

F. BAIER.
Draw-Bridge Gates.

No. 151,741.

Patented June 9, 1874.

Fig. 3.

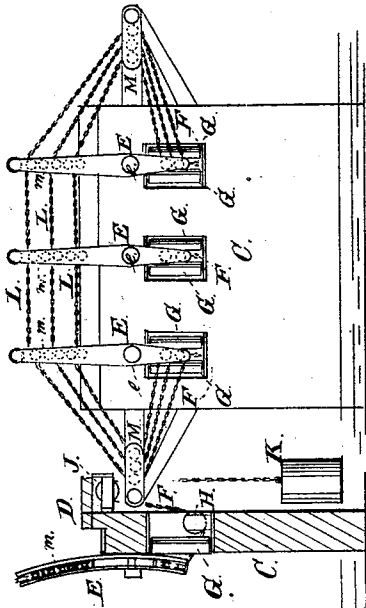
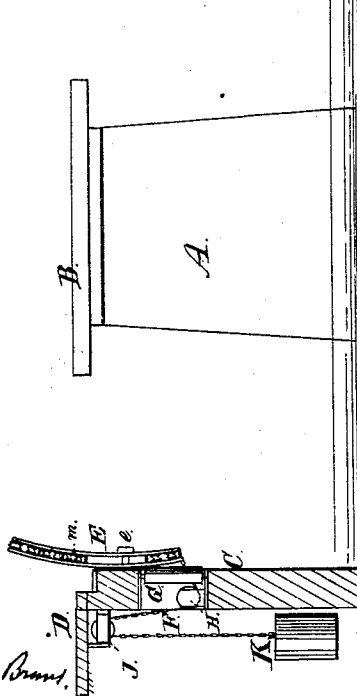


Fig. 1.

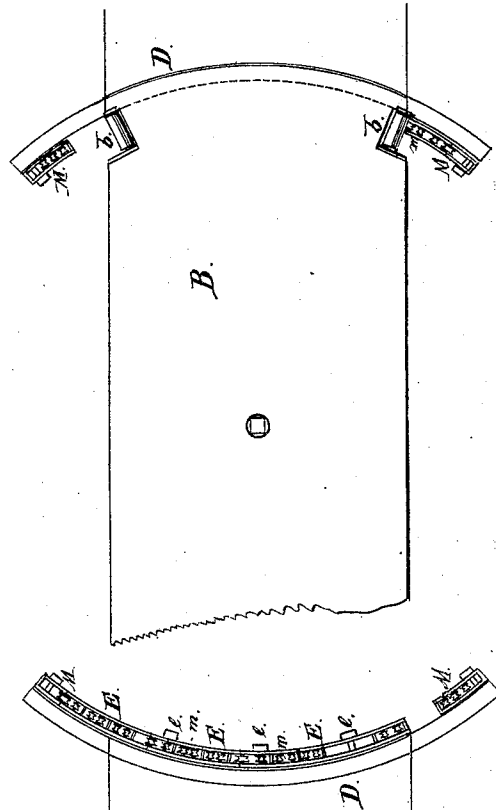


Witnesses:

Herbert L. Brand.

John W. Munday.

Fig. 2.



Inventor.

Franz Baier.

UNITED STATES PATENT OFFICE.

FRANZ BAIER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DRAW-BRIDGE GATES.

Specification forming part of Letters Patent No. 151,741, dated June 9, 1874; application filed May 14, 1874.

To all whom it may concern:

Be it known that I, FRANZ BAIER, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Bridge-Gates, of which the following is a specification:

This invention relates to a self-closing gate which bars the approach to a swing-bridge when the bridge is open, but is automatically removed from the way by the closing of the bridge.

The improved gate consists of a series of pivoted posts carrying chains or ropes, and connected to weights, as will be understood from the description and drawing, so that as the bridge is closed it rides upon and over the posts, turning them down. When the bridge is opened, the weights raise the posts and their ropes or chains, barring the approach.

In the accompanying drawing, which forms a part of this specification, Figure 1 represents a side view of the bridge swung open, the gates being, of course, closed. Fig. 2 is a plan view of the same when the bridge is closed. Fig. 3 is a front view of one of the abutments, the bridge being open and the gate closed.

In said drawing, A is the pivotal or center pier. B is the bridge. C C are the abutments; D D, the approaches. Upon the face of the abutment, at each side of the stream, are pivoted the posts E by the pivots e. I have shown three posts, but there may be any number desired. To the lower end of each post is attached a chain or rope, F, which passes between a pair of vertical guide-rollers, G G, under a pulley, H, over a pulley, J, and is attached to a weight, K, this mechanism being repeated for each post. A chain or rope,

L, is rove through the sheaves M M at each side of the abutment in several plies, passing all through the posts above the abutment, and attached below the abutment to the end posts, as shown in the drawing. Each post is furnished with friction-pulleys m, upon which the chain or rope L rests.

Now, as the bridge is swung closed, one of the horizontal rollers b, at one corner, strikes first the inclined portion of the chain or rope L; then one of the outside posts E, turning it down and raising its weight; and so each post in succession, opening the gate as fast as the bridge is closed.

It will readily be understood that the bridge may be swung in either direction, and the operation will be the same.

When the bridge is opened, the posts relieved rise in succession, actuated by the weights, and thus the gate is closed as fast as the bridge opens, leaving the footway open until the end of the bridge has left the abutment.

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

1. The combination of the pivoted posts connected by chains or ropes, and attached, at their lower ends, to a weight, with a swing-bridge, substantially as specified.

2. The combination of the pivoted posts E, chain or rope L, sheaves M M, chains or ropes F, vertical double rollers G G, pulleys H J, and weights K, substantially as specified.

FRANZ BAIER.

Witnesses:

HEINRICH F. BRUNS,
JOHN W. MUNDAY.