

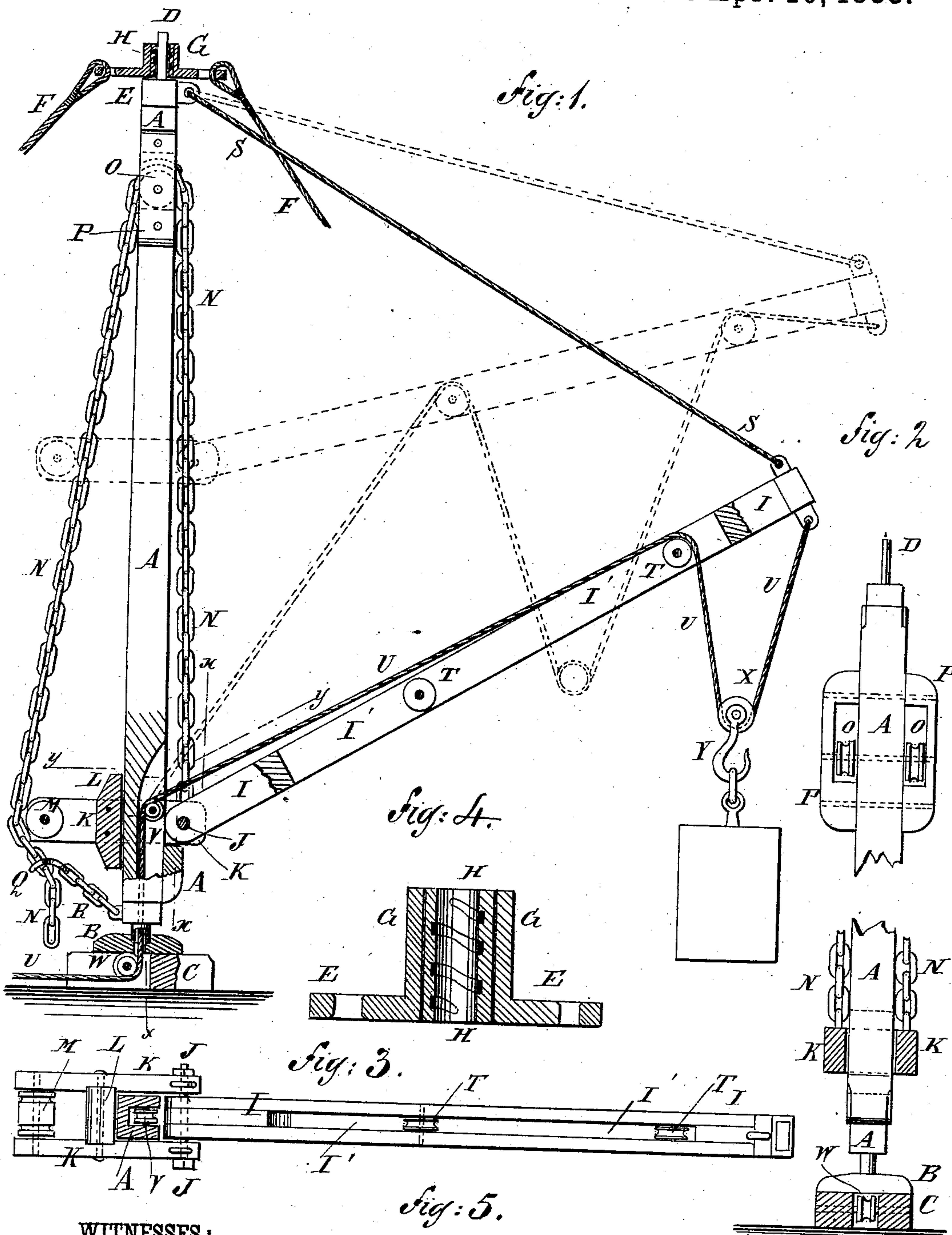
(No Model.)

G. W. TARR.

DERRICK.

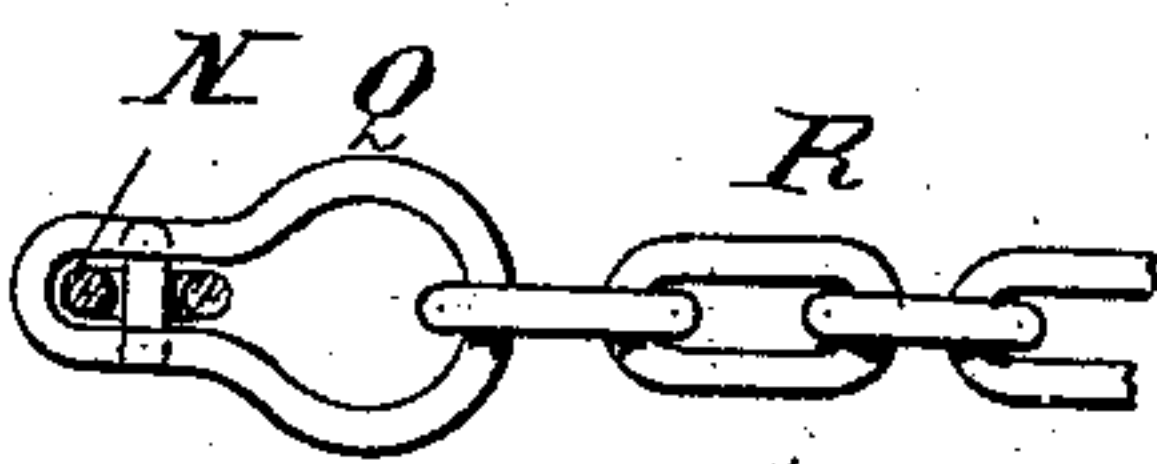
No. 275,540.

Patented Apr. 10, 1883.



WITNESSES:

Chas. Viola
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INVENTOR:

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UNITED STATES PATENT OFFICE.

GEORGE W. TARR, OF NEW YORK, N. Y.

DERRICK.

SPECIFICATION forming part of Letters Patent No. 275,540, dated April 10, 1883.

Application filed February 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. TARR, of the city, county, and State of New York, have invented a new and useful Improvement in
5 Derricks, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
10 corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement, parts being broken away. Fig. 2 is a front elevation of the derrick-post, the jaws and base being shown in section through the
15 line *xxx*, Fig. 1, and parts being broken away. Fig. 3 is a sectional plan view of the same, taken through the line *yy*, Fig. 1, the hoisting-rope and the supporting-chains being removed. Fig. 4 is a sectional elevation of the
20 top cap and bushing, enlarged. Fig. 5 is a plan view of the chain-locking link, a link of the locked chain being shown in section.

The object of this invention is to promote convenience in adjusting and operating der-
25 ricks, and also to increase the strength and durability of said derricks without increasing their size and weight.

The invention consists in a derrick constructed with a post and a boom connected by ad-
30 justable jaws, which are adjusted and supported by adjustable chains. The adjusting and supporting chains are passed through links made narrow in their outer parts and wider in their inner parts, whereby said chains will be made
35 self-locking. The adjustable boom-supporting jaws are provided with a bearing-block to rest against the rear side of the post and prevent the said jaws from tilting. The boom is slot-
40 ted longitudinally, and to it, within the said slot, are pivoted two or more pulleys to receive the hoisting-rope and allow it to be adjusted as may be required. The cap-plate of the post is made with a long hub to prevent uneven
45 wear of the cap-plate and its pivot, as will be hereinafter fully described.

A represents the derrick-post, the lower end of which, or a pivot attached to the said lower end, works in a socket-bearing, B, attached to or formed upon the base C or other suitable
50 support.

Upon the upper end of the post A is formed, or to it is attached, a pivot, D, upon which is

placed a cap-plate, E, which has holes in its outer part to receive the guy-ropes F, by which the said post A is held in an erect position. 55 The hub G of the cap-plate E is extended upward, as shown in Figs. 1 and 4, to give the said plate a longer bearing upon the pivot D, and prevent the said plate from tipping and wearing itself or the said pivot unevenly. 60 The hub G of the cap-plate E is provided with an anti-friction bushing, H, to lessen the wear and friction between the pivot D and the hub G.

I is the boom, the lower end of which is 65 hinged by a bolt, J, to and between two jaws or bars, K, placed upon the opposite sides of the post A and attached to a bearing-block, L, which rests against the rear side of the said post, and is made longer than the depth of the 70 jaws J to adapt it to hold the said jaws K firmly in place and prevent them from tipping. The jaws K project at the rear side of the post A, and to and between their rear ends is pivoted a double pulley or grooved roller, M, 75 around which pass two chains, N. The chains N pass over pulleys O, pivoted to the opposite sides of the upper end of the post A, or to blocks P, attached to the said sides. The forward ends of the chains N are attached to the 80 forward ends of the jaws K. The rear ends of the chains N are passed through the end links, Q, of two short chains, R, the other ends of which are attached to the lower end of the post A. The links Q are made with narrow 85 outer ends to receive a link of the chain N edgewise, so that the end of the next lower link of the said chains N will rest against the lower side of the link Q and serve as a key to lock the said chains in place. The inner ends of 90 the links Q are made wide, so that the chains N can slide through the said ends freely. With this construction the jaws K can be readily raised and lowered to adjust the inner end of the boom I at any desired height by taking 95 up and letting out the chains N, which can be done readily by slipping the locked links of the said chains into the wider inner parts of the locking-links Q. The outer end of the boom I is supported by a rope or chain, S, the lower 100 end of which is attached to the said outer end of the boom I, and its upper end is attached to the upper end of the post A. The middle part of the boom I has a longitudinal slot, I',

formed in it, and in the said slot are pivoted one, two, or more pulleys, T, to receive the hoisting-rope U, which passes over a pulley, V, pivoted in a recess in the lower part of the forward side of the post A, passes down through a perforation in the lower end of the said post A, passes around a pulley, W, pivoted in a slot in the base C, and is led thence to the windlass by means of which the said rope is wound up to raise the weight. The pulley X, that carries the weight-receiving hook Y, can be placed upon the rope U between the end of the boom I and the outer pulley T, as shown in full lines in Fig. 1, or between the pulleys T, as shown in dotted lines in the same figure. When the inner end of the boom I is at the lower end of the post A the rope U passes to the pulley V along the upper side of the said boom, as shown in full lines in Fig. 1; but when the boom I is raised the rope U is passed down around the inner pulley T, and passes below the boom I to the pulley V, as shown in dotted lines in Fig. 1.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The cap-plate E, having an upward extension sleeve or hub, G, and a bushing, H, on the interior thereof, in combination with the pivot D of the derrick-post, as shown and described.

2. In a derrick, the combination, with the rearwardly - extended boom-carrying jaws K and the post A, of the pulleys M O and the adjusting-chains N, substantially as herein shown and described, whereby the inner end of the boom can be readily raised and lowered and will be securely held, as set forth.

3. In a derrick, the combination, with the chains N, of the links Q, having wide inner ends and narrow outer ends, substantially as herein shown and described, whereby the chains are made self-locking, as set forth.

4. In a derrick, the combination, with the adjustable boom-supporting jaws K and the post A, of the bearing-block L, substantially as herein shown and described, whereby the said jaws are held from tipping, as set forth.

5. The weight-hook Y, carrying pulley X, in combination with a rope, U, end-fastened at one end of the boom, passing around pulley X and over pulleys T V W to a convenient position for the application of lifting-power, as described.

GEORGE W. TARR.

Witnesses:

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