

2 Sheets—Sheet 1.

SAFETY GATE FOR PIVOT BRIDGES.

Patented June 30, 1885.

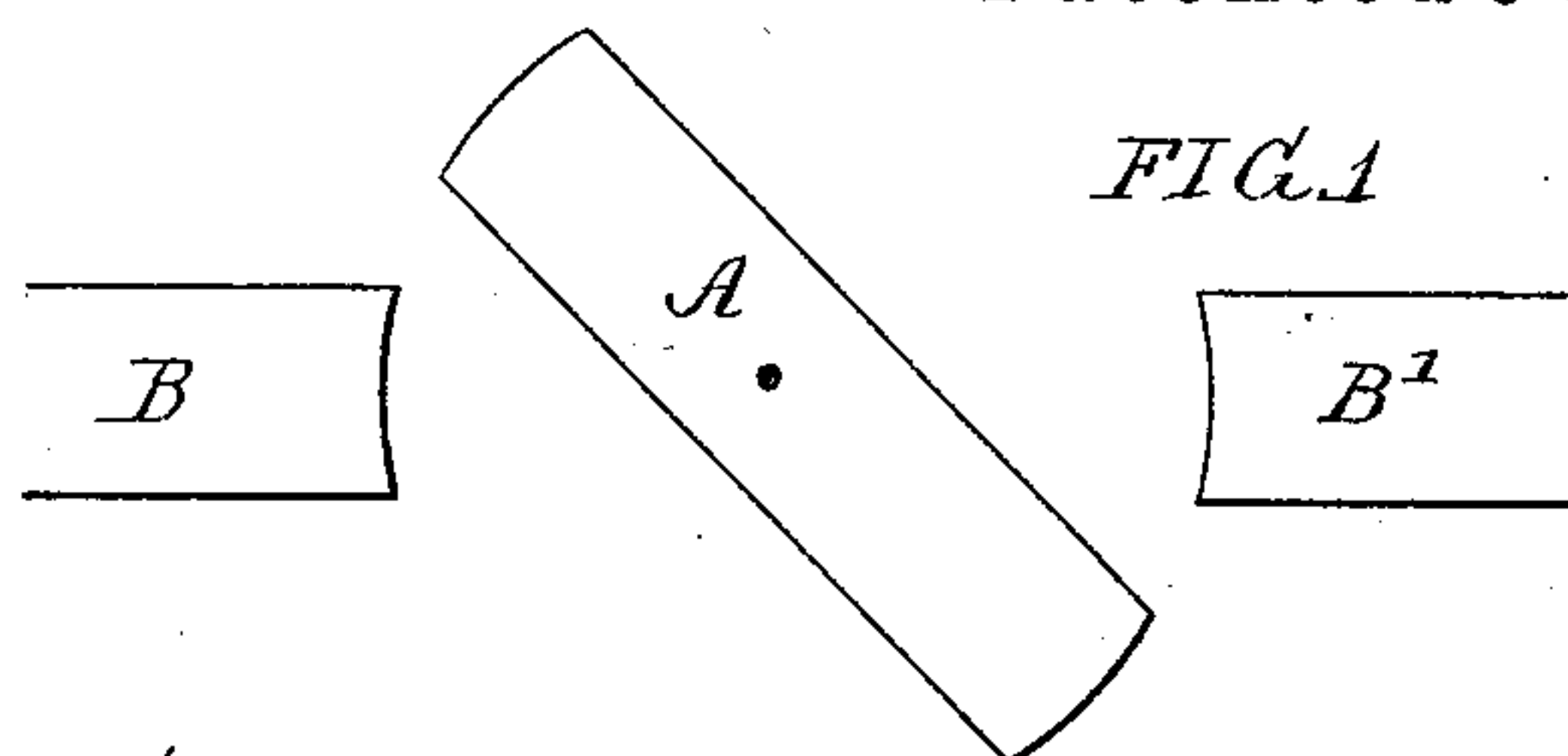


FIG. 2.

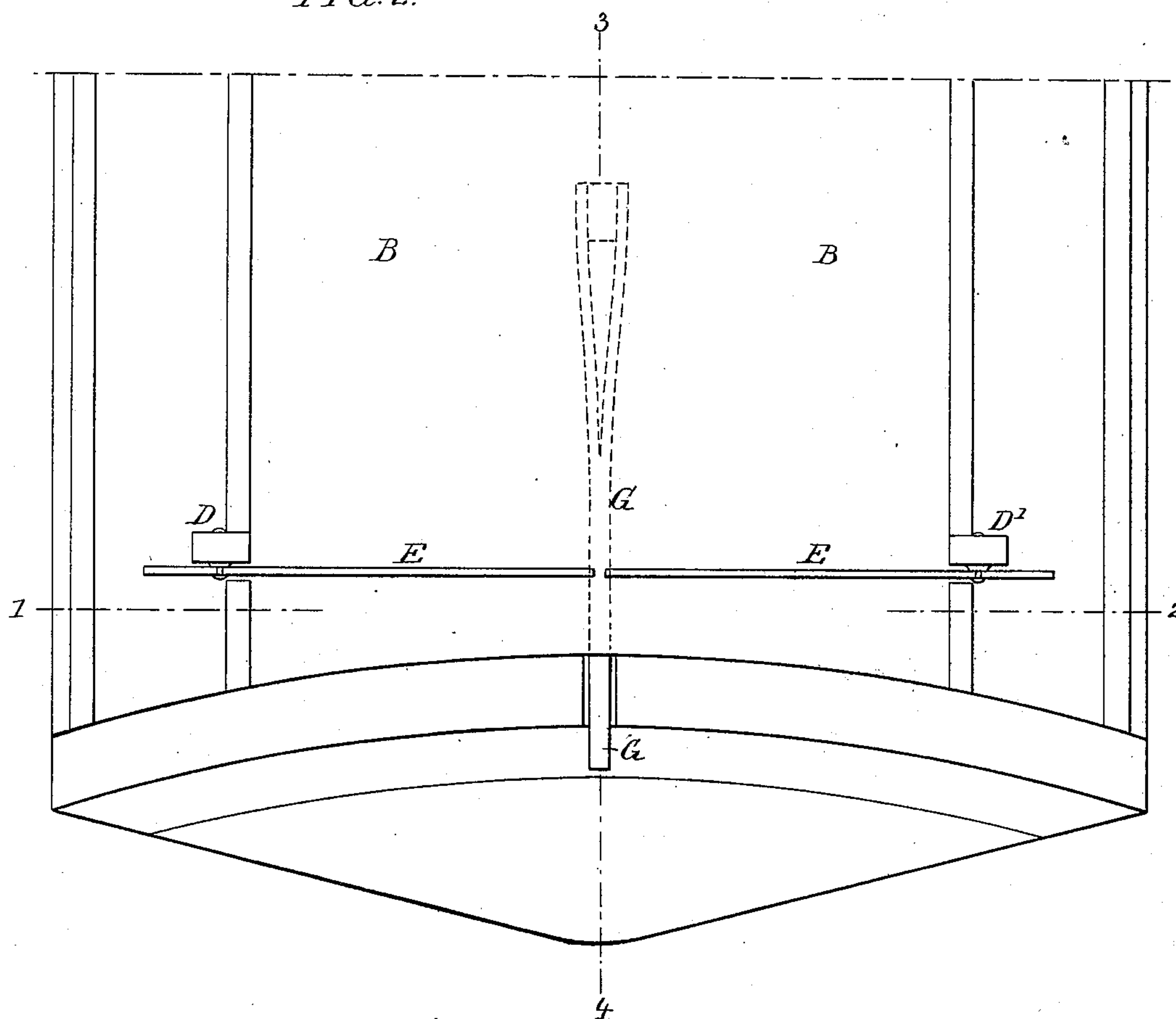
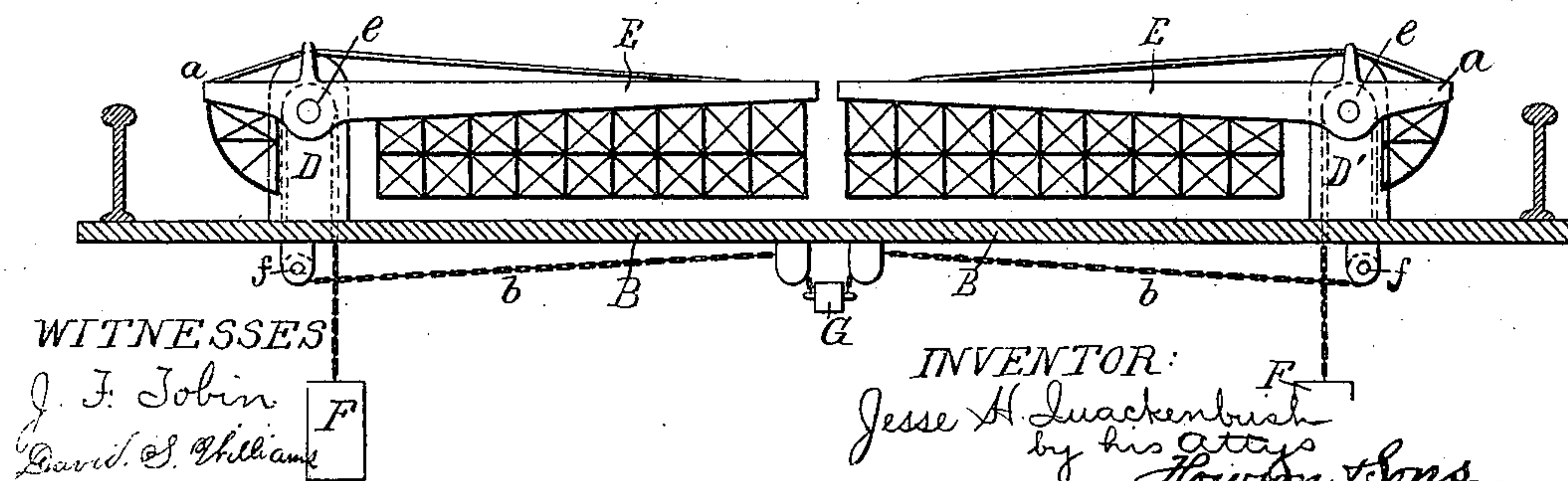


FIG. 3.



(No Model.)

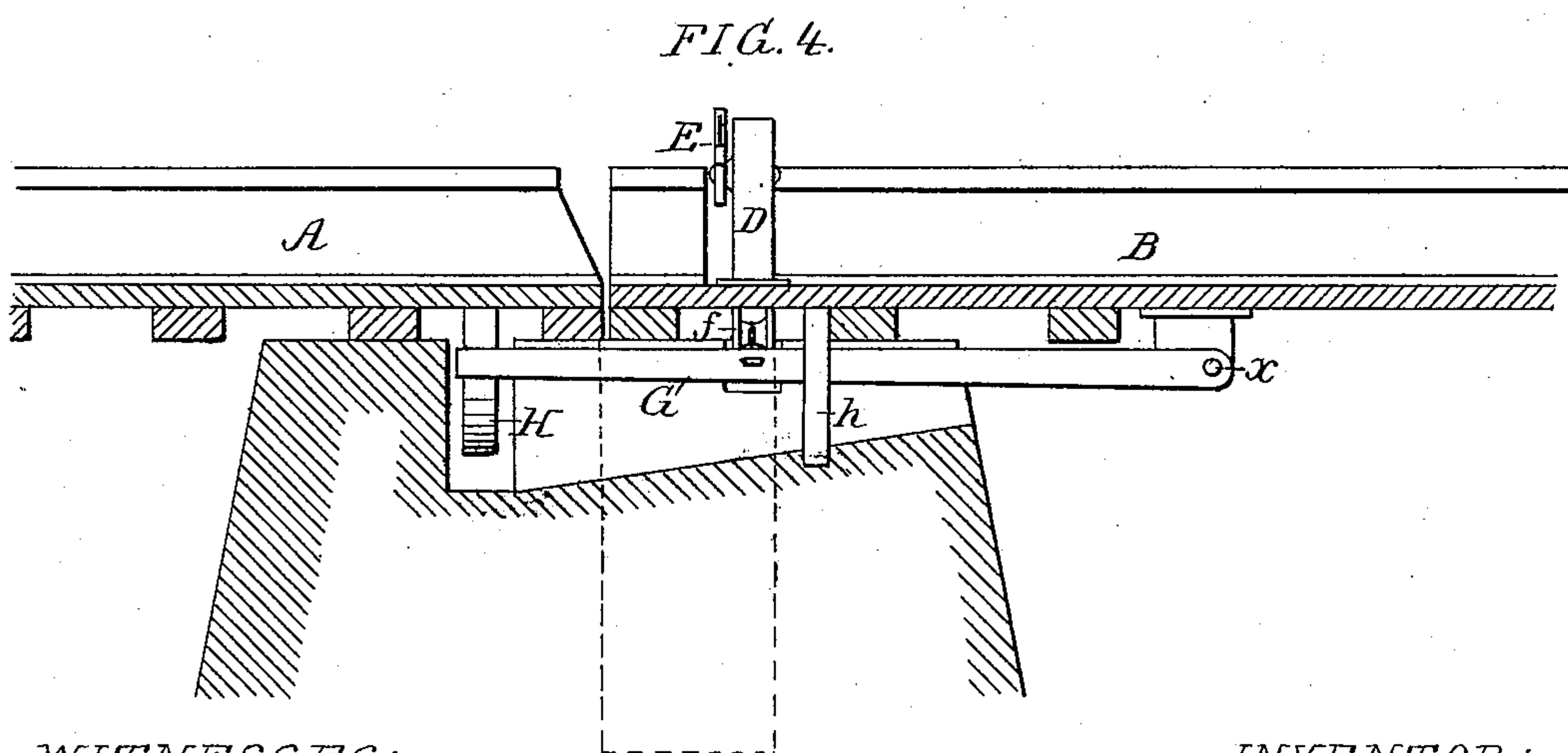
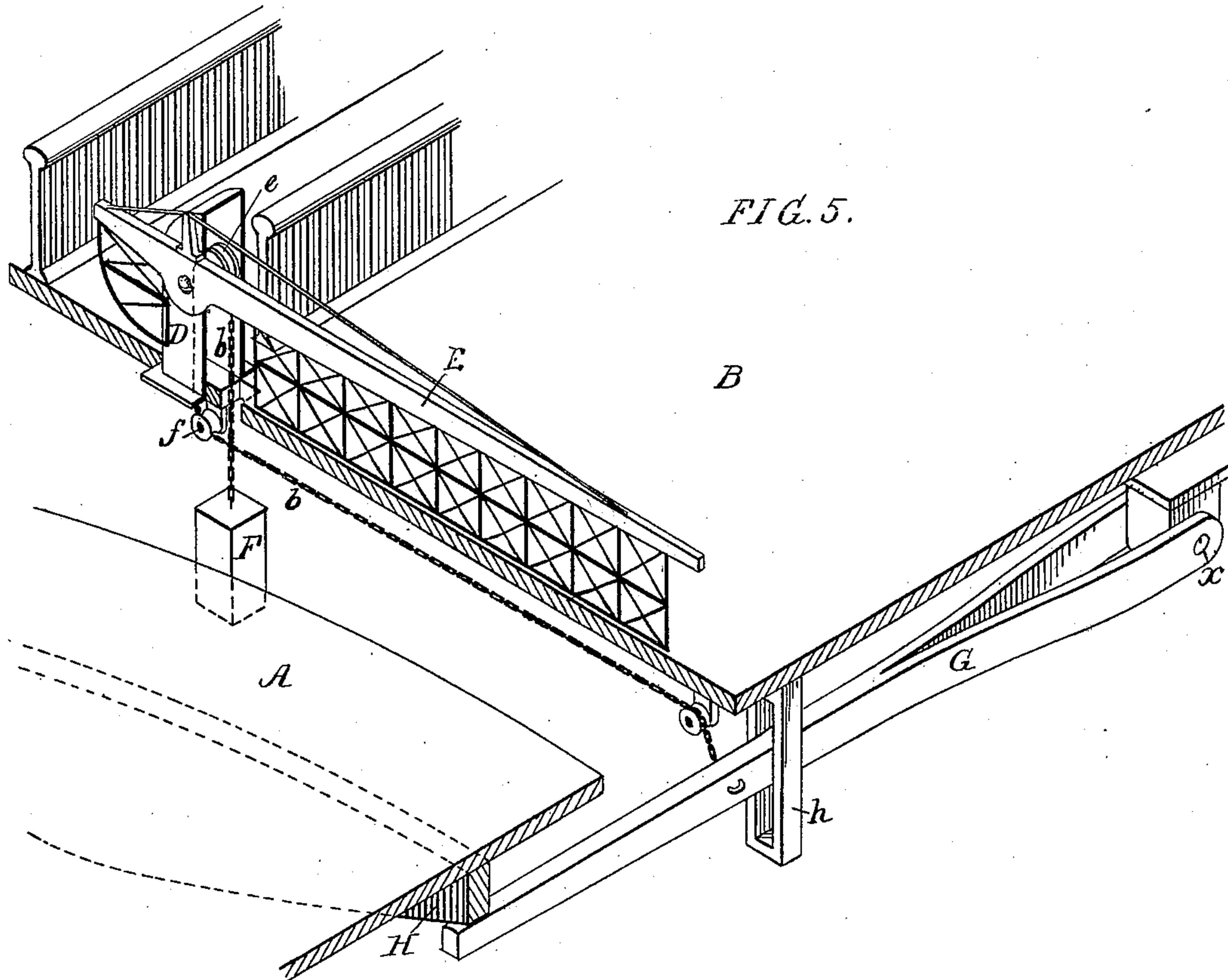
2 Sheets—Sheet 2.

J. H. QUACKENBUSH.

SAFETY GATE FOR PIVOT BRIDGES.

No. 321,249.

Patented June 30, 1885.



WITNESSES:

WITNESSES:
David S. Williams
James F. Tobin

INVENTOR:

Jesse H. Quackenbush
by his Attys.
Howson & Sons

UNITED STATES PATENT OFFICE.

JESSE H. QUACKENBUSH, OF EAST SAGINAW, MICHIGAN.

SAFETY-GATE FOR PIVOT-BRIDGES.

SPECIFICATION forming part of Letters Patent No. 321,249, dated June 30, 1885.

Application filed February 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, JESSE H. QUACKENBUSH, a citizen of the United States, and a resident of East Saginaw, Saginaw county, Michigan, have invented certain Improvements in Safety-Gates for Pivot-Bridges, of which the following is a specification.

My invention consists of certain improvements in mechanism for causing the closing of the roadways on the permanent parts of a bridge structure when a pivot-bridge connected therewith is opened, and for removing the obstructions when the pivot-bridge is closed.

In the accompanying drawings, Figure 1, Sheet 1, is a diagram drawn to a reduced scale and showing a pivot-bridge and parts of the permanent bridge structure; Fig. 2, a plan view drawn to a larger scale of parts of the permanent structure; Fig. 3, a vertical section on the line 1 2, Fig. 2; Fig. 4, Sheet 2, a vertical section on the line 3 4, Fig. 2; Fig. 5, a perspective diagram, partly in section, and illustrating my invention.

It should be understood in the outset that there has been no attempt to illustrate the detailed construction of the pivot-bridge or permanent portions of the structure, for the reason that these may be constructed in different ways without departing from the main feature of my invention, and for the further reason that elaborate details of the structure would lead to confusion.

A, Fig. 1, is the pivot-bridge, and B B' the permanent parts of the bridge structure, the ends of the pivot-bridge being made, as usual, in the arc of a circle, of which the pivot is the center, and the ends of the permanent portions of the structure being made to correspond with the rounded ends of the pivot-bridge.

To stands D D' on each permanent portion of the structure are pivoted the arms E E, one to each stand, and each arm may be counterbalanced by a weight secured to the extension *a* of the arm. A weight, F, is attached to one end of a chain, *b*, a suitable pit being

made in the permanent portion of the structure to receive this weight. The chain passes over a sprocket-wheel, *e*, on the arm, the said wheel being concentric with the arm's pivot-pin and the chain passing downward from the sprocket-wheel and round a guiding-pulley, *f*, and being secured to a central lever, G, which is pivoted at *x* to any suitable attachment on the under side of the permanent structure, the lever being so adapted to guides *h* that it can resist lateral strains. Both arms E are connected by chains to the central lever, G, in precisely the same way; but in applying my invention to a narrow bridge one arm with chain-connections to the said lever G will suffice. On the under side of the pivot-bridge is a beam, H, the under edge of which presents two inclined planes, so that in closing the bridge after it has been opened one of these inclined planes will so depress the lever G as to raise both arms E E, the weights, however, depressing the arms when the pivot-bridge is opened.

I am aware that pivoted gates on the approaches to a pivoted bridge have been combined with such mechanism that they will be closed when the bridge is opened and opened when the bridge is closed; hence

I claim as my invention—

The combination of a pivot-bridge having a cam or projection, H, an arm or gate, E, pivoted to the permanent portion of the structure, and a lever, G, beneath the same, with a chain, *b*, attached at one end to the lever, passing over a sprocket-wheel concentric with the pivot-pin of the said arm or gate, and weighted at its opposite end, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JESSE H. QUACKENBUSH.

Witnesses:

E. N. STONE,
BHD. HAACK.