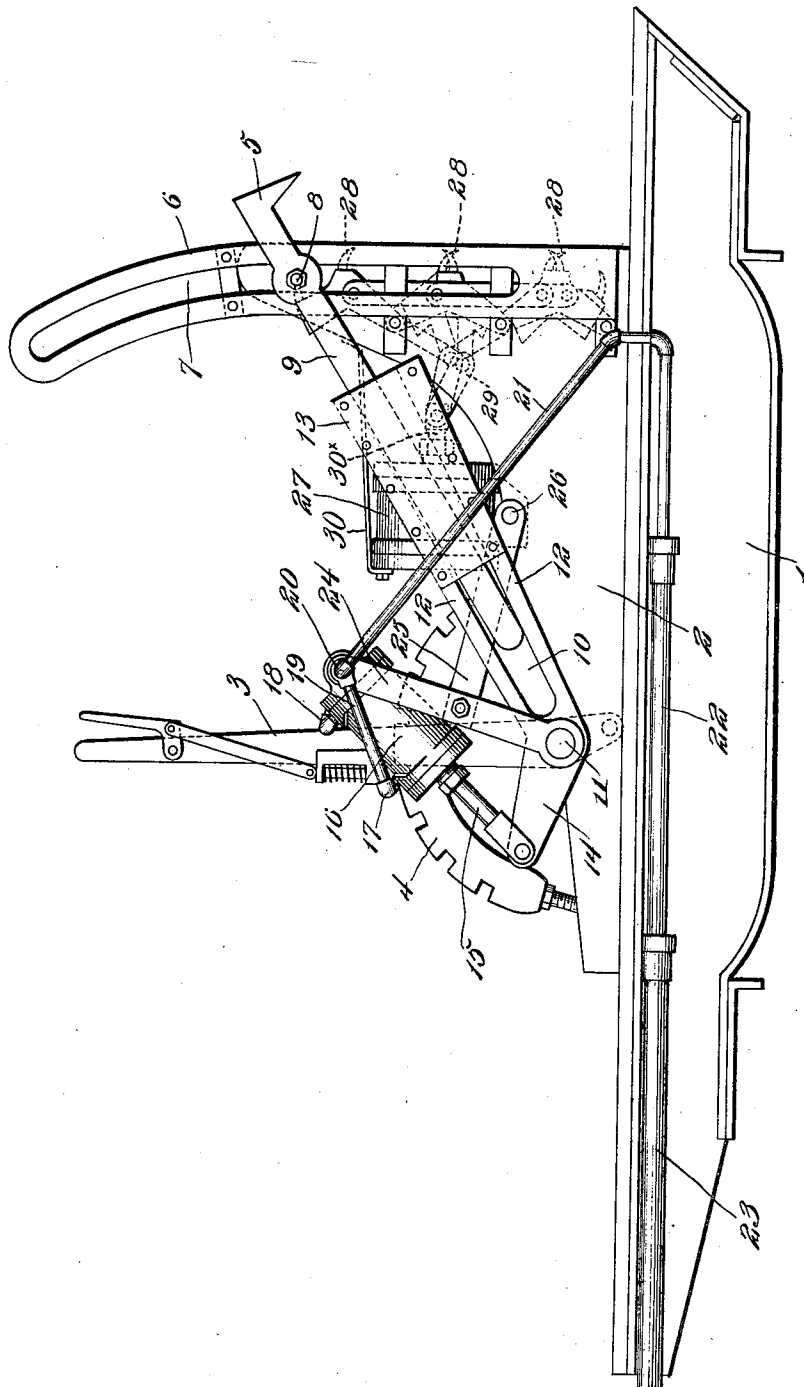


W. S. MILLER.
 STEAM OPERATED DOG FOR SAWMILL CARRIAGES.
 APPLICATION FILED NOV. 15, 1910.

999,834.

Patented Aug. 8, 1911.



WITNESSES

Louis H. Heinrichs
A. M. Sauner

INVENTOR

William S. Miller
 by *A. P. Runyon*, Attorney

UNITED STATES PATENT OFFICE.

WILLIAM S. MILLER, OF SUTHERLAND, TENNESSEE.

STEAM-OPERATED DOG FOR SAWMILL-CARRIAGES.

999,834.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM S. MILLER, a citizen of the United States, residing at Sutherland, in the county of Johnson and State of Tennessee, have invented certain new and useful Improvements in Steam-Operated Dogs for Sawmill-Carriages, of which the following is a specification.

This invention relates to steam operated dogs for saw mill carriages, and one of the principal objects of the invention is to provide simple, reliable and efficient means for operating a hammer dog and a series of claw dogs for engaging the log and holding it in position on the carriage during the sawing operation.

Another object of the invention is to provide a steam cylinder for operating a hammer dog and a valve for controlling the steam in the cylinder to actuate the hammer dog and to provide a separate steam cylinder connected to a valve for operating the claw dogs, said valves being operated by levers within easy reach of an attendant.

Still another object of the invention is to provide steam actuated dogs for engaging the log or timber, said dogs being quickly operated by means of valves and steam cylinders, said valves being operated by means of levers placed at a convenient point for operation by a single person.

Another object of the invention is to provide means for saving time and labor incident to the operation of securing a log or timber in position upon the carriage.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings in which, the figure of the drawing is a side elevation of a portion of a saw mill carriage, and one of the knees provided with my invention.

Referring to the drawing the numeral 1 designates a portion of the saw mill carriage and 2 is one of the knees mounted on the carriage and adapted to be moved back and forth by means of the lever 3, which is held in position by a curved rack 4 in the usual or any suitable manner. The hammer dog 5 is mounted to slide in a guide 6 provided with a curved slot 7, said dog having a roller 8 adapted to move in said slot. The shank 9 of the dog is mounted in a recess 10 formed in a lever pivoted at 11, said lever compris-

ing two arms 12 connected together by a plate 13. This recessed lever is provided with a short arm 14 to which is pivotally connected a piston rod 15 having a piston head mounted in the cylinder 16. Steam is admitted to the cylinder 16 at opposite ends by means of inlet connections 17-18. Steam pipes 19 are connected to the inlets 17 and 18 on opposite sides of the cylinder 16, said steam pipes being provided with a pivotal joint 20 connected to steam pipes 21 which lead to telescopic connections 22 mounted to slide in pipes 23 leading to a source of live steam. The pivotal joint 20 is mounted in a bracket 24 provided with an arm 25, said arm being connected at 26 to a steam cylinder 27 adapted to operate the claw dogs 28. These claw dogs 28 which may be of the usual construction are operated by means of toggle links 29 connected to a piston rod 30 having the piston head mounted to slide in the cylinder 27. The cylinder 27 is supported by means of a suitable bracket 30*.

The manner of operating the claw dogs and hammer dogs may be briefly described as follows: The levers for operating the valves may be operated in one direction to raise the hammer dog 5, and when the lever is operated in the opposite direction, said dog is carried down and inserted into the timber. The claw dogs 28 are operated by means of a separate lever, the lower arm 12 of the member carrying the hammer dog striking against the under side of the shank 9 will raise the dog out of the log or timber.

From the foregoing it will be obvious that by means of my invention a single attendant may operate the entire set of hammer dogs and claw dogs quickly by means of the levers 36 and 46 which he may grasp, one in each hand, thus doing away with at least one operator or attendant.

I claim:

1. In a saw mill carriage, the combination of a knee, a lever pivotally mounted on the knee and provided with a recess, a dog having a shank to slide in said recess, a guide in which said dog is mounted to slide, a steam cylinder, a piston rod provided with a head mounted in said cylinder, said piston rod being connected to said lever, steam connections at the opposite ends of said cylin-

der, a valve for controlling the steam in said cylinder, and a lever for operating said valve.

2. In a saw mill carriage, the combination
5 of a hammer dog mounted to slide in a guide, a recessed lever in which the shank of said hammer dog is mounted, a steam cylinder, provided with a piston rod connected to said lever, and a valve operated by a hand

lever for admitting steam to said cylinder 10 at opposite sides of the piston head.

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

WILLIAM S. MILLER.

Witnesses:

S. W. MINTON,

G. FRANK ROBINSON.