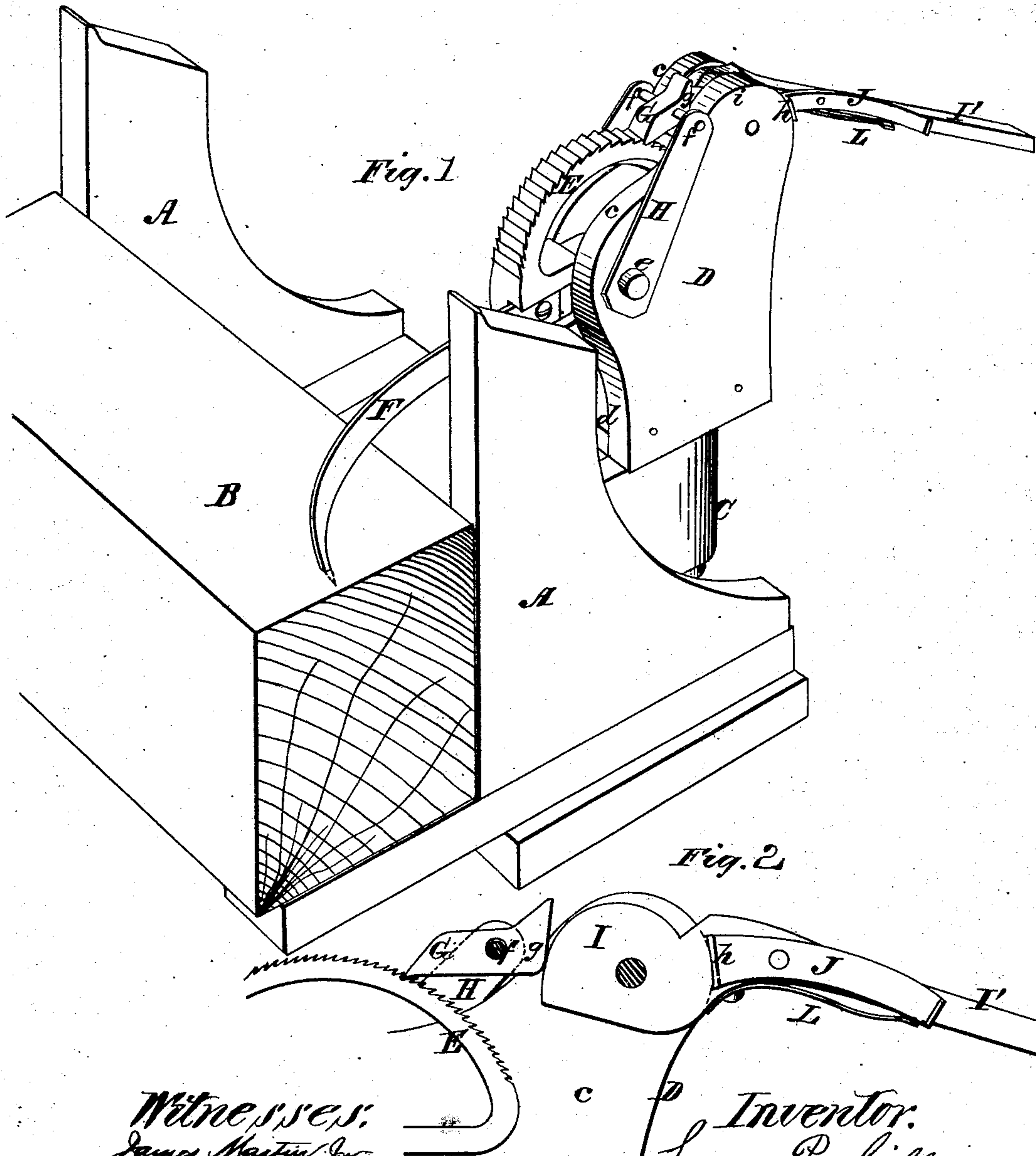


L. P. GILBERT.
Saw-Mill Dogs.

No. 157,171.

Patented Nov. 24, 1874.



Witnesses:
James Martin Jr.
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Inventor.
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UNITED STATES PATENT OFFICE.

LEVI P. GILBERT, OF FORT ATKINSON, WISCONSIN.

IMPROVEMENT IN SAW-MILL DOGS.

Specification forming part of Letters Patent No. 157,171, dated November 24, 1874; application filed May 19, 1874.

To all whom it may concern:

Be it known that I, LEVI P. GILBERT, of Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented a new and useful Improvement in Saw-Mill Dogs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a perspective view of the improved dog. Fig. 2 is a longitudinal section of a portion of the dogging apparatus.

The nature of my invention consists in a ratchet-segment having a dogging-tooth attached to its front end, pivoted to a box on one of the knees of a saw-mill, in combination with a swinging pivoted pawl, a lever-cam, and a friction-clamp or other suitable fastening, whereby logs can be securely dogged in position, and when dogged there will be very little liability of the dogs losing their hold by reason of the jarring produced during the sawing operation.

My present plan is an improvement on the one for which a patent was allowed to me on the 19th day of May, 1874, No. 151,115.

To enable others skilled in the art to make and use my invention I will proceed to describe it.

A A represent the knees of a saw-mill; B, a log dogged against the same. C is a bracket with a vertical socket formed in it. D is a box with a pivot-stem extending down from its bottom into the socket, and confined against up-and-down movement, and so as to revolve, by means of a pin passed through the bracket C, into an annular groove around the foot of the stem. The box consists of two jaws, *c c*, and a base-piece, *d*. E is a segment-ratchet placed between the jaws and pivoted, at *e*, to the jaws *c c*. F is a dogging-tooth bolted fast to the front end of the segment, as shown. G is a pawl hung loosely on a pivot, *f*, of a frame, H, which is attached to the pivot or axle of the segment. The frame swings with the pawl on the axle *e*, and the pawl turns on the pivot *f*. The rear end of the pawl is formed with a bearing-sur-

face, *g*, and its front end is shaped to engage with the teeth of the ratchet. I I' is the lever-cam. Its cam portion I fits between the jaws of the box, and is pivoted to said jaws, and the lever end I' extends back some distance beyond the jaws, so as to give the operator leverage power for dogging the log. J is a cramping lever plate or foot. It is pivoted to the side of the part I' of the lever, and its eccentric end *h* bites upon the curved portion *i* of the jaw *c*, with an eccentric action. L is a spring for holding the plate J firmly in locking position during the sawing operation. This spring is fastened to the under side of the lever, and bears against the under side of the rear portion of the plate J. The swinging frame also enables me to take a more powerful and effective bite with the pawl upon the ratchet-segment, it enabling the pawl to follow up the dogging-tooth, no matter how much it may penetrate the log.

The dogging device shown can be turned on the stem of the bracket, so that the dogging-teeth may stand diagonal to the log when necessary.

When the dog is out of use the dogging hook and lever stands up in nearly a vertical position out of the way of the saw, and cannot fall down unless moved by the hand.

In order to use the dog, the dogging-hook is thrown into position upon the log or cant, either at right angles or diagonally, as the case may require. Then, by bringing down the lever, the front end of the pawl, turning upon the pivot *f*, is forced down and caused to bite into the ratchet, and then moved forward by the eccentric action of the lever, causing the dogging-hook to fasten firmly into the log or cant.

The lever is held in position by the cramping-plate J.

To unfasten the dog, place the thumb upon the upper edge of the cramping-plate J, bearing down so as to release it. Then lift the lever up to a vertical position, when that part of the lever which is above the eccentric catches or gears with the upper end of the pawl, causing its front end to loosen from

the ratchet and rise up out of the way, leaving the dogging-hook and ratchet-segment free to move up and down by the hand of the operator.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the ratchet-segment

E, swinging pawl G, lever-cam I I', and the friction clamping-plate or fastening device J, substantially as described.

LEVI P. GILBERT.

Witnesses:

L. B. CASWELL,

A. E. BALDWIN.