

(No Model.)

E. MYERS & L. HANHART.
OFFSET MECHANISM FOR SAWMILL CARRIAGES.

No. 496,129.

Patented Apr. 25, 1893.

FIG. 1.

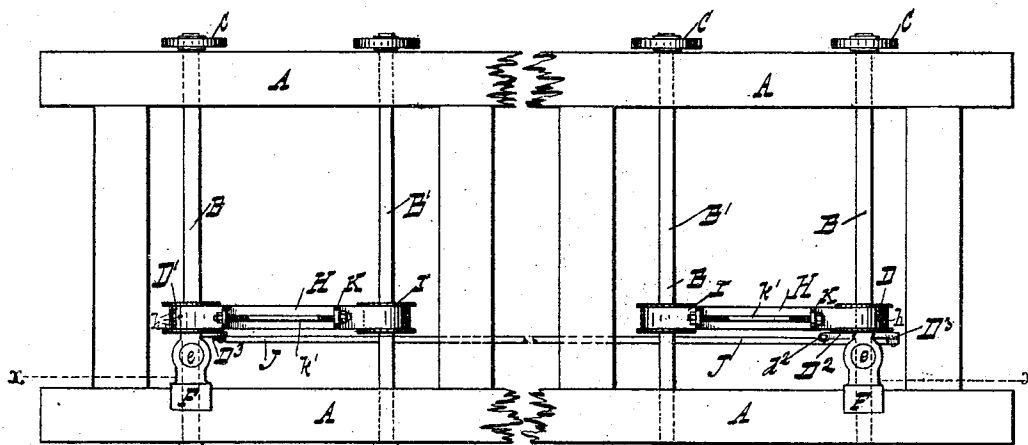


FIG. 2.

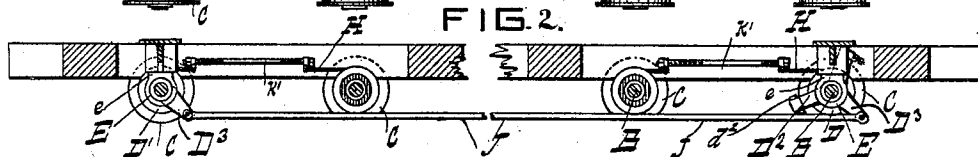


FIG. 3.

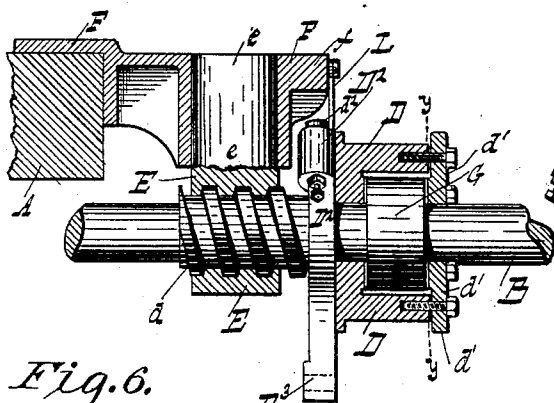


FIG. 4.

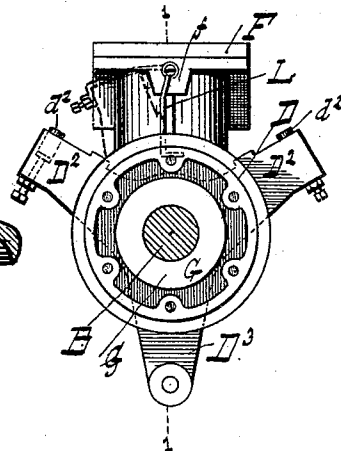


Fig. 6.

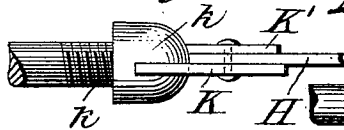
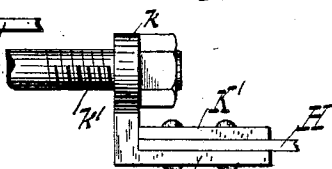


FIG. 5.



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OFFSET MECHANISM FOR SAWMILL-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 496,129, dated April 25, 1893.

Application filed May 18, 1891. Serial No. 393,133. (No model.)

To all whom it may concern:

Be it known that we, EDWARD MYERS and LOUIS HANHART, citizens of the United States, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Offset Mechanism for Sawmill-Carriages, of which the following is a specification.

Our invention is an improved offset mechanism for saw mill carriages.

Its object is to provide a simple and effective means to automatically move the carriage laterally upon the return movement, so that the saw will pass clear of the log, and to automatically return the carriage and hold it securely in working position while moving forward. These objects we attain by the means illustrated in the accompanying drawings in connection with which the invention will be first fully described, and then particularly referred to and pointed out in the claims.

Referring to the drawings in which like parts are indicated by similar reference letters wherever they occur throughout the various views:—Figure 1 is a plan view of a saw mill carriage provided with our improvements. Fig. 2 is a longitudinal vertical section of the same taken through line *x, x*, of Fig. 1. Fig. 3 is a detail view upon a greatly enlarged scale partly in transverse vertical section and partly in elevation of the carriage shifting mechanism, the section being cut through line 1, 1, of Fig. 4. Fig. 4 is a vertical section of the same through line *y, y*, Fig. 3 showing the parts of the shifting device to the left of the section line in elevation. Fig. 5 is a detail view in edge elevation of the belt clamps and belt tightening device. Fig. 6 is a similar view showing a modification of the device illustrated in Fig. 5.

The carriage frame A, is so mounted upon truck axles B, B', that it is capable of a limited lateral movement, and the truck wheels C, are secured rigidly to the axles in the usual manner.

Upon the axles B, at each end of the carriage are loosely journaled flanged pulleys D, D', these pulleys have screw threaded hubs *d*, which pass through nuts E, which have turned shanks, *e*, fitted to slide vertically in tubular bosses of brackets F, which are firmly secured to the inside of one of the side tim-

bers of the frame. The pulleys D, D', are chambered to receive collars G, which are secured upon the axles B, and have separable ends *d'*, which when secured in place bear against the ends of the collars. The purpose of the fixed collars is to prevent lateral motion of the pulleys upon the axles, and to compel the carriage to move laterally when the pulleys are reciprocated by the forward and backward movement of the carriage by means of belts, H, which pass around flanged pulleys I, which are secured upon the axles B', and around the pulleys D, D', to which they are secured by screws *h*, passing through the belts and tapped into the periphery of the pulleys. The purpose of this arrangement is to insure a positive movement of the pulleys D, D', with the belts while the pulleys I may slip within them when the pulleys D, D' are stopped.

The movements in either direction of the pulleys D, D', are limited as follows:—The pulley D, has cast integral with it arms D², D³. In the paths of the arms D², D³, is a stop *f*, depending from the web of the bracket F. The ends of the arms D², are provided with adjustable blocks *d*², of wood or rubber to cushion the arms and prevent jar. The pulleys D, D', are alike in construction except that the arms D², are omitted from pulley D', the two pulleys are compelled to reciprocate in unison, by the connecting link J, the opposite ends of which are journaled upon wrist pins secured in the ends of the arms D³. The ends of the belts which extend over the pulleys, are clamped between plates K, K', the lower ones K, having upwardly projecting angle lugs *k*, to receive tightening rods *k'* which pass through the lugs and have nuts upon their screw threaded ends, to regulate the tension of the belts or the lower plates K, may have tubular nuts projecting from their rear edges, one of which is tapped with a right hand thread and the opposite one with a left hand thread, and the ends of the rods *k'*, correspondingly threaded so that the tension of the belt may be regulated by turning the rod as clearly shown in Fig. 6.

Should it be desirable from any cause to back the carriage after the saw has entered the log and before it has passed through it, we have provided a lock for the shifting device

which will prevent the lateral movement of the carriage upon its backward movement, this consists of a hook L, (Figs. 3 and 4.) which is pivoted upon the end of the stop *f* and so arranged that its hooked end may be thrown around one of the arms *D*², to hold it against the stop *f*, (as shown in dotted line Fig. 4.) and prevent the pulley D, from moving until the hook is thrown off.

It being understood that upon the forward movement of the carriage, and before the log reaches the saw, the pulley D, will be turned until the rear arm *D*², strikes the stop *f*, which brings the carriage and log in proper position for the cut to be made, the carriage will be held in this position until the cut is completed and the log carried some distance beyond the back edge of the saw, on the reverse movement of the carriage the belts H, will turn pulleys D, D', in the opposite direction, until the opposite arm *D*², strikes the opposite side of the stop *f*, this movement will carry the log away from the saw, and so hold it until the log is carried beyond the cutting edge of the saw, when the reverse movement will again shift the carriage and bring the log in position for a new cut.

The provision of the vertically sliding nut E, prevents the shifting devices from being injured by any vibration of the frame and also prevents any jarring that would interfere with the evenness of the cut, thus insuring smoother and better work. And the flexible belt passing over the tight and loose pulleys mounted upon different axles, secures a positive movement of the loose pulley with but little wear upon the belt. It is of course obvious that the rear pulley I, and its belt may be omitted when the front pulley D, and rear pulley D', are coupled to move in unison by the connecting rod L, and that if both pulleys D, D', were alike and the stop interposed between their stop arms the connecting rod and arms *D*², might be omitted but in either case the movement would not be so even and certain as the device constructed as shown in the drawings.

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

1. In a shifting device for saw mill carriages, the combination of the trucks, the frame loosely mounted to slide laterally thereon, loose pulleys having screw threaded hubs

mounted upon the end axles, brackets secured to the frame and having nuts to engage said screw threaded hubs, the fixed pulleys mounted upon the intermediate axles, and belts passing over the fixed and loose pulleys, substantially as shown and described.

2. As a shifting device for saw mill carriages of the character described, the combination of the carriage and trucks with loose pulley D, having screw threaded hub, and radial arm *d*², the collar G, to prevent lateral play of the pulley upon the axle, the bracket F, secured to the carriage and having stop *f*, in the path of the radial arms the nut E, fitted to slide vertically in said bracket the pulley I, fixed upon the truck axle and the belt for imparting motion to the pulley D, substantially as shown and described.

3. The combination substantially as hereinbefore set forth, of the truck the carriage mounted to slide laterally thereon, the loose pulley D, recessed, and provided with a screw threaded hub and removable end and radial arms *D*², the collar G, secured upon the axle within the recess of the pulley, the bracket F, having stop *f*, in the path of said arms and perforated to receive the shank of the nut E, the nut fitted to slide in said bracket and to engage the screw on the pulley hub, and means such as shown for imparting motion to said pulley around the axle when the carriage starts upon its travel in either direction.

4. The combination of the truck and carriage, the pulleys D, D', loosely mounted thereon the collars to prevent lateral motion of said pulleys the nuts secured to the carriage to engage the screw threaded hubs of the pulleys, the stop arms *D*², *D*², secured to the pulley D, the stop interposed between said arms to limit the movement of the pulleys, the pulleys I, secured upon axles B', of the truck, the belt H, passing over said pulleys I, D, D', and secured to the pulleys D, D', the clamps for holding the ends of the belts, and the screw rods and nuts connecting said clamps for the purpose of regulating the tension of the belt, substantially as shown and described.

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