

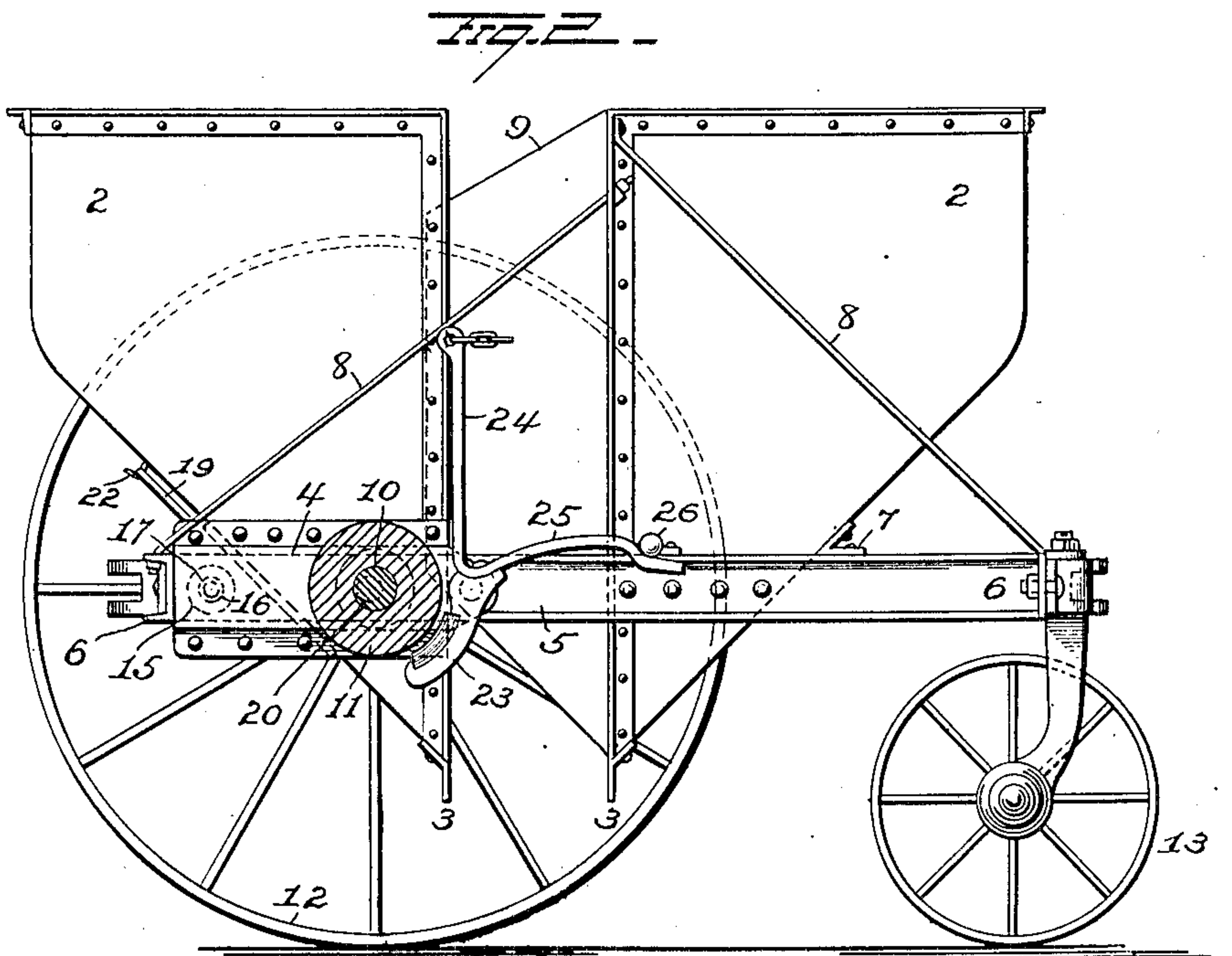
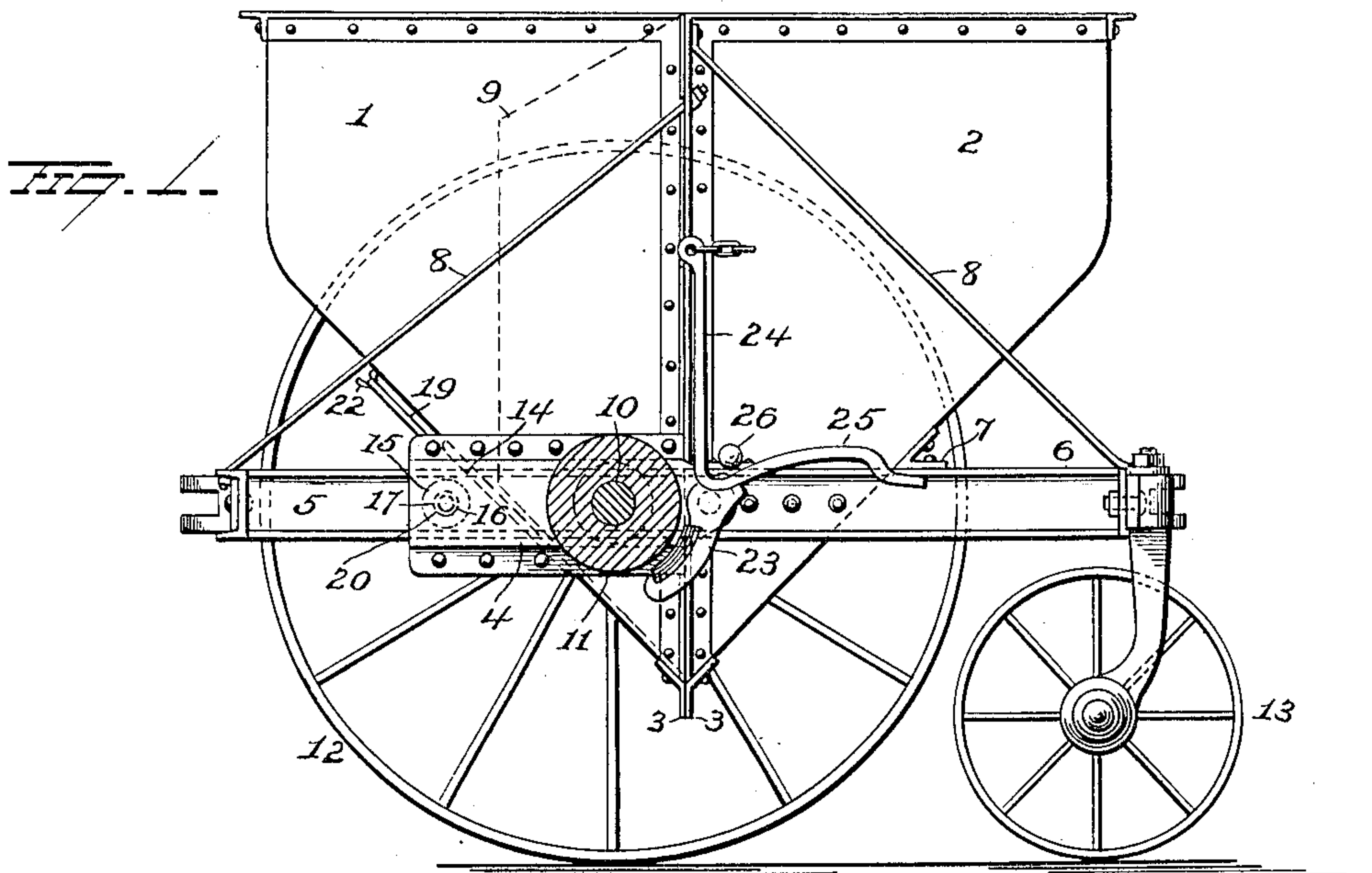
No. 844,891.

PATENTED FEB. 19, 1907.

E. I. NOTTINGHAM.
DUMPING VEHICLE.

APPLICATION FILED JAN. 24, 1906.

3 SHEETS—SHEET 1.



WITNESSES

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FIG. 3.

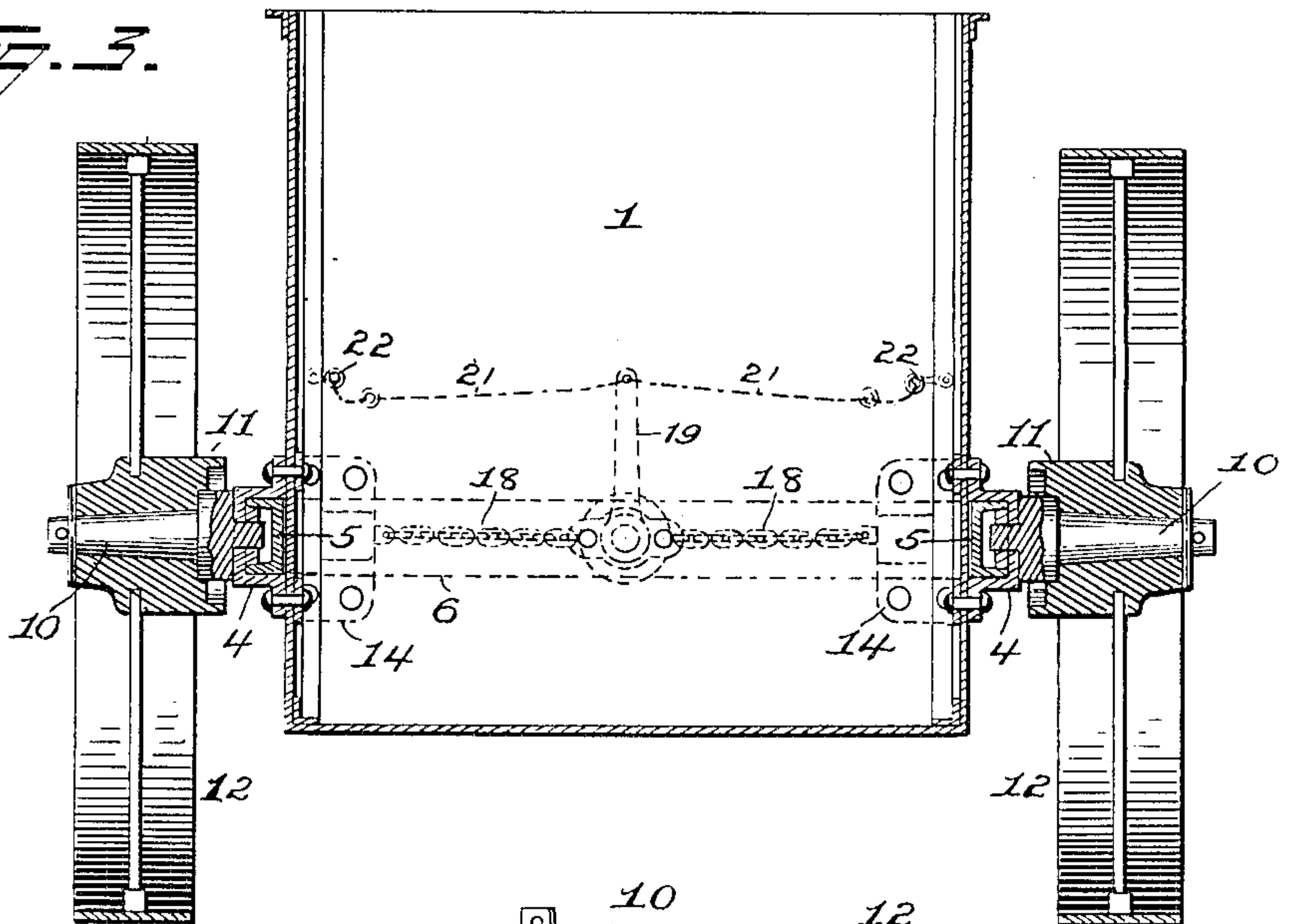
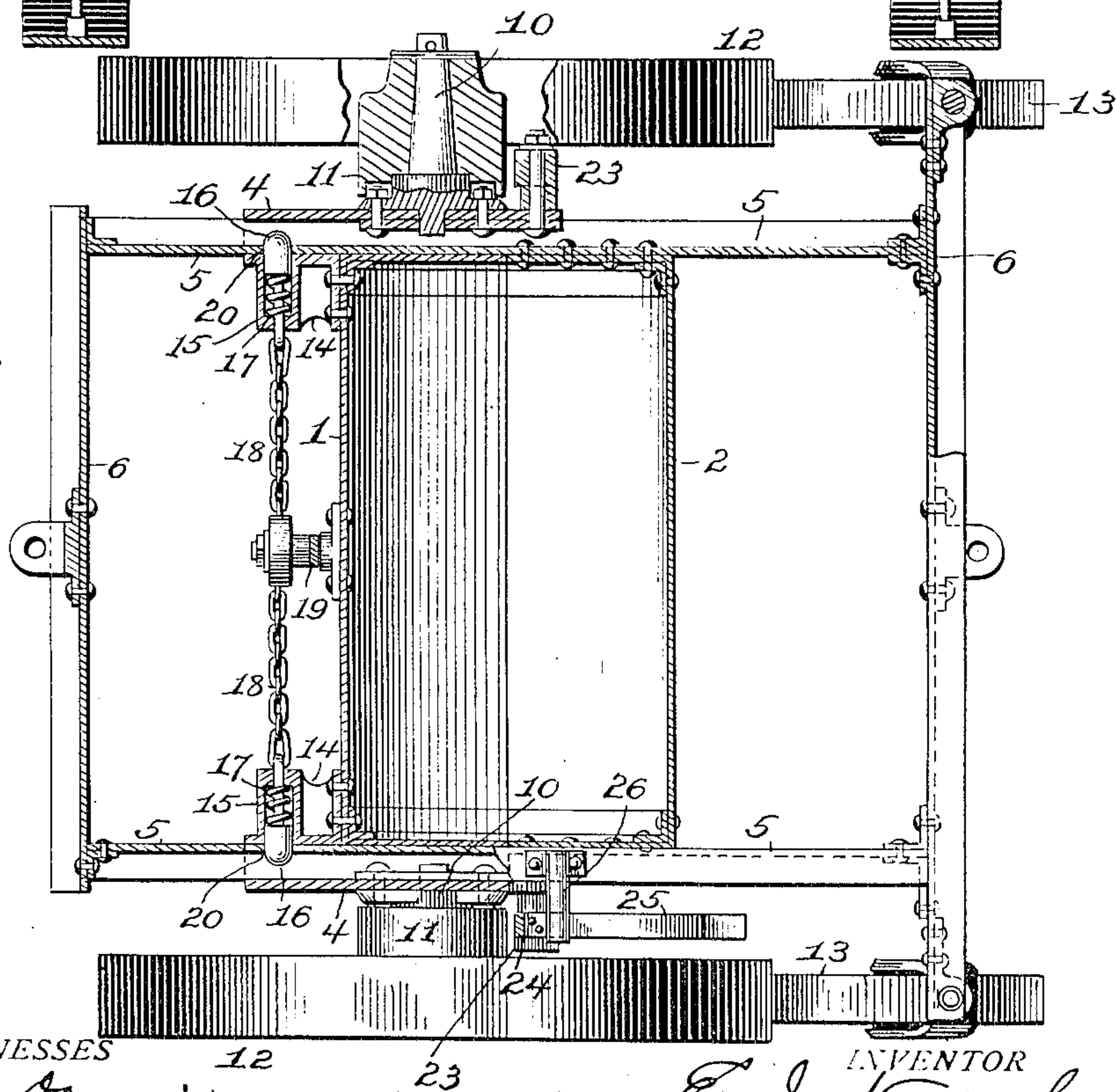


FIG. 4.



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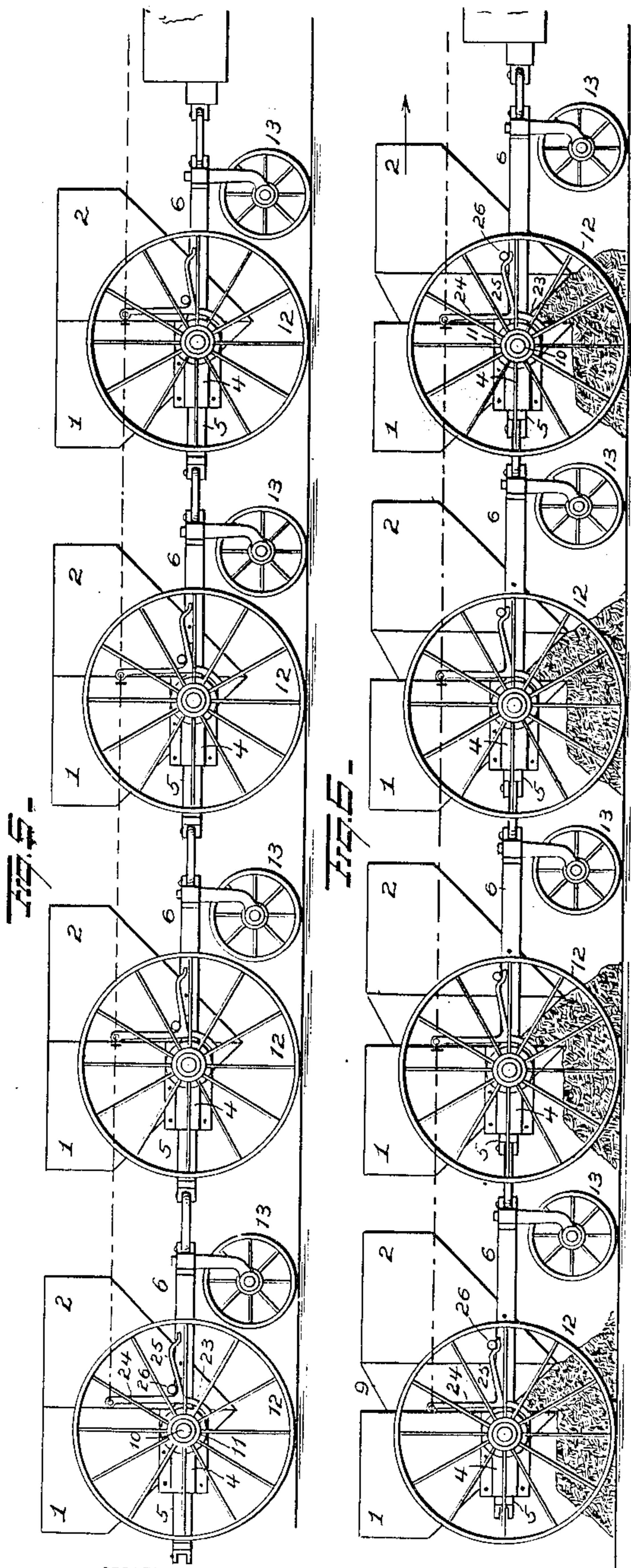
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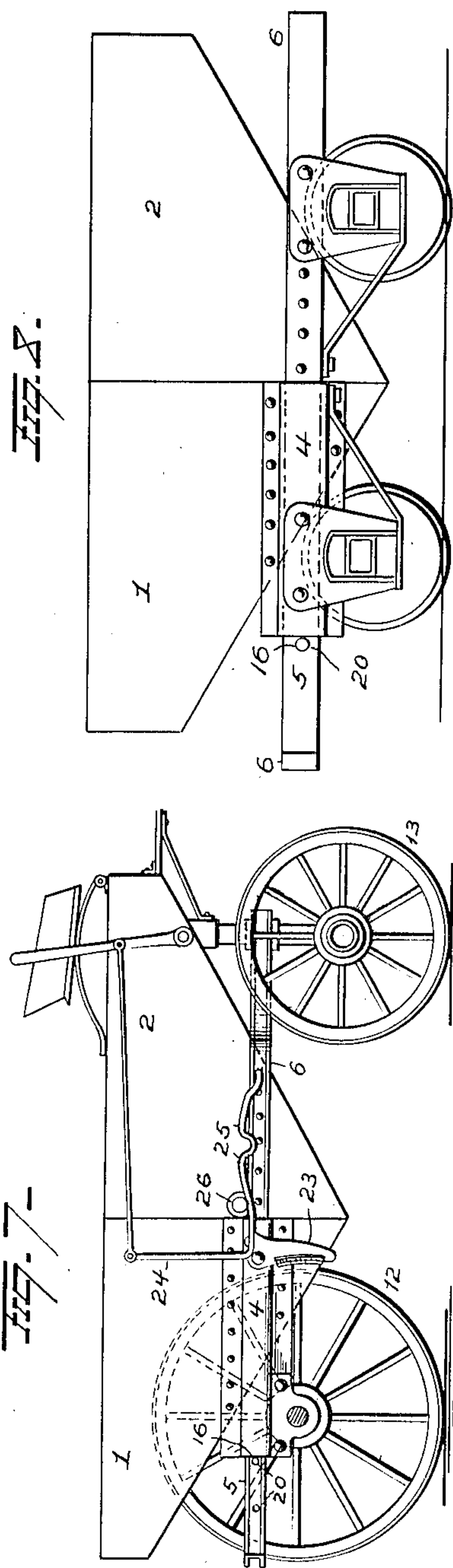
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

EDWIN I. NOTTINGHAM, OF WASHINGTON, DISTRICT OF COLUMBIA.

DUMPING-VEHICLE.

No. 844,891.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed January 24, 1906. Serial No. 297,660.

To all whom it may concern:

Be it known that I, EDWIN I. NOTTINGHAM, a resident of Washington, District of Columbia, have invented certain new and useful Improvements in Dumping-Vehicles; and I 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.

My invention relates to improvements in dumping-vehicles, an object of the invention being to provide a vehicle-body comprising two independent sections coöperating when closed to form a single receptacle, but having individual supporting mechanism which permits the sections to be drawn apart to dump or move together to close the body.

A further object is to provide a dumping-vehicle with a hopper-shaped body comprising two half-sections independently supported and the supporting mechanisms constructed to be moved relative to each other to separate the body-sections or move them together.

A further object is to provide a vehicle of this character with improved brake mechanism which may be operated to control the momentum of the vehicle and which is automatically applied when the body-sections are separated or moved together to hold one section against movement during such operation.

With these and other objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation with one wheel removed, illustrating my improved vehicle in closed position. Fig. 2 is a similar view showing the vehicle open for dumping. Fig. 3 is a view in vertical cross-section. Fig. 4 is a view in horizontal section. Fig. 5 is a view showing a train of my vehicles. Fig. 6 is a similar view showing the vehicles in the act of dumping and leveling. Fig. 7 is a view showing my improvements as applied to a wagon, and Fig. 8 is a view showing my improvements applied to a railroad-car.

The body of my vehicle, which is composed of sheet metal and of hopper shape, comprises two half-sections 1 and 2, each having a scraper or leveler 3 at its lower end.

To opposite sides of body-section 1 box cast-

ings or guides 4 are securely fastened in horizontal position and encompass the parallel side channel-bars 5 of a rectangular frame 6, and to which latter the body-section 2 is securely riveted and strengthened by a cross-bar 7 and brace-rods 8, and this body-section 2 is preferably provided at its sides with plates 9, telescoping in body-section 1 and serving as side closures for the body when the sections are separated, to prevent the load falling out at the sides.

Axle-stubs 10 are secured to the box castings or guides 4 and mounted in the hubs 11 of wide-rimmed wheels 12, and caster-wheels 13 are located at the forward corners of frame 6 to prevent tilting of the body and maintain frame 6 always in a horizontal position. Owing to the half-hopper shape of body-section 1, the box castings or guides 4 will project rearward beyond the inclined rear wall of said body-section, and triangular-shaped castings 14 are secured to the rearwardly-projecting portions of castings 4 and also to the body-section 1, serving to brace and strengthen the latter. In these castings 14 pockets 15 are provided for sliding catches 16, forced outward by coiled springs 17 behind them and connected by chains 18 with a T-lever 19, pivoted to body-section 1. When the body-sections are together, the catches 16 project into openings 20 in side bars 5 of frame 6 and lock the body-sections together, permitting the vehicle to be moved from place to place without separating the body-sections.

To unlock the frame 6 from castings 4, or, in other words, to unlock the body-sections 1 and 2, supported by the castings 4 and frame 6, the T-lever 19 is swung to either side to draw inward the catches 16, and a chain 21, which is secured between its ends to the upper end of lever 19, may be pulled to accomplish this purpose and may be caught over lugs or pins 22 to hold the catches withdrawn and the vehicle ready to dump.

Brake-shoes 23 are pivotally secured to the forward ends of castings 4 in position to engage the hubs 11 of wheels 12, and upright brake-arms 24 are secured to the brake-shoes and provided at their lower ends with forwardly-projecting curved or cam extension-bars 25, to be engaged by lugs 26 on body-section 2. The arms 24 and cam extension-bars 25 are preferably made of a single bar of spring metal bent into the shape

shown, and this brake-arm 24 may be swung to apply the brake during transit of the vehicles and is automatically applied during the separation of the body-sections, as will now be explained.

The operation is as follows: To dump the vehicle, the T-lever 19 is swung to withdraw catches 16, as above explained, and draft applied to the forward end of frame 6. This serves to draw the side bars 5 of frame 6 through castings 4, and the lugs 26 on the sides of body-section 2 will engage the cam extension-bars 25 to press brake-shoes 23 against the hubs 11 of wheels 12, and thereby hold the body-section 1 stationary while body-section 2 is pulled away. This movement of frame 6 and body-section 2 continues until lugs 26 reach the ends of the cam portions of bars 25, when pressure of brake-shoes 23 will be relieved and the rear cross-bar of frame 6 will have engaged the rear ends of castings 4 to limit the separation of the body-sections. As the body-sections are separated the contents of the body will fall through the open bottom thus made, and when the sections have separated to their fullest extent the vehicle will begin to move forward as the brakes are released, and the rear scraper or leveler 3 will level the pile as the vehicle continues to move forward and dump. When the vehicle has been emptied, the draft-animal or engine will be backed, or draft is applied to the rear end of frame 6, and as the frame 6 begins to slide rearward through castings 4 the lugs 26 will engage cams 25 to apply the brakes and hold the body-section 1 against movement until the sections are together, when the brakes will be released and catches 16 will spring into locked position, and the vehicle is ready to be drawn away for another load.

In Figs. 5 and 6 I have illustrated a number of my improved vehicles coupled together and operating as a train. A train of such vehicles can be easily drawn by a traction-engine, which latter can be shifted from one end of the train to the other to close the vehicles and draw the train back for another load without turning the train around, which is especially desirable in working on narrow roads.

In Fig. 7 my invention is illustrated applied to an ordinary wagon. In this form of my invention, I preferably provide the bar 26 with two cams and the side bars of frame 6 with two openings 20 for the catches 16, thus permitting the body-sections to be opened half-way or entirely, at the will of the operator.

In Fig. 8 my improvements are illustrated as applied to a railroad-car.

A great many other slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I would have

it understood that I do not restrict myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. A dumping-vehicle having a body comprising two cooperating members, wheeled supports on which said body members are mounted, and means for moving the members bodily away from each other and discharging the contents of each between the members.

2. A dumping-vehicle having a body comprising two cooperating members, separable bodily from each other, and means for locking one body member when the other body member is moved relatively thereto.

3. A dumping-vehicle having a body comprising two cooperating members separable bodily away from each other, means for normally locking the body members together, and means for locking one body member when the other body member is moved relatively thereto.

4. A dumping-vehicle having a body comprising two cooperating members, wheeled supports on which said body members are mounted, and means for permitting one member to move in a horizontal plane away from the other.

5. A dumping-vehicle having a body comprising two cooperating members separable bodily from each other, and means operating automatically to hold one body member when the other body member is moved relatively thereto.

6. The combination of a series of dumping-vehicles coupled together, each having a separable body, and means operating to permit the simultaneous opening or closing of the entire series of separable bodies.

7. The combination of a series of dumping-vehicles coupled together, each vehicle having a body comprising two members movable bodily away from or toward each other, and means operating automatically to hold one body member of each vehicle and permit the other body members of all the vehicles to move simultaneously when power is applied to one end of the train of coupled vehicles.

8. A dumping-vehicle having a body comprising two members separable from each other, one member having sides telescoping into the other member.

9. In a dumping-vehicle, the combination of a body comprising two independent half-sections, means supporting the sections and constructed to permit one section to be moved away from the other to dump and back again to close the body.

10. In a dumping-vehicle, the combination

of a hopper-shaped body comprising two half-sections separable from each other, supporting mechanism for each section to which the respective sections are rigidly secured, and means permitting the supporting mechanisms to be moved relative to each other.

11. In a dumping-vehicle, the combination of a body comprising two half-sections, and wheeled supports for both sections having sliding engagement with each other.

12. In a dumping-vehicle, the combination with a body comprising two half-sections, of wheeled supports for both sections having sliding engagement with each other and the sections rigidly secured to their respective supports, means for locking the supports together, and means for releasing the locking means to permit the supports to move independent of each other to separate or move the body-sections together.

13. In a dumping-vehicle, the combination with a body comprising two half-sections, of box castings or guides secured to the sides of one body-section, a frame supported to slide in the box casting or guides and to which the other body-section is secured, axle-stubs secured to the box castings or guides, wheels on said axle-stubs, a brake for said wheels, and devices automatically operating the brake when the frame is moved in the box castings or guides.

14. In a dumping-vehicle, the combination with a body comprising two half-sections, of a wheeled support for one section, a sliding support for the other section, a brake, a cam-bar secured to the brake, and a lug or pin to engage the cam and operate the brake when the sliding support is moved to open or close the body.

15. In a dumping-vehicle the combination with a body half-section and wheels support-

ing the same, of a rectangular horizontal frame having sliding connection with the said body half-section, a body half-section secured to the frame, wheeled support for one end of the frame, a brake, a cam-bar secured to the brake, and a lug on the last-mentioned body-section to engage the cam-bar and apply the brake when the frame is moved independently.

16. In a dumping-vehicle, the combination with a body comprising two half-sections, box castings or guides secured to one half-section, wheels supporting said box castings or guides and this half-section, a sliding frame movable in the castings or guides, spring-pressed catches carried by the castings or guides to engage in openings in the frame and lock the body-sections together, and a lever connected with the catches and constructed to release the catches when the lever is moved.

17. In a dumping-vehicle, the combination with a body comprising two half-sections, of wheels supporting one half-section, a frame supporting the other section and having sliding connection with the wheel-supported section, pivoted brake-shoes to engage the hubs of the wheels, brake-arms secured to the shoes and adapted to operate the brakes, cam extension-bars on said arms, lugs to engage the cam-bars and apply the brake when the body-sections are moved relative to each other, and means for locking the body-sections together.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWIN I. NOTTINGHAM.

Witnesses:

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S. G. NOTTINGHAM.