

H. A. HOLMES.

Machines for Sawing Clapboards.

No. 142,339.

Patented September 2, 1873.

Fig. 1.

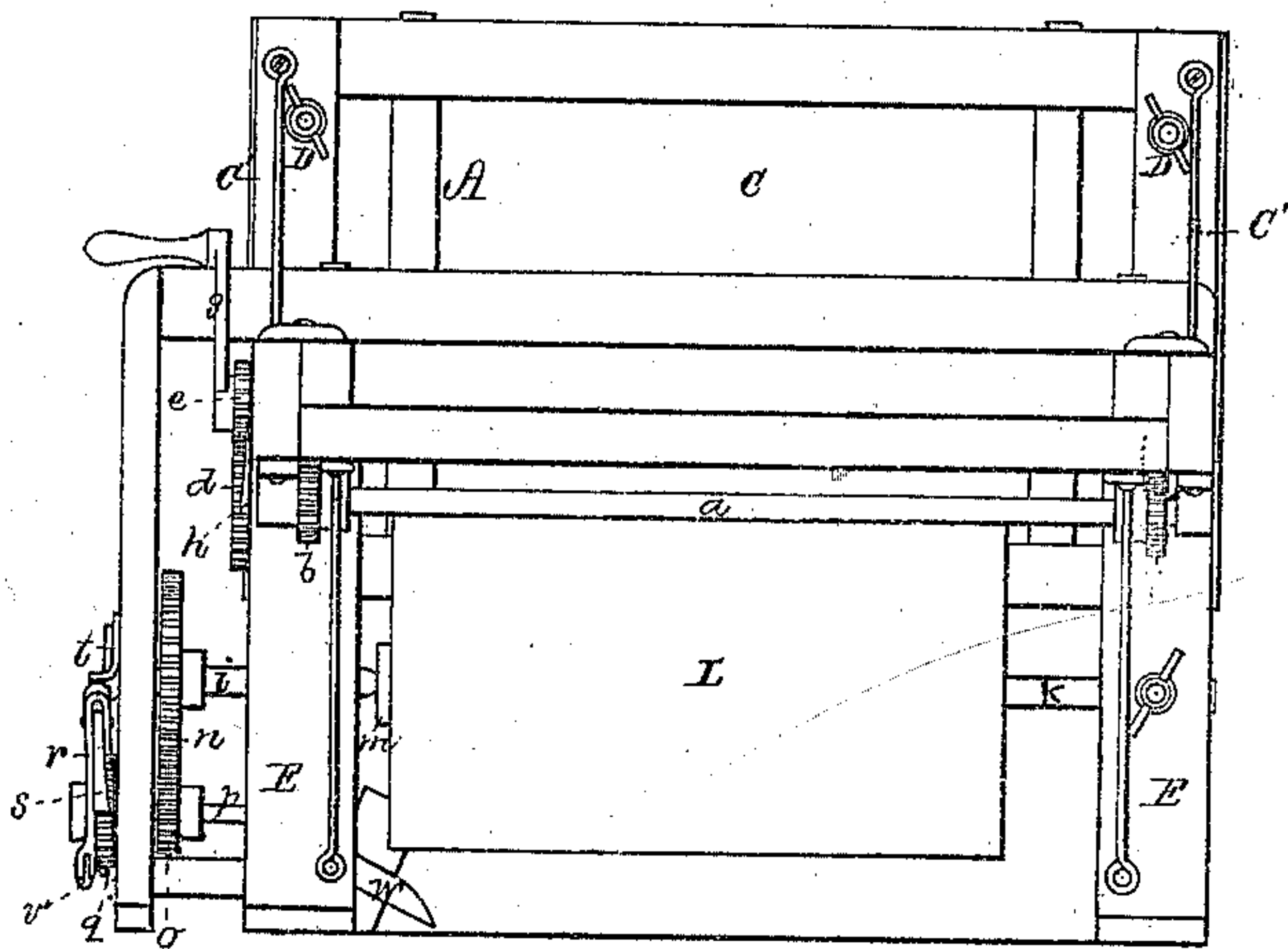


Fig. 2.

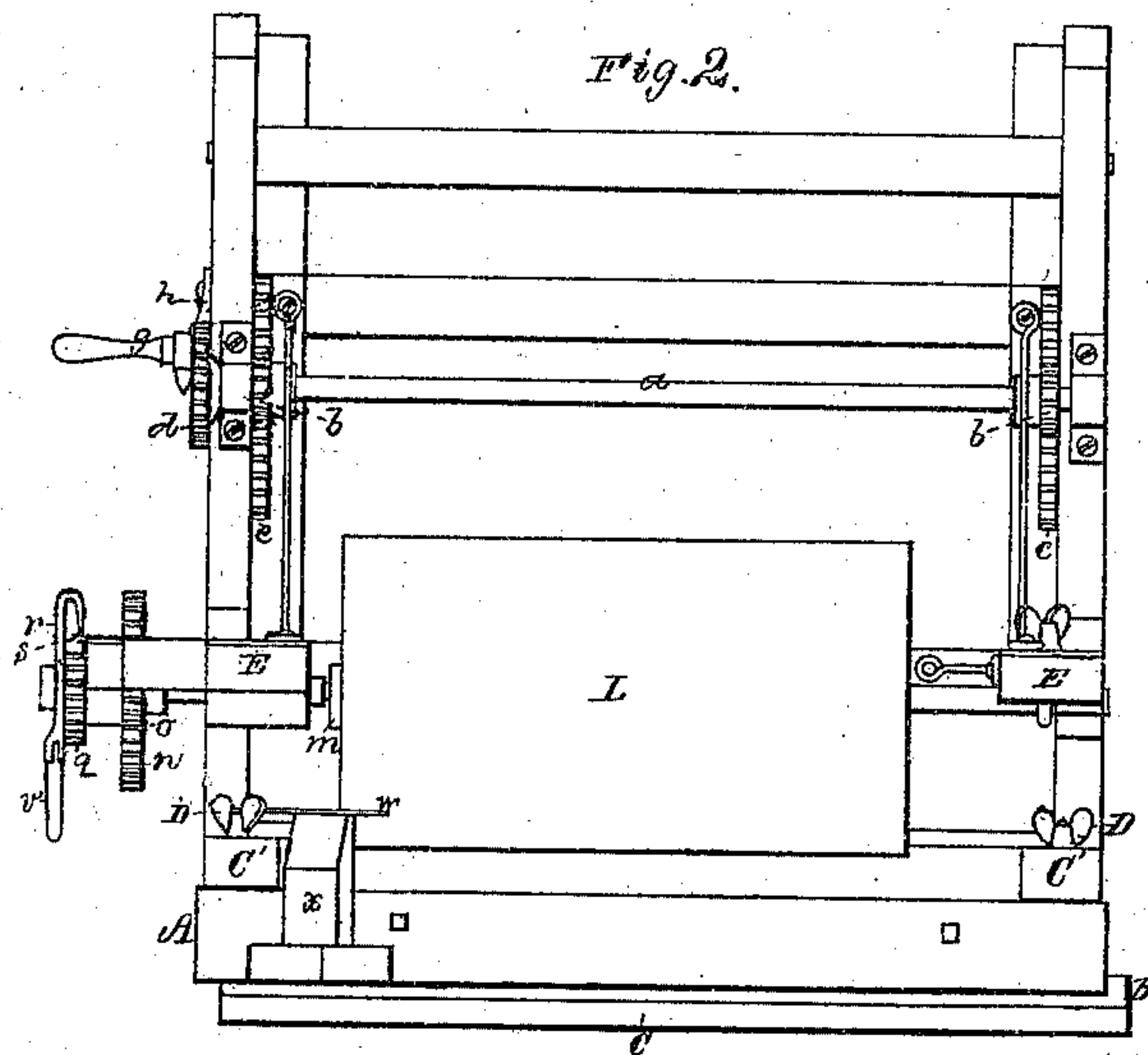
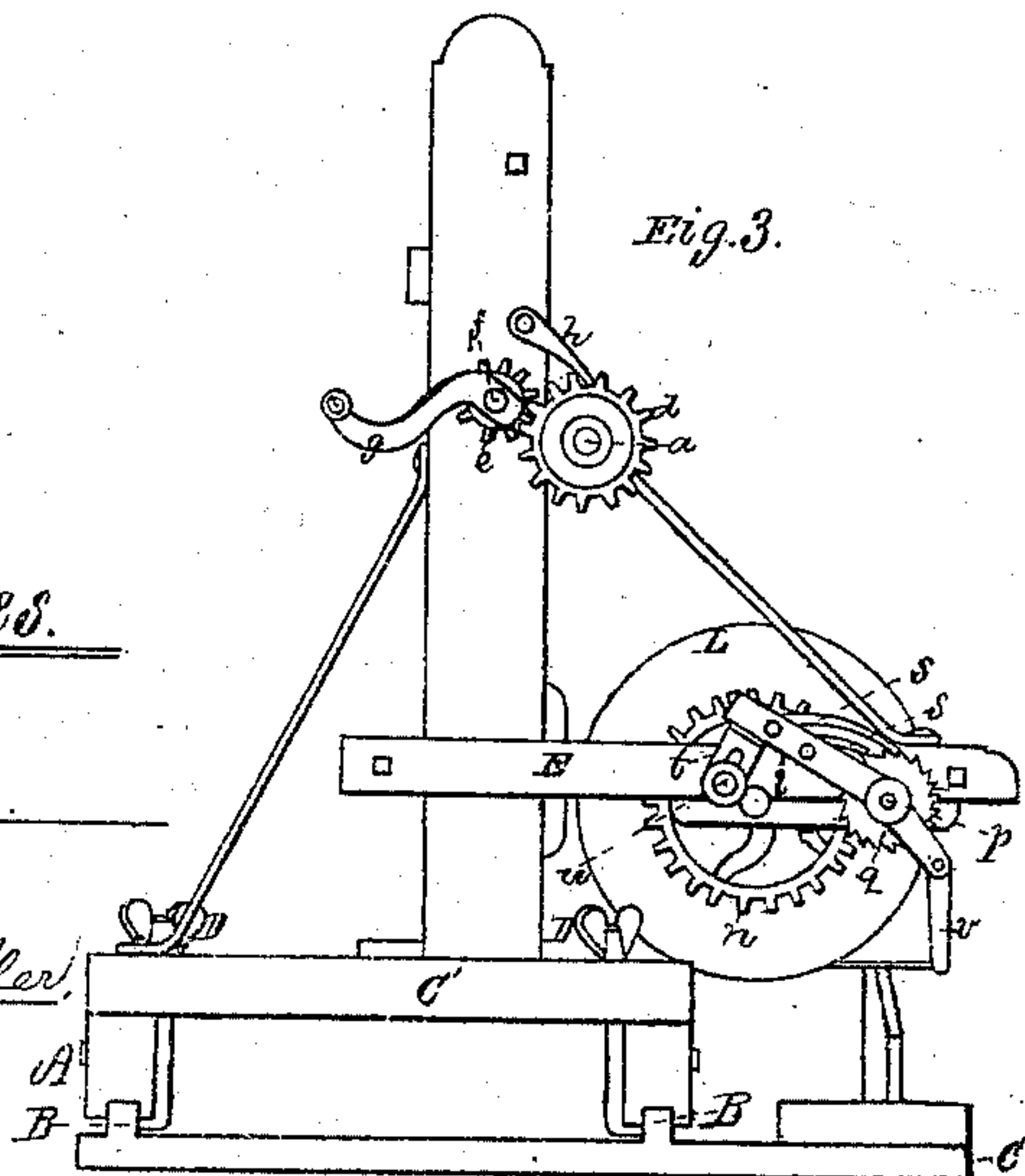


Fig. 3.



Witnesses.

L. N. Piper.

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by his attorney

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# UNITED STATES PATENT OFFICE.

HIRAM A. HOLMES, OF EPSOM, NEW HAMPSHIRE.

## IMPROVEMENT IN MACHINES FOR SAWING CLAPBOARDS.

Specification forming part of Letters Patent No. 142,339, dated September 2, 1873; application filed July 5, 1873.

*To all whom it may concern:*

Be it known that I, HIRAM A. HOLMES, of Epsom, of the county of Merrimack and State of New Hampshire, have invented a new and useful Improvement in Machine for Sawing Clapboards; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, and Fig. 3 an end elevation, of my clapboard machinery and saw-mill carriage and their attachments.

The machinery hereinafter described for supporting and intermittently turning a log is represented as combined with the carriage of a saw-mill, it being intended by such to adapt said saw-mill to sawing a log into boards or timber in the ordinary way, or to the sawing of it into clapboards, as occasion may require.

In the drawings, A denotes a common saw-mill carriage, supported on ways or rails B B laid upon the floor C of a saw-mill. On the top of this carriage there is placed, in manner as shown, the main frame C' of the clapboard log-carrying machine, such main frame being provided with a series of screw-clamps, D, for clamping it in position upon and to the saw-mill carriage. The said main frame, constructed as represented in the drawings, has arranged within it, in manner as shown, an auxiliary frame, E, the two frames being so applied together as to admit of the auxiliary one being moved vertically within the main one, and guided in its movement by the latter. In order to effect these movements of the auxiliary frame, which are for the purpose of properly regulating the altitude of the log-arbor with reference to the saw of the mill, the two frames are provided with suitable mechanism—that is to say, there is applied to the main frame a horizontal shaft, a, furnished with two spur-pinions, b b, to work in toothed racks c c fixed to the posts of the auxiliary frame, all being arranged as represented. Furthermore, the said shaft a has fixed to it at one end a gear, d, which engages with a pinion, e, arranged on a pivot, f, projecting from one of the posts of the main frame, the said pinion being provided with a crank, g, for effecting its revolution. A retaining-pawl, h, pivoted to the last-mentioned post,

serves to arrest back motion of the gear d. The auxiliary frame has an arbor, i, and a center, k, arranged as shown, the arbor on its inner end being provided with a dog, m, to connect it with the end of a log, L, such log at its other end turning freely on the center k. On the arbor i there is fixed a gear, n, that engages with a pinion, o, carried by a shaft, p, arranged and provided with a ratchet-wheel, q, all being as represented. There is also upon the said shaft p a rocker-lever, r, provided with two or any other suitable number of impelling-pawls, s s, to engage with the ratchet-wheel. The upper arm of the said lever rests upon an adjustable stop, t, held to the frame by a clamp-screw, u, going through a slot in the stop, all being as shown. To the lower arm of the lever r there is pivoted a pendulous arm, v, connected to the lever by a rule-joint, by which the arm, when in a vertical position, is estopped from moving backward relatively to the lever, although such arm is capable of being moved forward on its pivot without at the same time moving the lever. To operate with the said arm is a stationary cam, w, formed as shown, and fastened to the head of a standard, x, erected on the floor, all being as represented.

While the carriage supporting the log is in the act of being moved forward, the pendulous arm will be carried in contact with the cam w, and will swing or pass it without creating any movement of the pawl-lever on its fulcrum; but, during the return movement of the carriage, the pendulous arm will be again moved in contact with the cam, which will so move it, and cause it to move the lever r, as to cause it to force the impelling pawl or pawls against the ratchet-wheel, and revolve it the requisite distance for effecting the turning of the log the requisite degree for it to receive the screw, which, while passing through the log, will cut it radially.

By means of the adjustable stop and the pendulous arm, arranged with the pawl-lever, as explained, the necessary movement of the latter can be obtained for any log. As the logs vary in diameter the auxiliary pinion has to be raised or lowered in order to properly adjust any log to the saw. It will be seen that the larger the radius of the log the less



must be the movement of the pawl-lever, all of which will be regulated by the pendulous arm. The higher it is raised the less, while it is being moved by the cam, will it move the lever, the back movement of the lever being regulated by the adjustable stop.

I am aware that, for sawing a log into clapboards, a machine provided with a circular saw, and having mechanism for holding a log and intermittently turning it and moving it forward and backward to enable the saw to cut through it, is not new; therefore I make no claim to such a machine.

I have applied to a saw-mill carriage a mechanism to enable it to support a log and so move it relatively to its saw as to cause the latter to separate the log into clapboards, thus enabling the carriage to be used either in sawing common boards or common timber having parallel

sides or in sawing clapboards, thereby saving room in a saw-mill, and the expense of an additional carriage and its operative mechanism necessary for the clapboard-machine as heretofore used.

I therefore claim—

The combination of the saw-mill carriage A, the clamps D, and the separate stationary cam *w*, with the main and auxiliary frames C E, arranged together and provided with mechanism, substantially as described, for adjusting the altitude of the auxiliary frame, and for supporting and intermittently revolving a log, all as and for the purpose specified.

HIRAM A. HOLMES.

Witnesses:

R. H. EDDY,

J. R. SNOW.