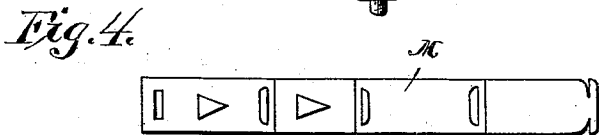
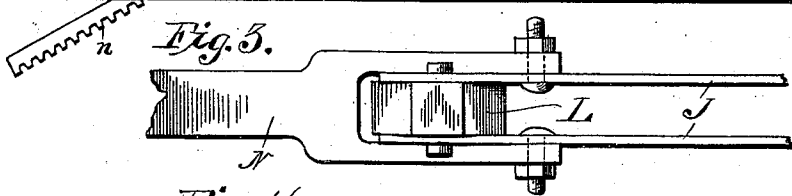
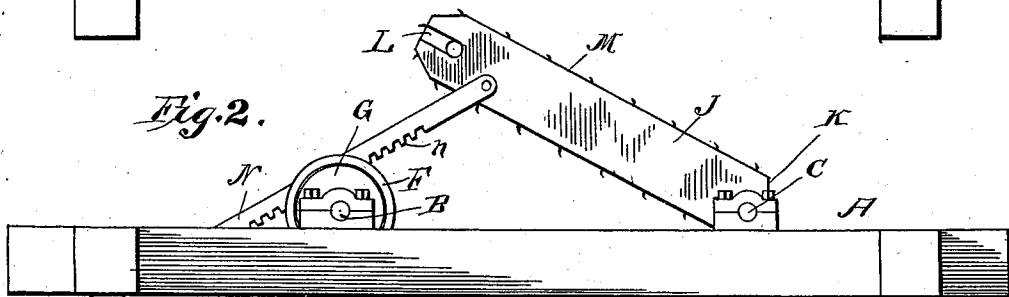
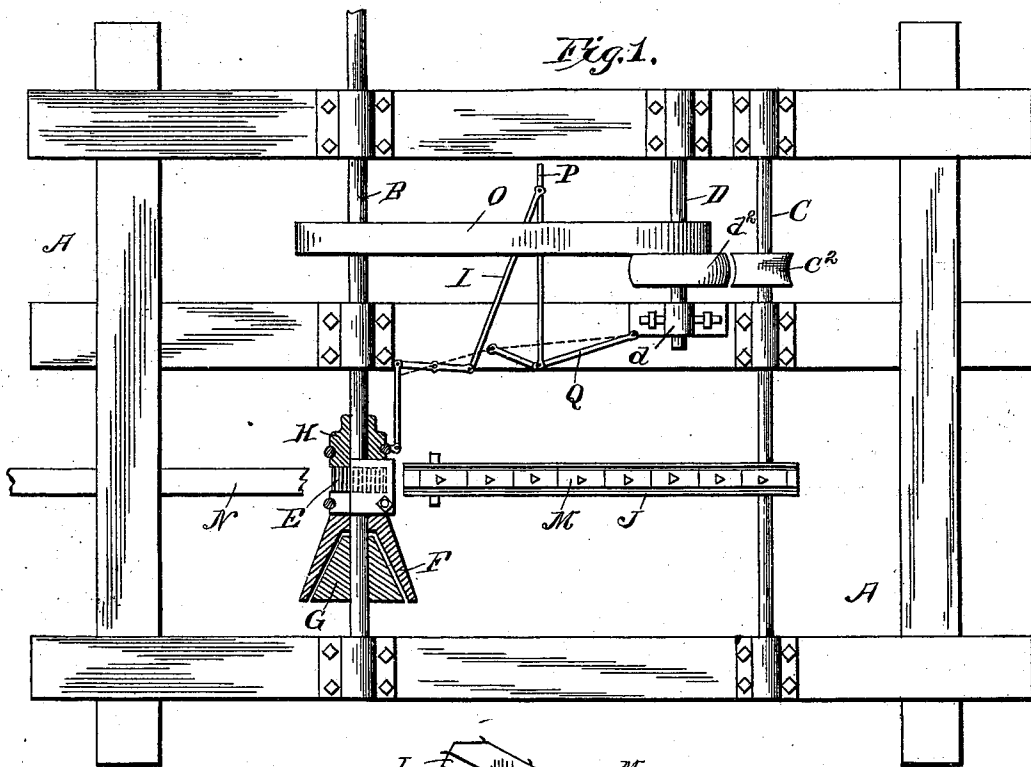


(No Model.)

E. J. METZLER.
LOG ROLLER.

No. 549,455.

Patented Nov. 5, 1895.



Witnesses,

Carroll J. Webster

R. H. Bennett.

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his Atty.

UNITED STATES PATENT OFFICE.

ERNEST J. METZLER, OF BAKER CITY, OREGON.

LOG-ROLLER.

SPECIFICATION forming part of Letters Patent No. 549,455, dated November 5, 1895.

Application filed April 18, 1895. Serial No. 546,265. (No model.)

To all whom it may concern:

Be it known that I, ERNEST J. METZLER, a citizen of the United States, residing at Baker City, in the county of Baker and State of Oregon, have invented certain new and useful Improvements in Log-Rollers; 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 appertains to make and use the same.

This invention relates to log-rollers.

The object of the invention is to produce a log-roller which shall combine great simplicity of construction with high efficiency and durability in use and in which the parts will be so constructed and arranged as to reduce the danger of breakage to a minimum.

With these objects in view the invention consists in the novel construction and combination of parts of a log-roller, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification and in which like letters of reference indicate corresponding parts, I have illustrated one form of embodiment of my invention capable of carrying the same into effect, although other embodiments thereof may be employed without in the least departing from the spirit thereof, and in these drawings—

Figure 1 is a view in plan, partly in section, displaying the operative parts of the machine. Fig. 2 is a view in elevation, showing the log-rolling mechanism in its raised position and also the mechanism for elevating and depressing it. Fig. 3 is a detail view of the upper portion of the rod for elevating the log-rolling mechanism, displaying more clearly the connection between the parts. Fig. 4 is a detail view of a portion of the chain forming the log-rolling mechanism, displaying more clearly its peculiar construction.

Referring to the drawings, A designates the frame of the machine, in which is suitably journaled two transversely-arranged shafts B and C, respectively, and a slide-shaft D; the swinging end of the latter shaft being mounted in a slide-box *d*. Upon the shaft B is loosely mounted a gear E, to which is rigidly connected a cone-shaped socket F, adapted to engage a cone G, rigid on the shaft B, contact between the cone and the socket

being effected by means of a sliding clutch H, to which is connected a shifting-lever I, the latter when moved serving to shift the clutch laterally on the shaft B, and thus move it into or out of contact with the cone, as will be readily apparent by reference to the drawings.

Upon the shaft C is mounted a frame or casing J, between which, at its point of attachment to the shaft, is arranged a polygonal pulley K, fast on the shaft, and at its upper end a similar pulley L, and around the two pulleys passes an endless belt M, constructed of interchangeable links, each having its upper surface provided with a tooth or spur adapted to bite into the log and thus effect its turning. As shown, the links are provided with but one tooth, but it is to be understood that, if desired, two or more may be employed. To the free end of the casing J is pivotally attached the yoked end of a rack-bar N, the teeth *n* of which are designed to engage with the gear E, and when the latter is rotated it will cause the rack-bar to raise the casing J to the position shown in Fig. 2.

The shafts B and D are provided each with a pulley, around which passes a belt O, and the shaft D carries a friction-pulley *d*², adapted to engage with a similar pulley *c*² on the shaft C.

When the machine is at rest, the casing lies approximately flush with the frame A, and when it is desired to turn the log a rod P is operated, thereby causing the cone G and socket F to contact with each other and at the same time the friction-pulleys *d*² and *c*², the latter motion being effected through the medium of the toggle Q, connecting with slide-box *d*. By this arrangement the belt M and gear E are started into operation simultaneously, the casing J, through the medium of the rack-bar N, being elevated in the manner already described. As soon as the casing has been elevated to the desired point and it is desired to discontinue its use, a reverse movement of the rod P will throw the clutch H out of engagement with the gear E, and thus allow the casing and rack-bar to assume their normal positions.

The particular advantage claimed for the employment of an endless belt constructed of interchangeable links each provided with a

spur or spurs for biting into the log is that should one of the links become broken it may be easily and quickly replaced with a new one, which can not be readily done where a rack-bar or similar contrivance is employed for turning the logs. Furthermore, the machine is constructed of the fewest possible number of parts thereby reducing the liability of breakage or of the machine getting out of order from continued use.

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

In a log rolling machine, the combination with a frame, shafts mounted thereon, a casing provided with supporting-pulleys, an endless chain passing around the pulleys, teeth or spurs on said chain adapted to project above the sides of the casing, a rack-bar pivotally connected with the free end of the

casing, a frictionally controlled gear-wheel adapted to be engaged by the rack-bar, a cone-socket on the gear-wheel, a cone adapted to engage the socket, a clutch for controlling the cone, a shifting lever connected to the clutch, a pulley on one of the main-shafts, a sliding-shaft mounted in a sliding box and connected by a belt to said main-shaft, a friction pulley on the sliding-shaft adapted to engage a friction pulley on the other main shaft, a toggle connected with the sliding-box, and an operating rod connecting the said toggle and shifting lever and adapted to operate them simultaneously, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ERNEST J. METZLER.

Witnesses:

R. S. ANDERSON,
W. B. MCCARTHY.