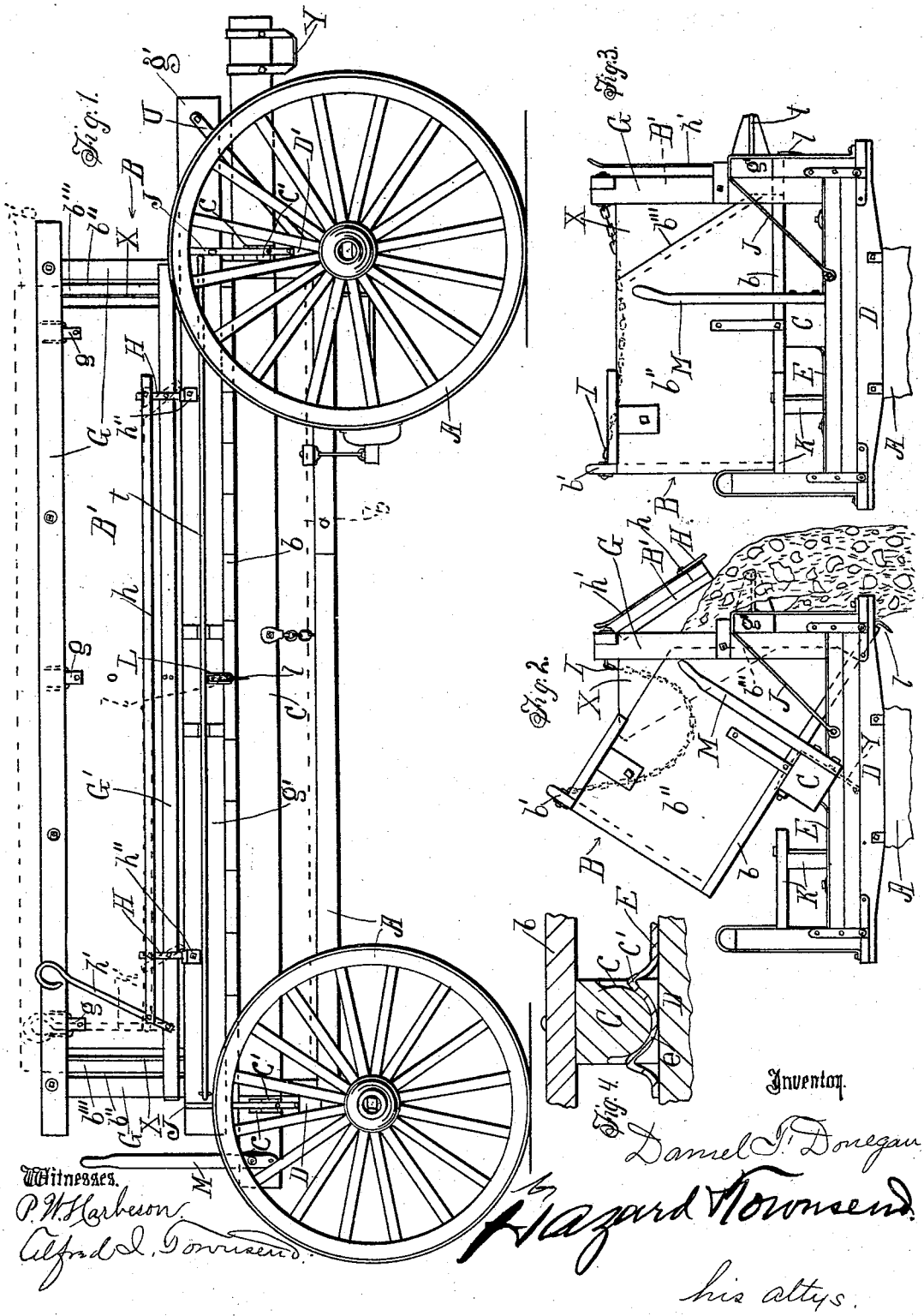
(No Model.)

D. F. DONEGAN.

DUMPING WAGON.

No. 492,623. Patented Feb. 28, 1893.



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UNITED STATES PATENT OFFICE.

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DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 492,623, dated February 28, 1893.

Application filed May 4, 1892. Serial No. 431,844. (No model.)

To all whom it may concern:

Be it known that I, DANIEL F. DONEGAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Side-Dump Wagon, of which the following is a specification.

My invention relates to that class of dump wagons in which the bed is pivoted to tilt sidewise in order to enable the wagon to be driven along side of an embankment and the load dumped over the edge thereof.

The object of my invention is to so arrange and proportion the various parts that the greatest capacity can be secured with a minimum weight of material in the bed.

My invention comprises the combination in a dump wagon of the running gears; a frame rigidly fixed to the bolsters of such running gears and comprising an upper and a lower girder beam; a swinging side wall hinged to the upper girder and provided with latches adapted to engage catches arranged upon the lower girder when such side wall is closed; such catches; a tilting bed comprising a floor and a side wall secured together and mounted upon such running gears and pivoted to tilt toward such swinging side wall, and means for securing the tilting bed to the lower girder.

My invention also comprises the combination of the supporting beam provided at each end with a transverse groove and a semi-cylindrical journal bearing in such groove, and a journal bearing formed of strap metal, secured upon the bolster and having a portion bent upward at two points above the plane of its body and having the portion between such points arranged to form a journal bearing for the semi-cylindrical portion of said beam, whereby I am enabled to form a simple, light, artistic and strong journal at a minimum expense.

The accompanying drawings illustrate my invention.

Figure 1 is a plain side elevation of my improved side-dump wagon in position to receive a load. Dotted lines indicate the position of parts when the wagon is in the act of dumping. Fig. 2 is a plain front elevation showing the bed tilted in the act of dumping a load. The lower part of the running gears being broken away to contract the view. Fig. 3 is a plain front elevation with the bed untilted. Fig. 4 is a fragmentary sectional view illustrating the means I employ for pivoting or journaling the bed to the running gear.

A indicates the ordinary running gear of a wagon.

B indicates the tilting bed including the bottom *b* and the side wall *b'* rigidly fixed thereto. The bed is provided with two end walls *b''* rigidly secured to the bottom and side wall. The bottom *b* is mounted upon a supporting beam C which extends longitudinal of the wagon and is pivoted or journaled upon the front and rear bolsters D D' approximately mid-way of their length.

The means I employ for pivoting the bed upon the bolsters comprise the combination of the beam C provided with the transverse groove *c* and the journal bearing *c'* situated in such groove and the journal bearing strap E formed of strap metal and arranged to be secured upon the bolster and having a portion of its body bent upward at two points above the plane of its body and having the portion *e* of its body between such points arranged to form a journal bearing for the semi-cylindrical portion within the groove *c* of the beam C. By this arrangement the walls of the groove *c* engage with the sides of the strap E and prevent the beam and wagon bed from slipping end-wise.

The swinging side wall or gate B' is mounted upon an upright frame G which is rigidly secured to the bolsters D D'. Such side wall is hinged to the upper girder of the frame by hinges *g* and is arranged to swing outward when its lower portion is not secured to the frame.

To provide simple and convenient means for detachably securing the lower edge of the hinged side wall B' to the frame, there are pivoted to the swinging side wall suitable latches H H near the lower edge of such wall. To the upper ends of such latches is pivoted a connecting rod *h* which is pivoted at one end to the bolt operating lever *h'* which is pivoted to the bar G' attached to the lower edge of the gate or swinging wall and is arranged within reach of the driver at the front end of the dumper. The lower ends of the latches are

arranged respectively to engage the catches h'' (which are mounted on the girder beam g' of the frame G) when it is desired to lock the gate or swinging wall B′ to the frame G.

The end walls b'' are beveled from near the bottom of the bed next to the swinging side wall B′, upward and backward to form the diagonal shoulder b''' which allows the bed to tilt toward the frame G sufficient to dump the load, and engages the frame G to prevent the bed from tilting too far.

X indicates wings made of sheet steel or other suitable material secured to the frame G and arranged on the inside of the end walls b'' to prevent escape of the material over the beveled portion of such walls.

I is a chain to prevent the side wall b' of the bed from spreading out.

J J are braces arranged to hold the frame G in rigid connection with the bolsters D D′.

K is a bed stop and support arranged upon the bolsters to receive and assist in sustaining the closed side of the bed when in position to receive the load. The girder or beam g' of the frame G is arranged in the path of the floor b and also assists to prevent the bed from tilting in the wrong direction. L is a link attached to such girder beam of the frame G and is arranged to receive a hook l which is pivoted to the bottom b of the bed, to detachably secure the bed to the frame to prevent the bed from dumping when it is desired to haul the load a considerable distance. To remove the link from the hook l, the hook is turned up as indicated in dotted lines in Fig. 1, when the link will be released. By arranging the swinging side wall between the two rigid girders I avoid all danger of the side wall being pressed out or broken by the pressure of the material in the bed when the wagon is loaded, and I am enabled thereby to make the bed much longer with-out making the weight excessive.

In practice the bed is placed in the position shown in Figs. 1 and 3, and the side B′ is locked to the frame G by actuating the lever h' to throw the bolts or latches H into engagement with the catches h''. The bed is secured to the frame G, by the link L and hook l, the load is placed in the bed and transported to the place where it is desired to dump it. When the bed is filled with material, the gate B′ being locked, the material of the load confined between the gate and the bed wall b' prevents the bed from tilting, and practically no strain is brought to bear upon the hook l. When the load is to be moved only a short distance the link need not be secured by the hook. When it is desired to dump the load, the link being released, the lever h' is actuated as shown in dotted lines in Fig. 1, to release the latches H from their engagement with the catches h''; the load pressing outward swings the gate or swinging side-wall B′ outward. The operator pulls upon the handle M and tilts the bed as shown in Fig. 2. If, as is usually the case, the dump is inclined in the direction the load is to be dumped, the bed is tilted with great ease. The load discharges both above and below the beam g' of the frame as indicated in Fig. 2. The supporting beam C extends rearward from the bed and is provided with a clip or lever socket Y into which a lever may be inserted by a helper to assist in dumping when the wagon stands without any lateral slant. As illustrated in the drawings, the bed B is short enough to swing clear inside of the bolsters.

It would not be a departure from the spirit of my invention to fix the beam C to the bolsters and pivot the tilting bed thereon but I at present consider the construction shown to be preferable and the change above suggested is considered so obvious as to require no illustration. The girder beam g' is braced by a truss rod t to prevent it from being broken by the weight of the material. The girder beam g' projects rearward from the rear bolster and is connected with such bolster by a suitable brace U to prevent the bed from racking endwise.

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

A dump wagon comprising the combination of the running gears; a frame rigidly fixed to the bolsters of such running gears and comprising an upper and a lower longitudinally arranged girder beam; a swinging side wall hinged to the upper girder and provided with latches adapted to engage catches arranged upon the lower girder when such side wall is closed; such catches; a tilting bed comprising a floor and a side wall secured together and mounted upon such running gears and pivoted to tilt toward such swinging side wall, and means for securing the tilting bed to the lower girder.

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