

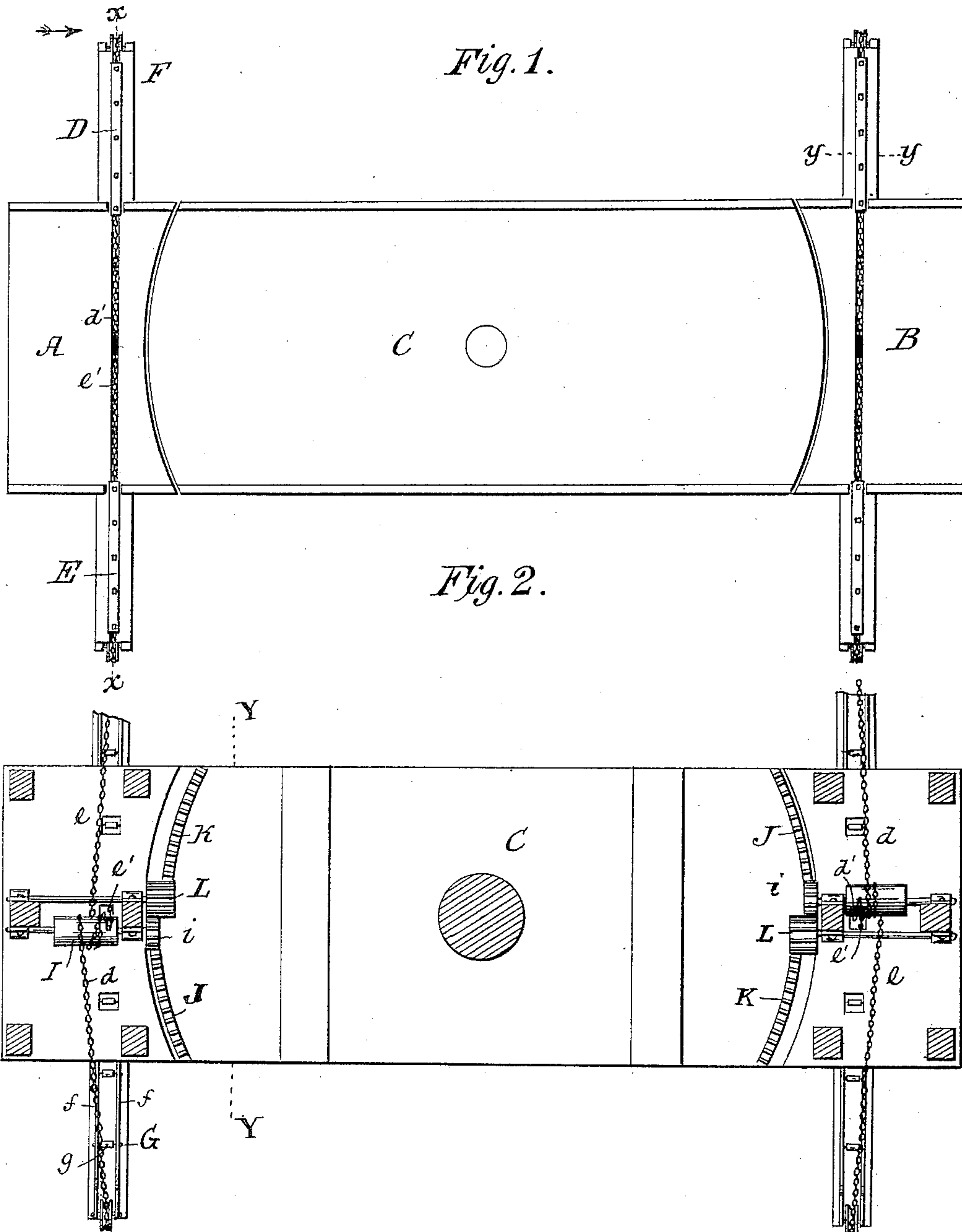
(No Model.)

2 Sheets—Sheet 1.

W. KREJCI & B. KAPINOS.
DRAW BRIDGE GATE.

No. 445,117.

Patented Jan. 20, 1891.



Witnesses
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Inventor
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By his Attorney
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Fig. 3.

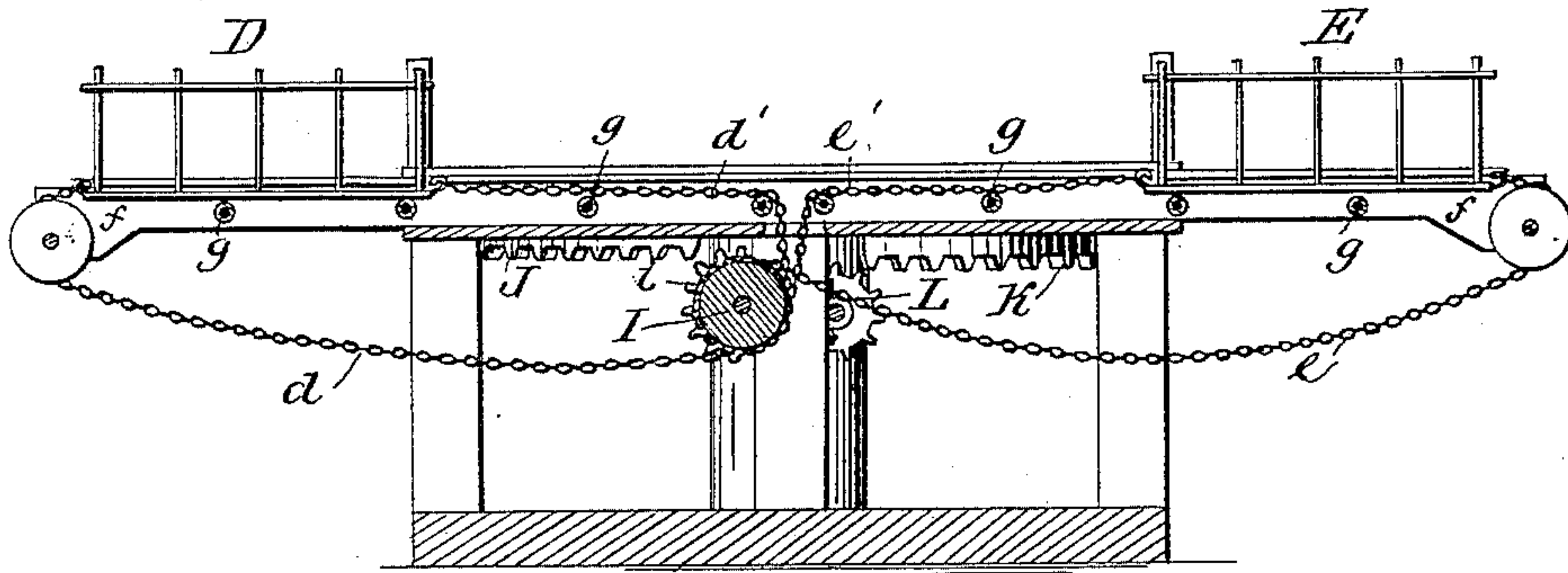


Fig. 4.

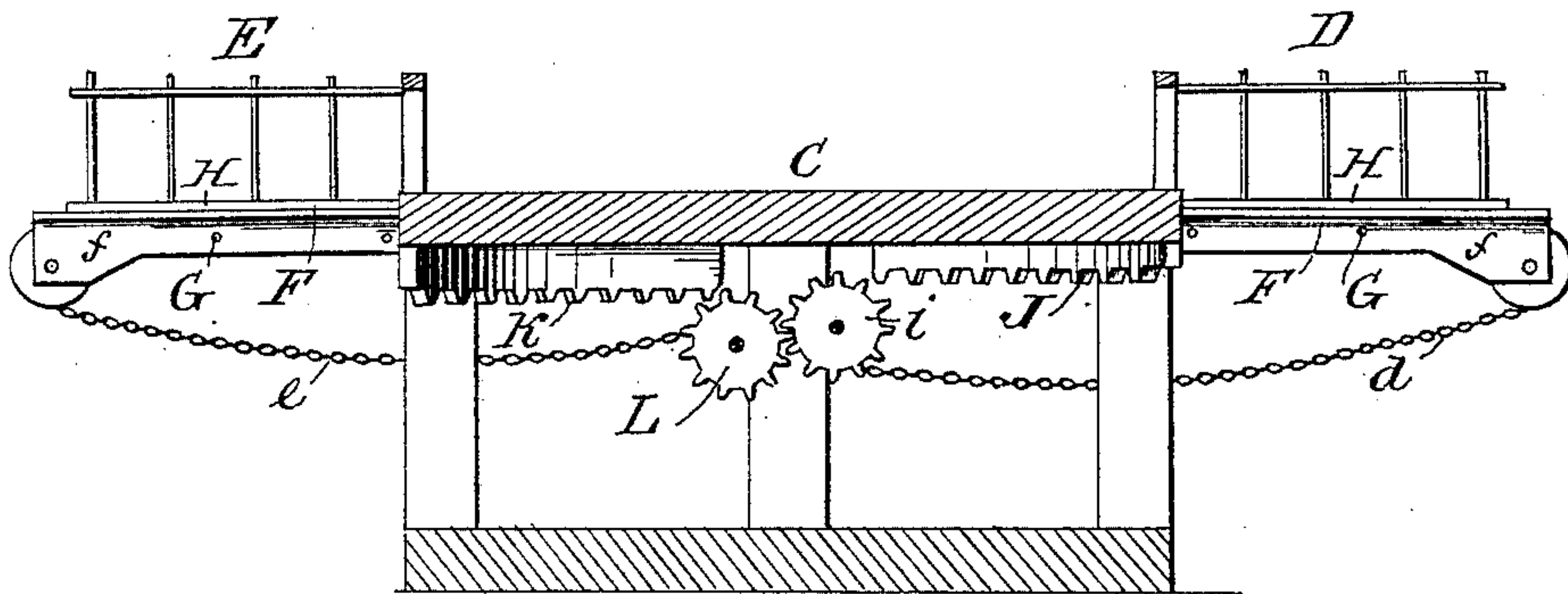
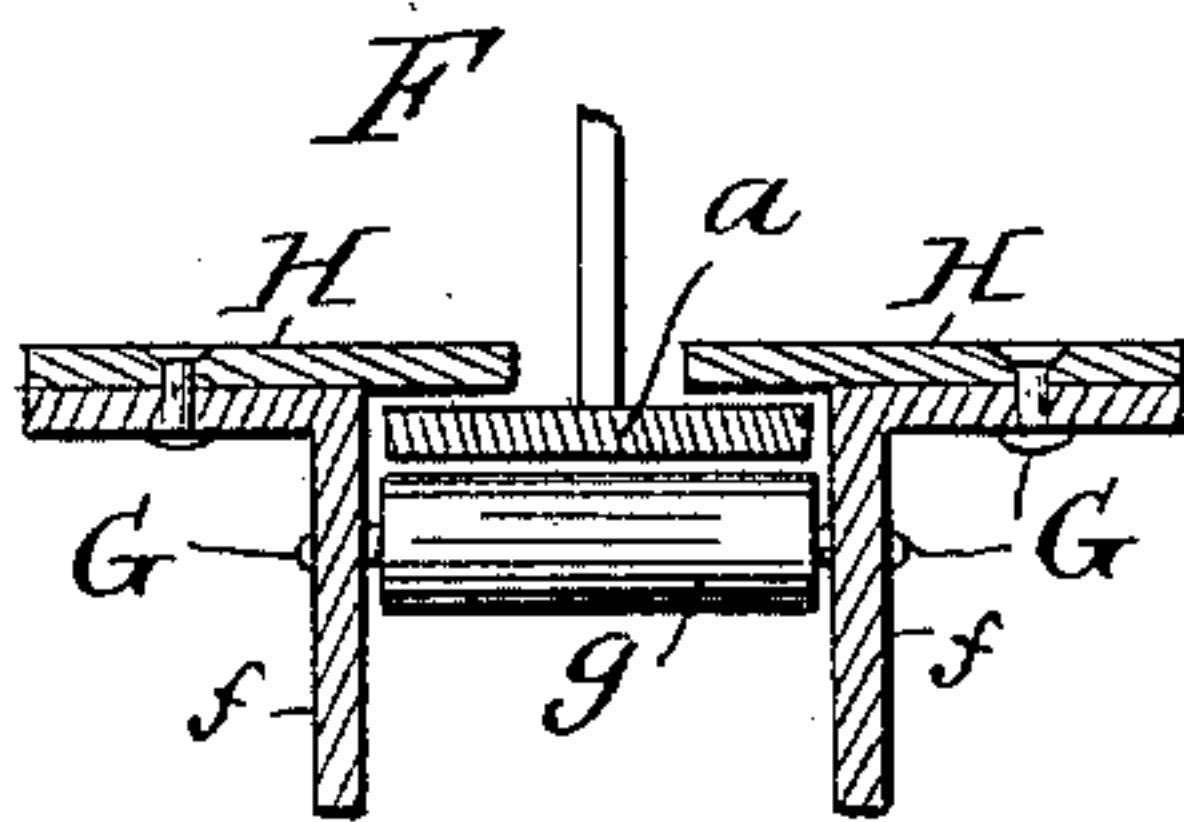


Fig. 5.



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UNITED STATES PATENT OFFICE.

WENZEL KREJCI AND BENJAMIN KAPINOS, OF JACKSON, MINNESOTA.

DRAW-BRIDGE GATE.

SPECIFICATION forming part of Letters Patent No. 445,117, dated January 20, 1891.

Application filed April 22, 1890. Serial No. 349,027. (No model.)

To all whom it may concern:

Be it known that we, WENZEL KREJCI and BENJAMIN KAPINOS, citizens of the United States, residing at Jackson, in the county of Jackson and State of Minnesota, have invented certain new and useful Improvements in Draw-Bridge Gates; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to draw-bridges, and aims to provide simple and efficient means for closing the bridge to travel when the draw is open, and has particular relation to the devices for operating the gates at the intercepted ends of the bridge when the draw is opened and closed.

The improvements consist of the novel features, which hereinafter will be more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a top plan view of a bridge embodying our invention. Fig. 2 is a bottom plan view of the bridge. Fig. 3 is a section on the line X X of Fig. 1, looking in the direction of the arrow. Fig. 4 is a section on the line Y Y of Fig. 2, looking to the left. Fig. 5 is a cross-section of the gate-support on the line y y of Fig. 1.

A and B represent the intercepted ends of a bridge of ordinary construction, and C is the draw. Each of the ends A and B of the bridge and the contiguous ends of the draw are similarly equipped, hence a detailed description of one will suffice for both.

D and E are two gates which close the bridge when the draw is open, and which are adapted to slide on suitable supports, as F, the latter extending across the bridge and projecting on each side thereof a sufficient distance to receive the gates when they are drawn full back, and composed of two angle-irons *ff* parallel with each other and placed a proper distance apart to receive the gates and permit their free movements. The gates travel on rollers *g*, which are mounted on the rods or bolts *G*, that hold the irons *ff* together. The gates have a wide foot-rail *a*, and are

held in a vertical position by the plates H, which are secured to the horizontal flanges of the angle-bars, and which overlap the edges of the said foot-rail *d*, as shown most clearly in Fig. 5. The drum or windlass I, journaled beneath the bridge, is provided with the gear-wheel *i*, which is adapted to mesh with the toothed rim-section J on the under side of the draw C. The chain *d* is connected at its outer end with the outer end of the gate D, and is connected at its inner end with the said drum I. The chain *d'* is secured at one end to the inner end of the gate D, and its other end is secured to the drum I. These chains *d* and *d'* are adapted to be wound in reverse directions on the said drum, so that as the one unwinds the other will wind up on the drum, thereby positively moving the gate D in either direction. The chain *d* passes over a guide-pulley at the outer end of the support F, and the chain *d'* passes over one of the rollers *g* near the middle of the support. The gate E is connected by chains *e* and *e'* with the said drum I in precisely the same manner as gate D. When the drum I is turned in one direction, the chains *d* and *e* will be wound thereon and the chains *d'* and *e'* unwind therefrom and draw the gates D and E out on the support F, and when turned in the opposite direction the reverse of this operation will take place and the gates will be drawn across the bridge, closing the roadway. When the draw is opened to the left, the toothed segment or rim J will mesh directly with the gear-wheel *i* and rotate the drum so as to close the gates, and when opened to the right means, as the toothed rim K and the gear-wheel L, are provided to rotate the drum in the same direction to effect a closing of the gates. The rim K is in a different plane from the rim J, and the gear-wheel L, which meshes with the gear-wheel *i*, is placed so as not to be engaged by the toothed rim J. Both ends of the draw and the intercepted ends of the bridge being provided alike with corresponding sliding gates and similar devices for operating the gates, obviously the detailed description of the operation of one set of gates applies to both.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a draw-bridge, the combination, with
5 the gate-support and the gate having a broad foot-rail, of the plates overlapping the edges of the said foot-rail, substantially as set forth.

2. In a draw-bridge, the combination, with
10 the two angle-irons or plates and the rollers between the said plates, of the gate having a broad foot-rail which runs on the rollers, and

the plates secured to the horizontal portions of the angle-irons and overlapping the foot of the rail, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WENZEL KREJCI.
BENJAMIN KAPINOS.

Witnesses:

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