

October 24, 1913.

DRAWING

3,667

A careful search has been made this day for the original drawing or a photolithographic copy of the same, for the purpose of reproducing the said drawing to form a part of this book, but at this time nothing can be found from which a reproduction can be made.

Finis D. Morris,

Chief of Division E.

AWK

# UNITED STATES PATENT OFFICE.

JOHN EATON, OF BROOKFIELD, AND F. M. STETSON, OF SANGERFIELD, NEW YORK.

## METHOD OF SETTING LOGS ON THE CARRIAGE OF SAWMILLS.

Specification of Letters Patent No. 3,667, dated July 15, 1844.

*To all whom it may concern:*

Be it known that we, JOHN EATON, of Brookfield, in the county of Madison and State of New York, and FRANCIS M. STETSON, of Sangerfield, in the county of Oneida and State aforesaid, have invented a new and useful Sawmill-Set or Improved Method of Adjusting and Setting Logs on the Log-Carriage in Sawmills; and we do hereby declare that the following is a full and exact description.

The nature of our invention consists in providing a certain mechanical arrangement by which the log to be sawed may be moved in a lateral or sidewise direction, each end moving simultaneously and equally, and thus be adjusted to the desired thickness of the board or timber by the slight and easy movement of a lever fixed in a convenient position at the side of the carriage, and at the same time the head block is left free to be moved longitudinally, or in the direction of the length of the log, adjusting it to such length without disengaging the gearing by which the transverse movement is made.

To enable others to make and use our invention we will proceed to describe its construction and operation.

A B C D of the drawing hereto annexed is the common saw mill carriage.

A is the foot block, which is stationary, and forms a part of the carriage.

E is the head block, which slides back and forth in the ordinary way on the sides of the carriage accommodating itself to the length of the log to be sawed.

F and G are bearings on which the ends of the log rest, and *l* and *l* are the ordinary dogs hung on gudgeons at *n n*, *o o*, and which fasten into the end of the log to hold the same when sawing.

The saw as usual hangs vertically in the center of the carriage, and at the commencement of sawing is drawn back into the recess which is sawed into the head block and is seen at P.

R R, and S S, are sliding blocks to which the dogs *l l* are attached. These move from side to side, sliding on the ways W, W, W, W, which are firmly fastened to the head and foot blocks and are fitted to corresponding grooves formed in the ends of the slide blocks R R and S S.

The log being placed on the carriage, the ends resting on the flat bearings at F and G, and the dogs *l, l*, being thrown up and

fastened in its ends in the usual way, is moved from side to side for the purpose of setting it to the required thickness of the board, or timber to be sawed, by the use of the screws X and X. These pass through screw boxes in the centers of the respective slide blocks R R and S S, and turn easily in bearings on their ends, in boxes seen at K K, L L. The outer ends of these screws extend beyond the side of the carriage, and on them are fixed the bevel wheels *t* and *t* of equal diameter.

The rod H which is a square bar of iron of about one and a half inches in diameter, extends from the bearing at *d* to that at *e* lying parallel to the side of the carriage. A cylindrical bearing is turned up on one end of this bar, which is fitted to and turns in the gudgeon box *e*, and a like bearing is turned up near the other end, and turns in the gudgeon box *d*. On this end of this bar is firmly fitted the bevel wheel *v* which matches with the wheel *t*. The bevel wheel *u* of the same diameter of the one last mentioned matches in like manner with the wheel *t* at the end of the head block. This latter wheel (*u*) has a neck cast upon it of about two and a half inches in length, through the center of which is a square hole a little larger than the square bar H. A cylindrical bearing is turned up on this neck of about two inches in length, leaving a collar on the outer end of half an inch in width. This wheel is slipped over the square shaft H, and brought into the box D, the cylindrical bearing on its neck lying loosely in the box so as to turn freely in it. The cap of the box is then screwed down leaving the collar *f* without, so that when this gudgeon box is moved in the direction of the length of the shaft either way, it takes the wheel *u* with it. This gudgeon box is bolted down on a portion of the head block, which here extends for that purpose beyond the side of the carriage. When the head block, therefore, is moved either receding from, or advancing toward, the foot block A, to accommodate itself to the length of the log to be sawed, it carries with it the match wheels *t* and *u* without disengaging them, the square eye of the wheel *u* sliding easily over the square bar H.

The shaft of the screw X lying on the head block E, instead of terminating like that on the foot block at half the width of the carriage, extends quite across it, resting

and turning in the gudgeon box K, and has on its end fixed to it the spur wheel T, outside the carriage. Outside of this wheel and on the same shaft is the lever Y, on the  
 5 inside of which is hung on a bolt inserted in the lever, the dog h. This dog hanging loosely on the bolt at the end h, and being suitably shaped at the opposite end, the latter, when the lever Y is raised falls into the  
 10 notches or recesses between the teeth of the wheel, and when the lever is again depressed, the wheel T is turned accordingly.

It will readily be seen by an inspection of the figure, aided by the foregoing description that the turning of the wheel T  
 15 operates equally and simultaneously on both the screws X and X and consequently moves in a correspondent degree both the slide blocks R R and S S, and that the depression of the lever Y moves them to the left,  
 20 or in the direction from the shaft H. The dog h on this lever, hanging loose on the bolt which holds it, is capable of being thrown over upon the upper side of the  
 25 wheel T, in which case its point falling into the notches in the upper side of the wheel, the raising of the lever Y, turns the shaft in an opposite direction from that before  
 30 mentioned, moving the slide blocks R R, S S, also in an opposite direction, or in the direction of X and X on the two screws. Thus the log, or timber to be sawed resting  
 on its two ends upon the flat bearings F and G, is moved to the right, or left, sidewise,  
 35 both ends moving simultaneously, and equally by the mere exertion of the hand on the lever Y, and the position of the log is thus in an easy, simple, and instantaneous manner moved and adjusted to the thickness  
 40 of the cut designed.

The wheels V and u are just half the diameter of the wheels t and t on the screw shafts. This proportion is adopted in order  
 45 to throw more of the leverage against the screw shafts, than against the shaft H, the latter being longest and most liable to contortion. These screw shafts are about two  
 and a half inches in diameter and may be made either of cast or wrought iron. The  
 50 shaft H is wrought iron, and as before stated is about one and a half inches square.

For the purpose of better explaining the use and operation of this improvement, we state the following advantages presented by  
 55 it over all other methods of setting logs now in use which have come to our knowledge: By the machinery heretofore used, the back end of the log, or that resting on the foot block only, is set as it is passing  
 60 from the saw, and before it is clear of it;

while the other, or that resting on the head block remains to be set by hand after the saw passes out of the cut. The setting of the back end of the log in this manner, while  
 65 the other remains stationary, leaves the saw standing obliquely to the direction of the cut thus bending and sometimes breaking the saw and its teeth; and in those mills where the saw continues in motion while the log  
 70 is passing from it, raking and injuring the lumber. Besides these inconveniences, after the log is fully withdrawn from the saw, for the purpose of commencing a new cut, the sawyer is under the necessity by hand  
 75 to remove the other end as near as he can judge equal to the movement already made at the first. If he does not move it the same distance, the consequence will be a board  
 thicker at one end than the other. These and other labors, and inconveniences, which  
 80 constitute a considerable part of the expense of sawing, are either entirely removed, or greatly mitigated by our invention. By this mode the sawyer is enabled by the use  
 85 of a single stationary lever, placed in a convenient position, to perform all the manual labor of sawing, after the log is placed on the carriage, without leaving the gates that govern the mill. Remaining in the same  
 90 position he moves both ends of the log at once, and exactly the same distance, and sets it with reference to the saw to any required thickness of the board. This is done after the log is fully withdrawn from the saw  
 95 avoiding all the delay, and inconvenience above described, which flow from the present mode of moving one end of the log, while the saw is still hanging in the cut, and then after the saw in its oblique position is  
 100 suffered to pass the whole length of the cut, moving the other, without any certain means of moving it the same distance.

What we claim as our invention, and desire to secure by Letters Patent, is—

The connecting together the screws and  
 105 sliding blocks on the head and foot blocks of the carriage so as to move both ends of the log simultaneously and equally, and at the same time allowing the head block to recede from, or approach to the foot block,  
 110 and thus be adjusted to the length of the log to be sawed, the whole being arranged combined and connected, substantially as above set forth and described.

JOHN EATON.  
 FRANCIS M. STETSON.

Witnesses:

WILLIAM BAKER,  
 ERASTUS HUMPHREY.