Schneider & Montgomery

Self-Acting Draw Bridge

No. 29,917. Patented Sept. 4. 1860.

Fig. 1.

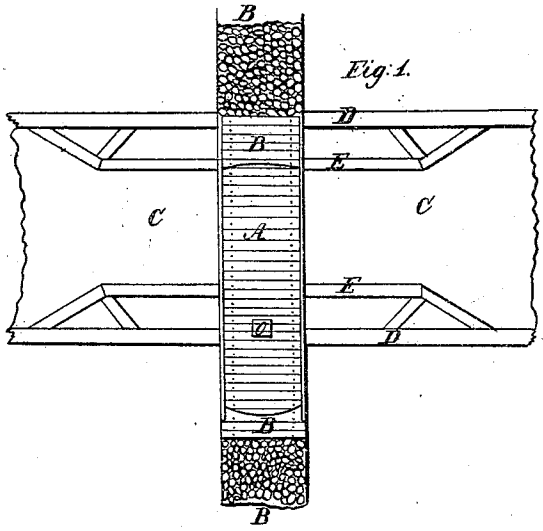


Fig. 2.

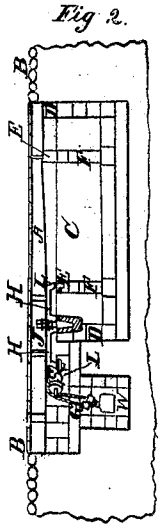


Fig. 3.

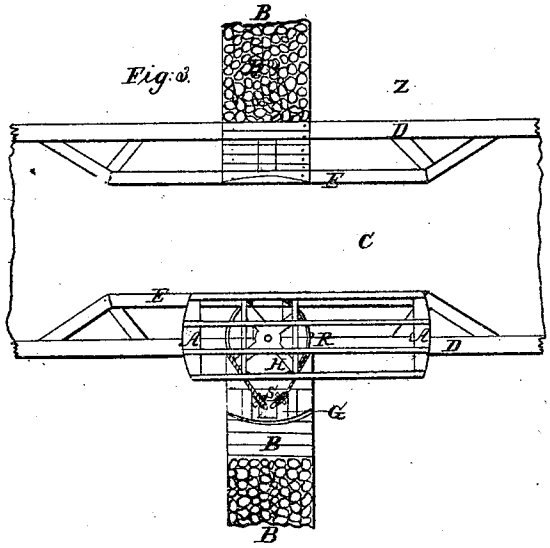
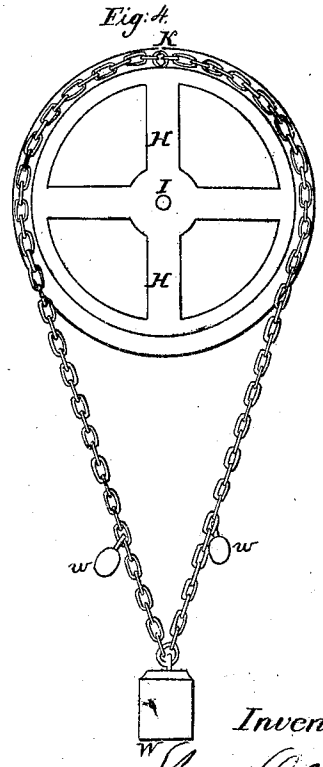


Fig. 4.



Witnesses;

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J. H. Pollock

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UNITED STATES PATENT OFFICE.

LOUIS SCHNEIDER AND J. A. MONTGOMERY, OF WILLIAMSPORT, PENNSYLVANIA.

SELF-ACTING DRAWBRIDGE.

Specification forming part of Letters Patent No. 29,917, dated September 4, 1860; Reissued April 22, 1873, No. 5,372.

To all whom it may concern:

Be it known that we, LOUIS SCHNEIDER and JOHN A. MONTGOMERY, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Self-Acting Drawbridges; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan view of the bridge and its connections; Fig. 2 a longitudinal section; Fig. 3 a plan view with planking removed; and Fig. 4 a view of the wheel, chain and weights by which the bridge is moved.

In all of which figures, A represents the bridge or draw; B the roadway; C the canal or stream to be spanned; D the docking on the sides; E a frame work to support the bridge and guide the boats; F the posts supporting the frame work and allowing a passage for backwater between them and the docking; G the well in which the weight and chain work; H the wheel (or half sheave) on which the bridge is supported when moving; J the spindle or center on which the bridge moves; K the attachment of the chain to the wheel; L the rollers on which the wheel rests; O the covering on the bridge, to the spindle; S the sheaves over which the chain passes; I the hole in the wheel holding the spindle; W the weight producing the action of the bridge; and *w* smaller weights to take up the slack of the chain and prevent its displacement.

The operation of our invention is this: The bridge being free to move either forward or backward, when acted upon by sufficient pressure is forced open by a boat towed against it, the chain being wound on one side of the wheel and slackened on the other, thus throwing all of weight W on the chain wound up; which weight will when the resistance is removed, descend until it bears equally on each chain, and in so descending will move the bridge to the point at which it is set and from which it was moved.

The operation will be more clearly understood by reference to Fig. 4, in which if the wheel is free to revolve on I and is so moved as to wind up either chain, the whole of W will be supported by said chain. Consequently the weight W when allowed to descend will do so until its weight is equally borne by each chain, and the wheel is returned to its position, it being evident that the bridge if attached to the wheel will move with it. It is also evident that by attaching the weight at different points, the bridge will be moved to different positions and that it can be so adjusted as to close it in line with the roadway. It may sometimes occur that it will be desirable to dispense with the well G—we do not claim the well nor restrict ourselves to its use, it being evident that the same purpose will be effected by passing the chains under sheaves at the or near the side of the bridge and thence over an upright of sufficient height thus suspending the weight by the side of said upright.

What we claim is—

The self acting draw bridge herein described capable of being turned in either direction by a passing vessel and closing itself with a constant force from any position in the manner substantially as herein set forth.

LOUIS SCHNEIDER.
J. A. MONTGOMERY.

Witnesses:
J. J. METZGER,
I. H. POLLOCK.