

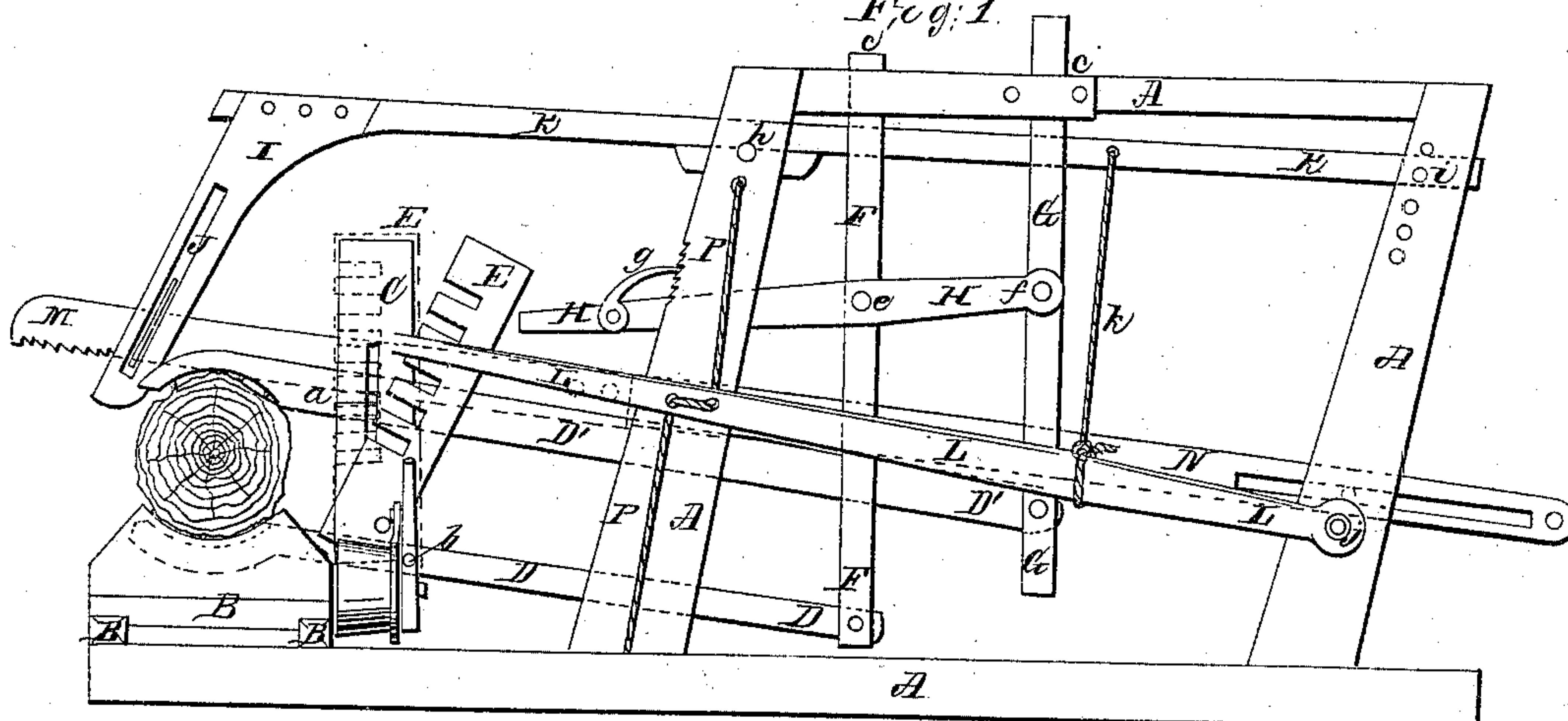
*White & Bostwick,*

*Drag Saw.*

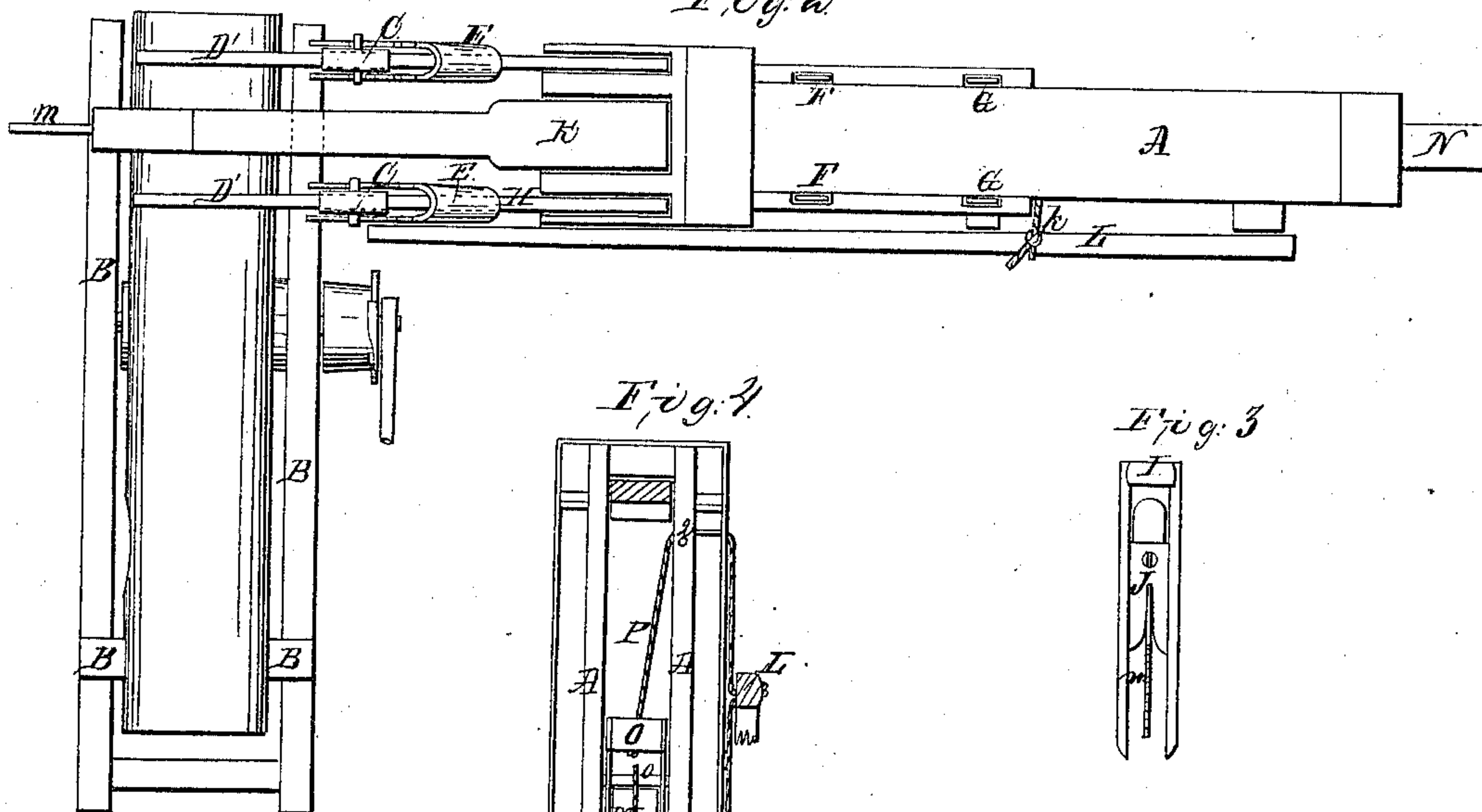
*N<sup>o</sup> 42,246.*

*Patented Apr. 5, 1864.*

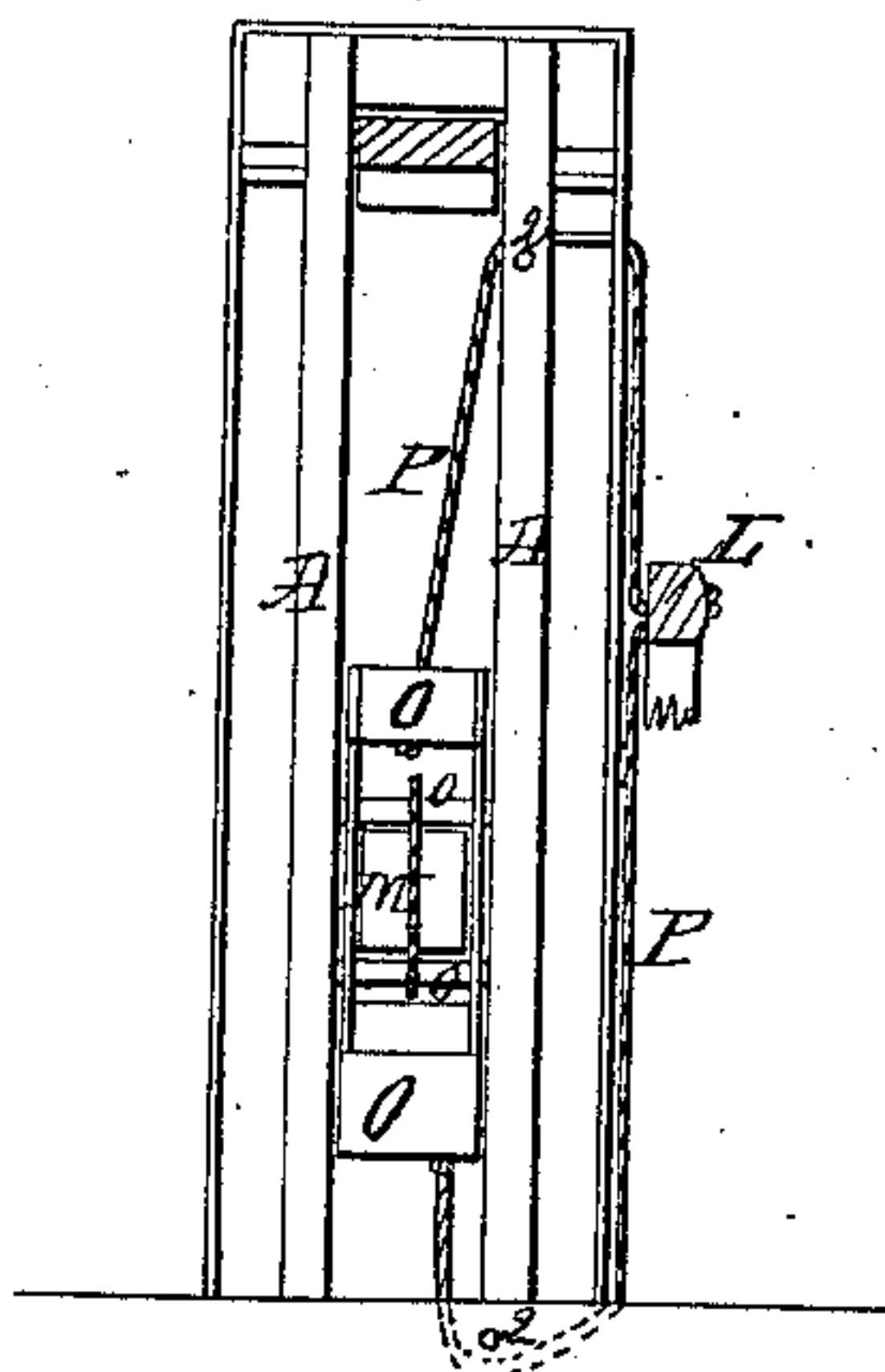
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

ORSAMUS A. WHITE AND ISAAC W. BOSTWICK, OF NORWALK, OHIO.

## IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 42,216, dated April 5, 1864.

*To all whom it may concern:*

Be it known that we, O. A. WHITE and I. W. BOSTWICK, of Norwalk, in the county of Huron, in the State of Ohio, have invented certain new and useful Improvements in Sawing-Machines; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference thereon marked.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 shows the saw-guide. Fig. 4 is a section showing the mode of lowering the saw-arm.

To enable those skilled in the art to make and use our invention, we will describe its construction and operation.

In the several figures similar characters refer to like parts.

Our invention consists in an improved "saw-guide," and also in an improved "log-holder," both constructed and operating as coactive parts of one machine.

We will first describe that part of our invention used as a log-holder.

A is the flooring and standards constituting the frame of the machine.

B is the saddle and ways upon which the log to be cut is laid, and is worked in the usual manner by a lever and pawl.

C are the guide-standards in which the holding-levers D D' work. It will be seen that there are two sets of holding-levers, D and D', so as to hold the log at each side of the saw.

E E are the ratchets which hold levers D' in place, and are adjustable according to the size of the logs.

a a are pins upon levers D', which take into the openings of ratchets E E. The lower holding-levers D are pivoted at b. The holding-levers have their jaws provided with teeth, so as to hold the log securely.

F and G are vertical connecting-arms, working in slots at c in the top of the frame A. The lower ends of arms F are pivoted to the inner ends of levers D, while the lower ends of arms G are pivoted to the inner ends of levers D'.

H is the hand-lever which works the levers D and D'. This lever is pivoted at e to the arms F and at f to the arms G. The hand end of the lever H is provided with a pawl, s, that catches into a ratchet upon the standard

of the frame. Depressing the lever H raises the inner ends of levers D' and depresses the inner ends of levers D, so that the jaw ends of levers D and D' are brought together with great force, causing their teeth to securely "dog" the log of wood, which has been previously laid upon its carriage B. By this arrangement of compound-levers we hold the log in the most effective manner. The levers D are brought up under the log, keeping it from dropping or settling down, and the levers D' are brought down tightly upon the top of the log, having the same power as levers D. It is seen in Fig. 2 that these holding-levers operate upon the log on both sides of the saw, so that a log of even only one foot in length can be firmly held and sawed in two pieces, or can saw three or four feet wood in two pieces. These levers are all worked by the hand-lever H, and do not interfere with tending the saw, and are easily adjusted to logs of different size. One set only of these levers can be used, if desired, or both of the upper levers, D', may be raised out of the way, and the weight of the log resting upon the teeth of the lower jaws may serve to hold it.

As to the saw-guide: I is the guide (see Fig. 4) provided with a sliding metallic guide-plate, J, which straddles upon the back of the saw. Guide I depends from the outer end of the arm K, which is pivoted to the frame at h. The inner end of the arm K is raised or depressed, according to the size of the log, and is regulated by pin i.

L is the operating hand-lever, pivoted at j. k is a cord attached to arm K and lever L, so that the lever may operate the arm; M, the saw, and N the saw-arm, the end of which is suitably attached to the driving power.

In Fig. 4 is shown the slide O, provided with two rollers, o, between which the saw-arm N reciprocates. P is a cord secured to lever L, and slide O, and passing over rollers, q so that the lever L may raise or lower the slide O, which would thus move the saw out from or down upon the log. l is a dog for securing the hand end of lever L.

In sawing, by raising the lever L the saw is lowered to the log, and at the same time the guide I descends until its lower end comes below the top of the log, when it is stopped by the pin i. By lifting this lever when the saw is running, one of the rollers o is brought



down upon the saw-arm, regulating the cut as the tender chooses. The guide-plate guides the saw until it has entered the log sufficiently to be steadied by the log itself until the cut is completed. The lever L then raises the saw-arm N until the back of the saw is up to the top of the slot in the guide, when the rope *k* raises the arm K, together with the saw, until they are both out of the way of the log.

By this device for guiding the saw we gain several advantages. It leaves the saw free when out of the log, and keeps it securely in its place, no matter how high the motion or speed. The action of the guide is entirely independent of that of the saw, leaving no weight upon it, and is worked simply by the lever L, and regulated by the distance of the cord *k* from the fulcrum of lever L. The saw-arm running through the slide and between the rollers *o o* is easily raised by the lever L when the arm is at full speed, and the tender is enabled to regulate the cutting of the saw by bringing the upper roller, *o*, down upon the back of the arm N, thereby adding a weight equal to that the tender lifts at lever L.

It will be readily seen that our invention shows a most cheap, simple, and effective arrangement for tightly holding and speedily sawing logs with a cross-cut saw.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement of levers D and D', F, G, and H, and ratchet E, constructed and operating substantially as specified, and for the purposes set forth.

2. The combination and arrangement of arm K, cord *k*, and lever L, as and for the purposes set forth.

3. The combination and arrangement of slide O, cord P, and lever L, constructed and operating as and for the purposes described.

In testimony that we claim the above improvements, we hereunto set our hands.

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Witnesses:

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JOHN G. KING.