(No Model.)

U. S. G. & L. D. WARNER.

DUMPING WAGON.

No. 456,868. Patented July 28, 1891.

Fig. 1.

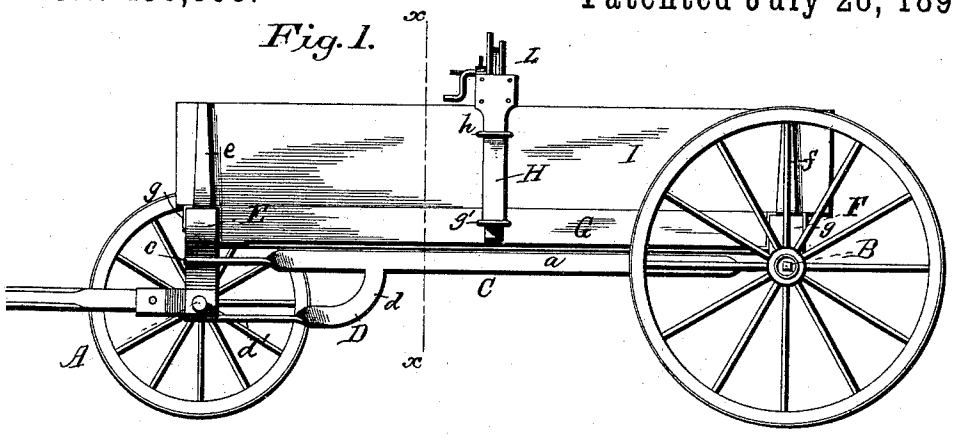


Fig. 4.

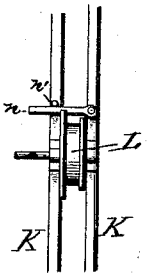


Fig. 2.

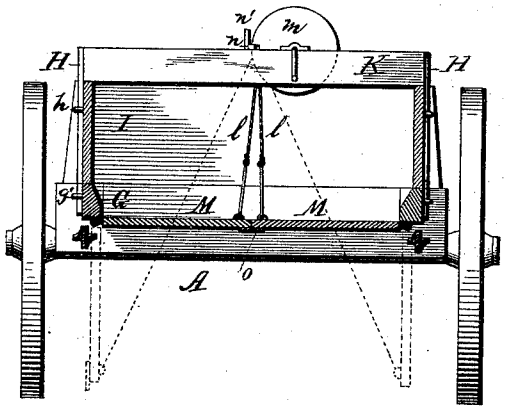
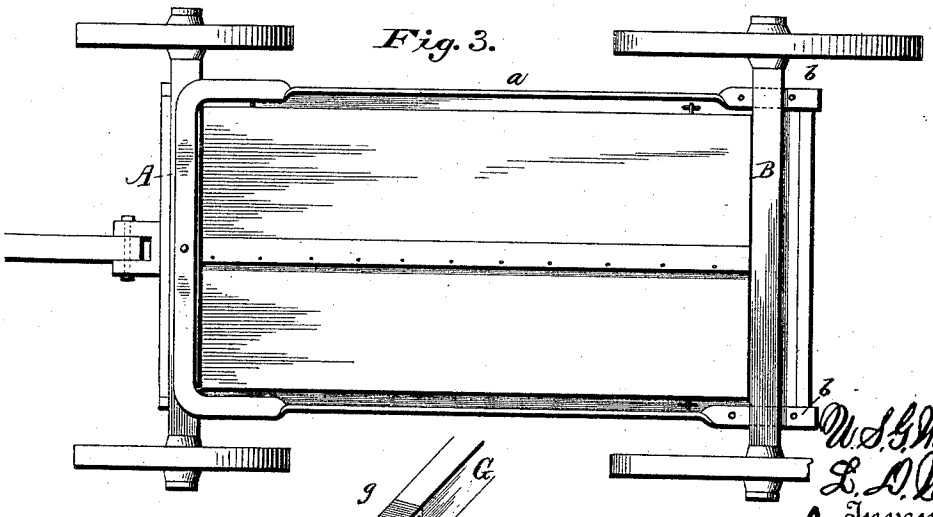


Fig. 3.



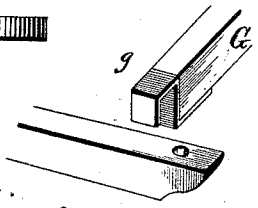


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

ULYSSES S. GRANT WARNER AND LORENZO D. WARNER, OF SOUTH BEND, INDIANA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 456,868, dated July 28, 1891.

Application filed November 13, 1890. Serial No. 371,350. (No model.)

To all whom it may concern:

Be it known that we, ULYSSES S. GRANT WARNER and LORENZO D. WARNER, citizens of the United States of America, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Dumping-Wagons; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in dumping-wagons.

The object of the invention is to provide an improved running-gear for dumping-wagons which will permit the bottom of the body to swing freely down upon its hinges and at the same time to thoroughly brace the front and rear axles, so that an ordinary body may be placed upon the running-gear and the vehicle used for ordinary purposes; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side view of a dumping-wagon constructed in accordance with our invention. Fig. 2 is a sectional view taken through the line $x\,x$ of Fig. 1. Fig. 3 is an inverted plan view. Fig. 4 is a detail view of the windlass. Fig. 5 is a detail perspective view.

A refers to the front axle, and B to the rear axle. These axles are connected to each other by a metallic frame C, consisting of longitudinal side pieces $a\,a$, the rear ends thereof being bent to present the horizontal portions b, which are provided with a series of perforations to permit of the frame or reach C being varied to lengthen or shorten the distance between the axles to accommodate the gear to bodies of different lengths. The side bars or parallel reaches $a\,a$ are bent, so that the forward connecting-bar thereof will lie horizontal, and said connecting-bar lies immediately above the front axle, and is centrally perforated for the passage of the king-bolt, which extends down through the connecting-bar of the brace D. The brace D extends from near the forward end of the frame or reach C and consists of the depending members $d\,d$, connected by the forward transverse portion c', which lies immediately beneath the axle. This construction provides a rigid frame made of flat metal, the portions thereof which lie between the axles being vertical, while the ends present horizontal surfaces, thus providing a reach that will occupy but little space, and which can be readily applied to axles of farm-wagons as now manufactured. Above the axles are placed the usual bolsters E and F.

G G refer to the side bars of the body, which are provided at their front and rear ends with angle-plates g, shaped to embrace the upper edges of the bolsters to prevent their sliding thereon, lateral movement of said bars being prevented by the standards e and f. If desired, the bolsters may be slightly recessed, so that the angle-plates will lie flush with the surface thereof. The side bars are provided about centrally with loops or staples g', in which the lower ends of the uprights H lie, said uprights supporting a frame which carries a windlass, to be hereinafter described.

I refers to the body, which may be of ordinary construction, the front and rear ends resting immediately upon the bolsters while the longitudinal side pieces rest the bars G G, said side pieces being provided centrally with loops h, which embrace the uprights H.

The windlass-supporting frame consists of parallel bars K K, which are rigidly connected to the upper ends of the uprights H H, and between these bars is journaled a drum L, around which passes two cords or flexible connections l, suitably connected at their lower ends to the bottom boards M M. The drum L has a notched disk m attached thereto, and with the notch therein a pivoted latch n is adapted to engage, so as to hold the drum from rotation, and accidental displacement of said latch is prevented by the pin n', which will limit its outward movement. The drum is adapted to be actuated by a crank-handle, as shown.

The bottom boards of the wagon are hinged to the under sides of the bars G G, and their

adjacent edges when closed practically meet; but in order that a tight joint may be provided one of said bottom boards is provided with a strip *o*, which laps the other board when closed.

It will be noted that in a wagon constructed as hereinbefore described, the bottom boards are free to swing downwardly, as shown in dotted lines, without in any manner interfering with the running-gear, and when desired the body and longitudinal side bars G can be removed and a body of ordinary construction used in lieu thereof.

I am aware that it has been proposed to provide a dumping-wagon with bottom boards hinged to the longitudinal rails of the frame of the wagon and adapted to swing downwardly and be raised by flexible connections attached to a crank-arm, also, that a windlass has been employed for raising the bottom sections of the wagon; but I am not aware that a construction has been provided whereby the space between the front and rear axles and between the bottom boards when opened has been left free from obstruction.

Having thus described my invention, I claim—

1. In combination with the axles of a vehicle, the side bars made up of a flat bar of metal having the rear ends twisted to present flat horizontal portions which are provided with corresponding perforations, a front horizontal connecting portion centrally perforated for the reception of the king-bolt to provide an adjustable reach having vertical central portions, the whole being made up of a single bar of metal, substantially as set forth.

2. In combination with the front and rear axles of a wagon, connecting means consisting of parallel side bars, a depending front brace, as D, having a horizontal transverse portion, substantially as set forth.

3. In combination with the front and rear axles, a connecting-frame consisting of parallel side bars *a a*, of flat metal, having their inner ends twisted so as to lie horizontal, perforations for adjustably connecting the same to the rear axle, together with a brace D, extending below the axle and having a perforation through which the king-bolt passes, substantially as set forth.

4. In combination with the running-gear of a vehicle, longitudinal bars G, having plates which are adapted to embrace the bolsters of the front and rear axles secured thereto, and a central loop *g'* for the reception of the end of an upright H, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ULYSSES S. GRANT WARNER.
LORENZO D. WARNER.

Witnesses:
N. FRAME,
A. S. DUNBAR.