

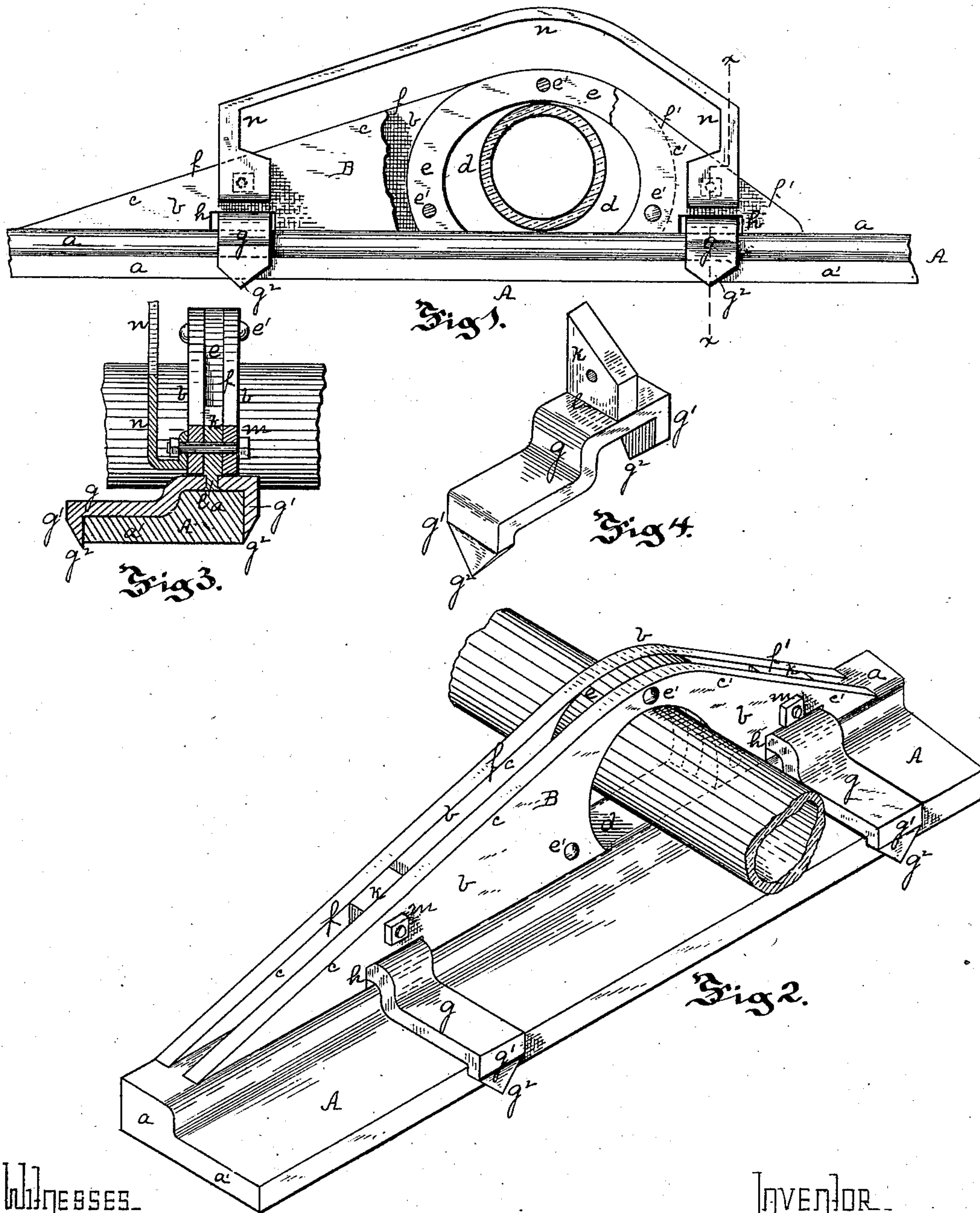
(No Model.)

T. REDDY.

HOSE BRIDGE FOR RAILWAY TRACKS.

No. 305,108.

Patented Sept. 16, 1884.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

THOMAS REDDY, OF PITTSBURG, PENNSYLVANIA.

## HOSE-BRIDGE FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 305,108, dated September 16, 1884.

Application filed March 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS REDDY, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Hose-Bridges for Railway-Tracks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to bridges to be employed on the tracks of street-railways to enable the cars to pass over the fire-engine hose without injury thereto, its object being to provide a light and efficient bridge for that purpose, which can be carried with the car, and so prevent the delay to these cars, so often caused in large cities by conflagrations.

It consists, essentially, in a bridge secured and having inclined treads or edges extending from each end to the highest point thereof, and an opening through the same for the passage of the hose, and provided with clamps corresponding in shape to the upper face of the rail, one of these bridges being placed on each rail, and the clamps fitting over and securing it thereto, and the car-wheels riding up over these inclines, and so passing over the hose without injury thereto and without obstructing the free passage of the water.

It also consists in certain improvements in the construction of the bridge to secure lightness and strength.

It also consists in certain improvements in the means of holding the bridge to the track, whereby on receiving any longitudinal pressure from the wheels the clamps are caused to bind more firmly on the rails.

It also consists in providing the bridge with a guard to hold the car-wheel against it.

In the drawings, Figure 1 is a side view, partly broken away, illustrating my invention, the hose being shown in section. Fig. 2 is a perspective view thereof. Fig. 3 is a cross-section on the line  $x x$ , Fig. 1. Fig. 4 is a perspective view of the clamps.

Like letters indicate like parts in each.

The rail A is the ordinary flat rail employed in street-railways, having the tread  $a$  and depressed body  $a'$ . The bridge B is formed of plate metal cut to shape and riveted or bolted together, the plates  $b$  having a flat base and the inclined faces  $c c'$  and the hose-opening  $d$ , and the semicircular or horseshoe-shaped

piece  $e$ , the inner face of which corresponds to the hose-opening  $d$ , fitting between the plates at said opening, and holding them apart so as to form the inclined treads  $f f'$ , of sufficient width to give a firm support for the wheels. In practice I find that plates  $b$  one-fourth inch thick and a horseshoe-shaped piece,  $e$ , three-fourths inch thick give the desired result, providing a tread one and one-fourth inch wide, which rests firmly on the tread of the rail and forms a bridge sufficiently strong to sustain any street-car loaded. The plates  $b$  and piece  $e$  are generally secured together by rivets  $e'$ , as shown. The incline up which the wheels travel is made gradual to prevent any sudden strain on the horses in drawing the car over the bridge; but the opposite end of the incline is made more abrupt in order to reduce the length and weight of the bridge, though it is not sufficiently abrupt to jar the car. The clamps  $g$  correspond in shape to the upper face of the rail and rest thereon, and they have the lips  $g' g'$ , extending down the side edges of the rail, being made to fit it neatly and hold thereto, and the ends of said lips being tapered to a point, as at  $g^2$ , to enter between the stones or dirt along the sides of the track. The clamps extend through mortises  $h$  in the plates  $b$ , fitting them loosely, as it is desired that they have a slight movement therein, and they are connected to the swivel-plates  $k$  by the swivel-joints  $l$ , which are made flat on the under face of the clamps, to allow them to rest squarely on the rail. The swivel-plates  $k$  are secured between the plates  $b b$  by the bolts  $m$ , which also act to hold the plates together and further brace the bridge. Bolted at the inner side of the bridge is the guard  $n$ , to hold the car-wheel close to the bridge and prevent the wheel from slipping therefrom. This guard is preferably made skeleton, as shown, to reduce the weight of the bridge, and extends out from the bridge far enough to give free space for the entrance of the wheel-flange between it and the bridge. This guard is not, however, necessary, as the bridge acts efficiently without it. When the bridges are employed, they are placed on the rails and held thereon by the lips  $g'$  of the clamps, which extend down into the stones and dirt on either side of the rail, and are generally sufficient to hold it against longitudinal mo-



tion or slipping thereon. The line of hose fits within the opening *d*, and is generally drawn directly across the track, so that both bridges may be in position to raise the car-wheels at the same time, and the opening *d* is sufficiently high to allow of the passage of the standard hose employed, the opening being broad enough to allow the hose to extend across the tracks at an angle. The car-wheels travel up the inclined treads *f* on one side and down on the other inclined treads, *f'*, the car being thus carried over the hose without injuring it, and the delay and annoyance so often occasioned in street-car traveling being thus entirely overcome. If the bridges are not held firmly to the rails by the clamps, as soon as the pressure of the wheels comes against them, by drawing on the clamps through the swivel-joints *l*, as these swivel-joints connect with the clamps at one side, they throw the clamps at an angle and cause the edges of the lips *g'* to bite into the side edges of the rails, and so hold the bridges firmly thereto.

The bridges are made about thirty inches long and weigh about fifteen pounds, so that they are not too large or heavy to be carried by the cars or hose-carriages; or they may be kept at intervals along the line, where they can be quickly obtained when needed. They can be manufactured at small cost and are efficient for the purpose intended.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the bridge having the inclined treads *f f'* and hose-opening *d*, the clamps *g*, corresponding in shape to the rail, and secured to the bridge, said clamps fitting over the rail, substantially as set forth. 35

2. The combination of the plates *b b*, having inclined faces *c c'*, and hose-opening *d*, the curved plate *e*, secured between said plates at said openings, and means for securing the bridge so formed to the rail, substantially as and for the purposes set forth. 40

3. In combination with the bridge, the clamps fitting over the rails and secured to the bridge by swivel-connections, substantially as and for the purposes set forth. 45

4. In combination with the bridge, the clamps *g*, secured thereto and fitting over the rail, and having the lips *g'*, tapered to a point, as at *g''*, substantially as and for the purposes set forth. 50

5. In combination with the bridge having the inclined treads *f f'* and hose-opening *d*, the wheel-guards *n*, secured thereto, substantially as and for the purposes set forth. 55

In testimony whereof I, the said THOMAS REDDY, have hereunto set my hand.

THOMAS REDDY.

Witnesses:

J. M. ROURKE,  
JNO. B. FENESY.