

O. ESCHÉ.
DRAW-BRIDGE GATES.

No. 171,003.

Patented Dec. 14, 1875.

Fig. 1.

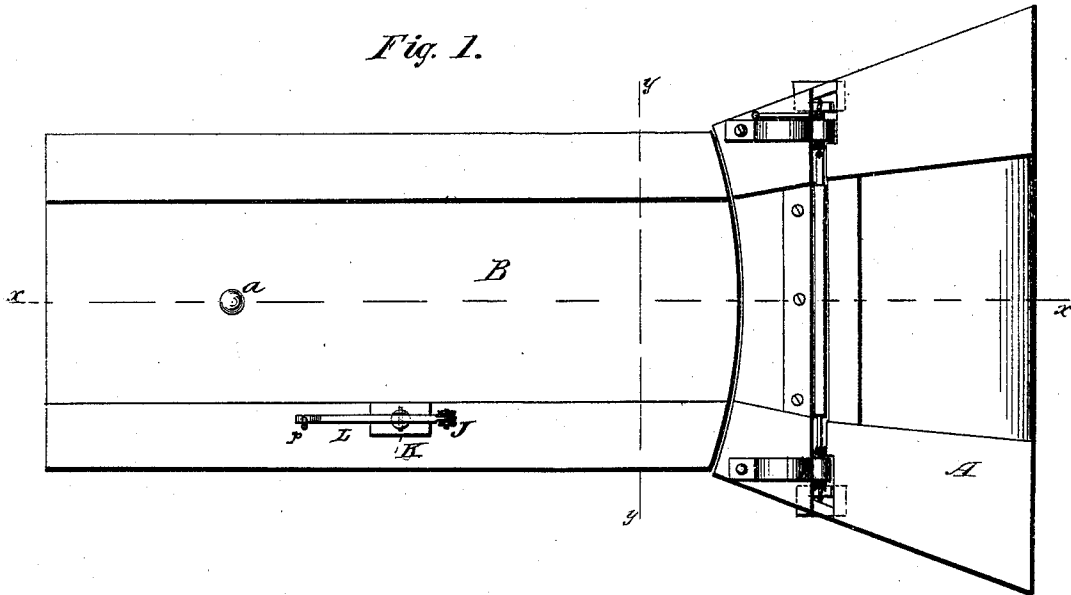


Fig. 2.

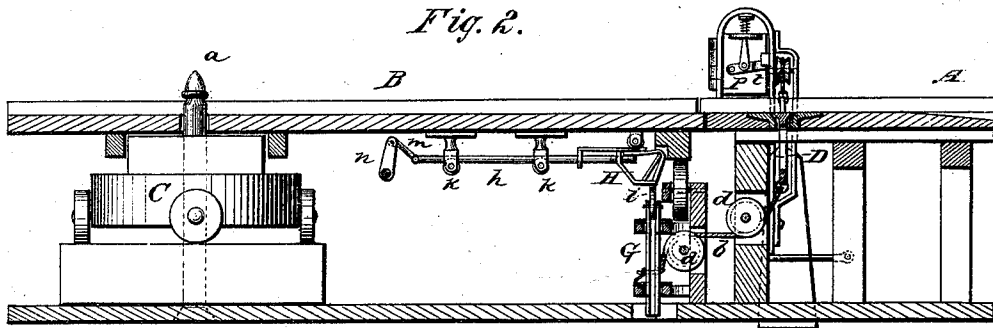


Fig. 3.

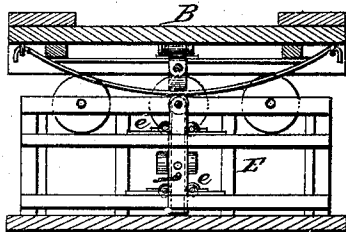
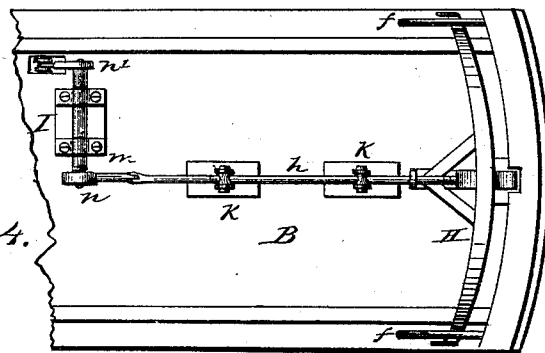


Fig. 4.



Witnesses:

F. C. Dietrich
F. H. Duff

Inventor:

O. Esche

Per: *C. H. Watson & Co*

Attorneys.

UNITED STATES PATENT OFFICE.

OTTO ESCHÉ, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN DRAW-BRIDGE GATES.

Specification forming part of Letters Patent No. **171,003**, dated December 14, 1875; application filed December 6, 1875.

To all whom it may concern:

Be it known that I, OTTO ESCHÉ, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Bridge-Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of draw-bridges in which the draw swings on a center, and a gate is raised at each end of the bridge; and the nature of my invention consists in the construction and arrangement of devices whereby the gate may be raised before the draw commences to open, and in the combination of parts, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a plan view of a bridge embodying my invention. Fig. 2 is a longitudinal section of the same through the line *xx*, Fig. 1. Fig. 3 is a transverse section through the line *yy*, Fig. 1. Fig. 4 is a bottom view of one end of the draw.

A represents the stationary part of a bridge, and B is the draw, which latter turns upon a carriage, C, around a central pivot, *a*, in the usual manner. D is the gate across the bridge A, near the point where the draw B closes thereto, said gate being raised by one or more weights or springs, or any other suitable or convenient means. The bottom of the gate has a chain, rope, or wire cable, *b*, attached to it, which passes around pulleys *d d*, as shown in Fig. 2, and is attached to a vertical sliding bar, G, arranged in a frame-work, E, under the end of the draw B. The sides of the bar G are grooved longitudinally, and work over rollers *e e*, so that the bar can move freely up and down. This bar moves upward by the upward motion of the gate, and when the bar is pushed down it draws the gate downward with it. To the under side of the draw B are attached guides *f f*, on which slides a frame, H, constructed to form inclines for

pushing down the bar G, the inclines of the frame working on a roller, *i*, in the upper end of said bar. From the center of the frame H a rod, *h*, extends backward under the draw, and is supported upon grooved rollers *k k*, and the rear end of said rod connected by a link, *m*, with an arm or crank, *n*, projecting from a shaft, I. The other end of this shaft has another arm or crank, *n'*, from the end of which a connecting-bar, J, extends up through a slot in the draw, and is pivoted to the end of a lever, L, pivoted to a standard, K. The other end of this lever is pressed down and held under a suitable catch, *p*. When the lever is thus held, the frame H is in proper position to operate on the bar G.

The operation then is the same as in other draw-bridges of this character. As the bridge is being opened, the gate D rises by the action of the weights connected therewith, and as the bridge closes, the frame H, riding on top of the roller *i* in the upper end of the bar G, draws the gate down.

When the bridge is closed, if it is desired to have the gate raised before the draw commences to open, the lever L is released from its catch at *p* and raised, which movement, by the connections above described, draws the frame H backward from off the upper end of the sliding bar G, allowing the weights connected with the gate to raise the same, and the draw is then to be opened.

In case any persons should be left on the bridge, when the gate is thus raised, I provide a side gate, P, on each side, having a spring-latch, *t*, as shown, which will give facility for such persons to get off before the draw is entirely opened.

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

1. The combination of the vertically-sliding gate D, rope or chain *b*, pulleys *d d*, grooved sliding bar G, guide-rollers *e e*, and friction-roller *i*, for the inclined frame H to operate upon, substantially as and for the purposes herein set forth.

2. The combination, with a bridge-gate, D, and vertically-sliding bar G, connected there-

with, of a sliding inclined frame, H, arranged to be moved off and on the sliding bar, for the purposes herein set forth.

3. The combination of the sliding frame H, rod *h*, link *k*, shaft I, with arms or cranks *n* *n'*, connecting-rod L, lever J, and catch *p*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

OTTO ESCHE.

Witnesses:

WM. B. UPPERMAN,
C. H. WATSON.