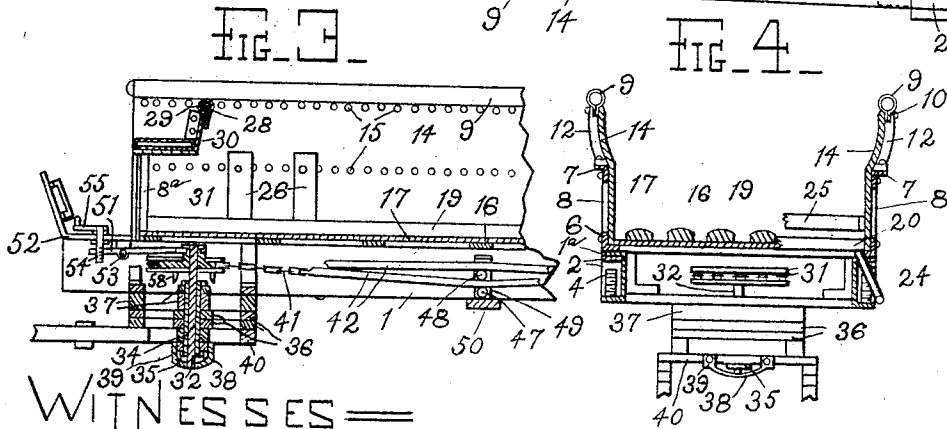
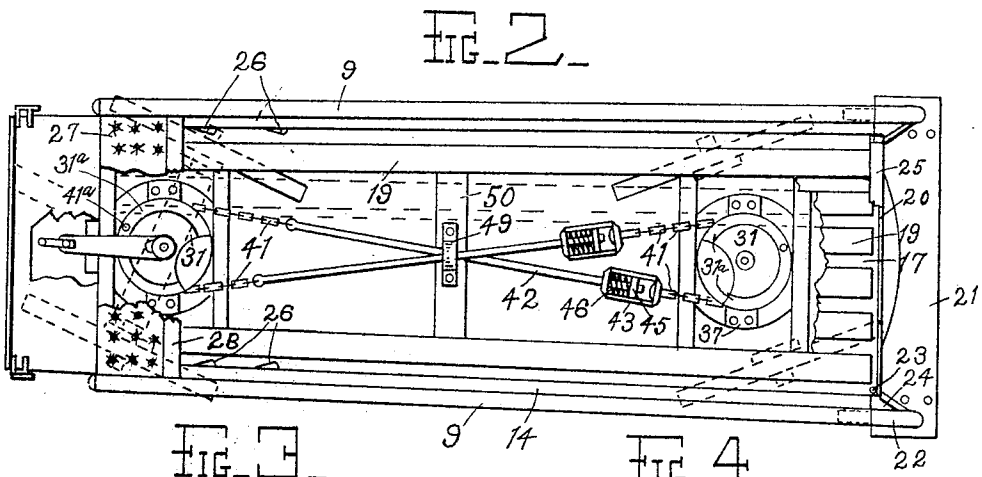
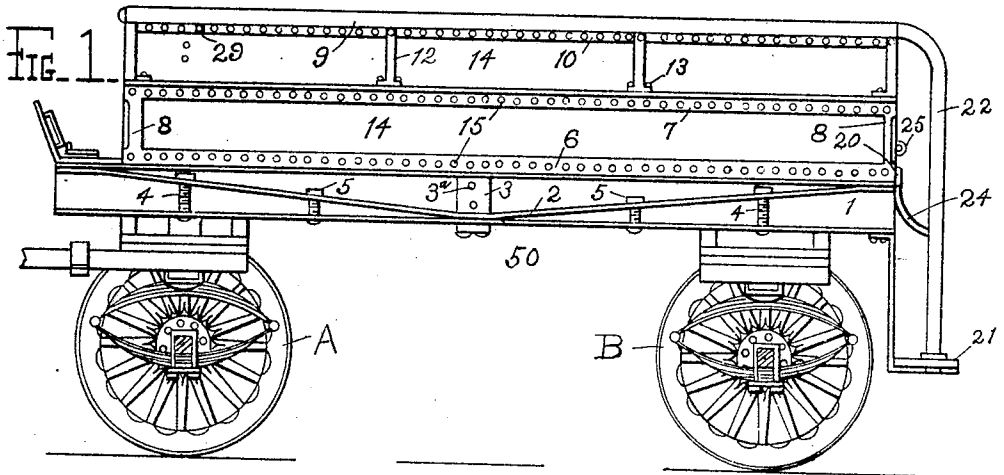


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B. B. BRIGGS.  
HOSE WAGON.

APPLICATION FILED NOV. 21, 1904.



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# UNITED STATES PATENT OFFICE.

BURDETT B. BRIGGS, OF CRESTON, IOWA.

## HOSE-WAGON.

No. 803,870.

Specification of Letters Patent.

Patented Nov. 7, 1905.

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*To all whom it may concern:*

Be it known that I, BURDETT B. BRIGGS, a citizen of the United States, residing at Creston, in the county of Union and State of Iowa, have invented certain new and useful Improvements in Hose-Wagons; and the manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

My invention relates to improvements in hose-wagons, more especially to that class designed to carry hose in an oblong box; and the objects of the same are to increase the carrying capacity of the body of the truck without materially increasing the weight of the structure to an objectionable extent; to provide improvements whereby hose may be more easily removed from the hose-body than heretofore; to provide an improved construction of the sides to the hose-box; to provide an improvement in the bottom of the hose-box so as to carry off or drain out any water in the bottom of the hose-box; to provide an improvement in trussing the sides of the hose body or box, whereby a stronger and lighter structure is obtained; to provide an improved tiller mechanism for the rear running-gear, whereby the hose-body can be made longer and increase its carrying capacity.

To this end the invention consists in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained and as described and claimed, with reference to the accompanying drawings, which form part of this specification.

Figure 1 is a side elevation of my improved hose-wagon, partly broken away. Fig. 2 is a top plan view, certain parts being broken away and showing the tiller mechanism and running-gears partly turned, with certain parts of the gears shown in dotted lines. Fig. 3 is a side elevation of a part of the truck, partly sectioned and broken away and showing the front tiller in sectional detail. Fig. 4 is a detail view of the rear end of the truck, partly in section and partly broken away.

Referring to the drawings, similar characters of reference refer to similar parts throughout the several views.

A designates the front, and B the rear, running-gear of the truck, such as usually forms part of the fire equipment of large cities.

The body or hose-box of the truck consists of two side sills 1 1, made from channel or

angle iron, with horizontal flanges 1" extending outward, as shown in Figs. 1 and 4. A truss 2 is located in the channel between the flanges 1" and is fastened at its ends to the ends of the top flange, and the middle portion of the truss converging down and fastened to the lower flange, a strut 3 is interposed at the middle of the sill and between the truss and top flange, as shown in Fig. 1. Threaded bolts 4 are fastened at one end to the lower flange and extend up through the truss and a bur 5 screwed thereon above the truss, as shown in Fig. 1.

As shown in Fig. 1, the burs 5 are made beveled on the side next to the truss and which prevents the bur from loosening, and thereby causing the truss to slack.

A bar of angle-iron 6 is fastened to the top flange of the side sills 1 and has the vertical flange extending upward. Another angle-iron bar 7 is secured at a distance above the bar 6, the flanges of bar 7 extending downward and outward, and the two bars are joined together by struts or vertical plates 8, as seen in Figs. 1 and 4. A horizontal tubular top or hand rail 9, having a vertical flange 10 extending downward, is located a suitable distance above the bar 7 and is supported on upright brackets 12, fastened to the lateral flange of bar 7 by bolts or rivets 13, as shown in Figs. 1 and 4.

Sheet-metal sides 14 of an oblong rectangular shape, preferably of one sheet of metal, are fastened to the inner side of the vertical flanges of bars 6 and 7 and to the vertical flange 10 of the top rail 9, as shown in Figs. 1 and 3.

Rivets or small bolts 15 are employed to fasten the sides to the vertical flanges of the horizontal bars.

Cross-bars 16 connect the two sides or sills 1 1 together in pairs, as shown in Fig. 4.

A sheet-metal bottom 17, preferably formed of one sheet of metal, is supported and fastened on the cross-bars 16 and to the inwardly-projecting flanges of bars 6 by rivets or other suitable means.

Longitudinal slats 19 are fastened on the top side of the metal bottom 17, and, as will be seen in Fig. 2, the slats have an intervening space between them to form gutters for water to drain into from off the hose. These slats have their top side beveled or rounded, so as to not retain any water on their top side to keep the hose wet, as is the case with a flat or level bottom or slat.

At the rear end of the hose-body the metal

bottom 17 extends beyond the ends of the slats 19 and is bent upward, so as to form a trough 20 transversely at the end of the slats, suitable ends being provided for the ends of the said trough, as shown in Figs. 1, 2, and 4.

The trough 20 might be at the front end of the hose-body and can be made separate from the bottom plate 17.

A footboard or step 21 is arranged at the rear end of the truck, and vertical hand-rails 22 extend up through the footboard and connect the rear ends of the horizontal side rail 9 by telescoping into the tubular part of said side rail, as shown in Figs. 1, 2, and 4.

At each end of the trough 20 outlets 23 are provided, and conductor-pipes 24 extend from these outlets downward and into the vertical hand-rails 22, as shown in Figs. 1, 2, and 4.

It will be observed that a perfect drainage is secured for wet hose or for washing the interior of the hose-body, and by conducting the water to the ground or into pails through the hand-rails no slop is made upon other parts of the apparatus.

A roller 25 is mounted above the trough 20 to prevent hose from catching on the trough while being removed or placed into the hose-body.

The sides of the hose-body are made diverging toward their rear ends to facilitate the removal of hose therein, as shown in Fig. 2.

To prevent hose from working loose or back, vertical wedges or side pieces 26 are fastened on the sides of the hose-body and to the inside of same and toward the front ends of the sides, as shown in Figs. 2 and 3, but may be located at other points along the sides. The wedges 26 slant from their respective sides inward and rearward, as seen in Fig. 2, and are placed some distance apart, whereby hose will wedge in between them, the wedges being slanted on their inside front edge to prevent hose-couplings catching on the wedges.

A driver's seat is constructed at and between the front ends of the sides of the hose-body and consists of a tubular back rail 28, fastened between the flanges of the top side rails 9 and arranged a suitable distance back from the front ends of said side rails, as shown in Figs. 2 and 3. A cross-rod 29 extends through the tubular part of the back rail 28 and the flanges of the side rails and serves to fasten the back rail to the sides of the hose-body and also brace the top side rails 9. The back rail 28 has a vertical flange extending downward and to which is fastened the sheet-metal bottom and back 30 of the seat, preferably formed of one sheet of metal and riveted to the vertical flange of the back rail and to the sides 14, as seen in Figs. 1, 2, and 3.

The vertical front end of the hose-body below the seat is formed of sheet metal similar to the sides and is fastened at its ends to vertical angle-iron corner-posts 8<sup>a</sup>.

Heretofore these trucks have been made

comparatively short, so as to turn corners, as they are not adapted to have the usual tiller used on or applied to the rear running-gear, consequently reducing the capacity and usefulness of the truck, and which also required the hose to be folded in shorter lengths. Therefore I have devised an automatic tiller of the following construction:

Two sets of tiller-heads are used, one for the front gear and one for the hind gear, and each consists of a tiller-wheel 31, fixed on a vertical shaft 32, extending down through a tubular king-bolt or boxing 34, burs or collars 35 being provided on the ends of said king-bolt to secure the upper and lower fifth-wheels 36 together, as the gears A and B are provided with fifth-wheels and bolsters or cross-bars 37, as is ordinarily used when any tiller appliance is used. The tubular king-bolt 34 is fixed rigid to the upper fifth-wheel or bolster 37 and provides a long bearing or boxing for the upright shaft 32, as best seen in Fig. 3. On the lower end of the shafts 32 laterally-extending arms 38 are fastened thereto and connect the shaft 32 with the lower section of the fifth-wheel or platform-gear 40, as shown in Figs. 3 and 4. Flanges or lugs 39 are provided on the sides of the arms 38 and extend upward a short distance to engage a suitable cross-bar or part of the platform-gear 40 and which add strength and reliable means to fasten or lock the upright shaft and tiller-head rigid to the platform or running gear, as shown in Figs. 1, 2, 3, and 4.

Each tiller-wheel 31 has lateral flanges 31<sup>a</sup> extending outward, so as to form a channel to hold and support a chain 41, passing around the tiller-wheel, and is fastened to the tiller-wheel by a bolt or rivet 41<sup>a</sup>, as shown in Figs. 2, 3, and 4. Diagonal connecting-rods 42 are fastened at their ends to the ends of the chains 41 and operate to gear the two tiller-heads together, as seen in Fig. 2. Each connecting-rod 42 is provided with a turnbuckle 43, and located between one end of the said rod and the chain, the rod extending through one end of the turnbuckle and slidably therein. A bur 45 is located in the slotted ways of the turnbuckle and screws on the end of the connecting-rod 42. The bur is made square or flat on two edges, so as to slide in the turnbuckle, as shown in Fig. 2. A compression-spring 46 encircles the end of the rod 42 between the bur 45 and the end of the turnbuckle, as seen in Fig. 2. These springs relieve the tiller-heads of any sudden jerks, and the tension of the springs can be adjusted by turning the turnbuckle, which will turn the bur 45. The turnbuckles also serve as a means to adjust the length of the diagonal connections between the two tiller-heads, which is quite necessary in order to make the hind running-gear run true with the front.

At the crossing-point of the connecting-rods 42 a friction-pulley 47 is mounted under

the lower rod. Another friction-pulley 48 is located between the two rods. These pulleys are mounted in a suitable bracket 49, fastened to the upper side of the cross-bar 50, as seen in Figs. 2 and 3.

The friction-pulleys are preferably rubber-covered, so as to prevent rattle of the rods and prevent friction and wear of the rods.

The front tiller-head is of about the same construction as the rear tiller; but the rear tiller-shaft is fixed rigid to its respective running-gear, as seen in Fig. 4, while the front tiller shaft and head is arranged to be shifted up and down, so as to disconnect the tiller from the front gear and lock the rear gear when desired.

A shifting lever 51 is pivoted at one end to the front tiller head or shaft and extends forward under the footboard 52 and is pivoted between its two ends to the truck-frame or to the under side of the footboard, as at 53, as shown in Figs. 2 and 3. An actuating-screw 54 is journaled to the footboard 52 and screws in the forward end of the shifting lever 51 and is provided with a hand-crank 55 on the upper end thereof, as seen in Figs. 1, 2, and 3.

Clutches 58 are provided on the front tiller-head and are adapted to engage the bolster 37 or upper half of the fifth-wheel 36 and when the gear is straight with the body of the truck and is engaged or disengaged therewith by turning the crank 55 in a direction which will move the shifting lever. The tiller is engaged or connected to the front gear by actuating the shifting lever in a direction which will raise the tiller-shaft and bring the clutches on the lateral arm 38 into engagement with the lower platform-gear, as best understood in Fig. 3. To disconnect the tiller from the front gear and lock the hind gear, the tiller shaft and head of the front gear is shifted downward or reverse to the direction of connecting it with the front gear and which brings the clutches 58 into engagement with the upper half of the fifth-wheel and releases the clutches 39 on the arm 38 and which will be understood in Fig. 3.

It will be observed in Fig. 2 that the slats 19 are so arranged as to make the space or channel between them diverge toward the rear end of the truck and which will permit a projection on a hose-coupling, which might get lodged in between the said slats, to be easily drawn out rearward.

It will be observed that the strut 3 is fastened to the vertical web by bolts or rivets 3<sup>a</sup> and which secures the strut more rigid to the side sill.

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

1. A hose-wagon body having two sides and a bottom, each side composed of a channel-iron side sill, an angle-iron bar secured to the said side sill, the lateral flange of said bar extend-

ing inward and the vertical flange extending upward, another angle-iron bar located above the first bar and having its lateral flange extending outward, struts connecting said angle-iron bars together, a tubular top rail having a vertical flange extending downward and located above the upper angle-iron bar, and brackets secured to the upper angle-bar and to the flange of the tubular rail; of metal sides secured to the inner side of the vertical flanges of the angle-bars and the tubular top rail, and a metal bottom secured to the lateral flanges of the lower angle-iron bars, all substantially as set forth.

2. A hose-wagon body comprising two sides and a bottom, said sides diverging toward the rear end of the body, and vertical retaining-wedges secured on the inside of said sides, for the purpose set forth.

3. In a hose-wagon comprising two sides and a bottom, said sides diverging toward the rear end of the body, and hose-retaining wedges fastened on the said sides, for the purpose set forth.

4. In a hose-wagon comprising two sides and a bottom, said sides diverging toward their rear ends, and a plurality of retaining-wedges secured on each side, as set forth.

5. In a hose-wagon, comprising two sides and a bottom, hose-retaining wedges fastened on the inner side of said sides, said wedges being beveled from the side of the body inward and rearward, substantially as and for the purpose set forth.

6. In a hose-wagon body, a metal bottom therefor, longitudinal slats secured on said bottom, an intervening space between the slats, a transverse trough at the rear end of said bottom, and a roller above said trough, as set forth.

7. In a hose-wagon body, a metal bottom thereto, longitudinal slats secured on said bottom, a transverse trough across the rear end of said bottom, a footboard at the rear end of the body, a vertical tubular hand-rail extending upward through said footboard, and a conduit connecting said trough with said hand-rail, for the purpose set forth.

8. In a hose-wagon body constituting two sides and a bottom, a trough at the rear end of said bottom, a tubular hand-rail at the rear end of the said body, and a conduit connecting the trough with said hand-rail, for the purpose set forth.

9. In a hose-wagon body, a metal bottom therefor, a trough formed on one end of said bottom and a conduit extending downward therefrom, and a guard above said trough, all for the purpose set forth.

10. In a hose-wagon body, the metal side sills having two lateral flanges and a truss interposed between said lateral flanges, and means to fasten the truss therein, substantially as described.

11. In a hose-wagon, the side sills composed

of channel-iron with two lateral flanges, a longitudinal truss secured at its ends to the upper flange, and the middle portion of the truss converging down toward the lower flange, and a strut interposed between the truss and said upper flange.

12. In a hose-wagon, the metal side sills having two lateral flanges remotely apart, a metal truss interposed between said flanges, and fastened at its ends to the upper flange, strut-bolts secured to the lower flange and to the truss and adapted to tighten the truss, as set forth.

13. In a hose-wagon body, the metal side sills having two lateral flanges remotely apart, a metal truss interposed between said flanges, said truss fastened at its ends to the ends of the upper flange, strut-bolts attached to the lower flange and to said truss and adapted to draw the middle part of the truss toward the lower flange, substantially as described.

14. In a hose-wagon body, the metal side sills having a lateral flange and a vertical flange extending downward, a longitudinal truss secured at its ends to the under side of said lateral flange, and a strut interposed between the truss and the lateral flange and fastened to said vertical flange, substantially as set forth.

15. The side sills constituting two longitudinal members remotely apart, a truss interposed between said members, and a tension-bolt secured to one of said members and engaging a recess provided on the truss, a beveled bur on said tension-bolt and bearing against the truss, said bur beveled on the side next to the truss, substantially as and for the purpose set forth.

16. In a hose-wagon body, a metal truss attached at its ends to the side of said body, strut-bolts secured to the body and extending through said truss, and a beveled bur on said bolts next to the truss, said bur beveled on the side next to the truss, all for the purpose set forth.

17. The combination in a hose-wagon body, of brackets fastened on the sides of said body and extending upward, a horizontal tubular rail located above said brackets, and a vertical flange formed on said rail and extending downward and fastened to said brackets, as set forth.

18. The combination with a hose-wagon

body, of brackets fastened on the sides thereof and extending upward, a horizontal tubular rail having a projecting flange formed thereon and fastened to said brackets, and sheet-metal sides fastened to said flange.

19. The combination with a hose-wagon body, of a horizontal tubular side rail supported on uprights on the side of said body, projecting flanges formed on said rail and extending downward, and a sheet-metal side fastened at its top edge to said flange.

20. The combination with a hose-wagon body, constituting two sides and a bottom, of uprights on said sides, horizontal circular side rails secured on said uprights, and flanges on said rails and extending downward, said sides secured to said flanges, for the purpose set forth.

21. In a hose-wagon body constituting two sides and a bottom, the combination of longitudinal slats secured on the bottom of the body and an intervening space between each slat to form a channel, and said channel diverging toward the rear end of said body, as set forth.

22. The tubular side rails having a vertical flange extending downward therefrom, sheet-metal sides secured to said flanges, and a seat secured between said sides and below said side rails.

23. In a hose-wagon constituting two sides, the combination of a tubular rail provided on each of said sides, a vertical flange formed on each rail and extending downward, transverse connection between said rails, and a seat secured between and below said flanged rails, as set forth.

24. In a hose-wagon constituting two sides, the combination of a tubular rail provided on each of said sides, a projecting flange formed on each rail, and a seat attached to said flanges.

In testimony whereof I have hereunto subscribed my name to this specification, at Creston, in the county of Union and State of Iowa, this 18th day of November, 1904, in the presence of two subscribing witnesses.

BURDETT B. BRIGGS.

Witnesses:

SAMUEL H. KINGERY,  
ARTHUR F. BALDWIN.