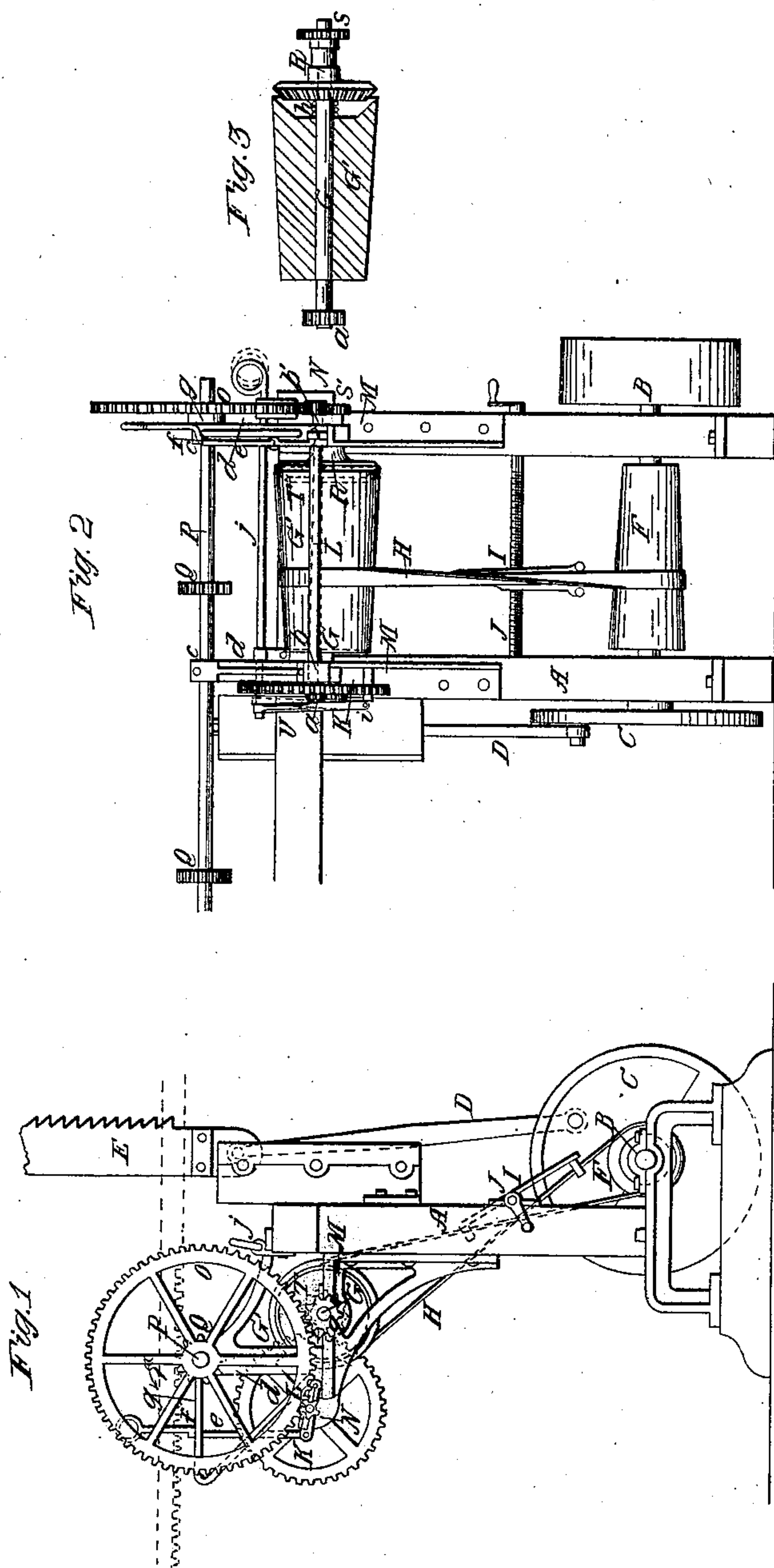


G. D. Lund,
Reciprocating Saw Mill,
No. 18,098,
Patented Sep. 1, 1857.



UNITED STATES PATENT OFFICE.

GEORGE D. LUND, OF YONKERS, NEW YORK.

FEED AND GIGGING MOVEMENT FOR SAWING-MILLS.

Specification of Letters Patent No. 18,098, dated September 1, 1857.

To all whom it may concern:

Be it known that I, GEORGE D. LUND, of Yonkers, in the county of Westchester and State of New York, have invented a new and useful Improvement in Sawing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of my improvement. Fig. 2, is an end view of ditto. Fig. 3, is a detached longitudinal section of the upper cone.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in sawing machines in which reciprocating saws are used.

The invention consists in a novel means employed in giving the feed and gigging back movements to the carriage whereby the motion of the carriage may be readily reversed and the necessary quick back movement obtained in the most simple manner, the feeding device being connected with cones by which the speed of the movements may be regulated as desired.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents the framing of the machine, at the lower part of which a shaft B is placed, said shaft having a crank pulley C at one end from which by means of a pitman D the saw E is driven as usual. On the shaft B a cone F is placed, and a cone G' is placed on a shaft G at the upper end of the framing. The two cones F, G', are placed in reversed positions as shown plainly in Fig. 2, and a cross belt H, passes around both cones. I is a belt shipper which is placed on a screw shaft J, by turning which the belt shipper may be adjusted at any desired point on the cones. On one end of the shaft G a pinion (a) is secured. This pinion gears into a toothed wheel K which is placed on the end of a shaft L which has its bearings (b) (b') attached to the outer ends of brackets M, M, which are secured to the framing A. The bearings of the shaft G are also secured on the brackets. The bearing (b') of the shaft L, at the end opposite to that where the toothed wheel K is attached, is hinged to its bracket, and

at this end of the shaft L a pinion N is secured, said pinion gearing into a toothed wheel O, which is placed on one end of a shaft P, the bearings (c) of which are at the upper ends of uprights (d) (d) secured to the brackets M, M. On the shaft P are secured pinions Q, Q, which gear into the racks of the carriage in the usual way. To the hinged bearings (b') a rod (e) is attached. This rod has a bend or shoulder formed on it which when placed over a horizontal rod or bar (g) attached to one of the uprights (d) and one of the brackets M, retains the pinion N in gear with the wheel O. On the end of the shaft G opposite to the end where the pinion (a) is attached, there is placed loosely a sleeve or collar R. This sleeve or collar has a pinion S on its outer end and this pinion gears into the wheel O. To the inner end of the sleeve or collar a conical hub or boss T is attached, and this hub or boss fits into the larger end of the cone G', a spiral spring (h) being placed around the shaft G said spring having a tendency to keep the drum thrown out free from the hub or boss T. The end of the shaft G where the pinion (a) is attached bears against a lever U which works in a fulcrum pin (i). To the upper end of this lever a rod (j) is attached.

The operation is as follows. When the hub or boss T is thrown out from the cone G' the shaft P will be rotated from the cone G' through the medium of the pinion (a) wheel K pinion N and wheel O, the pinion N being of course thrown in gear with the wheel O. The arrow (1) shows the direction in which the shaft P turns when it receives its motion as described; when it is desired to gig back the saw, the pinion N is thrown out of gear with the wheel O, by removing rod (e) off from the rod or bar (g) and the operator or attendant draws or pulls the rod (j) and causes the larger end of the cone G' to bind sufficiently tight on the hub of boss T to rotate the wheel O, and shaft P by means of the pinion S. By this means a quick gigging back motion is obtained, the operator of course retaining his hold on the rod (j) until the motion is to be reversed, which is done by releasing the rod (j) and throwing the pinion N in gear with the wheel O. The speed of both movements may be increased or diminished by adjusting the belt H on the cones F G'.

This device is extremely simple and may be applied to reciprocating saw mills, or machines at a moderate expense.

I do not claim separately the cones F G' for they have been previously used, nor do I claim separately any of the parts herein shown, but

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

10 The combination of the two cones F, G',

the conical hub or boss T and pinion S on the sleeve or collar R placed on the sliding shaft G of the cone G', and the gearing (a) K, N, O, arranged as herein shown and described for the purpose set forth.

GEORGE D. LUND.

Witnesses:

J. A. EMERSON,

WM. GARRABRANT.