

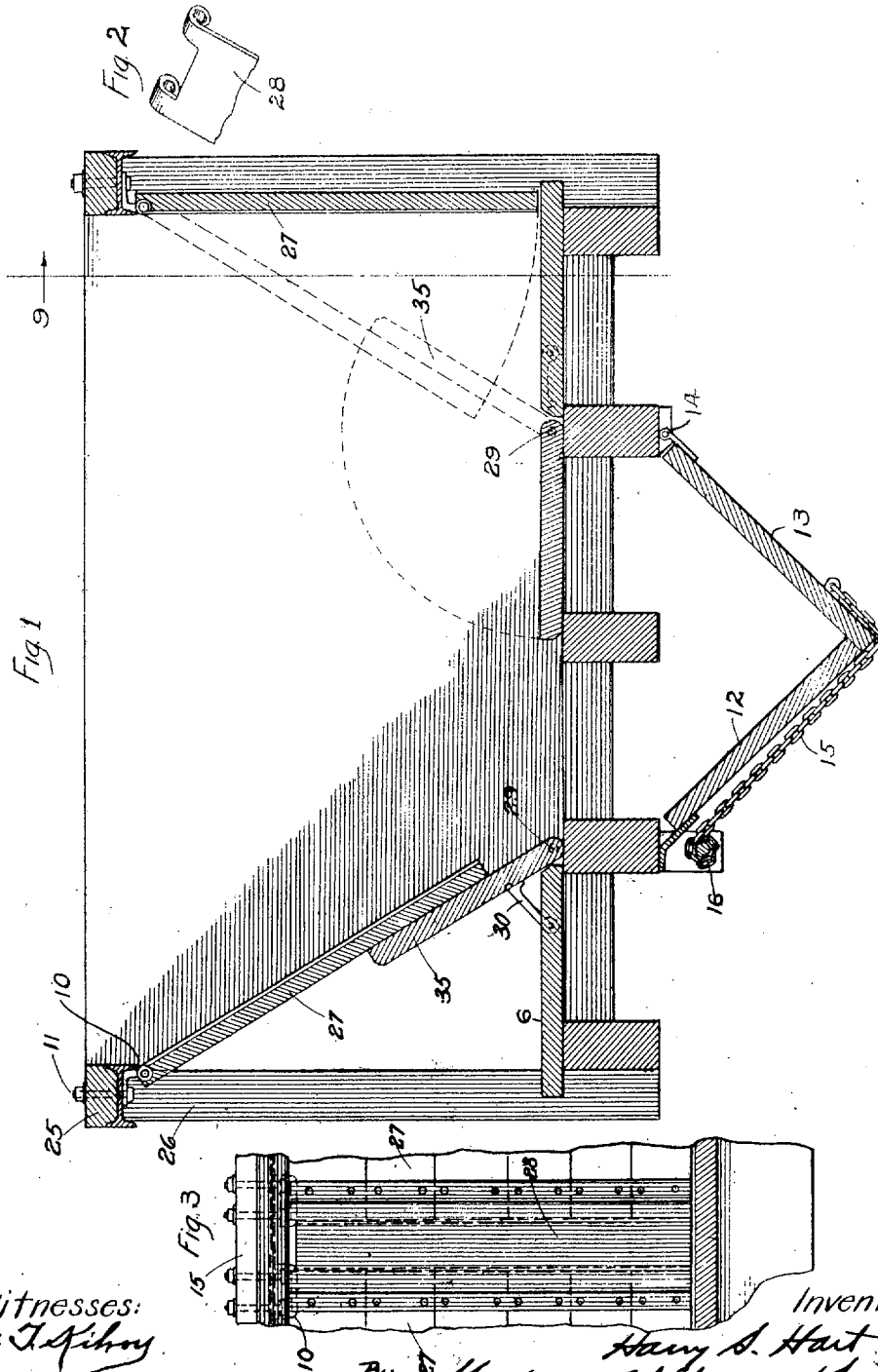
H. S. HART.

DUMP CAR.

APPLICATION FILED SEPT. 27, 1909.

1,018,389.

Patented Feb. 20, 1912.



Witnesses:

M. T. Fihoy

Henry A. Parks

Inventor:

Harry S. Hart

By

Meridian, Wilkinson & Scott
Attys

UNITED STATES PATENT OFFICE.

HARRY S. HART, OF CHICAGO, ILLINOIS, ASSIGNOR TO RODGER BALLAST CAR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

DUMP-CAR.

1,018,389.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed September 27, 1909. Serial No. 519,865.

To all whom it may concern:

Be it known that I, HARRY S. HART, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dump-Cars, of which the following is a specification.

The object of my invention is to provide a car of the type known as the "Hart convertible car" with movable sides so formed that they may be either adjusted to a vertical position or to an inwardly and downwardly inclining position.

Cars of the type referred to are illustrated in Patents Nos. 689,583 granted to Harry S. Hart, December 24, 1901, and 827,632, Harry S. Hart and others, July 31, 1906.

Cars of the type to which my invention is applied are provided with a central longitudinal hopper, flat floor sections extending outwardly from the hopper to the sides of the car and vertical sides and adjustable ends. Means are provided for covering the central hopper in order to transform the car into an ordinary gondola car, and to so adjust the parts as to uncover the central hopper, to incline the ends inwardly toward the central hopper, and in some instances to provide upward prolongations of the sides of the central hopper.

The nature of my improvement in these cars will be apparent from the following description and claims, taken in connection with the accompanying drawings, in which—

Figure 1 is a cross sectional view embodying one form of my invention. Fig. 2 is a detail of the upper end of a flap or apron located between the side doors. Fig. 3 is a view of the structure adjacent one of the side stakes, looking from the inside of the car.

In cars of the type to which my invention is applied, the sides are formed of doors hinged at their upper edges. It is my present purpose to so arrange the structure that these doors may be moved inwardly on their hinges to slope in the direction of the walls of the hopper bottom to form prolongations thereof.

In the car illustrated the superstructure comprises side stakes 26 rigidly connected to the underframe and carrying at their upper ends side rails 25. In the present instance I have shown these side rails built up from an I-beam and a wooden strip bolted together. The doors 27 are hinged upon loops 10 secured to the under sides of the rails 25 by means of bolts 11 which secure the two parts of the side rails together. The doors 27 may either occupy a vertical position as shown at the right of Fig. 1, may be swung inwardly to an inclined position as shown at the left of Fig. 1, or may swing outwardly to permit the contents of the car to be discharged through the sides thereof by means of a plow, or otherwise. The floor of the car comprises stationary horizontal sections 6 projecting inwardly from the car sides to the outer edges of the central hopper. Aprons 35 are hinged to the underframe of the car along the longitudinal edges of the central hopper and may be swung downwardly to a horizontal position as shown at the right of Fig. 1, covering the central hopper and forming a flat bottom car, or may be lifted to the inclined position shown at the left of Fig. 1. When the parts are adjusted as shown at the left of Fig. 1, a center dump hopper car is formed. This adjustment is effected by moving the side sections 27 inwardly sufficiently to permit the aprons 35 to be moved to a position outside of said sections 27, as shown at the left of Fig. 1. When so adjusted, the aprons 35 are held in the position shown at the left of Fig. 1 by means of braces 30, and the side sections 27 are in turn supported upon the aprons 35.

The central hopper may be of a form now in common use, comprising a stationary side 12 and a hinged side 13, hinged at 14 to the underframe. A chain 15 attached to the swinging section 13 at one end is at the other end attached to a winding shaft 16. Suitable means for rotating the winding shaft 16 permit the section 13 to be released for the purpose of dumping the load, and upon rotation of the winding shaft 16 in the opposite direction, the swinging section 13 is brought to closed position as illustrated.

Unless some provision be adopted, spaces

would be left between the doors 27 when adjusted to the position shown at the left of Fig. 1, such spaces being of the width of the side stakes which separate the doors. I have, therefore, shown aprons 28 hung upon the loops 10 which support the doors 27, these aprons being of somewhat greater width than the side stakes and lapping over the adjoining edges of the doors 27. The upper ends of the aprons 28 are provided with eyelets, as illustrated in Fig. 2, these eyelets engaging the loops 10. When the doors 27 are moved inwardly to the position shown at the left of Fig. 1, the aprons 28 will be carried with them, thus affording a closure of the spaces between the doors 27. When the doors 27 are adjusted vertically as shown at the right of Fig. 1, the aprons 28 will hang flat against the doors, and when the doors are moved outwardly, the aprons will be left behind and lying against the inner faces of the side stakes.

It will be apparent from the foregoing that I have provided a car which may be adjusted as an ordinary flat bottom gondola car with vertical sides and ends, and a horizontal floor, and that when so adjusted the load may be discharged through the side doors 27 by means of a plow or otherwise. The car may also be adjusted to provide a central longitudinal hopper with sides sloping inwardly and downwardly from their upper edges.

I claim:

1. A dump car comprising side walls adjustable to an inwardly and downwardly sloping position, and a central longitudinal hopper.

2. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, and movable sides adjustable to extend upwardly from the outer edges of said horizontal floor sections, or to extend upwardly and outwardly to slope substantially in the direction of the walls of the central hopper.

3. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, side frames, doors hinged at their upper edges to said side frames, said doors being adapted to be adjusted to a vertical position extending upwardly from the outer edges of said horizontal floor sections and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper.

4. In a dump car, a central longitudinal hopper, horizontal floor sections extending from said hopper to the sides of the car, side frames, doors hinged at their upper edges to said side frames, said doors being

adapted to be adjusted to a vertical position extending upwardly from the outer edges of said horizontal floor sections and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper, and hinged floor sections adjustable to cover said central hopper or to leave said hopper open and unobstructed.

5. In a car of the class described, a central longitudinal hopper, side frames comprising side stakes, side sections hinged at their upper edges and adapted to be adjusted to an inwardly and downwardly sloping position, and side aprons hinged at their upper ends adjacent the tops of said side stakes and overlapping the adjacent side sections.

6. In a dump car, a central longitudinal hopper, and sides adjustable to a vertical position and to a position sloping in substantially the direction of the walls of said hopper.

7. In a dump car, a central longitudinal hopper, side frames, doors hinged at their upper edges to said side frames, said doors being adapted to be adjusted to a vertical position and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper.

8. In a dump car, a central longitudinal hopper, side frames, doors hinged at their upper edges to said side frames, said doors being adapted to be adjusted to a vertical position and to open outwardly or to be adjusted to a position sloping downwardly and inwardly in the direction of the walls of said central hopper, and hinged floor sections adjustable to cover said central hopper or to leave said hopper open and unobstructed.

9. In a dump car, a central longitudinal hopper, side frames, doors hinged at their upper edges to said side frames, aprons hinged along the longitudinal edges of said hopper and adjustable to lie horizontally over said hopper, said aprons and doors being adjustable to slope upwardly and outwardly from the edges of said hopper, and means to hold said aprons and doors in said position.

10. In a dump car, a central longitudinal hopper, side frames, doors hinged at their upper edges to said side frames, aprons hinged along the longitudinal edges of said hopper and adjustable to lie horizontally over said hopper, said aprons and doors being adjustable to slope upwardly and outwardly from the edges of said hopper, said aprons and doors overlapping when so adjusted, and means to hold said aprons and doors in said position.

11. In a car of the class described, a sup-

porting framework, hinged side doors adapted to swing outwardly and inwardly, a hopper, floor doors adapted when in one position to form a level car floor over said hopper, and means for securing said floor doors and side doors in a position to form an upward continuation of said hopper.

In testimony whereof, I have subscribed my name.

HARRY S. HART.

Witnesses:

WALTER A. SCOTT,
C. E. BURNAP.