Feb. 23, 1926. 1,574,031

F. J. HECHT

END GATE

Filed August 27, 1925

Fig. 1.

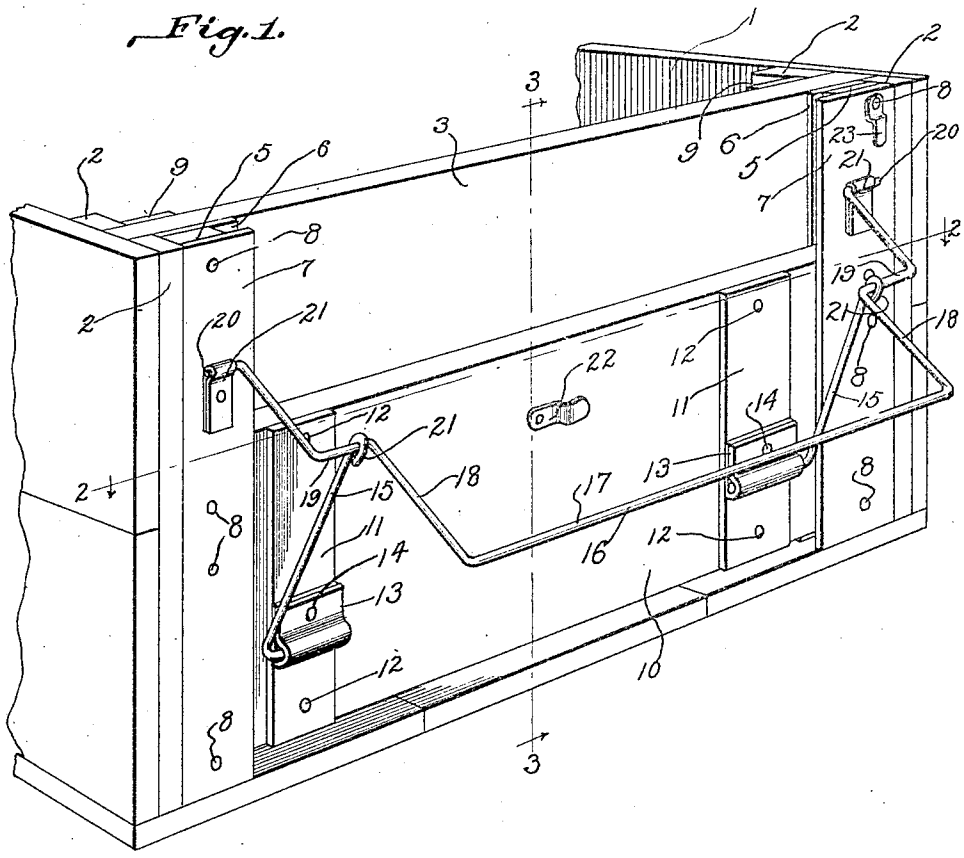


Fig. 2.

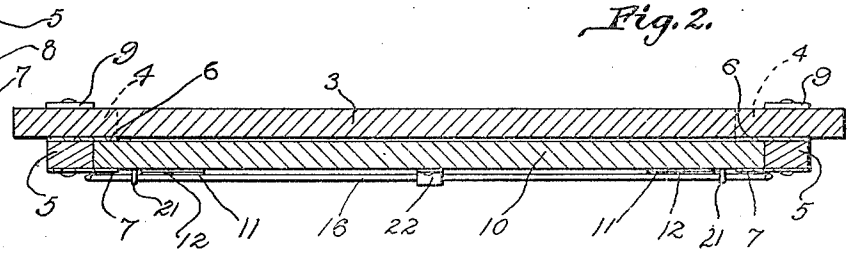
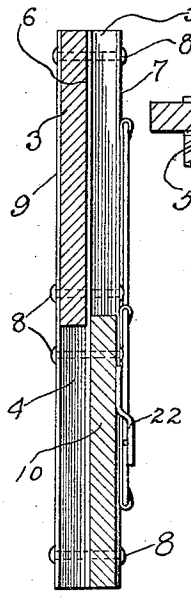


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRED J. HECHT, OF LYTTON, IOWA.

END GATE.

Application filed August 27, 1925. Serial No. 52,867.

To all whom it may concern:

Be it known that I, FRED J. HECHT, a citizen of the United States, residing at Lytton, in the county of Sac and State of Iowa, have invented certain new and useful Improvements in End Gates, of which the following is a specification.

This invention relates to an end gate of the type having a stationary upper section and a vertically slidable lower section adapted to be moved into and out of closing relation to the upper section so that grain and other material loaded in a vehicle body may be allowed to pass out of the body through the end gate without it being necessary to remove the end gate from the vehicle body.

One object of the invention is to so mount the lower movable section of the end gate that it will be permitted to slide freely into and out of a closing position.

Another object of the invention is to provide improved actuating means for the lower end gate section and so connect the actuating means with the lower gate section that the gate section will not be caused to bind in the tracks in which it slides when drawn upwardly.

Another object of the invention is to so construct the upper end gate section that it will be very strong and durable and its end portions with which the tracks for the lower section are associated not be liable to move out of parallel relation to each other.

This invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a perspective view showing the rear portion of a wagon body and the improved end gate in place and partially raised;

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1, and

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1 with the lower gate section in the closed position.

The end gate is for use in connection with a wagon body indicated in general by the numeral 1, the wagon body being open at its rear end and having strips 2 secured to its side walls to form trackways in which the end gate is mounted for vertical sliding movement into and out of place.

The upper section 3 of the end gate which may be termed the stationary section is of a length to extend between the side walls of the wagon body with its ends slidably fitting into the tracks formed by the strips 2 and is provided with depending supports 4 at its ends which are also adapted to fit into the tracks of the wagon body. Bars 5 extend across the end portions of the upper section 3 and along the supports 4 and are disposed between inner and outer strips 6 and 7 which are wider than the bars 5 and cooperate with the bars to form tracks adapted to slidably mount the movable end gate section. These strips 6 and 7 are formed of sheet metal and are secured by rivets or other suitable fasteners 8 which also serve to secure the metallic bracing strips 9 upon the inner face of the upper gate section. From an inspection of Fig. 3, it will be readily seen that the elements through which the rivets pass are very firmly held in engagement with each other and produce a strong and rigid construction.

The lower or movable gate section 10 is of a length to slidably fit between the tracks formed by the strips 6 and 7 and of a depth to rest upon the bottom of the wagon body with its upper edge portion overlapping the lower edge portion of the upper gate section when completely closed. Metal strips 11 are secured against the outer face of the lower gate section by rivets or other suitable fasteners 12 and bearings 13 are secured against the outer faces of the strips 11. The bearings are normally disposed horizontally but since they are secured by rivets 14 they will be permitted to swing somewhat and prevent binding of the links 15. It should be noted that the bearings 13 are mounted in spaced relation to the lower edge of the gate section and, therefore, when the gate is drawn upwardly toward an open position it will not be liable to be tilted and caused to bind in the tracks in which it is slidably mounted.

In order to slide the movable gate section into and out of a closed position, there has been provided a yoke 16 which is formed of heavy rod metal. The rod from which the yoke is made is bent in spaced relation to its ends to form a substantially U-shaped yoke having its bridge portion 17 extending longitudinally of the end gate and its arms 18 at right angles to the bridge portion. Each of the arms 18 is bent intermediate its length to form a horizontally extending bearing portion 19 and the free ends of the arms are bent outwardly to provide fingers

20 which are journaled in the bearings 21 secured against the outer faces of the strips 7 in spaced relation to their upper ends. The links 15 which have their lower ends journaled in the bearings 13 have their upper ends bent to form eyes 21 loosely engaged with the bearing portions 19 of the yoke arms so that when the yoke is swung vertically movement will be imparted to the links to open or close the movable end gate section according to the direction in which the yoke is moved. In Fig. 1 the end gate has been illustrated with the movable lower section partially raised and the yoke extending outwardly from the end gate. It will be readily understood that when the yoke is swung downwardly so that it rests flat against the outer face of the end gate the lower gate section will be completely closed, as shown in Fig. 3. A latch 22 is pivotally connected with the lower gate section and adapted to be swung into engagement with the bridge portion of the yoke and prevent the yoke from swinging outwardly when the end gate is closed.

When this end gate is in use, it is mounted in the tracks formed by the strips 2 and the lower gate section closed. The wagon body can then be filled with grain or any other material desired of such a nature that it can flow from the wagon. After the wagon has been moved to the place where it is desired to deposit the load, the latch 22 is swung to release the yoke and the yoke grasped by its bridge portion and swung upwardly to draw upon the links and slide the end gate toward an open position. The end gate may be completely opened or it may be only partially opened so that the flow of grain through the end gate may be controlled. If it is not desired to have all of the material in the wagon body pass out through the end gate at one time, the end gate may be easily closed after the desired quantity has passed out by swinging the yoke downwardly and thereby returning the end gate to the closed position. A latch 23 is pivotally mounted upon one of the rivets 8 and adapted to be turned into engagement with the adjacent side arm of the yoke to hold the yoke in a raised position and prevent the gate from accidentally closing when opened. A similar latch may be provided at the other side of the gate if so desired.

Having thus described the invention, I claim:

An end gate comprising an upper section, vertical supports beneath the end portions of said upper section with their upper ends engaging the lower edge thereof, said supports defining a discharge opening, bars extending along the outer faces of said supports and across said upper section in spaced relation to the ends thereof, bracing strips extending along the inner faces of said supports and across the end portions of said upper section, strips extending along the inner and outer faces of said bars and projecting beyond the inner side edges thereof and cooperating therewith to form tracks, said upper section, supports, bars and strips being secured together to form a unitary structure, a lower section slidably mounted between said bars and the projecting portions of said inner and outer strips for vertical movement into and out of closing relation to the discharge opening, and means for moving said lower section into and out of a closed position.

In testimony whereof I affix my signature.

FRED J. HECHT. [L. S.]