

(No Model.)

3 Sheets—Sheet 1.

T. D. WALLACE.
HOSE BRIDGE.

No. 577,393.

Patented Feb. 16, 1897.

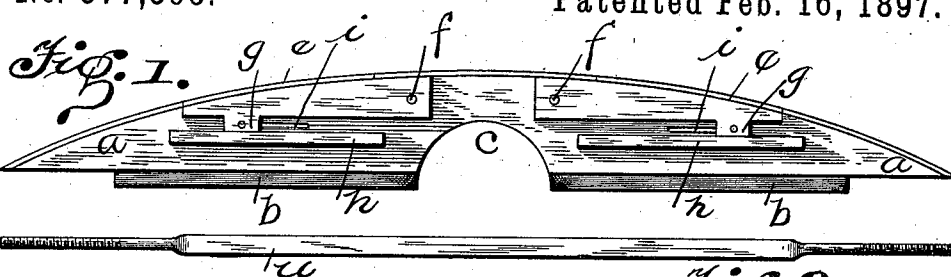


Fig. 2.

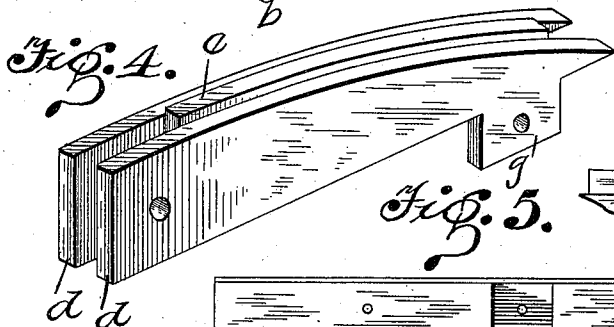
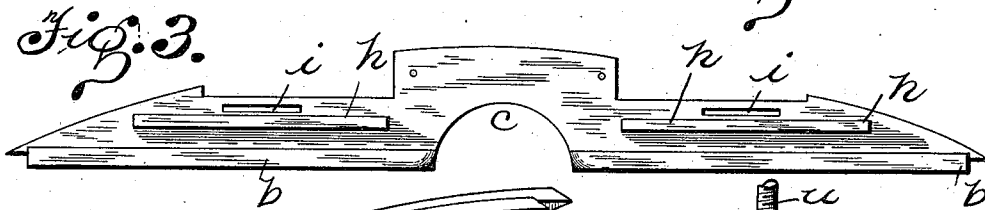


Fig. 5.

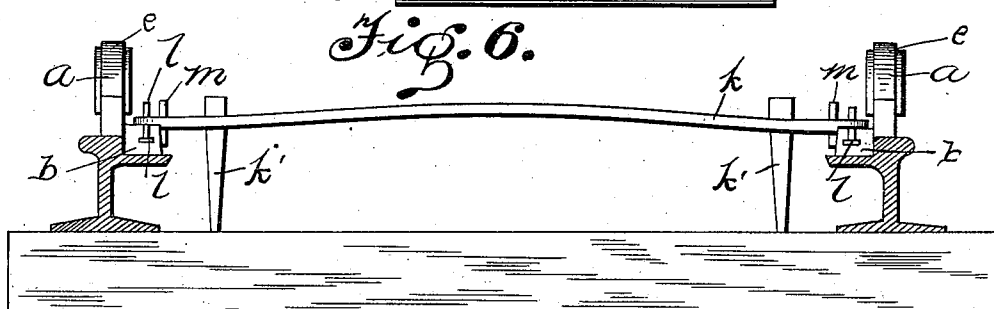
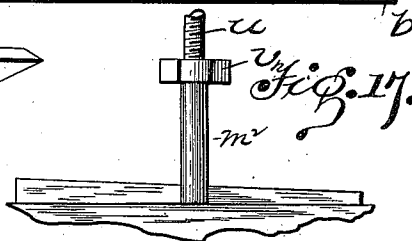
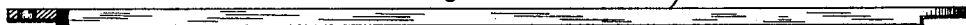


Fig. 7.



Attest:
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A. M. Wilson



Inventor:
T. D. Wallace.
By Henry L. Ernst Atty.

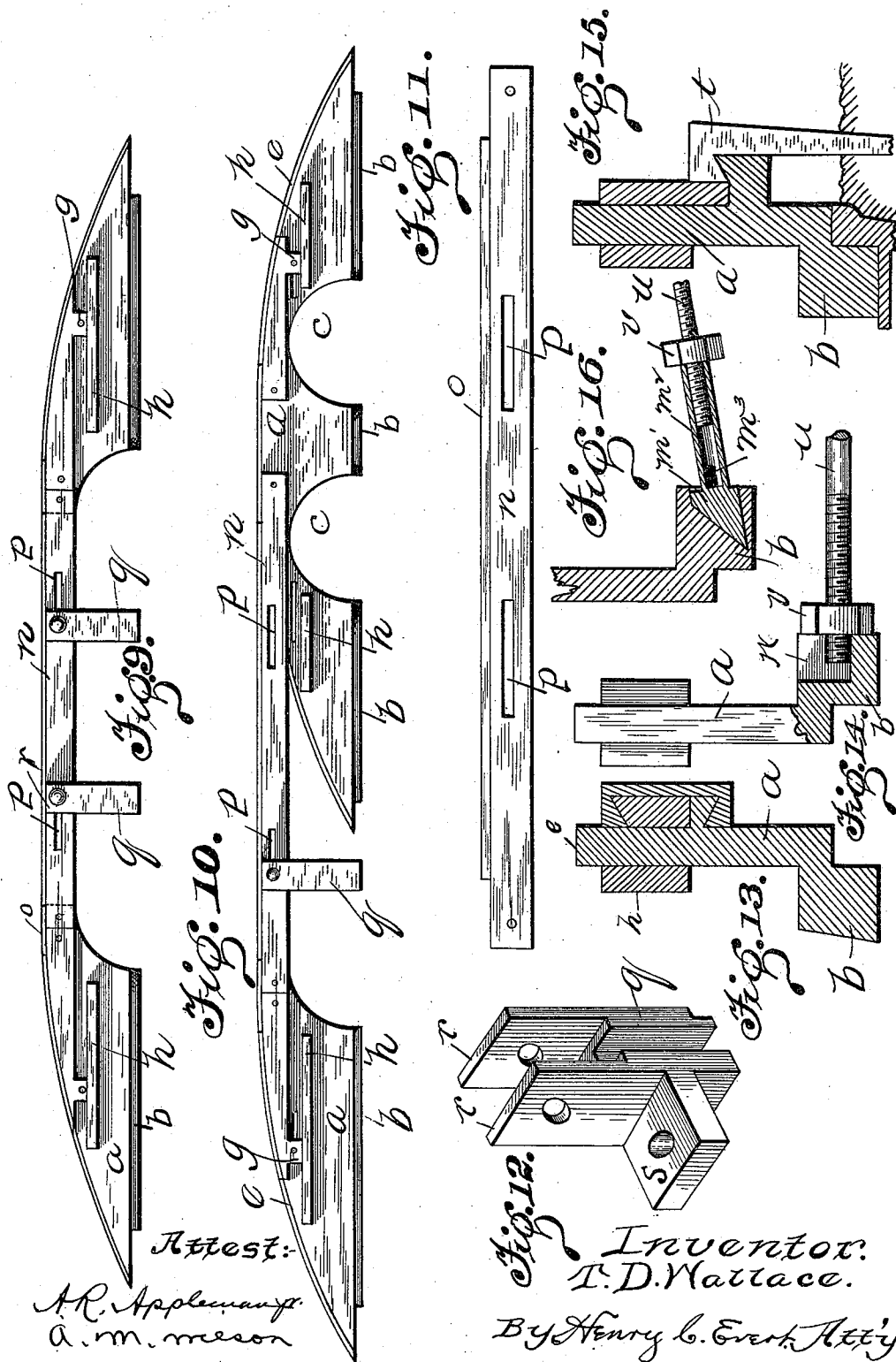
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3 Sheets—Sheet 2.

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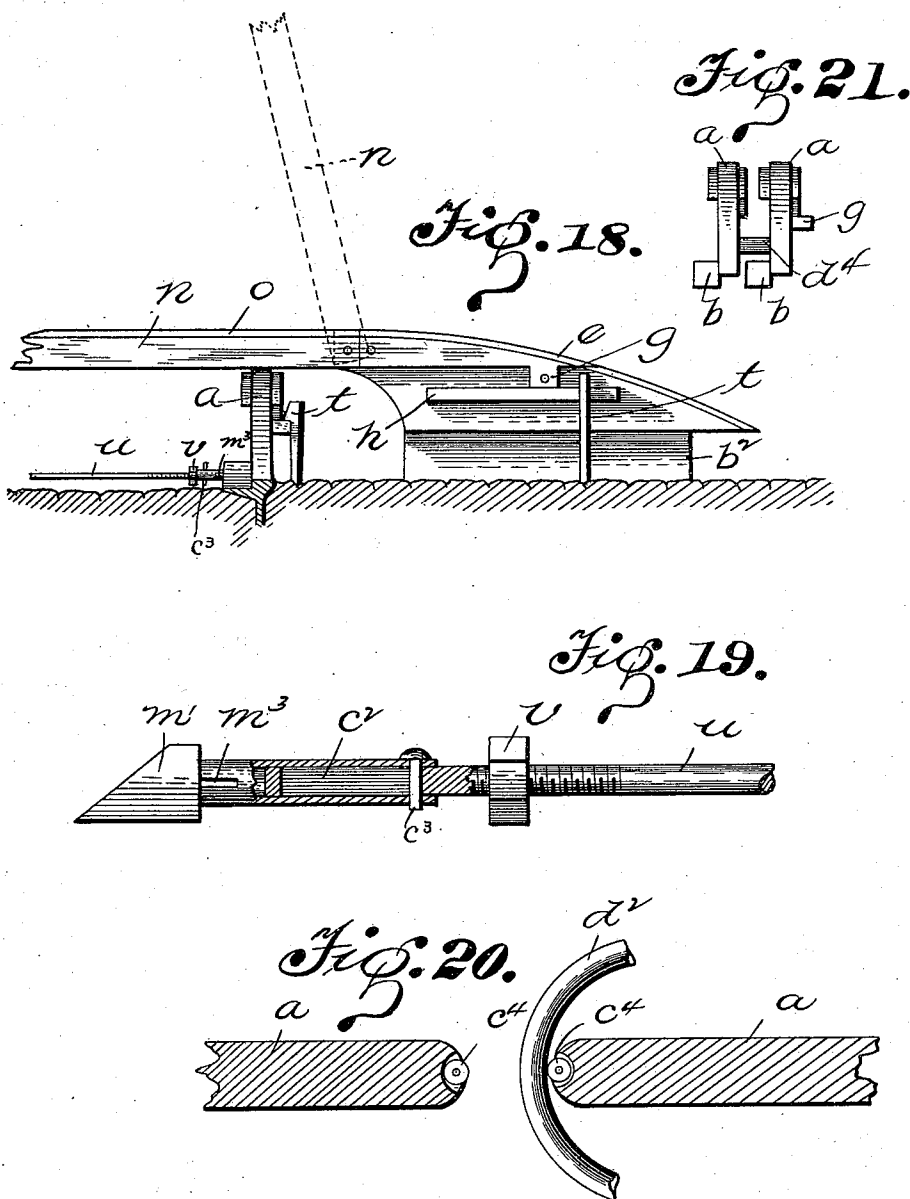
(No Model.)

3 Sheets—Sheet 3.

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Patented Feb. 16, 1897.



Witnesses:-

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Inventor:
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By Henry L. Evert, Atty.

UNITED STATES PATENT OFFICE.

THOMAS D. WALLACE, OF ALLEGHENY, PENNSYLVANIA.

HOSE-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 577,393, dated February 16, 1897.

Application filed July 23, 1896. Serial No. 600,256. (No model.)

To all whom it may concern:

Be it known that I, THOMAS D. WALLACE, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Hose-Bridges, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in hose-bridges, and has for its object to construct a hose-bridge for use principally on street-car tracks in case of fire that can be quickly and conveniently
15 placed in position on the tracks and will permit the cars to pass over the hose without injuring the same, thus preventing the delaying of the cars, which is very often the case at present, and obviating the inconvenience
20 and expense thus caused to the street-car companies.

A further object of the invention is to construct a hose-bridge of the above-referred-to class that will be extremely simple in its construction, strong, durable, effectual in its
25 operation and comparatively inexpensive to manufacture; furthermore, a hose-bridge that can be quickly arranged to accommodate one or as many lines of hose as may be desired.

30 With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described, and particularly pointed out in the
35 claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar
40 parts throughout the several views, in which—

Figure 1 is a side elevation of my improved hose-bridge. Fig. 2 is a side view of the adjustable securing-bar. Fig. 3 is a side view of the bridge with removable portions detached. Fig. 4 is a perspective view of the removable portions. Fig. 5 is a top plan view of a portion of the extended form of construction shown in Fig. 9. Fig. 6 is an end view of the device in position, showing one form
45 of securing-brace. Fig. 7 is a modified form of brace, partly in section. Fig. 8 is an underneath plan view of Fig. 5, showing the

bridge constructed to conform to a curve in the track. Fig. 9 is a side view of the bridge extended to accommodate more than one line
55 of hose. Fig. 10 is a modified form of the same. Fig. 11 is a plan view of the extensible bar. Fig. 12 is a perspective view of the supporting-block. Fig. 13 is a sectional view of the bridge and bar. Fig. 14 is an end view, partly in section, showing modified form of
60 adjustable securing-bar. Fig. 15 is a sectional view showing a spike or pin for holding the bridge rigid. Fig. 16 is a sectional view showing modified form of adjustable securing-bar. Fig. 17 is a top plan view of the same, partly broken away. Fig. 18 is a side
65 view showing manner of operating on cross-tracks. Fig. 19 is a modified form of the securing-bar shown in Fig. 16. Fig. 20 is a sectional view of a portion of the bridge, showing friction-rollers to engage the hose. Fig. 21 is an end view showing bridge constructed for double tracks.

In the drawings, *a* represents the arched bridge proper, (shown in Figs. 1 and 3 of the drawings,) which is formed on its underneath side with a heel *b*, adapted to abut against the inner face of the rail, and is provided at its center with a semicircular cut-away portion *c*, forming an opening for the hose. The bridge is also provided on its upper face with cut-away portions, which are adapted to receive the detachable portions arched to conform to the bridge and consisting of the jaws
85 *d d*, the raised portion *e* forming the track and conforming to the balance of the bridge. The jaws are pivotally secured to the arched portion of the bridge by pins *f f*, as shown, and the detachable portion is provided with
90 a lug *g*, which rests on a side brace *h*, said lug being adapted to be secured to the bridge in the same manner as the upper end of the detached portion, the bridge being provided with elongated slots *i* at this point.

A securing-bar *k* is employed for holding the bridges on each rail together, which may be crowned, as in the form shown in Fig. 6, or flat, as shown in Fig. 7. This bar *k* is shown in Fig. 6 as secured by means of an
100 inverted-T bolt *l* in the bridge and engaging the bar, and a wedge *m* is inserted through the bar, which locks the same.

In Fig. 9 I have shown the bridge as ad-

justed to accommodate more than one line of hose, and in this construction the bridge *a* is formed in two portions, the outer ends of the bridge being similar in construction to the form shown in Figs. 1 and 3, and are connected together by a bar *n*, formed with a track *o*, completing the track of the bridge, said bar being pivotally secured in the same manner as the detachable portions and provided with slots *p p* to receive the pin of the supporting-block *q*, said block being formed with jaws *r* to engage the bar *n* and a lug *s*, to which is secured the bar *k*, said block being formed with a heel to conform to the rail.

In Fig. 10 of the drawings I have shown a modified form of this extensible form, the construction being materially the same as that shown in Fig. 9, the exception being the dispensing with one of the supporting-blocks *q*, and one end of the bridge is provided with two semicircular openings, or there may be as many as desired, and in Fig. 15 I have shown the device with a spike *t* engaging the brace and driven into the street to hold the bridge rigid, which construction may be employed, if desired.

In Fig. 14 I have shown an adjustable screw connecting-rod *u*, provided with nuts *v*, engaging against the bridge, the ends of the rod being adapted to engage in slots *w w* in the heel of the bridge. The rod is shown as broken; but in practice it extends across and engages the heel of the opposite section of the bridge and holds the two sections in contact with the rails.

The operation of my improved hose-bridge will be readily apparent from the views of the same that I have shown in the drawings, but to illustrate the same further we will assume that all the parts have been secured in their respective positions and the bridge placed on the rail and over the hose. The ends of the bridge will lie flush with the rail, and the trucks of the car will readily ascend on same, the bridge being left in position until the hose are removed, when the same can be easily disconnected and stored in the street-car or sent to the barns or sheds of the company, as may be most convenient or desired.

The sides of the bridge at the aperture *c*, adapted to receive the hose, are beveled, so as to admit of the hose being pulled through same at any angle without danger of the same catching on the bridge.

In Fig. 6 of the drawings I have shown an additional fastening for the bar *k*. In this construction the bar is slotted to receive spikes *k'* to engage in the cross-tie and assist in holding the brace rigid. When it is desired to remove the bridge, these spikes are first withdrawn, and when the wedges *m m* are removed one end of the brace is loosened, and the oblong slot in the end of the bar will permit of the bar being swung round to rest on the heel of the bridge and be secured thereto, said bar being of course slightly raised be-

fore swinging the same to allow the same to clear.

In the modified form of the adjustable securing-bar as shown in Figs. 16 and 17 I employ a lock-bar head *m'*, secured on the barrel *m²* and adapted to fit in the heel of the bridge, said barrel being adapted to receive the end of the bar or rod *u*, which is provided with the nut *v*, as in the construction shown in Fig. 14. This construction will permit of a wedge being inserted in the bar lengthwise with the heel of the bridge, said barrel being slotted at *m³* to receive the wedge and securing a bearing throughout the length of the wedge, which cannot be obtained where the wedge is inserted transversely to the length of the heel. Fig. 16 shows the bar in an inclined position, which it would assume if crowned, as illustrated in Fig. 6.

In Fig. 18 I have shown my improved hose-bridge constructed for use on cross-tracks, and in this construction the bridge is constructed with a double heel *b²*, thus elevating the one bridge over the one on the cross-track, and in this view I have illustrated in dotted lines the manner in which the extension-bar is raised to allow the car on the one track to pass without removing the upper bridge.

In the modified form of securing-bar shown in Fig. 19 I have shown the bar *u* provided with a slot *c²* in the part entering the barrel, a pin *c³* being inserted through the barrel to prevent the securing-bar from pulling out. The connection between the rod and heel and the pressure are regulated by the nuts *v*, as heretofore explained.

In the construction shown in Fig. 20 I have arranged friction-rollers *c⁴ c⁴* in the bridge at each side of the semicircular opening *c*, which construction I will probably employ in all forms shown, as it will readily permit of the hose (a portion of which is shown at *d²*) being pulled through the opening easily and at any angle, the friction-rollers preventing the hose from lodging against the sides of the openings, as will be readily apparent.

In Fig. 21 I have shown the bridge constructed in the double form, so as to be applicable to double tracks. In this construction I employ two of my improved bridges, one for each rail, connected together by a bar *d⁴*, the two bridges being cast together.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a hose-bridge, the bridge proper having apertures to receive the hose, an extension-bar whereby the bridge may be made to accommodate several lines of hose, and means for securing the bridge on each rail together, substantially as shown and described.

2. In a hose-bridge, the bridge proper hav-

ing apertures to receive the hose, and an extension-bar and detachable portions, and a securing-bar engaging in the bridge on each rail to hold the same rigid, substantially as shown and described.

3. In a hose-bridge, the end portions connected together by an extension-bar, supporting-blocks to engage the rail, detachable portions on the end pieces, and a securing-bar engaging in the bridge on each rail to hold the same rigid, substantially as shown and described.

4. In a hose-bridge, the bridge proper constructed with detachable portions to admit of same being extended if desired, an extension-bar for said purpose, and a securing-bar locked to the bridge on each rail and holding the same rigid, substantially as shown and described.

5. In a hose-bridge, the bridge proper constructed to accommodate one or more lines of hose, detachable portions and an extension-bar pivotally attached to the bridge, supporting-blocks secured to the extension-bar, an adjustable securing-rod holding the bridge of each rail, and means for fastening said rod, substantially as shown and described.

6. In a hose-bridge, the end portions connected together by an extension-bar, supporting-blocks to engage the rail, detachable portions on the end portions, a securing-bar engaging in the bridge on each rail to hold the same rigid, and friction-rollers in the bridge proper to engage the hose, substantially as shown and described.

7. In a hose-bridge constructed double to conform to double tracks, said bridges connected together by a bar, an extension-bar, detachable portions, and an adjustable securing-bar to engage the bridge on the inner rails, substantially as shown and described.

8. In a hose-bridge, a bridge for each rail, friction-rollers in said bridge to engage the hose, detachable portions, an extension-bar and an adjustable securing-bar to lock the bridges, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS D. WALLACE.

Witnesses:

H. E. SEIBERT,
A. M. WILSON.