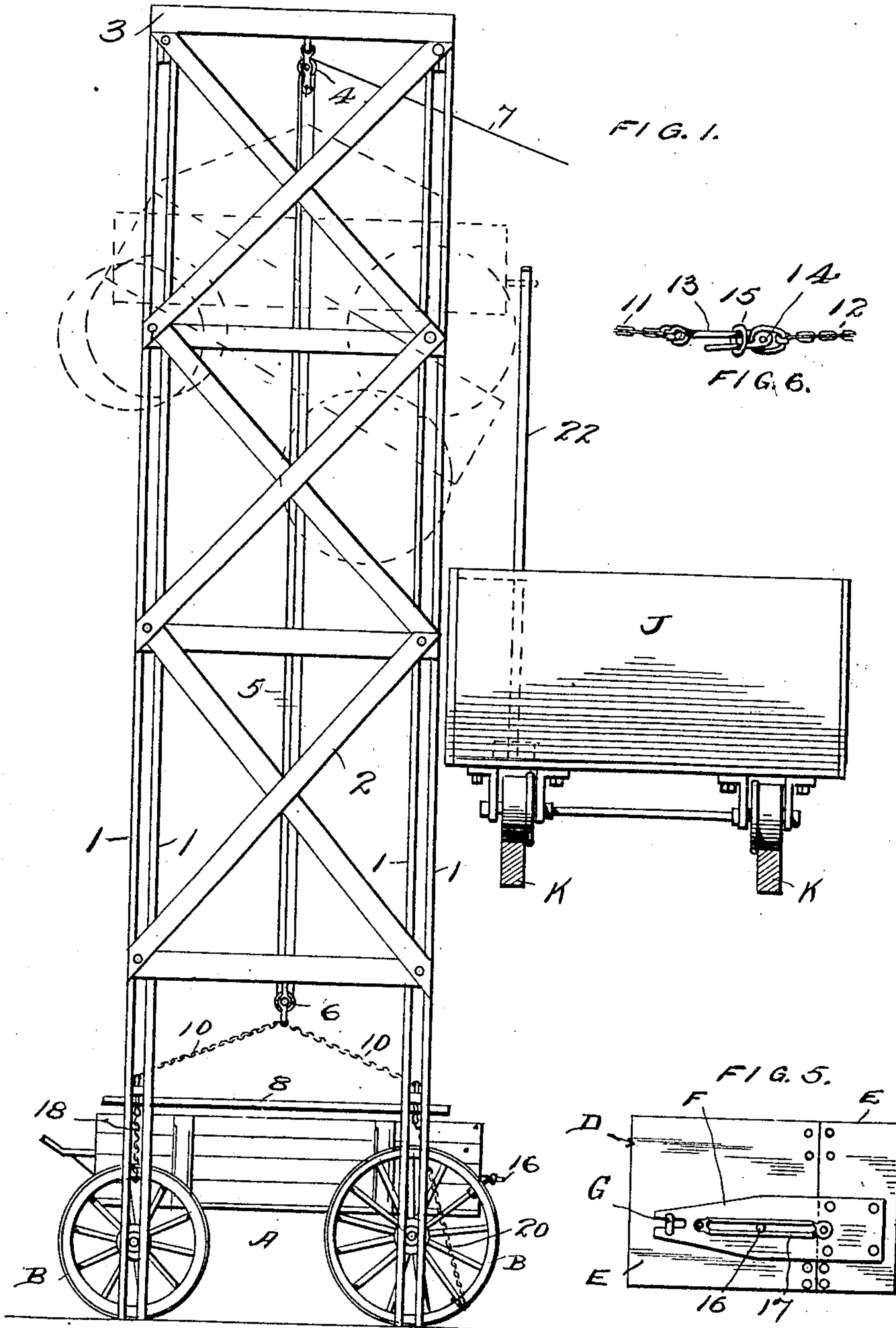


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WAGON HOISTER AND DUMPER.
APPLICATION FILED JULY 29, 1908.

913,170.

Patented Feb. 23, 1909.
2 SHEETS—SHEET 1.



WITNESSES

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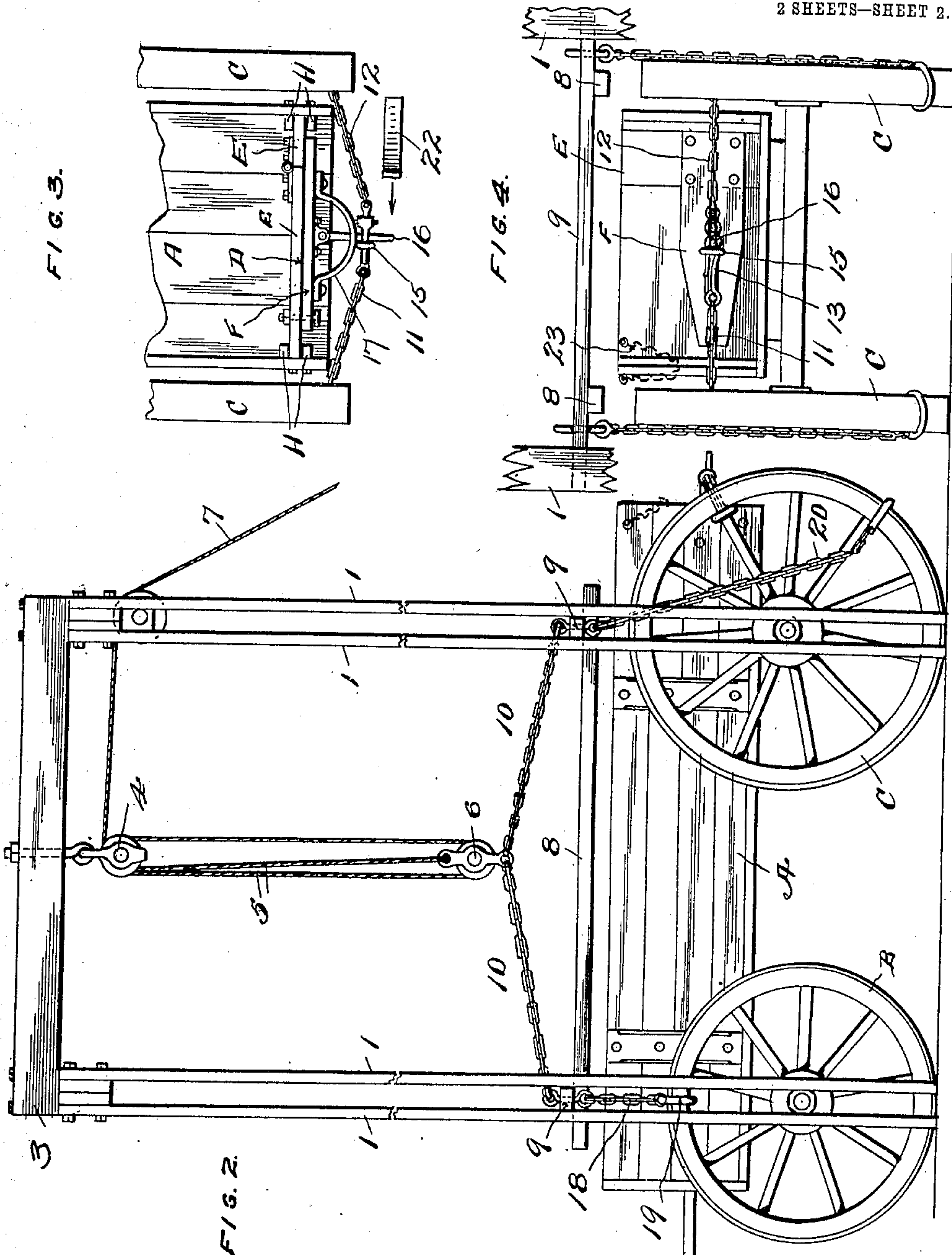
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UNITED STATES PATENT OFFICE.

STANFORD M. SMART, OF ZENDA, KANSAS.

WAGON HOISTER AND DUMPER.

No. 913,170.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed July 29, 1908. Serial No. 445,974.

To all whom it may concern:

Be it known that I, STANFORD M. SMART, a citizen of the United States, residing at Zenda, in the county of Kingman and State of Kansas, have invented certain new and useful Improvements in Wagon Hoisters and Dumpers, of which the following is a specification.

My invention relates to a wagon hoist and dump, and the object thereof is to provide a simple and inexpensive apparatus which may be employed in connection with the ordinary end-gate wagon to raise and dump the same in a novel manner.

In the accompanying drawings, forming a part of this specification, wherein my invention is illustrated, and wherein like characters are used to designate like parts throughout the several figures, Figure 1 is a diagrammatic elevation of my improved apparatus, as a whole, illustrating the practical application and operation thereof. Fig. 2 is a side elevation of my improved wagon hoist. Fig. 3 is a plan view of the rear portion of a wagon, having its rear walls and end-gate locked in accordance with my invention. Fig. 4 is an end elevation thereof, and of a portion of the hoisting frame. Fig. 5 is an elevation of the wagon end-gate removed, and, Fig. 6 is a detailed view of the hinged chain hook.

In the accompanying drawings, I have illustrated in connection with my improved apparatus, a wagon of the ordinary construction, embodying a body A, having forward and rear wheels B and C, and provided with an end-gate D, comprising sections E, having their abutting edges hinged upon their inner faces, and one of which sections E is provided with a parallel rigid extension plate F upon its other face, extending upon the face of the other section E, and normally locked thereto by a turn-key G to prevent said end-gate breaking at the joint of its section E. When the said sections E of the end-gate B are locked as described, to prevent their folding, the same are held against removal between the end-gate strips H of the wagon body A.

In the practical embodiment of my invention, I provide a hoisting frame rectangular in cross-section, and comprising spaced uprights formed by parallel beams 1, which uprights are suitably supported and connected by diagonal cross beams 2, and are provided with a platform 3 at their upper

ends, centrally from which depends a block 4 connected by ropes 5, extending centrally and downwardly through the hoisting frame, to a lower block 6, which ropes 5 embody an operating rope 7, extending downwardly and operating from a suitable winding drum to raise or lower the block 6. Within the hoisting frame is mounted a guide frame 8, rectangular in shape, and provided with extensions 9 projecting between the spaced beams of the hoisting frame uprights, said guide frame 8 being connected to the lower block 6 by chains 10 extending from adjacent corners thereof. Thus the guide frame 8 may be raised or lowered within the hoisting frame by means of the operating rod 7, and the connections described.

According to my invention, after the wagon to be dumped, is associated within the lower portion of the hoisting frame, beneath the guide frame 8, the rear wheels C of such wagon are locked against rotation by a chain secured between upper portions thereof, and passing rearwardly against the rear end of the body A. The said chain, comprises sections 11 and 12 having suitable hooks upon their outer ends engaging the wheel spokes adjacent the upper portion of the rear wheels C, and provided upon their inner ends with relatively engaging hooks and eyes, respectively. The hook 13 carried by the inner end of the chain section 11, and shown in Fig. 6, comprises a U-shaped member having its extensions hingedly connected at their inner ends at 14, which member and said chain are provided with an encircling ring 15, engaged about the said hinged extensions to prevent the same folding outwardly and releasing the chain sections 11 and 12. The release of the hook 13 by the sliding movement of ring 15, is accomplished by a rearwardly extending lever 16, pivotally secured at its inner end from the plate F of the end-gate, and projecting through said hook 13, inwardly of the said ring 15, whereby the horizontal swinging movement of said lever 16, in the direction of the arrow, Fig. 3, will move the retaining ring 15 from the extension of the hook 13, and allow the same to straighten out and release itself from the eye of the chain section 12, thereby releasing the end-gate B and allowing the rear wheels C to rotate, it being understood that the turn-key G of the end-gate locking plate F, is turned to release the end-gate as soon as the

chain sections 11 and 12 are secured in position to hold the same, and the rear wheels C. The swinging lever 16 is guided in its movement by a U-shaped frame 17, secured at its ends upon the plate F of the end-gate, and provided with a central longitudinal slot through which said lever passes. Short connecting chains 18 extend between one end of the guide frame 8, and the forward wheels B of the wagon, said chains being suitably secured to the upper portion of the said wheels, as for instance, by a hook 19 encircling the beam thereof, while connecting chains 20 of substantially greater length than the chains 18, extend between the opposite end of the guiding frame 8, and are connected to the rear walls C adjacent the lower portion thereof, said chains 20 being held rigid inasmuch as the rear walls C are prevented from rotation by the chain sections 11 and 12.

After the chains 18 and 20 are secured as described, and the rear wheel and end-gate locking chains 11 and 12 are in position, the wagon is ready to be hoisted within the hoisting frame, to the proper height, for instance, above a car J traveling upon elevated tracks K, and designed to receive the contents of the hoisted wagon. Any suitable means may be employed to trip the release lever 16, such as for instance, an upright arm 22, extending from the car J, and by its movement, adapted to swing said lever 16 and release the end-gate D and the rear wheels C, as before described, upon which the rear wheels C will at once rotate until the portion thereof to which the chains 20 are connected, is uppermost, thereby permitting the rear end of the wagon to drop, as shown in dotted lines in Fig. 1, and allowing the weight of the material within the wagon body A, to break the joint of the end-gate D and force the same outwardly, the said material dropping at once within the car J. In order to prevent the end-gate D from dropping into the car J, with the

material being dumped, I may attach the same, at one corner, to the wagon body A, by means of a slack chain 23 whereby the said end-gate will be merely thrown to one side of the wagon.

Having fully described my invention, I claim:

1. In a device of the character described, the combination with a wheeled wagon having an outwardly movable end-gate, of a hoisting frame, a guide frame mounted to move vertically within said hoisting frame, connecting devices arranged between the upper and lower portions of the forward and rear wagon wheels respectively, and the said guide frame, and releasable means for locking the rear wagon wheels from rotation and the said end-gate from outward movement, whereby the said rear wheels may be released to rotate and allow the rear end of the wagon to drop, and the said end-gate released, to permit of the dumping of the material, substantially as described.

2. In a device of the character described, the combination with a wheeled wagon having an outwardly movable end-gate, of trip controlled means for locking the rear wagon wheels from rotation, said means being adapted to prevent outward movement of said end-gate, a hoisting frame, a guide frame mounted to move vertically within said hoisting frame, connecting devices arranged between the upper and lower portions of the forward and rear wagon wheels respectively, and the said guide frame, and means for tripping said locking means to release said end-gate and said rear wheels, whereby the same may rotate to allow the rear end of the wagon to drop, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

STANFORD M. SMART.

Witnesses:

S. A. TERRY,
C. L. PARKER.