

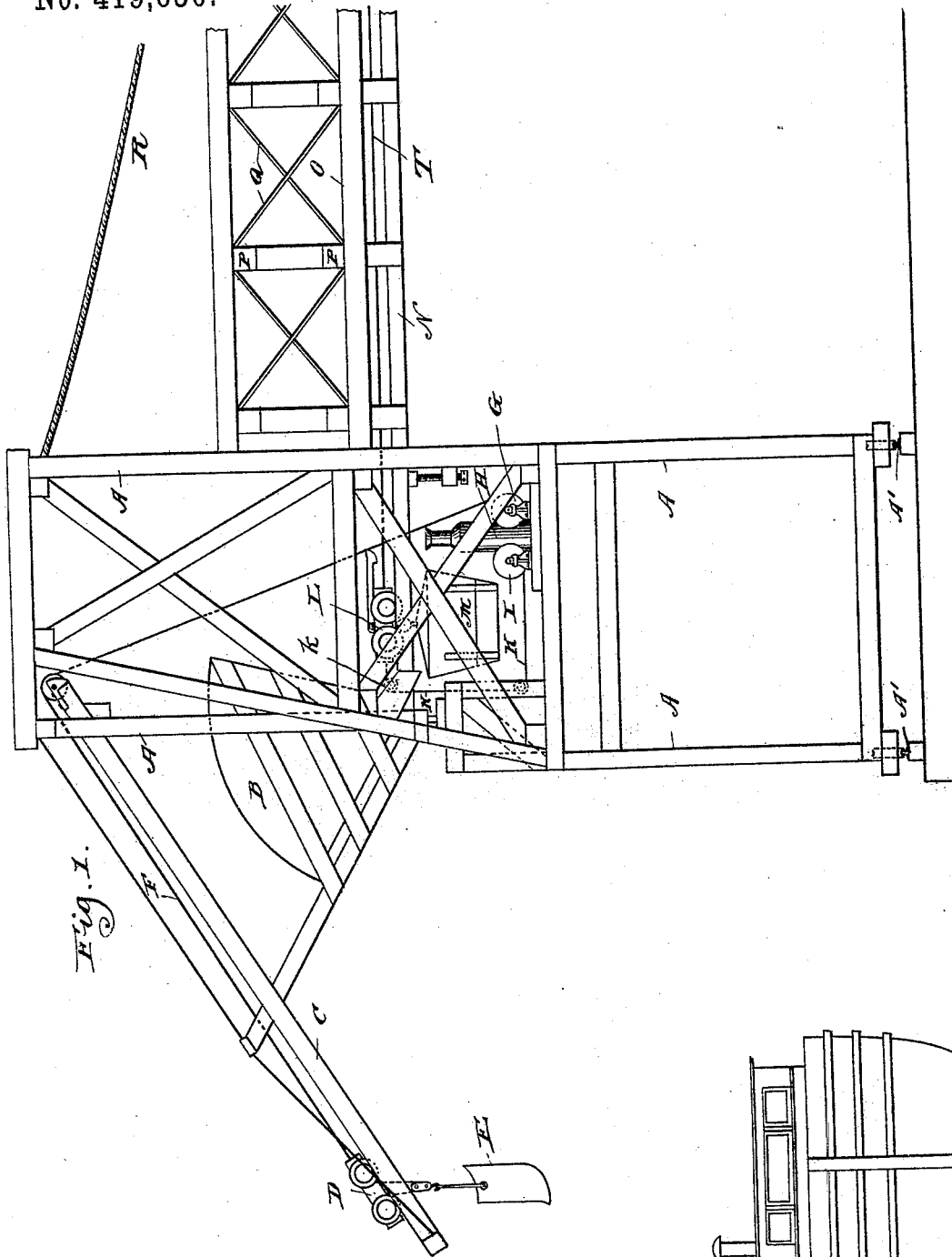
(No Model.)

2 Sheets—Sheet 1.

W. S. BOGLE.
COAL HANDLING APPARATUS.

No. 419,630.

Patented Jan. 21, 1890.



Witnesses,
J. A. Mann,
Frederick B. Goodwin

Inventor
Walter S. Bogle
By, C. B. Luthman, Atty.

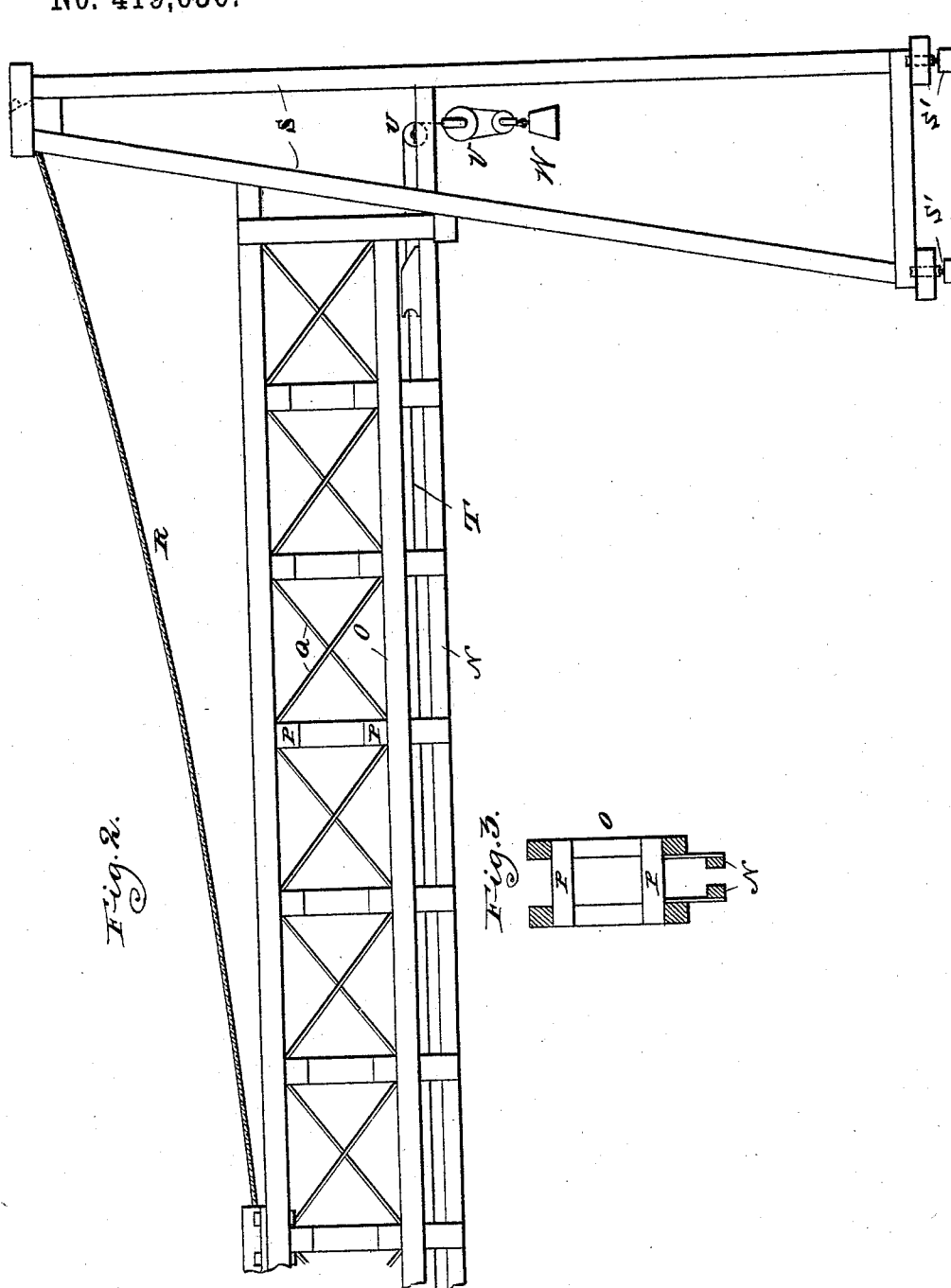
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UNITED STATES PATENT OFFICE.

WALTER S. BOGLE, OF CHICAGO, ILLINOIS.

COAL-HANDLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 419,630, dated January 21, 1890.

Application filed October 24, 1889. Serial No. 327,978. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. BOGLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coal-Handling Apparatus, of which the following is a specification.

My invention relates to certain improvements in means for transferring coal from vessels or cars to different points on the dock or yards, where it is either dumped in piles or loaded into wagons or cars, as occasion requires. The means usually employed to this end comprise a series of stationary tracks and a hoisting-tower located at the end of each track. In some instances a single tower has been employed, which is mounted upon wheels and is adapted to be moved along its track, so as to permit the coal hoisted thereon to be run off in cars upon the various tracks. It has also been proposed to employ a single movable track connected with a movable hoisting-tower. The common method of transferring coal from the tower to points along the track has been to employ a hoisting-engine at the outer end of the track, having a drum over which a cable is wound, said cable being connected with the carriage, whereby to move the same outwardly along the track when loaded, and the return of the carriage has been effected by a cable having a weight attached at the tower end of the track or by gravity by inclining the track toward the tower.

In my application, Serial No. 304,588, filed March 25, 1889, I have described a series of stationary suspended tracks, a movable hoisting-tower adapted to be brought to register with the various tracks, a hoisting-engine located at the tower and having a cable connected therewith and with the carriage, and a second cable connected with the carriage and with a counterbalance-weight at the end of the track opposite the tower. In this arrangement the carriage, carrying a loaded bucket, is moved outwardly by the weight and is returned by the engine-cable, and this arrangement is included in one of the claims of my said application in combination with other features of construction.

My present invention provides a simple and efficient means for handling coal, and the

apparatus comprises a single track of truss construction connected at one of its ends to a movable hoisting-tower and at the other with a movable frame, a hoisting-engine located on the tower, said engine having a drum over which a cable is wound, the cable being connected to the carriage, whereby to return the latter when empty, and the carriage being drawn out with its load by means of a cable attached thereto and carrying at the outer end of the track a weight.

In the accompanying drawings, Figure 1 is a side elevation of the tower and a section of the track connected to said tower, and showing also a vessel in position to be unloaded. Fig. 2 is a side elevation of the outer end of the track, showing the wheeled frame and weight; and Fig. 3 is a cross-section of the track structure, taken midway of its length.

In the drawings, A indicates the tower structure, which may be adapted to move on the stationary track A', and on which is secured a stationary hopper B.

C is an inclined way along which the carriage D, carrying the bucket E, is moved by the cable F, the latter being wound upon a drum G of the hoisting-engine H.

I is a second drum, which is adapted to be rotated by the engine when desired, and K is a cable wound on said drum and passed over the sheave *k* and connected to the transfer-carriage L, which carries the transfer-bucket M. The carriage moves upon rails N, hung from a supporting structure O, which comprises, preferably, a rectangular frame formed by timbers extended parallel to the rails N, the cross-trees P, brace-rods Q, and cables R. Said track may be of any length desired consistent with due regard to the weight and strength of materials. The outer end of the track is supported upon a movable frame S, which may have wheels adapted to the stationary track-rails S'. The cables R will be connected to the tower A and frame S at their respective ends and centrally to the track-supporting structure.

T is a cable, which is connected at one of its ends to the carriage, passed over a sheave U, journaled on the wheeled frame, and bearing, through the intervention of the block V, a weight W.

The operation is as follows: The coal or

other material to be transferred will be loaded into the hoisting-bucket, and, the engine being put in motion, the carriage carrying the bucket will be drawn upward along the inclined hoisting-track until it is in position over the stationary hopper, when the coal will be discharged therein. From this hopper the coal will be delivered at will to the transfer-bucket, and when the latter has been filled the carriage carrying said bucket will be released, and will move outwardly, under the influence of the weight, to the point where it is desired to dump the material. When this has been done, the drum over which the return-cable is wound will be operatively connected with the engine and the carriage will be returned to place. When it is desired to lift the coal from different points—as, for example, from different holds of the vessel—the whole structure can be moved laterally upon the stationary parallel tracks A' and S'. The advantages of this system consist chiefly in the simplicity of the construction and arrangement of parts and in the fact that the engine is located on the tower, where

the work of hoisting and transferring the coal come under the observation of the engineer, the weight at the outer end requiring no attention whatever, and the operation of all parts of the apparatus being under the eye of and controlled by one man.

I claim—

An apparatus for handling coal, comprising, in combination, a movable hoisting-tower, an elevated suspended track rigidly connected at one of its ends to said tower and at its other end to a movable frame, a hoisting-engine located on the tower and having a hoisting drum and cable, and a second drum having a cable adapted to be wound thereon and connected to a carriage moving on the suspended track, and a cable connected to the carriage and to a weight at the outer end of the track, whereby the carriage may be drawn out, when loaded, by the weight, and returned, when emptied, by the engine.

WALTER S. BOGLE.

Witnesses:

C. C. LINTHICUM,
FREDERICK C. GOODWIN.