

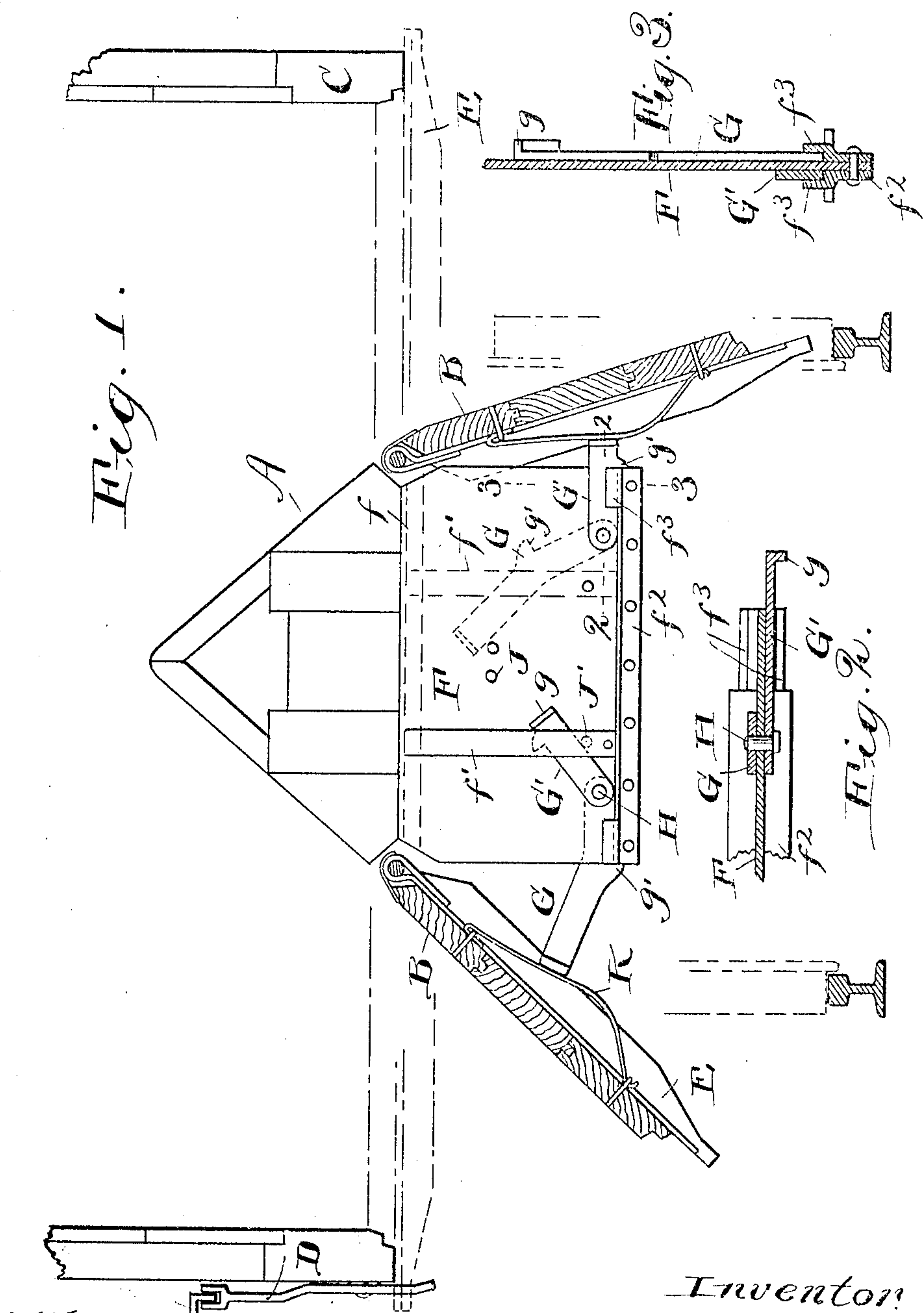
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PATENTED JAN. 7, 1908.

F. S. INGOLDSBY.

DUMP CAR.

APPLICATION FILED JULY 14, 1906.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK S. INGOLDSBY, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE INGOLDSBY AUTOMATIC CAR COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF WEST VIRGINIA.

DUMP-CAR.

No. 875,820.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK S. INGOLDSBY, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Dump-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 The object of this invention is to provide a simple and efficient mechanism to receive the impact of dropping doors of dump cars and hold the same at various inclinations as desired.

15 The invention is particularly applicable to dump cars of what are known as the Ingoldsby type, these cars having a central longitudinal beam and doors hinged at the opposite edges thereof and arranged to swing downward.

20 In the drawings Figure 1 is a vertical section of a car of the Ingoldsby type having my bumping mechanism. Figs. 2 and 3 are details, being cross sections on the correspondingly numbered lines of Fig. 1.

25 The car has a central longitudinal beam A, to the lower edges of which are pivoted dumping doors B. These doors are adapted to have their outer edges abut the sides C of the car, where they may be held by hooks D pivoted to the sides and engaging the projecting ends of floor beams E on the under side of the doors.

30 Secured to the under side of the central beam A is a vertical metal sheet F held in place by bolts and angle flanges f and braces f¹ leading diagonally in opposite directions from near the lower edge to the sheet. The sheet is reinforced at its lower edge by angle irons f² on opposite sides thereof riveted thereto by common rivets.

35 The plate F carries bumpers which are adapted to receive the impact of the doors and hold them in desired position. There are a plurality of these bumpers for each door, and thus a choice of positions is afforded.

40 In the drawing, two bumpers G G¹ are shown for each door, and this is to be taken as illustrative of two or more bumpers, as may be found convenient.

The bumpers G G¹ are pivoted on a common pivot H and are shown as lying on op-

posite sides of the sheet F. When in use they are turned down substantially horizon- 55 tally; when not in use, they are swung back beneath the central beam and rest against suitable pins designated J J¹. In Fig. 1 the shorter bumper is shown as in use on the right hand side of the car and the longer 60 bumper on the left hand side, the other bumpers being turned back to idle position, though of course in ordinary practice, similar bumpers are used for both doors.

The ends of the bumpers are shown as 65 bent over at g' to make a suitable head. Carried on the under side of the door is a leaf-spring K which is adapted to abut this head and relieve the force of the blow. This spring is so formed that the arc in which the 70 end of the bumper swings upward recedes from the spring. This is so in order that, if the material clogs in discharging, by reason of lumps between the door and the side of the car, the same may be easily relieved by a 75 workman stepping under the car and delivering a blow with a sledge-hammer on the bumper, knocking it upward,—the upward movement of the bumper not having to raise the door. 80

To relieve the thrust of the bumpers and relieve the pins H, I form on the bumpers shoulders g' which engage the ends of the angle strips f² when the bumpers are down and thus these angle strips and the plate F 85 receive the impact directly. Portions of the horizontal flanges of the angle strips f² may be turned upward at f³ to guide the bumpers when they are down.

Having described my invention, I claim: 90

1. In a dump car, the combination of a dumping door, an interchangeable bumping mechanism to receive the impact of the door and limit the movement thereof.

2. In a dump car, the combination of a 95 dumping door, a variable rigid bumping mechanism disconnected from the door and adapted to receive the under side of the door and hold the door in one of a number of different positions. 100

3. In a dump car, the combination of a dumping door, and a plurality of bumpers therefor, each adapted to support the door in a different position.

4. In a dump car, the combination of a 105 dumping door, and a movable bumper

adapted to be rigidly placed to engage beneath said door as it falls and receives the impact of it and support it.

5 5. In a dump car, the combination of a beam, a support depending therefrom, variable bumping mechanism carried by such support, and a door pivoted to said beam independently of the bumping mechanism, but cooperating with such mechanism.

10 6. In a dump car, the combination with a dumping door of a pivoted bumper therefor.

7. In a dump car, the combination of a dumping door, and a plurality of pivoted bumpers adapted to be moved into or out of
15 the path of the door.

8. In a dump car, the combination of a dumping door, and a plurality of bumpers adapted to be moved into or out of the path of the door, and a spring carried by the door
20 and adapted to engage either bumper.

9. In a dump car, the combination of a beam, a door pivoted thereto, and a plurality of pivoted bumpers supported by the beam and adapted to receive the impact of the
25 door.

10. In a dump car, the combination of a beam, a downwardly extended plate carried thereby, and a bumper pivoted to said plate and adapted to receive the impact of the
30 door.

11. In a dump car, the combination of a beam, a support carried thereby, a bumper pivoted to said support and adapted to receive the impact of the door, there being a
35 shoulder on said bumper adapted to engage a member carried by said support.

12. In a dump car, the combination of a beam, a metal plate depending therefrom, a reinforcing member riveted to said plate, a

pivoted bumper having a shoulder adapted to engage such reinforcing member, and a dumping door cooperating with such bumper.

13. In a dump car, the combination of a plurality of bumpers pivoted on the same pivot, and a dumping door cooperating with
45 either of said bumpers as desired.

14. In a dump car, the combination, of a depending plate, bumpers pivoted on opposite sides thereof, reinforcers on opposite sides of the plate with which said bumpers
50 may engage, and a door cooperating with either of said bumpers.

15. In a dump car, the combination of a dumping door carrying a spring on its underside and movable bumping mechanism
55 adapted to present a rigid stop in various positions to engage said spring.

16. In a dump car, the combination with a dumping door, of variable rigid bumping mechanism to receive the impact thereof.
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17. In a dump car, the combination of a dumping door and a plurality of bumpers carried independently of the door and adapted to support the door in different positions.

18. In a dump car, the combination of a
65 dumping door and rigid variable mechanism adapted to support the same in different positions.

19. In a dump car, the combination of a dumping door, and means independent of the
70 door for receiving its impact and supporting it in a variety of definite positions.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

FRANK S. INGOLDSBY.

Witnesses:

JOSEPH R. BOWLING,
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