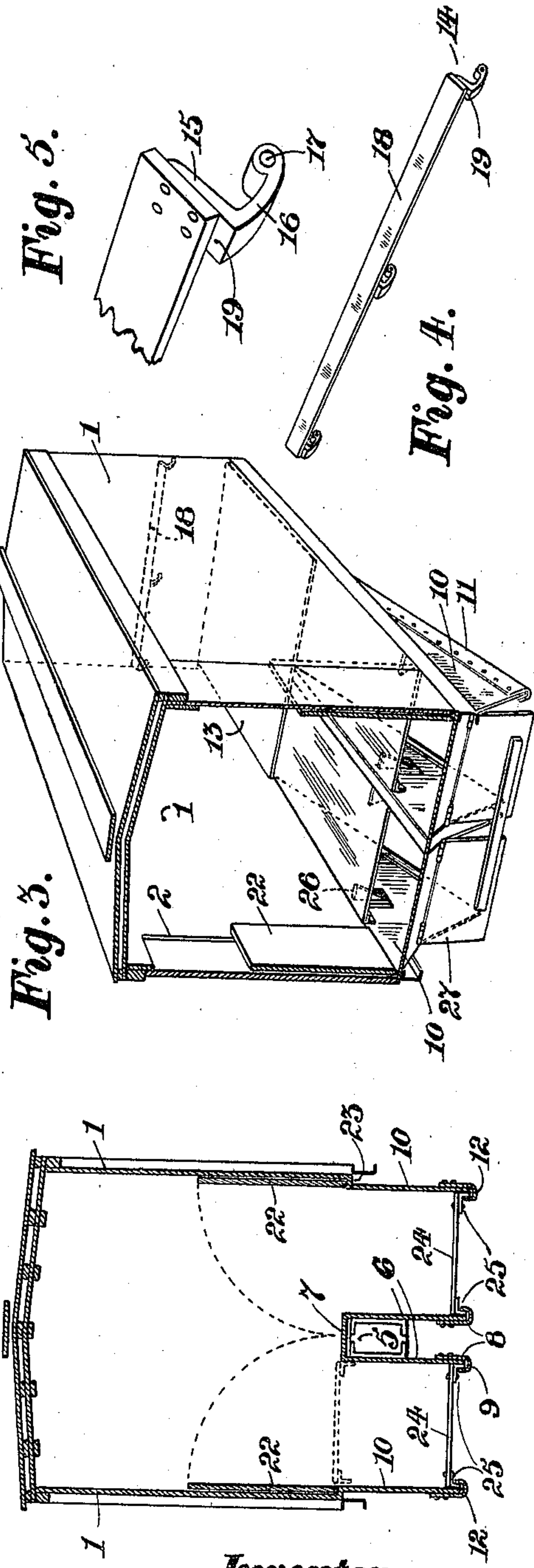
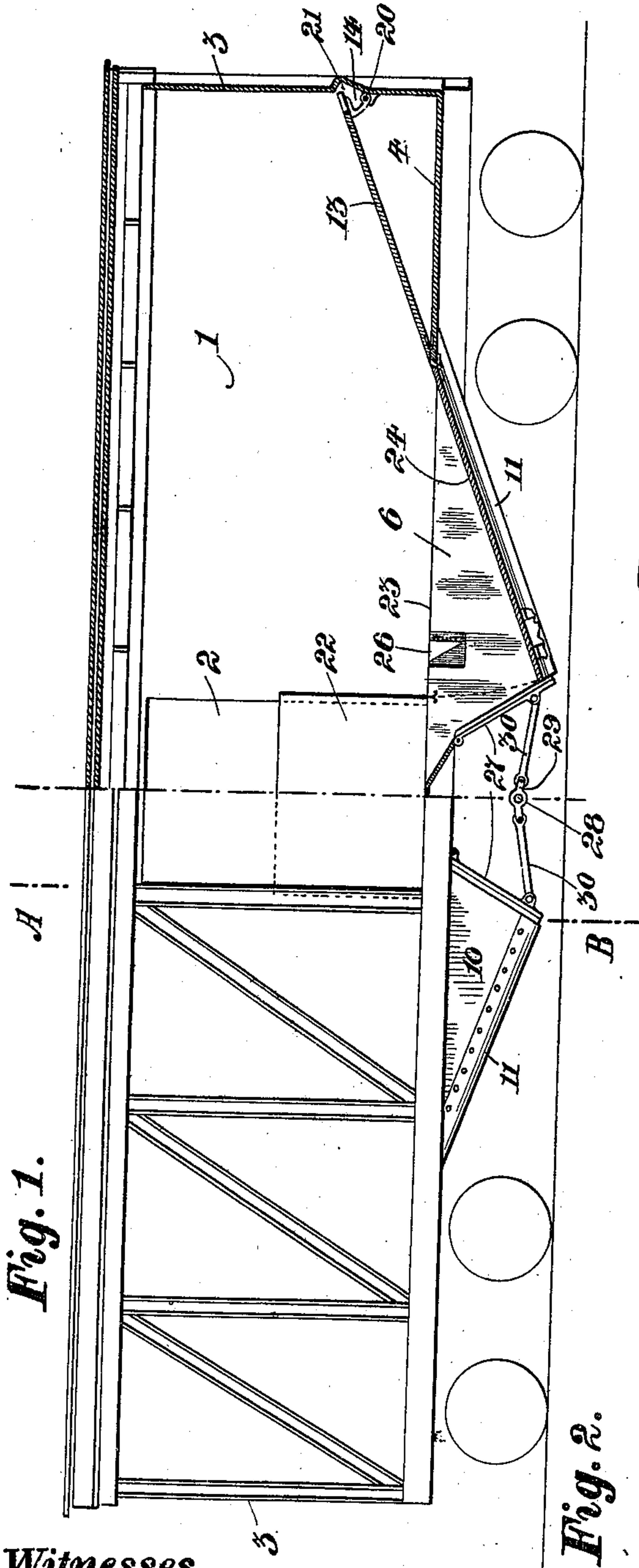


J. McC. COLEMAN.
FREIGHT CAR.
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975,398.

Patented Nov. 15, 1910.



Witnesses.
Harry Davis
P. Lee

Inventor.
J. McC. Coleman
By *E. H. Sturges*
Atty

UNITED STATES PATENT OFFICE.

JAMES McCUTCHEON COLEMAN, OF ST. LAMBERT, QUEBEC, CANADA.

FREIGHT-CAR.

975,398.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, JAMES McCUTCHEON COLEMAN, resident of the town of St. Lambert, in the Province of Quebec, in the Dominion of Canada, a citizen of the United States of America, have invented certain new and useful Improvements in Freight-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in freight cars, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction and arrangement of parts, whereby the interior of the car is converted from a hopper car for bulk freight to a box car suitable for package freight, by forming the flooring in sections, a plurality of said sections being adapted for the double use of flooring and chute bottoms or walls separate from and continuing from movable upper inclined ways.

The objects of the invention are to devise a form of freight carrying car suitable for the purpose of transporting bulk freight from one part of a country and returning with package freight if desired, to increase the efficiency of the discharging arrangement for the bulk freight and generally to simplify the means employed to effect the conversion and thereby produce a car of comparatively cheap construction and free from complicated mechanism.

In the drawings, Figure 1 is a side elevation of the car showing one half the length thereof in section. Fig. 2 is a cross sectional view on the line A—B in Fig. 1. Fig. 3 is a cross sectional view of the car in perspective showing the car partially converted. Fig. 4 is a perspective detail of the supporting brackets and continuation shelf for the inclined ways. Fig. 5 is an enlarged perspective detail of a bracket and portion of continuation shelf.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 are the side walls of the car having the usual door openings 2. 3 are the end walls. 4 are permanent sections of flooring extending from each end wall 3 and terminating intermediate of the length of said car. 5 is the longitudinal central truss extending from end to end of the car. 6 are inside chute walls ex-

tending downwardly and tapering upwardly from points adjacent to the center of the car to the said permanent sections 4. 7 is a longitudinal cap suitably shaped and secured to the top of the walls and closing in the central truss space at the top between the ends of said permanent sections.

8 are inwardly turned and upwardly curved flanges secured to the bottom of the walls 6 and forming the longitudinal recesses 9. 10 are the outside walls of the chutes corresponding to said inside walls 6 and suitably secured to the frame of the car. 11 are flanges inwardly turned and upwardly curved and secured to the bottom of the walls 10 and forming the longitudinal recesses 12. 13 are inclined ways hinged to the ends of the permanent sections 4 and adapted, in one state of said car, to fold down and rest on the said sections 4.

14 are brackets formed with the upper bar 15 and the curved legs 16 said legs having the transverse pivot orifices 17 therethrough. 18 are shelves, each of said shelves being supported by a plurality of brackets 14 and secured on said bars or forming part therewith, leaving the portion 19 of each bracket exposed for supporting the inclined ways 13 in their upper position, the shelves 18 being flush with said ways. 20 are pivot rods securing the brackets 14 in the recesses 21 across the end walls 3 intermediate of the height of said walls. The weight of said brackets and shelves will keep them to their lower position, but on lifting the ways 13 from their lower position on the flooring sections 4, the said ways 13 will swing said brackets upwardly, until the bars 15 reach the under side of said ways, when the said brackets and shelves will fall into position, the latter forming the top portions or continuations of the inclined ways for the bulk freight. 22 are mid sections of flooring hinged at the bottom of the side walls 1 and folding inwardly to the central truss 5 and adapted to form half doors in their raised positions. 23 are ledges extending inwardly from the side walls 1, between the mid sections 22 and end sections 4. 24 are intermediate floor sections hinged to the end sections 4 and forming also chute bottoms, said sections 24 having the downwardly turned flanges 25 extending into the recesses 9 and 12 in the lower positions of the sections 24. 26 are brackets pivotally secured to the side walls of the chutes and adapted to swing in-

wardly on the raising of the sections 24 and outwardly under said sections for supporting the same in their upper position as sections of the flooring of the car. 27 are doors transversely hinged at their upper ends and adapted to close the discharge openings at the lower ends of the chutes leading from said inclined ways. 28 is a shaft centrally arranged between said doors 27 and journaled in suitable bearings. 29 is a lever fixedly mounted on the shaft 28. 30 are rods connecting the opposite ends of said lever with opposite doors 27. The shaft 28 is suitably operated but as this door opening and closing mechanism is not part of the present invention it will not be described further.

In the operation of this car, the supporting brackets for the intermediate sections are swung inwardly, thus allowing the said intermediate sections to drop into their lower positions and form bottoms in the chutes. The inclined ways are then raised above their supporting brackets and allowed to rest on the same, the shelves forming the extensions to the end walls.

In the event of the car being loaded with grain the car is loaded as usual, the mid sections forming the grain doors. The doors at the discharge openings hold the grain in and immediately they are opened the grain flows out freely and the whole cargo may be discharged in a few minutes.

To convert the car to one of the regular box car type, the hopper bottoms are raised becoming intermediate floor sections, the half doors are folded in becoming mid floor sections, and the inclined ways are lowered onto the permanent end sections, thus completing a car for package or other freight.

It must be understood that modifications may be made in the various sections of flooring and their supports, also in the many details of construction described herein, so long as the main features pointed out in the following claims are adhered to.

What I claim as my invention is:—

1. In a freight car, a central longitudinal truss, a plurality of inclined ways movably arranged in the interior of the car and at one end adapted to be supported from the end walls of the car and terminating at the other end at the entrance to chute openings and there rigidly held, a plurality of chute side walls beneath the flooring level on each side of said truss, and a plurality of flooring sections hinged at the chute openings and adapted to be lowered between said chute walls and form continuation pieces of said inclined ways and separate therefrom and with said chute side walls complete the chutes leading to suitable discharge openings.

2. In a freight car, a central longitudinal truss, a car body having inner and outer chute walls below the flooring level, inclined

ways hinged at the entrances to chute openings extending upwardly and suitably supported from the end walls of the car, intermediate floor sections hinged at the entrances to said chute openings and adapted to be lowered between said chute walls and form bottoms to said chutes and continuation pieces from said inclined ways and separate therefrom and mid sections to said flooring folding inwardly from the sides and in their upper position adapted to form half doors, and doors closing the openings at the lower ends of said chutes.

3. In a freight car, a body having side and end walls, a roof, flooring in sections and a plurality of tapering chute walls beneath the flooring level, said flooring sections comprising permanent sections at the ends thereof, mid sections folding inwardly from the sides and movable intermediate sections adapted in one position to cover in the chute openings in trap door style at the lower end of said chute walls and in the other position to form chute bottoms, and movable inclined ways supported from the end walls of the car at one end and at the other end supported at the entrances to the chute openings substantially flush with said intermediate sections in their lower positions and separate therefrom.

4. In a freight car, a car body having side and end walls, flooring in sections and a plurality of tapering chute walls beneath the flooring level having inturned and upwardly curved flanges at the lower ends, said flooring sections comprising permanent end sections, movable mid sections, movable intermediate sections having longitudinal downwardly turned flanges and extending from said end sections to said mid sections adapted in their lower position to form chute bottoms, and movable inclined ways extending from the ends of the cars to said chute bottoms.

5. In a freight car, a car body having side and end walls, flooring in sections and a plurality of tapering chute walls having longitudinal flanges at their lower ends, said flooring having movable longitudinal sections adapted to form in their lower position chute bottoms, inclined ways extending upwardly toward the end walls from said chute bottoms and adapted to be lowered level with the said longitudinal sections in their upper position and extension pieces secured to the end walls meeting said inclined ways.

6. In a freight car, a car body having side and end walls, flooring in sections and a plurality of tapering chute walls, said flooring having movable longitudinal sections adapted to cover in the chute openings in trap door style and to be lowered between said chute walls and supported at the lower sides thereof and form bottoms to the chutes, in-

clined ways at one end adjacent to said end walls and at the other end supported substantially flush with said longitudinal sections in their positions as chute bottoms and
5 separate therefrom, brackets pivotally secured in said walls and supporting said ways and shelves supported by said brackets and meeting said ways.

7. In a freight car, a car body having side
10 and end walls, flooring in movable and fixed sections and chutes beneath the level of said flooring, inclined ways extending from said chutes toward the end walls, brackets suitably recessed in said end walls and piv-
15 oted and having upper bars adapted to support said ways in their outer position and shelves rigid with said top bars and extending rearwardly therefrom.

8. In a freight car, a central longitudinal
20 truss, side walls having suitable door open-

ings, end walls recessed transversely intermediate of their height, flooring in fixed and movable sections, inside and outside chute walls arranged on each side of said central truss, brackets pivoted in said chute
25 walls and adapted to support movable sections of said floor in their upper position, inclined ways extending from the upper ends of said chutes toward the end walls, brackets secured in the recess in said end
30 walls, and shelves supported on said brackets and adapted to meet said ways.

Signed at the city and district of Montreal, Quebec, Canada, this 22nd day of April.

JAMES McCUTCHEON COLEMAN.

Witnesses:

HARRY DAVIS,
P. SHEE.