

(No Model.)

G. W. HUCKABAY.  
SAW MILL SET WORKS.

No. 407,664.

Patented July 23, 1889.

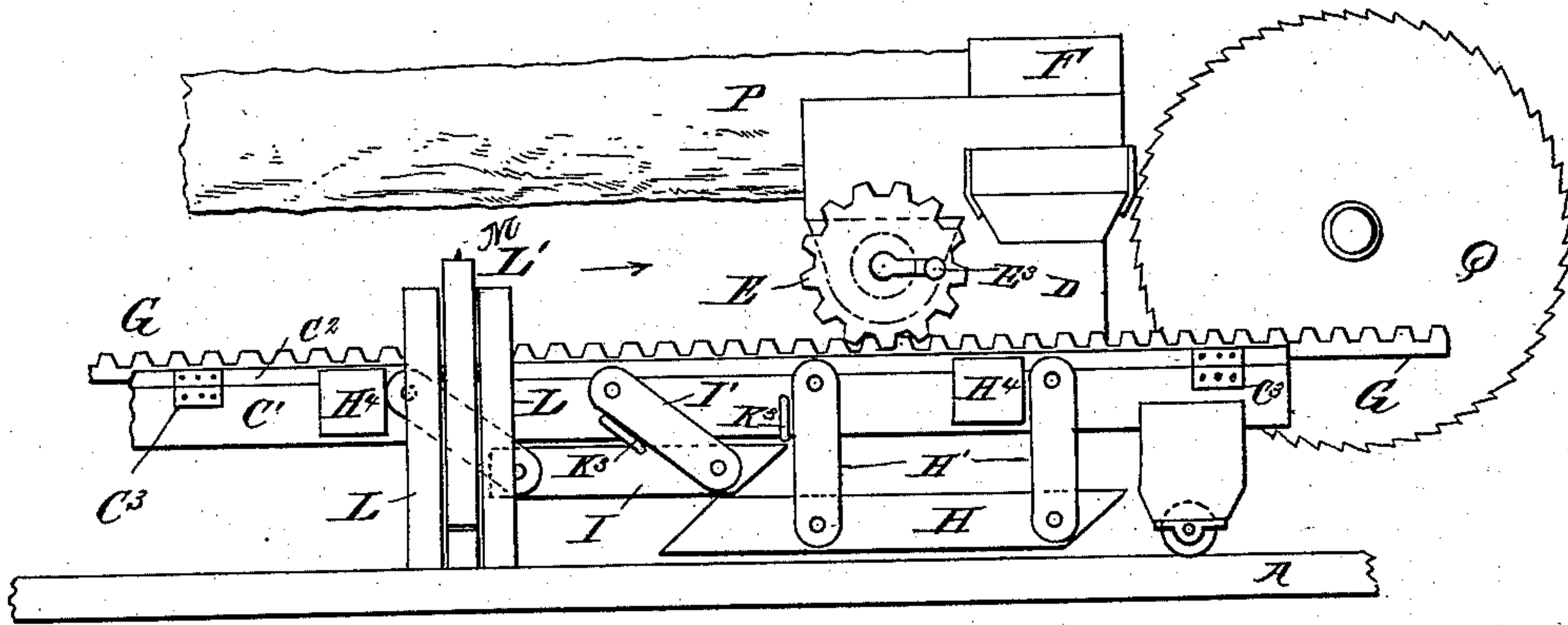


Fig. 1

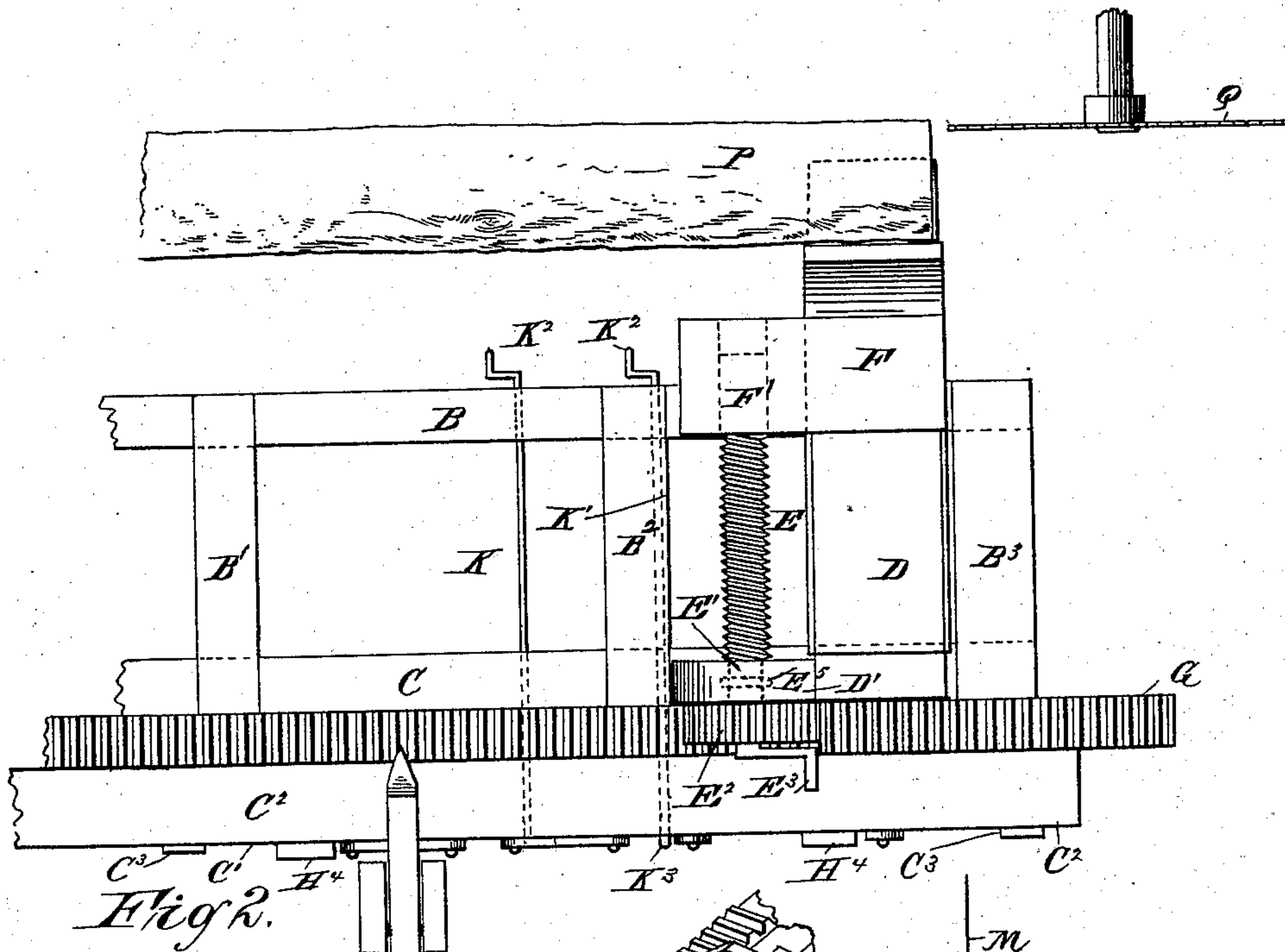


Fig. 2

WITNESSES:  
*Benjamin*  
*Scott*

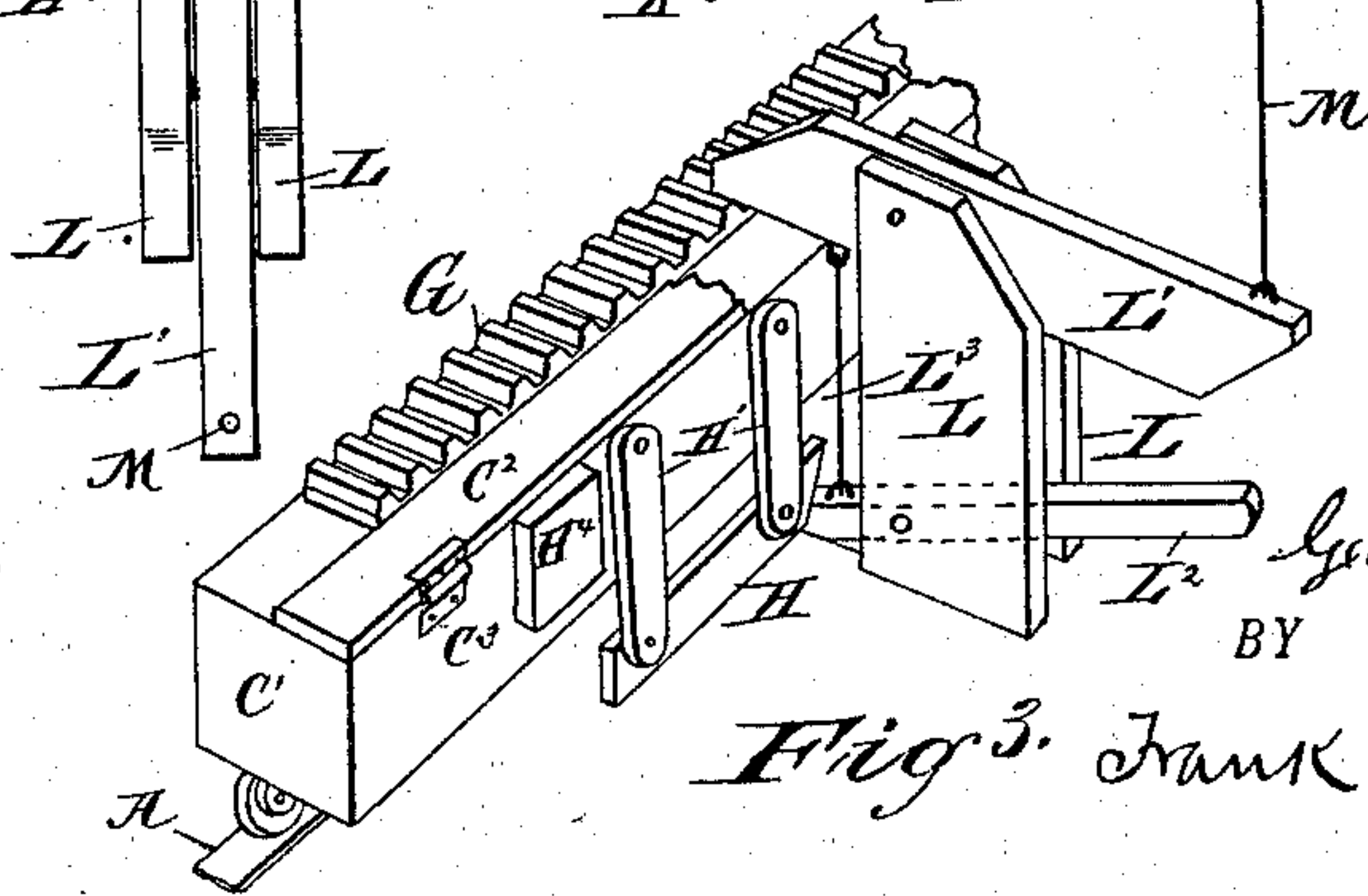


Fig. 3

INVENTOR

BY

ATTORNEY



# UNITED STATES PATENT OFFICE.

GEORGE W. HUCKABAY, OF GARFIELD, LOUISIANA.

## SAW-MILL SET-WORKS.

SPECIFICATION forming part of Letters Patent No. 407,664, dated July 23, 1889.

Application filed September 12, 1888. Serial No. 285,209. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. HUCKABAY, a citizen of the United States, and a resident of Garfield, in the parish of Caddo and State of Louisiana, have invented certain new and useful Improvements in Saw-Mill Set-Works, of which the following is a specification.

My invention relates to certain improvements in head-blocks for saw-mill carriages; and its object is to provide automatic means for shifting the head-block and log any desired distance before each cut of the saw, and a further object is to return the head-block to its original position after it has passed out to the extent of its movement; and it consists in the parts which will be hereinafter described, and pointed out in the claims.

Reference is herein had to the accompanying drawings, in which similar letters of reference indicate corresponding parts in the several views.

Figure 1 represents a side elevation of my invention. Fig. 2 is a top plan view, and Fig. 3 is a detail perspective, of the mechanism for automatically effecting the shift of the head-block.

A represents the base or track upon which the carriage is mounted. The frame of the carriage consists of three parallel bars B C C', connected by cross-bars B' B<sup>2</sup> B<sup>3</sup>. A cross-stand D is mounted upon and fixed to the carriage between the cross-bars B<sup>2</sup> B<sup>3</sup>. A boxing D' is fixed to one side of the stand D, and said boxing is provided with an opening for the reception of the smooth part E' of the screw E, the outer end of said screw being provided with a gear E<sup>2</sup> and a crank E<sup>3</sup>. The smooth part E' of the screw is provided with a circumferential bead E<sup>5</sup>, which fits a corresponding groove in the part D' to prevent the lateral movement of the screw and its gear. A sliding head-block F is mounted on the stand D, and said head-block is provided with a screw-threaded opening F' for the reception of the screw E. The upper outer side of the frame-piece C' is provided with a hinged bar C<sup>2</sup>, and C<sup>3</sup> are the hinges thereof. A movable toothed bar G is seated on the upper side of the bar C' inside of the bar C<sup>2</sup>. H is a bar pivotally suspended by hanger-arms H' from the outer side of the frame-bar C', and I is a shorter bar of like construction pivotally

suspended by hanger-arms I' from the side of the bar C' aforesaid. The ends of the bars H I are beveled, as shown. H<sup>4</sup> represents blocks on the outer side of the frame-piece C'. K K' are two cross-rods mounted in openings in the parallel side pieces of the frame, each of said rods being provided on one end with a crank K<sup>2</sup>, the opposite end of each of said rods being provided with a right-angled piece or bend K<sup>3</sup>.

Two separated flat blocks L are secured to the main frame, upon which the track is located, near the side of the carriage, and L' L<sup>2</sup> are two arms pivotally secured between the blocks L. The inner ends of said arms are connected by a rod L<sup>3</sup>, and M represents the lower end of a cord secured to the outer end of the upper arm L'.

A log is represented by the letter P, and Q is the saw.

The operation is as follows: While a log is being sawed the toothed bar G and its gear-wheel E<sup>2</sup> move with the carriage. The shift of the head-block is made just before the log advances on the saw, and said shift is effected by arresting the movement of the toothed bar, which is effected by causing the arm L' to lock with the said bar, and the momentary stoppage of said toothed bar will cause the gear E' to rotate and shift the head-block, which will be more fully hereinafter specified. The thickness of each cut of the log or the extent of movement of the head-block between each cut is regulated by the bars H I. These bars may be of any length and any number, and one or more may be used at the same time, as desired. A short bar (I for instance) will effect a shorter movement of the head-block than the longer bar H. Suppose the bar I to represent one-inch lumber and the bar H one inch and a half, and a bevel end of each bar the width of the cut of the saw, so that when the bar H is used the lumber cut will be exactly one inch and a half in thickness, and the lumber sawed while the bar I is used will be exactly one inch in thickness. Fig. 1 represents the position of the parts when the bar H is in use, the head-block has been shifted, and the carriage is presumed to be advancing in the direction of the arrow, the bar I being held up by means of the bent end K<sup>3</sup> of the rod K, the bent end of the rod



K' being turned so as to permit the hanger-arms H' and their bar H to hang down, as shown in Fig. 1. After the saw has made its cut, and on the return of the carriage, the heel of the bar H will encounter and ride over the under arm L<sup>2</sup>, Fig. 3. On the next advance movement of the carriage in the direction of the arrow, said bar H will again encounter the inner end of the arm L<sup>2</sup> and depress said arm, drawing down the rod L<sup>3</sup> and inner end of the arm L', thereby causing said arm L' to engage with the toothed bar G, and firmly retain said bar, while the carriage moves onward, the bar sliding on the carriage during the engagement of the arm L' with said toothed bar, and such engagement continues while the arm L<sup>2</sup> is depressed by the bar H. After said bar has passed forward beyond the arm L<sup>2</sup> the inner ends of the arms L' L<sup>2</sup> will rise by gravity of the outer ends of the arms, causing the disengagement of the arm L' with the toothed bar. The block H<sup>4</sup> holds the bar H and its hanger-arms rigid while the said bar moves forward over the under arm L<sup>2</sup>, but said bar and its arms fold on the return movement of the carriage while the bar is passing over the said under arm. Any thickness of lumber—that is to say, any desired shift of the head-block—may be effected by combining two or more arms L I. For instance, suppose it is desired to cut lumber two inches and one-half in thickness, the said two arms can be lowered, so as to hold down the arms L' L<sup>2</sup>, thereby causing a greater movement or slide of the toothed bar G on the carriage and effect a consequent greater revolution of the gear E<sup>2</sup> and effect a movement of the head-block to correspond with the thickness represented by the combined arms H I. After the head-block has been moved outward to the desired extent, it may be returned ready for another log in the following manner: The cord M is intended to extend upward over and around a pulley or other suitable device, so as to be accessible to the hand of the sawyer. By actuating said cord the arm L' may be caused to lock with the toothed bar G, and said bar held so as to slide on the carriage back to its former posi-

tion, when the carriage is moved backward, the locking and retention of said bar causing the gear E<sup>2</sup> and screw to turn and thereby return the head-block to the desired position.

It will be observed that the hinged bar C<sup>2</sup> serves as a guide for the toothed bar, and that when said bar C<sup>2</sup> is turned outward on its hinges the toothed bar may be moved out of contact with the gear E<sup>2</sup>. The said gear and its screw may be rotated by turning the crank E<sup>3</sup>.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. The combination, with a saw-mill carriage, of a toothed bar seated thereon, an arm for intermittently locking the said bar, so as to permit the carriage to move independently of the same, the gear-wheel engaging said bar, the screw to which said gear-wheel is attached, and the movable head-block operated by said screw, and the bar or lever whereby the movement of the toothed bar is arrested and the parts operated to move the head-block, substantially as specified.

2. The combination, with a saw-mill carriage, of a toothed bar seated thereon, a beveled bar or bars suspended therefrom by hanger-arms L', the rods K K', having arms K<sup>3</sup> and cranks K<sup>2</sup>, whereby the bar or bars may be elevated, the blocks for engaging the hanger-arms, the gear, screws, and head-block, the blocks L, and connected arms L' L<sup>2</sup>, all arranged to operate substantially in the manner specified.

3. A saw-mill carriage provided with a toothed bar seated thereon and also provided with one or more bars suspended by hanger-arms, and a gear, screw, and head-block, in combination with the connected arms L' L<sup>2</sup>, substantially as specified.

Signed at New York, in the county of New York and State of New York, this 10th day of September, A. D. 1888.

GEORGE W. HUCKABAY.

Witnesses:

J. P. SCOTT,  
FRANK A. FOUTS.