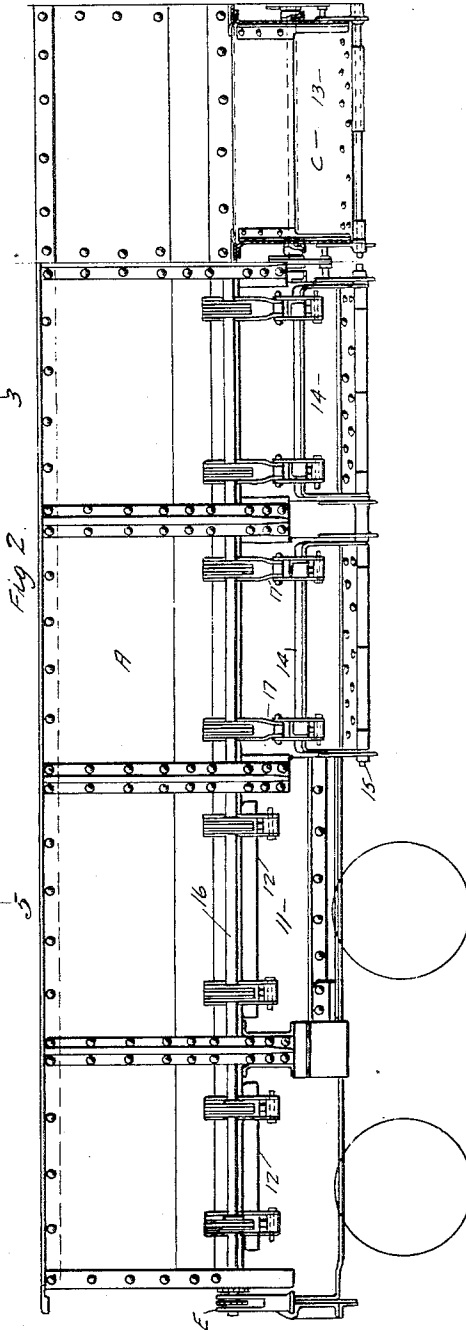
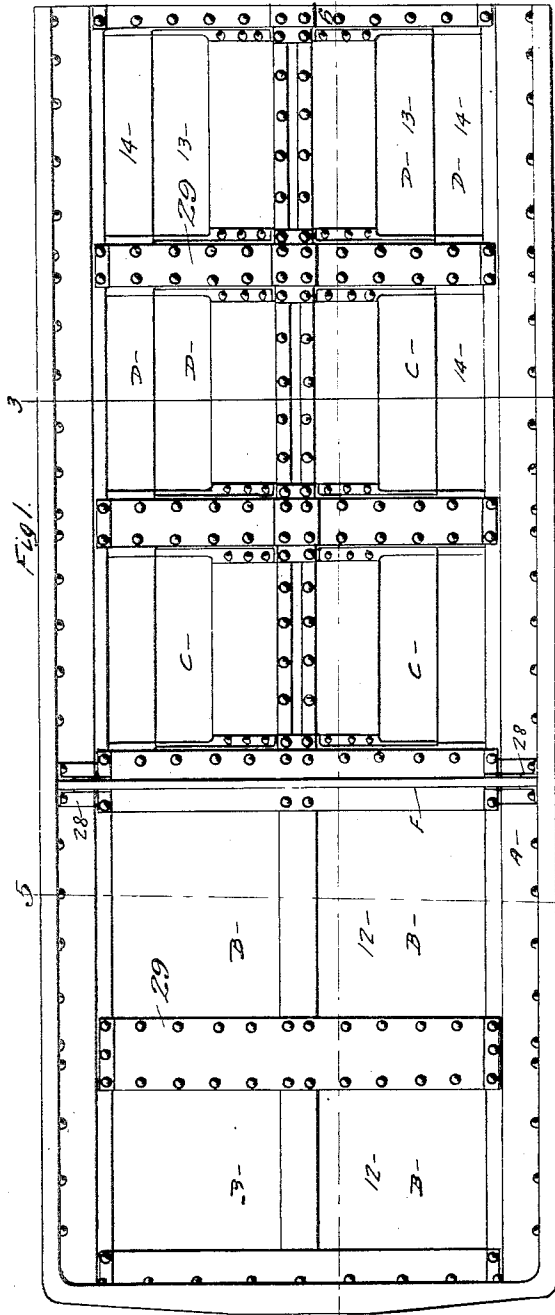


A. CAMPBELL.
GENERAL SERVICE DUMP CAR.
APPLICATION FILED JUNE 17, 1912.

1,056,884.

Patented Mar. 25, 1913.

4 SHEETS-SHEET 1.



WITNESSES

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Pearl Ahrens

INVENTOR

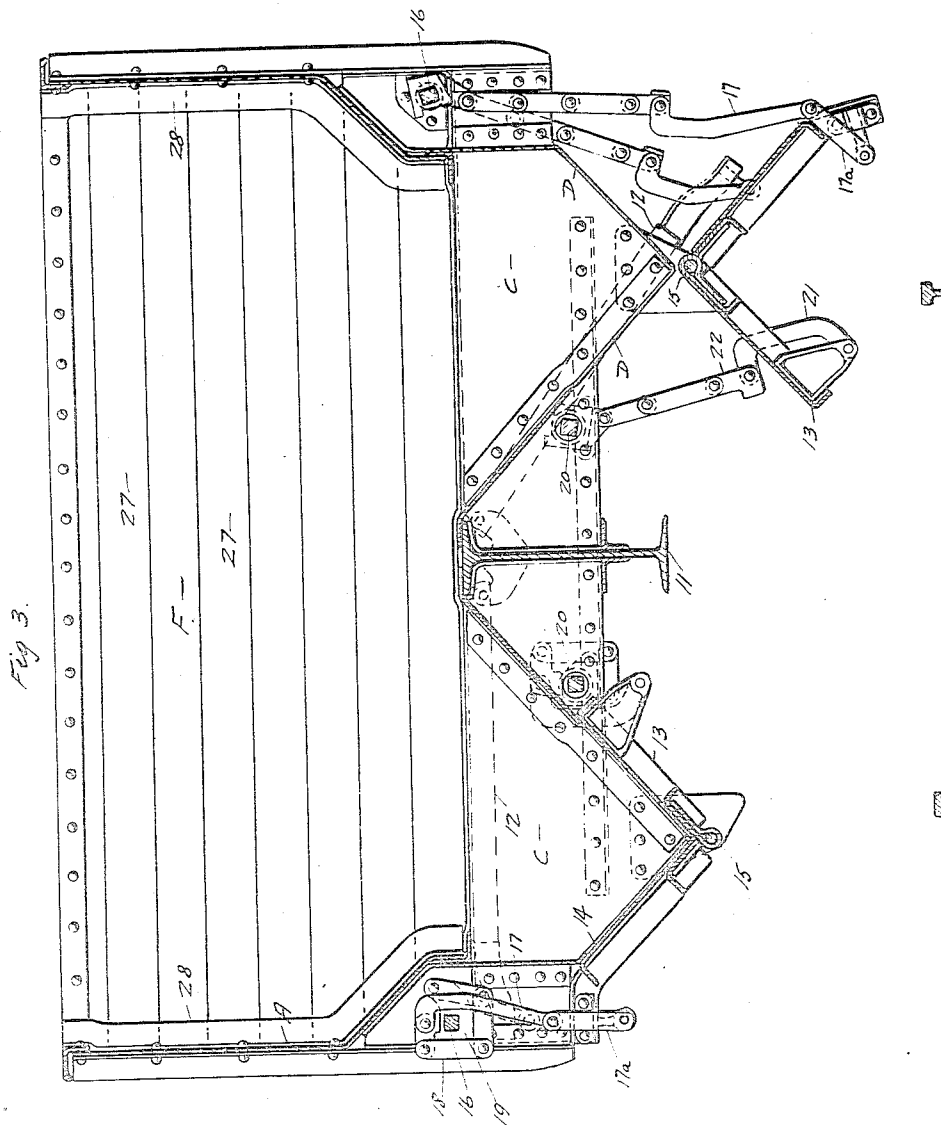
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4 SHEETS—SHEET 2.



WITNESSES

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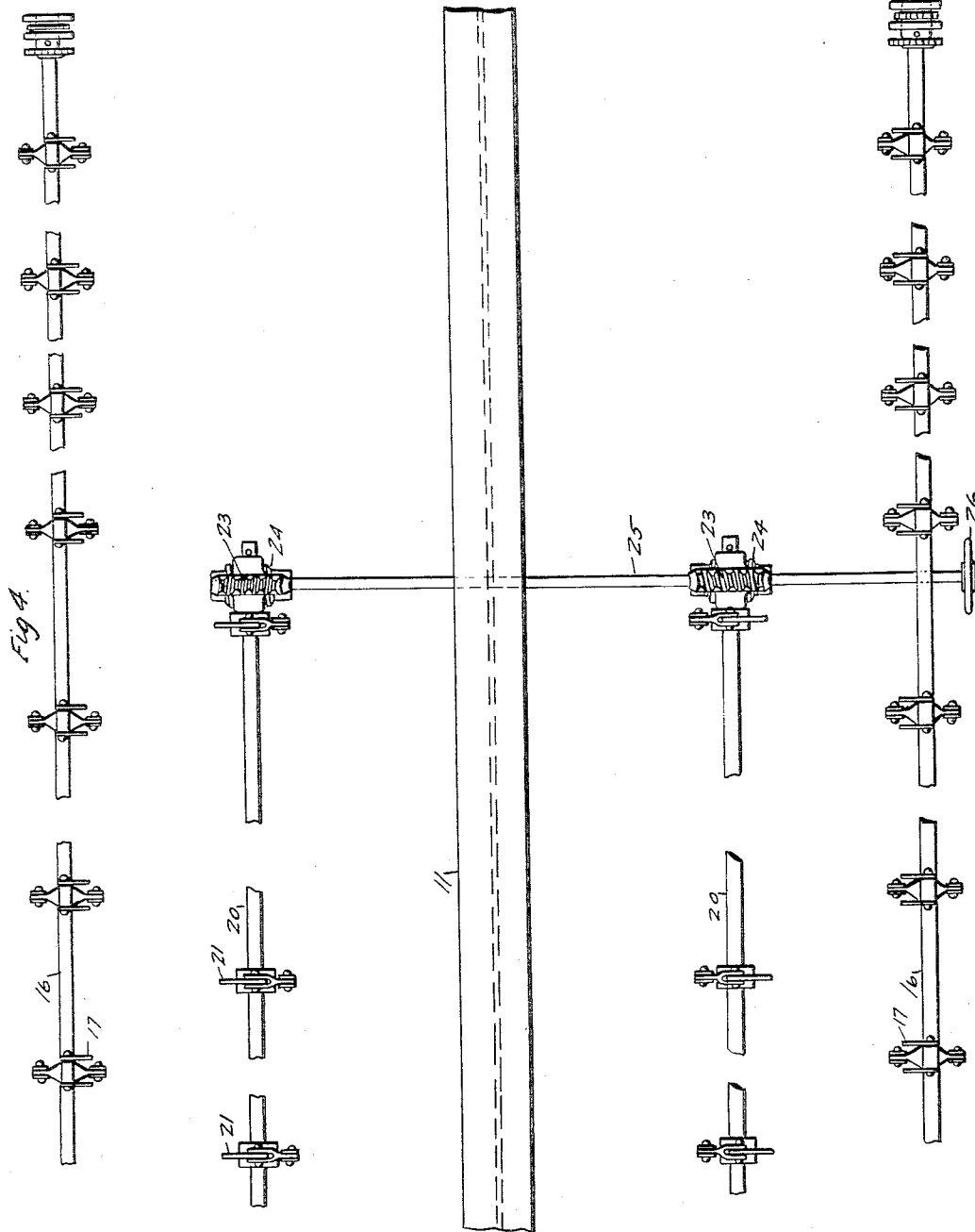
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4 SHEETS—SHEET 3.



WITNESSES

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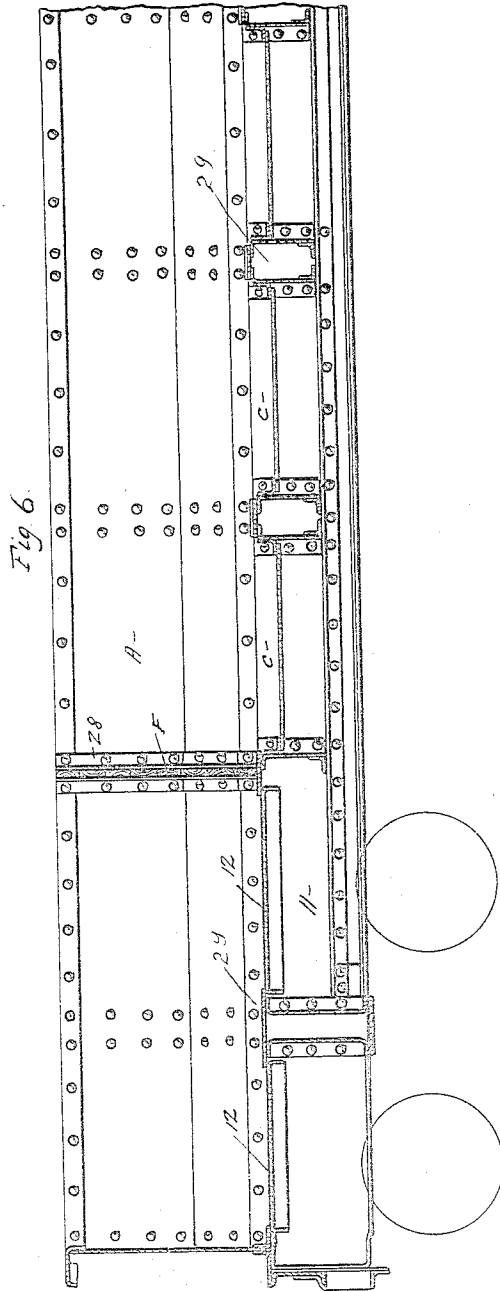
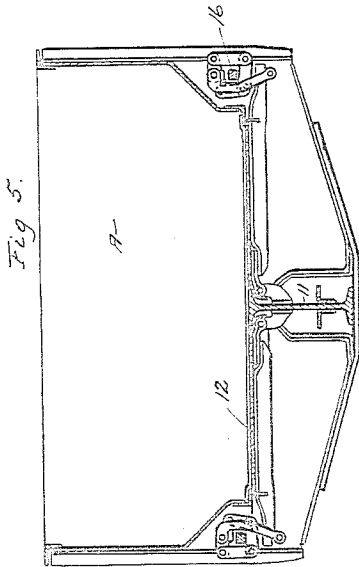
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4 SHEETS—SHEET 4.

1,056,884.



WITNESSES

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UNITED STATES PATENT OFFICE.

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GENERAL-SERVICE DUMP-CAR.

1,056,884.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed June 17, 1912. Serial No. 704,090.

To all whom it may concern:

Be it known that I, ARGYLE CAMPBELL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in General-Service Dump-Cars, of which the following is a specification.

This invention relates to improvements in general service dump cars.

The object of the invention is to provide a flat bottom gondola car which will be adapted to dump to the sides one hundred per cent. or dump to the center approximately sixty-five per cent. of a load of coal or other comparatively light material of approximately the same weight, or that will dump one hundred per cent. of a load of ballast or other relatively heavy material of approximately the same weight to either the sides or center. The car is also so arranged that it is suitably adapted for carrying lumber, pipes or like materials.

The invention furthermore consists in the improvements in the parts and devices and in the novel combinations of parts and devices herein shown, described or claimed.

In the drawing forming a part of this specification, Figure 1 is a partial plan view of a car embodying my improvements. Fig. 2 is a side elevation of the structure illustrated in Fig. 1, the extreme right hand portion of the car being shown in section. Fig. 3 is a transverse, vertical section, taken substantially on the line 3—3 of Fig. 1, and being upon a somewhat enlarged scale, the end and hopper doors on the right hand side being shown in the open position, and closed on the left hand side. Fig. 4 is a partial, broken plan view, of the door operating mechanisms. Fig. 5 is a transverse, vertical section, taken substantially on the line 5—5 of Fig. 1 and Fig. 6 is a longitudinal section, taken substantially on the line 6—6 of Fig. 1.

In the drawing, A denotes the body of the car, the same being provided with a plurality of door openings B, B at each end disposed over the trucks of the car, and a plurality of hoppers C, C disposed between the trucks, said hoppers C, C being arranged longitudinally on opposite sides of the center sill 11. The car is provided with a plurality of doors 12, 12, hinged at their inner, longitudinal edges for the door openings B, B at the ends of the car, (see Fig. 5,) the

same being operated in a manner hereinafter specified. Each of the hoppers C, C is provided with a pair of door openings D, D and a pair of V hung hinged doors 13 and 14, the latter being preferably pivoted at their lower longitudinal edges on a common pivot pin or pintle 15, whereby the doors 14, 14 when opened, allow the material to fall to the sides of the car, and the doors 13, 13, when opened, allow the material to fall between the rails. The end doors 12, 12 and the hopper side doors 14, 14 on each side of the car are preferably operated from a common operating shaft 16, arranged along the outside of the car, and in a plane above the floor, said shaft being provided with connections to each of the doors 12, 12 and 14, 14, said connections being preferably in the form of hooks 17, 17, links 17^a and a plurality of links 18, 18, the latter being adapted to wind over drums 19, 19 disposed along the shaft. Each set of inner center hopper doors is operated from a shaft 20 through hooks 21, 21 and links 22, 22, the shafts 20 being disposed, as clearly shown in Fig. 3, between the hoppers, and said shafts 20 are preferably operated in unison by means of worm gears 23 secured to each of the shafts 20 and operated from worms 24, 24 on a transversely arranged shaft 25 adapted to be rotated as by means of a hand wheel 26. Each of the operating shafts 16 is rotated by means of any suitable form of lever and pawl and ratchet mechanism indicated generally by the reference E.

Vertically arranged removable partitions F are provided at each end of the car between the end door openings B, B and the hoppers C, C, said partitions F being preferably in the form of a plurality of boards 27, 27 adapted to be retained in place as by means of angle irons 28, 28.

As is well known, cars of this type are constructed to carry a certain load, generally 110,000 pounds, and where coal or other material, of approximately the same weight, namely, 52 pounds per cubic foot, is to be carried, the entire length of the car will be required, at which time the removable partitions F, F will be taken out and suitably stored. When a load of coal or similar material is carried, one hundred per cent. of the same, as will be obvious, may be dumped to the sides by opening the end doors 12, 12

and the side hopper doors 14, 14, by operating the shafts 16, 16. If it is desired to dump this material to the center, the shafts 20, 20 are operated, which will dump approximately sixty-five per cent. of the load to the center. When, however, heavier material than coal is to be carried, such, for instance, as ballast, which weighs approximately 110 pounds to the cubic foot, only that portion of the car between the trucks will be required to carry the full load, and at this time the removable partitions F, F will be inserted and the entire load is dumped from the hoppers either to the sides or to the center, as desired, by opening either the doors 14, 14 or the doors 13, 13.

By referring to Fig. 6, it will be seen that the top plates 29 on all of the transverse diaphragms between the hoppers are arranged substantially on the same level as the end floor portions of the car, thus easily adapting the car to carry such materials as lumber and pipes.

Various changes and modifications may be made in the details of the construction herein described, without departing from the spirit of the invention, and all such changes and modifications are contemplated as fall within the scope of the claims appended hereto.

I claim:—

1. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks, and with hoppers between the trucks having door openings, hinged horizontal doors for the end openings and V arranged hinged doors for the hopper door openings, the latter being adapted to dump the materials either to the sides or to the center.

2. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks, and with hoppers between the trucks having door openings, hinged horizontal doors for the end openings and V arranged hinged doors for the hopper door openings, the latter being adapted to dump the materials either to the sides or to the center, and all of the V arranged hinged hopper doors being pivoted at their lower, longitudinal edges.

3. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks, and with hoppers between the trucks having door openings, hinged horizontal doors for the end openings and V arranged hinged doors for the hopper door openings, the latter being adapted to dump the materials either to the sides or to the center, said end doors being hinged along their longitudinal, inner edges.

4. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks and with

longitudinally arranged hoppers between the trucks located on each side of the center sill, each of the hoppers being provided with door openings, hinged, horizontal doors for the end openings of the car body and a pair of V arranged doors hinged at their lower, longitudinal edges for each of the hoppers, said V arranged doors being adapted when the outer doors are opened, to dump the load to the side, and when the inner doors are opened, to dump the load to the center.

5. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks and with hoppers between the trucks and having door openings therein, hinged, horizontal doors for the end openings, V arranged hinged doors for the hopper door openings, and removable, vertical partitions located between the end and hopper portions of the car.

6. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks and with hoppers between the trucks, each having door openings, hinged, horizontal doors for the end openings, and side and center V arranged hinged doors for the door openings of each hopper, and operating mechanism for opening and closing the doors, said mechanism including longitudinally arranged shafts disposed along the outside of the car and connections from said shafts to the end doors and side doors of the hoppers, whereby the end and side hopper doors are operated simultaneously.

7. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks and with a plurality of hoppers between the trucks, each of said hoppers being provided with door openings and arranged on opposite sides of the center sill, hinged doors for the end openings, and a pair of V arranged center and side doors for each of the hoppers, and operating mechanism for the doors, said operating mechanism including a pair of longitudinally arranged shafts located between the hoppers, and connections from each of said shafts to the center doors of the hoppers.

8. In a dump car, in combination, a dump car body provided with door openings at the end portions over the trucks, and with a plurality of longitudinally arranged hoppers between the trucks, said hoppers each having a pair of door openings, hinged, horizontal doors for the end openings, and a pair of V arranged doors hinged at their lower, longitudinal edges for each of the hoppers and adapted to dump the material to either the side or the center, and operating mechanism for all of said doors including a pair of longitudinally arranged

shafts disposed along the outer side of the car body, and a pair of longitudinally arranged shafts located between the hoppers, connections from said first named shafts to the end doors and to the side doors of the hoppers, and connections from the second named shafts to the center hopper doors.

9. In a dump car, in combination, a dump car body provided with floor door openings at the end portions over the trucks, and with longitudinally arranged hoppers between the trucks on each side of the center sill, said hoppers being each provided with a pair of door openings, hinged horizontal doors for the end openings, and a pair of

hinged doors for each of the hoppers adapted to dump the material to either the side or the center, and operating mechanism for opening and closing the doors, said mechanism including longitudinally arranged shafts, one on each side of the car, and connections from each shaft to the end floor doors and the doors of the hoppers which dump to the sides, on the same side of the car on which the shaft is located, substantially as specified.

ARGYLE CAMPBELL.

Witnesses:

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W. L. GUNNISON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."