

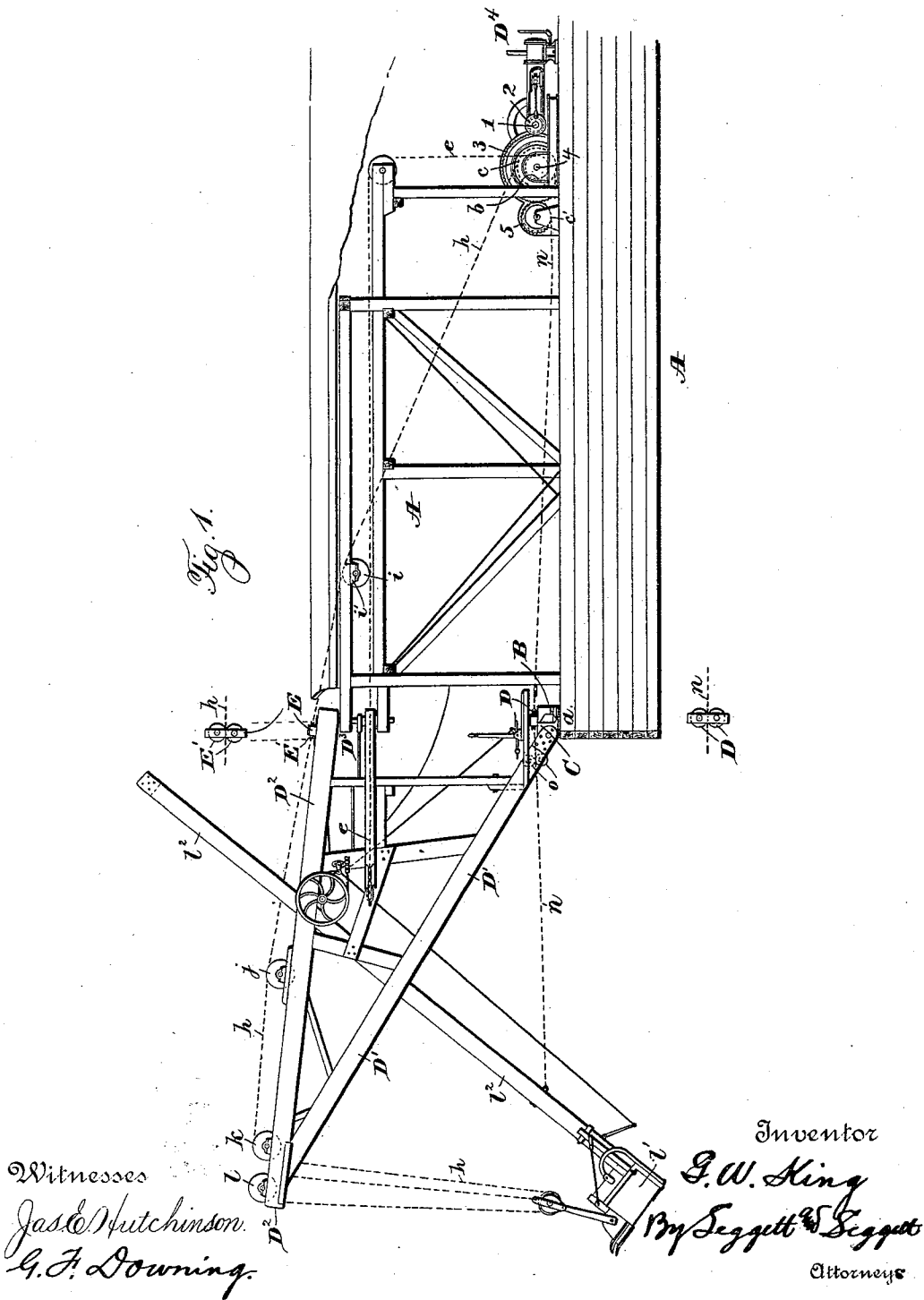
(No Model.)

2 Sheets—Sheet 1.

G. W. KING.
DREDGER OR TRAVELING CRANE.

No. 494,637.

Patented Apr. 4, 1893.



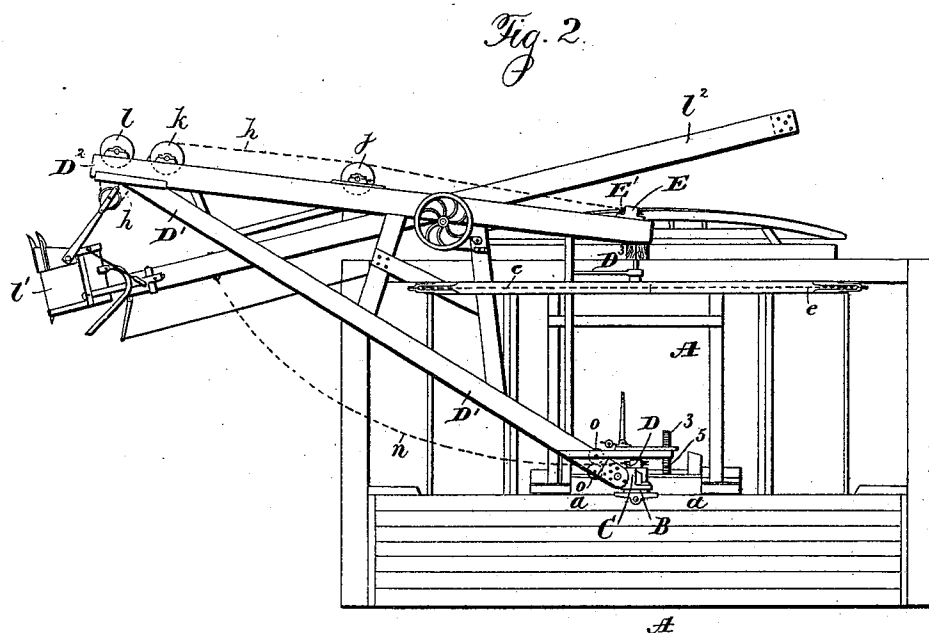
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Witnesses

Jas. E. Hutchinson.
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Inventor
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UNITED STATES PATENT OFFICE.

GEORGE W. KING, OF MARION, OHIO.

DREDGER OR TRAVELING CRANE.

SPECIFICATION forming part of Letters Patent No. 494,637, dated April 4, 1893.

Application filed May 5, 1892. Serial No. 431,915. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. KING, a resident of Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Dredgers or Traveling Cranes; and I 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 appertains to make and use the same.

My invention relates to an improvement in dredgers or traveling cranes, the object of the invention being to provide simple and efficient means whereby the hoisting chain will be carried and guided from the hoisting mechanism to the point or forward portion of the crane or boom, when said crane or boom is connected with the body of the dredger, at the upper portion thereof as well as at the lower portion.

A further object is to provide simple means whereby the hoisting chain will be properly carried and guided past the upper pivotal connection of the boom or crane with the body of the machine.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a dredger embodying my invention. Fig. 2 is an end view.

A represents the dredger, on the forward portion of which timbers *a* are located, on which a strong journal B is securely fastened. On this journal is placed a hub or box C, so arranged as to receive the foot of the crane or boom D', which is connected to it. The upper beam or member D² of the boom or crane is pivotally connected to the body portion of the dredger at or near the top thereof, as at D³. Secured to the top of the hub or box C is a frame, in which a pair of sister pulleys D is mounted.

Located on the upper beam or member D² of the crane in close proximity to its pivotal connection with the body of the dredger, is a bracket E, in which sister pulleys E' are arranged, side by side.

Located on the dredger, preferably about

midway between its ends, is a steam engine D⁴ (or other motor), adapted to transmit motion to a shaft 1, to which a pinion 2 is keyed. The pinion 2 is adapted to mesh with and convey motion to a gear wheel 3 carried by a shaft 4. The shaft 4 also carries a series of drums *b*, and *c*, and preferably a series of clutches for throwing one or more of said drums into or out of action. Located in advance of the shaft 4 is a drum *c'*, on the shaft of which a pinion 5 is secured and adapted to mesh with the gear wheel 3,—the shaft of the drum *c'* being also preferably provided with clutch mechanism. The chain *e* for swinging the crane or boom is connected at its ends to the drums *b*,—at a point between its ends to the boom and at intermediate points is passed over suitable pulleys. A chain *h* is secured at its rear end to the drum *c*, from which it passes over a pulley *i* supported by a bracket *i'* secured to the roof of the dredger at its forward end. After passing over the pulley *i* the hoisting chain *h* passes between the sister pulleys E' located on the beam or member D², then over a pulley *j* carried by the beam or member D², and over pulleys *k*, *l* at the forward end of the crane or boom and finally said chain is connected with the bucket *l'*, carried by the beam or gaff *l'*. The rear end of the haul-back chain *n* is secured to the drum *c'*, from whence it is carried forwardly and passed between the sister pulleys D carried by the box or hub C. After passing through the sister pulleys D, said haul back chain is passed between sister pulleys *o* carried by the crane or boom and the forward end of said chain is secured to the beam or gaff *l'*.

From the construction and arrangement above described in connection with the hoisting chain, it will be seen that when the boom or crane is swung in either direction, the sister pulleys E' will turn with said boom or crane and the hoisting chain made to bear on one or the other of the sister pulleys. It will also be seen that as the sister pulleys are arranged in very close proximity to the fulcrum of the boom or crane, the swinging of said boom will not materially throw the chain out of line.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a traveling crane, the combination
5 with a boat or body portion and a boom or
crane having a member pivotally connected
to the body portion at or near its top, of sister
pulleys carried by said boom or crane in
close proximity to its pivotal-connection to
10 the upper portion of the body portion, and a
hoisting chain passing between said sister
pulleys, substantially as set forth.

2. In a traveling crane, the combination
with a body portion or framework, and a boom
pivotally connected thereto at or near its top,
15 of sister pulleys carried by said boom or crane
at or in close proximity to its pivotal connection
with the top of the framework, a pulley
located in the top of the framework, a drum
a motor and means for transmitting motion
20 to said drum, and a hoisting chain connected
to said drum, passing over the pulley in the

top of the frame and passing through said
sister pulleys, substantially as set forth.

3. In a traveling crane, the combination
with a boat or body portion and a boom or 25
crane pivotally connected to said boat or
body portion at two points, one above the
other, of sister pulleys carried by the boom at
or in close proximity to its upper pivotal connection,
a hoisting chain passing between 30
said sister pulleys, sister pulleys carried by
the hub of the boom and a haul back chain
passing between the last-mentioned sister
pulleys, substantially as set forth.

In testimony whereof I have signed this 35
specification in the presence of two subscribing
witnesses.

GEORGE W. KING.

Witnesses:

J. A. WALFORD,
J. F. MCNEAL.