W. W. Le GRANDE.

Machine for Cutting Siding.

No. 164,381. Patented June 15, 1875.

Fig. 1.

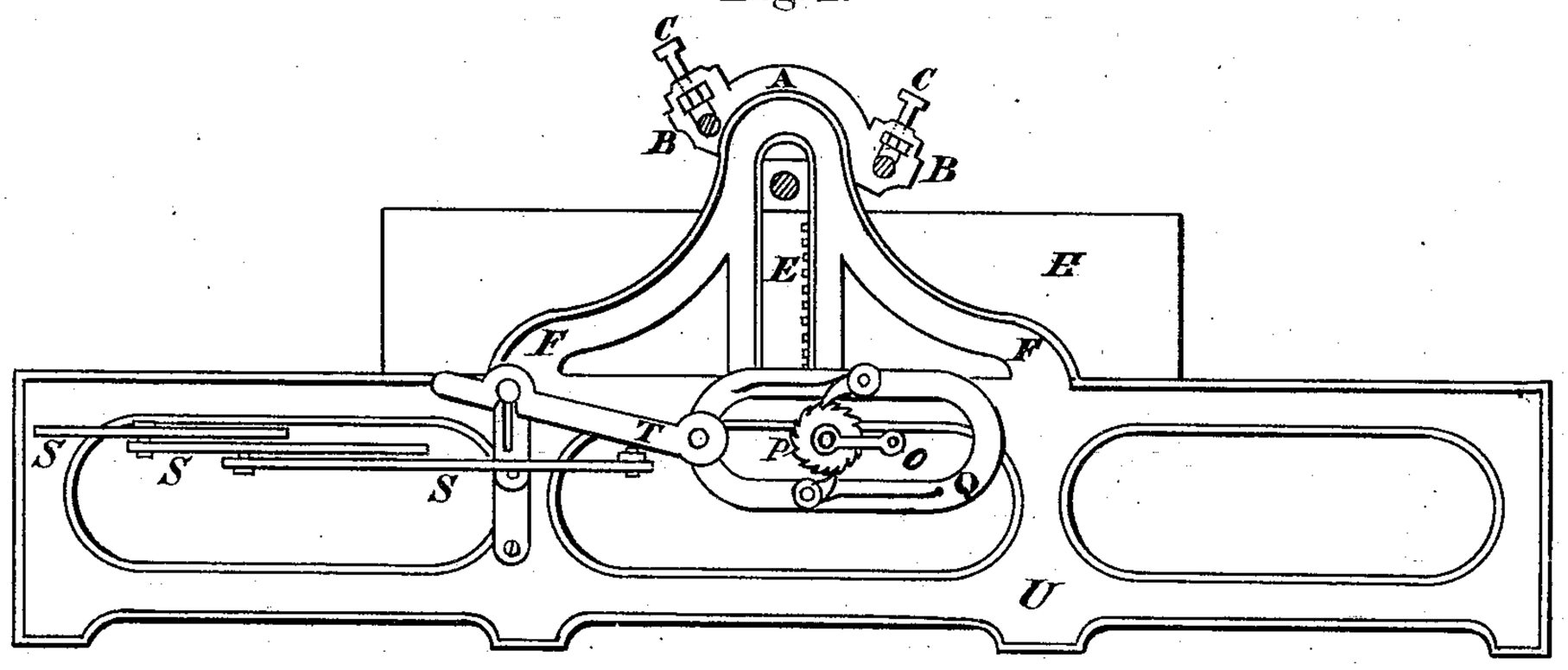


Fig. 2.

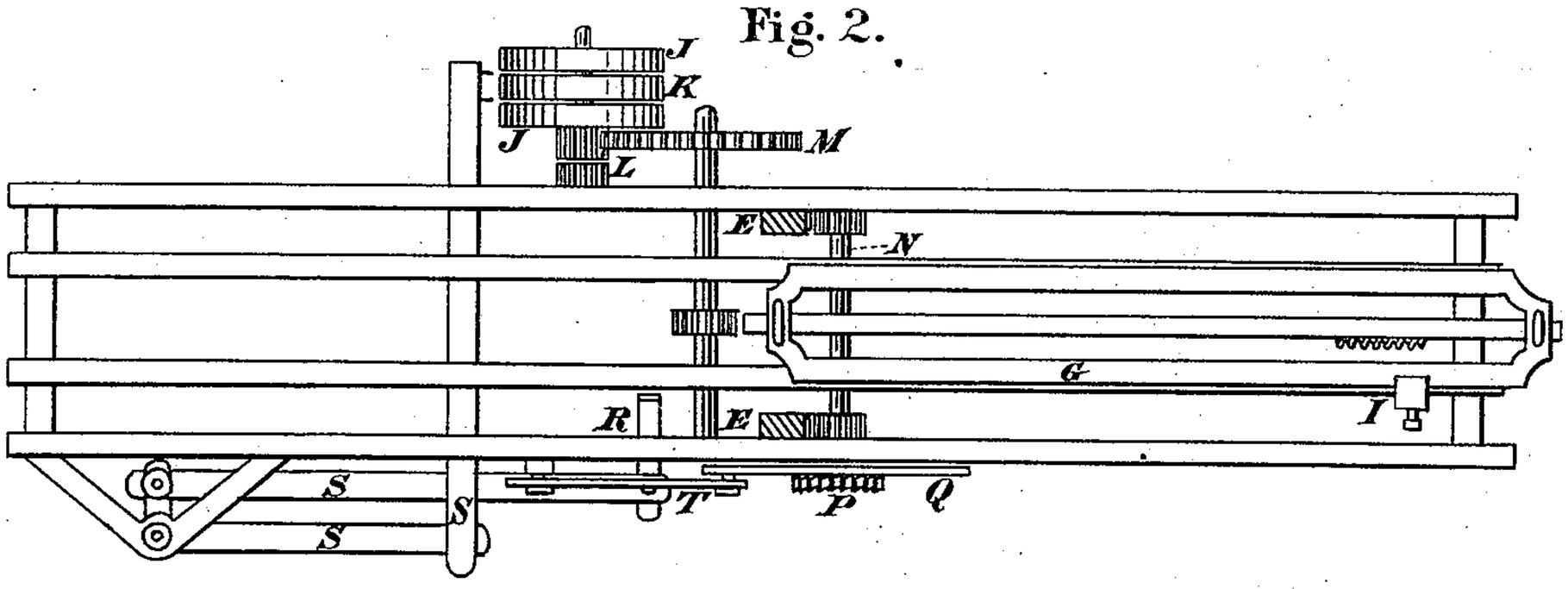
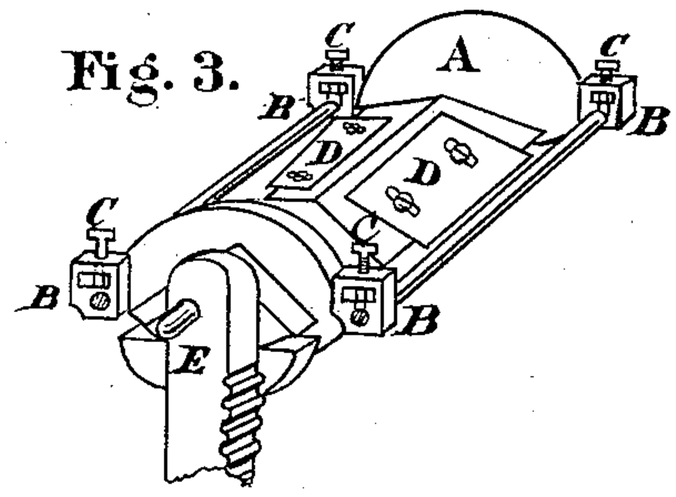


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM W. LE GRANDE, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF HIS RIGHT TO THOMAS D. OSBORNE, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR CUTTING SIDING.

Specification forming part of Letters Patent No. **164,381**, dated June 15, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that I, WILLIAM W. LE GRANDE, of the city of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Machines for Cutting Siding; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification:

Figure 1 is a side elevation of the machine, showing the shifting and feeding devices at the side. Fig. 2 is a plan or top view, with the cutter-head left off in order to show the interior arrangement of the several devices for operating the machine. Fig. 3 is a perspective view of the cutter-head, showing how the knives and pressure-rolls are arranged thereon.

Similar letters of reference indicate corresponding parts.

My invention relates to machines for cutting weatherboarding or other thin lumber by means of adjustable knives or cutters secured to an oscillating head, as hereinafter described, the object of which is to provide a machine that will cut beveled weatherboarding or other thin lumber, such as splits, veneering, &c., of varying thicknesses, from a piece of timber driven under stationary knives secured to an angular-shaped head mounted upon adjustable bearings, which are made to drop automatically the required distance each time a board is cut from the piece.

The machine will be found more fully illustrated in side elevation, Fig. 1, plan or top view, Fig. 2, and perspective view, Fig. 3, in which A is an angular-shaped head, to which the knives are secured, and which is made to oscillate in its bearings to suit the changes of motion in the machine. B B are pressure-rollers to keep the timber in position while being cut to the required thickness without shivering or splitting the board. C C C C are set-screws for adjusting the rollers. D D are the knives, secured to the head-piece A by means of set-screws through elongated holes, so as to make them adjustable. One of these knives is made square on the edge, while the other is beveled to suit the kind of boards to be cut, the object of which is to cut a board at each movement of the carriage, as it passes back and forth on the ways. E E are the upright racks in which the cutter-head works, and by means of which it is raised or lowered to suit the different thicknesses of boards to be cut, which can be accurately gaged by means of the ratchet-wheel P at the side, which is made to operate pinions working in these racks on the inside of the frame. F F represent the housing-stands, which support the top of the last-named racks, all of which are made in form as shown in the drawing, and to the sides of which the pulleys and other devices for operating the machine are secured. The carriage and its movements are arranged and operated similar to that of an ordinary iron-planer. G is this carriage or platform. H is the piece of timber to be cut. I I are lugs on the side of the carriage for reversing the motion. J J are the driving pulleys. K is the idler. L and M are the pinions and wheel for transmitting motion to operate the carriage. N is the shaft with pinions to operate the cutter-head racks. O is the crank for raising the head and cutters. P is the ratchet-wheel for holding the racks in position. This last-named ratchet is provided with double pawls in order to operate it when the motion of the carriage is reversed. The pawls are attached to the yoke Q, at the side of the frame, and are operated by means of a small lever, R, extending in through the frame so as to be caught by the lugs I I on the carriage, by which all the shifting devices are operated, which devices consist in a series of levers, marked S S S S, all of which are made in form as shown in the drawing. T is a cam-hook, the wrist of which is secured in a slotted arm, so as to be made adjustable in order to regulate the thickness of the boards to be cut. U is the main bed-frame of the machine, which may be made of any suitable material and in any required form.

Having thus fully described the nature and objects of my invention, in order that others skilled in the art may know how to operate it, I first have the timber sawed into pieces of sufficient thickness to make the width of the board, and as wide as the log will square—for example, a log twenty-four inches square will

make four pieces six inches thick and twenty-four inches wide. One of these pieces I place on the carriage of the machine, with the edge up, and there secure it firmly by means of clamps or other suitable mechanism, after which the machine is put in motion, causing the carriage to approach the knife on the head A, the edge of which sits at a sufficient angle to cut the first board one-half inch thick at one side, and and one-fourth at the other. The carriage is then reversed by means of the shifting devices above described, and the knife-head lowered by means of motion transmitted to the ratchet-wheel P by the yoke Q, which connects with the shifting-levers S, the movement of which causes the cutter-head A to drop the thickness of the next board, and, when cut, the head is reversed, ready to enter the piece again, by means of suitable mechanism, so as to be in position to cut a board at each movement of the carriage as it passes back and forth on the ways, and so on alternately, in like manner, until the whole piece is cut into boards, the cutter-head A being so arranged in bearings as to rock or turn from one side to the other each time the carriage is reversed, to prevent the knife that is not cutting from rubbing the top of the timber as the piece passes under it. Immediately in front of the knives there is a pressure-roller, in order to regulate the depth that the knife is intended to cut, and also to prevent shivering or splitting the board as the knife advances.

Having thus fully described the nature and object of this my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The oscillating cutter-head A, with its pressure-rollers B B, adjusting-screws C C, and adjustable knives D D, as above described, in combination with the racks E E, shaft and pinions N, ratchet-wheel P, yoke Q, and cam-hook T, by which it is operated, when arranged, constructed, and operated substantially as and for the purpose set forth.

2. The combination of the carriage G, shaft and pinion L, wheel M, pulleys J J and K, with the shifting-levers S S S S, bed-frame U, and housing-stands F F, when arranged, constructed, and operated substantially as and for the purpose hereinbefore set forth.

WILLIAM W. LE GRANDE.

Witnesses:
FRANK PARDON,
CHARLES SWETNER.