F. LOCKE.

DERRICK-STEPS.

No. 193,824. Patented Aug. 7, 1877.

Fig. 1.

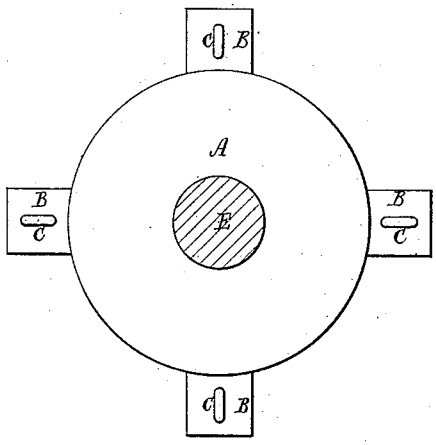


Fig. 2.

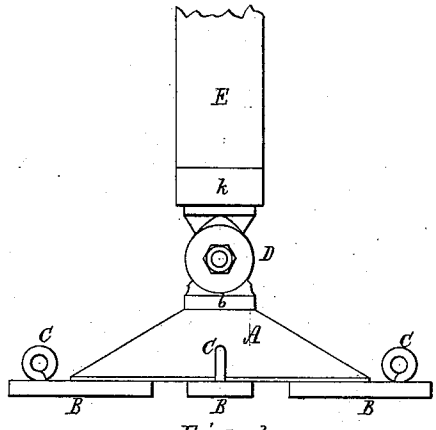
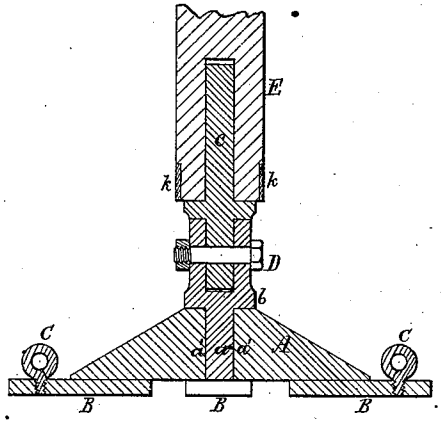


Fig. 3.



Witnesses.
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FRANCIS LOCKE, OF GLOUCESTER, MASSACHUSETTS.

IMPROVEMENT IN DERRICK-STEPS.

Specification forming part of Letters Patent No. **193,824**, dated August 7, 1877; application filed July 10, 1877.

To all whom it may concern:

Be it known that I, FRANCIS LOCKE, of Gloucester, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Derricks or the Steps thereof; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a transverse section, of the lower part of a derrick-boom and its step provided with my invention.

The derrick to which my improvement particularly appertains or has reference is the kind generally used on navigable vessels or lighters, and for taking on board thereof or discharging therefrom blocks of stone. Such a derrick has usually been composed of a single boom and a supporting-plank, the latter being provided with a semi-spherical socket to receive the lower end of the boom.

My improved step consists of a flat conic frustum and a series of supporters, arranged as represented, such supporters being provided with eyes or eyebolts, arranged as shown. The frustum has a hole made down through it centrally, to receive the pintle of a hinge applied to the lower end of the boom.

In the drawings the conic frustum is shown, at A, as resting upon and fastened to four support-pieces, B B B B, arranged radially with reference to it, and at right angles with each other, and to project from and beneath it, as shown, eyebolts C C being fixed in two or more of such support-pieces, so as to extend therefrom, as represented. The pintle *a* of a hinge, D, is inserted in the hole *a'* of the step, and such hinge is provided with a shoulder, *b*, to rest on the top of the step. Furthermore, the hinge has a projection or stud, *c*, to enter a corresponding hole in the lower end of the boom E of the derrick, on which is a collar, *k*.

By means of the hinge and pintle the derrick-boom may be revolved and inclined to any desirable angle relatively to the step.

When the derrick is in use the support-pieces B rest on the deck of the vessel, the eyebolts being to receive ropes to stay the step in place. By having the frustum A elevated above the deck a crow-bar can easily be inserted beneath the frustum, to move it in any desirable direction upon the deck or platform, on which it may rest.

With the step made as described, and applied to the boom by a pivoted and studded hinge, as represented, there is no danger of the step or the boom being thrown out of place by a load of the derrick, as frequently happens with the boom when stepped into a plank resting on the deck, and thus there is avoided all danger of accident that frequently is liable to follow from such displacements.

The great facility by which the step can be moved by means of a bar renders it very convenient for use on lighters or vessels for receiving, transporting, and discharging large blocks of stone.

I claim—

1. The derrick-step composed of the frustum A, the support-pieces B B B B, and eyebolts C C, arranged as set forth.

2. The combination of the derrick-step, composed of the frustum A and support-pieces B B B B, with the pivoted and studded hinge D and the boom E, all arranged and applied substantially as shown and explained.

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