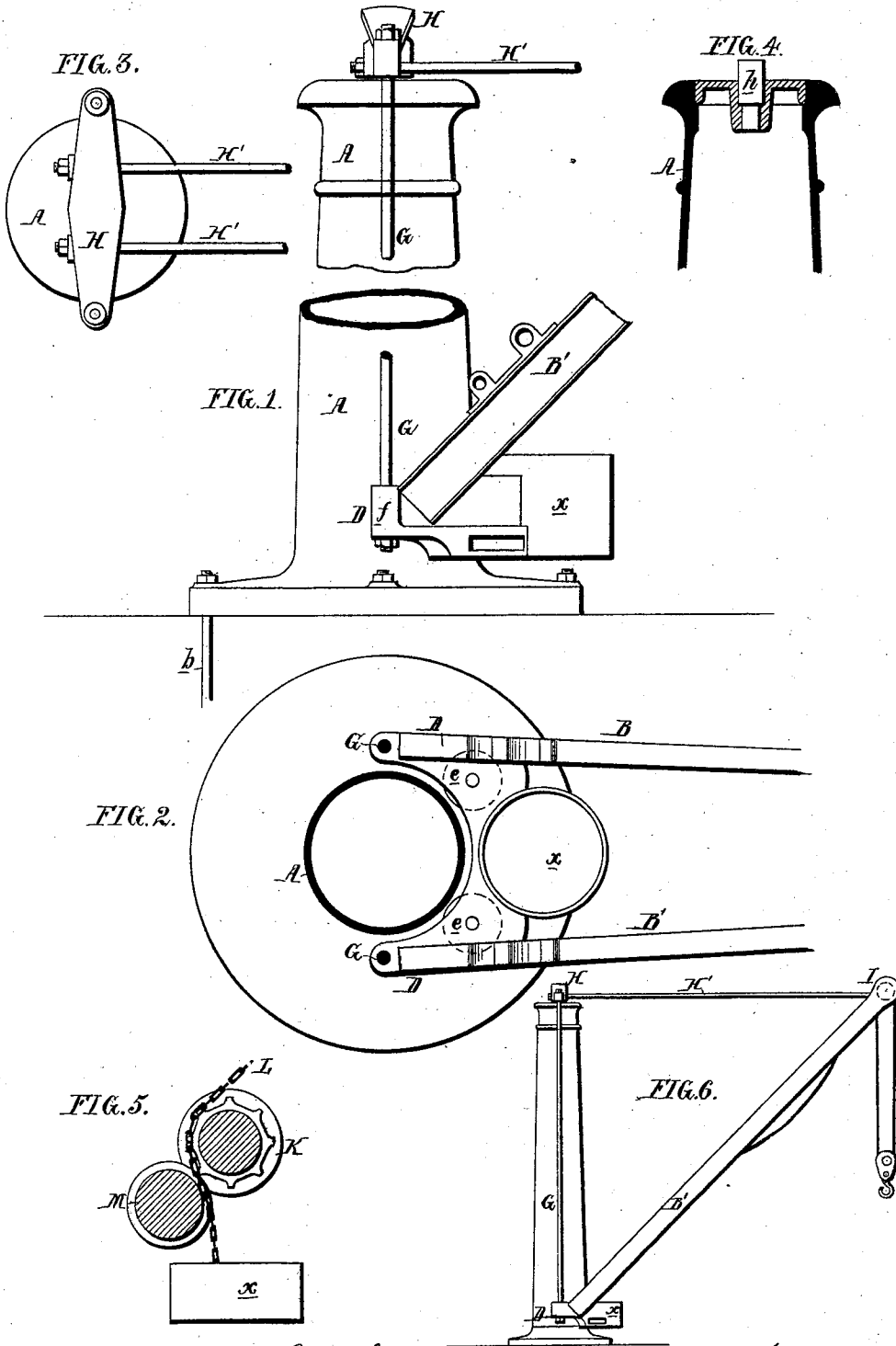


F. FARREL.
Cranes.

No. 138,876.

Patented May 13, 1873.



WITNESSES
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UNITED STATES PATENT OFFICE.

FRANKLIN FARREL, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN CRANES.

Specification forming part of Letters Patent No. **138,876**, dated May 13, 1873; application filed January 22, 1873.

To all whom it may concern:

Be it known that I, FRANKLIN FARREL, of Ansonia, New Haven county, Connecticut, have invented an Improvement in Cranes, of which the following is a specification:

The object of my invention is to simplify the construction of pivot-cranes; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 represents the upper and lower portions of the crane; Fig. 2, a sectional plan on the line 1 2, Fig. 1; Fig. 3, a plan view of the top of the post; Fig. 4, a vertical section of the upper end of the post; and Fig. 5, a vertical section of part of the lower portion of the crane; Fig. 6 being a general outline view of the complete crane.

A is the post of the crane, and at the bottom of this post is an extended flange, which rests on a substantial foundation, and is permanently secured to the same by suitable anchor-bolts, *b*.

It may here be remarked that, in cranes of this class, it is usual to extend the post downward into the foundation, within which is a step for a pivot-pin at the lower end of the post, so that the latter, with the jib and tie-rods—in fact the whole crane—can be swung around to any desired position. I have found that a more durable and economical pivot-crane can be made by permanently securing the post to the foundation, and so making the jib and its connections that they can be swung around this fixed post.

The jib of the crane consists of two wrought-iron beams, B and B', the lower ends of which are snugly fitted and firmly secured to a substantial casting, D, which forms the base of the jib, and which has horizontal rollers *e e*, bearing against the post A. This base is supported in its proper vertical position by two rods, G G, which extend one rod on each side of the post from projections *f* on the base to a cross-head, H, which is supported by a fixed pivot, *h*, Fig. 4, on the top of the post, the cross-head having a central recess for receiving this pivot. Tie-rods H' extend from the cross-head to a casting, I, at the outer end of the crane, as shown in the general view, Fig. 6. The upper end of the jib, composed of the above-mentioned beams B B', is also secured to this

casting, which contains the pulleys for the hoisting-chain.

As this casting and its connections at the outer end of the crane form the subject of a special application for a patent, further reference to them here will be unnecessary.

The hoisting mechanism of the crane consists of a wheel, K, having a periphery adapted to the chain L, which is maintained in proper contact with the chain-wheel by a follower, M.

This hoisting mechanism also forms the subject of a separate application for a patent; hence it will be unnecessary to explain it more fully.

The shaft to which the chain-wheel K is secured may be driven from a cranked shaft through the intervention of such gearing as the size of the crane and the weight which it is destined to hoist may suggest.

The chain-wheel and its follower take the place of the usual cumbrous chain-barrel, the slack chain below the wheel being secured into and driven from a receptacle, *x*, attached to or forming part of the base D, as the weight hung to the crane is raised or lowered.

This is a prominent feature of my invention, and is applicable to all cranes in which the hoisting-gearing is moved about with the crane, and in which a chain-wheel is used as a hoisting-medium in place of a barrel, for no matter what position the crane is turned to, the receptacle and chain-wheel always bear the same relation to each other.

I claim as my invention—

1. The combination, in a crane, of a chain-wheel as a hoisting-medium, and a receptacle for receiving the slack chain when both wheel and receptacle bear the same relation to each other, no matter what position the crane may be moved to.

2. The base D of the jib, having rollers for bearing against the post, and a receptacle for receiving the slack chain.

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

FRANKLIN FARREL.

Witnesses:

WM. A. STEEL,
HUBERT HOWSON.