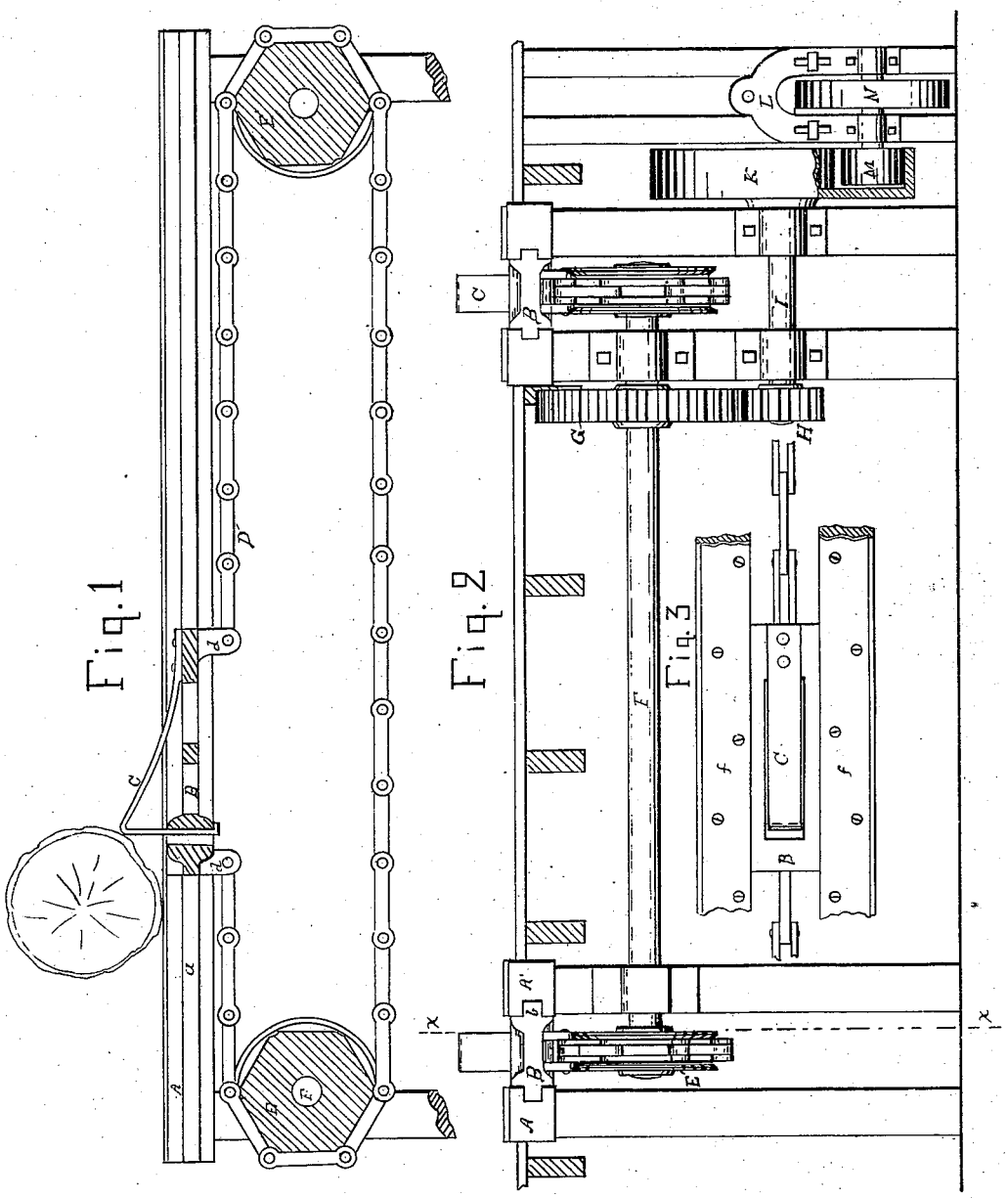
A. RODGERS.

Machine for Moving Logs.

No. 161,903. Patented April 13, 1875.



Witnesses.
William Chrystal
Thomas Bloghorn

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UNITED STATES PATENT OFFICE.

ALEXANDER RODGERS, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN MACHINES FOR MOVING LOGS.

Specification forming part of Letters Patent No. **161,903**, dated April 13, 1875; application filed September 27, 1873.

To all whom it may concern:

Be it known that I, ALEXANDER RODGERS, of Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Machines for Moving Logs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to that class of devices used in saw-mills for the purpose of moving logs from the jackway, where they are left after being drawn into the mill by the bull-wheel or jack to the saw-carriage; and consists in the use of two or more skidways, within which a carrier, provided upon its upper side with a strong and peculiarly-shaped spring-knee, is reciprocated by means of endless chains passing over sprocket-wheels, which are caused to revolve alternately in opposite directions by suitable gearing.

In the accompanying drawings similar letters of reference indicate corresponding parts.

Figure 1 is a side view of the devices, being a section upon the line *x* of Fig. 2. Fig. 2 is an end view, showing the gearing used for giving motion to the chains and carriers. Fig. 3 is a plan view of one of the carriers, with a portion of the skidways.

A A′ are the skidways, which are shown as being formed of two pieces of timber placed at a proper distance from each other, and provided with metal friction-plates *f f* upon their surface, also having upon their inner sides longitudinal grooves *a a*, within which fit the tongues *b* of the carrier B. This carrier, which is generally formed of cast-iron, has upon its upper side a spring-knee, C, one end of which is secured firmly to the carrier by bolts, and the other passes through a mortise, and is left free to rise and fall within certain limits, the height to which it rises being limited by a projection upon its free end, which catches under a stop formed upon the carrier, room being left above the carrier and between the skidways to allow of its depression entirely below their surface, so that logs may be rolled over it in one direction without difficulty. Upon the under side of the carrier are attached the standards *d*, by means of which it is connected with the chain D, which passes around the pairs of sprocket-wheels E and E′, one pair of which are secured upon opposite ends of the shaft F, which receives motion through the spur-gear G and pinion H. This pinion is keyed upon one end of the shaft I, which carries upon the opposite end a friction-wheel, K. This wheel has two concentric frictional surfaces, to which motion is imparted by a continuously-revolving friction-wheel, M, which receives its motion through the pulley N, secured upon the same shaft, both being supported in the vertically-moving frame L, by which the wheel M may be thrown into gear alternately with either of the frictional surfaces of the wheel K, thus giving to the carrier and its accompanying devices a movement in either direction; and as the inner frictional surface of this wheel is of much less diameter than the outer, its revolution in one direction will be much quicker than when moving in the opposite. It is, therefore, obvious that the movement of the log-carrier will be slow when moving forward with a log, but much quicker when returning; and, further, from this description of the method of construction, it will be seen that the spring-knees offer but a slight obstruction to the log in one direction, but when moving in the opposite one carry the log with them.

It will also be obvious that many changes in the details of construction and arrangement of parts may be made without departing from the spirit of my invention. I do not, therefore, desire to limit myself to the arrangement of mechanism herein described for operating the carrying-knee, but as being the arrangement which I prefer to use for that purpose.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States of America, the following:

The log-moving mechanism, consisting of the spring-knees, in combination with the carriers, their operating devices, and sustaining parts, substantially as herein shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand this 10th day of September, 1873.

ALEXANDER RODGERS.

Witnesses:

DAVID MCLAUGHLIN,

WILLIAM CHRYSTAL.