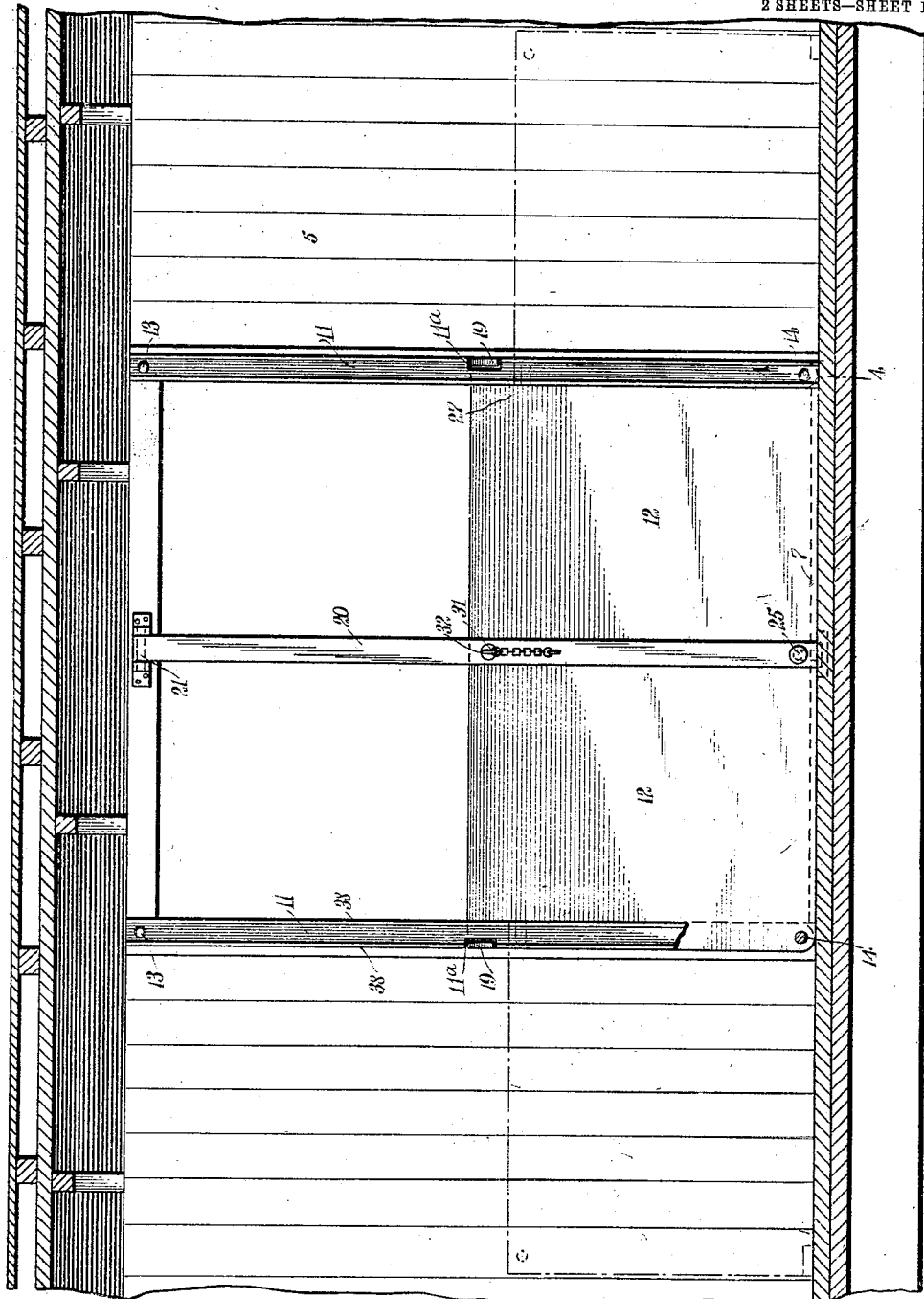


W. G. CRAIG & A. R. RAMSDELL.
DOOR FOR GRAIN CARS,
APPLICATION FILED APR. 30, 1910.

969,604.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

J. A. Brophy
E. B. Marshall

FIG. 1

INVENTORS

William G. Craig
Hubrey R. Ramsdell

Monroe
ATTORNEYS

W. G. CRAIG & A. R. RAMSDELL.

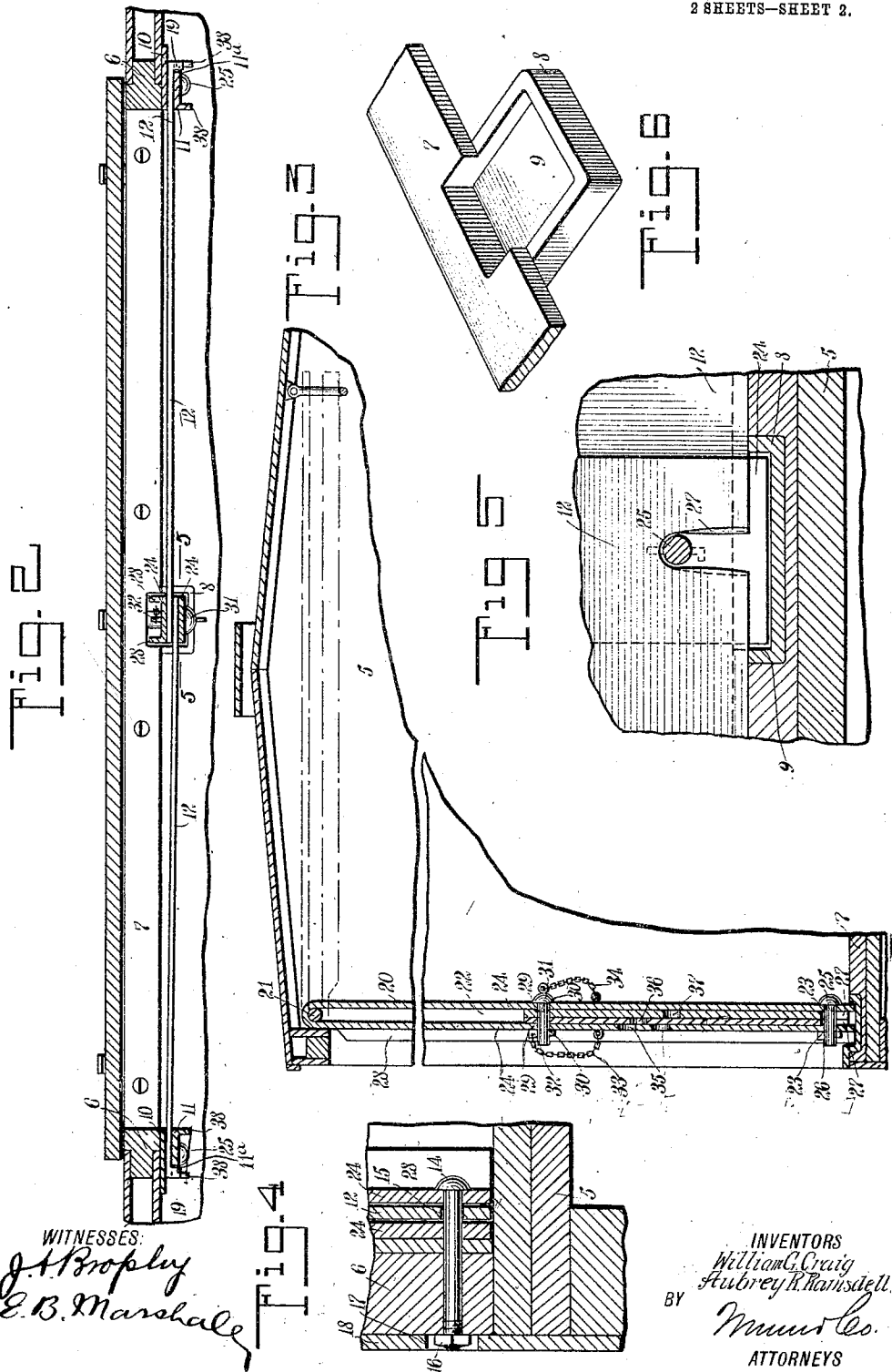
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UNITED STATES PATENT OFFICE.

WILLIAM G. CRAIG, OF MARSHALLTOWN, AND AUBREY R. RAMSDELL, OF TOLEDO,
IOWA.

DOOR FOR GRAIN-CARS.

969,604.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed April 30, 1910. Serial No. 558,742.

To all whom it may concern:

Be it known that we, WILLIAM G. CRAIG, a resident of Marshalltown, in the county of Marshall and State of Iowa, and AUBREY R. RAMSDELL, of Toledo, in the county of Tama and State of Iowa, both citizens of the United States, have invented a new and Improved Door for Grain-Cars, of which the following is a full, clear, and exact description.

Our invention relates to doors for grain cars, and it has for its object to provide doors which are simple in construction and which may be manufactured at little expense.

Another object of the invention is to provide a central hinged post, and two doors pivoted on horizontal axes, which are adapted to engage a slot in the hinged post and be secured thereto.

Still another object of the invention is to provide means by which the doors are held in position relatively to the side of the car, to prevent grain from working through the doorway.

Still other objects of the invention will appear in the following complete description.

In this specification we will describe the preferred form of our invention, it being understood that the scope of the invention is defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a sectional view showing a doorway in the side of a car, equipped with our improved doors; Fig. 2 is a sectional plan view of the side of the car as equipped with our doors; Fig. 3 is a transverse sectional view showing a portion of a car in which our improvements are installed; Fig. 4 is a sectional view on the line 4—4 of Fig. 1; Fig. 5 is a sectional view on the line 5—5 of Fig. 2; and Fig. 6 is a fragmentary view of the plate secured to the bottom of the doorway, having a projection with a recess in which the lower terminal of the central post is normally disposed.

By referring to the drawings it will be seen that the car 5 is of the usual type, the car having a doorway, at the sides of which there are disposed the usual door jambs 6,

a plate 7 being secured to the floor of the car at the bottom of the doorway, this plate 7 having an inwardly-projecting member 8 in which there is a recess 9. To the inner sides of each of the door jambs 6 are secured two plates 10 and 11, the plates 10 being disposed against the door jambs 6 and the plates 11, which are preferably constructed of angle iron, being spaced from the plate 7 and having pivoted between them doors 12. The plates 10 and 11 are connected together at their upper terminals by bolts 13 which project through orifices in the door jambs 6, there being nuts, which are disposed in recesses in the said door jambs, by which the bolts 13 are held firmly in place. The plates 10 and 11 are connected at their lower terminals by bolts 14, these bolts 14 being disposed through orifices 15 in the doors 12, the bolts 14 also being disposed through the door jambs 6 and being held in place by nuts 16 which are disposed in recesses 17 in the outer walls 18 of the car. The doors 12 are rectangular in shape and have lugs 19 which fit the recesses 11^a in the plates 11, the plates 11 limiting the movement of the doors and preventing them from bulging outwardly when they are secured to the central post 20.

The central post 20 is bent around a rod 21 secured to the car above the doorway, members 24 of the central post 20, at one side of its bent portion, being disposed substantially parallel to each other, there being a slot 22 between the members 24, for engaging the doors 12 when they are closed. The lower terminal of this central post 20 is adapted to be disposed in the recess 9 in the projection on the plate 7, the bottom of the central post abutting against the plate 7, which prevents it from moving outwardly. In the members 24 of the central post 20, at their lower terminals, are orifices 23, which are in alinement and in which is normally disposed a pin 25 which is secured in place by a key 26, which engages a slot in the said pin. The doors 12 have recesses 27, in which the pin 25 is disposed when the doors 12 are closed. The outer member 24 of the central post 20 has outwardly-extending flanges 28 which afford strength to prevent the central post from buckling under pressure of the grain against the doors. The doors 12 also have orifices 29, which register with orifices 30 in the members 24 of the central post 20 when the doors are closed; a pin 31 being

normally disposed in these orifices 29 and 30, the pin 31 having a slot in which is disposed a key 32 by which the pin is held in place. The key 32 is secured to the outer member 24 of the central post 20 by means of a chain 33 and the pin 31 secured to the inner member of the key 32 by means of a similar chain 34. There are two additional orifices 35 in the outer member 24 of the central post 20, the center of one of these orifices 35 being slightly out of alinement with the center of an orifice 36 in one of the doors, the center of the other orifice 35 being slightly out of alinement with the center of an orifice 37 in the other door.

When the central post and the doors are constructed and are mounted as has been described, it will be readily understood that, when the doors are swung on their pivots away from the central post 20, and the central post 20 is swung inwardly, the doorway will be unobstructed. When it is desired to close the doorway, the central post is pushed into position with its lower terminal disposed in the recess 9 in the projection 8 on the plate 7, and the doors 12 are swung on their pivots 14, until their edges are disposed in the slot 22 in the central post 20 and the pin 25 is disposed in the recesses 27 in the doors. The orifices 29 in the doors 12 will then be found to be in alinement with the orifices 30 in the members 34 of the central post 20. The pin 31 is then introduced in these orifices 29 and 30 and it is held in place by the key 32. The door will then be found to be held firmly in place in such a manner as will prevent any possible leakage of the grain. To open the door the pin 31 is removed, when it will be possible to insert a pin or spike in one of the orifices 35, so that the pin will engage one of the doors 12 at its orifice 36, and, by lifting the pin or spike, the door may be loosened so that it may be readily raised and thrown back. In a similar way the door may be free from the central post. The flanges 28 on the central post will prevent it from buckling, and in a similar manner the flanges 38 on the plates 11 will prevent them from buckling. Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In combination with a car having a doorway, two doors, one pivoted at each side of the doorway, lugs on the doors respectively, members at the sides of the doorway, for engaging the lugs and limiting the

movement of the doors, a central post secured to the doorway, and means for securing the doors to the central post when the lugs are in engagement with the said members.

2. In combination with a car having a doorway, two doors, one pivoted at each side of the doorway on horizontal axes, a central post hinged on a horizontal axis and at right angles to the axes of the doors, and means by which the doors may be secured to the central post.

3. In combination with a car having a doorway, two doors with recesses, one pivoted at each side of the doorway, a central post secured to the car at the doorway, having two members spaced apart, between which edges of the doors may be disposed, and a bolt secured to the central post, from one of the members to the other, which is normally disposed in the recesses in the doors.

4. In combination with a car having a doorway, two doors with recesses, one pivoted at each side of the doorway on horizontal axes, a central post pivoted to the car above the doorway, having two members spaced apart, between which edges of the doors may be disposed, and a bolt secured to the central post and disposed across the slot, for engaging the recesses in the doors.

5. In combination with a car having a doorway, two doors with recesses, one pivoted at each side of the doorway on horizontal axes, a central post pivoted to the car above the doorway, having a slot in which edges of the doors may be disposed, and a bolt secured to the central post and disposed across the slot, for engaging the recesses in the doors, there being two orifices in the central post and an orifice in each of the doorways, the centers of the orifices in the central post being out of alinement with the orifices in the doors respectively.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM G. CRAIG.

AUBREY R. RAMSDELL.

Witnesses to the signature of William G. Craig:

E. G. LEFFLER,

P. L. HAYZLETT.

Witnesses to the signature of Aubrey R. Ramsdell:

G. A. HUTCHISON,

E. E. RAMSDELL.