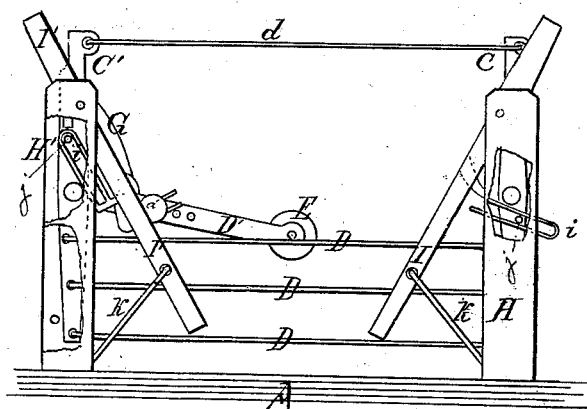
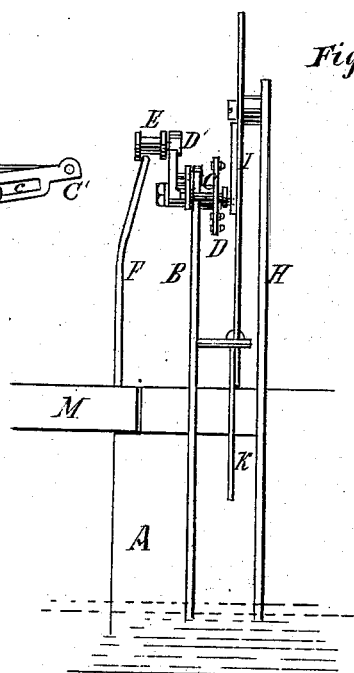
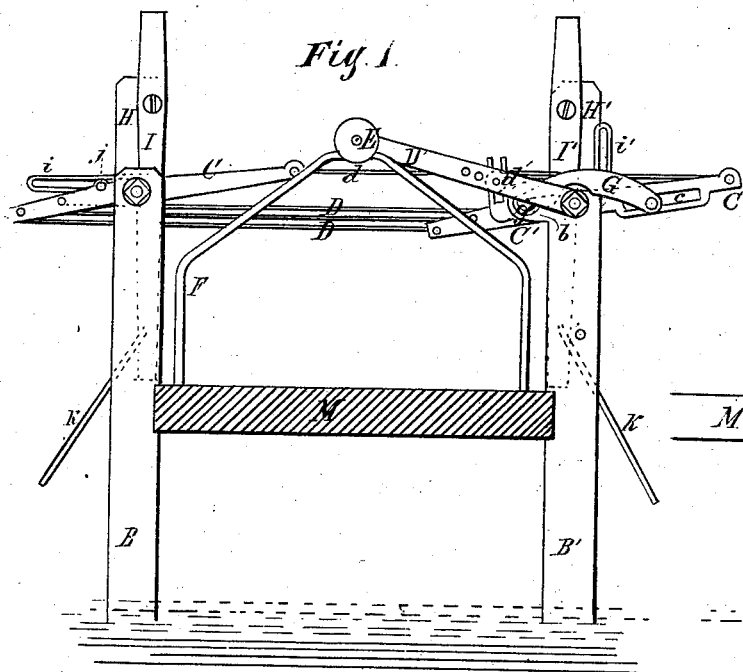


A. STEMPEL.  
Draw-Bridge Gate.

No. 217,440.

Patented July 8, 1879.



*Witnesses:*

*Jacob Richter  
L. H. Korfner*

*Inventor:*

*Adolph Stempel  
by Wm H Lotz  
his Attorney*

# UNITED STATES PATENT OFFICE.

ADOLPH STEMPEL, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN DRAW-BRIDGE GATES.

Specification forming part of Letters Patent No. **217,440**, dated July 8, 1879; application filed January 27, 1879.

*To all whom it may concern:*

Be it known that I, ADOLPH STEMPEL, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Bridge-Gate, as fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents an elevation of the gate from the bridge side while the bridge is closed and the gate is open. Fig. 2 is an edge view of the gate; and Fig. 3 represents an elevation of the gate from the abutment side while closed.

The nature of my invention relates to an improvement in that class of gates which are placed on the approaches of a draw-bridge in order to prevent accidents; and it consists of a gate composed of two oscillating beams pivoted to posts at each side of the bridge-abutment, which carry a series of horizontal bars or chains moving parallel with each other, said beams being automatically operated from an  $\Lambda$  or arch shaped bar or frame stretched over the ends of the draw-span of the bridge by a wheel riding up and down its inclines, which is pivoted to the end of a crank, all of which is constructed and arranged, as more fully hereinafter explained.

In the drawings, A is the abutment or approach to the bridge, and B B' are two posts firmly erected upon the sides of the abutments in close proximity to the draw-span of the bridge, which at or near their top ends have each a journal-box, in which are pivoted the trunnions of two oscillating beams, C and C'. These beams C and C' are arranged to describe a quarter-circle by their movement, so that from a horizontal they will assume a vertical position, and vice versa, and are connected at their downward, swinging ends by a series of horizontal bars or chains, D D, the ends of which are coupled to the beams at equal distance apart and parallel with each other, while the upwardly-swinging ends of said beams are connected by a single bar,  $d$ , whereby the motion of both beams will be simultaneous and in the same direction, similar to a parallel ruler, and the bars will be lifted to clear the highway and will approach each other when the beams are turned to a horizontal line, and when the beams are turned

to assume a vertical position said bars will form a fence-like barrier across the bridge approaches.

D' is a crank pivoted upon an elongation of the trunnion of beam C', and provided on its swinging end with a fulcrum-pin for wheel E, which has flanges and rides upon an  $\Lambda$  or arch shaped bar or frame, F, stretched across the end of the draw-span M at an elevation high enough not to interfere with the travel over the bridge. A stud,  $d'$ , projecting from the side of crank D', engages with the rectangular bifurcated end of a lever, G, pivoted at  $g$  to a bracket,  $b$ , of post B', the opposite end of which lever carries a pin entering a slot,  $e$ , in beam C', whereby the up and downward motion of wheel E is transmitted to the beams C and C'.

H and H' are two posts placed behind the posts B and B', from the upper ends of which are suspended the levers I and I', so as to have a pendulous movement, the lever I of which having a rectangular slotted arm,  $i$ , and the lever I' a slotted arm,  $i'$ , which is knee-bent, so as to be parallel with said lever, each of which slotted arms engages with a pin,  $j$ , projecting off the sides of beams C and C', by which said levers I and I' are caused to swing toward the center of the abutment simultaneously with the closing of the gate. To the lower ends of said pendent levers I and I' are suspended the bars K, which, by the movement of said levers, will drag across the sidewalk and will obstruct the passage over the same.

The *modus operandi* of this gate is as follows, to wit: When the draw-span of the bridge is closed the wheel E is in its highest position, causing the beams C and C' to be horizontal and their connecting-bars D D to be elevated, while the pendent levers I and I' will hang perpendicular with the bars K K, hanging down between the posts B and H when the passage over the bridge is open; but as soon as the draw-span of the bridge is swung open to either direction the wheel E will ride downward upon the inclines of the bar F, which will cause the beams C and C' to assume a vertical position, when their connecting-bars D D will blockade the highway, while at the same time the lower ends of the

levers I I' will swing across the sidewalks, and the bars K suspended thereto will shut up the passage thereon.

As will be noticed this gate is very simple in its construction, and can be counterbalanced to work with great ease; and, because there is no gearing to get out of order or to interfere with the turning of the draw-span, it is very durable, while such gates heretofore were automatically operated from the lower part of the draw-span, where their working parts were exposed to the mud from the highway, and were out of sight for inspection. I have overcome these objections by operating the gates automatically by means of the  $\Lambda$ -shaped bar or frame across and above the draw-span ends.

To attach this gate to any draw-bridge no cutting away of any of the timbers and no special construction for different-sized bridges is necessary, as all the parts can be made ready and can be mounted within a very limited time, and without interfering with the travel over the bridge during the construction of the gate.

What I claim as my invention is—

1. A bridge-gate adapted to be automatically

opened and closed by the swinging of the draw-span of the bridge, and by means of an elevated bar or frame secured across and above the ends of the draw-span, substantially in the manner herein set forth.

2. A bridge-gate consisting of beams C and C', pivoted to posts B and B', and connected by bars or chains D D, to be closed and opened automatically by the swinging of the draw-span M, and by means of an  $\Lambda$  or arch shaped bar or frame, F, secured over and across the ends of said draw-span, substantially as herein shown and specified.

3. A bridge-gate consisting of beams C and C', pivoted to posts B and B', and connected by bars or chains D D, the wheel E, crank D', and lever G, in combination with the draw-span M, carrying the elevated  $\Lambda$  or arch shaped bar or frame F, all constructed, arranged, and operating substantially as herein set forth.

ADOLPH STEMPEL.

Witnesses:

GEO. FROMMANN,  
JACOB RICHTER.