(No Model.) 2 Sheets—Sheet 1.

R. R. OSGOOD.

HEAD BLOCK FOR A-FRAMES OF DREDGES.

No. 285,658. Patented Sept. 25, 1883.

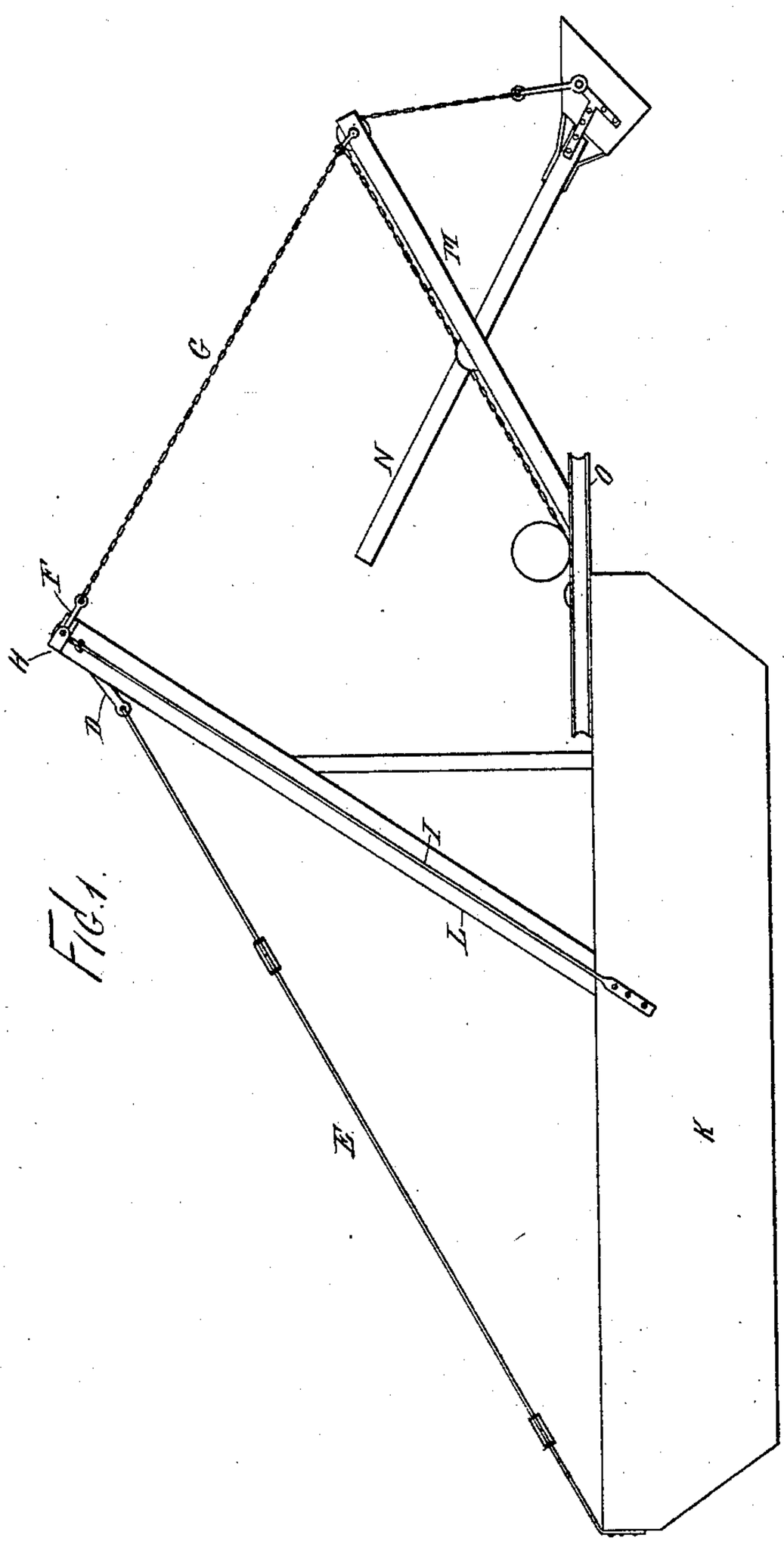

FIG. 1.

Witnesses.
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Frank W. Mansford

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By Wirth Osgood.
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

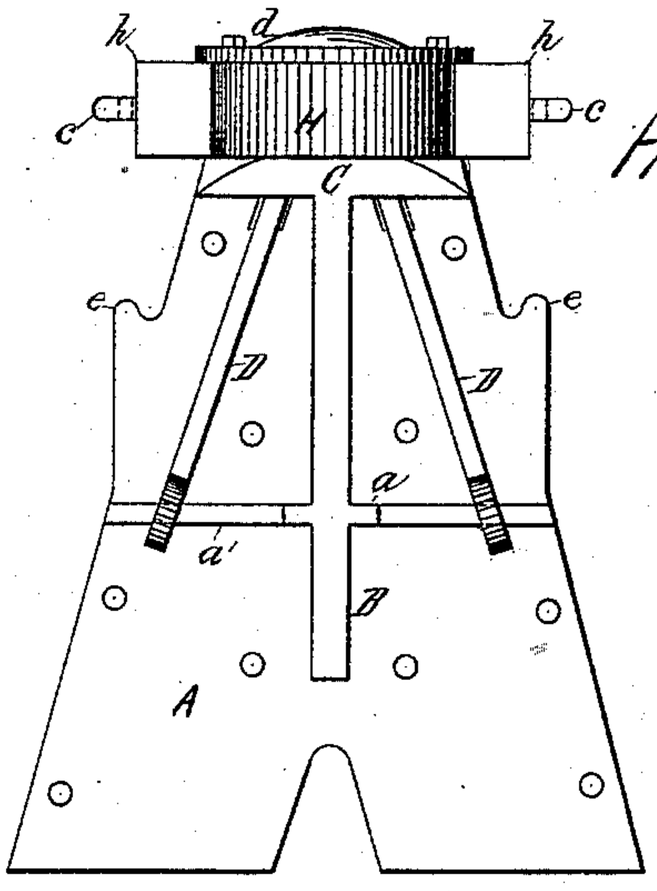


Fig. 4.

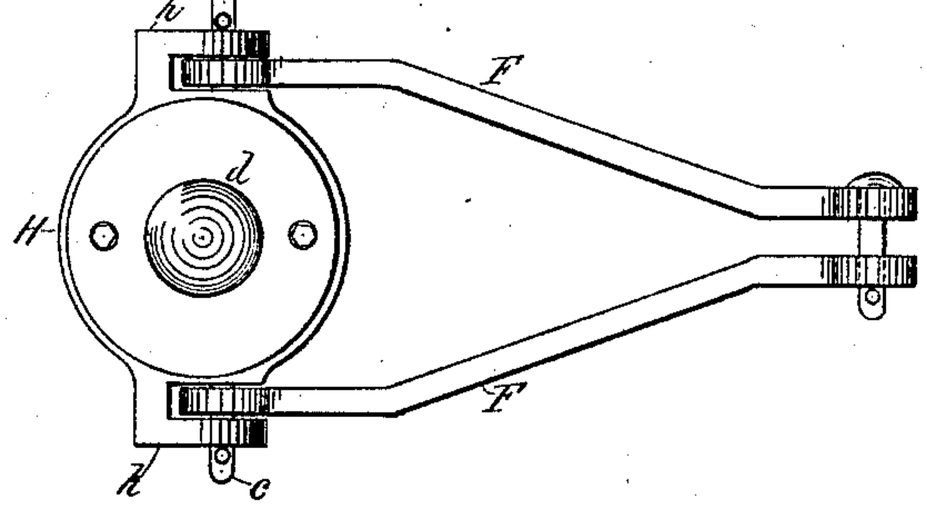


Fig. 3.

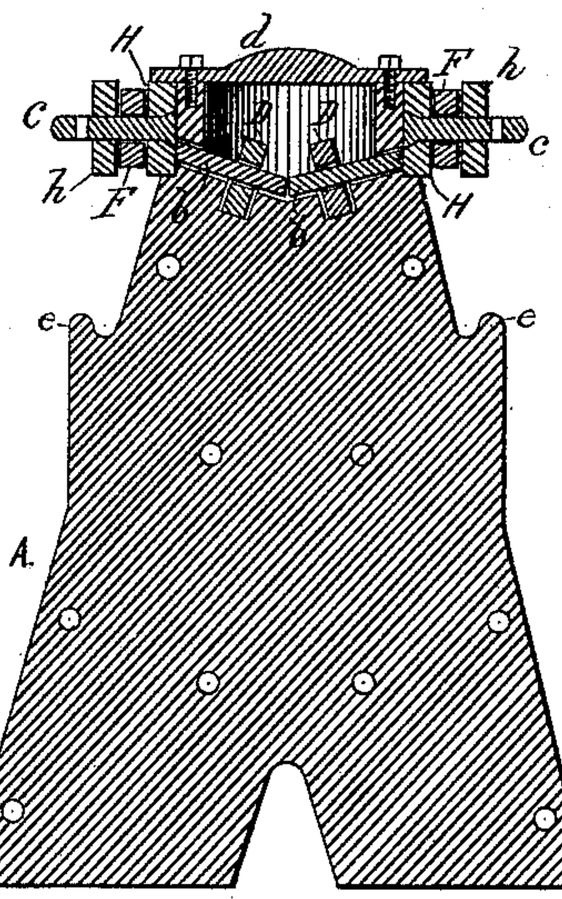


Fig. 5.

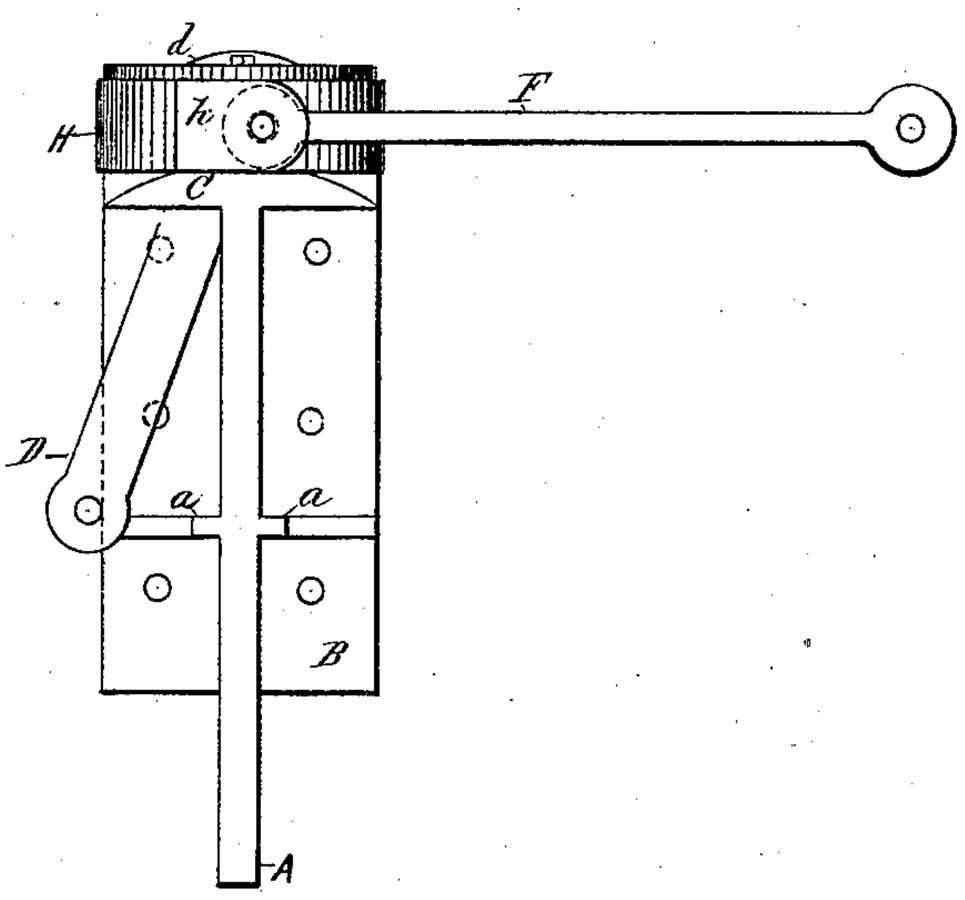
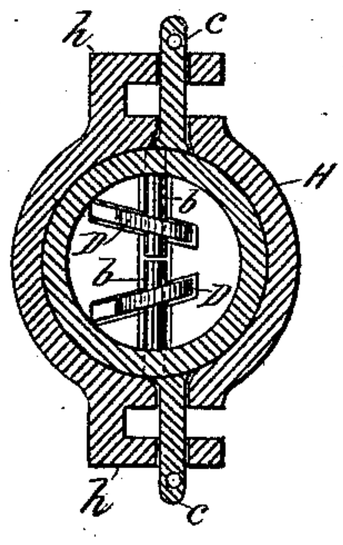


Fig. 6.



Witnesses.
John Buckler,
Frank W. Hanaford.

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Inventor.
By North Osgood,
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UNITED STATES PATENT OFFICE.

RALPH R. OSGOOD, OF ALBANY, NEW YORK, ASSIGNOR TO OSGOOD & MACNAUGHTON, OF SAME PLACE.

HEAD-BLOCK FOR A-FRAMES OF DREDGES.

SPECIFICATION forming part of Letters Patent No. 285,658, dated September 25, 1883.

Application filed January 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, RALPH R. OSGOOD, of Albany, county of Albany, and State of New York, have invented certain new and useful Improvements in Head-Blocks for A-Frames of Dredges and other Hoisting Machinery, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvements have special relation to a device for application to the upper end of a supporting-frame or A-frame of a dredging-machine or excavator, which device affords a means of attachment for the rod or chain which sustains the outer end of the swinging boom; but, as will be understood from a consideration of the following explanation, the improved device or "head-block," as I term it, is equally applicable to the supporting-frames of other hoisting-machines wherein swinging booms or equivalent braces are employed.

Among the principal objects of my invention are the production of a simple, strong, compact, and durable head-block which will afford easy means for connecting it with the timbers or iron-work of the A-frame in a substantial manner, which will sustain the boom-supporting chain or rod in a manner so that the boom may be moved and swung about, and at all times and in all positions of the boom direct the strains arising from the load or draft thereon through the center of the head-block, and which will afford means for connecting the rear tie-rods with the head-block, so that any strain on the tie-rods will be directed through or nearly through the axial center of the head-block; and secondary objects of the invention are the provision of simple means for holding the keys and movable parts against any accidental displacement or disarrangement.

To accomplish all of this my improvements involve certain novel and useful peculiarities of construction, relative arrangements or combinations of parts, and principles of operation, all of which will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, I have shown at Figure 1 a side elevation of a dredging-machine having my improved head-block applied upon the A-frame thereof, and with the rods and boom-supporting chain in place. In this figure the head-block is of necessity represented on a very small scale. Fig. 2 is a view of the head-block detached, and Fig. 3 is an axial section thereof; Fig. 4, an end view; Fig. 5, a side elevation, and Fig. 6 a cross-section and partial elevation upon a plane passing through the bolts which sustain the depending yoke to which the boom chain or rod is applied.

In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

A is the central plate of the head-block, upon which the timbers or metal bars of the supporting-frame are applied, and B is a rib or flange at right angles thereto. These are preferably cast together, though they might be otherwise formed, and they afford a convenient means of coupling the pieces of the frame, holding them firmly together, and sustaining the block in the necessary immovable manner. The timbers of the supporting-frame are usually four in number, and one is placed in each angle between the ribs and central plate. Any suitable number of cross-ribs, as at *a a*, may be applied as required to render the connection perfectly solid. The timbers or pieces abut against the head C, formed with the central plate.

D D are two eye-bars, the inner ends of which project through the head C, being inclined toward each other and taking the general direction of the tie rods or chains, as E, with which they are connected. The inner ends of the eye-bars are brought near to each other, and are sustained by the keys or bolts *b b*, inclined so as to lie at about right angles to the direction of the eyebolts and bearing against the wall of head C. From this construction it will be seen that any strain upon the A-frame resulting from a strain upon the tie-rods will be transmitted through the general central axis of the head-block, and from thence transferred about equally on the several timbers or pieces of the A-frame.

F F are two eye-bars bent to form the yoke with which the boom-chain, as G, is connected with the head-block. This yoke might be otherwise formed.

H is a movable ring mounted upon the projecting end of the head-block, so that it may turn freely thereon and always about or around the central axis of said block. The ring has two ears, *h h*, perforated for the reception of the keys or bolts *c c*, which sustain the upper ends of the yoke, and these bolts or keys pass through the wall of the ring, as shown. The yoke swings upon the bolts *c c*, so as to admit of the raising and lowering of the boom, and when the boom is swung to either side the ring turns upon its seat. Thus the block and its adjuncts accommodate themselves to all required movements of the boom and preserve the same general direction of the strains, no matter what the position of the boom may be. The keys *b b* are long enough to reach through the wall of the head. They are inserted through perforations in the exterior after the eyebolts D are located. The bolts *c c* have an inner head, and they are inserted from the interior of the ring after the yoke is located in the ears. They may be sustained by a pin or otherwise until the ring is finally located. When the ring is put in place, it holds the bolts *c c* and *b b* against accidental displacement. To prevent the ring from being displaced I provide the head with a cap, *d*, the margin of which projects over the ring, and the cap is then securely bolted to the end of the head. The ring might be otherwise held in place.

At *e e* are ears by which side stays or guys, as I, may be applied to the head-block. These lead down along the general direction of the sides of the A-frame and serve to steady it against side strains or wrenching.

I have chosen the dredging-machine upon which to illustrate the operation of my improved device, for the reason that it is specially advantageous for use in connection therewith, the various strains thereon being great, both when the dipper is taking its load and when the load is swung to one side for dumping; but, as before explained, the improved device may be employed on other machines as well. It will be found advantageous upon any machine—light or heavy—wherein a swinging boom is employed.

K represents a dredge-boat; L, an A-frame; M, swinging boom; N, dipper-handle, and O turn-table.

When constructed in accordance with and arranged to operate substantially as explained, the improved device will be found to admirably answer all the purposes and objects of the invention as previously stated.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a head-block of the character herein set forth, the eyebolts projecting through the end, inclined toward each other, and secured by keys, substantially as and for the purposes set forth.

2. The ring mounted and turning upon the end of the head-block, and provided with ears, one on each side, arranged to support the ends of the yoke, substantially as and for the purposes set forth.

3. In a head-block of the character herein set forth, the plate for attachment to the A-frame, the eyebolts for the stay-rods, arranged as explained, and the movable ring for supporting the yoke, combined and arranged for operation substantially as shown and described.

4. In a head-block of the character herein set forth, the keys for sustaining the inner ends of the eyebolts, arranged at right angles to the direction of said bolts, and held against displacement by the movable ring, substantially as and for the purposes set forth.

5. In a head-block of the character herein set forth, the keys for sustaining the ends of the yoke, arranged to be inserted from inside the movable ring, and held in place substantially as shown and described.

6. In a head-block arranged for connection with the timbers or pieces of the A-frame, and having the eyebolts and movable yoke-supporting ring, the combination, with the main or central plate, of the projecting ears for attachment of the side guy-rods, substantially as and for the purposes set forth.

7. The herein-described improved head-block for A-frames, having the central plate and ribs, the eyebolts, movable ring, keys, and cap-piece, all arranged and combined substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

RALPH R. OSGOOD.

Witnesses:
F. W. HANAFORD,
JOHN BUCKLER.