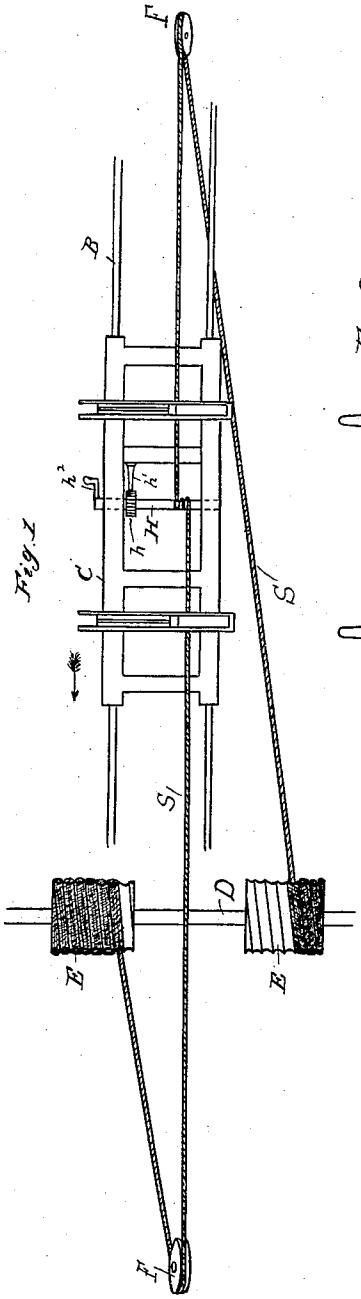
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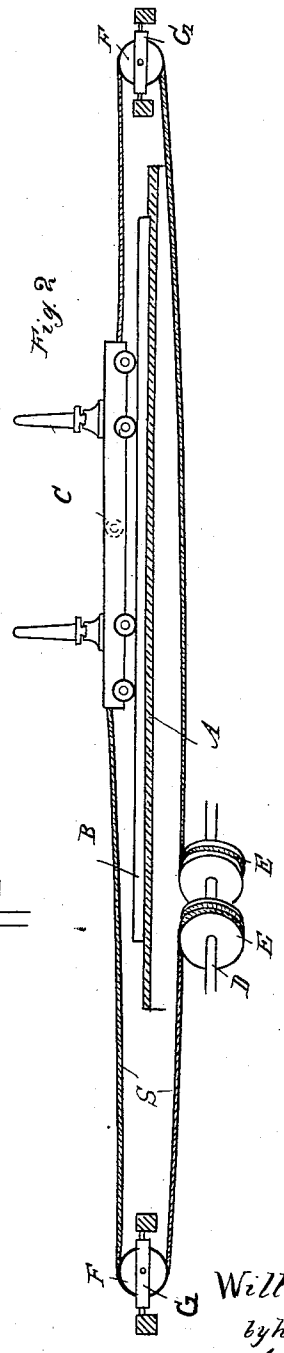
2 Sheets—Sheet 1.

W. A. CAMPBELL.

FEED MECHANISM FOR SAW MILL CARRIAGES.

No. 324,223. Patented Aug. 11, 1885.





Attest:
John Schuman.
N. [illegible] Sprague

Inventor:
William A. Campbell
by his Att'y
Thos. L. Sprague

N. PETERS, Photo-Lithographer, Washington, D. C

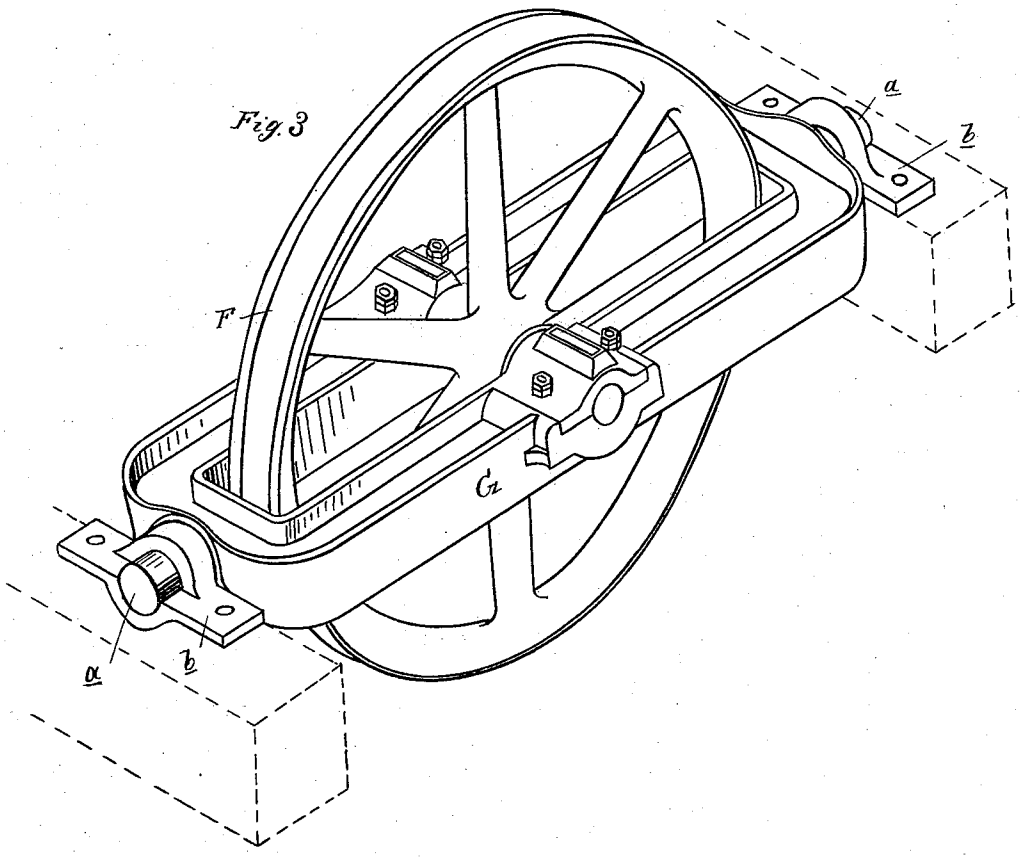
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Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM A. CAMPBELL, OF EAST SAGINAW, MICHIGAN, ASSIGNOR OF ONE-HALF TO A. F. BARTLETT & CO., OF SAME PLACE.

FEED MECHANISM FOR SAW-MILL CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 324,223, dated August 11, 1885.

Application filed April 29, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. CAMPBELL, of East Saginaw, in the county of Saginaw and State of Michigan, have invented new and useful Improvements in Reversible Feed-Works for Circular-Saw Mills; 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 the construction of means to drive the carriage of a saw-mill where a rapid reverse motion of the carriage is required, as in mills where circular saws are employed.

The invention consists in the peculiarities of construction of the parts, and their combinations and operation by means of which the usual wear upon the rope or cable employed is diminished to the minimum and the friction decreased, as more fully hereinafter described.

Figure 1 is a plan view showing the carriage and the parts which give it its motion, the floor of the mill being removed in order to show the relative position of the parts. Fig. 2 is a side elevation, and Fig. 3 is a detached perspective view, of the oscillating pulley.

In the drawings, A represents the floor of the mill, upon which is laid the usual ways, B, upon which the carriage C travels. Supported in any suitable manner below the floor, and at right-angles to the travel of the carriage and between the two ends of the track B, is journaled the shaft D, to which are secured the spirally-grooved pulleys E.

F are two grooved sheaves, journaled in a suitable frame, G, and at both ends of these frames they are provided with journals or pintles *a*, which run in boxes *b*, these boxes being secured to suitable supports which hold the frames in line with the travel of the carriage. A rope, S, is fastened at its center to the shaft H, and at each end to one of the pulleys E.

It will be noticed that the axis of the oscillation of the sheaves F is always in line with the draft of the carriage C, while the sheaves are free to adjust themselves to the plane in which their respective ropes travel. This arrangement permits of bringing the grooves of the drums and sheaves in line with their ropes, thereby preventing their chafing upon the edges of the grooves on the sheaves and on the drums, the latter being spirally grooved, the more easily to allow the rope in the rotation of the sheaves to follow the spiral and not allow any coil of such rope to ride upon its fellow. The slack which occurs in the ropes from time to time is taken up by turning the shaft H, carrying a pinion, *h*. The shaft is secured to the carriage and has the rope secured to it. A pawl, *h'*, engages the pinion, and a crank, h^2, allows the crank to be operated. The alignment of those parts of the ropes between the sheaves and the carriage is thereby changed; but with my oscillating sheaves the ropes will still run true over the sheaves.

The space beneath the floor under the carriage is generally required for other machinery and is not available for placing the drums E E. By grooving them spirally and using the oscillating sheaves in connection with them I am now enabled to place them anywhere between the ends of the track, and can place them as far apart or as near together as convenience will dictate, simply taking care to adjust the spiral grooves to the angle of the ropes.

What I claim as my invention is—

1. In a saw-mill, substantially as described, the combination, with a reciprocating carriage, of a sheave, as F, journaled in bearings in a rocking frame, and a rope passing over said sheave and operating said carriage, as set forth.

2. In a saw-mill, the combination, with a reciprocating carriage and an operating-rope connected therewith, of an oscillating oblong frame provided with a pintle at each end, journaled in boxes secured to the frame of the machine, and a sheave journaled in said oscillating frame, substantially as and for the purposes specified.

WILLIAM A. CAMPBELL.

Witnesses:
H. S. SPRAGUE,
CHARLES J. HUNT.