

J. ELLINGSON.

Guard-Gates for Draw-Bridges.

No. 154,028.

Patented Aug. 11, 1874.

Fig. 1.

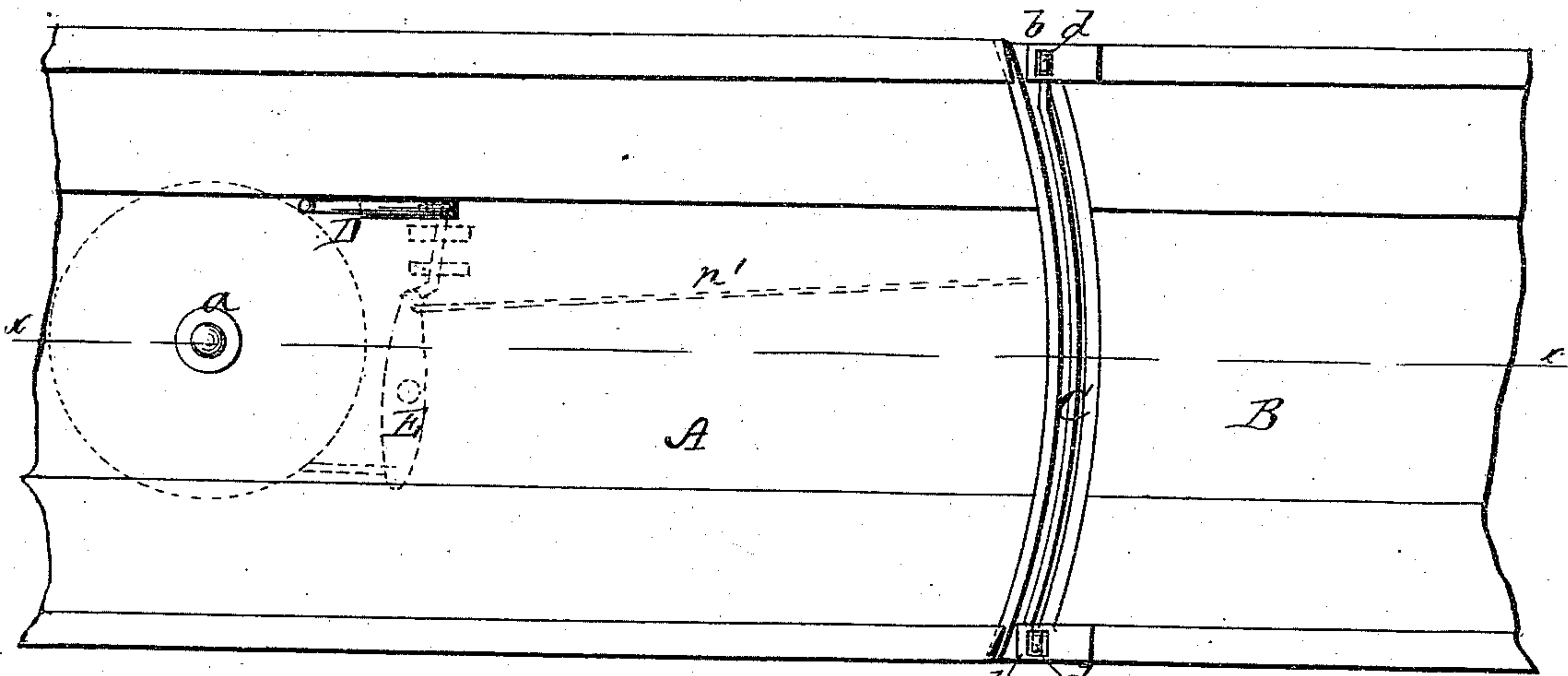
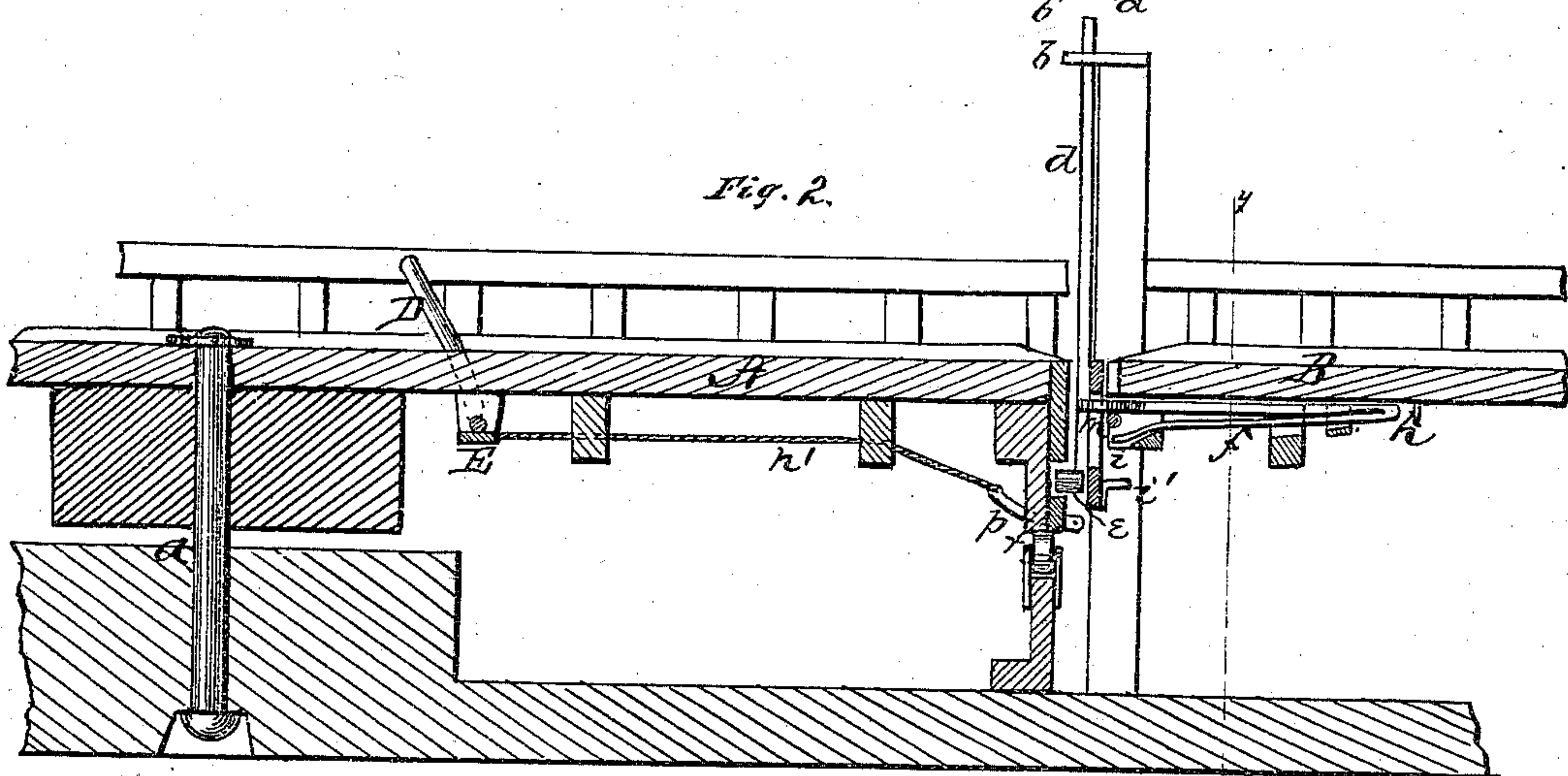


Fig. 2.



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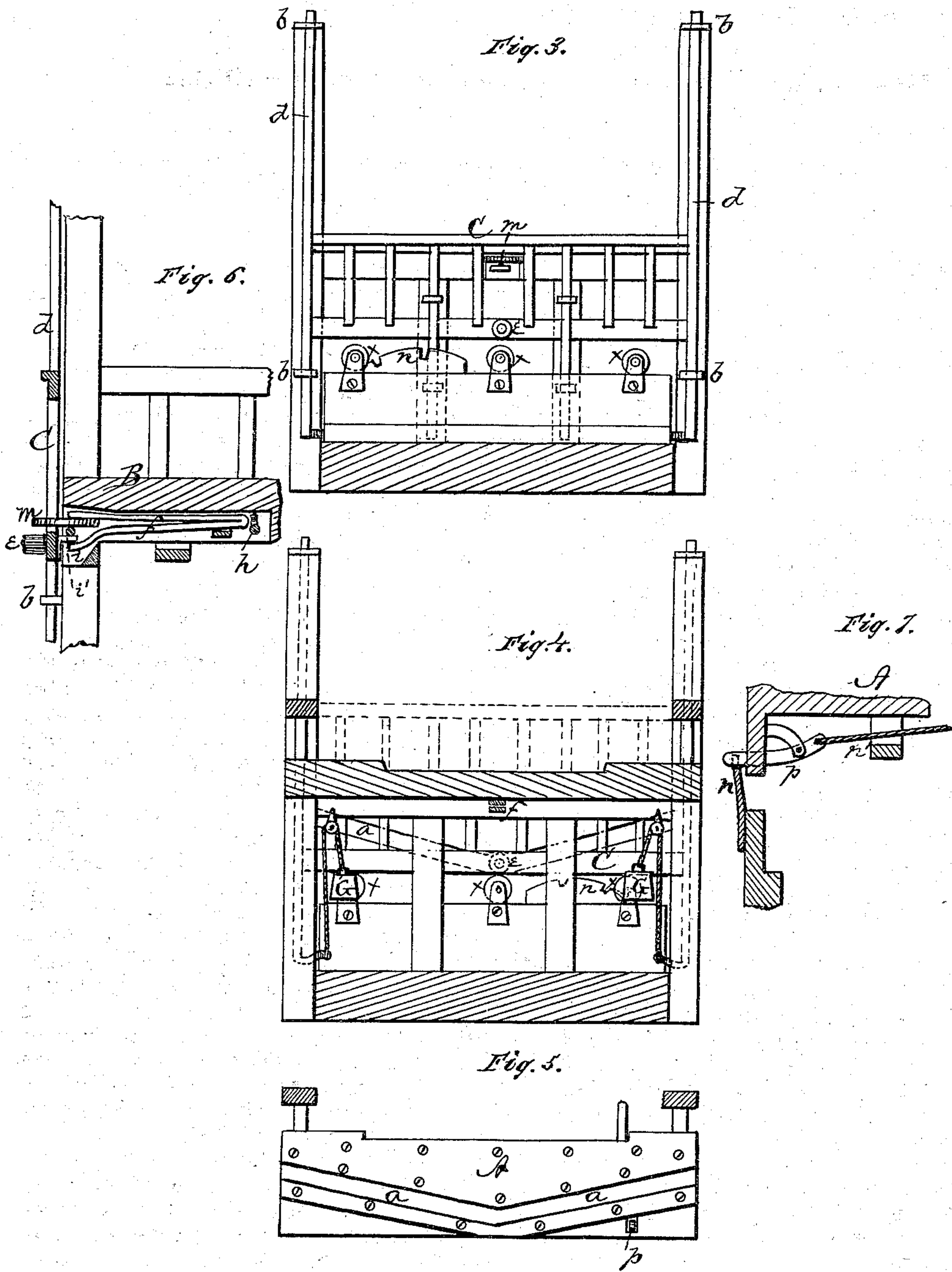
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UNITED STATES PATENT OFFICE.

JONAS ELLINGSON, OF FORT HOWARD, WISCONSIN.

IMPROVEMENT IN GUARD-GATES FOR DRAW-BRIDGES.

Specification forming part of Letters Patent No. **154,028**, dated August 11, 1874; application filed June 18, 1873.

To all whom it may concern:

Be it known that I, JONAS ELLINGSON, of Fort Howard, in the county of Brown and State of Wisconsin, have invented certain new and useful Improvements in Guard-Gate for Bridges; 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 pertains to make and use of 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 guard-gates for bridges, having for its object to improve the method of locking the gate when it is up, the device being placed in such position as not to interfere with the movement of the gate at any other time, except when the gate is up; and it consists in combining with the stationary part of the bridge a disk or wheel, to be operated by the draw, which, in connection with a spring and catches, holds the gate firmly in position when raised, and after being released, and the gate moved downward, does not interfere with the movement of the gate at all, as will be hereinafter more fully described.

In the accompanying drawing, Figure 1 is a plan view of a draw-bridge embodying my invention. Fig. 2 is a longitudinal vertical section of the same through line *xx*, Fig. 1. Fig. 3 is a view of the gate. Fig. 4 is a transverse section through the line *yy*, Fig. 2. Figs. 5, 6, and 7 are detached views of certain parts of the bridge.

A represents the draw of the draw-bridge turning upon a pivot, *a*, and B is the part of the bridge against which the draw closes. In the end of the draw A are two inclined grooves, *a a*, running from each end downward to the center. In the end of the part B of the bridge is the gate C, which, at each end, is provided with a vertical bar, *d*, moving in suitable guides *b* attached to side posts of the bridge. The gate C is in the center, at the lower end, provided with a stud and friction-roller, *e*, to work in the grooves *a* of the draw. Under the part B of the bridge is a sliding bar, *f*,

pressed forward by means of a spring, *h*. The bar *f* is double, as shown in Fig. 6, and the lower front part spread downward; or the bar may be made single and forked at its front end, the lower tine or prong forming a catch, *i*, to engage with a similar catch, *i'*, on the gate when the same is raised. On the upper part of the bar *f*, at the front end, is pivoted a friction-wheel or disk, *m*, which projects beyond the gate, as shown in Fig. 6. When the draw A is closed and the gate C drawn down level with the surface of the bridge, the bar *f* is pushed inward by the disk *m* being in contact with the end of the draw, and the roller *e* will stand directly on the angle of the two grooves *a a*. As the draw is being opened the groove *a* will raise the gate by forcing the roller *e* upward, and by the time this roller passes out of the groove the catch *i'* will have passed above the catch *i*, and hence as soon as the end of the draw clears the wheel *m* the spring *h*, throwing the bar *f* forward, will lock the gate, so that it cannot be pushed down. In closing the draw A again, the end of the draw strikes the wheel *m* and forces the bar *f* inward, releasing the catch *i'*, so that the roller *e* entering the groove *a* will cause the gate to be lowered by the closing of the draw. The draw A, when closed, is locked by means of a pivoted arm, *p*, entering a notched plate, *n*, on the bridge. The arm *p* is pivoted in the end of the draw, and is operated by means of a lever, D, at or near the center of the draw, said lever being connected with and operating another lever, E, which, by a wire, *n'*, is connected with the arm. It must, of course, be understood that there is one of these arms, *p*, at each end of the draw, and a gate also at each end thereof. The gate C is balanced by means of weights G so as to move easily up and down. *xx* are friction-rollers, upon which the end of the draw moves in the bridge.

I am aware that devices have been used to hold draw-bridge gates up, or to hold them firmly in position when raised; and I do not broadly claim such device, nor do I claim a device to lock the bridge, nor a sliding gate; but

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

The part B, sliding bar *f*, and spring *h*, in combination with catches *i i'*, friction-wheel or disk *m*, draw A, and sliding gate C, all constructed and arranged as and for the purpose set forth.

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

JONAS ELLINGSON.

Witnesses:

C. WATNER,

A. M. IVERSON, Jr.