

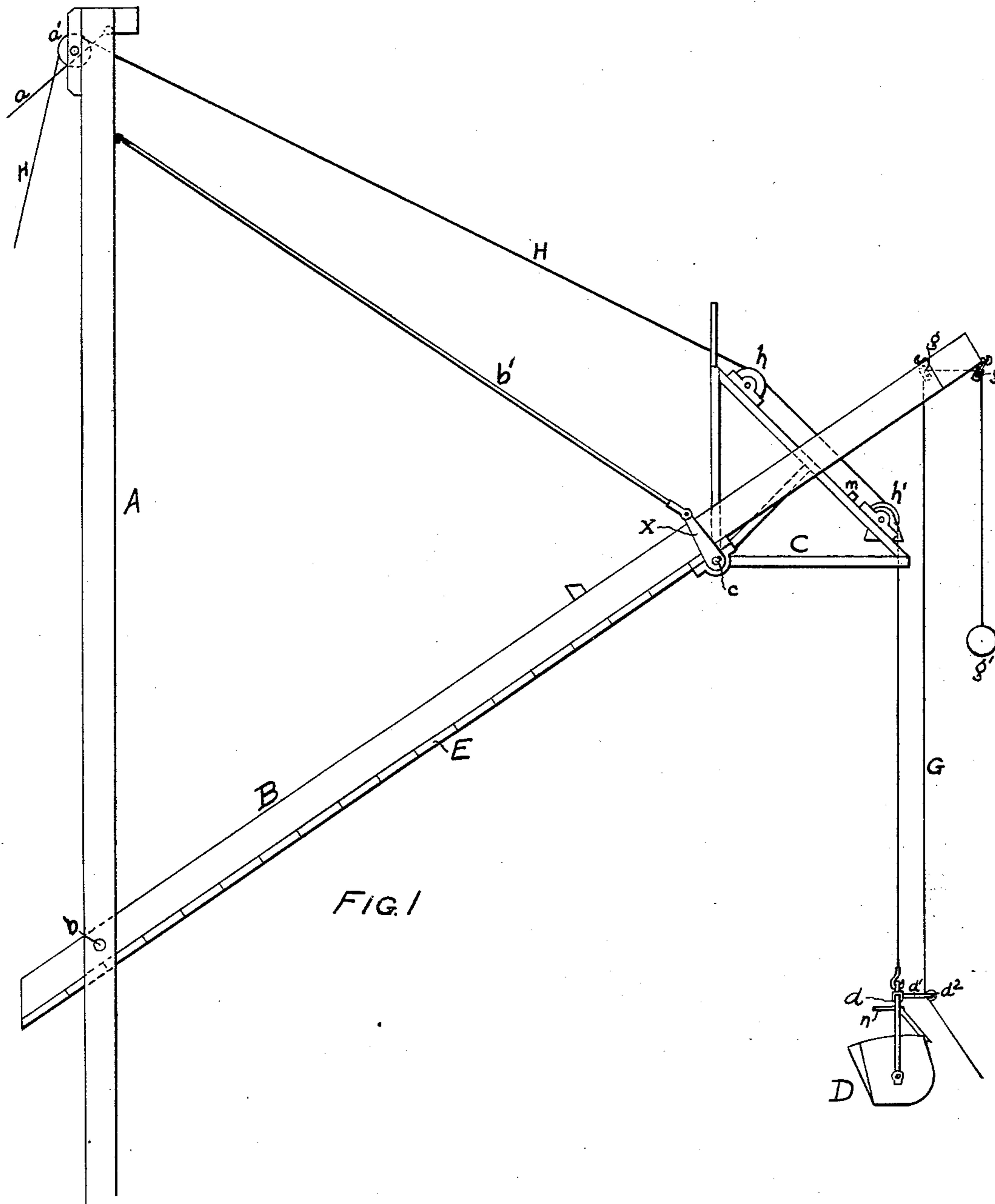
No. 733,615.

PATENTED JULY 14, 1903.

G. BLAAUW.
HOISTING APPARATUS.
APPLICATION FILED MAR. 3, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

Richard A. Wright.
F. W. Wright,
E. W. Collins

INVENTOR
GEERT BLAAUW

BY

Horton and Hovey
HIS ATTORNEYS

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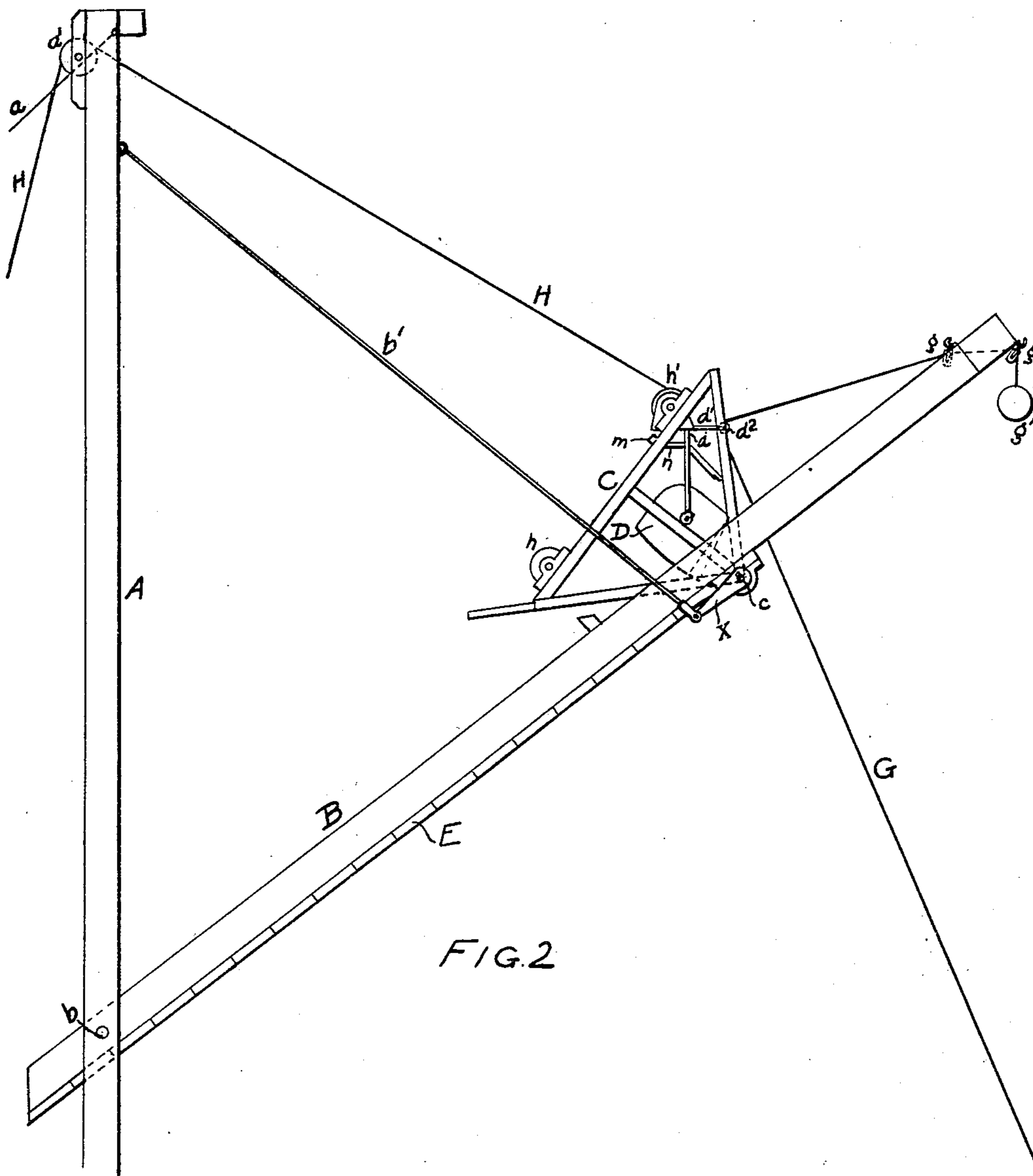


FIG. 2

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3 SHEETS—SHEET 3.

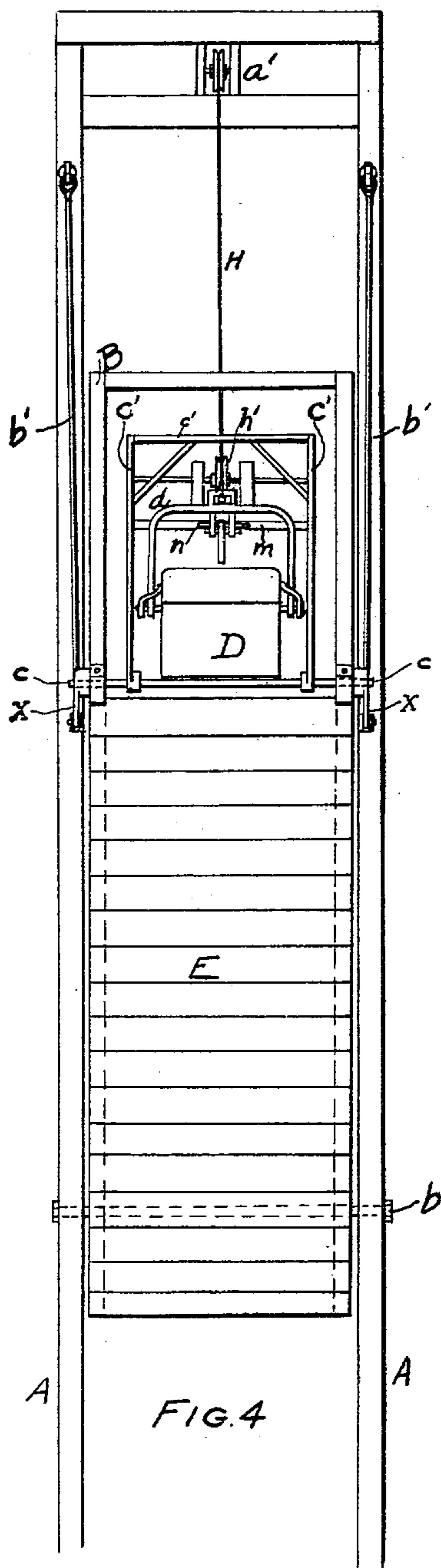


FIG. 4

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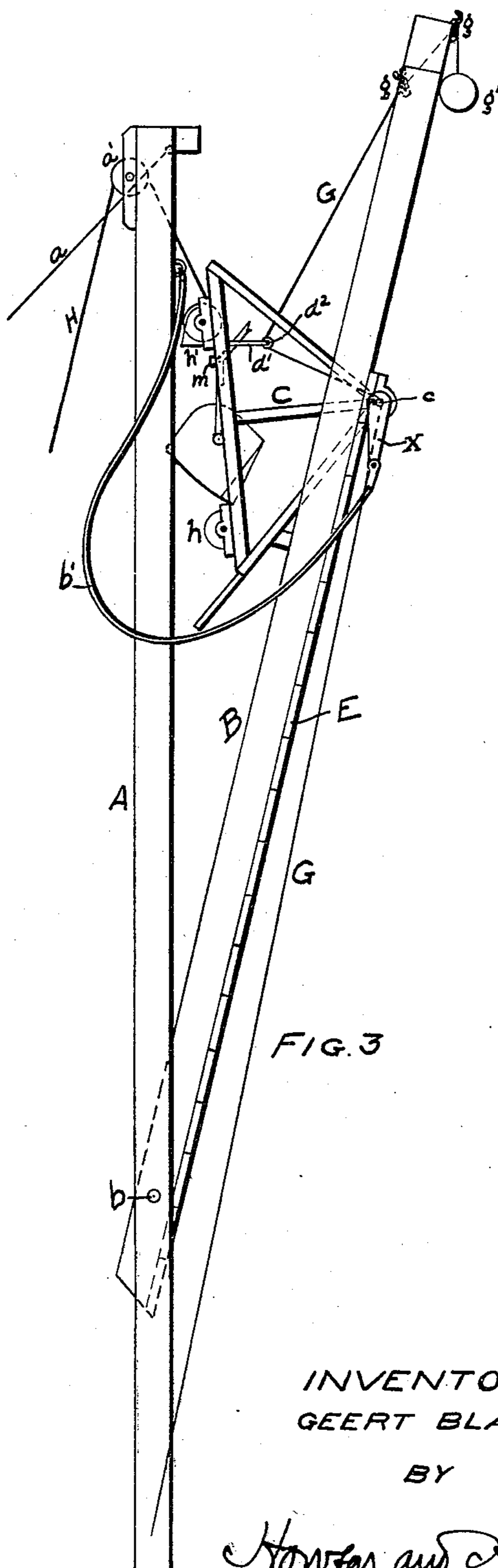


FIG. 3

INVENTOR
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UNITED STATES PATENT OFFICE.

GEERT BLAAUW, OF NEW YORK, N. Y.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 733,615, dated July 14, 1903.

Application filed March 3, 1903. Serial No. 145,873. (No model.)

To all whom it may concern:

Be it known that I, GEERT BLAAUW, a subject of the Queen of the Netherlands, and a resident of New York city, in the county and State of New York, have invented Improvements in Hoisting Apparatus, of which the following is a specification.

My invention relates more particularly to that class of hoisting appliances in which a bucket is used to elevate material and discharge it into a chute—such a hoisting appliance, for example, as is adapted for the loading of steamers with coal from barges lying alongside or the filling of storage-bins with coal or other such material from barges or cars.

The main object of my invention is to so construct the apparatus as to avoid having to provide means for inboard travel of the bucket, as by the employment of a trolley or by the swinging or raising of the boom. This object I attain by the construction hereinafter described.

In an apparatus of this character for which I have obtained Letters Patent, dated January 22, 1903, No. 719,177, I have employed a telescopic chute. My present improvement embraces the use of a stationary chute.

In the accompanying drawings, Figure 1 is a side view of a hoisting apparatus embodying my invention. Fig. 2 is a similar view, but showing the parts in another position with the bucket tipped and discharging its contents into the chute. Fig. 3 is a side elevation showing the boom and the parts carried by it lifted up against the frame, so as to be out of the way of the vessel's masts, for example; and Fig. 4 is a front view corresponding with Fig. 2.

A is a stationary frame which may be supported in any suitable way, as by means of a guy-line *a* from the top of the frame to a suitable point below.

B is the boom, which is hinged at *b* to the frame A, so that when desired it may be turned up out of the way against the frame, as shown in Fig. 3, but when in use will be supported at a suitable angle by guy-ropes *b'* and in effect form a part of the stationary frame.

The hoisting-rope H passes over a sheave *a'* at the upper part of the stationary frame A and thence over sheaves *h* and *h'* on a

cradle C, which may conveniently be of the triangular outline illustrated in Figs. 1 and 2, and is hinged or mounted to swing on an axis *c* in the boom B. The rope H carries at its lower end the bucket D, which may be of the clam-shell, tub, or other suitable type, with a tripping means, a tilting bucket being shown in the drawings merely for the sake of illustration.

The cradle C consists of two side frames C', suitably connected by cross-bars *c'*, preferably at the corners of the triangular side frames; but the side frames and cross-bars are so spaced as to leave the center open and to leave room enough for the hoisting-bucket to pass or swing in between the side bars and cross-bars to the position illustrated in Figs. 2 and 4 when this swinging cradle is turned on its axis from the position shown in Fig. 1 to the position shown in Fig. 2.

With the boom B is combined a chute E, which in the present instance I have shown as structurally a part of the boom, the upper end of the chute terminating at about the point where the swinging cradle is pivoted, while the lower or discharge end of the chute is preferably extended to the rear side of the frame A. The boom B, with the chute E, is preferably hinged to the frame A at *b*, so that it may be folded up, as shown in Fig. 3, to take the apparatus out of action and out of the way of vessels' masts, for example. When in use, however, the chute is stationary as distinguished from the extensible telescopic chute of my former patent.

Instead of connecting the guy-ropes *b'* directly to the boom B, I prefer to connect them to arms *x* on the swinging cradle C. In the present instance I have shown these arms *x* as secured to the opposite ends of the axis *c* of the swinging cradle.

The supporting-yoke *d* of the bucket D may have a horizontal arm *d'*, carrying a pulley *d''* to run on the steadying and guiding rope G; but instead of fastening this guiding-rope to the end of the boom I prefer to carry it over a pulley or pulleys *g* at the outer end of the boom B and to attach a counter-weight *g'* to the other end of the rope.

Supposing the bucket to have been loaded and to be in the course of being raised, the yoke *d* of the bucket D will come into contact

with the projecting right-hand end of the cradle C. The continued hoisting of the rope will cause the cradle C to swing over on its axis from the position shown in Fig. 1 toward that shown in Fig. 2. As the bucket swings into the open cradle the tripping-lever *n* will come into contact with a projecting part *m* of the cradle and the bucket will be turned over and its contents discharged into the chute, over which it now lies, as shown in Fig. 2. When the bucket has been emptied and the strain on the hoisting-rope is released, the weight of the boom and bucket, acting through the arms *x*, to which the guide-ropes *b'* are connected, will aid in turning the cradle C back from the position shown in Fig. 2 to the position shown in Fig. 1, so that the bucket can then run down again into the barge or other place from which the material is to be taken.

I claim as my invention—

1. A hoisting apparatus, consisting of a stationary frame, boom and chute with a hoisting-rope and bucket, a cradle pivoted to the boom and sheaves on the cradle over which the hoisting-rope passes, the cradle being open to permit the bucket to swing into the cradle as the latter is turned on its pivot by the hoisting-rope, and means for tripping the bucket.

2. A hoisting apparatus comprising a stationary frame, boom and stationary chute,

with a hoisting-rope and bucket and a swinging cradle pivoted to the boom and means for tripping the bucket when it enters the turned cradle.

3. A hoisting apparatus, comprising a stationary frame and stationary chute with a hoisting-rope and bucket and a swinging cradle pivoted to the chute, the cradle being open to permit the bucket to swing into the cradle as the latter is turned on its pivot, and means for tripping the bucket, substantially as described.

4. A hoisting apparatus, comprising a stationary frame and stationary chute with a hoisting-rope and bucket and a swinging cradle pivoted to the chute and means for tripping the bucket when it enters the turned cradle.

5. A hoisting apparatus, comprising a frame and chute with a hoisting-rope and bucket and a swinging cradle having sheaves over which the hoisting-rope passes and means for tripping the bucket when it enters the turned cradle.

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

GEERT BLAAUW.

Witnesses:

F. WARREN WRIGHT,
HUBERT HOWSON.