No. 852,062. PATENTED APR. 30, 1907.

H. HOLMES.

FAIR LEAD FOR DONKEY ENGINES.

APPLICATION FILED SEPT. 19, 1906.

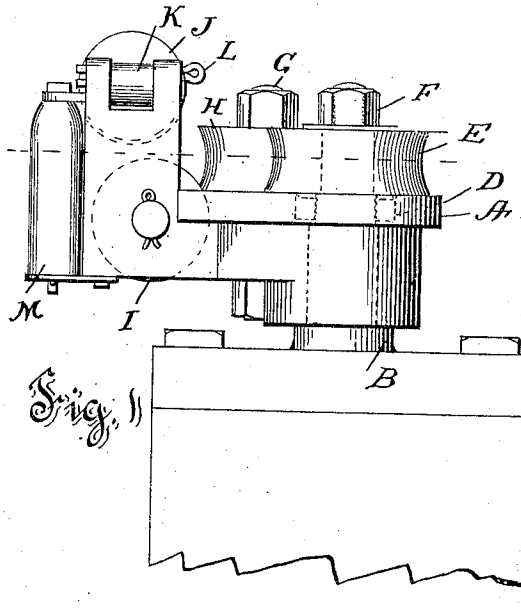


Fig. 1

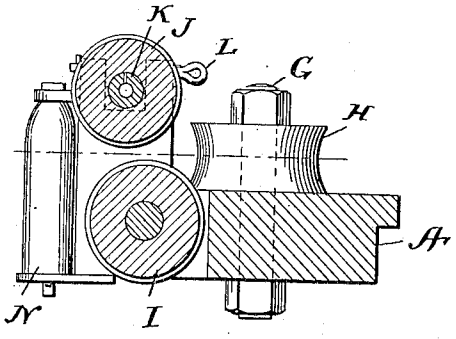


Fig. 3

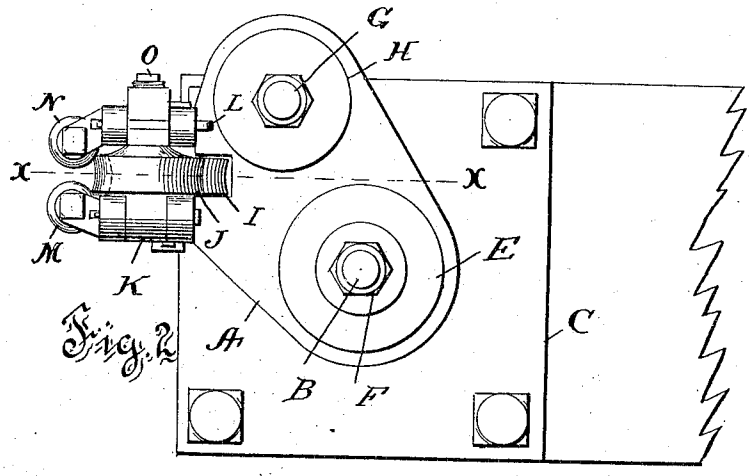


Fig. 2

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UNITED STATES PATENT OFFICE.

HARRY HOLMES, OF GRACY, CALIFORNIA.

FAIR-LEAD FOR DONKEY-ENGINES.

No. 852,062. Specification of Letters Patent. Patented April 30, 1907.

Application filed September 19, 1906. Serial No. 335,337.

To all whom it may concern:

Be it known that I, HARRY HOLMES, a citizen of the United States, residing at Gracy, in the county of Mendocino and State of California, have invented certain new and useful Improvements in Fair-Leads for Donkey-Engines; and I hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

In the manipulation of "donkey engines" in connection with logging, the cable leading from the spool or drum of the engine is constantly changing its direction according to the position of the load. Now to provide a lead which will compensate for this shifting position of the load and at the same time lead the cable from the engine with a minimum amount of friction and haul is the prime object of my present invention.

In carrying out my invention I have not overlooked the requisites of strength and durability necessary to cope with excessive strains, nor have I neglected to observe the importance of simplicity of construction.

The several parts are so arranged as to be not liable to derangement and are positive in their action. The cable can be instantly positioned in or as readily removed from the lead thereby obviating the necessity of costly delays in the operation of the donkey.

Other objects and advantages of the invention will appear in the following specification to those familiar with logging, and the novel features thereof will be particularly pointed out in the appended claims.

I am enabled to accomplish the objects of my invention by the means illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the invention. Fig. 2 is a top view of the same. Fig. 3 is a vertical section taken in the direction of the line *x x* of Fig. 2.

I will now set forth the construction of my invention, and subsequently explain the operation of the same, reference being had to the above views by letter.

The main member or body A of the device is mounted on the vertical post B which is mounted on the plate C, the latter being secured to the corner of one of the out-reaches of the engine. This body A is held on the post B by means of a sunken nut D, while arranged to revolve on the contracted upper extremity of the post B and rest on the upper surface of body A is the sheave E, the latter being held in place by the nut F.

Mounted on a post G, carried by the body A, and having its grooved periphery sufficiently near that of the sheave E to guide the interposed cable, is the secondary sheave H whose diameter is slightly less than that of the sheave E.

After the cable is led between the peripheries of the sheaves E and H, whose axes of revolution are perpendicular, it is then led between the grooved sheaves I and J, the former being revolubly mounted on the body A, while the latter is mounted on the pivoted arm K which is normally held parallel to the axis of sheave I by means of the cross pin L. The axes of revolution of the sheaves I and J are horizontal or at right angles to those of sheaves E and H.

Bearing against opposite sides of the cable as it leaves the sheaves I and J are the vertical twin elongated rollers M and N. In order to provide ample lubrication I have provided the grease cup O the screw plug of which is arranged to force the lubricant to the bearing of the sheave.

Now from the description so far gone into assuming that the cable is positioned relative to the several sheaves as shown by the broken lines in Fig. 1, it will be readily seen that the body A will swing around in either direction, the tangent to the sheaves E, H, I and J always pointing toward the load. Should the load rise or fall above or below the level of the upper surface of the body A, the elongated nature of the rollers M and N will compensate for such movement.

By simply removing the cross pin L the arm K can be thrown up and the cable removed or set in place as the case may be.

It will be noted that the plane of the axes of the sheaves E and H is not parallel with that of the axes of I and J. By this construction the body A will have a greater play in one direction than were the sheaves E and H equidistant from the sheaves I and J. Of course this condition is on the assumption that a right hand and a left hand lead are employed.

I am aware that various changes in the form and proportion of parts of the devices herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes and

alterations as fairly fall within the scope of my invention.

Having thus fully described my invention, what I claim and desire to secure by patent is:—

1. A device of the class described consisting of a suitable body, a series of sheaves carried by said body and having vertical axes of revolution, a secondary series of sheaves arranged to guide the cable to said former sheaves and having horizontal axes of revolution, vertical elongated rollers in line with said secondary sheaves, and a vertical post about which said body is arranged to revolve as set forth.

2. In combination with a suitable post, a body revolubly mounted on said post, a sheave carried by said post, a secondary sheave carried by said body and having its axis of revolution parallel to said post, a series of sheaves carried by said body and having their axes of revolution at right angles to said post, and elongated rollers carried by said body and arranged to guide the cable to said series of sheaves, and means for admitting said cable between said sheaves, substantially as set forth.

In witness whereof I have signed my name to this specification in presence of two witnesses.

HARRY HOLMES.

Witnesses:

ELIZABETH KINCAID,

DOROTHY KINCAID.