

(No Model.)

W. H. GIBBES, Jr.

SAW MILL FEED DEVICE.

No. 376,592.

Patented Jan. 17, 1888.

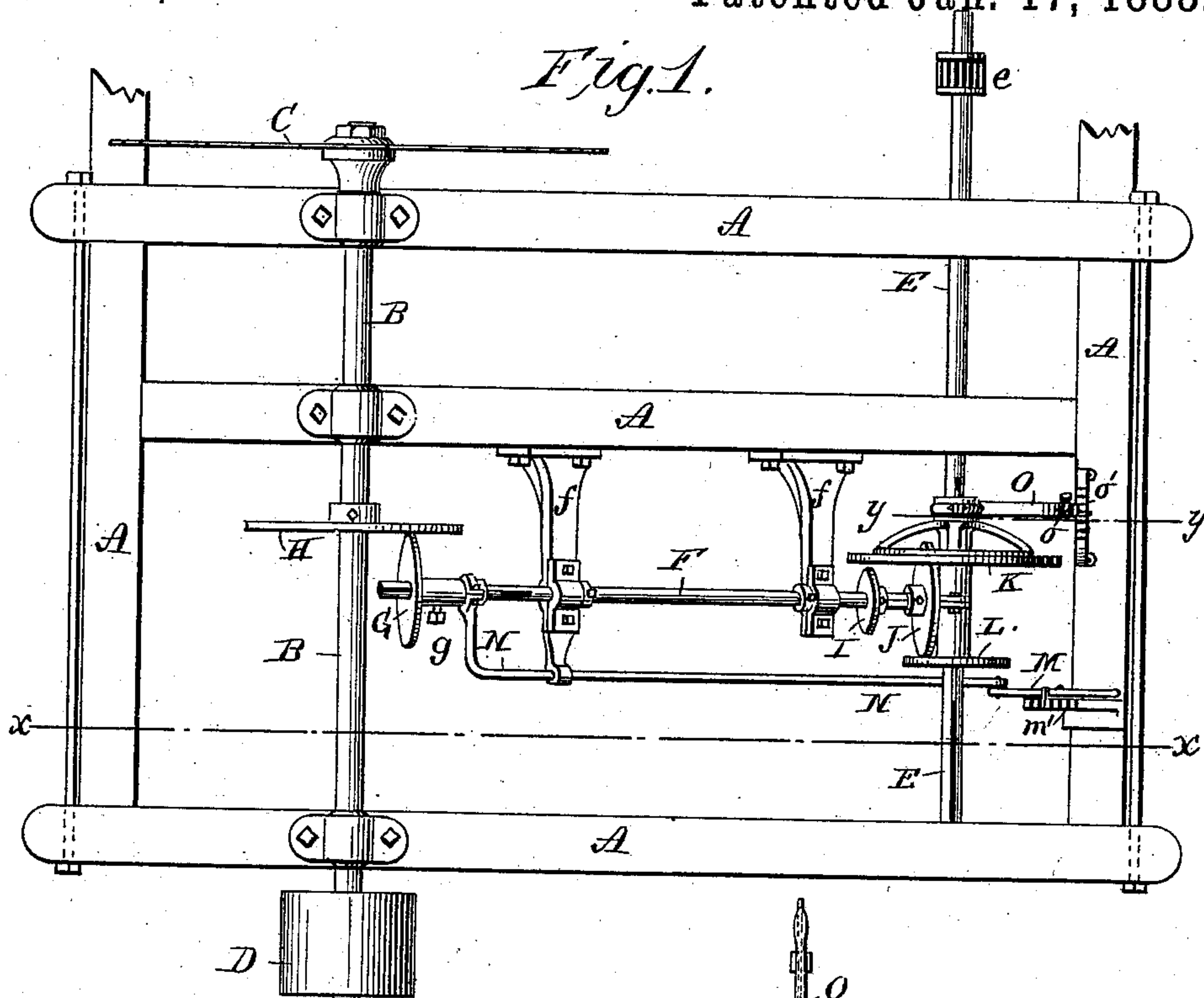
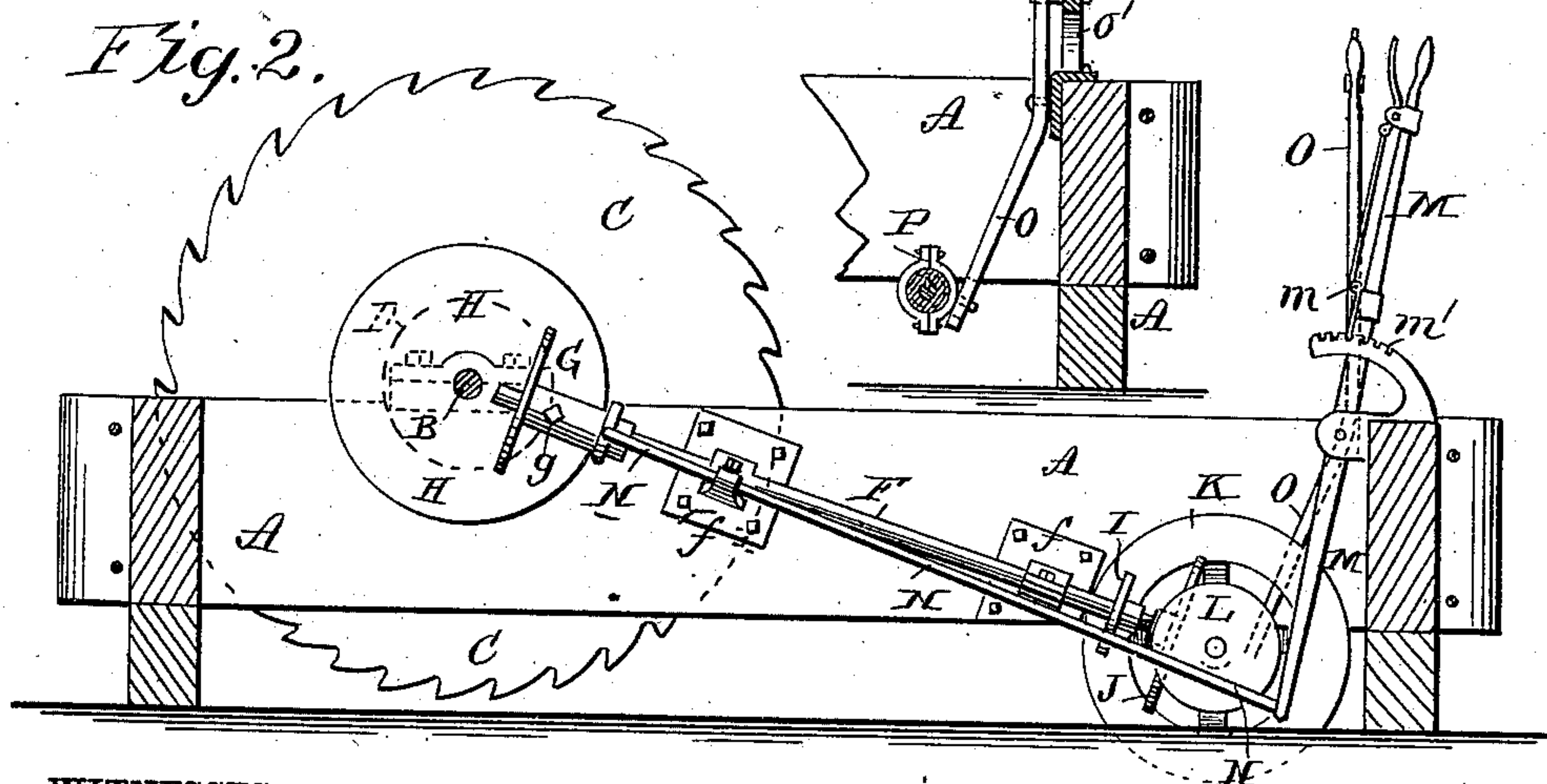


Fig. 3.



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SAW-MILL-FEED DEVICE.

SPECIFICATION forming part of Letters Patent No. 376,592, dated January 17, 1888.

Application filed June 29, 1887. Serial No. 242,874. (No model.)

To all whom it may concern:

Be it known that I, W. HAMPTON GIBBES, Jr., of Columbia, in the county of Richland and State of South Carolina, have invented a new and Improved Saw-Mill-Feed Device, of which the following is a full, clear, and exact description.

My invention relates to a saw-mill-carriage feeding apparatus, and has for its object to provide a simple, inexpensive, and efficient device of this character by which the reciprocations of the carriage may be effected and controlled at any required speed at the will of the sawyer.

The invention consists in certain novel features of construction and combinations of parts of the saw-mill-feed device, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of part of a saw-mill with my improved carriage-feeding devices applied thereto. Fig. 2 is a longitudinal vertical section thereof taken on the line *xx*, Fig. 1; and Fig. 3 is a detail vertical sectional view taken on the line *yy*, Fig. 1.

The saw-mill-frame A may have any improved construction, and to it is journaled the mandrel or shaft B, which carries a saw, C, and a pulley, D, to receive a belt for driving the saw. A shaft, E, which is also journaled to the frame A, is provided with a toothed pinion, *e*, which engages a rack on the adjacent rail of the saw-mill carriage to move the carriage forward and back in the ordinary way when motion is imparted to the shaft by a system of friction-gearing next described.

A shaft, F, which is journaled in bearings *ff*, fixed to the frame A, is provided at one end with a friction-wheel, G, which is driven by a friction-disk, H, fixed to the saw-mandrel B, and at its other end the shaft F carries two friction-wheels, I J, which are adapted to be engaged by friction-disks K L, fitted adjustably on the carriage-feed shaft E, the two sets of disks being so arranged with respect to each other that the smaller disk of one set engages the larger disk of the other set. The wheel G is fitted to the shaft F by a spline-and-feather connection, allowing it to be moved

along the shaft by a lever, M, which is fulcrumed to the frame A, and is connected at its lower end, by a rod, N, with the hub or collar of the wheel G, which may be provided with a screw, *g*, adapted to be set against the shaft to lock the wheel in place. The lever M may have a latch-bar, *m*, adapted to lock into a rack, *m'*, fixed to the frame A. By adjusting the wheel G farther from the mandrel B the speed of rotation of the feed-shaft F will be increased, and by setting the wheel G closer to the mandrel the rotative speed of the shaft F will be decreased, as the nature of the timber being cut or the condition of the saw may require to assure maximum efficiency of the mill.

The friction-disks K L may be cast with one hub connecting them both; but I prefer to cast a short hub on each disk and bolt the ends of the hubs together, which allows more convenient and inexpensive repairs of the parts should either of the disks be broken or otherwise become unserviceable. In either case the hub connects the two disks K L so that they are practically one piece adapted to slide along the shaft E, to which the disk-hub is fitted by a spline-and-feather connection, thus allowing the disks K L to be shifted against their respective drive-wheels I J for feeding and jiggling back the mill-carriage at the will of the sawyer. The friction-disk K is shown made with an open-dished central part; but the friction-wheels I J may be arranged to allow this disk K to be made as a solid plate like the disk L.

A lever, O, which is fulcrumed to the frame A, is connected to a loose collar, P, which is fitted in an annular groove of the hub of the disk K, thus allowing either of the disks K L to be brought against its respective drive-wheel to operate the carriage. The lever O has a suitable latch-bar, *o*, which is adapted to engage a rack-bar, *o'*, on the frame to lock the disks K L in intermediate position when the carriage is to remain at rest.

It is obvious that the above-described apparatus will operate most effectively to feed the carriage up to bring the log to the saw and jig the carriage back to allow the log to be set for the next cut, and that both these movements of the carriage may be regulated as to speed with the greatest nicety, and that the

actions are positive, and that the whole structure comprises few and simple parts not liable to get out of order.

It will be understood that the friction-disks
5 K L may be fixed to the carriage-feed shaft E, and that the adjacent end of the shaft F may be arranged to be moved laterally, by a suitable lever or other device, to carry the friction-wheels I J against the respective disks K L
10 for assuring reciprocation of the saw-mill carriage.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 1. In a saw-mill-feed device, the combination of the carriage-feed shaft E, the friction-disks K L, of unequal size and fitted to slide on the said shaft, the lever O, for moving the said disks on the shaft, the shaft F, and the
20 friction-disks I J, mounted on the shaft F and of unequal size, the two sets of disks being so

arranged with respect to each other that the smaller disk of one set engages the larger of the other, substantially as herein shown and described.

25 2. In a saw-mill-feed device, the combination of the carriage-feed shaft E, the friction-disks K L, fitted to slide on the said shaft, the disks being of unequal size and the disk K having an open-disked central part, the lever
30 O, for sliding the disks, the shaft F, and the friction-disks I J, mounted on shaft F and of unequal size, the two sets of disks being so arranged with respect to each other that the
35 smaller disk of one set engages the larger disk of the other, substantially as herein shown and described.

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