

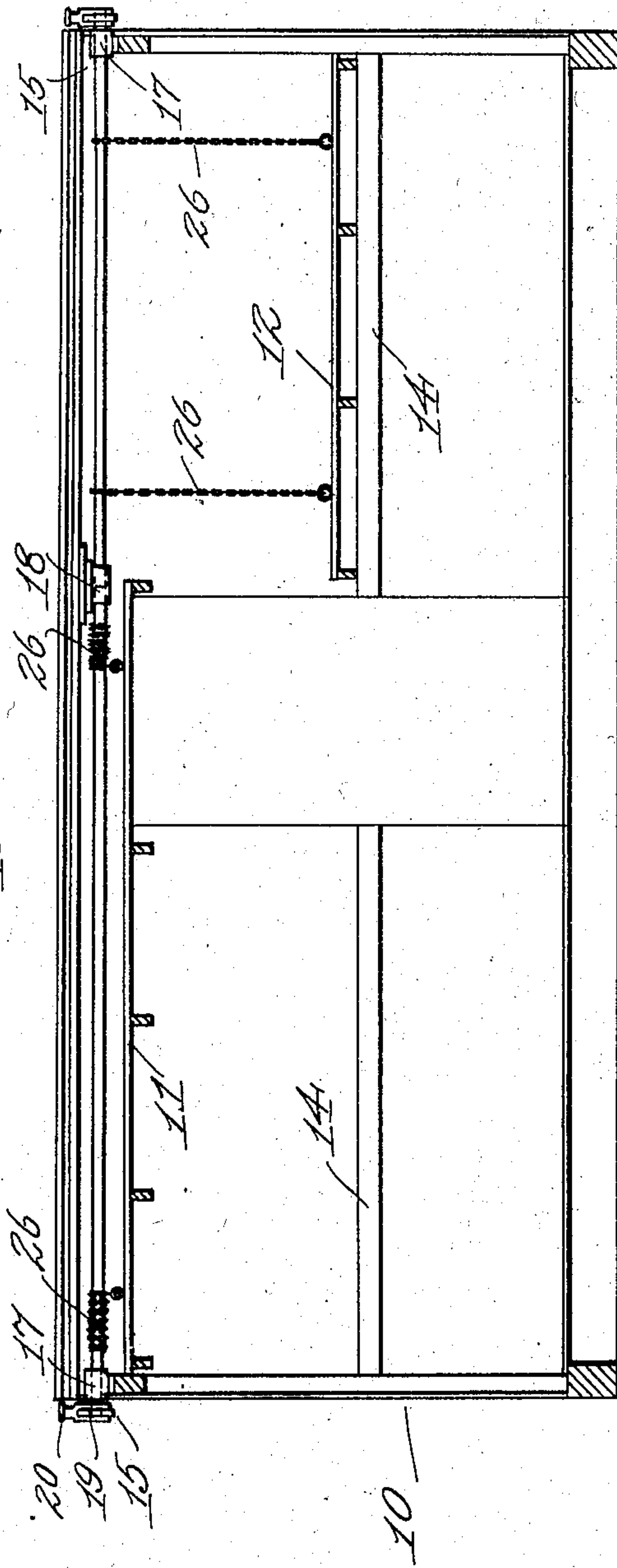
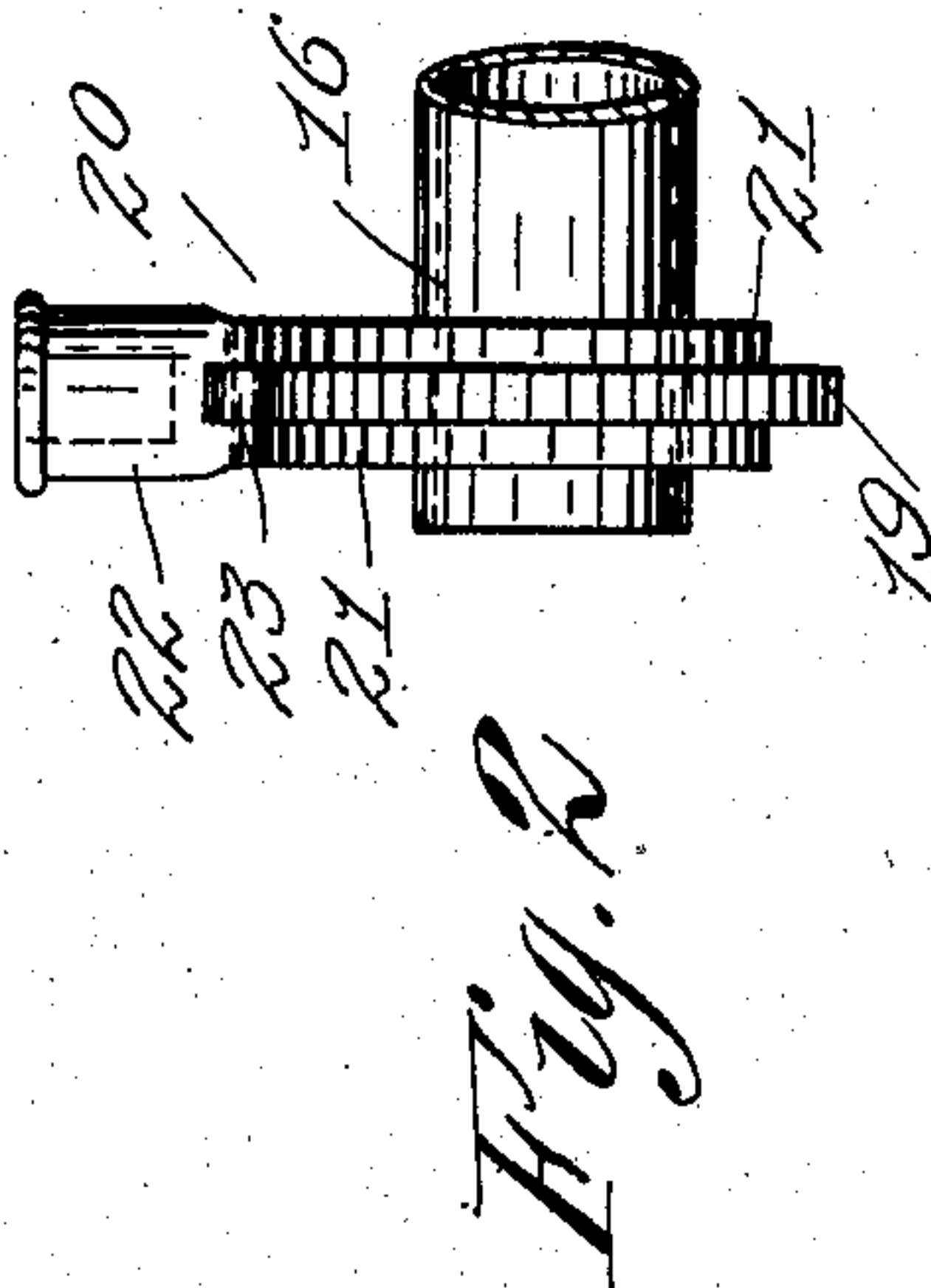
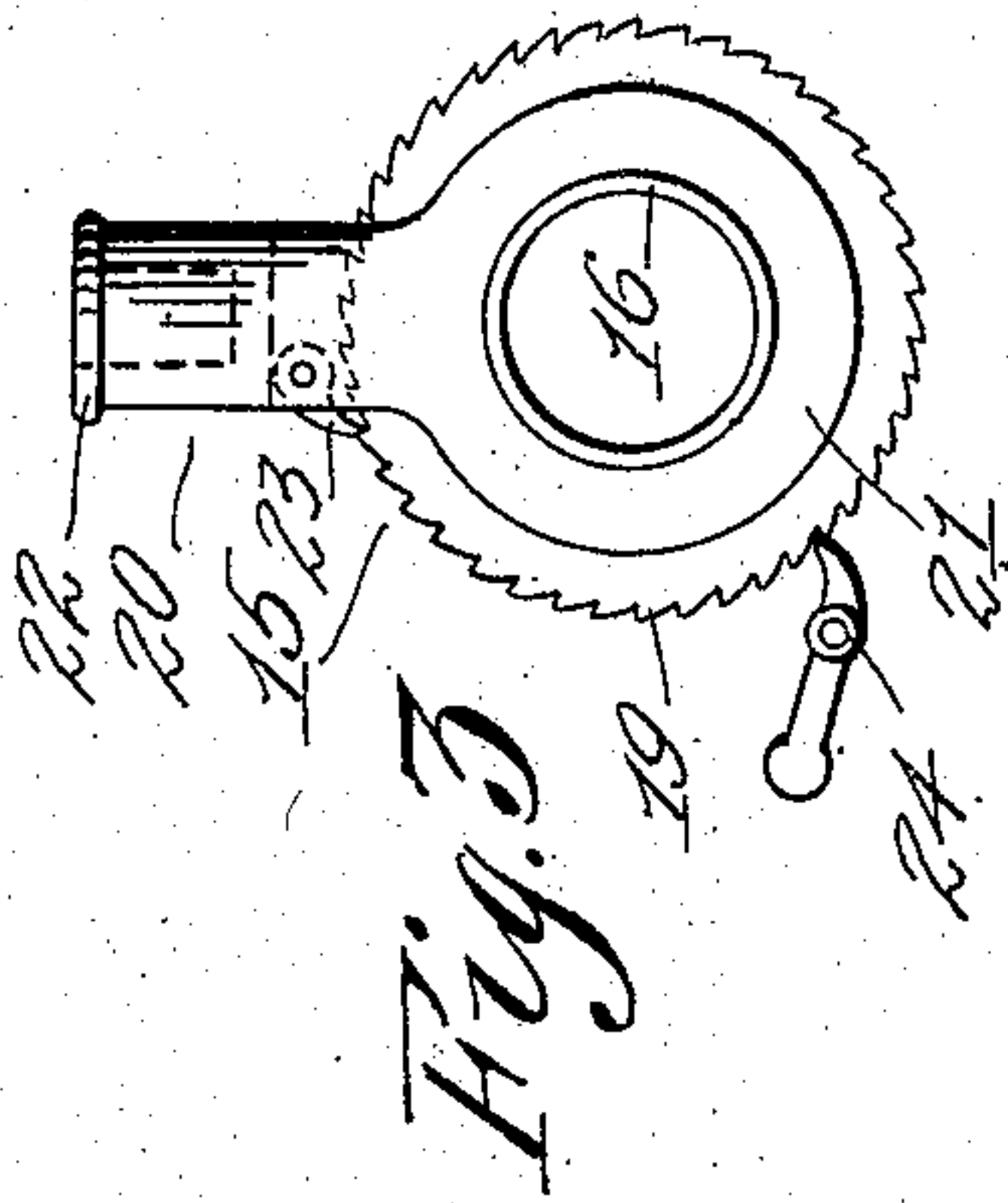
No. 791,642.

PATENTED JUNE 6, 1905.

J. A. MCGHIE.
FREIGHT CAR.

APPLICATION FILED AUG. 28, 1903.

2 SHEETS—SHEET 1.



WITNESSES:

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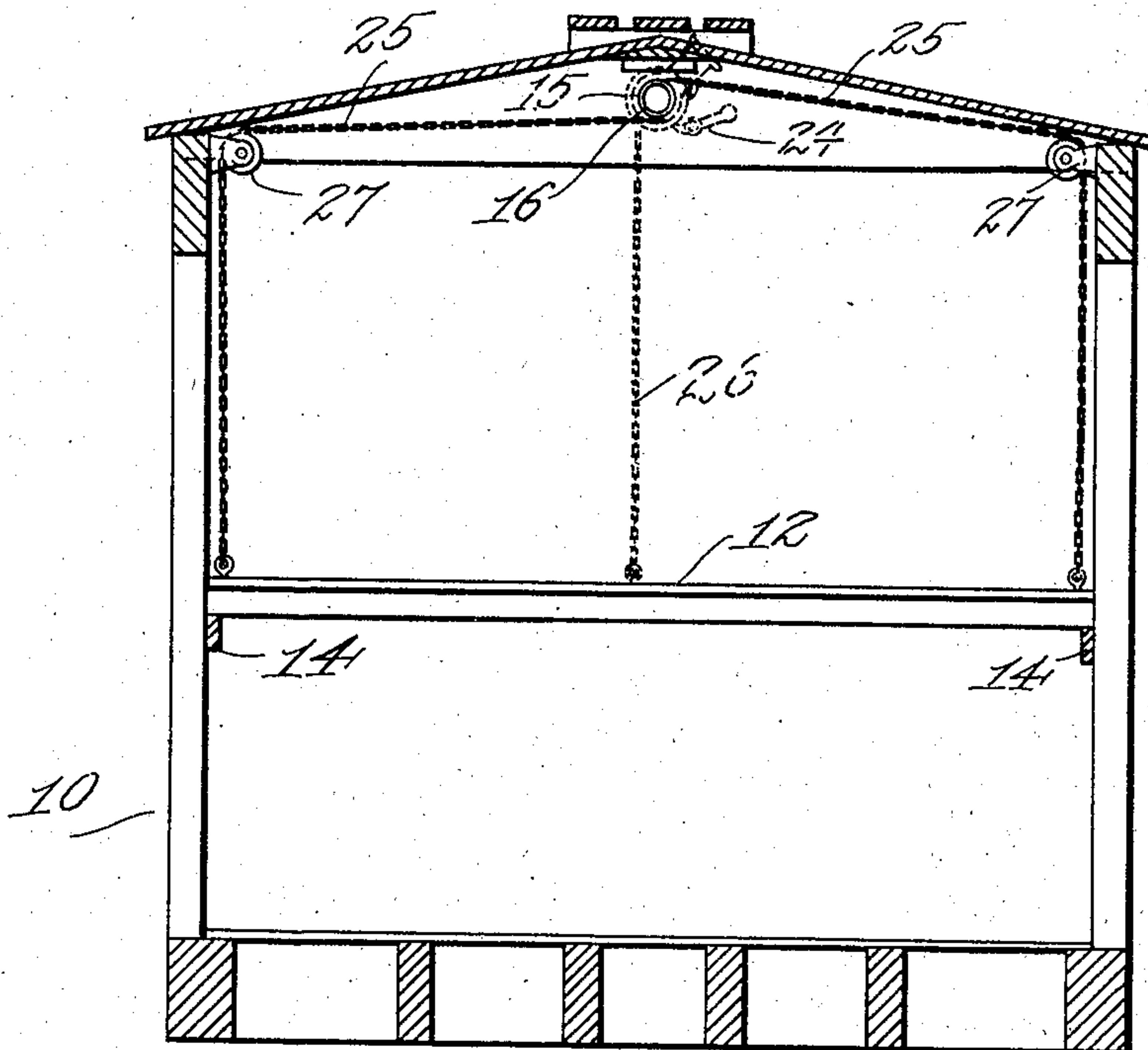


Fig. 4

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UNITED STATES PATENT OFFICE.

JOHN ALEXANDER MCGHIE, OF EVERETT, WASHINGTON.

FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 791,642, dated June 6, 1905.

Application filed August 28, 1903. Serial No. 171,121.

To all whom it may concern:

Be it known that I, JOHN ALEXANDER MCGHIE, a citizen of the United States of America, and a resident of the city of Everett, Snohomish county, and State of Washington, have invented certain new and useful Improvements in Freight-Cars, of which the following is a specification.

My invention relates to improvements in freight-cars, and has for its objects to provide simplified and inexpensive means whereby the ordinary cattle or box car can be readily and expeditiously converted from a single to a double decker, and vice versa, for better adaptation to different classes of freight and in which the movable deck when not in use is so arranged that it will not materially reduce the capacity of the car.

The above-mentioned and other desirable objects are attained by the constructions, combinations, and arrangement of parts as disclosed on the accompanying drawings, set forth in this specification, and succinctly pointed out in the appended claim.

With reference to the drawings filed herewith and bearing like reference characters for corresponding parts throughout, Figure 1 is a vertical longitudinal section of an ordinary cattle or box car, showing my improvements installed. Fig. 2 is a side view of a portion of the pawl-and-ratchet mechanism of the take-up employed in raising the movable deck. Fig. 3 is an end view of said mechanism; and Fig. 4 is a vertical transverse section of a cattle or box car, showing my improvements installed.

My invention can be readily installed in the body, as 10, of any ordinary cattle or box car, and includes a vertically-movable deck, which fits snugly but freely in said body and is of any suitable construction, and this deck preferably comprises two sections, as 11 and 12, the former of which is formed of suitable length to extend from one end of the body across the doorway and the latter section is formed correspondingly shorter, so as to fit the remaining part of the body. As shown in Fig. 1 of the drawings, section 11 being elevated, this portion of the car is arranged for the reception of large freight—for instance,

cattle—while the remaining portion of the car, in which section 12 is mounted, is designed for smaller freight—for instance, pigs, sheep, &c.—and by the peculiar formation of these sections when thus positioned they will offer no obstructing parts to the doorway, thereby facilitating loading and unloading of the car. Suitable means, as horizontal strips 14, are arranged in the car to support the movable deck substantially midway the height of the car, and these strips are secured to the inner side of the side walls of body 10 in any suitable manner so as to project inwardly therefrom as brackets.

Related to the deck-sections are independently-operative take-up devices, as 15, which are adapted for raising and lowering the said sections independently, and each of these devices includes a shaft 16, preferably consisting of a section of piping somewhat greater in length than the respective deck-section, and these shafts are disposed longitudinally of the car over respective deck-sections and are rotatably supported in suitable bearings, as journal-boxes 17, mounted on the end walls of the car substantially midway their width and close to the top thereof, and a hanger 18, suspended from the roof of the car over contiguous edges of the deck-sections and formed of suitable length of bearing to receive the abutting ends of both shafts 16. These shafts 16 extend from the ends of the car, and upon the outer end of each is secured a ratchet-wheel 19, and a suitable pawl-carrier 20, consisting of opposite annular hubs 21 and a laterally-projecting socket 22, secured to said hubs, is rotatably mounted on each shaft with the hub embracing the said wheel, and a pawl 23 is pivotally mounted on each carrier, so as to engage the teeth of the ratchet when the carrier is moved in one direction and ride on said teeth when the carrier is reversely moved, and a catch-pawl 24 is mounted on the car-body for each ratchet to prevent backlash.

Attached to the sections adjacent each end are suitable sections of chains 25 or 26, Fig. 4, which lead to the shafts 16 of respective take-ups 15 and are secured thereto, so that when desired to raise the deck-sections said shafts are simply rotated to wind up the chains,

and thereby elevate the deck-sections. As
now considered I prefer to employ two op-
positely-disposed sections of chain 25 at each
end of each deck-section and pass same over
5 suitable guides, as idlers 27, mounted in the
upper side corners of the car-body, and these
chains are secured by one end to the respec-
tive deck-sections and at the opposite end to
the respective shafts 16. However, if desired
10 a single vertical section of chain 26 can be
used at each end of each deck-section and se-
cured by one end to a respective shaft 16 and
by the opposite end to a respective deck-sec-
tion. By using the double chains 25 the deck-
15 sections are maintained in the horizontal dur-
ing their vertical movements, and thereby in-
sured from binding in the car-body and are
also thereby steadied and adapted for use at
any desired elevation between their extreme
20 lowered and raised positions, being so main-
tained by engaging check-pawls with the
ratchet-wheels of the take-ups.

When the deck-sections are raised to the
roof of the car, they do not interfere with
25 ventilation and occupy a space seldom used,
and consequently do not reduce the carrying

capacity of the car, and by dividing the false
deck into sections a portion of the car can be
converted into a double-decker for transport-
ing small animals, as sheep, and the remain- 30
der left as a single-decker for transporting
cattle of large size, as cows.

This invention is exceedingly simple and in-
expensive and can be readily installed in the
ordinary cattle or box cars without requiring 35
any material alterations in the car.

Having thus described my invention, what
I claim as new, and desire to secure by Letters
Patent of the United States of America, is—

The combination with a car-body; of a ver- 40
tically-movable deck fitting in said body and
divided transversely of the car at one side
edge of the doors into independently-movable
sections, and means to support said sections
substantially midway the height of the car. 45

Signed at Seattle, Washington, this 30th day
of July, 1903.

JOHN ALEXANDER MCGHIE.

Witnesses:

ROBERT UBNEHERSON,
ERNEST B. HERALD.