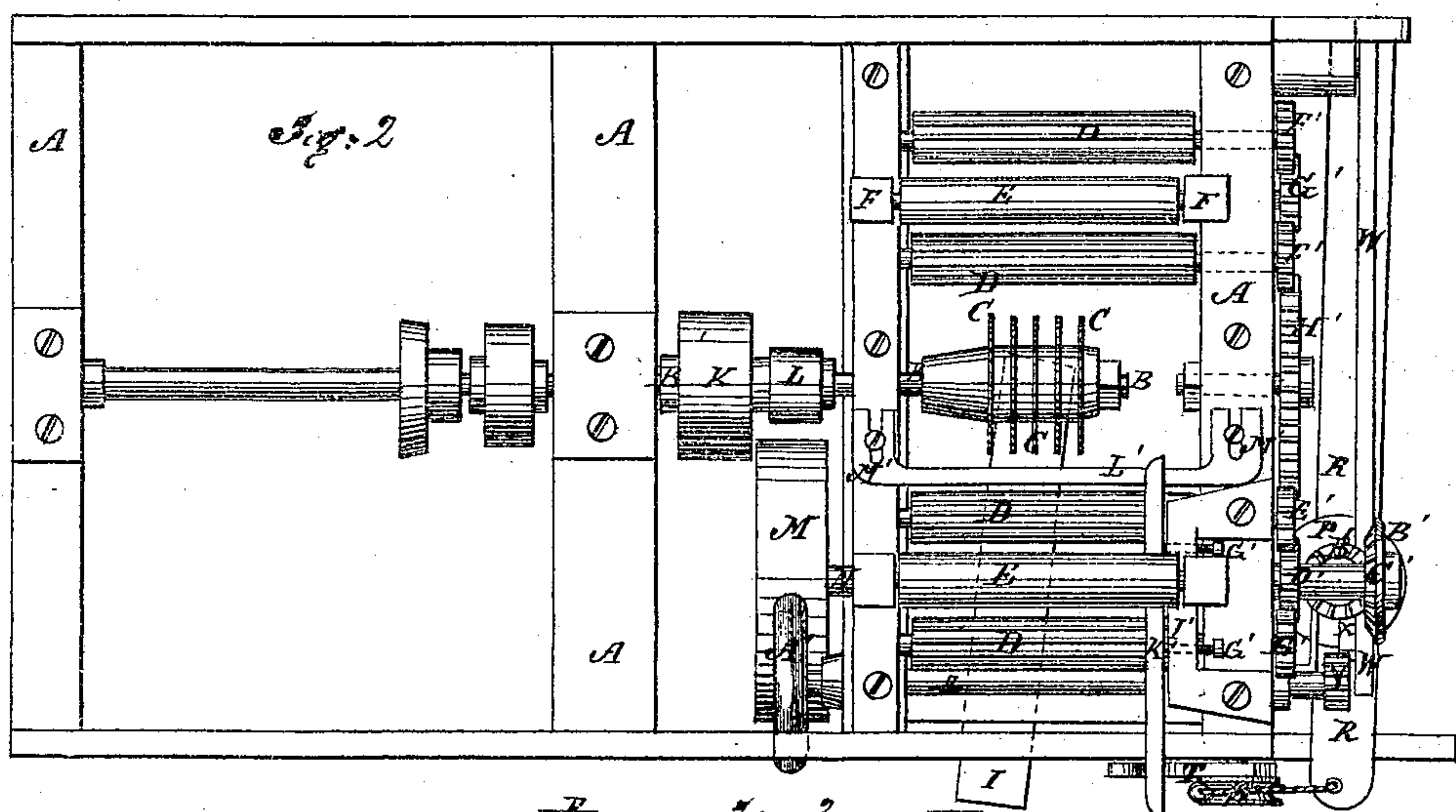
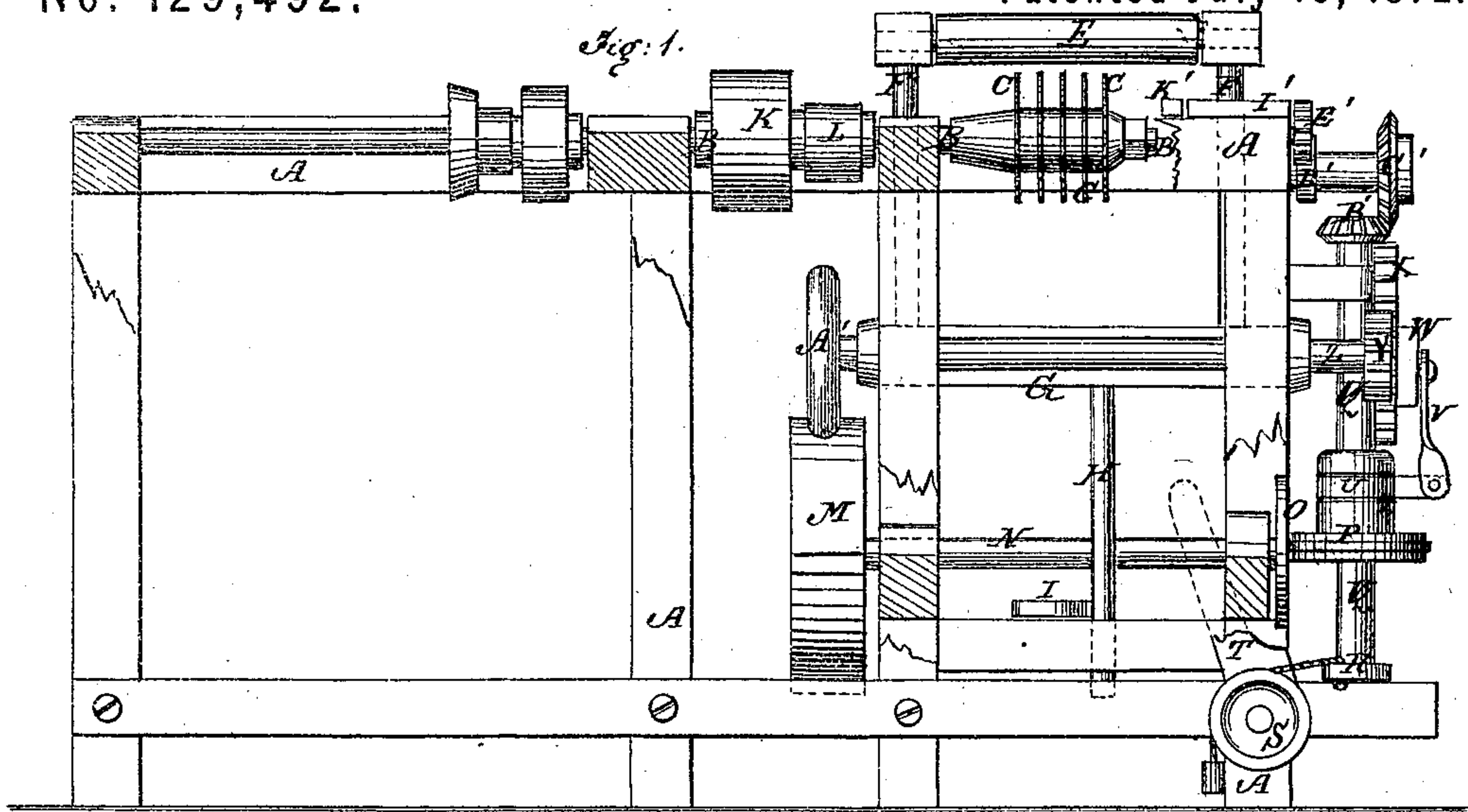


S. M. PALMER.

Improvement in Lath-Machines.

No. 129,492.

Patented July 16, 1872.



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# UNITED STATES PATENT OFFICE.

SAMUEL M. PALMER, OF GLEN'S FALLS, NEW YORK.

## IMPROVEMENT IN LATH-MACHINES.

Specification forming part of Letters Patent No. 129,492, dated July 16, 1872.

Specification describing a new and useful Improvement in Lath-Machines, invented by SAMUEL M. PALMER, of Glen's Falls, in the county of Warren and State of New York.

In the accompanying drawing, Figure 1 is a side view, partly in section, of my improved machine. Fig. 2 is a top view of the same. Fig. 3 is an end view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved lath-machine, simple in construction, convenient in use, and effective in operation, and which shall be so constructed as to bring the machine fully under the control of the operator, so that he can easily regulate the rapidity of the feed without stopping the machine, and so that he can instantly stop the feed when desired; and it consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A represents the frame of the machine. B is the shaft, which revolves in bearings attached to the frame A, and to the free end of which the saws C are attached, so that they can be readily detached and adjusted or replaced by new ones without disturbing the shaft B in its bearings. D are the feed-rollers, four of which are used, two upon each side of the saws C, and so near the said saws that no table will be required. All the feed-rollers D may be fluted, or part of them may be fluted and the others made smooth. E are the press-rollers, which are placed directly over the spaces between the feed-rollers D of each pair. The journals of the press-rollers E revolve in bearings formed in or attached to the upper ends of the rods F that pass down through holes in the frame-work A, and their lower ends are attached to the frame G, so that the two press-rollers E may be rigidly connected together, so that one or the other of said press-rollers may be always bearing upon the timber being sawn, however uneven or irregular in shape it may be. To the frame G are attached two or more rods, H, which pass through guide-holes in the lower part of the frame A. The press-rollers E may be raised, when desired to release the timber, by a foot-lever, I, pivoted to a stud, J, attached to the central part of the frame G. To the

saw-shaft B is attached a pulley, K, to receive the driving-belt, and a pulley, L, to receive a belt for driving the feed-rollers, and which also passes around a pulley, M, attached to the inner end of the shaft N. The shaft N revolves in bearings attached to the lower part of the frame A, and to its outer end is attached a disk, O, against the flat outer surface of which rests the face of the friction-wheel P placed upon the vertical shaft Q so that it may carry said shaft with it in its revolution, and so that it may be slid up and down freely upon said shaft.

By this construction, by moving the friction-wheel P toward the edge of the disk O the rapidity of the feed will be increased; by moving said wheel toward the center of said disk the feed will be slowed; and by moving it to the center of the disk the movement of the feed-rollers will be stopped, thus enabling the feed to be controlled and stopped without throwing any of the machinery out of gear. The lower end of the vertical shaft Q revolves in bearings on a bar, R, one end of which is pivoted to the frame A, and its other end rests upon a bar of said frame, and has a cord attached to it which passes over a guide-pulley, S, pivoted to the frame A, and has a weight attached to its other end, so that by varying the said weight the friction-wheel P may be held against the disk O with any desired force. T is a cam-lever pivoted to the frame A in such a position that its inclined or curved edge may rest against the inner edge of the free end of the bar R, so that by operating the said lever T the friction-wheel P may be moved back from the disk O and the feed stopped instantly if desired. Upon the hub of the friction-wheel P is placed a strap, U, to which is attached the lower end of the rod V, the upper end of which is pivoted to a lever, W, one end of which is pivoted to the frame A, and to its other end is attached a rack-bar, X, the teeth of which mesh into the teeth of the small gear-wheel Y attached to the end of the shaft Z, which revolves in bearings in the upper part of the frame A, and to its inner end is attached a hand-wheel, A', so that the position of the friction-wheel P upon the disk O may be adjusted by turning the said hand-wheel A' in one or the other direction.



If desired the toothed-rack X and gear-wheel Y may be replaced by a cord and pulley, the weight of the friction-wheel P being sufficient to carry it downward, as the said cord is slackened, by turning the hand-wheel A'. Upon the upper end of the shaft Q is secured a bevel-gear wheel, B', the teeth of which mesh into the teeth of a bevel-gear wheel, C', which revolves upon a journal attached to the frame A. Upon the bevel-gear wheel C' is formed, or with it is rigidly connected, a small gear-wheel, D', the teeth of which mesh into the teeth of the two gear-wheels E' attached to the ends of the journals of one pair of feed-rollers, D. To the journals of the other pair of feed-rollers D are attached the gear-wheels F', similar to the gear-wheels E', and the teeth of which mesh into the teeth of the intermediate gear-wheel G', which is pivoted to the frame A, and which is similar to the gear-wheel D'. The teeth of the inner gear-wheels E' F' mesh into the teeth of a large intermediate gear-wheel, H', so that all the feed-rollers may be revolved at the same time, in the same direction, and with the same velocity. I is a short stationary gauge or guide attached to the frame A, and with which is connected, by a set-screw or screws, J', an adjustable sliding gauge or guide, K', which may be slid along the side of the outer saw to keep the outer lath from springing outward while being sawn. L' is a bar placed in front of the saws C, and between them and the inner feed-roller D, and the lower side of which is beveled off so that it may be moved

close up to the saws to support the extreme end of the timber while being sawn and after it has left the feed-rollers. The bar L' is made with cross-arms M' upon its ends, which are slotted to receive the screws by which it is secured to the frame A, so that bar L' may be moved up to the saws as they become smaller from wear.

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

1. The pivoted bar R, with its cord-weight and guide-pulley, in combination with the vertical shaft Q that carries the friction-wheel P, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the pivoted lever W, rack and gear-wheel X Y, shaft Z, and hand-wheel A' with the friction-wheel P and shaft Q, substantially as herein shown and described, and for the purpose set forth.

3. The combination of a pivoted cam-lever, T, pulley S and its weighted cord, the pivoted lever R, friction-wheels O and P and their shafts, as shown and described.

4. The adjustable bar L' M', placed in front of the saws C and between them and the inner feed-roller D, substantially as herein shown and described, and for the purpose set forth.

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