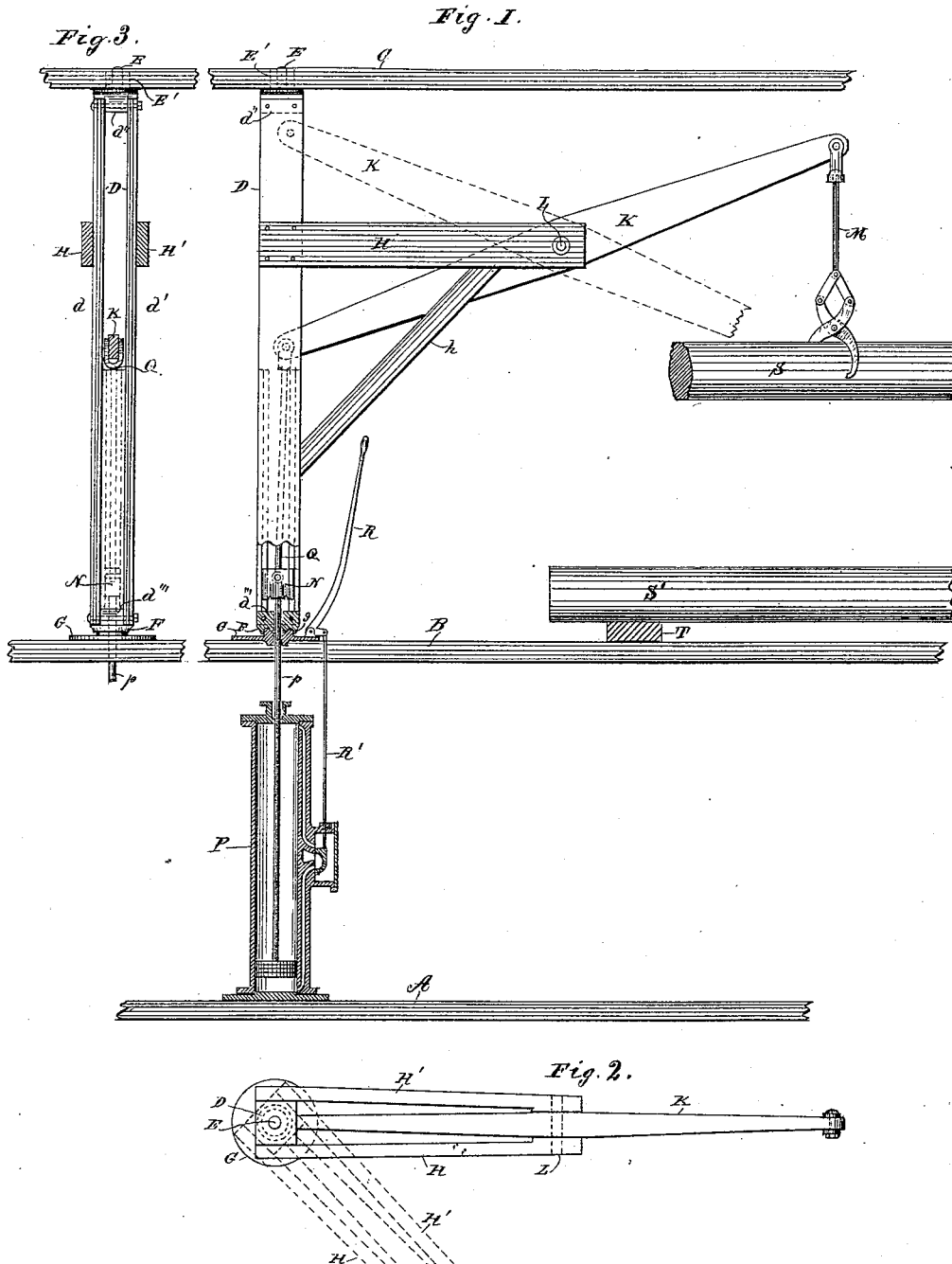


(No Model.)

F. O. KILGORE.
STEAM LOG LOADER.

No. 420,942.

Patented Feb. 11, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

FRED. O. KILGORE, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF
TO JAS. F. WILLIAMSON, OF SAME PLACE.

STEAM LOG-LOADER.

SPECIFICATION forming part of Letters Patent No. 420,942, dated February 11, 1890.

Application filed December 31, 1888. Serial No. 295,041. (No model.)

To all whom it may concern:

Be it known that I, FRED. O. KILGORE, a citizen of the United States, and a resident of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented a certain new and useful Steam Log-Loader, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to log-loaders designed for use in saw-mills; and it has for its object to provide a simple and efficient construction for the purpose which shall be quick and reliable in its actions. To this end I pivot the log-loading lever to a swinging mast and operate the lever by an engine directly connected thereto. The engine is controlled by a hand-lever within convenient reach of the operator. In this manner the most direct and the quickest action is obtained.

In the accompanying drawings, like letters referring to like parts throughout, Figure 1 is a side elevation of my invention in position for use. Fig. 2 is a plan view of the same, and Fig. 3 is a front view of the pivoted mast detached.

A represents the basement, B the working-floor, and C the ceiling or overhead framework, of an ordinary saw-mill.

D is an upright post or mast pivoted so as to freely turn in the horizontal plane. As shown, this mast is composed of separate pieces *d* and *d'*, securely bolted together at top and bottom through end blocks *d''* *d'''*. There is thus left a clear space between the side bars *d* and *d'*, which serve as a cross-head guide, as hereinafter stated. The upper end piece *d''* is provided with a pintle E, adapted to engage with the socket or seat E' in the overhead beam C. The lower end piece *d'''* is provided with a hole through its vertical center. On the lower end of the mast surrounding its central opening is secured an annular metallic flange or bearing-plate F, cast integral with the block *d'''*.

To the floor B, in proper position to engage with the bearing-plate F, is secured a corresponding annular casting or base-plate G, having a vertical flange *g*. The mast rests upon the bearing-plate G below and is held

from displacement by the pintle E and the socket E' above. It is thus free to turn in the horizontal plane on these bearings as pivots.

H H' are a pair of horizontal arms rigidly secured to the opposite faces of the mast D. *h* are braces for the same.

K is the log-loading lever. This is pivotally secured at about its central point by pivot-pin L, between the outer ends of the arms H H'. The inner end of this lever is approximately in line with the axis of the mast D. Its outer end is provided with a grappling device M, adapted to handle logs.

N is a cross-head movable between the bars *d* *d'* as guides.

P is an upright slide-valve reciprocating engine located, as shown, in the basement A, directly in line with the axis of the mast D. The piston-rod *p* of this engine passes up through the floor B and the hole in the end block of the mast D and is attached at its upper end to the cross-head N.

Q is a connecting-rod uniting the cross-head N and the inner end of the log-loading lever K.

R is a hand-lever pivoted to the floor B in convenient position for the operator's use, and R' is a connection from the same to the valve of the engine P.

S S' represent logs, and T is one of the supports for the same.

The operation is evident from the description. The inner end of the log-loading lever being directly connected to the piston of the engine, is moved up and down at the will of the operator through the valve-operating lever R. This gives the necessary movement to raise or lower the logs. The mast D freely turns on its pivots, the piston of the engine turning within its cylinder, and this gives the necessary movement to swing the logs wherever desired in the horizontal plane.

It will be readily understood that the specific construction of the mast may be different than herein shown. The engine might be also elsewhere located as long as the piston is directly attached to the log-loading lever.

I use steam as my motive power; but of

course it will be understood that air or liquid under pressure might equally well be employed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination, with a pivoted mast provided with vertical cross-head guides and a rigid horizontal arm, of a log-loading lever pivoted to said arm, a cross-head movable in said guides, an engine having its piston connected to said cross-head, and a connecting-rod from said cross-head to said log-loading lever, substantially as described.

2. The combination, with a pivoted mast provided with vertical cross-head guides and a rigid horizontal arm, of a log-loading lever pivoted to said arm, a cross-head movable lengthwise of said guides, a reciprocating engine mounted in fixed supports in line with said guides, having its piston connected to

said cross-head, and a connecting-rod from said cross-head to said lever, substantially as described.

3. The combination, with the pivoted mast having cross-head guides and a horizontal arm, of the log-loading lever pivoted to said arm and provided with a log-grappling device, a cross-head movable in said guides, a reciprocating slide-valve engine mounted in fixed supports in line with said guides, having its piston-rod connected to said cross-head, a connecting-rod from said cross-head to said lever, and a hand-lever with connections to the engine-valve, substantially as described.

FRED. O. KILGORE.

In presence of—

A. H. OPSAHL,

EMMA F. ELMORE.