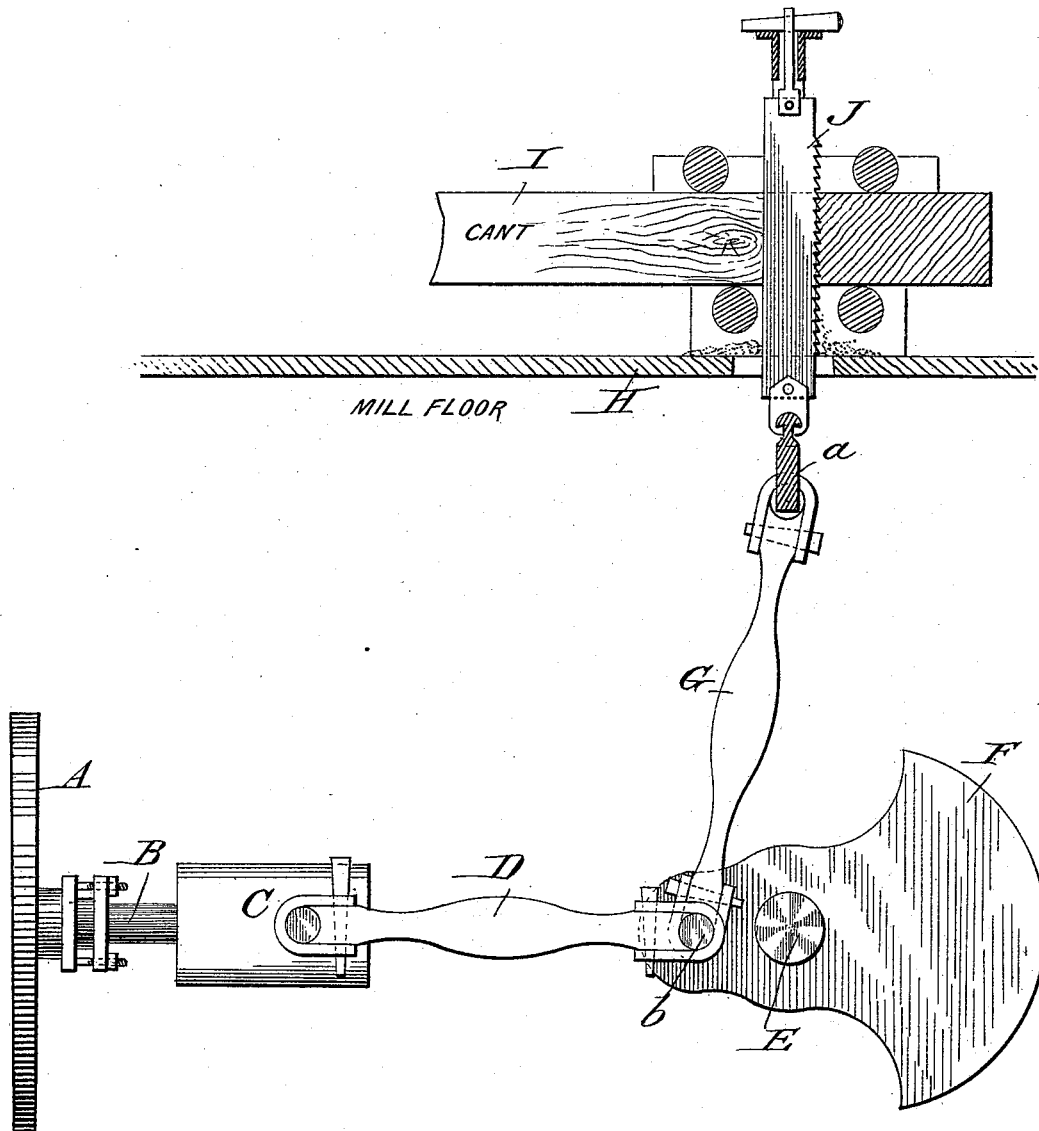


(No Model.)

A. J. WILCOX.
COMPENSATING GANG SAWING MACHINE.

No. 420,849.

Patented Feb. 4, 1890.



Attest:

F. H. Schott
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Atty

UNITED STATES PATENT OFFICE.

ALFRED J. WILCOX, OF MUSKEGON, MICHIGAN.

COMPENSATING GANG SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 420,849, dated February 4, 1890.

Application filed April 9, 1889. Serial No. 306,501. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. WILCOX, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Compensating Gang Sawing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to an improvement in sawing machinery for the manufacture of lumber, the object of the invention being to construct the mechanism thereof that it may have a compensating movement; and it consists, essentially, of any ordinary and common gang of reciprocating saws with the usual actuating mechanism therefor and suitable counter-balances, so that the motion may be made steady and uniform and for other reasons, substantially as will be hereinafter described and claimed.

In the annexed sheet of drawings I have represented a sawing-machine in side elevation, together with the mechanism for actuating the same, which is provided with my improved counterbalancing or compensating devices.

In the drawing, I denotes a cant or log upon which the saw or saws J are acting for the purpose of cutting the same into lumber. H denotes the mill-floor.

It will be noted that the saws J reciprocate vertically and that the mechanism for actuating the same is arranged in the usual manner beneath the mill-floor. This mechanism for actuating the saws consists, essentially, of the steam-cylinder A, containing a piston whose rod B reciprocates in a horizontal direction and carries at its outer end the cross-head C, to which is pivotally connected the engine-pitman D.

E denotes the main shaft, on which is mounted the counterbalancing device F, made of any suitable size and shape, it being very much heavier upon one side of the shaft than it is upon the other side thereof. To this latter and smaller portion of the counter-balance F the engine-pitman D is pivotally connected by means of the pivot b or by some other similar and suitable device. The gang-pitman

G is also connected to the counter-balance F at a point opposite to its heaviest part, and is shown in the drawing as being attached to said counter-balance by means of the pivot b. The gang-pitman G is connected to the lower end of the gate for the reciprocating saw or saws by means of the connection a, as shown in the drawing.

The cross-head C is made of suitable size, shape, and weight, so as to properly balance the counter-balance F, so that when the machine is running rapidly there will be no swaying motion to overcome and no heavy foundation will be required to uphold and properly support the several parts of my machinery, and so that the motion of the mechanism during the operation of the saw may be simple, uniform, and steady, and not subject to jerks or fluctuations.

From this description of the construction of my improved counterbalancing mechanism for reciprocating sawing-machines it will be seen how extremely simple and effective the same will be in operation. As the cross-head C moves back and forth horizontally and rotates the counterbalancing device F on the shaft E, it will be evident that the continued rotation of this part F will give to it considerable momentum, which will be sufficient to carry the gang of saws past the center when they are in an exactly-balanced condition. Since the cross-head C is made heavy it will balance the counterbalance-weight F, and the motion of the several parts will be even and uniform. My improved machinery will therefore be cheap in construction and effective in operation, and the advantages to be subserved by the use thereof, as hereinabove detailed, will be evident to any one skilled in the art.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the saw-gang J, the main shaft E, the counter-balance F, mounted thereon, said counter-balance being constructed, as described, with the part on one side of the shaft much heavier than the part on the other side thereof, the gang-pitman G, connected to the saws and pivotally attached to the smaller portion of the counter-balance F, the engine-cylinder, its piston and piston-rod, the heavy cross-head carried by said rod,

said cross-head and the counter-balance being
suitably proportioned as to weight, and the
engine-pitman connected to the cross-head
and pivotally attached to the smaller portion
5 of the counter-balance near the pivotal con-
nection of the gang-pitman, all of said parts
being combined and operating substantially
in the manner and for the purpose described.

In testimony whereof I affix my signature in
presence of two witnesses.

ALFRED J. WILCOX.

Witnesses:

ARTHUR JONES,
A. W. EGGERT.