H. GROVES.

Saw-Mill Carriage.

No. 203,908. Patented May 21, 1878.

Fig. 1.

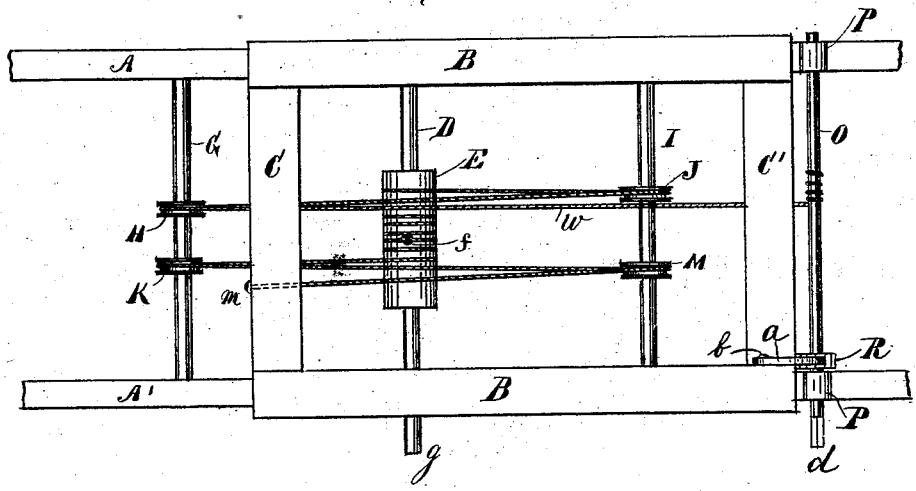
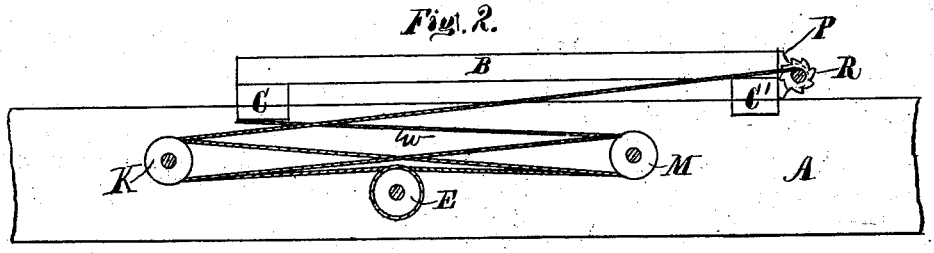


Fig. 2.



Witnesses;

S. C. Dodge

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UNITED STATES PATENT OFFICE.

HENRY GROVES, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN SAW-MILL CARRIAGES.

Specification forming part of Letters Patent No. **203,908**, dated May 21, 1878; application filed March 11, 1878.

To all whom it may concern:

Be it known that I, HENRY GROVES, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in the Mode of Operating Saw-Mill Carriages, of which the following is a description, reference being had to the accompanying drawing.

My invention relates to a new device for operating saw-mill carriages.

The object of my invention is to operate the carriage of a saw-mill with a positive motion without the aid of racks and pinions.

My invention consists of the new construction, arrangement, and application of devices, and in the new combination of old elements, all of which combined are deemed essential in my newly-organized device for operating a saw-mill carriage, as will be hereinafter fully set forth.

In the drawing, in which like letters of reference indicate like parts, Figure 1 is a plan view of a saw-mill carriage mounted on its guides, showing my improved mode of operating the same. Fig. 2 is a horizontal vertical section of the same.

A A′ represent the side sills or guides, on which the carriage B B C C is mounted. The shafts D, G, and I extend across from side to side of the sills A A′, and are supported in suitable journal-boxes attached to said sills.

The center shaft D projects beyond the sill A′, and is revolved by any of the ordinary connections with a power mechanism. On said shaft is secured a long drum, E, provided with a stud, pin, or bolt, *f*.

The shafts G and I are provided with loose grooved sheaves H, J, K, and M, in the manner shown in Fig. 1.

At the front of the carriage are secured boxes P P, in which the shaft O operates. Said shaft is provided with a crank end, *d*, and a ratchet-wheel, R.

The pawl *a* is pivoted to the frame of the carriage by the bolt *b*, and operates, with the ratchet R, to hold the shaft O and prevent it from revolving.

The rope *w* is first secured to the rear end C of the carriage, and extends forward, passing over the loose sheave M, thence back, over, and around the loose sheave K, and then over the top of the drum E, on which it is wound around several times and made fast to the stud *f*, after which it has several more turns around said drum, and is then carried forward under the sheave J, thence back under the sheave H, thence forward, and is attached to the ratchet-shaft O, where it is tightened by means of a crank applied to the end *d*, and the ratchet and pawl *a* hold the rope taut.

The operation of my improved device is as follows: Power being applied to the drum-shaft D, the drum revolves and winds up the rope *w* on one side while it is being unwound on the other. The carriage B is moved along the guide-sills A in the direction in which the drum E revolves, and is reversed when the motion of the drum-shaft is reversed. If the rope should become slack, it can be tightened on the shaft O.

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

The combination of the shafts G and I, provided with loose sheaves H K J M, the drum E, the rope *w*, the movable carriage B C, and the shaft O, provided with the ratchet R and the pawl *a*, all arranged and combined to operate in the manner set forth and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY GROVES.

Witnesses:
E. O. FRINK,
S. C. FRINK.