(No Model.)

J. W. STOKOE.

FEED MECHANISM FOR SAW MILL CARRIAGES.

No. 307,349. Patented Oct. 28, 1884.

Fig. 1

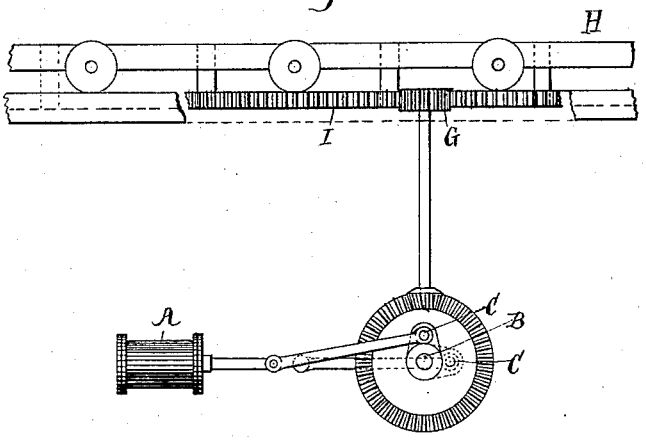
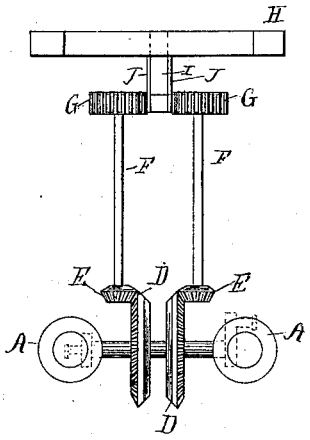


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. STOKOE, OF MANISTEE, MICHIGAN, ASSIGNOR TO N. W. NELSON, OF SAME PLACE, AND MATTIE J. STOKOE, OF JEANERETTE, LOUISIANA.

FEED MECHANISM FOR SAW-MILL CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 307,349, dated October 28, 1884.

Application filed June 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. STOKOE, of Manistee, in the county of Manistee and State of Michigan, have invented new and useful Improvements in Saw-Mill Carriages; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in devices for giving the necessary reciprocating motion to saw-carriages such as are ordinarily employed in saw-mills, by means of which a certain and regular motion is given to such carriage in such a manner that under no circumstances can it vary from a right line in its motion, this being done by applying the devices for giving such motion upon opposite sides of the carriage.

The invention consists in the peculiar construction, arrangement, and operation of the parts, as more fully hereinafter described.

Figure 1 is a side elevation showing the operating-floor of the mill, with the carriage and its connection with the engines which drive such carriage situated on the ground-floor of the mill or below the operating-floor. Fig. 2 is an end view of the same.

In the accompanying drawings, which form a part of this specification, A A represent a pair of independent reversible horizontal engines, although these may be vertical, if preferred.

B is a horizontal shaft, journaled in suitable supports, (the latter not being shown,) and each end of this shaft is provided with a crank, C, the one upon one end being set quartering to the one upon the opposite end, and these cranks are connected in the usual way to the piston-rods of the engines.

D are bevel spur-gears, meshing into and engaging with the beveled gear-pinions E, which are secured upon the vertical shafts F—that is to say, one of the pinions upon each of the vertical shafts. These vertical shafts are suitably stepped at their lower ends, and journaled at their upper ends in proper supports, secured to any adjacent part of the mill. Upon the upper end of each one of these shafts F is secured a horizontally-running spur-pinion, G.

H is the saw-carriage, secured to which, centrally and longitudinally, is a rack-stick, I, extending the whole length of the carriage, and to each side of this rack-stick there is secured a rack, J, designed to mesh and engage with the spur-pinions G, one of the latter being upon each side of such rack-stick.

It will readily be seen that instead of a centrally-located rack-stick, I, there may be two of such rack-sticks, similarly secured to the carriage, and each at a considerable distance from the center line, and the outer or inner side faces of these rack-sticks provided with the racks. In such case the same arrangement of driving parts below could be employed. By this arrangement of parts it will be seen that the power, being applied upon each side instead of upon one side, will compel the carriage to travel without wabbling, and in a straight line, and I esteem this arrangement better than to apply the power to a rack located upon the bottom of the rack-stick, as by accident something may drop through the floor of the mill into the rack-pinion, and thus, being carried by the rotation of such pinion into the teeth of the rack, would have a tendency to raise the carriage from the track. By this arrangement, also, the usual appliances are provided for allowing the sawyer upon the floor of the mill to govern the reversal of his engines at the completion of each reciprocation of the carriage, and a higher rate of speed with a greater economy in the amount of steam required can be had than is obtained by any of the known means of driving saw-carriages.

I am aware of Patent No. 222,775, and make no claim to the construction shown therein.

What I claim as my invention is—

In combination with a saw-carriage provided with a rack-stick, I, and vertical rack J, the spur-pinions G, carried by the shafts F, bevel-pinions E, also carried by the shafts F, beveled gear-wheels D, engaging with the bevel-pinions, shaft B, carrying said gear-wheels D, and having cranks C C, set quartering to each other, and a pair of independent reversible engines, A, connected directly to shaft B, all the parts being constructed, arranged, and operating substantially as and for the purposes specified.

JOHN W. STOKOE.

Witnesses:
H. S. SPRAGUE,
E. SCULLY.