2 Sheets. Sheet. 1.

Wicke & Ellenbogen,

Draw. Bridge.

No. 100,480. Patented Mar. 1. 1870.

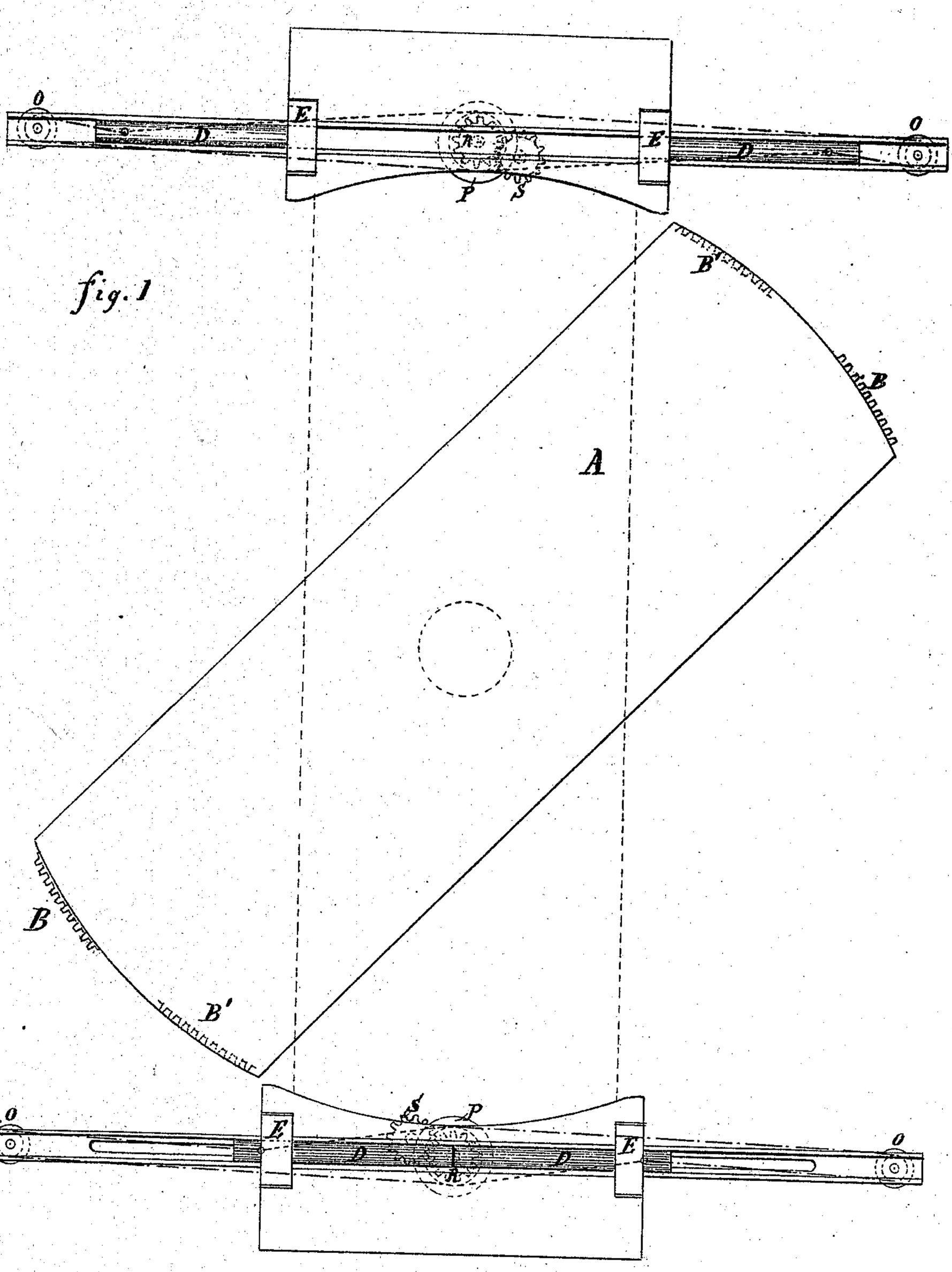

fig. 1

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Inventors:
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2 Sheets, Sheet 2.

Wicke & Ellenbogen

Draw Bridge.

No. 100,480. Patented Mar. 1. 1870.

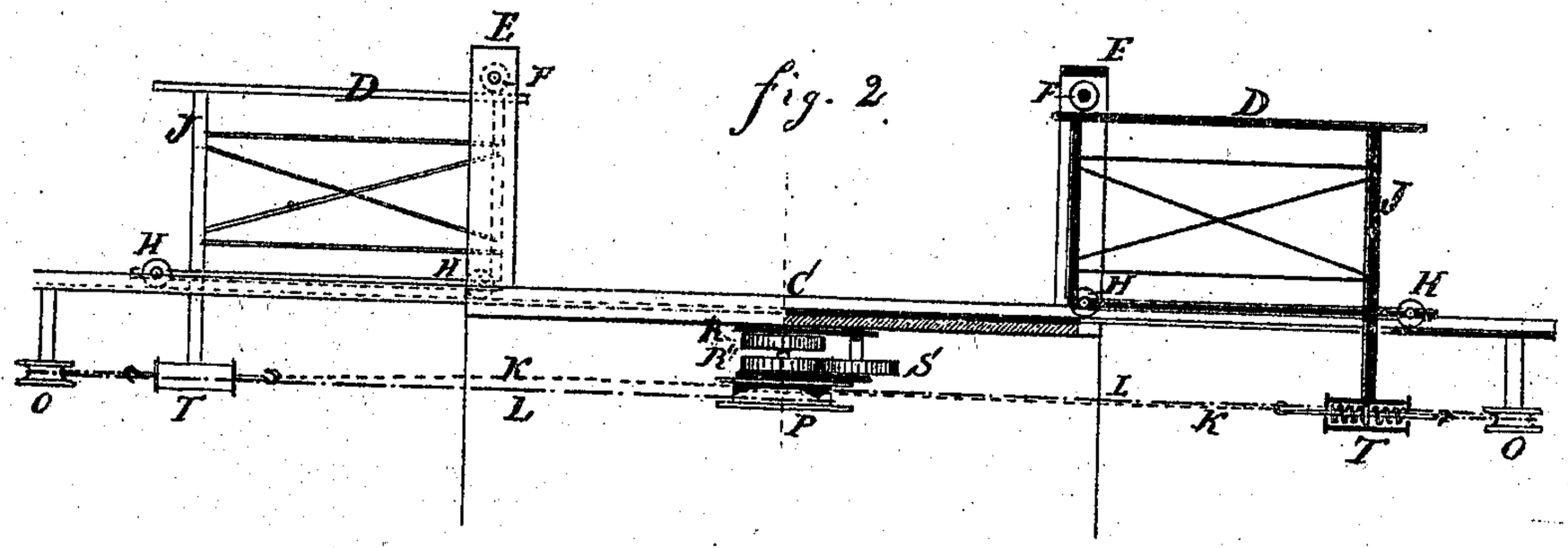


fig. 2.

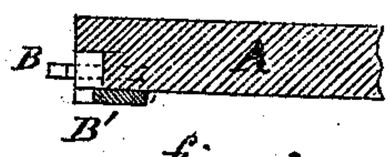


fig. 3

fig. 4

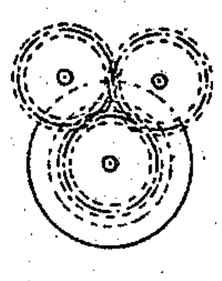


fig. 6

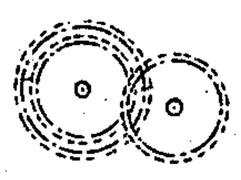


fig. 5

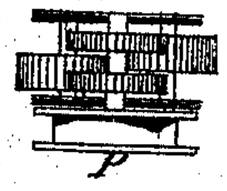
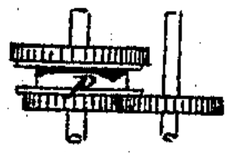


fig. 7



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JULIUS WILCKE AND M. ELLENBOGEN, OF CHICAGO, ILLINOIS, ASSIGNORS TO MAXIMILIAN ELLENBOGEN.

Letters Patent No. 100,480, *dated March* 1, 1870.

IMPROVED BRIDGE-GATE.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that we, JULIUS WILCKE and M. ELLENBOGEN, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Bridge-Gates; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form a part of this specification, and in which—

Figure 1 represents a top or plan view of the bridge and bridge-gates;

Figure 2, a side elevation of the gates at one end of the bridge;

Figure 3, an end view of a section of the end of the bridge;

Figure 4, a plan view of a different system of gearing;

Figure 5, a side elevation of the same;

Figure 6, a side elevation of still another system; and

Figure 7, a plan view of the same.

The nature of our invention consists in the device, hereinafter fully described, whereby sliding gates are opened and closed by the action of a turn-bridge, so that the bridge in opening closes the gates, and in closing opens the gates.

To enable those skilled in the art to understand how to manufacture and use our invention, we will proceed to describe the same with particularity.

The same letters of reference refer to the corresponding parts in the different figures.

In the annexed drawings—

A represents the turn-bridge, to each end of which the toothed pieces B B′ are attached.

C C represent the roadway on the abutments of the bridge; and

D, the sliding-gates that are slid across the roadway as the bridge is opened and back, as shown in fig. 2, as the bridge is closed.

E are gate-posts, set permanently by the side of the roadway, to which the pulleys F are attached that serve to guide the gates.

The gates are supported by the rollers H that run on a track extending across the roadway.

The uprights J of the gates extend below the roadway, and there are attached to each one of them two cords or chains, K and L.

The cord L passes around the pulley O, and all the cords are attached to the drum P in such a manner that the cords K wind up on the drum as the cords unwind therefrom, and *vice versa*.

There are two cog-wheels, R and R′, on the shaft of the drum P, and there is also another cog-wheel, S, which engages with the cog-wheel R.

The cog-wheel S extends further forward than the cog-wheels R and R′, and it is operated or driven by the toothed piece B′, which is set a little further back on the bridge than the piece B, as shown.

If the bridge is closed, as indicated by the dotted lines in fig. 1, and the gates open when the operator turns the bridge to open it, if he turns it in one direction the pieces B′ engage with the cog-wheels S, and thereby revolve the drums P, and wind the cords so as to close the gates; but if he turns the bridge in the opposite direction to open it, the pieces B engage with the cog-wheel R′, and revolve the drums in the same direction as before, and close the gates. Also, when the bridge is opened and the gates closed, it makes no difference which way the bridge is turned to close it. If it is turned one way, the pieces B′ revolve the cog-wheels S; and if it is turned the other way, the pieces B turn the cog-wheels R′, and on account of the wheels S engaging with the cog-wheel R, the drums P are revolved in the same direction in either instance, and open the gates.

The cog-wheels may be arranged as shown in figs. 4 and 5, or as shown in figs. 6 and 7, or instead of being cog-wheels, they may be operated by friction against the end of the bridge as it is opened and closed.

The cords K and L may be attached to springs T that are attached to the gate-pieces J, or the springs may be arranged in connection with said cords in any other place, the object being to obviate the objections to a rigid attachment between the bridge and gates.

Having thus fully described the construction and operation of our invention,

What we claim, and desire to secure by Letters Patent, is—

The drums P, ropes or chains K and L, and gates D, when so constructed and arranged that the bridge, when it is opened and closed, will alternately rotate the drums in opposite directions, and wind the cords thereon, and open and close the gates, substantially as described.

JULIUS WILCKE.
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Witnesses:
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J. L. COBURN.