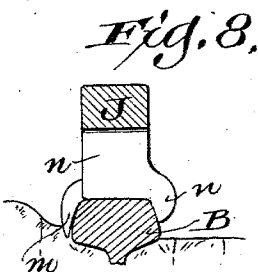
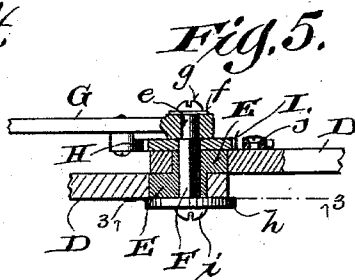
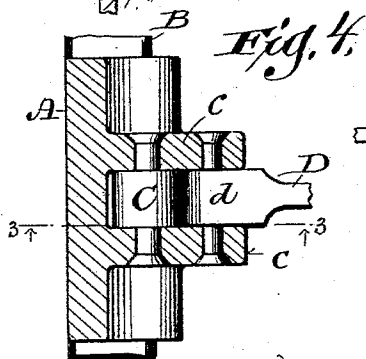
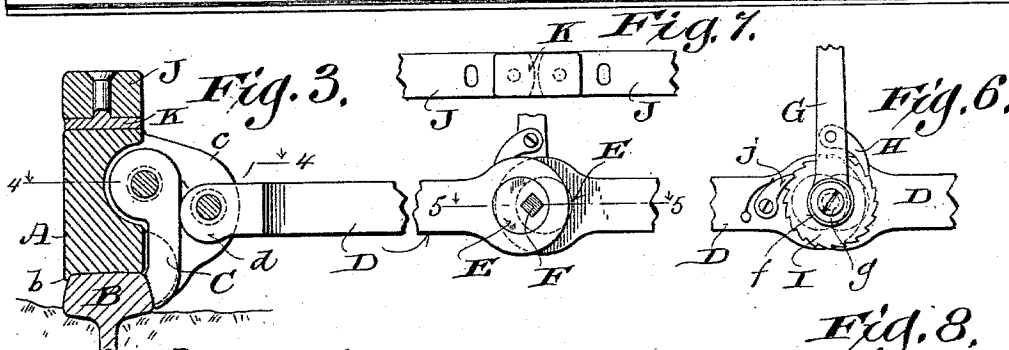
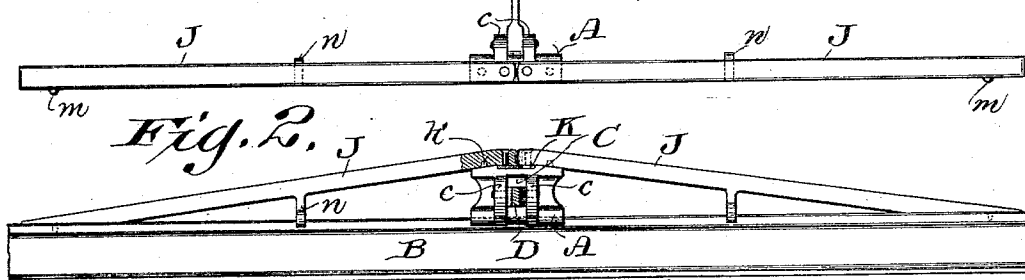
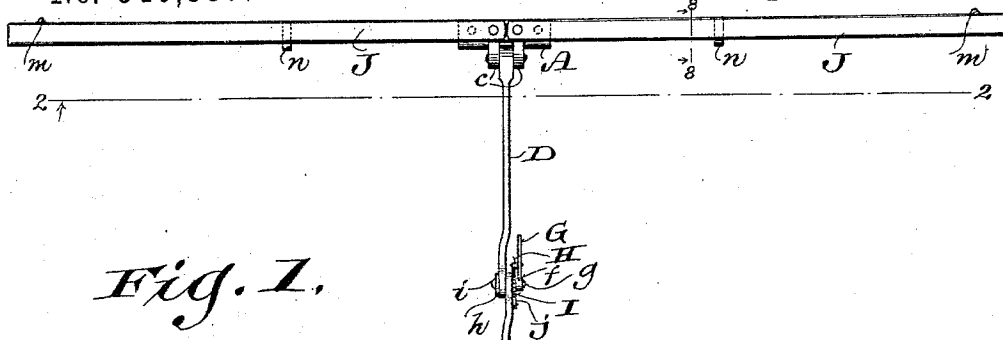


T. NISKERN.
HOSE BRIDGE.

Patented Sept. 17, 1895.



Witnesses:
Geo. W. Loring.
N. E. Oliphant

Inventor:
Isaac Niskern,
H. G. Underwood,
Attorney

UNITED STATES PATENT OFFICE.

ISAAC NISKERN, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO
JAMES B. HATCH, OF SAME PLACE.

HOSE-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 546,387, dated September 17, 1895.

Application filed February 18, 1895. Serial No. 538,840. (No model.)

To all whom it may concern:

Be it known that I, ISAAC NISKERN, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hose-Bridges; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple and economical folding hose-bridge for street-railways; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth, with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a plan view of my hose-bridge; Fig. 2, an elevation of a portion thereof in view on line 2 2 of the preceding figure and partly broken away; Fig. 3, a detail section on line 3 3 of Figs. 4 and 5; Fig. 4, a similar view on line 4 4 of Fig. 3; Fig. 5, a like view on line 5 5 of Fig. 3; Fig. 6, a detail elevation of a pawl-and-ratchet mechanism embodied in my invention; Fig. 7, a plan view of the bridge-rails inverted, and Fig. 8 a detail sectional view on line 8 8 of Fig. 1.

Referring by letter to the drawings, A represents each of a pair of center blocks that are preferably cast-iron and have outside bottom flanges *b*, that come over against track-rails B, upon which they are supported when my bridge is positioned for use. A pair of ears *c* extend inward from each block, and are pivotally connected to these ears between the same is a jaw C, having a preferably serrated lower end shaped to impinge against the adjacent track-rail. The eccentric heads *d* of jointed links D, also in pivotal connection with the block-ears, oppose the jaws C and operate to clamp the same on the rails when the brace formed by said links is brought to a horizontal position.

To compensate for possible deviations in excess of the standard gage of the railway the joint between the brace sections or links D is made extensible, so that the necessary clamping-pressure against the jaws C may be exerted at all times to maintain the center blocks on the rails. Any suitable extensible joint may be employed, but the one herein

shown results from a union of two eccentrics E, extended in opposite directions and engaging suitable openings in said brace members. This double eccentric is herein shown as fitted on a squared stem F, having a circular end *e* loosely engaged by a lever G, carrying a pivotal clutch-pawl H, that engages with a ratchet-wheel I, also fitted on the squared stem intermediate of the lever and adjacent brace member. A washer *f*, held on the stem against the lever by a screw *g*, and another washer *h*, fitted to said stem against the outside of the adjacent brace member, are held in place by a screw *i* to complete the joint.

To hold the ratchet-wheel in position corresponding to an adjustment of the eccentrics, and thereby prevent accidental contraction of the extended brace-joint, I employ a spring-controlled detent *j*, the latter being best shown in Fig. 6.

In Figs. 3 and 5 the brace-joint is shown at its full extension, and while the lever is shown vertical it will in practice be swung down out of the way as soon as the extension of said joint is effected.

The center blocks have their upper faces beveled in opposite directions and provided with studs *k*, that engage transverse recesses in the under sides of bridge-rails J, pivoted in pairs to plates K, that seat in corresponding recesses in said center blocks, this construction and arrangement of parts being devised for the purpose of adapting the bridge to straight track or curves; but any suitable means may be employed to form hinge-joints between the aforesaid center blocks and bridge-rails in order that the latter may be folded together to economize space when the bridge is not in use as well as to facilitate the handling of said bridge. It is also to be observed that the brace may be folded together because of its joint. Consequently the entire bridge may be made very compact when not in use.

Each bridge-rail has its outer end preferably provided with a toe *m*, that comes outside the corresponding track-rail to embed in the roadway, and a foot *n* depends from said bridge-rail intermediate of the toe and center block to bear upon said track-rail and ex-

tended inside against the same, as shown in Figs. 1 and 8, whereby the bridge is steadied in position.

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

1. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon, a jointed brace connected at its extremities to the blocks to exert pressure against the jaws when extended, and bridge-rails joined to said blocks.

2. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon, a brace connected at its extremities to the blocks to bear against the jaws and provided with an intermediate extensible joint, together with bridge-rails joined to said blocks.

3. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon, a jointed brace connecting the blocks and exertive at its extremities against the jaws, together with bridge rails pivotally connected to said blocks and having transverse recesses engaging studs on the same.

4. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon, brace-sections connected to the blocks to exert pressure against the jaws, a double-eccentric engaging the brace-members to form an extensible joint, suitable means for adjusting the eccentric, and bridge-rails joined to said blocks.

5. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon,

brace-sections connected to the blocks to exert pressure against the jaws, a double eccentric engaging the brace-members to form an extensible joint, a squared stem fitting the eccentric, a ratchet-wheel fitted on the stem to turn therewith, a lever loose on said stem and provided with a clutch-pawl engageable with the ratchet-wheel, a detent also engageable with said ratchet-wheel, and bridge-rails joined to said blocks.

6. A hose-bridge comprising center-blocks having clamp-jaws that come inside of track-rails when the blocks are in place thereon, a brace connecting the blocks and exertive at its extremities against the jaws, bridge-rails joined to said blocks, a toe at the outer end of each bridge-rail arranged to come on one side of a track-rail, and a foot depending from said bridge-rail intermediate of the toe and center-block to bear upon said track-rail and extend against the other side of the same.

7. A hose-bridge comprising center-blocks having recessed upper faces and clamp-jaws, the latter being arranged to come inside of track-rails when the blocks are in place thereon, a jointed brace connecting the blocks and exertive at its extremities against the jaws, plates engaging the block-recesses, bridge-rails pivoted to the plates, and studs on said blocks engageable with openings in the bridge-rails.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ISAAC NISKERN.

Witnesses:

N. E. OLIPHANT,
HENRY DANKERT.