No. 820,058. PATENTED MAY 8, 1906.

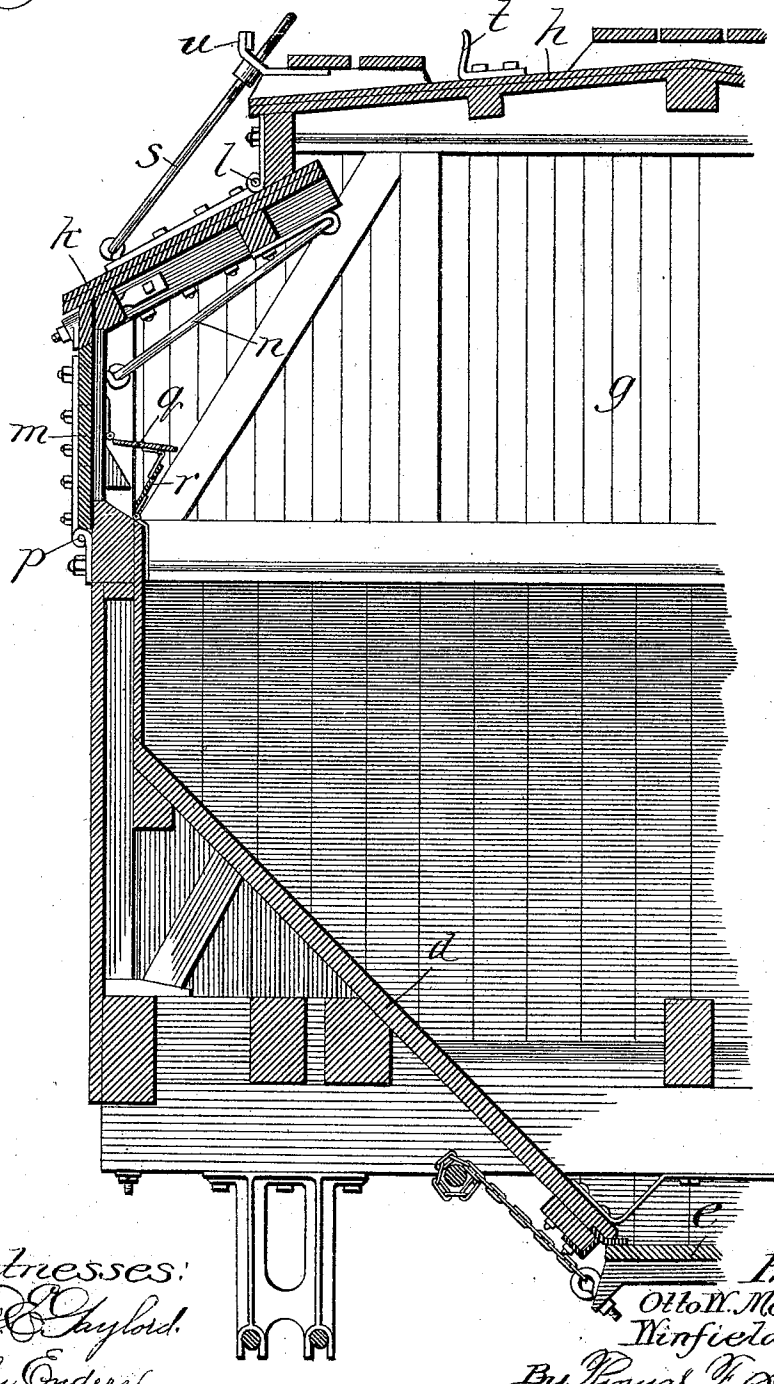
O. W. MEISSNER & W. YOST.

RAILWAY FREIGHT CAR.

APPLICATION FILED JULY 5, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



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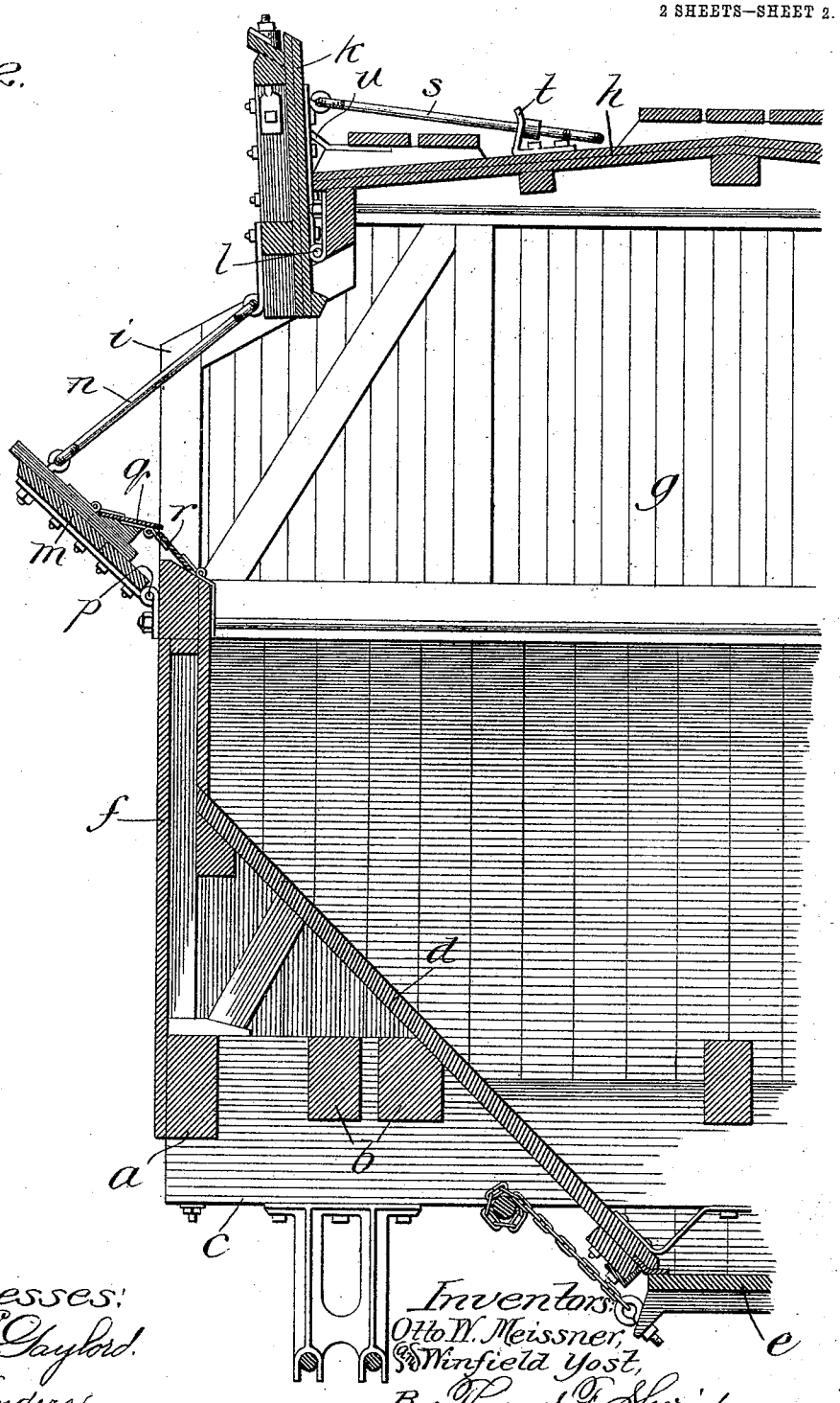
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

OTTO W. MEISSNER AND WINFIELD YOST, OF CHICAGO, ILLINOIS, ASSIGNORS TO RODGER BALLAST CAR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

RAILWAY FREIGHT-CAR.

No. 820,058. Specification of Letters Patent. Patented May 8, 1906.

Application filed July 5, 1904. Serial No. 215,275.

To all whom it may concern:

Be it known that we, OTTO W. MEISSNER and WINFIELD YOST, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway Freight-Cars, of which the following is a specification.

The invention relates to that class of railway freight-cars known as "box-cars," and particularly to the means by which a portion of the car may be opened for the purpose of loading it with loose bulky freight and afterwards closed to protect the same during storage or shipment, all of which will more fully hereinafter appear.

The principal object of the invention is to provide a simple, economical, and efficient box-car with movable sections located at the angle of the roof and longitudinal sides which may be opened and closed for the purpose of loading the car.

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

The invention consists principally in a box-car in which there are combined a supporting-frame portion provided with upwardly-extending sides and ends, an inclosing-roof portion, and movable sections extending longitudinally of the car at each side of the center located at the meeting angle of the roof and side portions and adapted to be opened and closed to cover and form a loading-opening.

The invention consists, further and finally, in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of a portion of the car, showing substantially one-half thereof and taken transversely across the car, illustrating a car fitted with our improvements in closed position; and Fig. 2 is a similar view showing the parts in open position.

In the art to which this invention relates, it is well known that it is highly desirable to use box-cars for the purpose of transferring grain of all kinds, as well as coal of all kinds, in a loose and bulky state, so as not only to protect the same from the depredations of sneak thieves, but also from the inclemency of the weather. It is further desirable to provide such cars with a loading-opening at or near the upper part which may be opened and closed in an efficient and simple manner, thus minimizing the work of loading the car. To this end this invention is particularly designed.

In illustrating and describing these improvements we have only illustrated and will here describe that which we consider to be new, taken in connection with so much as is old as will properly disclose the invention to others and enable those skilled in the art to practice the same, leaving out of consideration other and well-known elements which if set forth herein would only tend to confusion, prolixity, and ambiguity.

In constructing a car in accordance with these improvements we provide a supporting-frame portion having side sills *a*, intermediate sills *b*, and transverse sills *c* secured and tied together in any easy and well-known manner. This car may for certain purposes be provided with a hopper-bottom portion *d*, having dumping-doors *e;* but while this preferred construction is illustrated in the drawings, it will be understood that our invention is also adapted for use with a car having a flat-bottom portion provided with dumping or non-dumping sections, as occasion may require or necessity demand. This supporting-frame portion is provided with upwardly-extending side portions *f* and end portions *g*, held in place by any of the well-known and usual forms of superstructure frames, and is further provided with an inclosing-roof portion *h*.

To provide means for covering a loading-opening *i* at the meeting angles of the roof and side portions, we preferably provide two sets of swinging sections, one set *k*, pivotally secured at *l* to the lateral edges of the roof portion, and a second set *m*, pivotally secured at its lower edges to the upper ends of the side portions. These swinging sections may be closed, as shown in Fig. 1, in such manner that the first set *k* overlaps the second set

and not only acts to assist in holding it closed, but also to shut out all dirt and dust, thus minimizing the danger of deleterious and injurious matter from entering the car at such portion. It is very desirable to provide some means for opening and closing such swinging sections by and during the same operation and preferably in a successive manner—that is, to first complete the closing of the side swinging sections and then complete the closing of the roof swinging sections during the covering of such loading-opening—the reverse being true during the uncovering at such portion or portions. For this purpose connecting-rod mechanism *n* is provided, pivotally secured to the side swinging sections at or near the free edges and to the roof swinging sections at or near the heel. By this arrangement the side swinging sections are first closed and then the roof swinging sections.

To provide a seal for the joint *p*, which would otherwise exist between the side swinging sections and the upper edges of the car, flap mechanism is provided, formed of sheet-metal plates *q* and *r*, pivotally secured together and also pivotally secured to the side swinging sections and side framework of the car in such manner as to cover such joint, and thereby more efficiently provide for the loading of the car through this opening.

In order to facilitate the opening and closing of these swinging sections as well as to hold them in their different positions, operating-rod mechanism *s* is provided, pivotally secured to the exposed portion of the roof swinging sections. This rod mechanism is adapted to be engaged with either of the latch mechanisms *t* and *u*, the first of which acts to hold the parts in open position, as shown in Fig. 2, and the second to hold the parts in closed position, as shown in Fig. 1.

We claim—

1. A box-car having the usual sides, ends and roof, the roof being provided with an upwardly-swinging hinge-section, and the side at a point adjacent with a downwardly-swinging hinge-section, and means for successively opening and closing the swinging sections.

2. In a car of the class described, the combination of a supporting-frame portion, a superstructure extending upwardly therefrom composed of side and end portions and an inclosing roof, swinging sections pivotally secured to the roof and side portions at the meeting angle thereof to open and close the loading-opening, and a connecting-rod pivotally connected to both of such swinging sections so that the same may be opened and closed by and during the same operation, substantially as described.

3. In a car of the class described, the combination of a supporting-frame portion, a superstructure therefor composed of upwardly-extending side and end portions and an inclosing roof, swinging sections pivotally secured to the side and roof portions at the meeting angle thereof with their free edges overlapping, and overlapping flap portions secured to the side swinging sections so as to cover a joint between such side swinging sections and the side of the car, substantially as described.

4. In a car of the class described, the combination of a supporting-frame portion, a superstructure therefor composed of side and end portions and an inclosing roof, swinging sections pivotally secured to said side and roof portions at the meeting angle thereof and with their free edges adapted to engage and overlap one the other, connecting-rod mechanism pivotally secured to both of such sets of swinging sections so as to open and close the same by and during one operation, and operating-lever mechanism secured to the roof swinging sections so as to operate the same and hold it in open or closed position, substantially as described.

5. In a car of the class described, the combination of a supporting-frame portion, a superstructure therefor composed of outwardly-extending side and end portions and an inclosing roof, two sets of swinging sections, one set pivotally secured to the lateral edges of the roof portion and the other to the upper edges of the side portions of the car at the meeting angles thereof so as to open and close the loading-opening, connecting-rod mechanism pivotally secured to the side swinging sections near their free edges and to the roof swinging sections near the heel thereof so that both of such sections may be opened and closed by and during the same operation, operating-lever mechanism pivotally secured to the roof swinging sections for operating the same, and latch mechanism adapted to engage and hold such operating-rod mechanism and thereby such swinging sections in open and closed position, substantially as described.

6. In a car of the class described, the combination of a supporting-frame portion, a superstructure therefor composed of outwardly-extending side and end portions and an inclosing roof, two sets of swinging sections, one set pivotally secured to the lateral edges of the roof portion and the other to the upper edges of the side portions of the car at the meeting angles thereof so as to open and close the loading-angle, connecting-rod mechanism pivotally secured to the side swinging sections near their free edges and to the roof swinging sections near the heel thereof so that both of such sections may be opened and closed by and during the same operation, operating-lever mechanism pivotally secured to the roof swinging sections for operating

the same, latch mechanism adapted to engage and hold such operating-rod mechanism and thereby such swinging sections in open and closed position, and flap mechanism composed of metal plates pivotally secured to the inner lower portions of the side swinging sections and side framework of the car so as to cover the joint between such swinging sections and the side of the car, substantially as described.

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