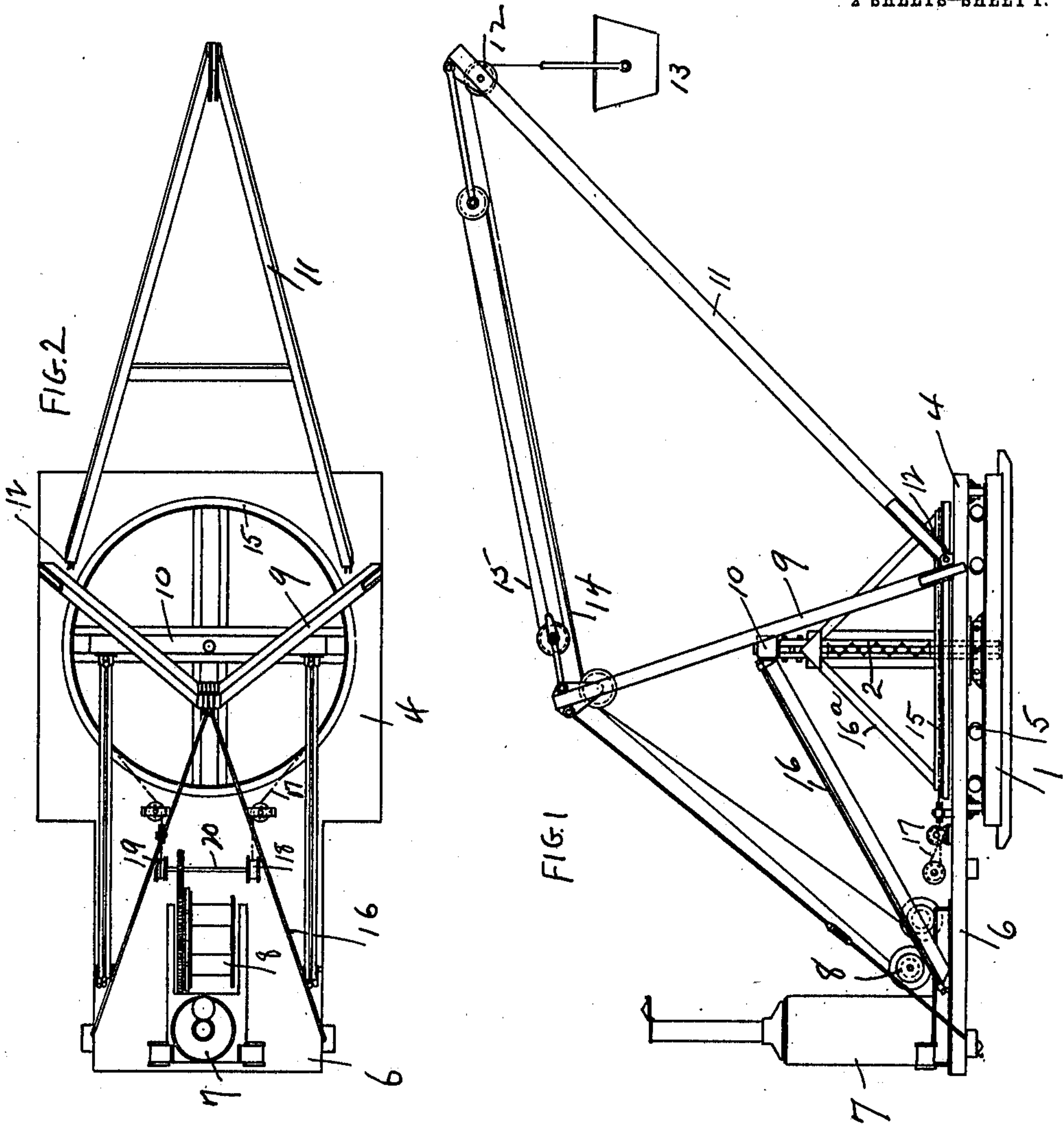


F. L. BROBERG.
HOISTING DERRICK.
APPLICATION FILED MAR. 31, 1910.

978,553.

Patented Dec. 13, 1910.

2 SHEETS-SHEET 1.



WITNESSES:
Mabel Dittmer
Benjamin Osterberg

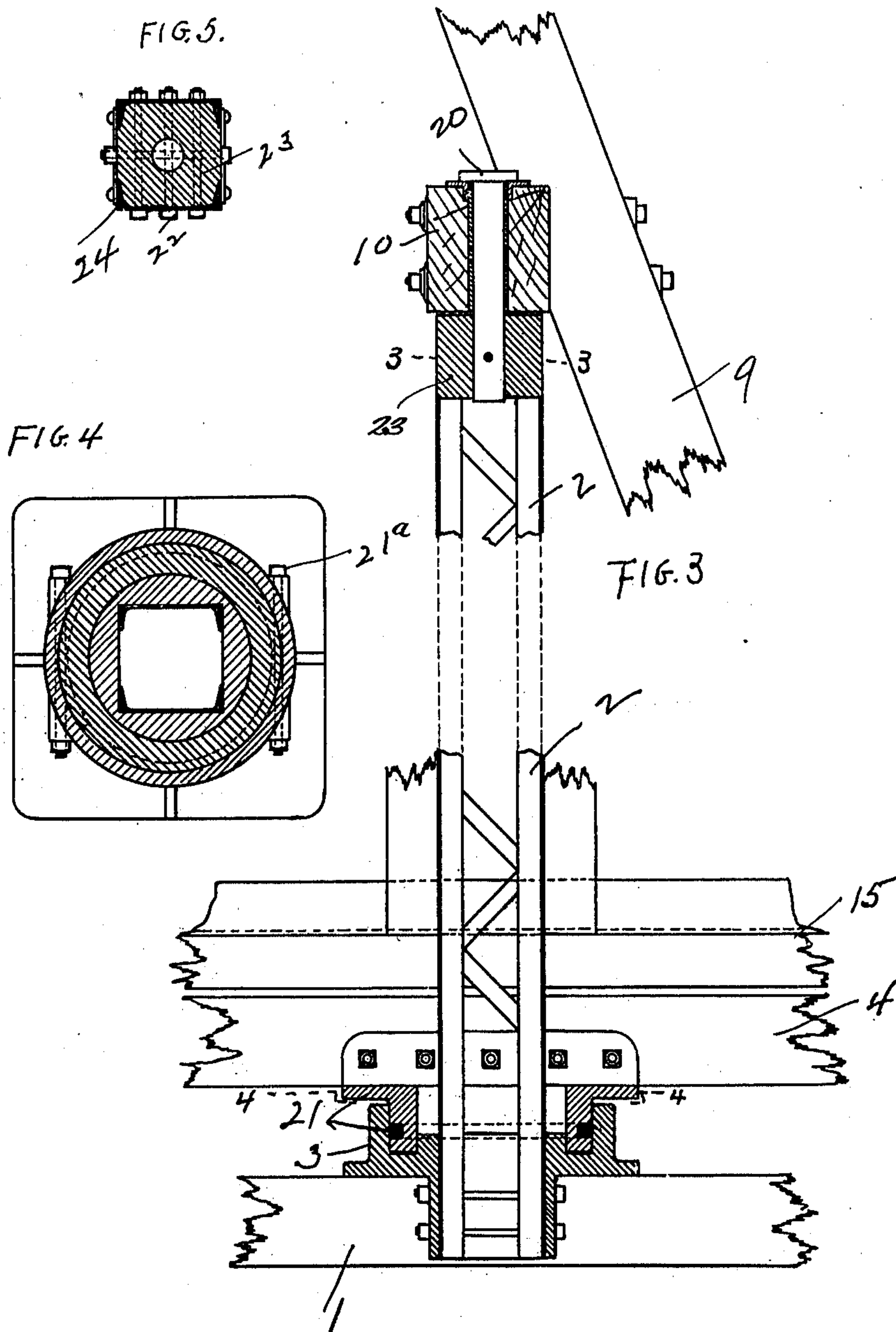
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WITNESSES:
Mabel Dittenhoefer
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UNITED STATES PATENT OFFICE.

FREY LAWRENCE BROBERG, OF BROOKLYN, NEW YORK.

HOISTING-DERRICK.

978,553.

Specification of Letters Patent.

Patented Dec. 13, 1910.

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To all whom it may concern:

Be it known that I, FREY LAWRENCE BROBERG, a subject of the King of Sweden, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hoisting-Derricks, of which the following is a clear, full, and exact description.

This invention relates to an improved construction of hoisting derrick where the frame, boom and engine are carried on a rotatable platform.

The object of the invention is to reduce the weight of such structure without decreasing its efficiency, simplify the construction, and cheapen the cost, at the same time providing simple and ready means for rotating the same.

In carrying out my invention, I provide a foundation platform, above which I provide a rotatable platform. Anti-friction rollers are arranged between the two platforms. An A frame or other structure rises from the rotatable platform, and an extending boom is pivoted therefrom on one side of the frame, while the hoisting motive power, shown in this specification as an engine and boiler, is located on the opposite side of the frame. A stationary post and a stationary bull-wheel above the rotatable platform are provided. Around the bull wheel, and secured to it, are cables running over suitable drums mounted upon the rotatable platform, so that upon paying out and taking in the cable secured to the stationary bull wheel, the hoisting platform may be rotated to any extent desired.

I am aware that hoisting derricks have heretofore been made to swing, and that they have been swung by cables leading from drums, and I do not claim such invention broadly.

The scope of my invention will be pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of an improved derrick of my invention. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged central sectional view, showing the construction of the post taken through the center of the bolt 20. Fig. 4 is a sectional view on line 4—4, Fig. 3. Fig. 5 is a sectional view on line 3—3, Fig. 3.

As shown in the drawings, a stationary platform 1 is provided of any suitable construction, from the center of which rises a

post 2, bolted in a foot-step 3, secured to the stationary platform 1.

Above the platform 1 there is mounted a rotatable platform 4, and between the two platforms are provided anti-friction rollers 5. The platform 4 has an extension 6, on which is mounted the boiler 7, and the hoisting drums and motor 8. An A-frame 9 is pivotally secured through its cross bar 10 to the top of the stationary post-2. A hoisting boom 11 pivoted at 12 extends away from the A-frame and is provided with the ordinary sheave 12 and bucket 13. Suitable hoisting ropes 14 leading to the drum are provided for raising and lowering the buckets, while take-up ropes 15 are adapted to raise the boom. The A-frame, boom and motor may be of any usual construction. A tie-rod 16 fast to the top of the post is preferably led to and secured to the extension 6, to give greater rigidity to the structure. A bull-wheel 15 at all times stationary, is mounted so as to encircle the stationary post to which it is secured by supporting members 16^a. A cable 17 leads to drums 18 and 19, and is reversely wound thereon. The drums are operated from a shaft 20, so that upon their rotation they will pay out and take up the cable so that the derrick will be rotated with relation to the stationary bull-wheel.

I prefer that the stationary post be of the ordinary built-up lattice work girder type shown particularly in Fig. 3, and that the cross bar 10 of the A frame be pivotally secured thereto by a heavy pin 20. I prefer to provide a depending casting 21, bolted to the rotating platform and having a circumferential groove, through which bolts 21^a may be passed to hold it firmly to the stationary platform 1. The pin 20 may be bolted by a bolt 22 into a casting 23 secured in place between channel irons 24, comprising part of the lattice work stationary post.

The operation of swinging the derrick will be obvious to any one skilled in the art. The advantage of constructing the derrick as described is that there is secured through the stationary post, points of support to permit the strengthening of the structure against overthrow, by the weight of the engine or the weight of the bucket, because of the connection to the post of the A-frame, and by the use of additional tie-rods or braces, such as 16.

In carrying out this invention, details of

construction may be varied from those shown, and yet the essence of the invention be retained; some parts might be employed without others, and new features thereof might be combined with elements old in the art in diverse ways, although the herein described type is regarded as embodying substantial improvements over such modifications.

As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense. It is furthermore desired to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim as my invention:

1. The herein described hoisting derrick, comprising a rotatable platform, a hoisting boom, a derrick frame and hoisting motor mounted thereon, a supporting post pivotally connected with the frame, and means for rotating the platform.

2. The herein described hoisting derrick, comprising a rotatable platform, a hoisting boom, a derrick frame and hoisting motor mounted thereon, a supporting post pivotally connected with the frame, and means for rotating the platform, said means comprising a stationary bull-wheel located above the platform, and means secured on the platform adapted to rotate the same by connection with the bull-wheel.

3. The herein described hoisting derrick comprising a rotatable platform, a hoisting boom, a derrick frame, and a hoisting motor mounted on the platform, a stationary bull-

wheel above the platform, and cables leading thereto, and means mounted on the platform to take up and pay off said cables.

4. The herein described hoisting derrick comprising a rotatable platform, a hoisting boom, a derrick frame, and a hoisting motor mounted on the platform, a stationary bull-wheel above the platform, and rotating means carried on the platform adapted to engage the bull-wheel.

5. The herein described hoisting derrick, comprising a rotatable platform, a stationary platform, rollers therebetween, a central stationary post passing through the rotating platform, a bull-wheel secured to said post, a cable secured to said bull-wheel, and means for operating said cable from the rotating platform, a hoisting boom and a hoisting motor on the platform.

6. The herein described hoisting derrick, comprising a rotatable platform, a stationary platform, rollers therebetween, a central stationary post passing through the rotating platform, a bull-wheel secured to said post, a cable secured to said bull-wheel, and means for operating said cable from the rotating platform, a hoisting boom and a hoisting motor on the platform, and a derrick frame, to which the stationary post is pivotally connected.

7. In combination, a rotating platform, a hoisting motor mounted on an extension of the same, a boom oppositely disposed upon said platform, an intermediate derrick frame, rollers beneath said platform, a stationary bull-wheel and post pivotally connected with said frame, a drum upon the platform, and a cable leading from the drum to the bull-wheel.

Signed at New York city this 30th day of March 1910.

FREY LAWRENCE BROBERG.

Witnesses:

F. WARREN WRIGHT,
THOMAS A. SHAW.