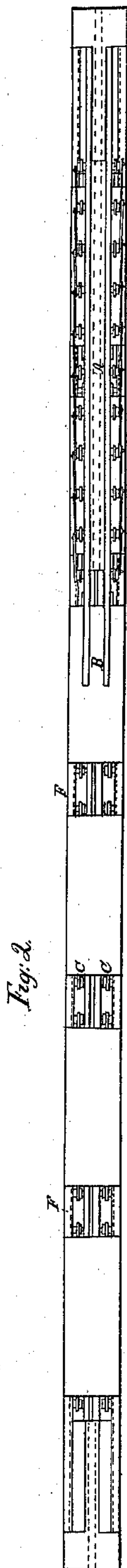
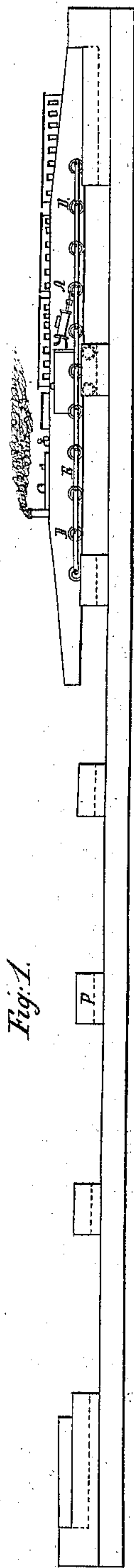


F. Field.
Draw Bridge.

N^o 10,817.

Patented Apr. 25, 1854.



UNITED STATES PATENT OFFICE.

FREDK. FIELD, OF ADRIAN, MICHIGAN.

TRAVELING BRIDGE.

Specification of Letters Patent No. 10,817, dated April 25, 1854.

To all whom it may concern:

Be it known that I, FREDERICK FIELD, of Adrian, in the county of Lenawee and State of Michigan, have invented a Mode of Crossing Rivers Without Obstruction to Navigation, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same.

My invention consists in a mode of crossing navigable waters without obstructing navigation, the main feature of which is a traveling bridge or carriage propelled over and upon piers so placed in the waters as to leave sufficient room between them for vessels to pass.

The traveling car is shown at A, Figures 1 and 2, and may be described as a long box to be made of iron or wood according to circumstances, into which railroad trains or vehicles of any kind are to be driven, to be carried over the piers. The traveling car when intended for railroad cars alone may have about one-sixth of its entire length without a floor as shown at B. The underside of the car is furnished with suitable rails to run upon the rollers or wheels placed on the piers P. These friction rollers or wheels are shown at G, G, and must have their axles large in consequence of the great weight they may have to sustain. The traveling bridge must in all cases be of sufficient length to reach across two spaces and over three piers, and the burden so disposed as to be distributed between the two farthest apart of the three. In regard to the mode of propelling this bridge, it is obvious that there may be several; as for instance it may be drawn over by means of chains kept down or sunk a little below the bed of the river, using for this purpose stationary steam engines on shore, or it may be propelled by means of steam engines placed upon the

piers, and turning the friction wheels or rollers; but the mode which I prefer is to make the traveling bridge a locomotive-bridge of itself. For this purpose it is provided with a set of driving wheels D, D, all united by the coupling rods E, E, and running upon the side tracks upon the piers which are shown at F, F, in blue lines. As the weight will be somewhat divided upon these tracks and the friction rollers, adjustments, by springs or otherwise, must be made to insure sufficient traction upon the rails. The steam engines may be attached to the sides of the traveling bridge or placed in such position as may be found most convenient.

I do not claim a retractile drawbridge nor any of the appliances by which such bridges are moved, and I wish to be understood that I distinguish my bridge from all others, and claim it as such, that my bridge acts as a carriage as well as bridge receiving its load upon it, while resting on the abutments or one side of the span or spans to be crossed, carries the load over and rests upon the other side to receive its return load and so back and forth, leaving the spaces between the piers open for vessels, etc.

What I claim as my invention, is—

The mode, substantially as herein set forth, of crossing navigable waters without obstruction to navigation, the same consisting in a traveling bridge, supported upon friction wheels or rollers fixed upon the piers and abutments, the traveling bridge being sufficiently long to extend across two or more spaces between the piers and to be propelled either by steam engines attached to said bridge or fixed upon the piers or on shore as may be found most convenient.

FREDERICK FIELD.

Witnesses:

WM. GREENOUGH,
TOLMIE CAMPBELL.