(No Model.)

J. B. ANDERSON.

DERRICK CRANE.

No. 479,730. Patented July 26, 1892.

Fig. 1

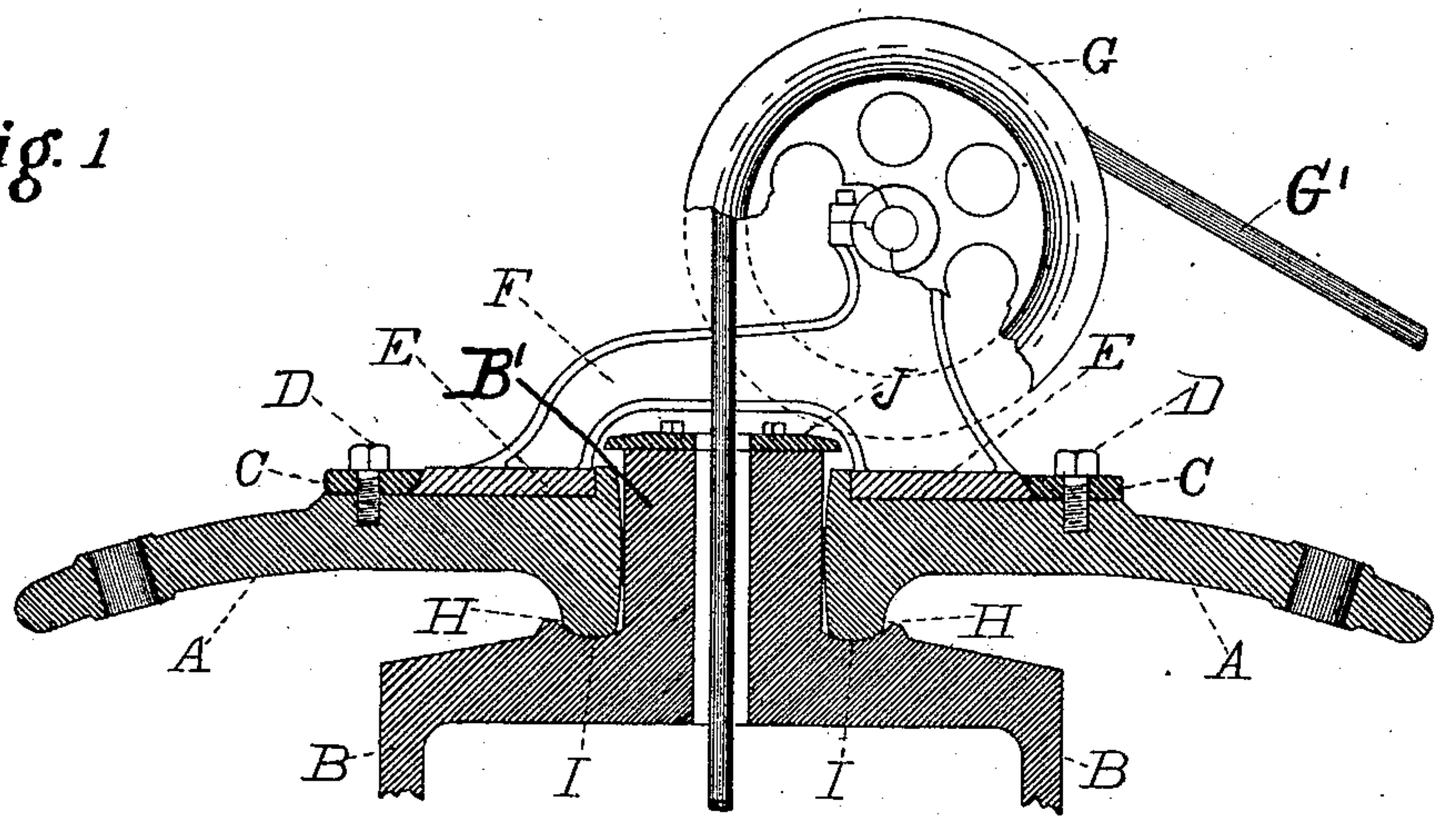
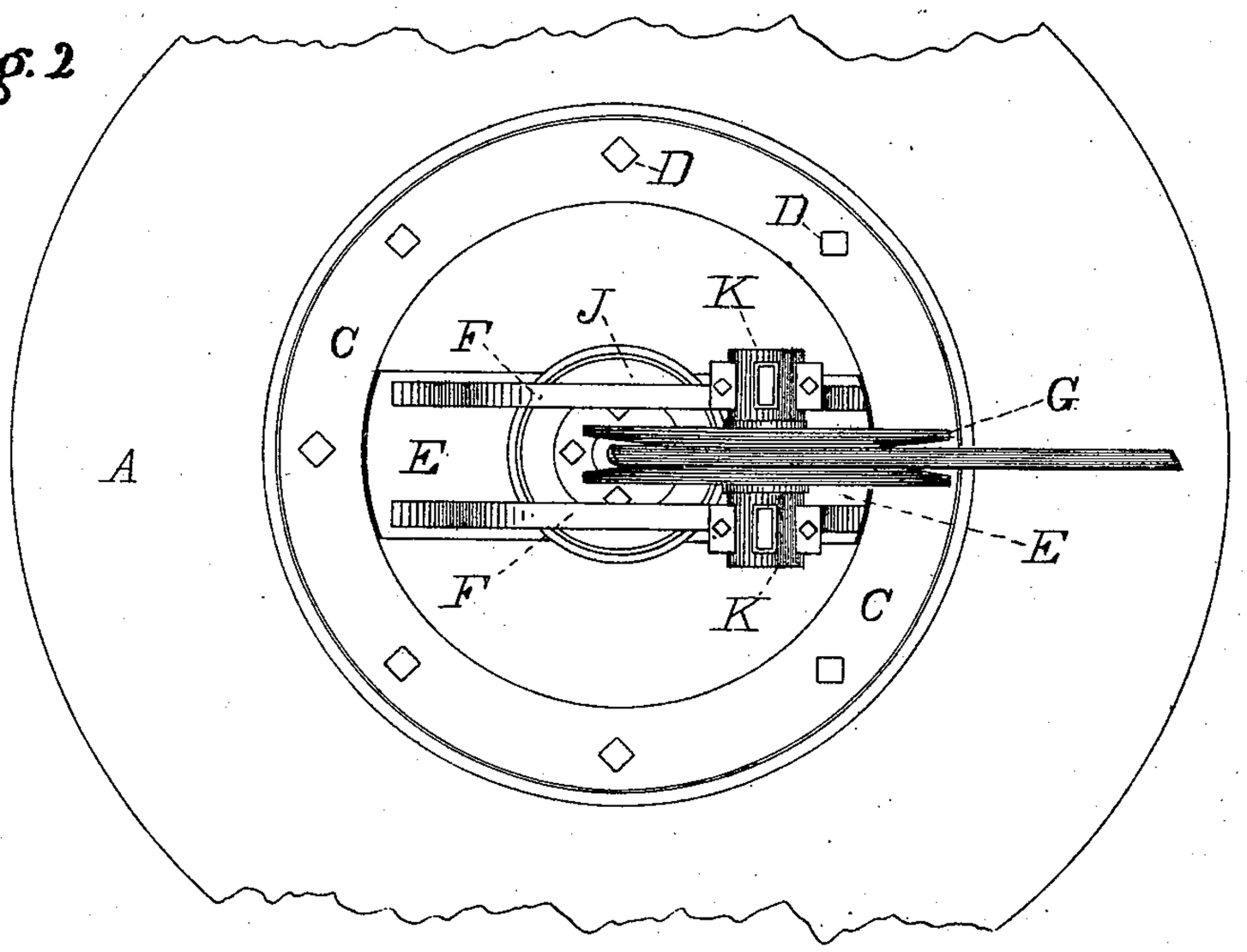


Fig. 2



WITNESSES:

Wm. L. Boyden

Jacob Schanz

INVENTOR

John B. Anderson

BY

Fred. P. Fisher,

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN B. ANDERSON, OF MONTPELIER, VERMONT, ASSIGNOR TO THE LANE MANUFACTURING COMPANY, OF SAME PLACE.

DERRICK-CRANE.

SPECIFICATION forming part of Letters Patent No. 479,730, dated July 26, 1892.

Application filed September 10, 1891. Serial No. 405,312. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. ANDERSON, a citizen of the United States, residing at Montpelier, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Derrick-Cranes; 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 an improvement in derrick-cranes and particularly to the upper-sheave mechanism at the head thereof, the object being to render such mechanism adjustable, so that it may at any time be changed or adjusted with facility to suit the relative position of the actuating power; and the invention therefore consists in the construction, arrangement, and combination of the several parts, substantially as will be hereinafter fully described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a sectional elevation of those parts of a derrick-crane to which my present improvements apply. Fig. 2 is a plan view of the same.

Like letters denote like parts.

A designates the guy-plate of a derrick-crane to which the guy-ropes are fastened. These ropes are not shown in the drawings, as it is unnecessary. The guy-plate has any desired shape and size.

B indicates the mast-cap, which is seated on the top of the mast or central post (not shown) of the derrick. The guy-plate is seated upon the mast-cap, the latter being provided with a circular depression I, in which the hub H of the guy-plate rests and turns. The cap B has also the central upward extension B′, which lies within a central opening in the guy-plate and projects therethrough at its upper end, at which point said projection B′ is provided with a horizontal plate J, projecting over the edge of the mast-cap and serving to shed rain or snow.

Secured upon the upper side of guy-plate A is a circular gib C. This is simply an annular rim having its inner peripheral edge inclined or shaped so as to act as a clamp or wedge upon the edge of the bottom plate E of the sheave-hanger, wherein the upper sheave is supported, which edge is shaped to fit thereunder. The gib C is held in place by the screws or bolts D, which may be tightened or loosened at pleasure to clamp or unclamp the gib.

F F designate the upright parallel parts of the hanger integral with plate E, said parts F F carrying boxes that receive the journal-pins K of the pulley or sheave G, around which passes the rope G′, that goes down through a passage in the mast-cap, as shown.

In the common and ordinary form of derrick-crane the upper pulley runs in the same plane in which the driving power is applied and is non-adjustable, its hanger being made as a part of the guy-plate and so stationary. In order, therefore, that the pulley may be properly positioned for work the entire machine must be erected with special reference to the direction of location of the driving power, and if at any time the location of the power is changed the location of the guys must also be changed, which in many cases causes as much trouble and expense as would be required to erect the whole machine anew. My invention aims to obviate this difficulty and expense by making the hanger of the upper sheave adjustable. Then the derrick-crane can be set up without regard to the location of the power, after which the hanger may be easily adjusted, so that the sheave will turn in the proper direction or plane, and in case the location of the power is at any time changed the hanger can be readjusted and no other part of the machine has to be moved or disturbed.

From the foregoing description of the construction and arrangement of the several parts it will be readily understood how the adjustment of the hanger is effected. All that need be done is simply to loosen the screws D, thereby loosening the circular gib and unclamping it from the foot of the hanger. Then the hanger can be turned in a horizontally-rotatable manner as much as may be necessary, and after being thus properly adjusted in the right plane the screws D will be tightened, thereby again tightening the gib and clamping the hanger, making said hanger firm and stationary. One or two other points de-

serve mention. It is found in practice almost impossible to make the guys of a derrick-crane tight enough to prevent the guy-plate from rocking a little as the load upon the boom is swung around. In my construction by providing depressions I, I afford a good surface for the cap to rock upon as much as may be necessary, and, also, said depressions make an excellent oil-cup. On this bottom of the mast-cap is a rim like a cask-chine, which serves as a drip-rim, so that water or other injurious agent falling or gathering on the machinery may collect on this rim and then drip off instead of finding its way into the working parts.

I reserve the liberty of making minor changes in the arrangement and form of the parts of my invention.

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

The combination of the flat circular guy-plate to which the guy-ropes are adapted to be fastened, said guy-plate having on its under side a circular flange serving as a hub, the mast-cap having a circular depression in which the aforesaid hub rests and turns and having also a central forward extension which lies within a central opening in the guy-plate and projects therefrom, being provided on its upper end with a horizontal plate, circular gib secured on the upper side of the guy-plate and having its inner peripheral edge inclined, the sheave-hanger having its bottom plate likewise provided with an inclined edge and fitting under the circular gib, and the sheave journaled in said hanger, all the parts being arranged so that by simply loosening the gib the hanger and its sheave can be horizontally adjusted so as to locate the sheave in the desired plane, substantially as described.

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

JOHN B. ANDERSON.

Witnesses:
CARROLL P. PITKIN,
CLARENCE H. PITKIN.