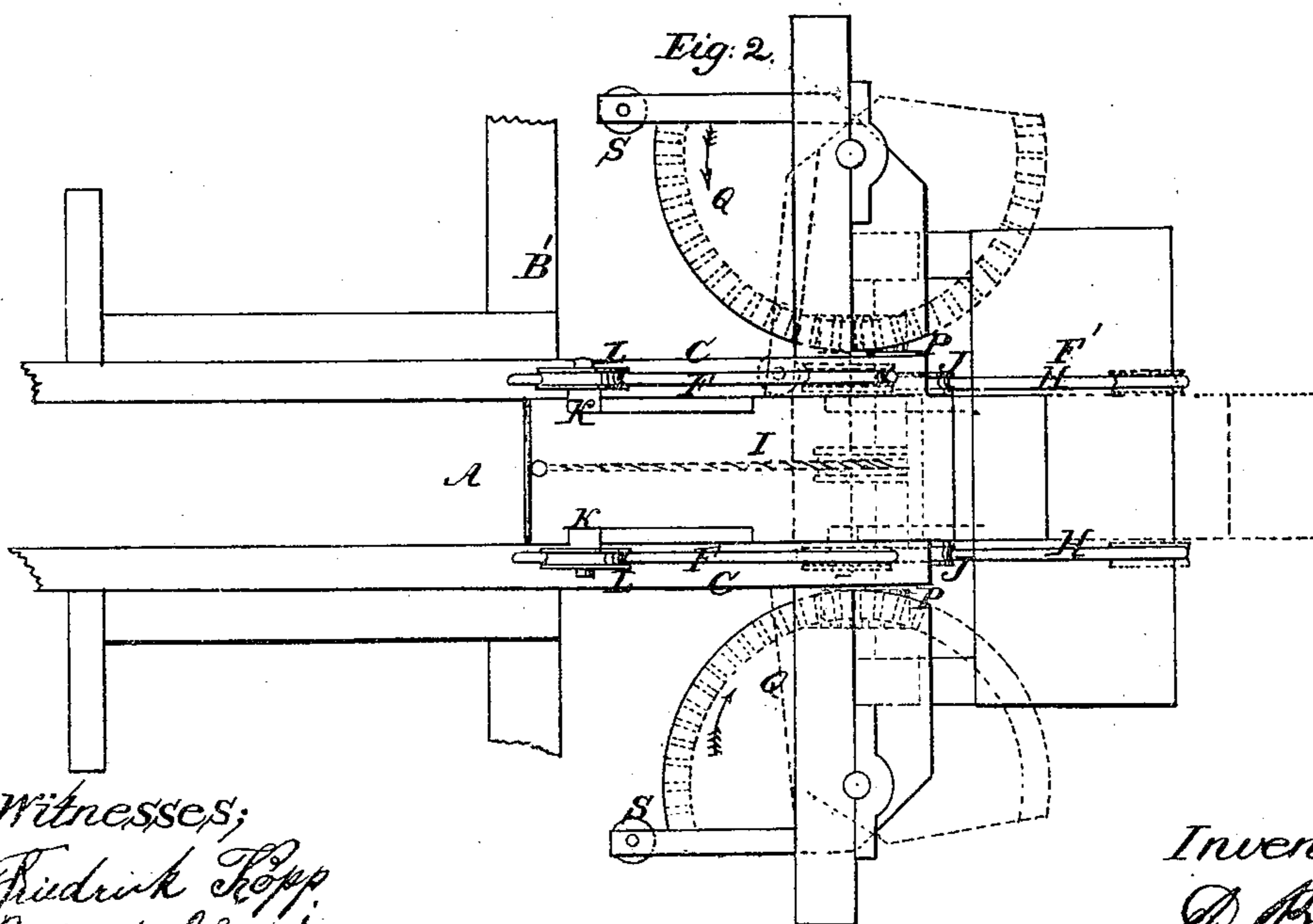
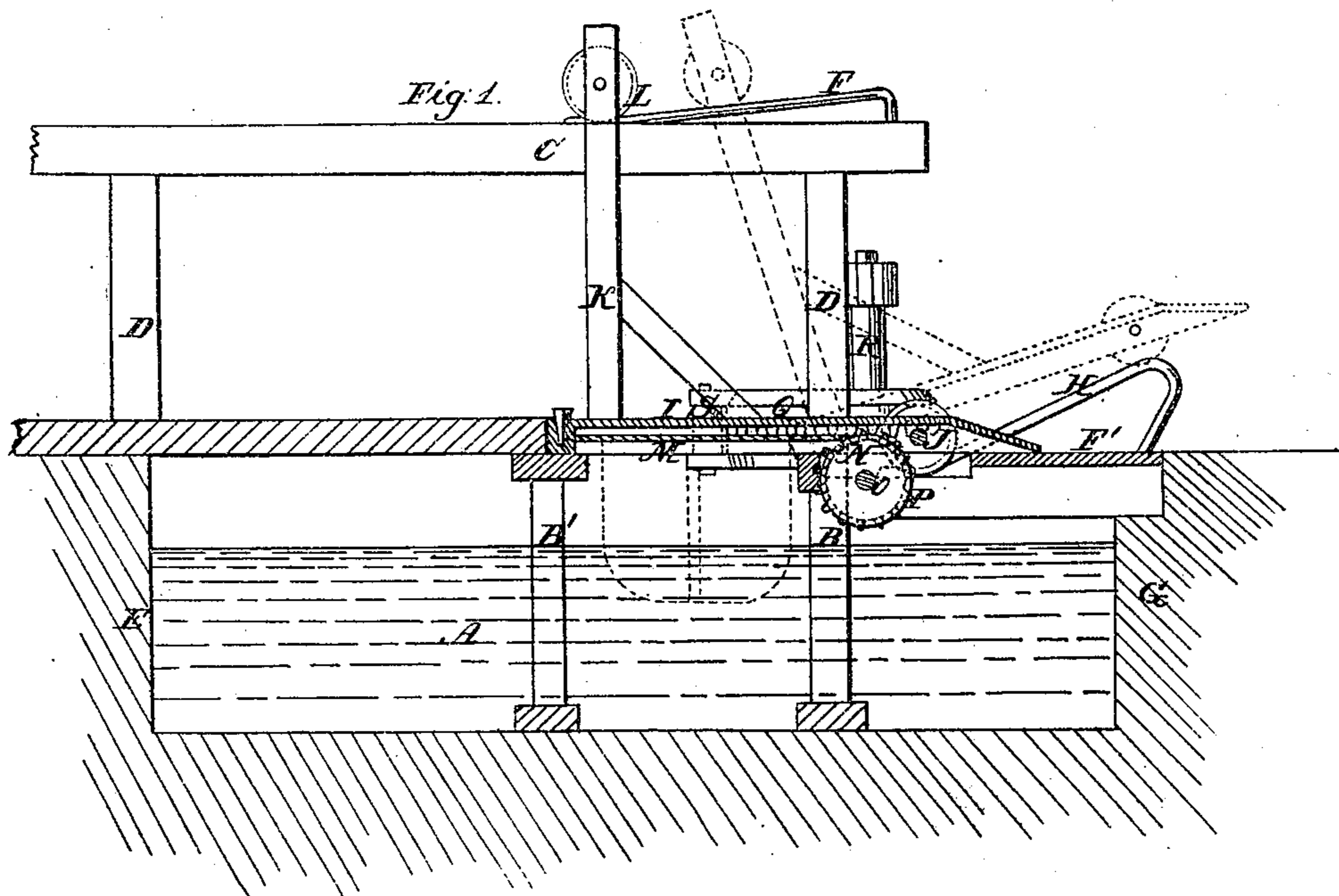


D. Berry.
Canal Bridge

N^o 26156.

Patented Nov. 22. 1859.



Witnesses;
Friedrich Kopp
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Inventor;
D. Berry.

UNITED STATES PATENT OFFICE.

D. BERRY, OF HUNTINGTON, INDIANA.

AUTOMATIC CANAL-BRIDGE.

Specification of Letters Patent No. 26,156, dated November 22, 1859.

To all whom it may concern:

Be it known that I, D. BERRY, of Huntington, in the county of Huntington and State of Indiana, have invented a new and Improved Canal-Bridge; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side sectional view of my invention. Fig. 2, a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a bridge for canals that may be opened by a boat as it passes along and closed by its own gravity after the boat has passed, the device being perfectly automatic in its operation throughout, and thereby allowing low bridges to be used in cases where high piers and bridges are now required in order to allow the boats to pass underneath them.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a cross section of a canal and B, B', represent longitudinal framings within the canal between which the boats pass, said framing forming supports for the bridge and its concomitant parts.

C, C, are parallel beams which are supported by uprights D, from the framing B, and pin E. On each beam C, an inclined way F, is secured.

F', is a platform one end of which rests on the framing B, and the other on a pin G. This platform F', has two inclined ways H, H, on it.

I, is a bridge the outer end of which is provided with wheels J, J, one at each side. These wheels have grooved peripheries and they run or work on the ways H, H. The bridge I, near its inner end has two uprights K, K, attached to it and properly braced. These uprights K, extend up between the parallel beams C, C, and have wheels L, L, attached to them one to each, said wheels running or working on the inclined ways F, F, on the beams C. The ways F, F, and H, H, are inclined in the same direction and the ways H, are rather more inclined than the ways F, as plainly shown in Fig. 1.

The bridge when closed extends entirely across the space between the two framings

B, B', its inner end being over the top of the framing B.

To the inner end of the bridge I, a rope or chain M, is attached. This rope or chain is secured to and passes around a wheel N, on a shaft O, which is at the upper part of the framing B. This shaft O, has two pinions P, P, on it, one near each end and into the pinions segments Q, Q, gear.

The segments are placed on vertical shafts R, the journals of which are allowed to turn freely in their bearings. The inner edges or sides of the segments Q, Q, extend entirely or nearly across the space between the two framings B, B', and each inner side has a friction roller S, fitted in it.

The operation is as follows:—A boat in passing along and passing through the bridge at either side will strike a segment Q, and actuate it in the direction of the arrow upon it, see Fig. 2. This movement of the segment, will rotate the shaft O, and the wheel N will wind the rope or chain M, on it and throw back the bridge I, as indicated in red, the wheels J, L, diminishing friction and thereby allowing the bridge to move readily back under the action of the boat. The bridge is retained in an open state by the boat as the latter passes between the framings B, B', and when the boat has passed between the framings and the last segment Q, is free from it, the bridge closes by its own gravity the wheels L, J, passing down their respective inclined planes F, H, and the segments in consequence of their connection with the bridge returning across the space between the framings B, B'.

The rollers S, S, diminish friction as the boat passes between the framings as said rollers bear against the side of the boat.

Having thus described my invention what I claim as new and desire to secure by Letters Patent—

The bridge I, arranged to work on inclined ways F, H, and connected by a chain and wheel M, N, or their equivalents to a shaft O, which is connected by gearing to segments Q, in line with the bridge and the boat so that the former can be actuated by the movement of the latter, substantially as described.

D. BERRY.

Witnesses:

FRIEDRICK KOPP,
ROBERT CLARK.