A. A. NEWBERT.

GARBAGE WAGON.

APPLICATION FILED JULY 28, 1913.

1,101,878.

Patented June 30, 1914.

2 SHEETS—SHEET 1.

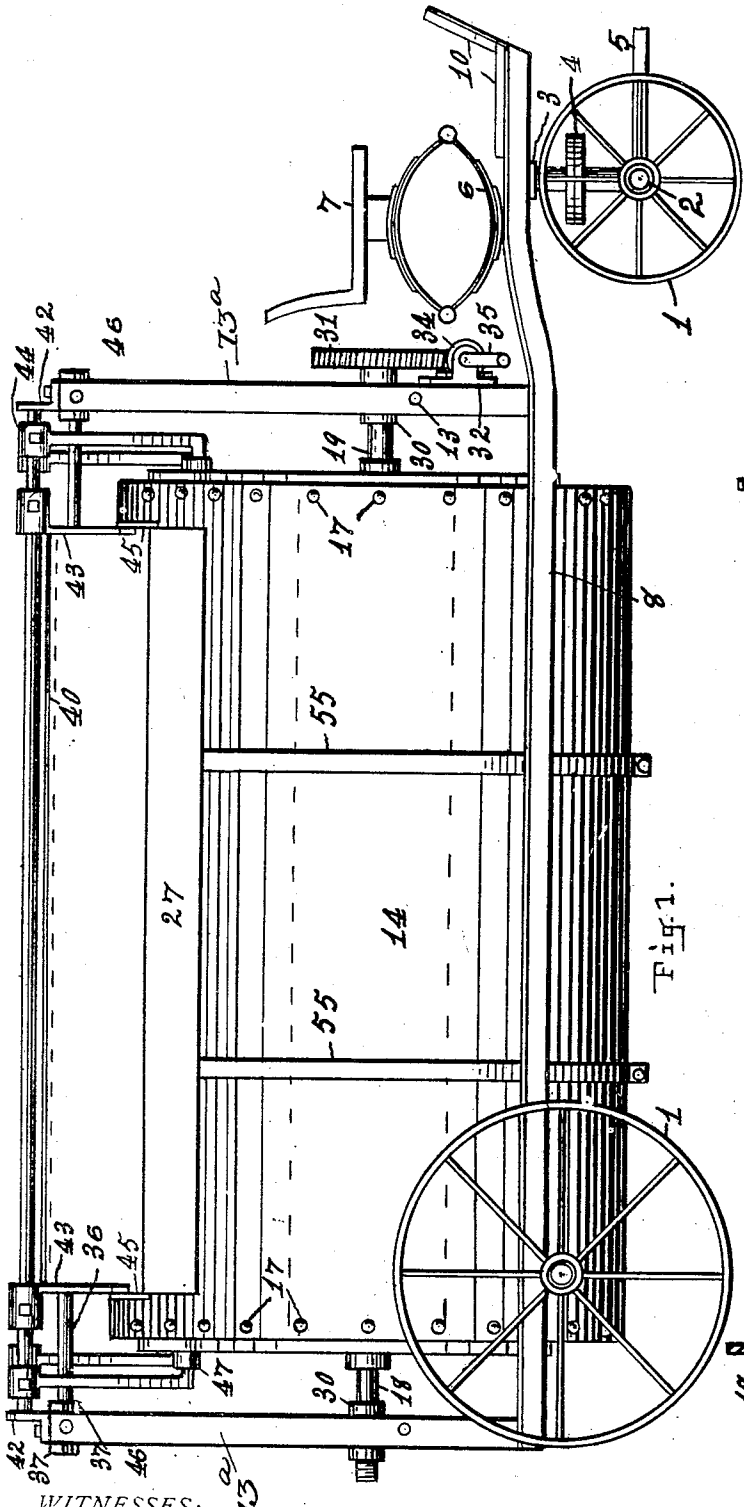


Fig. 1.

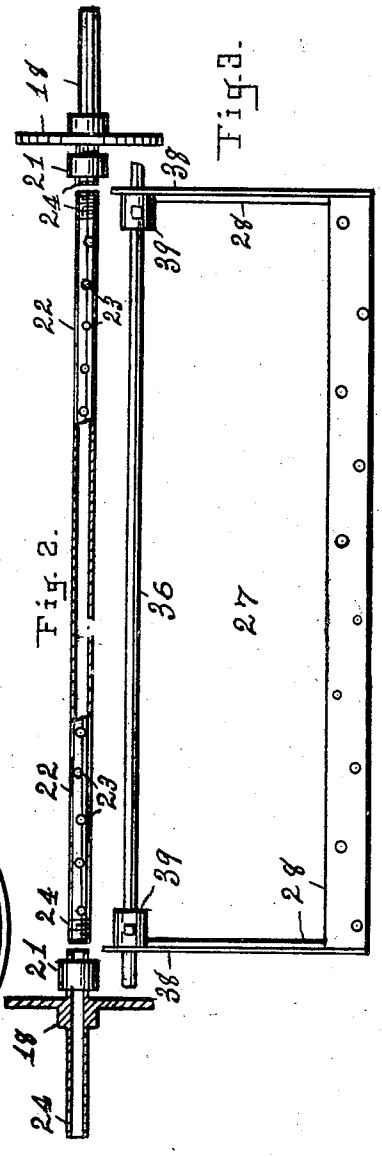


Fig. 2.

Fig. 3.

WITNESSES:

E. M. Albee.

E. A. Briggs

INVENTOR.

Alden A. Newbert

BY

G. H. Albee.

ATTORNEY.

A. A. NEWBERT.

GARBAGE WAGON.

APPLICATION FILED JULY 28, 1913.

1,101,878.

Patented June 30, 1914.

2 SHEETS—SHEET 2.

Fig. 4.

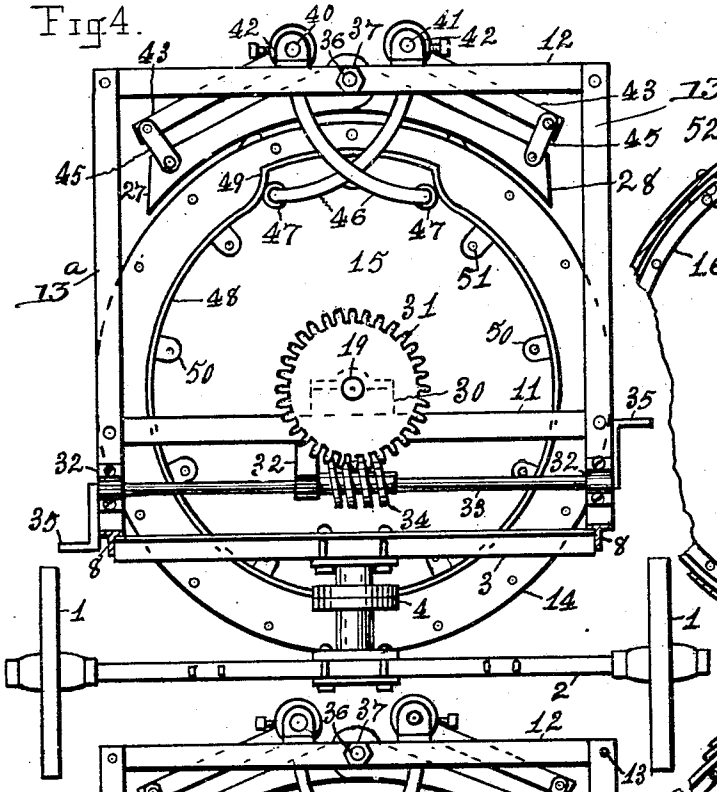
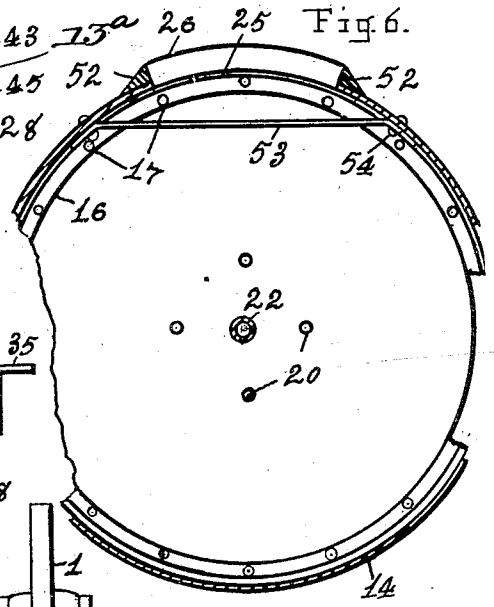


Fig. 6.



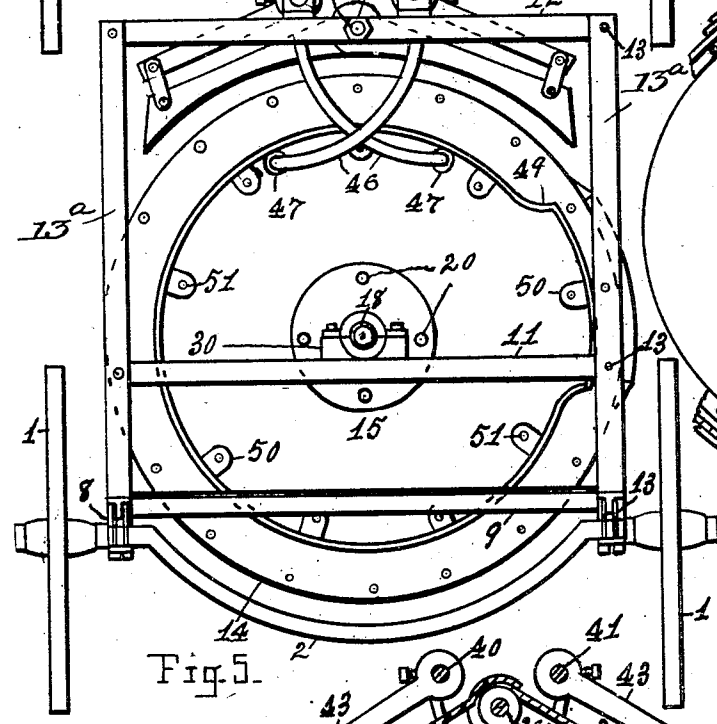


Fig. 5.

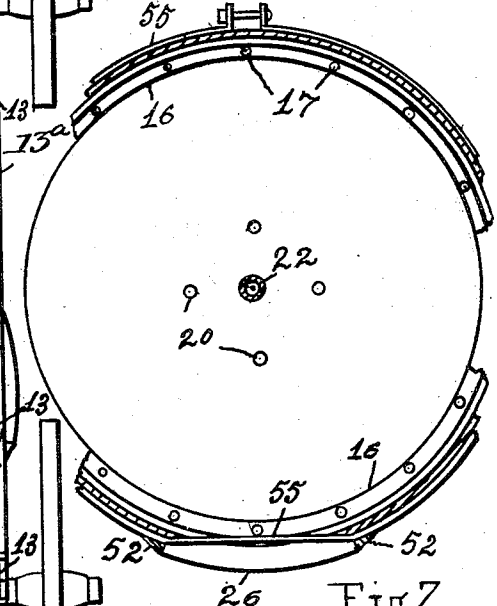


Fig. 7.

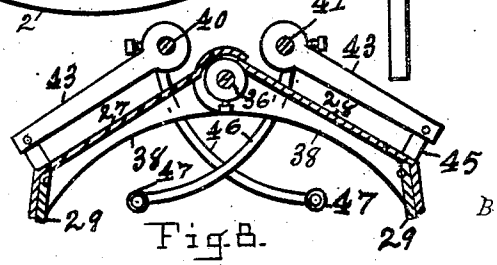


Fig. 8.

WITNESSES:

C. M. Albee.

E. A. Briggs

INVENTOR.

Alden A. Newbert.

BY

G. H. Albee.

ATTORNEY.

UNITED STATES PATENT OFFICE.

ALDEN A. NEWBERT, OF APPLETON, WISCONSIN.

GARBAGE-WAGON.

1,101,878. Specification of Letters Patent. Patented June 30, 1914.

Application filed July 28, 1913. Serial No. 781,532.

To all whom it may concern:

Be it known that I, ALDEN A. NEWBERT, a citizen of the United States, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented a new and useful Garbage-Wagon, of which the following is a specification.

The invention consists of a four wheeled vehicle of suitable construction, a cylindrical tank mounted longitudinally of the vehicle, an opening lengthwise of the tank nearly its entire length, covers for the opening, hinged at their longer edges above the tank and arranged to be separately automatically opened and closed as the tank is revolved from its normal position a partial revolution and returned, means for revolving the tank in either direction and holding it in the desired position and a tubular shaft upon which the tank is mounted for revolution.

In addition to the above named features are sanitary ones, which will be fully explained in describing the construction, and the object of the several improvements is, to form a garbage wagon that is free from several objectionable features of those now in use, in that the contents can be tightly inclosed while the loaded wagon is passing along the streets of a city, and no effluvia allowed to escape, and that the contents when frozen can be easily and quickly thawed out, and the inside of the tank subjected to the action of hot water and steam for keeping the entire apparatus in a clean and sanitary condition. It may be observed that although this is described as for handling garbage, it will be evident that other material beside what is usually considered of that class can be with profit to the one who handles it, transported with the wagon.

The several parts are shown in the accompanying drawing, in which,—

Figure 1 is a side elevation of the wagon and its tank. Fig. 2 is a plan, partly in section, of the tank journals and their connecting tubular shaft. Fig. 3 is a plan of the inside of one of the tank covers, with the shaft upon which it is loosely mounted. Fig. 4 is an end elevation of the front end of the vehicle and tank, the seat and springs and foot board of Fig. 1, being omitted. Fig. 5 is an end elevation of the rear end of vehicle and tank. Fig. 6 is a vertical section of the tank and showing a method of preventing the receiving and delivery opening from spreading. Fig. 7 is a vertical section, showing the tank with its opening downward, and a method of preventing the spreading or bulging of the tank. Fig. 8 is a transverse section of two covers intermediate their end, of the shaft upon which they are mounted and of the two shafts which carry their operating arms, and an elevation of said operating arms.

Similar numerals indicate like parts in the several views.

1, indicates wheels of the vehicle; 2, axles; 3, bolster and forward cross sill above forward axle; 4, fifth wheel plates between bolster and axle; 5, tongue; 6, springs; 7, seat; 8, side sills of frame; 9, rear end sill; 10, foot board; 11, intermediate cross girts; 12, upper cross girts; 13, bolts for connecting girts to corner uprights 13ª.

The cylindrical tank is formed of heavy, preferably galvanized, sheet metal sides 14, and ends 15, riveted together. End rings 16, are formed of angle iron and the ends and sides riveted to the rings with rivets 17. Upon each end of the tank, flanged journals 18 and 19, secured to ends 15 with rivets 20, are provided, one journal, 18, being tubular, and above extending inside of the tank a few inches and provided with a coupling thimble 21 threaded to each, and a pipe 22 is fitted to connect the two extending ends and be coupled to them with said couplings. The pipe is provided with a series of perforations 23, through which steam and water can be forced for cleansing the tank, and in case the contents become frozen, for thawing them out. By the use of this device, the tank can be kept in a clean and sanitary condition at all times. The outer end of the journal 18, is provided with threads 24, for attaching a pipe or hose from any available steam or hot water supply source.

The opening 25 provides both means for filling the tank and emptying the same. It is provided with a part of the sheet of which the tank is formed, turned upward some two inches, more or less, around its sides and ends and forming the rim 26, over which the lower sides of the two covers 27 and 28, and their ends are fitted. their ends and lower sides being provided with a packing strip 29, of soft material, like rubber, which fits closely the surface of the tank, their upper longitudinal edges lapping one within the other, as is shown in Fig. 8, so that when the covers are closed down, a comparatively air

tight joint is formed between the covers and tank. Journal boxes 30 upon the girts 11 are provided in which the journals 18 and 19, are carried. Upon the outer end of the journal 19, a worm wheel 31, is secured, and journaled in boxes 32, a shaft 33, is arranged, upon which is secured a worm 34, for engaging with and turning the worm wheel, the shaft being provided with a crank 35, at each end by which the worm may be turned and the tank revolved. A shaft 36, is arranged to extend from one end of the vehicle to the other, which is provided at each end with nuts 37, for spacing the two end frames apart, but any other suitable method of spacing the ends apart or of securing the shaft in position may be employed. This shaft serves as a pivot upon which to mount the cover ends 38. The covers can be held in position longitudinally of the shaft with set collars 39, (see Fig. 3). Spaced apart, a little above the shaft 36, are two shafts, 40 and 41, which are supported in brackets 42, upon the top of the girt 12. These shafts each carry near their ends, two set collars 43 and 44. From each collar 43 on each shaft, an arm extends which is integral with the collar and is connected with the end 38 of the cover, by means of the link 45, and from each collar 44, a curved arm 46, extends downward past the end of the tank a short distance and is provided with a roller 47, upon its lower end which is arranged to be engaged with a cam 48, upon the end of the tank, as the tank is revolved, which revolution of the tank from the position of the opening upon the top will raise the cover upon one side of its suspension rod 40, as the roller upon the arm 46 is engaged with the cam projection 49, and permit the rim around the opening 25, to be turned downward without its interference with the cover. These cams, and arms for operating the cover are shown upon both ends of the tank but upon very short tanks with covers formed of stiff material, they may in some cases be made to operate successfully, if the cam and the several arms are applied to only one end of the tank.

For putting in garbage, the tank may be turned downward approximately one fourth of a revolution, and for emptying, a half revolution, as in Fig. 7. Upon reaching a place where material is to be loaded into the tank, it will not matter which side of the wagon it is, as the tank can be turned in either direction. Having loaded the material into the tank, the tank is to be turned to its normal position, which turning will close the cover automatically, and it will remain closed until the tank is turned at the next stopping place for receiving garbage, or for dumping the load. The cam 48 is circular in form for nearly its entire circumference, but is enlarged for a short distance under the opening 25 at 49, and is conveniently formed of a strip of band metal which is provided with ears 50, through which rivets 51 may be inserted for connecting the cam to the tank end. For stiffening the longitudinal sides of the opening 25, a triangular strip of hard wood 52, may be secured along the rim 26, and additional means for strengthening the sides 14, may be a rod, one or more, spaced apart, as 53, secured to the shell 14 with rivets 54, or instead of the rod, as shown in Fig. 6, hoops 55, as shown in Figs. 7 and 1, clamped to the sides 14, may be used for preventing the tank sides from bulging.

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

1. A garbage wagon, consisting of a cylindrical tank having a journal at each end adapted to be mounted for revolution upon a suitable support upon the frame of the wagon, a rectangular opening nearly the entire length of the tank for the insertion and removal of the material to be carried, a covering suspended independently of the tank arranged to be automatically raised slightly, for permitting the tank to be revolved, means for revolving the tank, consisting of a worm wheel, secured to the end of one of the journals, a worm upon a shaft for engaging with said worm wheel, arranged for revolution in suitable journal boxes upon said frame, and a crank by which said shaft can be turned.

2. A tank for a garbage wagon, consisting of a cylindrical body having a journal at each end adapted to be mounted for revolution upon a suitable vehicle, a rectangular opening for the tank longitudinally arranged, and a rim around the opening, extending slightly outside of the cylindrical surface of the tank the longitudinal side edges of said opening outside thereof, being inclined from the cylindrical surface of the tank to the top of said rim.

3. A tank for a garbage wagon, consisting of a cylindrical body having a journal at each end adapted to be mounted for revolution upon a suitable vehicle, a rectangular opening for the tank, longitudinally of the same, a rim around the opening, extending slightly outside of the cylindrical surface of the tank, and a stiffening member secured to the tank along the longitudinal edges of the opening, outside thereof, each of said stiffening members forming an incline from the cylindrical surface of the tank to the upper edge of the rim around said opening.

4. A tank for a garbage wagon, consisting of a cylindrical body having an opening for inserting and removing garbage, and a journal at each end adapted to be mounted for revolution upon a suitable vehicle, one of said journals being tubular, and both ex-

tending into the tank a short distance, a tubular connection between said two inwardly extending ends, coupling members for coupling the tubular connection and inwardly extending journal ends, means for connecting a hose or pipe to the outer end of the tubular journal, and a series of apertures in the tubular connection between the two inwardly extending journal ends.

5. A garbage wagon, consisting of a cylindrical tank having a journal at each end adapted to be mounted for revolution upon a suitable support upon the frame of the wagon, a rectangular opening nearly the entire length of the tank for the insertion and removal of the material to be carried, normally upon its upper side, a rim extending slightly above the outer surface of the tank around its ends and sides, two covers, each suspended along one of their longitudinal and meeting sides from a supporting rod vertically over the axis of the tank independently thereof, each of a length for covering said opening and of such a width when hinged together that both will cover a wider space than the width of said opening, a rod arranged upon each side of the aforesaid supporting rod and supported upon the vehicle frame parallel with the length thereof, an arm extending from each rod and being hinged to the free edge of a cover, a second arm extending from each rod and extending downward outside of the tank end, a suitable end upon the free end of each of said second named arms adapted to be engaged by a cam, a cam upon the end of the tank for being engaged by said arm ends for raising a cover, and mechanism for turning the tank by means of a suitably arranged crank.

6. A garbage wagon, consisting of a four wheeled vehicle, a support at the forward and rear ends of the vehicle for carrying a tank, a cylindrical tank mounted for revolution upon journals at opposite ends of the tank upon said supports, a rectangular opening along said tank for nearly its entire length, normally upon its upper side, a rim extending a short distance above the outside surface of the tank around the opening, a stiffening member along the longer sides of the opening beveled from the surface of the tank to the upper edge of said rim, two covers, each suspended along a longitudinal and the meeting side of the covers from a rod supported upon the vehicle frame and vertically over the axis of the tank, each cover being of a length for covering said opening and of such a width that when hinged together, both will cover a wider space than the width of said opening and its beveled stiffening members, a rod arranged each side of the aforesaid cover supporting rod, supported independently of and parallel with the tank, an arm extending from each rod near each end of the tank and hinged to the free edge of a cover, a second arm extending from each rod downward outside of each end of the tank, a suitable end upon the free ends of said second named arms for engaging a cam, a cam secured upon each end of the tank arranged to engage the free ends of said second named arms and mechanism for revolving the tank in either direction, including a crank and suitable gearing.

7. A garbage wagon, consisting of a four wheeled vehicle, a support at the forward and rear ends of the vehicle for carrying a garbage tank, a cylindrical tank mounted for revolution upon journals at opposite ends of the tank, upon said supports, a rectangular opening along the tank for nearly its entire length, normally with its transverse center directly over the axis, a rim extending slightly above the outside surface of the tank, around the ends and sides of the opening, a suitable covering for the opening, normally inclosing said rim and closely fitting the outside surface of the tank, mechanism for revolving the tank including a suitably arranged crank, and means for raising said covering, free of said rim simultaneously with the initial movement for revolving the tank from its normal position.

ALDEN A. NEWBERT.

Witnesses:
C. M. ALBEE,
K. W. JONES.