No. 711,895. Patented Oct. 21, 1902.

T. HILL.

PUSH WAGON FOR STREET CLEANING PURPOSES.

(Application filed May 17, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

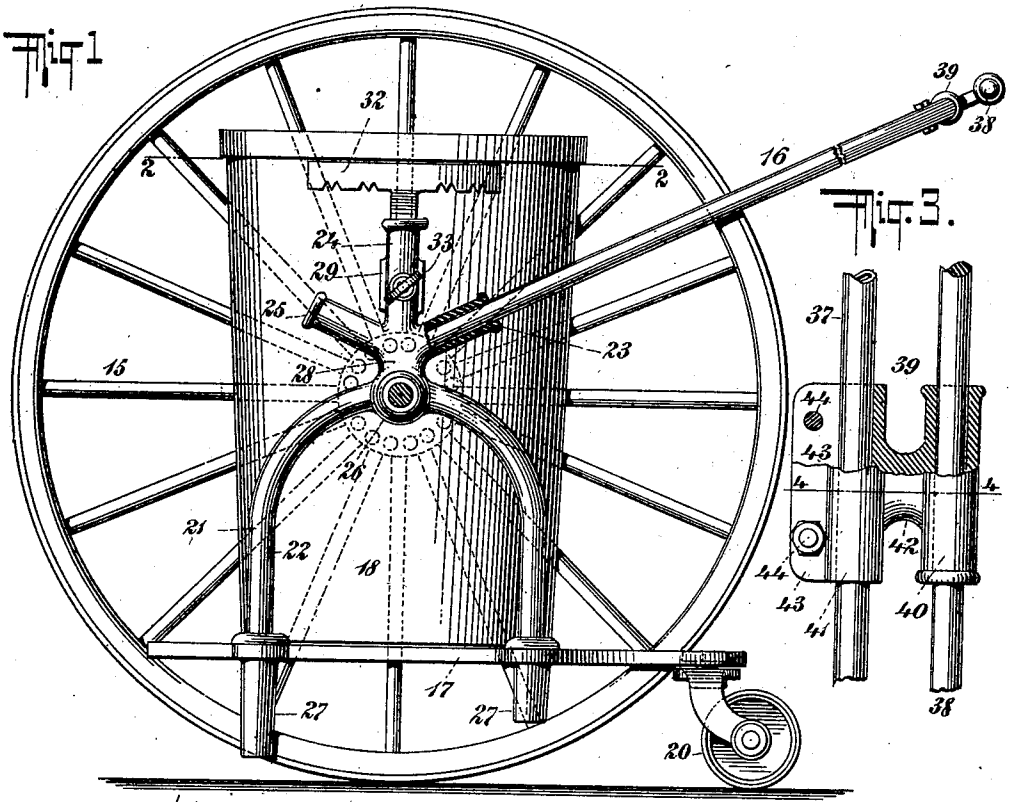


Fig. 3.

Fig. 4.

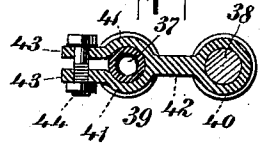
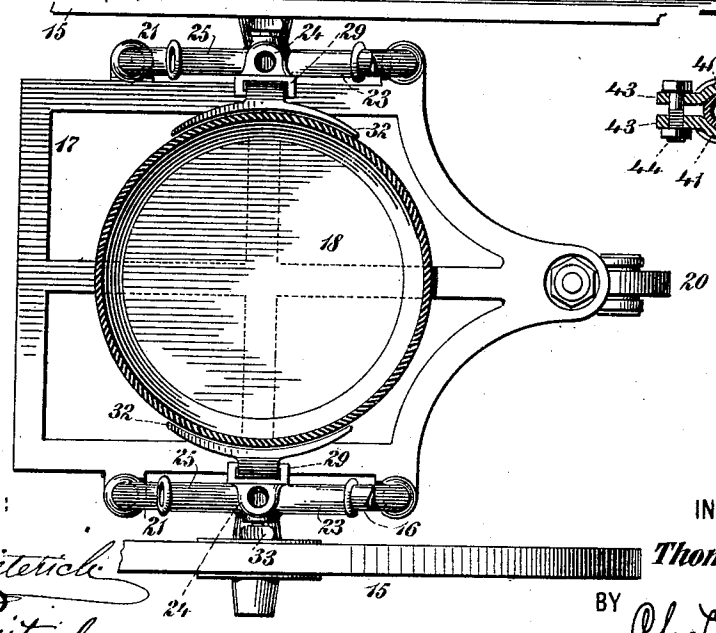


Fig. 2.



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Fig. 5.

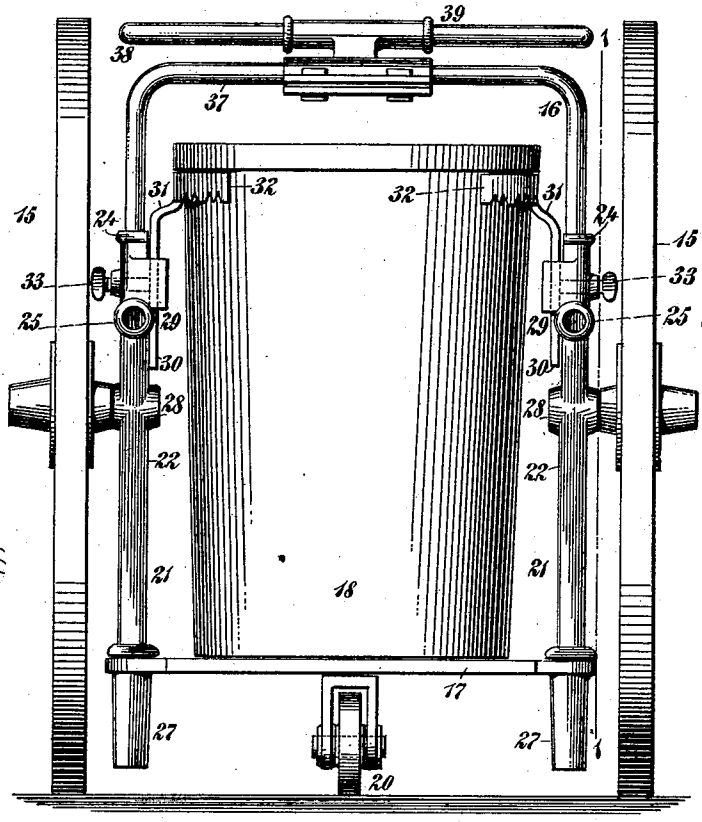


Fig. 7.

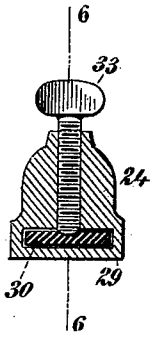


Fig. 9.

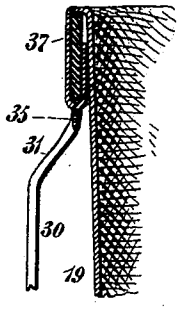


Fig. 8.

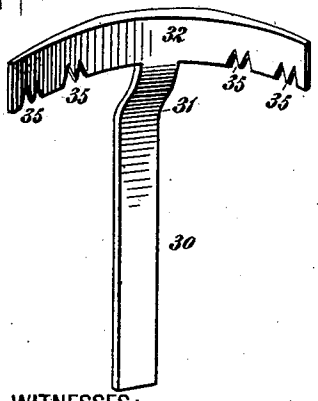


Fig. 10.

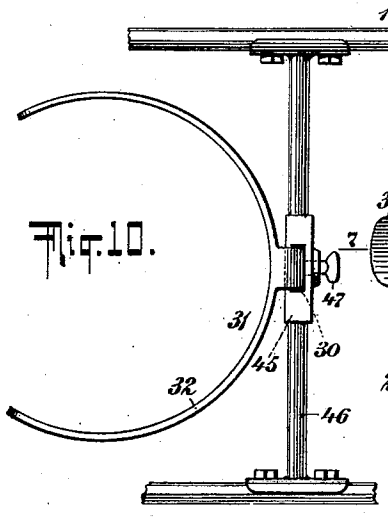
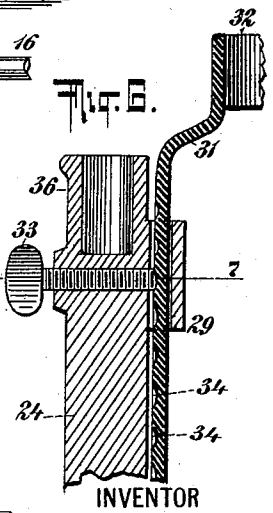


Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS HILL, OF JERSEY CITY, NEW JERSEY.

PUSH-WAGON FOR STREET-CLEANING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 711,895, dated October 21, 1902.

Application filed May 17, 1902. Serial No. 107,713. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HILL, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Push-Wagons for Street-Cleaning Purposes, of which the following is a specification.

The invention relates to improvements in push-wagons for use in the cleaning of streets and the like; and it consists in the novel features, arrangement, and combinations of parts hereinafter described, and more particularly pointed out in the claims.

The object of the invention is to produce a push-wagon which shall be light, durable, and inexpensive of construction and perfect in the details of its parts and which shall be adapted for removably supporting and transporting cans or bags within which the collected dirt and refuse may be placed.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly broken away and partly in section, of a push-wagon constructed in accordance with and embodying the invention. Fig. 2 is a top view, partly broken away and partly in section, of same, the section being on the dotted line 2 2 of Fig. 1. Fig. 3 is an enlarged top view, partly in section, of a portion of the handle-bar construction. Fig. 4 is a vertical section of same on the dotted line 4 4 of Fig. 3. Fig. 5 is a rear end view of the push-wagon and denotes by the dotted line 1 1 the section on which Fig. 1 is taken. Fig. 6 is an enlarged vertical section through a portion of one of the side frames of the wagon and illustrates the adjustable frames for securing the upper edge of the can or bag, Fig. 6 being a sectional view on the dotted line 6 6 of Fig. 7. Fig. 7 is a horizontal section of same on the dotted line 7 7 of Fig. 6. Fig. 8 is a detached perspective view of one of the frames for retaining the upper end of the can or bag. Fig. 9 is a vertical section through the upper member of one of the said retaining-frames and illustrates the method of securing the upper edge of a bag thereby; and Fig. 10 is a top view of a portion of a push-wagon, illustrating a modified form of the frame for retaining the upper edge of a can or bag.

In the drawings, 15 designates the side wheels of the wagon, 16 the handle portion of the wagon, and 17 the platform upon which a can 18 or a bag 19, if the latter be used, may rest. The wheels 15 and platform 17 are of known construction, and therefore need not be specifically described. The wagon is supported upon the side wheels 15 and a rear swiveled wheel 20.

The sides of the wagon are designated by the numerals 21 21, respectively, and said sides, which correspond exactly with one another, are each in one integral piece and comprise the arched or main body member 22, the tubular socket members 23 24 25, and hub member 26, the latter being at the apex of the arch of the member 22 and adapted to receive the axles for the wheels 15, while the lower ends of the said arch or body member 22 extend downward into sockets 27, depending from the platform 17. The tubular members 23, 24, and 25 extend radially from a neck member 28, disposed directly over the hub 26, the members 23 and 25, respectively, projecting upward and outward, while the member 24 extends vertically upward centrally over the hub 26.

At the inner facing sides of the members 24 of the side frames are formed the vertical guides 29, within which are placed the vertical members 30 of the frames 31, the latter being composed of the said members 30 and horizontal curved members or bars 32 and being provided, as indicated in the drawings, for the purpose of retaining the upper end of the can or bag. The frames 31 are vertically adjustable in the guides 29, so as to adapt them for cans and bags varying in height, and the said frames 31 are also detachable from the push-wagon, and hence they may be renewed from time to time as occasion may require. The vertical leg members 30 of the frames 31 are adapted to slide freely within the guides 29 and are to be held in any adjusted position desired by means of the set-screws 33, which extend through the vertical member 24 of the side frames, as shown in Fig. 6, and engage the said frames 31, the outer surface of the leg member 30 of said frames 31 being preferably provided with a

series of recesses 34 to receive the point of the screw 33 and aid the latter in firmly maintaining the frame 31 in position. The manner of employing the frames 31 in connection with a can is clearly illustrated in Figs. 1, 2, and 5, in which it will be seen that the curved members 32 of said frames hug against the opposite sides of the upper end of the can and prevent the latter from slipping from off the platform 17. The construction presented allows the use of the frames 31 in several ways for securing the can 18—as, for instance, the frames 31 may be secured by the set-screws 33 and the upper edge of the can forced between the members 32 of said frames, there being a slight yielding in the can-body and a slight yielding in the leg members 30 of said frames 31, or the frames 31 may be released from the action of the screws 33 and allowed to rest freely within the guides 29 or lower from their proper normal position, and thereby adequate space will be provided for inserting the upper edge of the can between the frames 31, after which the frames 31 may be moved upward to their correct position (shown in Fig. 5) and secured by means of the screws 33. The leg members 30 of the frames 31 loosely enter the guides 29, and hence when the screws 33 are loosened there will be no binding of said leg members 30 within said guides. The vertical adjustment of the frames 31 also adapts the wagon for cans or bags varying in length.

In order that the frames 31 may be adapted for retaining the upper edge of a bag as well as that of a can, I form upon the lower edge of the horizontal members 32 of said frames the teeth or serrations 35, Fig. 8, which are not used when the can is to be transported upon the platform 17, but which are used when a bag 19 in lieu of a can 18 is to be employed for holding the collected refuse; and in Fig. 9 I illustrate the manner of securing the upper end of a bag by means of the said frames 31, the latter being employed for holding the upper edge of the bag at its proper height and in an open condition. When applying the upper end of a bag 19 to the frames 31, a portion of the bag will be wrapped around the outer side of and then under and up along the inner side of the members 32 of the frames 31, while the main body of the bag will hang downward between said frames 31 and exert a sufficient tension to keep a portion of the fibers of the bag bound against the teeth 35 of the frames 31, care being taken while arranging the bag upon the frames 31 to press the fabric of the bag firmly against the said teeth 35, so that the latter may enter or partly enter the same. The vertical adjustment of the frames 31 is also of advantage when bags 19 are to be employed in lieu of cans, because there will be a variance in height between the bags and cans. I do not, of course, limit the invention in all its parts to the employment of the serrations or teeth 35, because when bags 19 are not to be made use of the teeth or serrations 35 become unimportant; but there are many times when it is desired that the wagon may be employed in connection with either cans or bags, and in such cases it will be found to be of great advantage to have the frames 31 provided with the teeth or serrations 35.

The open sockets 36 in the members 24 of the side frames are for the convenience of the attendant in carrying a brush-broom or other instrument connected with his work, the handle of the same being inserted downward into the said socket 36. The tubular members 23 25 of the side frames are provided to receive handle-frames 16, the latter being composed of two side members and a transverse member 37, connecting said side members, and the ends of the latter being secured within the tubular sockets 23, as indicated in Fig. 1. Handle-frames 16 may be applied at both the front and rear ends of the wagon, if desired, Fig. 1 illustrating the handle-frame 16 at the rear end of the wagon, and the socket members 25 being shown in correct position to receive an additional handle-frame 16 at the front of the wagon should it be desired to employ two handle-frames 16 at the same time. The tubular sockets 23 25 also enable the use of the one handle-frame 16 at either the rear or the front end of the wagon, and when the handle-frame 16 is used, for instance, at the rear end of the wagon, as shown in Fig. 1, the tubular sockets 25 then form convenient means for supporting the handle end of a short broom or other instrument needed by the street-cleaner in his work.

The transverse member 37 of the handle-frame 16 may be directly used as the handle-bar to be grasped by the attendant; but it is better, especially in cold weather, that a wooden handle-bar be provided, and hence I connect a handle-bar 38 of wood with the transverse member 37 by means of a cast frame 39, said frame 39 comprising the tubular section 40 to receive the bar 38, the jaw-sections 41 41, which grasp the opposite sides of the said member 37, the neck-section 42, connecting the parts 40 41 together, and the flanges 43, extending from the jaws 41 41 and adapted to receive the bolts 44, by which the frame 39 may be firmly secured to the member 37 of the handle-frame 16. The frame 39 is in one integral malleable casting, and hence the jaws 41 may be sprung upon the transverse member 37 and then be firmly secured by means of the bolts 44. A beneficial feature of the frame 39 for securing the wooden handle-bar 38 is that it is secured to the transverse member 37 in a detachable manner and without the use of rivets and without weakening or cutting into the transverse member 37, the latter being left entirely intact.

In Fig. 10 I illustrate a modified form of the frame 31, the vertical leg member 30 of the frame 31 in Fig. 10 being held within the guide 45, formed in a transverse bar 46, con-

necting the two sides of the handle-frame 16, a set-screw 47 being provided for securing the frame 31 in its adjusted position. The screw 47, guide 45, and leg member 30 correspond exactly with the like features shown in Fig. 6. The modification in respect of Fig. 10 consists in mounting the frame 31 on the transverse bar 46 instead of on the side frames of the wagon and in extending the upper horizontal member 32 of the frame 31 so that one frame 31 may answer for retaining the can or bag instead of two frames 31 being required for that purpose. The horizontal member 32 of the frame 31 in Fig. 10 corresponds exactly with the horizontal member of the frame 31 in Fig. 8 except that in Fig. 10 the said member 32 is of greater length and adapted to take the opposite sides of the can or bag.

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

1. In a wagon, the wheels, handle portion, sides and platform, combined with the oppositely-arranged independent vertically-adjustable frames 31 having the vertical leg members and the horizontal members whose vertical facing sides are curved on the arc of a circle and adapted to engage the sides of a can for holding the same on said platform, said leg members being held in the said sides, and means for securing said frames 31 in their adjusted positions; substantially as set forth.

2. In a wagon, the side wheels, the handle portion, the platform, and the side frames secured at their lower ends to said platform and each comprising in one integral piece the arched body member, the hub for the axle at the apex of the arch, the neck portion 28 above said hub, and the socket members 23, 25, extending from opposite sides of the upper end of said neck portion to receive said handle portion; substantially as set forth.

3. In a wagon, the side wheels, the handle portion, the platform, and the side frames secured at their lower ends to said platform and each comprising in one integral piece the arched body member, the hub for the axle at the apex of the arch, the neck portion 28 above said hub, and the vertical socket member 24 and lateral member 23 at the upper end of said neck portion; substantially as set forth.

4. In a wagon, the wheels, handle portion, sides and platform, combined with an adjustable frame having a horizontal member on the arc of a circle and a vertical leg member, and means for securing said frame in its adjusted positions, said wagon having a vertical socket to receive and direct the said leg member in vertical adjustment of said frame; substantially as and for the purposes set forth.

5. In a wagon, the wheels, handle portion, sides and platform, combined with the oppositely-arranged frames 31 having the curved facing horizontal toothed members and vertical leg members, the latter being held by the sides of the wagon; substantially as set forth.

6. In a wagon, the wheels, handle portion, sides and platform, combined with the oppositely-arranged frames 31 having the horizontal members and vertical leg members, guides on the sides of the wagon to receive said leg members, and the set-screws for securing said leg members in said guides, said leg members having the several recesses to receive the point of said screws; substantially as set forth.

7. In a wagon, the wheels, sides, platform, and handle portion 16 comprising the transverse member 37, combined with the handle-bar 38, and the frame 39 for connecting said bar 38 with said member 37, said frame 39 being in one integral piece and comprising the tubular portion 40, neck section 42, jaws 41 to embrace said member 37, flanges 43 extending from said jaws, and bolts passing through said flanges; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 16th day of May, A. D. 1902.

THOMAS HILL.

Witnesses:
CHAS. C. GILL,
ARTHUR MARION.