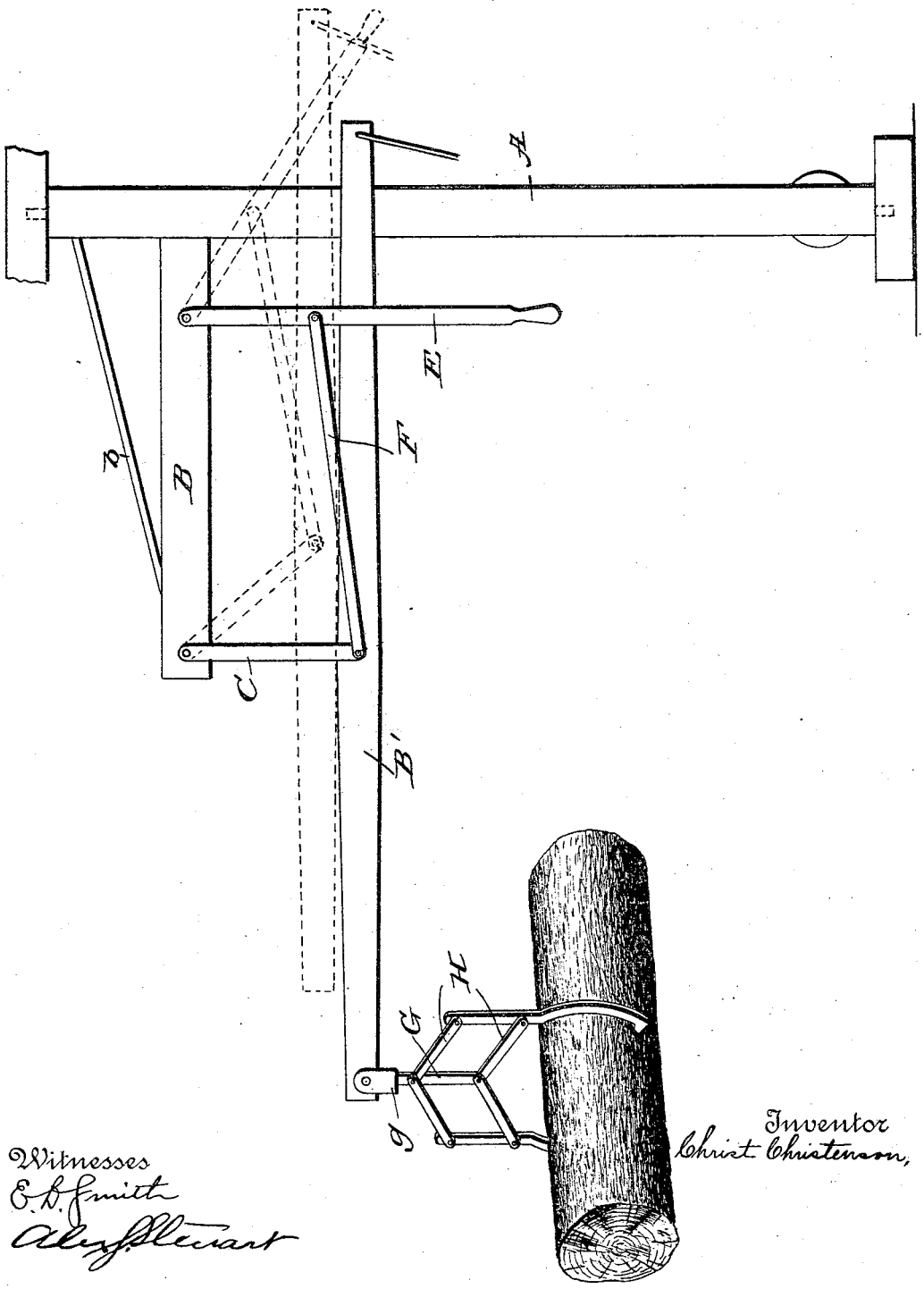
(No Model.)

C. CHRISTENSON.

CRANE FOR LOADING LOGS.

No. 457,341. Patented Aug. 11, 1891.



Witnesses
E. B. Smith
Alex. F. Stewart

Inventor
Christ. Christenson,

UNITED STATES PATENT OFFICE.

CHRIST CHRISTENSON, OF STILLWATER, MINNESOTA.

CRANE FOR LOADING LOGS.

SPECIFICATION forming part of Letters Patent No. 457,341, dated August 11, 1891.

Application filed February 9, 1891. Serial No. 380,750. (No model.)

To all whom it may concern:

Be it known that I, CHRIST CHRISTENSON, of Stillwater, in the county of Washington and State of Minnesota, have invented certain new and useful Improvements in Cranes for Piling or Loading Logs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, and to the letters of reference marked thereon.

This invention has for its object to provide a simple, economical, and easily-operated device for piling, loading, or otherwise handling logs, which, as is well known, are at best extremely unwieldy and awkward to handle.

The invention consists in certain novel details of construction and combinations and arrangements of parts, to be hereinafter described, and pointed out particularly in the claims at the end of this specification.

In the accompanying drawing the figure is a side elevation of a device constructed in accordance with my invention, showing its operation.

Like letters of reference refer to the same parts in the drawing.

A indicates the crane post or mast mounted on vertical pivots in a suitable base or support to swing horizontally; B, the crane beam or arm rigidly affixed to the mast at a point near the upper end, and, if necessary, braced and supported by a diagonal brace *b*, as shown.

The walking-beam B′ is pivotally connected to the end of the crane-arm through the medium of link C, whereby the beam may be moved bodily toward and from the mast to increase the range of movement of the grapple which is attached to the outer end of the beam, as will be presently described. The range of movement of the beam is preferably about two and one-half feet in each direction, giving a total of five feet toward and from the mast, which is ample for all ordinary purposes; and in order to secure the necessary power to easily move the beam when loaded, as well as provide a most convenient means, I pivot an operating-lever E to the crane-arm and at a point more or less removed from the pivot connecting the lever with the beam, preferably through the medium of a link F, which joins the beam at the ends of the link C. The operating-handle, it will be understood, extends down into convenient reach of the operator. Power for tilting the beam is applied to the end nearest the mast, and as the particular power employed forms no part of the present invention it is not deemed necessary to illustrate the same. Sufficeth to say that it may be steam or other power applied in the ordinary and well-understood manner. To the end of the beam is connected a rod or grapple-base G, preferably by means of an interposed swivel *g*, and to this base are pivoted on each side two sets of links H, on the outer ends of which the grapple-arms are mounted. Thus the said arms are each given the well-known parallel movement with relation to the base. The holding-points are arranged at approximately an angle of forty-five degrees, which angle is peculiarly efficacious in that the log is firmly held and the points free themselves promptly when the log is deposited. The angle is maintained no matter to what extent the arms are opened, by reason of the parallel movement of the arms, and therefore a large log may be held and released with the same facility as a small one, and vice versa.

In operation the logs are grappled, the grapple-arms opening automatically when lowered into contact with the logs, the power applied to the rear end of the beam to swing the log up, the whole device being then turned with the mast as a center, if necessary, and the operating-lever is then manipulated to move the log over the proper point for depositing the same, and the power released.

The advantages of the device in which the range of movement of the beam and grapple not only covers a circle around the mast, but a belt five or more feet in width, will be appreciated at once by those accustomed to handling logs and the like.

Having thus described my invention, what I claim as new is—

1. In a log-handling apparatus, the combination, with the pivoted mast and crane-arm rigidly secured thereon, of a link pivotally connected at one end to said arm, the beam pivotally connected to and suspended by the link and carrying the grapple, and the operating-handle connected with the beam, substantially as described.

2. In a log-handling apparatus, the combination, with the pivoted mast and crane-arm thereon, of the beam carrying the grapple, the link connection between the arm and the beam, and the operating-lever pivoted to the arm and engaging the beam, substantially as described.

3. In a log-handling apparatus, the combination, with the pivoted mast and crane-arm thereon, of the beam carrying the grapple, the link connection between the arm and beam, the operating-lever pivoted to the arm, and a link connection between the operating-lever and beam, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHRIST CHRISTENSON.

Witnesses:
P. W. FARICY,
FR. F. WILDE.