

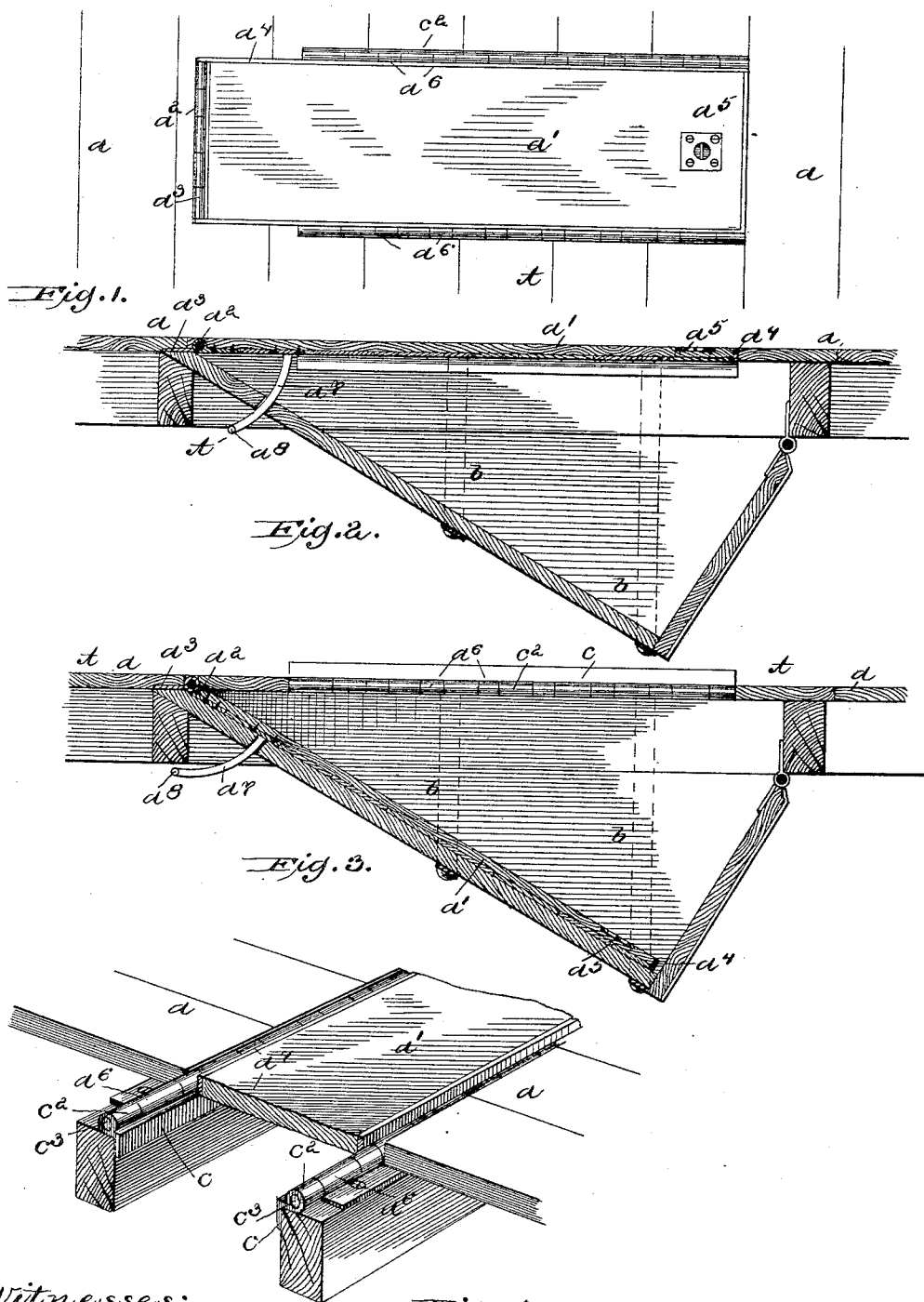
(No Model.)

2 Sheets—Sheet 1.

S. D. KING.
DUMPING CAR.

No. 460,974.

Patented Oct. 13, 1891.



Witnesses:
Arthur Ashley
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Inventor:
Sidney D. King
by J. M. Ashley atty.

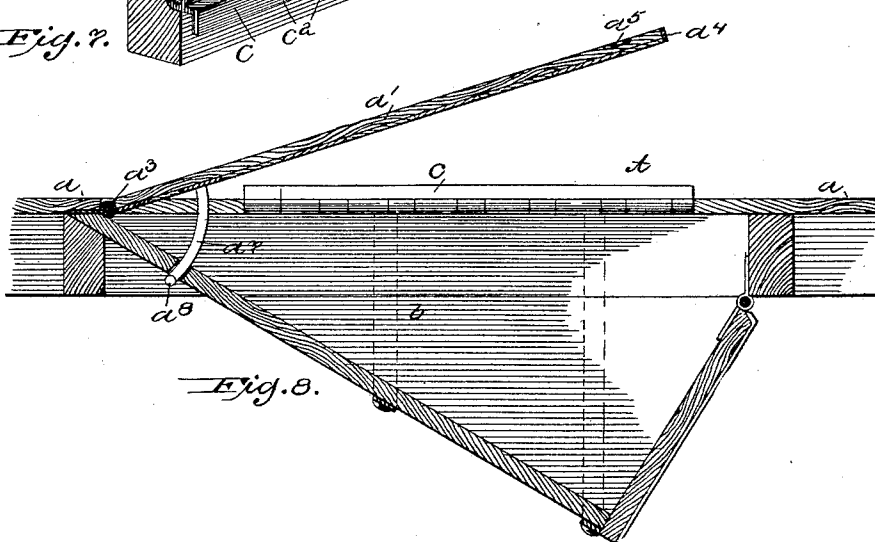
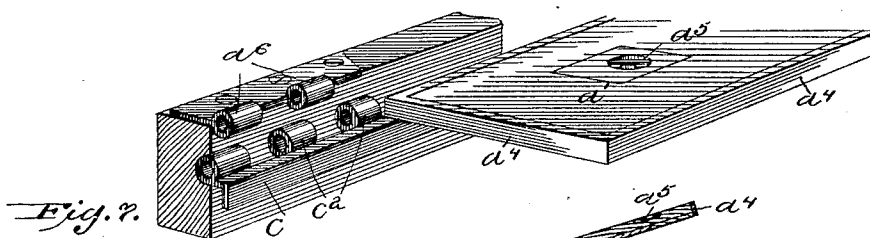
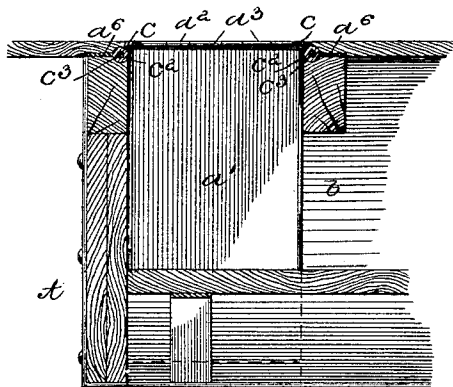
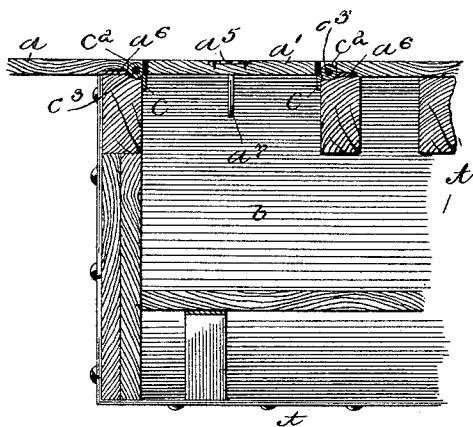
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2 Sheets—Sheet 2.

S. D. KING.
DUMPING CAR.

No. 460,974.

Patented Oct. 13, 1891.



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UNITED STATES PATENT OFFICE.

SIDNEY D. KING, OF PITTSTON, PENNSYLVANIA.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 460,974, dated October 13, 1891.

Application filed April 27, 1891. Serial No. 390,542. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY D. KING, a citizen of the United States, residing in the borough of Pittston, in the county of Luzerne, in the State of Pennsylvania, have invented a new and useful Improvement in Discharging-Hoppers and Adjustable Floor-Sections for Convertible Dumping-Cars for Railways, of which the following is a correct description.

The invention relates, generally, to that class of dumping-cars which are provided with one or more hoppers, the discharge-opening of which is below the plane of the floor or upper surface of the bed-frame of the car; but in so far as many features of the invention are concerned it is applicable in many other situations as well. In this example the invention is represented as applied in a car which has one or more longitudinally-extending hoppers, in which, in discharging, the material discharged is directed toward the transverse center or mid-length of the car; but it is equally applicable if the hopper be inclined from the center toward one end of the car, and, in fact, in whatever direction the hopper may be inclined.

The invention consists in various novel elements and in various novel combinations of elements in or in connection with the hopper or with the floor, or in connection with both the floor and the discharging-hopper of a car, as will first be described with particularity, and then distinctly specified in the paragraphs which follow the detailed description.

In the accompanying drawings, which constitute a part of this specification, Figure 1 represents a top plan view showing a fragment of the floor of a car which is provided with the improvements above referred to. Fig. 2 is a longitudinal vertical section in the line *vv* of Fig. 1. Fig. 3 is a longitudinal section in plane, as in Fig. 2, but with the pivoted floor-section or door in its lowest adjustment. Fig. 4 is a perspective view of the free end of the door and of some of the immediately-related parts, a portion of the transversely-extending floor-strips having been removed. Fig. 5 is a transverse vertical section in the line *ww* of Fig. 1. Fig. 6 is a partial transverse vertical section in the line *xx* of Fig. 3.

Fig. 7 is a detail perspective showing a portion of the floor adjacent to the opening of the hopper, the supporting-bar having been removed. Fig. 8 is a detail vertical section representing the door or floor-section in its most elevated adjustment.

In this instance the pivoted floor-section or door *a'* is represented as applied to the receiving or floor opening of a longitudinally-extending centrally-discharging hopper *b* of a car *A*, which for the purposes of this invention may be either open or roofed—that is to say, either a gondola or a box car. From the plan view, Fig. 1, and the longitudinal section, Fig. 2, it will be seen that the door or floor-section *a'* is connected to the floor *a* by hinge-pieces *a²* and *a³* and a suitable hinge-rod *c*. If the door *a'* be of wood, it will be provided at each side with suitable metallic protecting-plates *a⁴*, which cover the entire vertical surface of such sides, and which are secured thereto by any suitable means.

At or near its free end the door is provided with any suitable recessed socket or loop *a⁵* for engagement by a hook or other lifting device.

In some cases it may be desirable to provide a slide or other device, which will engage with a fixed part of the floor or the bed-frame to lock the door; but ordinarily this provision will be unnecessary.

Along each side of the floor-opening, at the upper extremity of the hopper, a series of hinge-pieces *a⁶* are attached at suitable intervals by screws or other appliances.

Horizontally along the inner vertical face of the upper extremity of the hopper-opening, at each side thereof, is extended a supporting-bar *c'*, with which are formed a series of hinge-pieces *c²*, which are coincident with the intervals between the fixed hinge-pieces *a⁶* of the floor, the two sets of hinge-pieces being conjoined for operation by means of the hinge-rod *c³*.

Upon its bottom surface, at a suitable distance from the hinged extremity thereof, the pivoted floor-section or door *a'* is provided with an arm *a⁷*, which is curved, as shown in Fig. 8, which extends through an opening in the bottom of the hopper *b*, and which at its lower and outer extremity is provided with

an engaging-head a^8 , by means of which the upward movement of the floor-section is limited.

It will be understood that in the operation of the car thus described whenever the main body of the car is employed for the transportation of miscellaneous merchandise or of live stock the pivoted floor-section or door a' will rest upon the coincident supporting-bars $c' c'$, which depend from their hinge-pieces within the containing-space of the hopper. When it is desired to employ the car for the conveyance of granular material, the pivoted floor-section is elevated to a distance sufficient to permit the supporting-bars to be turned upwardly and outwardly to a point outside the plane of movement of the floor-section, whereupon the door will be depressible upon its hinges to the inclined position represented in Fig. 3, in which, it will be observed, it constitutes, in effect, the discharging-surface of the hopper-bottom, protecting such surface from the abrasion to which it would otherwise be subjected when discharging coals, mineral ores, or the like.

It will be noted that the outer edge of the adjustable door fits closely against the vertical wall of the hopper.

If desired, a fixed false bottom may be provided between two contiguous hoppers to fill the interval between two coincident depressed floor-sections.

The change from the horizontal to the depressed inclined adjustment, or from the in-

clined to the horizontal, is easily effected in a few seconds of time by the most unskillful attendant.

The invention having been thus described, what is claimed is—

1. A convertible dumping-car which is provided with a door which serves either as a part of the main horizontal floor of the car or as an inclined false bottom or re-enforce upon the upper surface of the hopper below such main floor.

2. In a convertible dumping-car which has a pivoted floor-section, a pivotally-supported bar, which serves as a support for the pivoted floor-section and which when the floor-section is lifted is movable out of the plane of movement of such section to permit the same to be depressed.

3. In a convertible dumping-car, a pivoted door or floor-section, which in its horizontal position constitutes a part of the floor of the car, which is movable upwardly above the plane of such floor, and which is movable downwardly below the plane of such floor to serve as a bottom for a discharging-hopper.

4. In a convertible dumping-car, an adjustable door which is provided upon its bottom surface with a downwardly-extending arm which has a stop for engagement with the fixed part of the car.

SIDNEY D. KING.

Witnesses:

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