

(No Model.)

2 Sheets—Sheet 1.

C. W. HUNT.
HOISTING APPARATUS.

No. 351,446.

Patented Oct. 26, 1886.

Fig. 3.

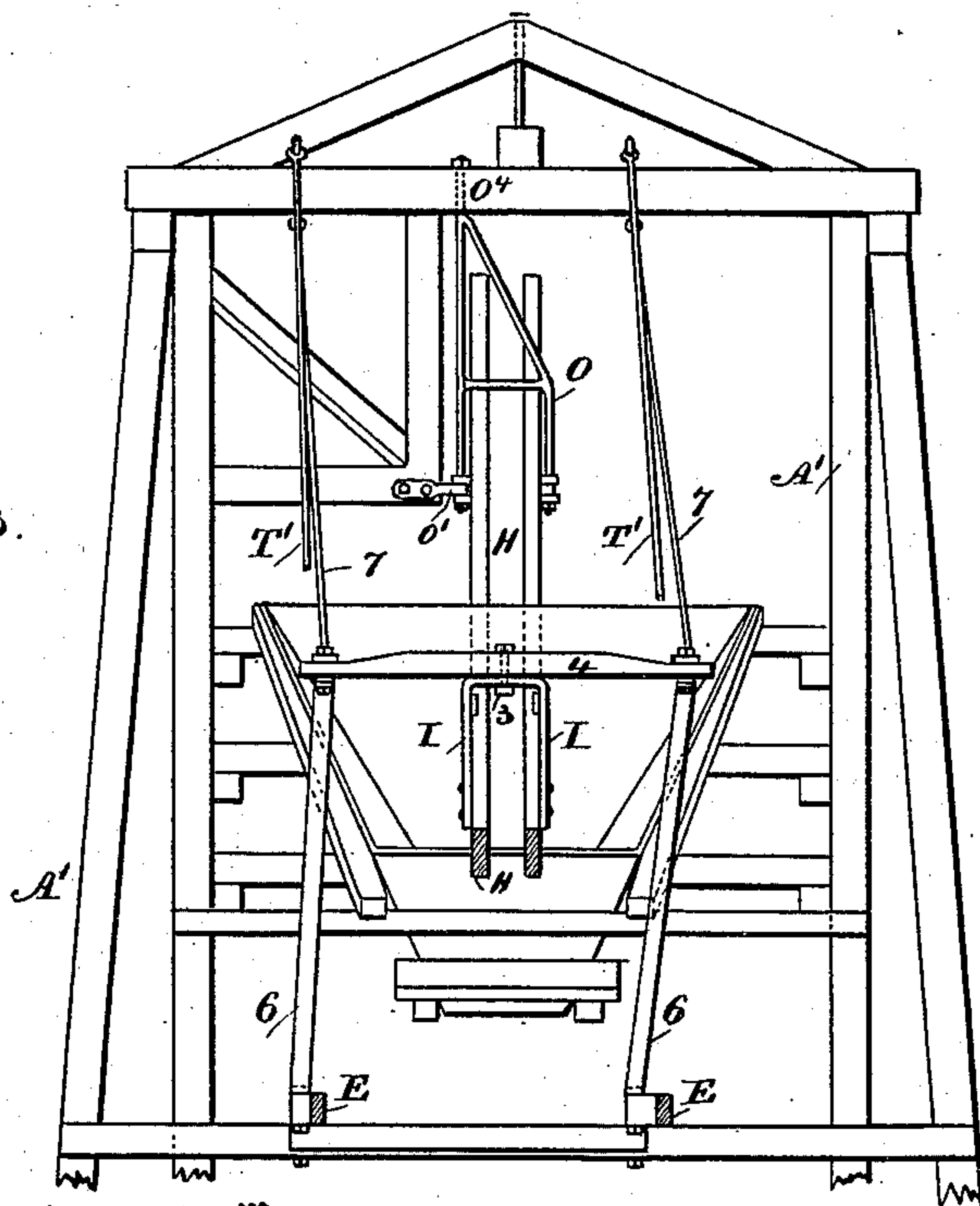
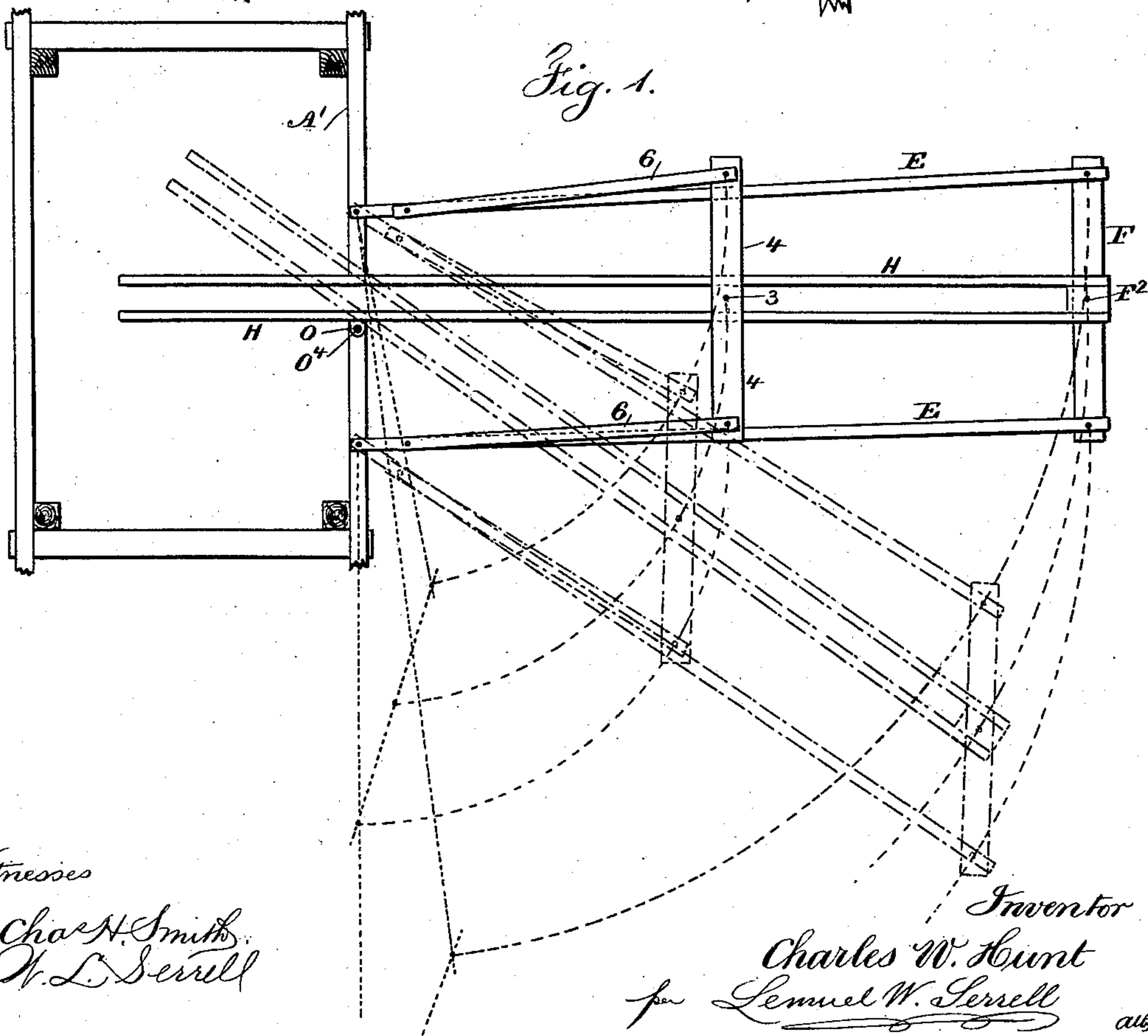


Fig. 1.



Witnesses

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Inventor

*Charles W. Hunt
per Lemuel W. Serrell*

att

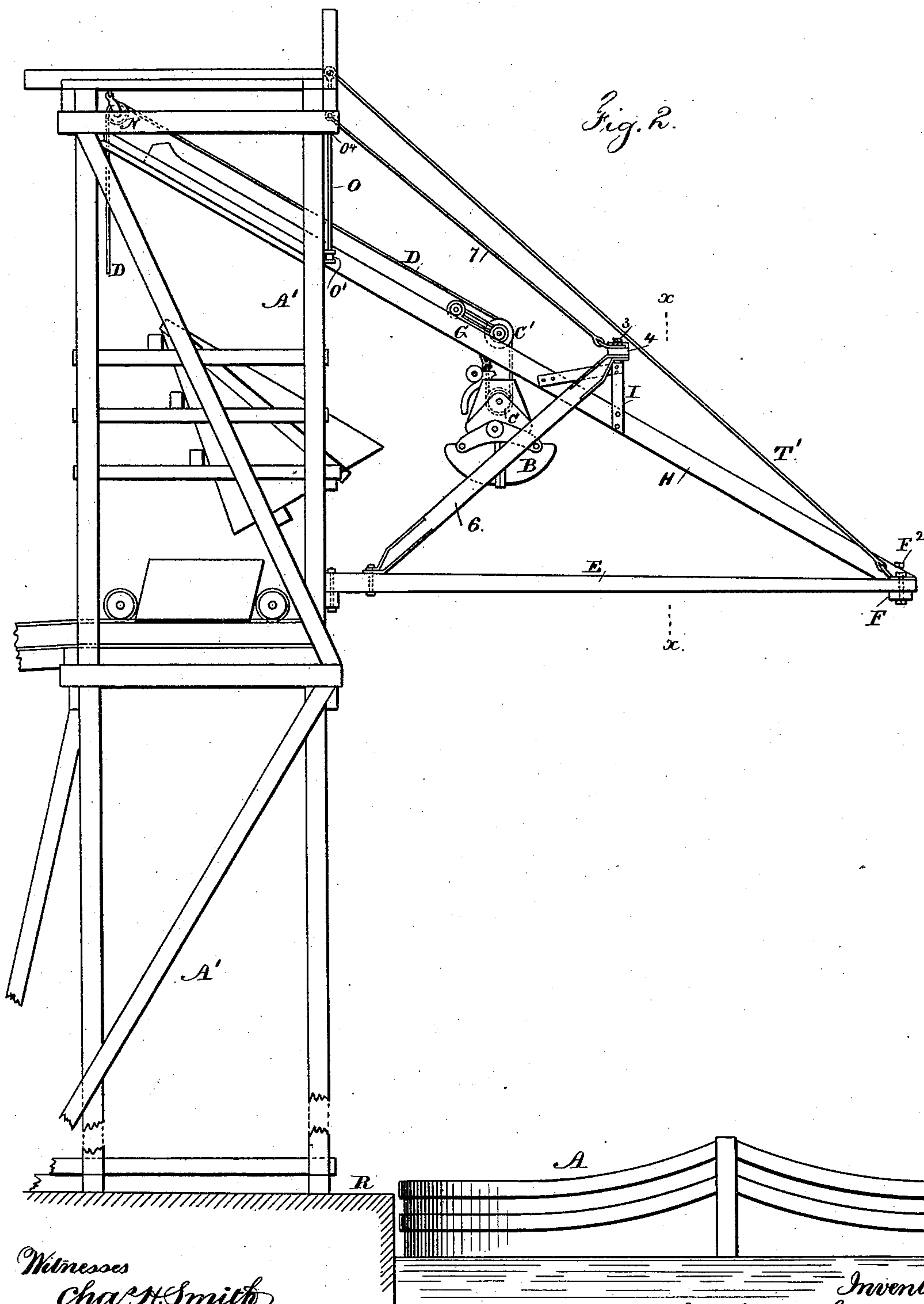
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Chas. H. Smith

St. L. Serrell

Inventor
Charles W. Hunt.
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UNITED STATES PATENT OFFICE.

CHARLES W. HUNT, OF WEST NEW BRIGHTON, ASSIGNOR TO THE C. W. HUNT COMPANY, OF NEW YORK, N. Y.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 351,446, dated October 26, 1886.

Application filed August 4, 1886. Serial No. 209,939. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HUNT, of West New Brighton, in the county of Richmond and State of New York, have invented an Improvement in Hoisting Apparatus, of which the following is a specification.

In Letters Patent No. 170,442, granted to me November 30, 1875, a swinging boom is shown upon which are tracks and a truck, by which a bucket or other device is raised in delivering coal or other material.

My present invention relates to an improvement by which the middle portion of the boom is supported, to prevent the same bending or breaking under heavy loads, and at the same time the boom is free to be swung into the position for use or back out of the way when not in use.

In the drawings, Figure 1 is a plan view of my improvement, the dotted lines showing the positions of the parts when the boom is swung aside out of use. Fig. 2 is a side view of the apparatus; and Fig. 3 is a cross-section of the boom and track at the line *xx*, Fig. 2, and an elevation of the intermediate supports.

The boat is represented at A, the wharf or pier at R, and the frame-work A' upon the pier supports the booms H H. These parts—the hoisting-rope D, truck G, bucket B, and pulleys C, C', and N—are similar to those in my aforesaid patent, and the bracket O is fastened to the boom, and has bearings O' and O' upon the frame-work A'.

The cross-bar F is pivoted at F² to the outer end of the booms, and there are braces E from the frame-work A' to the outer ends of the cross-bar F, and diagonal stays T' from the upper part of the framing A' to the pivotal connections at the ends of the cross-bar F. These parts are similar to those shown in an application of like date herewith, No. 209,938, filed August 4, 1886.

In order to support the middle portion of the booms H H, I attach to the same the bow-iron I, the same being secured to the outer faces of the boom timbers or tracks H H, and extending up above such tracks a distance sufficient to allow the truck G to pass freely beneath the same, and upon the top of this bow-iron I is a pivot, 3, by which is attached the yoke-bar 4. This yoke-bar is preferably

of the same length as the cross-bar F, and there are below the ends of the yoke-bar the braces 6, that are pivoted at their lower ends to the braces E or frame-work A', and at their outer and upper ends to the yoke-bar 4. These parts only may be used, as the braces 6 will afford a considerable support to the boom H; but I prefer to employ in addition to the braces, or instead of them, the secondary stays 7, extending from the pivots at the outer ends of the yoke-bar 4 up to the upper portion of the frame-work A', so as to increase the strength of the parts that support the boom.

If the yoke-bar 4 is the same length as the cross-bar F, the braces E and 6 and stays T' and 7 will be in the same respective vertical planes when the boom is in use, and the yoke-bar will be parallel, or nearly so, to the cross-bar when the boom is swung aside out of use; but I do not limit myself in this particular, as the yoke-bar may be longer or shorter than the cross-bar, the pivots being properly placed, so that the parts will swing with the boom into either of its positions.

I claim as my invention—

1. The combination, with the boom and its supporting frame-work, and the bearings upon which it swings, of the bow-iron I above the track, the yoke-bar 4, pivoted to the same, and the braces 6, substantially as set forth.

2. The combination, with the boom and the frame-work, and bearings supporting the same, of the bow-iron I above the boom, the yoke-bar 4, pivoted to the same, and the secondary stays 7, extending from the yoke-bar to the frame-work, substantially as set forth.

3. The combination, with the boom and its supporting frame-work, and the bearings upon which it swings, of the bow-iron I above the track, the yoke-bar 4, pivoted to the same, the braces 6, and secondary stays 7, connected at their respective ends to the yoke-bar and the frame-work, substantially as set forth.

4. The combination, with the boom and its supporting frame-work, and the bearings upon which the same swings, of the cross-bar F, braces E, stays T', connected at their respective ends to the cross-bar and the frame-work, the bow-iron I above and connecting the track-bars of the boom, and a connection from the same to the frame-work for supporting the

boom near the middle thereof, substantially as set forth.

5 5. The combination, with the inclined boom, the frame-work for supporting the same, and the bearings upon which the boom swings, of the bow-iron I, connected to the boom, a yoke-bar pivoted to the same, and braces or stays connecting the ends of the yoke-bar with the frame-work, substantially as set forth.

10 6. The combination, with the boom, of the pivoted yoke-bar and braces pivoted to the

same, the pivots of the braces at the yoke-bar being farther apart than the pivots at the other end of the braces, for causing the yoke-piece to assume a slightly diagonal position, substantially as and for the purposes specified. 15

Signed by me this 19th day of June, A. D. 1886.

CHAS. W. HUNT.

Witnesses:

GEO. T. PINCKNEY,

WALLACE L. SERRELL.