

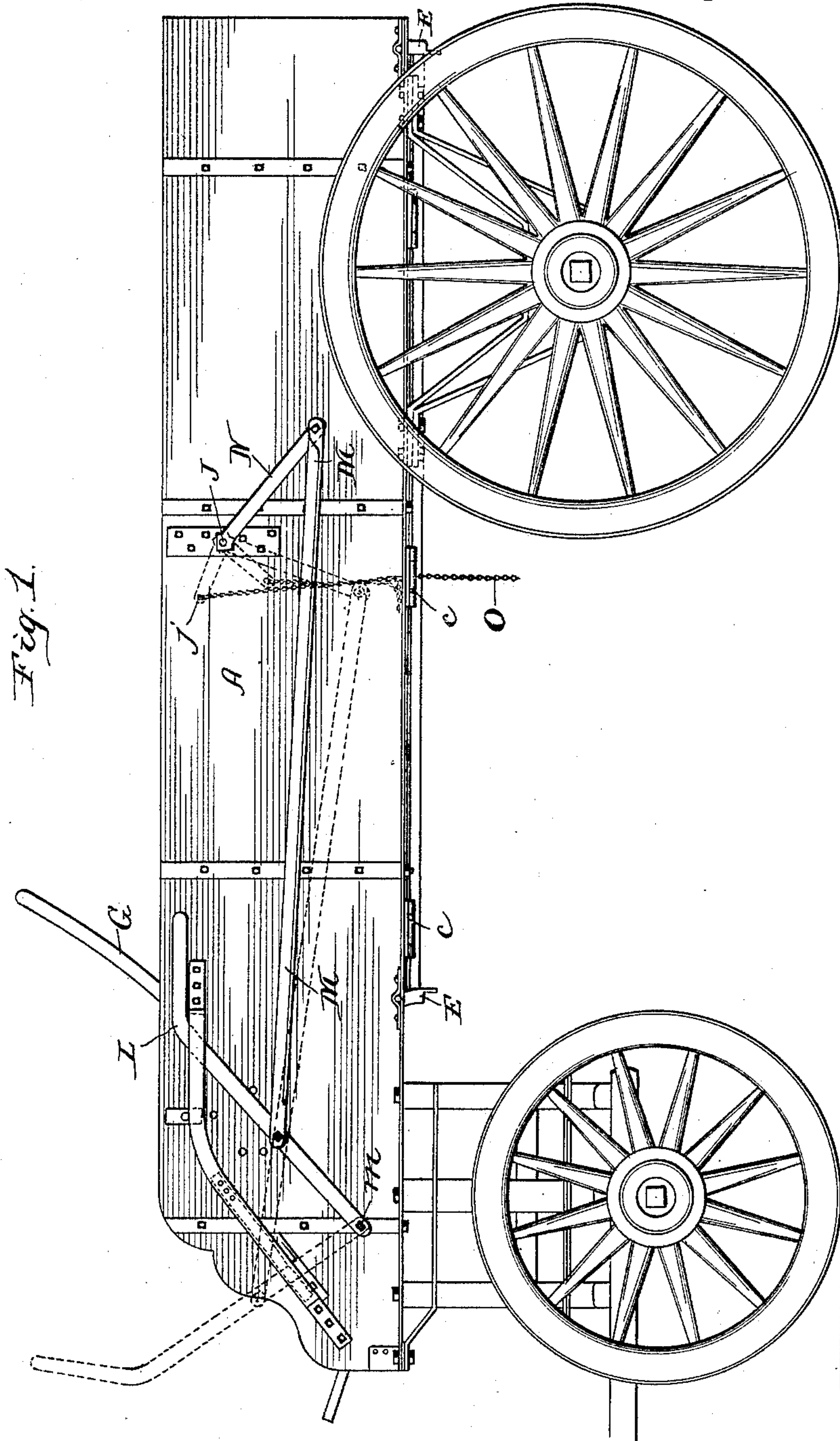
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3 Sheets—Sheet 1.

J. S. FIELD & W. J. SHEDD.
DUMPING WAGON.

No. 482,731.

Patented Sept. 20, 1892.



Witnesses:

Lew. C. Curtis

A. W. Munday

Inventors:

John S. Field

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By Munday Emits Pladerock
their Attorneys.

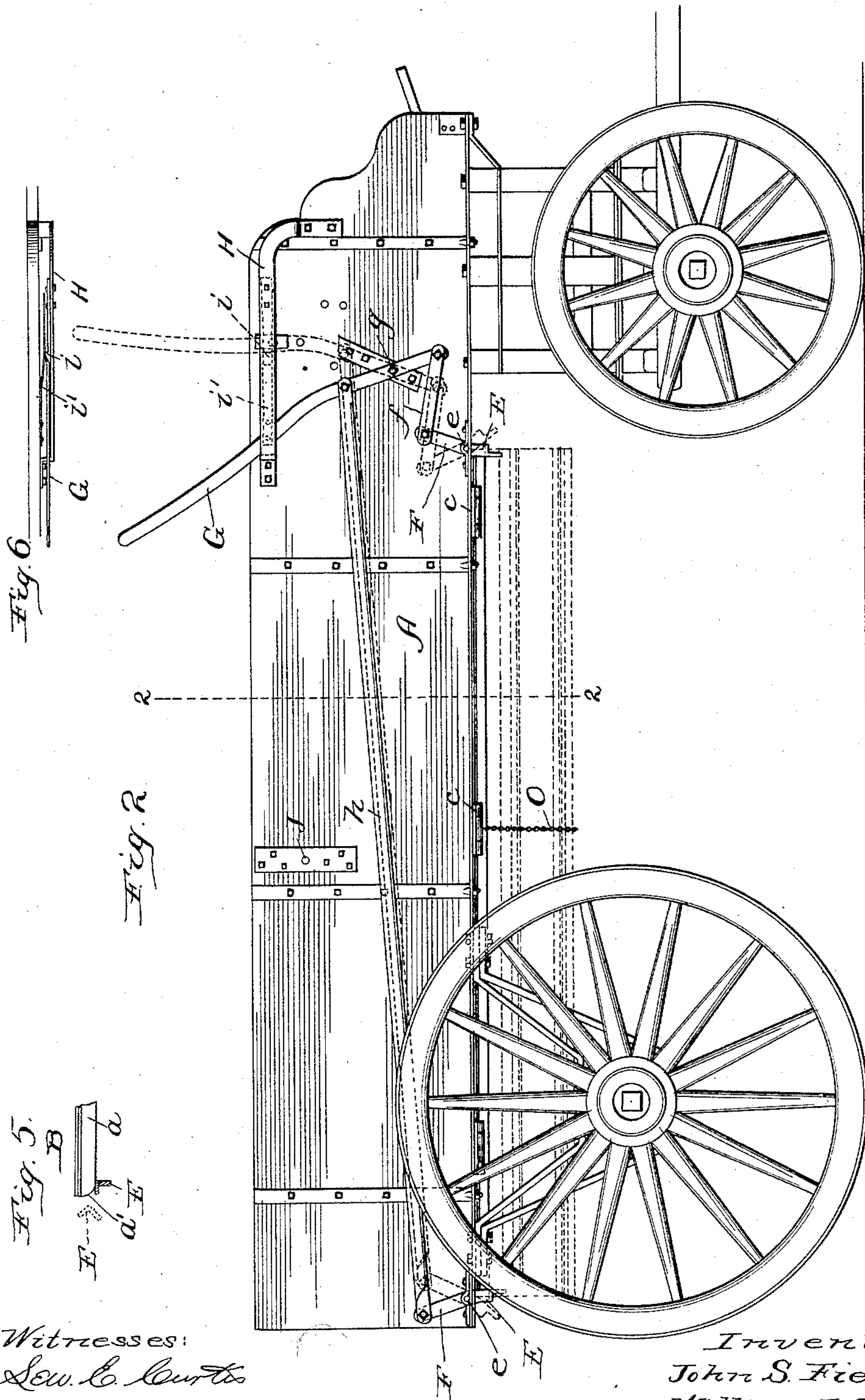
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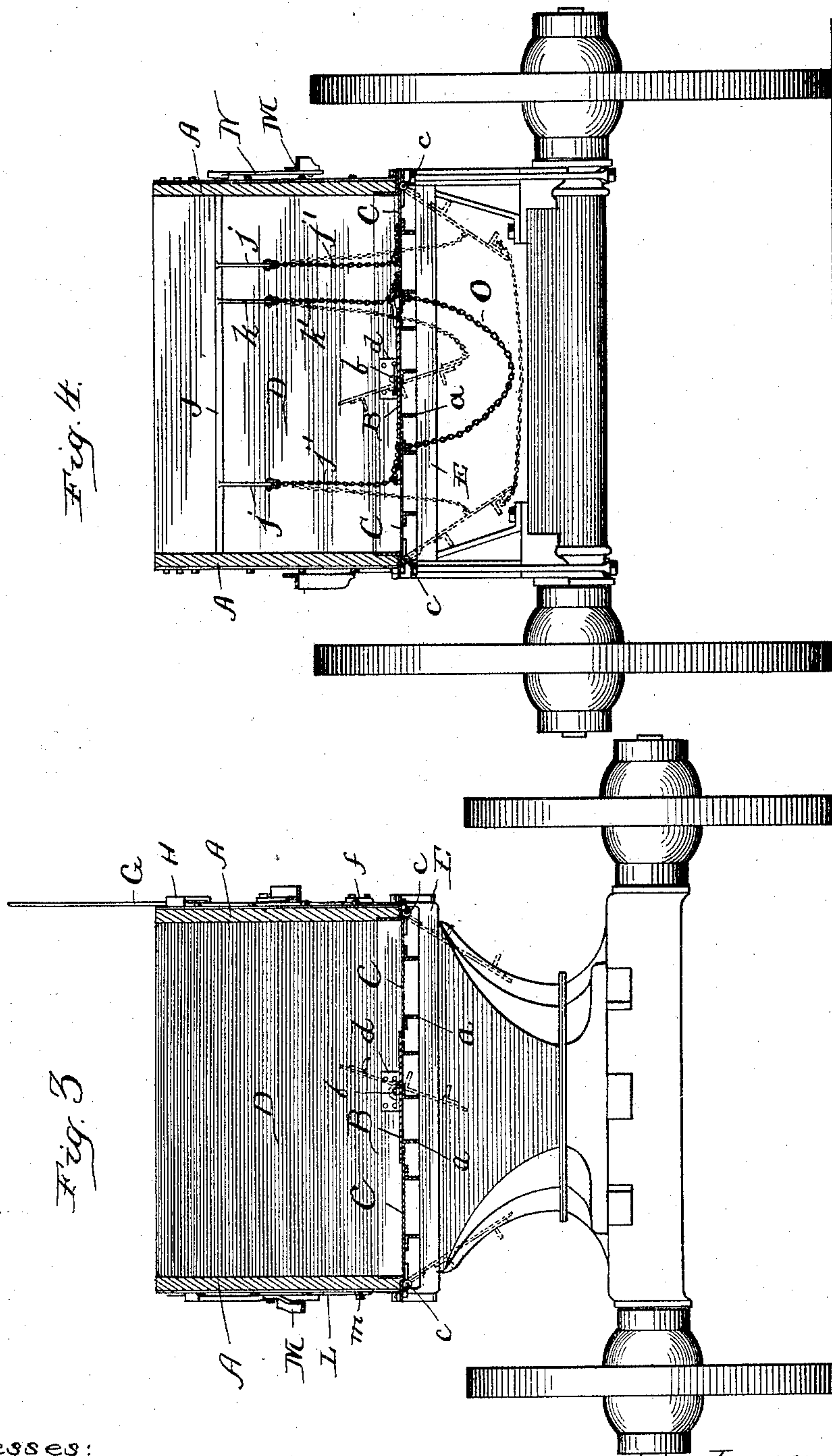
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UNITED STATES PATENT OFFICE.

JOHN S. FIELD AND WILLIAM J. SHEDD, OF CHICAGO, ILLINOIS.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 482,731, dated September 20, 1892.

Application filed June 3, 1892. Serial No. 435,360. (No model.)

To all whom it may concern:

Be it known that we, JOHN S. FIELD and WILLIAM J. SHEDD, citizens of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Dumping-Wagons, of which the following is a specification.

This invention relates mainly to the construction of the dumping bottom sections or leaves of this class of wagons and incidentally to the devices for raising the sections and for supporting them when raised.

The invention consists in a dumping-wagon having its bottom divided into three longitudinal sections, the outside ones of which are hinged at their outer edges and swing down at their inner edges and the central one is pivoted at its ends so as to tip sidewise.

The invention further consists in the novel features hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figures 1 and 2 are side elevations of our improved wagon. Figs. 3 and 4 are transverse sections on the line 2 2 of Fig. 2. Fig. 5 is a detail showing the operation of the rocking cross-bars, and Fig. 6 is a detail showing the device for locking one of the hand-levers.

In the drawings, A represents the sides of the wagon-body, and D the end-boards of the same.

B and C C represent the folding leaves or sections forming the bottom. These are each formed, preferably, of sheet metal, stiffened by T or angle irons *a*, running longitudinally to the sections and secured to their under surfaces. The middle section B is pivoted at its ends upon pivots *b*, located at one side of the center line of the section, so that it will tip readily upon such pivots. The latter are journaled in the plates *d*, attached to the ends D of the box. The side sections C are each hinged to the sides of the box, as shown at *c*, so that their inner edges will swing downward, as indicated by the broken lines in the drawings. The central section B is also indicated by the broken lines in its tipped position. It is made wide enough to lap over and form a tight joint with the side sections,

as clearly indicated, so that a close floor is formed by the three, and it will be noticed that when opened they will give full egress to the material carried in the wagon and do not afford lodgment for any portion of it, every part of the floor being tipped or swung into a vertical or substantially vertical position when the load is dumped. When raised so as to close the floor, these movable bottom sections are supported at each end by cross-bars E, moved into position under the bottom sections by levers, which may be operated by the driver from the seat and which will now be described. The cross-bars are pivoted to the sides of the wagon-body, as shown at *e*, and they are rocked on such pivots by levers F, one of which is connected by a short link *f* to the lower end of the hand-lever G, pivoted to the side of the wagon-body at *g*, and the other of said levers F is connected to the hand-lever by a long link *h*, joined to the hand-lever above the pivot *g*. It will be noticed that if the hand-lever is moved in one direction the cross-bars E will be rocked away from the floor-sections, so as to free the latter and allow them to dump, and that if said lever is moved in the other direction both the cross-bars will be forced under the floor-sections, so as to sustain them in the raised or closed position. A guard-iron H, attached to the side-board of the box, confines and guides the upper end of the hand-lever, and in conjunction with the catch *i* and spring *i'* serves to lock the hand-lever against any accidental return of the cross-bars to their acting position after a dump has been made. The cross-bars E, which are preferably formed of angle-iron, are adapted not only to support the floor-leaves, but also to lift them to their proper position in case they should fail to be entirely raised by the lifting devices or in case they should become sprung. This latter function is due to the rocking movement which the bars have around the curved ends *a'* of the webs of the stiffening-irons carried by the floor-sections. This action is clearly illustrated at Fig. 5. Supposing the wagon to be loaded and ready to be dumped, the driver moves the lever G from the position given at Fig. 2 to that indicated by the broken lines in said figure. This carries the cross-bars out from under the bot-

tom sections, so that the latter will then dump automatically by their own gravity and that of the contents of the wagon. After the discharge of the load the driver raises the floor-sections again by suitable devices, a preferred construction of which is as follows: J is a rocking shaft journaled in the sides of the box and operated by suitable levers, as hereinafter described. This shaft carries arms *j k*, from which chains *j'* and *k'* extend to the floor-sections and are attached to the latter near the edges which swing downward in dumping. It will be understood from what has been described that by rocking the shaft J these chains will be drawn upon, and thus return the floor-sections to their horizontal position. In this operation the center section is timed by shortening its chain or by extending its arm *k* at a different angle to move slightly in advance of the side sections, so that the latter may come up into position under the edges of the former. The lever system by which this rocking shaft J is obtained is preferably attached to the other side of the wagon from that carrying the lever system by which the supporting-bars are operated, and consists of a hand-lever L, pivoted at *m* and joined by a pitman M to a crank-arm N upon the end of the shaft J. After lever L and its connections have been employed to raise the floor-sections, in which they are moved from the position given in full lines to that given in broken lines in Fig. 1, they are returned to their starting positions, so that the chains then rest on the floor of the wagon, as illustrated at Fig. 4. In the practical operation of the wagon if the lifting-chains do not bring the floor-sections into their correct positions, as will frequently be the case, the supporting cross-bars when moved under them compel them to raise as much as may be needed to bring them to their proper level and in close junction with each other. It is desirable that the swing of the side sections when dumping be limited, and for this purpose we provide a guard-chain O, attached to their swinging edges and of a proper length to prevent their moving too far, each of these sections being thus caused to exert a restraining influence

upon the other. This chain depends below the wagon when the floor is closed, as shown.

We claim—

1. The dumping-wagon having its bottom divided into three longitudinal sections, the outside ones of which are hinged at their outer edges and swing down at their inner edges and the central one is pivoted at its ends, so as to tip sidewise, substantially as specified.

2. The dumping-wagon having its bottom divided into three longitudinal sections, the outside ones of which are hinged at their inner edges and the central one of which is pivoted at its ends, so as to tip sidewise, and also having movable supporting devices for locking the sections in the raised position, substantially as specified.

3. The combination, in a dumping-wagon, of three longitudinal floor-sections, the outer ones of such sections being hinged so as to swing downwardly at their inner edges and the central section being pivoted at its ends and adapted to tip sidewise, movable supporting-bars for supporting said floor-sections in their raised position, devices for moving said bars into and out of their acting positions, and devices for raising the floor-sections, substantially as specified.

4. The combination, in a dumping-wagon, of three longitudinal floor-sections each adapted to tip sidewise, essentially as described, the central section overlapping the edges of the side sections, means for raising said sections after dumping, and means for supporting the sections in the raised position, substantially as specified.

5. In a dump-wagon having a floor consisting of three longitudinal sections, whereof the side sections are hinged at one edge and swing downward and the center section is pivoted at its ends and tips sidewise, the combination, with the side sections, of the chain O, secured to said sections and limiting their downward movement, substantially as specified.

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