

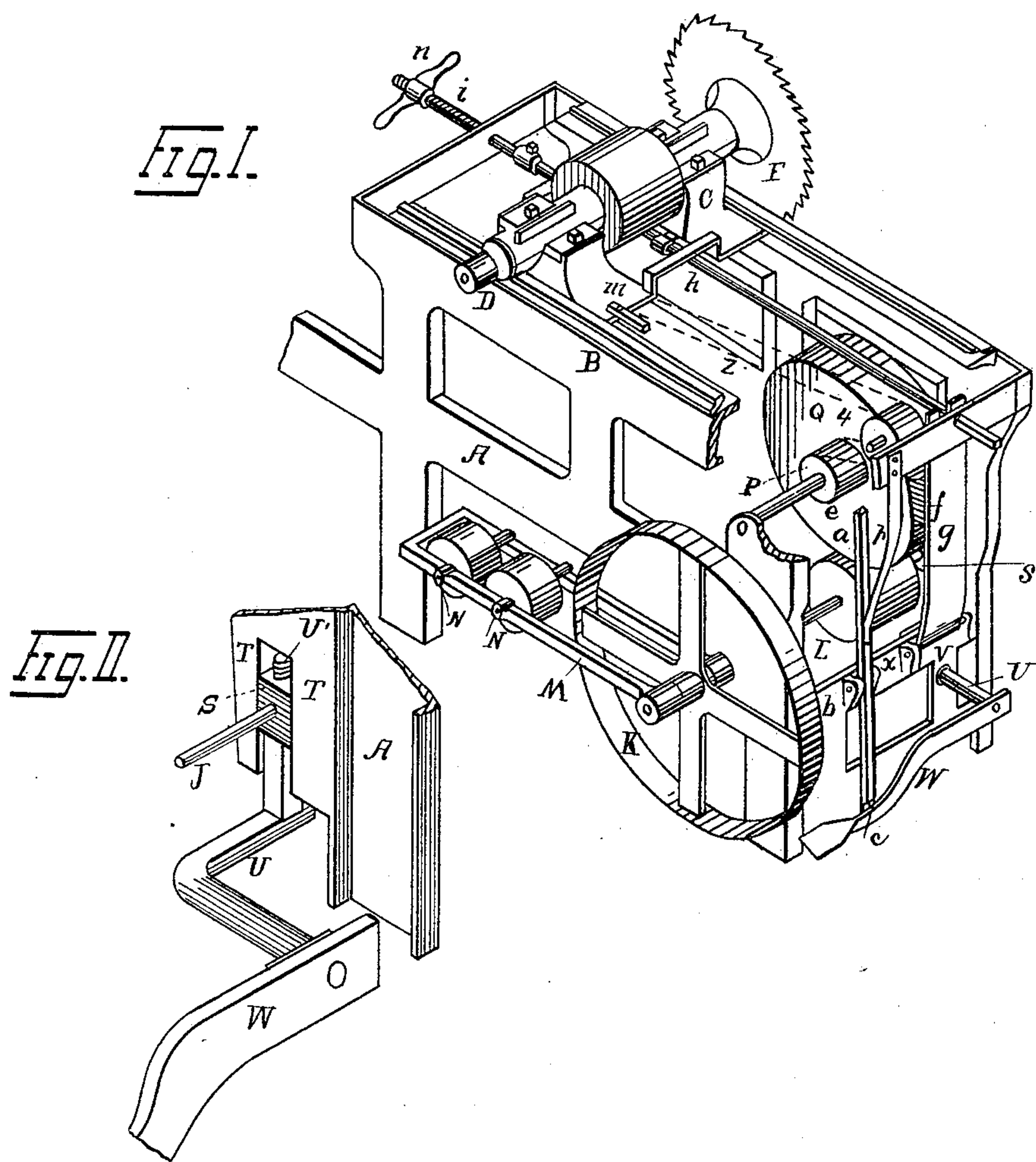
(No Model.)

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# BRAKE MECHANISM FOR SAWING MACHINES.

No. 371,533.

Patented Oct. 11, 1887.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## BRAKE MECHANISM FOR SAWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 371,533, dated October 11, 1887.

Application filed March 31, 1887. Serial No. 233,237. (No model.)

*To all whom it may concern:*

Be it known that I, ENGELBERT FISCHER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Brake Mechanism for Sawing-Machines, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure I is a perspective representation of a mechanism embodying my invention; Fig. II, a perspective and enlarged view of a detached part thereof.

This invention relates to the applying of a brake to that class of circular sawing machines which are employed for crosscutting lumber, planks, or boards in short lengths by a rotary saw which is fed to the lumber automatically by means of a reciprocating carriage. The purpose of the brake is to prevent the band which moves the carriage forward from getting out of taut during the backward movement of the carriage. Unless this be done the saw will not at all times be brought to the same stopping-point, and as a result the plank will not be cut off. My means to attain this end by a brake is as follows:

A represents the main frame of the machine, which is of the ordinary construction, except where bearings are provided for the mechanism herein described and shown.

B is the bed of the saw-carriage C, and to this carriage is hung the saw-arbor D, to which the saw F is hung.

J is a shaft journaled in frame A and supporting a drive-pulley, K, and friction-pulley L.

M is a compensating tightener-frame hung to shaft J and carrying loose pulleys N N. A belt from the arbor D is to run over pulleys N N K and give proper motion to friction-pulley L, in accordance with the motion of the saw; but the devices to attain this end are not to be considered a part of this invention, they being shown only to illustrate how my improved brake operates. The opposite end of the shaft J is journaled in box S, which may have a vertical reciprocating movement

in guides T on frame A, as more clearly shown at Fig. II, to engage and disengage the wheels L Q.

A coil-spring, U', placed above the journal-box S, keeps the wheel L from wheel Q till the box is operated on by the following means: An elbow-lever, W U, is journaled in the lower part of the frame A at V, and its inner end projects under the box S, so that when the outer bar, W, of the lever is brought down the box S will be so elevated as to bring the wheel L in contact with wheel Q. To hold the said wheels in contact while the carriage C is moving forward, a trip-lever, a, is pivoted to the frame A at b, and its lower end is provided with a notch, c, which engages and locks the lever W till the carriage C, or a projecting bar, m, on the carriage, strikes the top of lever a and moves it back, carrying the lower end, c, in and releasing lever W. To keep the lever W locked by lever a till acted on by the bar m, a spring, p, is attached to the front of the machine to bear against it above the joint b, as shown at Fig. I. The positions of the parts in said figure show the lever W locked by lever a to hold the wheel L to rotate by friction the wheel Q. A shaft, P, supports the wheel Q, and also a smaller wheel, e, and the small wheel and loose wheel 4 carry the strap z (dotted lines) for drawing the carriage C forward to bring the saw F to the lumber. The other part of this machine, having a well-known construction, will cause the carriage C to move quickly back so soon as the lever a is tripped. Now, to prevent the wheel e from letting the belt z run slack, I apply a brake to the wheel Q, of the following construction: A bar, g, is jointed to the front end of the machine at x, and it is provided with a shoe, f, which at all times exerts just force enough to stop the wheel Q in less time than is required to unwind the strap z. This resisting force is so little that no inconvenience is encountered thereby in running the machine, yet enough force to hold the strap z taut must be applied, or the carriage C will have different stopping-points. Connected with the top end of the brake g is a bar or rod, h, which extends through the opposite

end of the machine-frame, and on its end is applied a coil-spring, *i*, which may have given to it more or less tension by a jam-nut, *n*, that the brake *g f* may have more or less pressure  
5 on wheel Q.

From the foregoing it will be seen that the wheel *e* is only stopped when the wheel L is disengaged with wheel Q.

I claim as my invention—

o In combination with the brake *g f* and its

rod attachments *h i n*, the levers W, U, and *a*, and the sliding box S, for disengaging the wheel L from wheel Q, so that the brake *g f* will retard the motion of the strap-wheel *e*, and thus keep the strap *z* taut, as specified 15 and shown.

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Witnesses:

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