(No Model.)

C. W. DOTEN.

SUPPLEMENTAL GANGWAY FOR FERRY BOATS.

No. 308,308. Patented Nov. 18, 1884.

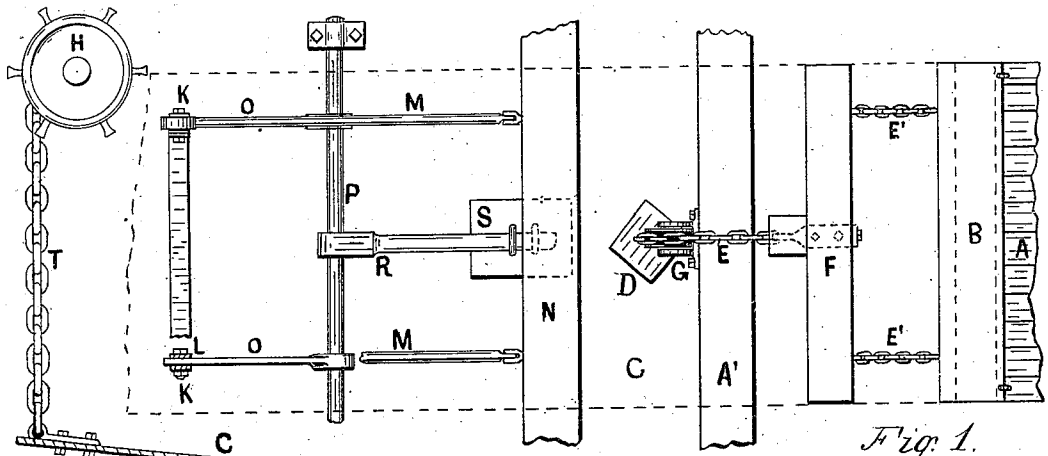


Fig. 1.

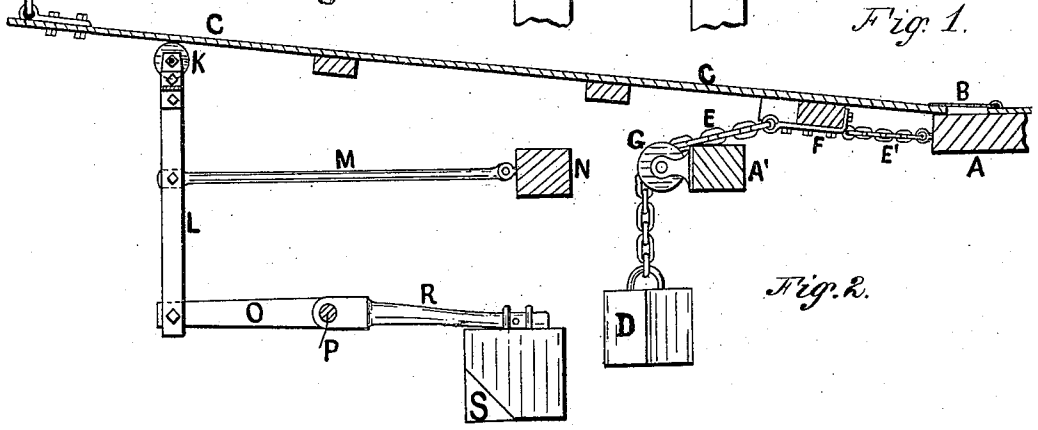


Fig. 2.

Witnesses:

Chas. S. Gooding.

W. R. Marble

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Clark W. Doten.

By Sylvenus Walker

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UNITED STATES PATENT OFFICE.

CLARK W. DOTEN, OF BOSTON, MASSACHUSETTS.

SUPPLEMENTAL GANGWAY FOR FERRY-BOATS.

SPECIFICATION forming part of Letters Patent No. 308,308, dated November 18, 1884.

Application filed September 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, CLARK W. DOTEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Supplemental Gangways for Ferry-Boats, of which the following is a specification.

The object of my invention is to provide a cheap, simple, safe, and convenient supplemental gangway for ferry-boat slips, which shall overcome the danger and liability to accidents from passengers leaving a ferry-boat on account of the unequal vertical movement of the free end of the gangway and the end of the ferry-boat adjacent thereto, as heretofore constructed; and it consists in the construction, combination, and arrangement of a supplemental gangway or passenger footway, hereinafter more fully described, and set forth in the claim.

Figure 1 represents a plan of a supplemental drop or footway embodying my invention. Fig. 2 represents a side sectional elevation of the same.

A represents the rear timber of the frame of the drop, to the upper side of which is pivoted or hinged the iron shield-plate B, its front edge portion resting upon the rear edge of the supplemental drop or footway C, which is free to have imparted to it a longitudinal movement, being drawn forward by the weight D and connecting-chains E E′, the latter one, E′, being connected at one end to the said frame A of the drop, and its opposite end to the support F of the supplemental drop C, and the other chain, E, connecting at one end with the said support F and passing over the friction-pulley G, journaled upon the frame-timber A′ of the said drop proper, and having connected to its opposite end a weight, D, which serves to draw the supplemental drop or footway C forward over the edge or end of a ferry-boat entering the slip, so as to cover the intervening opening or space between the end of the ferry-boat and drop end, and permit the boat end to move up and down and carry the overlapping end of the said supplemental drop or footway C therewith, or up and down with the motion of the end of the boat, thus keeping the dangerous opening covered while passengers are passing over the same in leaving the boat or entering upon the same. The free or forward end of this supplemental drop or footway C is arranged to rest upon a friction-roll, K, pivoted to the end, or at the upper end of the vertical pivoted support L, to the middle of which is connected the horizontal rod M by a pivot-joint, and the rear end of the said rod M being pivoted to the cross-timber frame N of the drop proper, and to the lower end of the said vertical support L is pivoted the end of horizontal arm O, the opposite end being secured upon the cross-shaft P, and to the said cross-shaft being secured the end of the arm R, the opposite end of which is provided with a counterbalance or weight, S, which nearly balances the free end of the said supplemental drop or footway C, so that it may be easily raised and lowered by means of the chain T, passing over the hand-wheel H, which, being turned in the right direction by the attendant, may be quickly raised to a position above the end of the ferry-boat about to enter the slip, and when the boat is secured to the drop be instantly lowered upon the end of the same, so as to cover over the opening joint or meeting end of the boat and adjacent end of the drop so as to render movement of the passengers thereover perfectly safe and free from danger or accidents by getting their feet caught between the said end of the boat and drop when a boat may be moving nearer thereto or moving vertically therewith so as to occasion a dangerous opening. This supplemental drop or footway may be connected so as to admit of being raised and lowered or operated in connection with any kind of a traffic or carriage-way drop, or, if desired, may be arranged to rise and fall in unison therewith or independently thereof, as circumstances may favor.

In the above description I have set forth one method of operating such supplemental footway and illustrated the same fully by the accompanying drawings; but I do not confine my invention to such, as it may be varied as circumstances require.

Having thus described my invention, what I claim is—

The combination, with a ferry-boat drop, of the supplemental footway loosely hinged or

pivoted at one end to the said drop, and the opposite end adapted to be raised and lowered by means of a hand-wheel and chain, as described, and having longitudinal movement imparted thereto by means of the counterbalance, whereby the opening between the end of the drop and ferry-boat may be closed, all being constructed and arranged to operate substantially as described, as and for the purposes set forth.

CLARK W. DOTEN.

Witnesses:
SYLVENUS WALKER,
F. H. BEAN.

Corrections in Letters Patent No. 308,308.

It is hereby certified that Letters Patent No. 308,308, granted November 18, 1884, upon the application of Clark W. Doten, of Boston, Massachusetts, for an improvement in "Supplemental Gangways for Ferry-boats," should have been issued to the said Clark W. Doten *and Daniel H. Bishop*, of Chelsea, Massachusetts, assignee of one-half interest in said invention; that the correction has been made in the files and records of the case in the Patent Office, and should be read in the Letters Patent to make it conform thereto.

Signed, countersigned, and sealed this 2d day of December, A. D. 1884.

[SEAL.]

M. L. JOSLYN,
Acting Secretary of the Interior.

Countersigned:

BENJ. BUTTERWORTH,
Commissioner of Patents.