

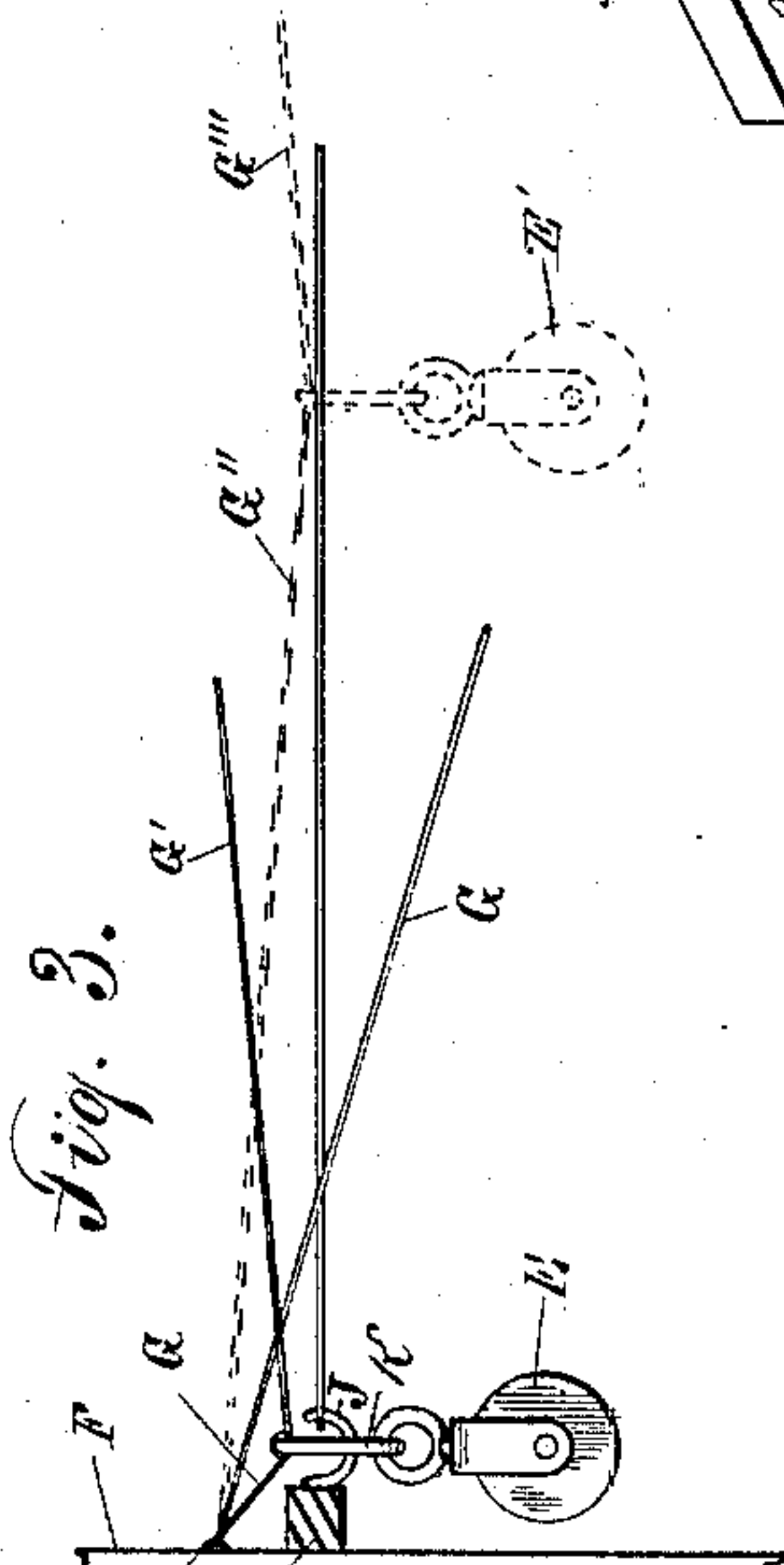
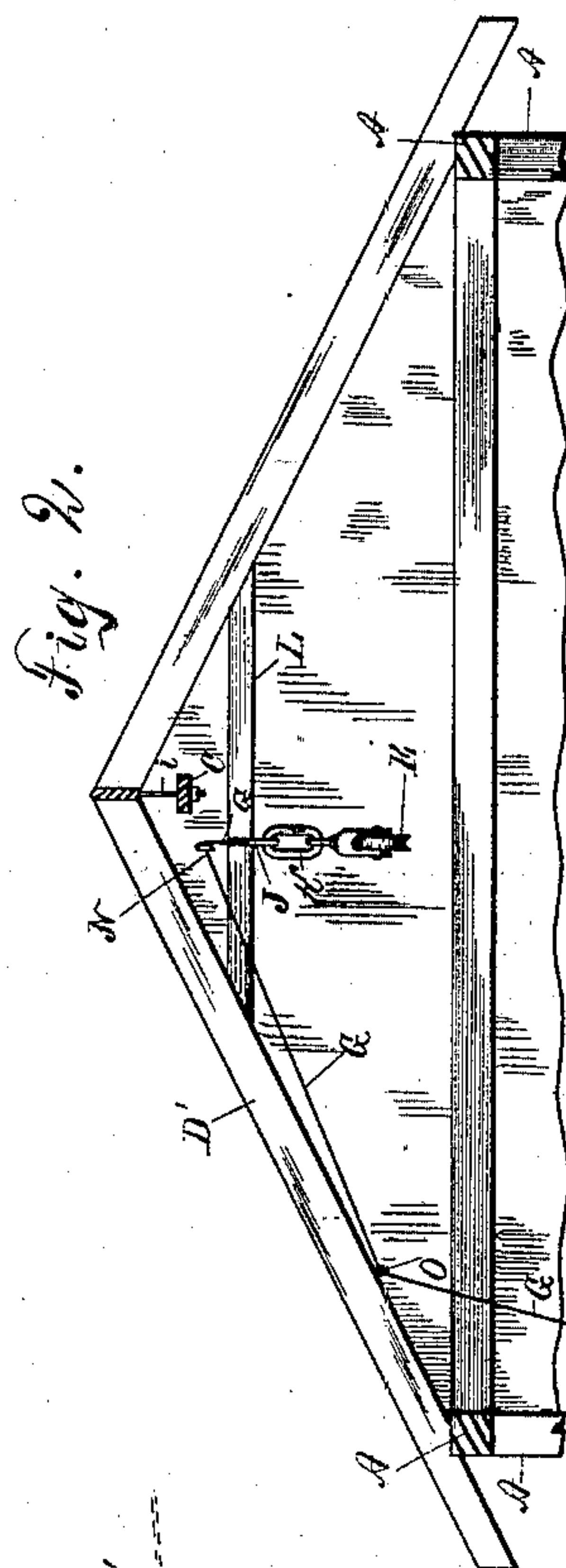
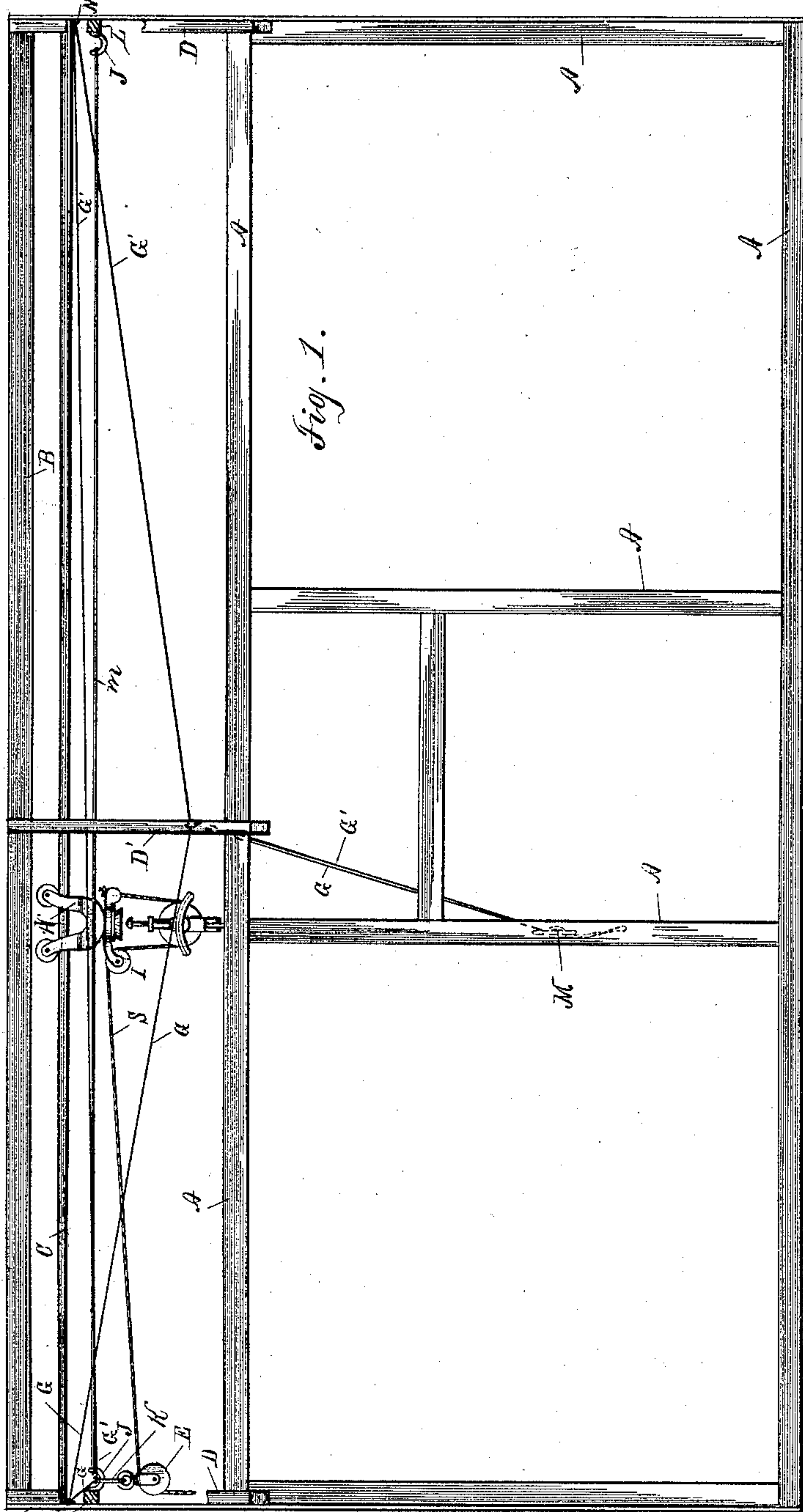
(No Model.)

C. E. HUNT, H. L. FERRIS & N. B. HELM.

HAY ELEVATOR AND CARRIER.

No. 316,462.

Patented Apr. 28, 1885.



WITNESSES:

L. M. Currier
T. D. Wilson

INVENTOR
Charles E. Hunt,
Henry L. Ferris, and
Nathan B. Helm
by Wiles and Greene
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES E. HUNT, HENRY L. FERRIS, AND NATHAN B. HELM, OF HARVARD,
ILLINOIS.

HAY ELEVATOR AND CARRIER.

SPECIFICATION forming part of Letters Patent No. 316,462, dated April 28, 1885.

Application filed January 30, 1885. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. HUNT, HENRY L. FERRIS, and NATHAN B. HELM, residents of Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Hay Elevators and Carriers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in hay elevators and carriers, and is fully described and explained in the following specification, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a barn-frame with the hay-elevating mechanism in position therein; Fig. 2, an internal elevation of one end thereof, showing relative positions of parts; Fig. 3, a partial side elevation of the device on a larger scale than Figs. 1 and 2.

In these views, A A are the posts and plates, D D D' rafters, and B the ridge-pole, of an ordinary barn-frame.

C is a suspended track extending from end to end of the frame, and H is a hay elevator and carrier of any ordinary construction adapted to move along said suspended track.

At either end of the barn, a short distance below the track C, is a cross-piece, L, fastened to the gable-rafters or to the planking of the barn, and in these cross-pieces are set-hooks J J', respectively, each of which is adapted to receive and hold securely the eye or link K of a pulley, E. From the carrier a rope, S, passes over the pulley E, and by means of this rope and pulley the carrier may be drawn from the center of the barn toward either hook, on which the pulley may be fastened. The hooks J J' are at one side of the track C, and preferably a short distance below the lower edge thereof, and immediately over said hooks, respectively, are fastened to the planking or frame of the barn two eyes or small pulleys, N N'. A rod, wire, or cord, m, extends from the point of the hook J to the point of the hook J', and forms a track for transporting the pulley E from one hook to the other; and

two cords, G G', are fastened to the link K of the pulley, and are carried from said link, one through the eye N and the other through the eye N'. From the eyes N N' the two cords are carried through a staple, O, fastened to the rafter D', and thence to a fastening, M, at one side of the door of the barn. The link K is of such length that it may be lifted vertically and then moved laterally out of either of the hooks J J' and onto the wire track m, and when the link is in the hook J, as shown in Figs. 1, 2, and in full lines in Fig. 3, if the cord G be pulled from below, the link will be lifted to the position shown in full lines in Fig. 3. In this position the top of the link is higher than the point of the hook J, and by pulling the cord G' the link may be drawn over the point of the hook and along the wire track, as shown in dotted lines in Fig. 3, until it reaches the hook J', when it will drop into the hook and be secured against the draft of the rope S of the hay-carrier. To move the link K from the hook J' to the hook J the operation just described is reversed, the link being lifted by pulling the cord G' and moved horizontally by pulling the cord G.

We have shown and described this device as operated by two separate cords, G G', as being a more convenient and easily comprehended form for description; but in practice we have found it best to connect the ends of the two cords, thus forming a single endless cord.

The track m, while a great advantage in moving the pulley from one hook to the other, is not absolutely necessary. If the cords G G' be both held taut, the pulley may be taken from one of the hooks J J' and moved across to the other without the support of the track m, or any other support except that afforded by the cords. We do not, therefore, limit our invention to the use of the track in combination with the other elements of our device; nor do we limit the track, when used at all, to any particular material, as any track strong enough to support the pulley may be used successfully.

The operation of our device, when used with a hay-carrier of any form, is evident from the

description and drawings, but may be briefly stated. The operation of the hay-carrier, when the link K is on either of the hooks J J', is the same as if the hooks were not connected 5 by the wire track m, or as if our device were not in use at all. The rope S passes from the carrier over the pulley E, and thence downward to the barn-floor, where it forms a means of raising and lowering the hay-loader and of 10 moving it from the center of the track C toward the pulley E. It is only when it becomes necessary to change the direction of operation of the hay-carrier, or, in other words, when it becomes necessary to move the pulley from 15 one hook to the other, that our device becomes operative.

When it becomes necessary to move the pulley, it is done by raising the link K and drawing it along the wire track m, as above set 20 forth, and at the same time the hay-carrier is reversed in any way to which its construction adapts it.

The carrier shown in the drawings is a swiveling carrier of the general form shown in our 25 patent of November 11, 1884, and reverses automatically on changing the position of the pulley E; but the use of our pulley-changing device is not limited to its combination with a swiveling carrier.

30 Having now described and explained our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a link or ring and two opposite supports, each adapted to receive 35 said ring, of means, substantially as shown and described, for detaching said ring from one of said supports and transferring it to the other.

2. The combination, with a pulley and a 40 link attached thereto, and two opposite hooks, each adapted to receive and support said link, of means, substantially as shown and described, for lifting said link from either of said hooks and moving it to the other.

45 3. The combination, with a pulley and its supporting-link, and two opposite hooks, each adapted to receive and support said link, of a track of suitable material connecting said hooks, and means, substantially as shown and 50 described, for lifting said link from either of said hooks, moving it along said track, and placing it in the other hook.

4. The combination, with a pulley and its supporting-link, and two opposite hooks, each adapted to receive and support said link, of a 55 track of suitable material connecting said hooks, and two cords attached to said link whereby, when the link is in either of said hooks, the drawing of one of said cords lifts the link from said hook, and the drawing of 60 the other cord moves the link along said track to the opposite hook.

5. The combination of the pulley E, link K, hooks J J', eyes N N', and cords G G', said 65 cords G G' being attached to said link and passed through said eyes N N', respectively, substantially as shown and described, and for the purpose set forth.

6. The combination of the hooks J J', the track m, eyes N N', pulley E, and link K, and 70 the cords G G', attached to said link K and passing through the eyes N N', respectively, substantially as shown and described, and for the purpose set forth.

7. The combination, with the track C, car- 75 rier H, pulley E, and rope S, passing from said carrier over said pulley, of the two opposite hooks, each adapted to support said pulley, the link K, attached to the pulley, and the cords G G', attached to said link and adapted 80 to transfer said link from one of said hooks to the other, substantially as shown and described, and for the purpose set forth.

8. The combination, with the track C, car- 85 rier H, pulley E, and rope S, passing from said carrier over said pulley, of the hooks J J', at one side of said track, the track m, connecting said hooks, the eyes N N', above the hooks J J', respectively, and the cords G G', fastened to said pulley and adapted to transfer it from one of 90 said hooks J J' along the track m to the opposite hook, substantially as shown and described, and for the purpose set forth.

In testimony whereof we have signed this specification in the presence of two subscrib- 95 ing witnesses.

CHARLES E. HUNT.
HENRY L. FERRIS.
NATHAN B. HELM.

Witnesses:

N. E. BLAKE,
A. C. MANLEY.