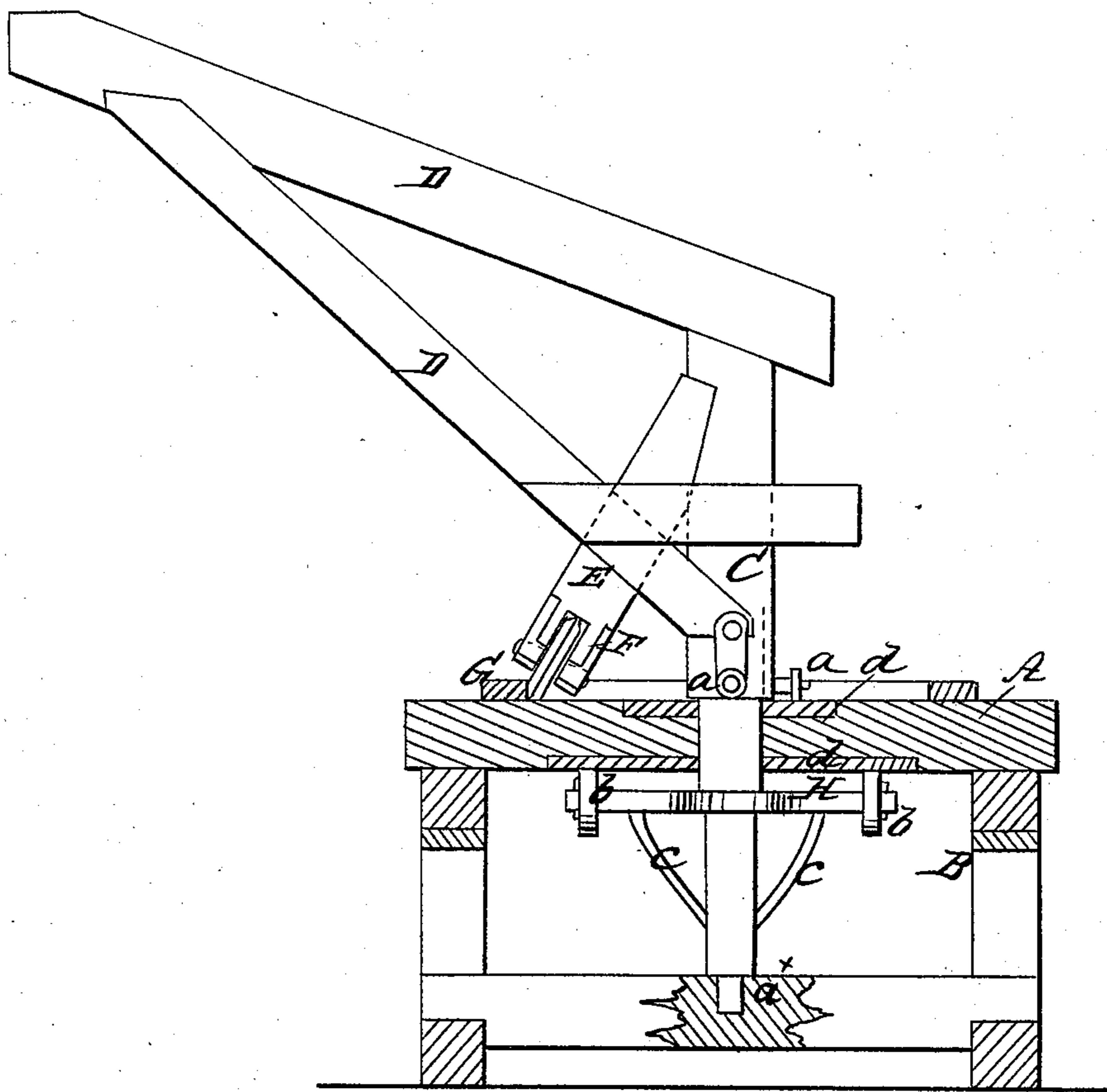


*J. T. Smith,*

*Derrick.*

*N<sup>o</sup> 29,109.*

*Patented July 10, 1860.*



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# UNITED STATES PATENT OFFICE.

JAMES T. SMITH, OF PORTSMOUTH, VIRGINIA.

## CRANE.

Specification of Letters Patent No. 29,109, dated July 10, 1860.

*To all whom it may concern:*

Be it known that I, JAMES T. SMITH, of Portsmouth, in the county of Norfolk and State of Virginia, have invented a new and Improved Crane; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, said drawing being a sectional elevation of my invention.

The object of this invention is to steady and support the upright beam or mast of the crane so that the same will not be liable to break as hitherto under the weight of the loads which they are hoisting.

The invention consists in the employment or use of a diagonal brace provided with a wheel which runs on or against an annular way on a platform of the crane in connection with wheels attached to a horizontal arm of the mast below the platform and which wheels run in contact with the under side of the mast.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a platform which is supported by a suitable frame B, and C, is an upright beam or mast, the lower part of which is of cylindrical form passes through the platform A, and has its lower end stepped in a cross piece at the lower part of the frame B, as shown at  $a^x$ . The mast C, may also have rollers  $a$ , attached to it just above the platform, said rollers resting on the platform.

To the mast C, above the platform A, there are framed two oblique timbers D, D and an oblique bar or brace E, is framed to the mast, the brace E, being inclined at an angle of about  $45^\circ$  and having a wheel F, at its lower end which wheel runs on or against an annular way G, on the platform A.

On the mast C, just below the platform A, there is placed a cross bar H, which projects at equal distances from opposite sides of

the masts and has a wheel or roller  $b$ , at each end, said wheels or rollers bearing against the under side of the platform. The cross bar H, is braced by rods  $c$ , from the mast as shown plainly in the drawing.

From the above description it will be seen that the strain to which the mast C, may be subjected will be resisted by the brace E, and the latter will support the mast and at the same time the wheels or rollers  $b$ , in bearing against the under side of the platform A, prevent the upward movement of the mast a contingency which would otherwise occur in consequence of the bearing of the wheel F, against the way G, the wheel serving, under the weight of the load being hoisted or lowered, as a fulcrum to raise the mast. The mast is allowed to rotate freely so that the device may be conveniently adjusted to its work.

The invention is simple and efficient and may be constructed at a cost not greatly exceeding the ordinary ones.

The small rollers  $a$ , may be used or not. If preferred the lower ends of the mast may be fitted in a step of any suitable construction, so as to properly sustain the mast, a suitable bearing being given the mast in the platform. The rollers  $a$ ,  $b$ , may bear against metal plates  $d$ , let into the upper and lower surfaces of the platform A.

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

The brace E, attached to the upright beam or mast C, and provided with the wheel F, which runs on or against the annular way G, on the platform A, in connection with the rollers  $b$ ,  $b$ , on the cross bar H, bearing against the under side of the platform A, substantially as and for the purpose herein set forth.

JAMES T. SMITH.

Witnesses:

JAMES K. SMITH,  
JOSEPH W. WELLENER.