

(No Model.)

J. DUMOULIN.
SAWMILL CARRIAGE.

No. 537,760.

Patented Apr. 16, 1895.

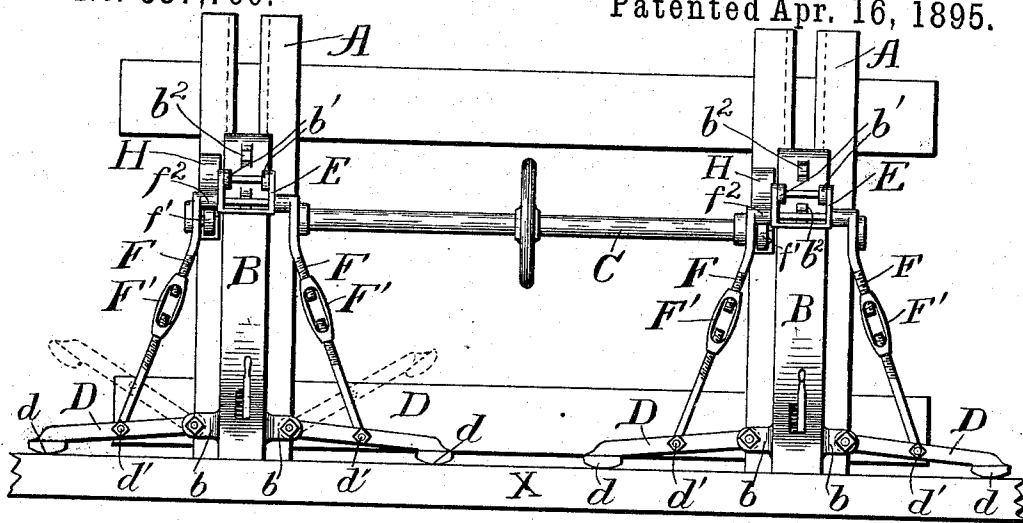


FIG. 1.

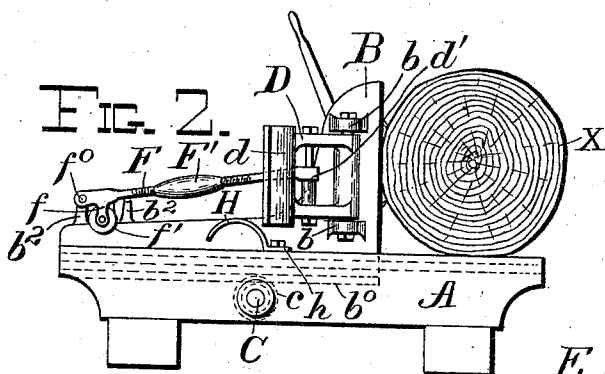


FIG. 2.

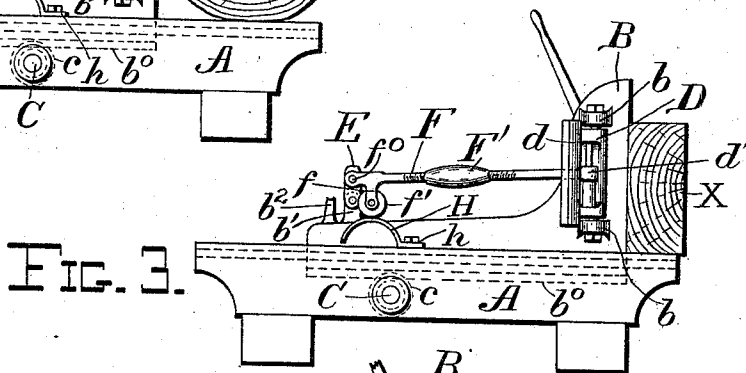


FIG. 3.

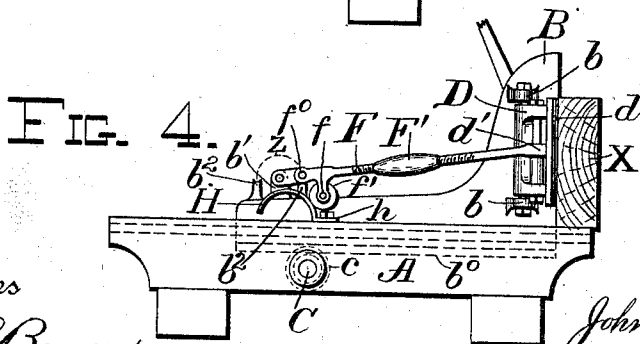


FIG. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN DUMOULIN, OF MARINETTE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO PATRICK O'CONNOR AND WILLIAM DONOVAN, OF MENOMINEE, MICHIGAN.

SAWMILL-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 537,760, dated April 16, 1895.

Application filed September 4, 1894. Serial No. 522,091. (No model.)

To all whom it may concern:

Be it known that I, JOHN DUMOULIN, a citizen of the United States, residing at Marinette, in the county of Marinette and State of Wisconsin, have invented certain new and useful Improvements in Sawmill-Carriages; 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 invention relates to improvements in attachments to saw mill set works, for use on saw mill carriages, the object being to provide means whereby the thin remnant of a log, or cant may be held perfectly straight and true until the last board has been sawed, the supports therefor, however, being automatically movable out of the way so as not to interfere with a new log.

In the usual form of saw mill set works organization, where there is no support between the knees, or the said support is rigidly attached to and moves with the knees, the remnant of the log becomes very liable to spring or bend as the last boards are being sawed, and thus it frequently happens that these last boards are spoiled. When supports are provided which are rigidly attached to the knees, they frequently interfere with the holding of logs for the first few cuts. This invention is designed to prevent this springing or bending of the remnant of the log by providing supports attached to some part of the knee, and having a motion coincident therewith when in their operative position, so that at such time they practically form sidewise extensions of the knee, but which are automatically retired out of operation at such times as a new log is on the carriage.

Referring to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views, Figure 1 represents a plan view of a saw mill carriage with my invention applied thereto; only so much of the carriage being shown as will lead to a clear understanding of the application of my invention thereto. Fig. 2 represents an end elevation of the same with the knee, and its auxiliary supports drawn back, as when the log is first placed thereon. Fig.

3 is a similar view showing the position of the knee and supports partially advanced as the log or cant is nearing the last cuts. Fig. 4 is a similar view, showing the knee advanced a little farther than in the last figure, and the supports bearing against the log.

A designates the head blocks, and B the knees, both of which are of the usual construction, the knees being advanced by any of the well-known methods as, for instance, by the shaft C, which may have a pinion c working in a rack b^0 upon the lower side of the knee. This, however, as it forms no part of the present invention need not be further described. Upon each side of each knee near the front end thereof is a pair of lugs b and pivoted or hinged between the said lugs are the wings D, which form the essential feature of the present invention. The said wings D extend for a short distance on each side of the said knees and their outside edges d fit close against the back of the cant. On the rear end of the said knees are upwardly projecting lugs b' and pivoted upon the said lugs are clevis like frames E, to which latter are pivoted the rear ends of two connecting rods F, the other ends of the said connecting rods being pivoted to the wings D as at d' . By this arrangement it will be seen that when the frames E are turned about their pivots as shown by the dotted lines z in Fig. 4, the connecting rods F, and with them the wings D will be drawn away from or pushed toward the log X. One of the connecting rods F of each pair is provided at its rear end near its pivotal point with a downwardly-projecting lug f to which is journaled a small roller f' , and the connecting rods are offset from the frame E as at f^2 to allow the said roller to pass the side of the frame freely, as the latter turns over.

A curved piece of spring steel H is secured at one end as h upon the head block A at one side of the knee B, the convex side of the said spring extending high enough to be in the path of the roller f' . As the knee is advanced to bring the log up to the saw, the roller f' will roll up the inclined surface of the spring H until the frame E, is turned to an upright position, as shown in Fig. 3, which position it

attains just before reaching the highest point of the spring. As the knee continues to advance and the roller can move no higher, it will depress the spring in order to pass over it; and as soon as it has passed over the center of the said spring the latter will spring up behind it and give the roller a push forward, which assisted by the weight of the heavy parts supported by the roller will cause it to roll down the front side of the spring into the position shown in Figs. 1 and 4. This movement of the roller and frame E will push by means of the connecting rods F, the wings D firmly against the cant, the pivotal points f^0 passing down to or slightly below a straight line from the pivot of the frame E to the pivot of the connecting rods with the wings D. Thus it will be seen that the said wings are firmly braced against the cant and will effectually prevent any springing or bending thereof, the cant, of course, being held firmly against the faces of the knees by the dogs in the usual manner.

Steps b^2 are placed, one in front and one behind, the pair of lugs b' , for the frame E to rest on, the former to prevent it from falling too far below the line of centers; and the latter to prevent it from swinging down far enough to get on a center or to bear downward when the knees are moved forward from the innermost position.

When the knee is moved backward the roller f' will roll up the front of the spring H, depressing it as it passes over the top, and rolling down the rear end as the spring rises after the roller has passed over.

From the foregoing it will be seen that the wings D are only moved against the cant when the last boards are being sawed, after the outside has been entirely removed and the cant is straight; and are automatically moved back out of the way when the knees are returned to receive a new log, which log may be crooked or have knots that would interfere with the wings if they were in their forward position.

The connecting rods F are formed of two pieces oppositely screw threaded at their meeting ends, and connected together by turnbuckles F' , thus allowing the adjustment of the wings to or from the log.

I have shown my invention as applied to knees having the dogs inside of the knee, but should it be desired to apply the invention to knees having the dogs on the side, the lugs b may be made long enough to bring the wings over the dogs, or they may be placed backward far enough to be behind the dogs. It will be obvious that these and other modifications may be made in the device without departing from the spirit of my invention.

The operation of the device will be clearly understood from the foregoing.

The advantages of the invention will be apparent to those skilled in the art, and it will be seen that I provide a device which is simple in construction and operation, strong

and durable, and very effective for the purpose described.

I am aware that a somewhat similar invention is described in the application of O'Connor and Donovan, saw mill machinery, filed October 1, 1894, Serial No. 524,589, to whom I have assigned this application; but the claims as drawn are not believed to interfere with those of the said application, and I disclaim the subject matter of the claims contained in the said application of O'Connor and Donovan.

I claim as my invention—

1. In a saw-mill set works organization provided with movable wings, of mechanism for automatically moving said wings into and out of line with the face of the said knee, as the knee is actuated, substantially as described.

2. In a saw-mill set works organization, provided with transverse knees, the combination with supports, separably movable from said knees, mechanism for moving said knees, and additional mechanism operated by the first mechanism and adapted to move said supports forward into a position with their front or bearing edges in the same plane with the bearing edges of the said knees, substantially as described.

3. In a saw-mill set works organization, the combination with the head blocks and knees, and means for retiring the said knees upon the said head blocks, of wings pivoted to each side of said knees, and movable independently thereof mechanism for moving said knees across said head blocks, and additional mechanism operated by the first mechanism and adapted to swing said wings about their pivots into engagement with the saw log, substantially as described.

4. In a saw-mill set works organization provided with movable knees, the combination with the movable wings, of mechanism for automatically moving said wings into and out of line with the face of the said knee, as the knee is actuated and for automatically locking said wings when in line with the face of the knee, substantially as described.

5. In a saw-mill set works organization provided with movable knees, the combination with the movable wings hinged to the opposite sides of the knee to swing into line with the face thereof, of mechanism for automatically actuating said wings to swing them into line with the face of said knee as the knee is moved, substantially as described.

6. In a saw-mill set works organization provided with movable knees, the combination with the movable wings hinged to the opposite sides of the knee to swing into line with the face thereof, of mechanism for automatically actuating said wings to swing them into line with the face of said knee as the knee is moved, and means for automatically locking said wings when in line with the face of the knee, substantially as described.

7. In a saw-mill set works organization, pro-

vided with transverse knees, the combination with supports separably movable from said knees, means for moving said knees and said supports across the saw-mill carriage simultaneously, and additional means operated by the movement of the knee, for holding said supports against the saw log, substantially as described.

8. In a saw-mill set works organization, the combination with the head blocks and knees, and means for advancing and retiring the said knees, of wings hinged to each side of the said knees, a frame pivoted to the rear end of the knees, connecting rods pivoted at one end to the said frame, and at the other end to the said wings, rollers journaled upon the said connecting rods, and convex cam surfaces upon the said head blocks, over which the said rollers will roll as the knees are advanced or retired, and thus turn the frame about its pivots to move the said wings against or away from the log, substantially as described.

9. In a saw-mill set works organization, the combination with the head blocks and knees, and means for advancing and retiring the said knees, of wings hinged to each side of the said knees, a frame pivoted to the rear end of the knees, connecting rods pivoted at one end to the said frame and at the other end to the said wing, rollers journaled upon the said connecting rods, and springs having convex cam surfaces attached to the head blocks, over which the said rollers will roll as the knees are advanced or retired, and thus the frame will be turned about its pivot to move the said wings against or away from the log, substantially as described.

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

JOHN DUMOULIN.

Witnesses:

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THEODORE DISCH.