

No. 863,285.

PATENTED AUG. 13, 1907.

R. B. KENDIG.
SIDE DOOR FOR CARS.
APPLICATION FILED APR. 15, 1907.

3 SHEETS—SHEET 1.

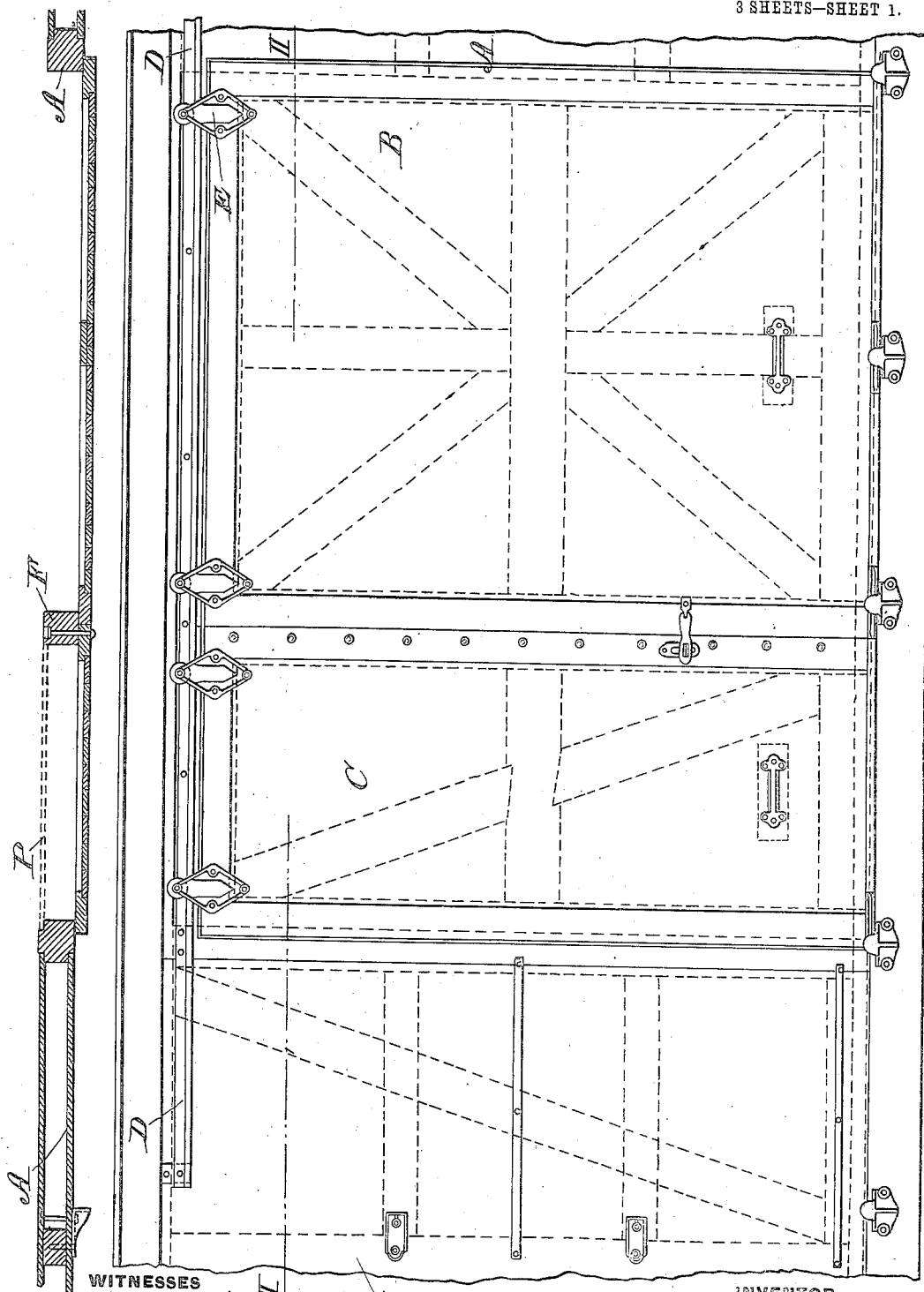


Fig. 2.

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Fig. 1.

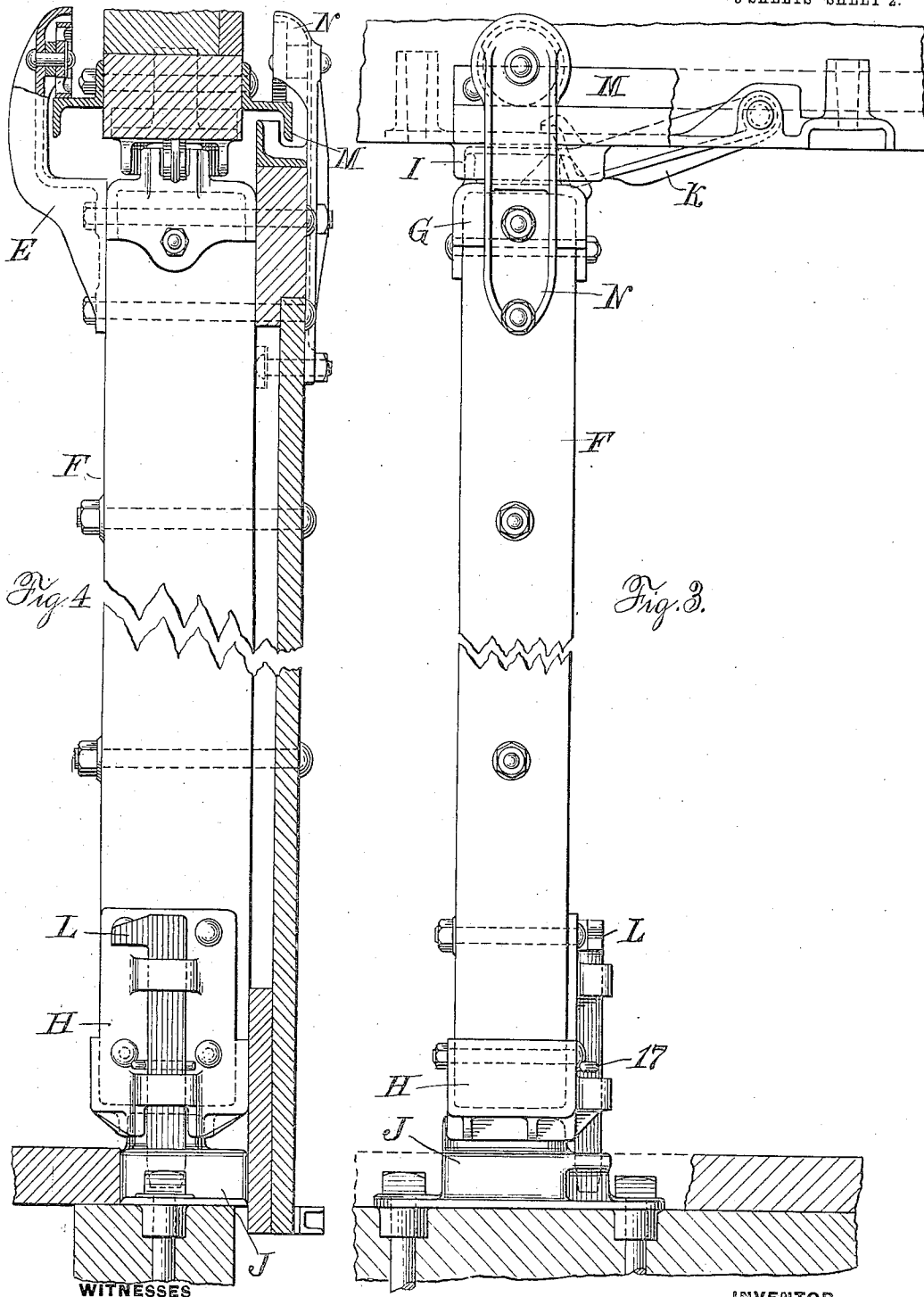
INVENTOR
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by *Wm. H. Symonds*

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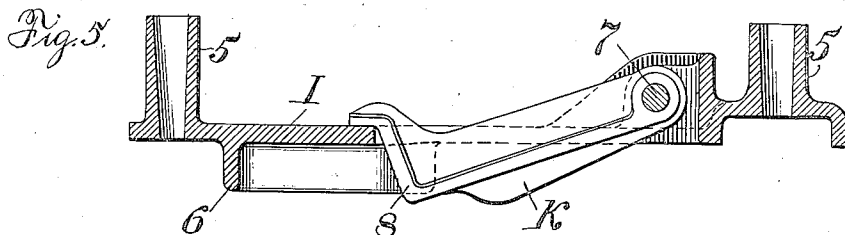
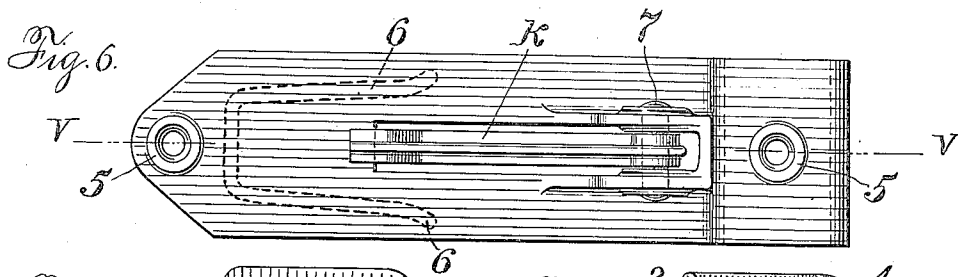
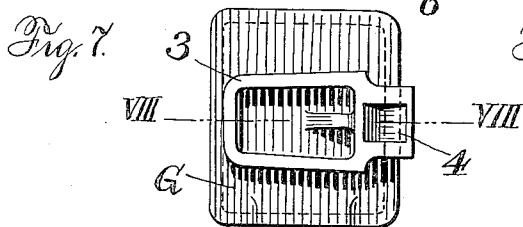
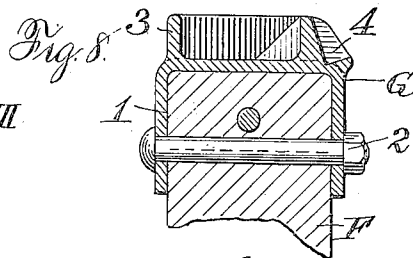
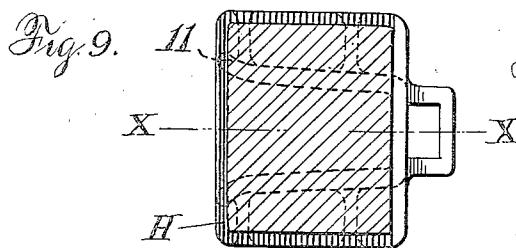
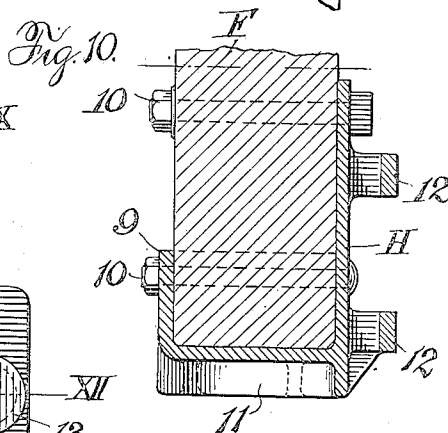
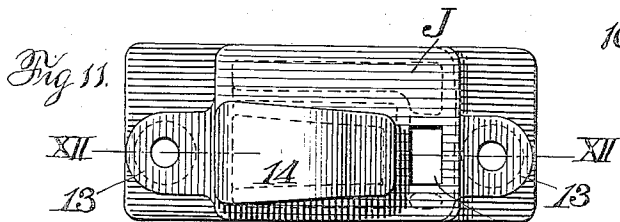
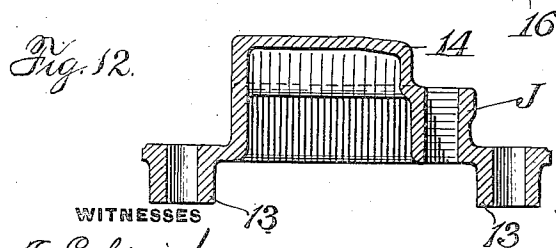
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3 SHEETS—SHEET 3.



WITNESSES

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J. C. Bradley

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UNITED STATES PATENT OFFICE.

ROSCOE B. KENDIG, OF CLEVELAND, OHIO.

SIDE DOOR FOR CARS.

No. 863,285.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed April 15, 1907. Serial No. 368,315.

To all whom it may concern:

Be it known that I, ROSCOE B. KENDIG, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Side Doors for Cars, of which the following is a specification.

My invention relates to side doors for cars; and has for its objects; to provide an improved construction wherein the door opening may be increased from the ordinary width for the introduction of large objects; to provide an inexpensive and practical construction comprising a supplemental door so supported that it may serve either as a part of the car wall, or may serve to secure additional door space when the occasion requires; to provide a supplemental door, which is very firmly supported, and which can be opened only after opening the main door; and finally, to provide a combination double door, wherein no loose supporting brace at the meeting edges of the doors, is necessary. The foregoing and other objects are secured by my invention, one form of which is illustrated in the accompanying drawings, wherein—

Figure 1 is an elevation showing a part of the side of a car, with the improved door construction applied thereto,

Figure 2 is a longitudinal section on the line II—II of Figure 1,

Figure 3 is a rear elevation of the post carried by the inner edge of the supplemental door, and the means for detachably securing such posts to the car-body, the door being closed,

Figure 4 is a side elevation of the post shown in Figure 3,

Figures 5 and 6 are enlarged details of the securing means for the upper end of the post, Figure 5 being a longitudinal section on the lines V—V of Figure 6, and Figure 6 being a plan view of the device,

Figures 7 and 8 are enlarged detail views of the cap for the upper end of the post which cap coöperates with the fastening means shown in Figures 5 and 6, Figure 7 being a plan view of the top of the cap, and Figure 8 being a transverse section on the line VIII—VIII of Figure 7,

Figures 9 and 10 are enlarged detail views of the cap for the lower end of the post, Figure 9 being a plan view of the cap, and Figure 10 being a section on the line X—X of Figure 9, and

Figures 11 and 12 are enlarged detail views of the securing means for the bottom of the post, which securing means coöperates with the cap shown in Figures 9 and 10, Figure 11 being a plan view of the device, and Figure 12, being a longitudinal section on the line XII—XII of Figure 11.

In box car construction, a certain width of door has been found most desirable and practically adopted as a standard. This width, however, while most desirable

for ordinary carrying, is unsuitable where objects of unusual size are to be carried, and it has been found necessary to employ special constructions for giving large door openings to meet this requirement. This has heretofore been done, either by making very large doors, or by making two meeting sliding doors with a common removable door post at the meeting edges. Both of these constructions have been found undesirable in certain respects, as the large single door is unwieldy and renders the box car unsuitable for handling grain, while the double door construction with the removable supporting post at the meeting edges, is undesirable, as the supporting posts are liable to become displaced and lost, and for other reasons well known to those familiar with car construction. My construction is designed to provide a door free from these objections, and yet having all the conveniences of the large doors, and to this end the construction consists primarily of a main sliding door of the ordinary size and type, a supplemental sliding door and a supporting post secured rigidly to the edge of the supplemental door, together with means for detachably anchoring the post to the car body, when the door is in closed position.

The general arrangement of parts is shown in Figures 1 and 2, wherein A is the car wall of usual construction, B is the main door, which is of the usual sliding type, C is the auxiliary or supplemental door, D is the track upon which both of the doors slide, by means of the usual hangers E, and F is the supporting post for the meeting edges of the doors, which post is as shown, rigidly bolted to the inner edge of the supplemental door. This post F is adapted to be anchored both at the top and at the bottom to the car body when in closed position, and is shown in detail together with such fastening means in Figures 3 and 4, to which figures attention is directed. As shown in these figures, the post is in the position as shown in Figure 2, at which time the door is closed and the post locked in position. The upper end of the post is provided with a metallic cap G, and the lower end of the post is provided with a metallic cap H. The cap G fits in an open sided socket I, which is secured to the door frame, and the cap H interfits with a member J, which is bolted to the bottom of the car. A catch K is provided for securing the parts I and G in the position shown in Figure 3, and a bolt L is provided at the bottom of the post for performing a similar function with respect to the parts H and J. A short track M is also preferably provided on the inside of the door frame with which the hangers N, secured to the upper end of the post co-act, thus providing a secure support for the heavy post.

The details for securing the post at top and bottom are shown in Figures 5 to 12 inclusive, to which attention is now directed. Referring first to the top cap member G shown in Figures 7 and 8, it will be noted that the cap consists of a socket portion 1, secured to the top of the

post F by means of the bolt 2, and that the upper part of the cap consists of a cup shaped member 3, having converging side walls, and a recess 4 at its rear edge for the reception of the locking member K. The securing means with which the cap G coöperates, is the part I, shown in Figures 5 and 6, which securing means I is securely fastened to the upper frame work of the door by means of bolts passing through the sockets 5. This member I has on its lower surface an open sided socket member 6, with slightly converging walls into which the projecting cup shaped member 3 on the part G is adapted to interfit, when the post is in the position shown in Figure 3. This open sided socket 6 gives a firm support to the cup shaped member 3 on three sides and on the fourth side the cup shaped member 3 is held in position by means of the latch K pivoted on the bolt 7 in the part I. The front portion 8 of the latch K is adapted to fit into the recess 4 in the cap G. When the cup shaped member 3 is interfitted in the socket 6, and the latch K is in the position shown in Figure 5, the upper end of the post is securely locked in closed position. The cap H for the lower end of the post, is shown in detail in Figures 9 and 10, from which it will be seen that the member consists of a socket portion 9 into which the lower end of the post F fits and is secured by means of the bolts 10, a socket portion 11 having inclined walls, as shown in Figure 9, and a bolt receiving portion consisting of two loops 12 through which the locking bolt L is adapted to slide. The open-sided socket 11, projecting from the bottom of the cap, is adapted to receive a projecting member secured to the bottom of the car in the same manner as the open-sided socket 6 heretofore described, receives the member 3. In Figures 11 and 12 are shown a securing means J for coöperating with the cap H and holding it rigidly in position. This securing member comprises a body portion secured to the bottom of the car by means of bolts passing through the sockets 13, an upwardly projecting portion 14, having inclined side walls, and adapted to fit into the open sided socket member 11 of the part H, and a socket 16 adapted to aline with the loop 12 on the member H, and to receive the lower end of the bolt L. After the projecting member 14 has been slid into position in the socket 11, the bolt L is pushed down into the socket 16, thereby firmly clamping the two parts in position. A projection 17 is provided on the bolt L (see Fig. 3), for preventing the bolt from being entirely removed from the loop 12, so that there is no danger of losing such bolt.

From the foregoing it will be seen that I have provided a supplemental door, which may be utilized to increase the door opening, when such increased opening is necessary, and that such door when closed, and the supporting post F locked in position, constitutes practically a part of the car wall, to which sheathing P, as indicated by dotted lines in Figure 2, may be applied, to adapt the car for carrying grain and other similar uses. Furthermore, it will be noted that my door has the very important advantage over the wide doors heretofore used, in that the framing is not weakened by the large

opening, or the strength of the car impaired, as the post F when locked in position gives the same support to the car wall as would the ordinary stationary post, which occupies the same position when the door of ordinary width is used. It will further be seen that the post F is securely suspended by virtue of the outside and inside tracks, and that such post can never become lost or misplaced as it is an integral portion of the door. It will further be apparent that the arrangement can be applied to the conventional type of car framing, and that the supplemental door, when locked in closed position, can only be opened after opening the main door.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. In combination in a car, a main sliding door, a supplemental sliding door, a supporting post secured to the inner edge of the supplemental door and means whereby such post may be anchored detachably to the car body when in closed position.
2. In combination in a car, a pair of opposing sliding doors, one of which carries at its inner edge a supporting post, and means for detachably anchoring the post to the car body.
3. In combination in a car, a pair of opposing sliding doors, one of which carries at its inner edge a supporting post, and means inside the car for detachably anchoring the post to the car body.
4. In combination in a car, a main sliding door, a supplemental sliding door, a supporting post secured to the inner edge of the supplemental door, an open sided socket in the car body in position to receive the post when the supplemental door is closed, and means for locking the post in engagement with its socket.
5. In combination in a car, a main sliding door, a supplemental sliding door, a supporting post secured to the inner edge of the supplemental door, a receiving member at both the top and the bottom of the doorway in position to receive the ends of the post when the supplemental door is closed and means for locking the post in engagement with its receiving members.
6. In combination in a car, a main sliding door, a supplemental sliding door, a supporting post secured to the inner edge of the supplemental door, a stop for positioning the supplemental door, and means for locking the post in engagement with the stop.
7. In combination in a car, a main sliding door, a supplemental sliding door, a supporting post secured to the inner edge of the supplemental door, an open sided tapered socket in the car body in position to receive the post when the supplemental door is closed, and means for locking the post in engagement with its sockets.
8. In combination in a car, a pair of opposing sliding doors, one of which is provided with an inner and outer track, and carries at its inner edge a supporting post, and means for detachably securing the post to the car body.
9. In combination in a car, a main sliding door, a supplemental sliding door, door framing therefor, a supporting post secured to the inner edge of the supplemental door, an open sided socket in one of the last mentioned parts, and a projection on the other part adapted to fit into the socket when the supplemental door is closed, together with means for locking the projection in engagement with the socket.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

ROSCOE B. KENDIG.

Witnesses:

T. L. McMILLAN,
M. U. HART.