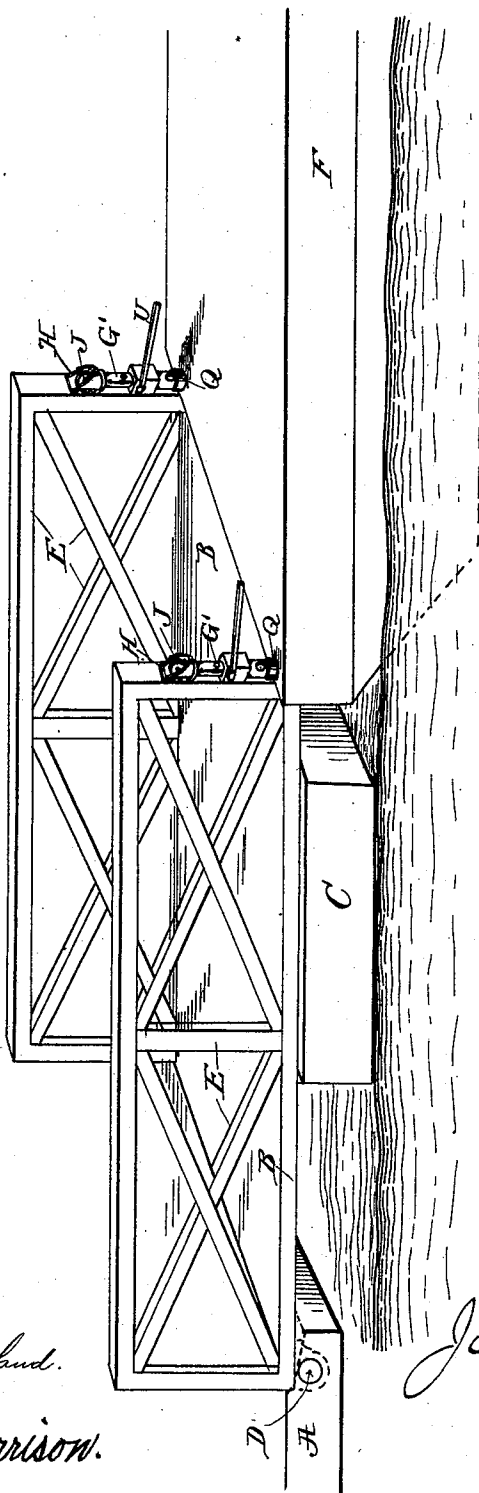


(No Model.)

J. WEEKS.
DOCK AND VESSEL LEVELING DEVICE.

No. 568,421.

Patented Sept. 29, 1896.



WITNESSES:

Edward L. Rowland.

Archie B. Morrison.

INVENTOR

John Weeks
BY *Phillips Abbott*
ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN WEEKS, OF NEW YORK, N. Y., ASSIGNOR TO JOHN F. DETTMAR AS
EXECUTOR OF RICHARD DUDGEON, DECEASED.

DOCK AND VESSEL LEVELING DEVICE.

SPECIFICATION forming part of Letters Patent No. 568,421, dated September 29, 1896.

Application filed November 16, 1895. Serial No. 569,153. (No model.)

To all whom it may concern:

Be it known that I, JOHN WEEKS, a citizen of the United States, and a resident of New York, in the county of New York and State
5 of New York, have invented a certain new and useful Dock and Vessel Leveling Device, of which the following is a specification.

My invention relates to a new and useful device for securing the proper levels between
10 a float or bridge and a scow or other vessel which is to be made fast thereto, so that cars, drays, wagons, &c., may pass from one to the other easily and without any considerable shock.

15 The drawing hereof illustrates a perspective view showing, generally, the arrangement and relative location of the dock or bridge, the scow, and the leveling hydraulic jacks.

A is a permanent or fixed dock.

20 B is the bridge or floating dock, supported upon a pontoon C.

D are the pivots or other means whereby the floating dock is attached to the fixed dock.

25 E E are the truss-frames of the floating dock.

F is the scow, barge, or other vessel.

G G are the leveling hydraulic jacks, which form the subject of this invention. They are
30 or may be of any preferred construction. I prefer a form specially constructed by me for this purpose, which, inasmuch as it forms the subject-matter of a separate application for Letters Patent, will not be described here, excepting to say that the jack is pivotally connected to the dock, so that movement of the vessel or dock may be permitted without fracture of the jack or any part thereof.

The means for pivotally supporting the
40 jacks are as follows: H is a bracket fastened to the framing of the dock or to a post or other framing upon the vessel, as may be preferred, and J is a wheel rotating upon a suitable axis forming part of the bracket, and
45 a chain, as shown, passes over the wheel J, and both ends of it are attached to the head of the jack by which it is supported, and the upper end of the jack bears against the under plate of the bracket and is seated against it.

50 The operation of the device is as follows: Ordinarily on floating bridges or docks

chains and windlass are employed, they being attached to some stationary part of the structure for the purpose of elevating or depressing the floating end of the dock; but it
55 frequently happens that these devices are not present, or, if they are, that the difference in elevation between the vessel and dock will be such that these chains cannot bring them to a level, so that the dowel timbers, which are
60 used to maintain level between the two as the train or other heavy object passes from one to the other, cannot be manipulated or brought to place. By my invention, therefore, if the chains referred to be wanting, or if, when
65 present, they cannot effect the proper relation between the two, then my device accomplishes the desired result in the following manner: The rams being in their uppermost position, that is to say, entirely or nearly withdrawn
70 within the cylinders, the vessel is brought up against the dock or bridge and is made fast. Then an operator, preferably upon the vessel, although he may be upon the bridge or dock, if preferred, manipulates the pumps of
75 the jack by means of the pumping-lever. The operation of the pumps is too well understood to require detailed description, excepting to say that by their instrumentality the rams of the jacks are forced downwardly,
80 and the relative position of the bridge or dock, the vessel, and the ram is such that the lower end of the rams as they descend engage with the front edge of the vessel, and, the pumping being continued, one of them is depressed
85 and the other elevated by the pressure applied by the rams of the jacks. When the desired leveling has been secured, the cars, drays, or other vehicles or cargo will easily
90 and without shock pass from one to the other, and if dowel timbers are used they may be properly manipulated to maintain the level between the two prior to the passage of the vehicle or other cargo. If, as frequently happens,
95 wave action or air-currents cause the vessel to sway or move, then the chain and the wheel which support the jack will permit it to compensate and adjust itself to such movements without injury to or fracture of any part. Owing to the enormous power of hydraulic
100 jacks, the needful pressure to level the dock and vessel may be secured in a manner unat-

tainable with any other available apparatus. After the vessel has been loaded or unloaded, as the case may be, and has to leave the dock or bridge by proper manipulation of the jack, as is well understood, the pressure of their
5 rams is relieved, and the vessel is then free to move away.

I do not in this application claim the construction of the hydraulic jack and its at-
10 tachments, whereby it is peculiarly adapted to the purposes above stated, because it forms the subject-matter of another application for Letters Patent filed by me and pending concurrently herewith, the same being serially
15 numbered 593,120; and I do not in this case claim the details of construction of the parts, since they may be modified and still the essentials of the invention be present.

I claim—

1. In combination with a dock or like struc- 20
ture, a hydraulic jack permanently attached thereto by a pivotal connection, and so located thereon as to be in operative position relative to a vessel, when brought up to the dock, for the purposes set forth. 25

2. The combination of a float pivotally connected at its shore end, and a hydraulic jack permanently attached thereto, and so located thereon as to be in operative position relative to a vessel when brought up to the dock, for
30 the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 8th day of November, A. D. 1895.

JOHN WEEKS.

Witnesses:

PHILLIPS ABBOTT,
ARCHIE B. MORRISON.