March 10, 1953 J. E. SMITH 2,631,056

ADJUSTABLE END GATE FOR TRUCKS

Filed Jan. 15, 1952 2 SHEETS—SHEET 1

Fig. 1

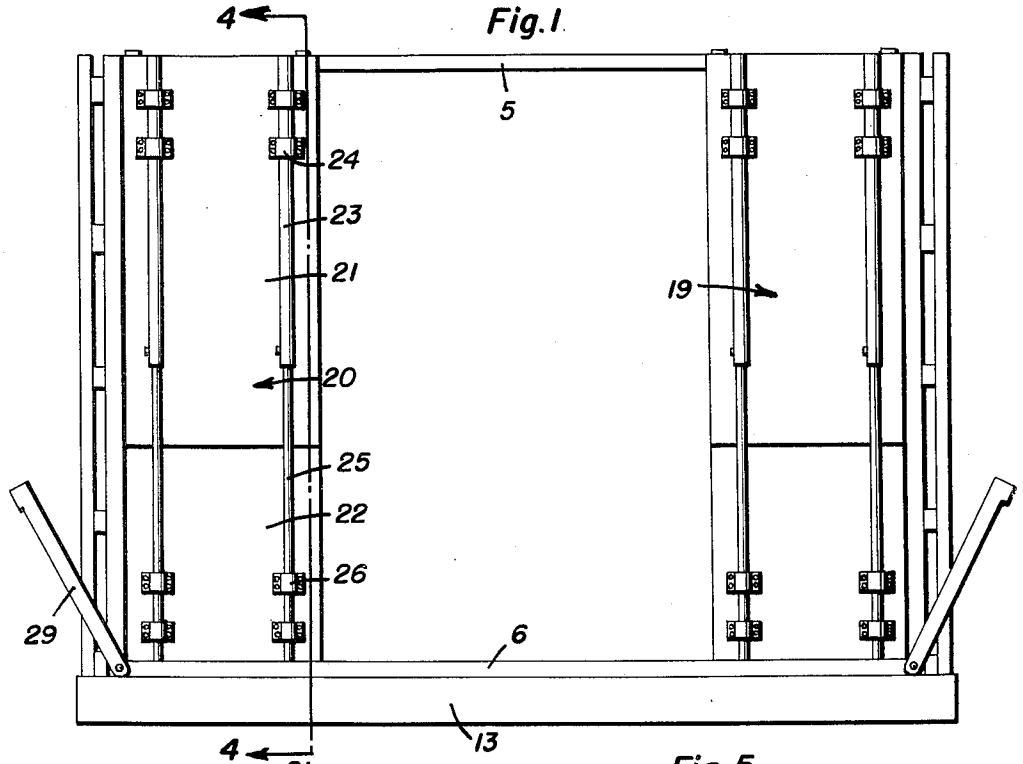


Fig. 4

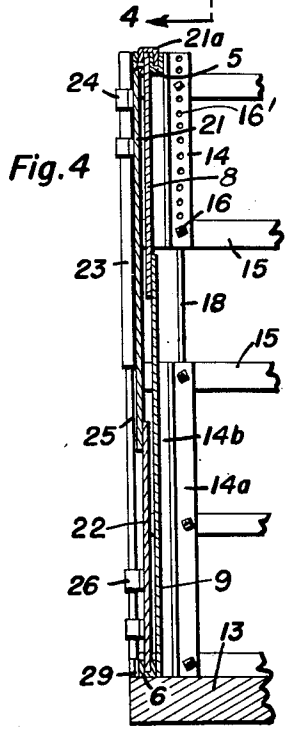


Fig. 5

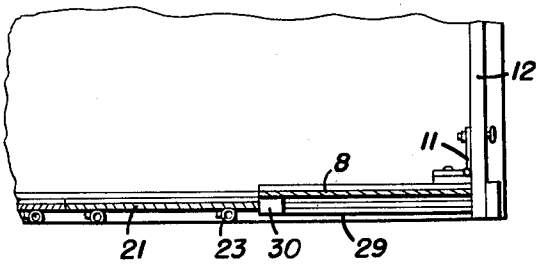
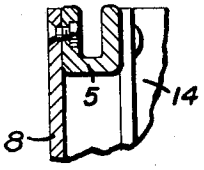


Fig. 6



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ADJUSTABLE END GATE FOR TRUCKS

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Fig.2

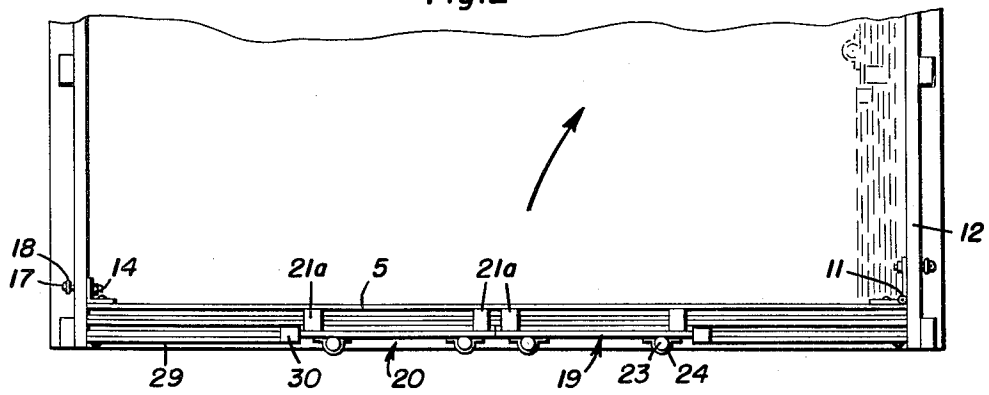


Fig.3

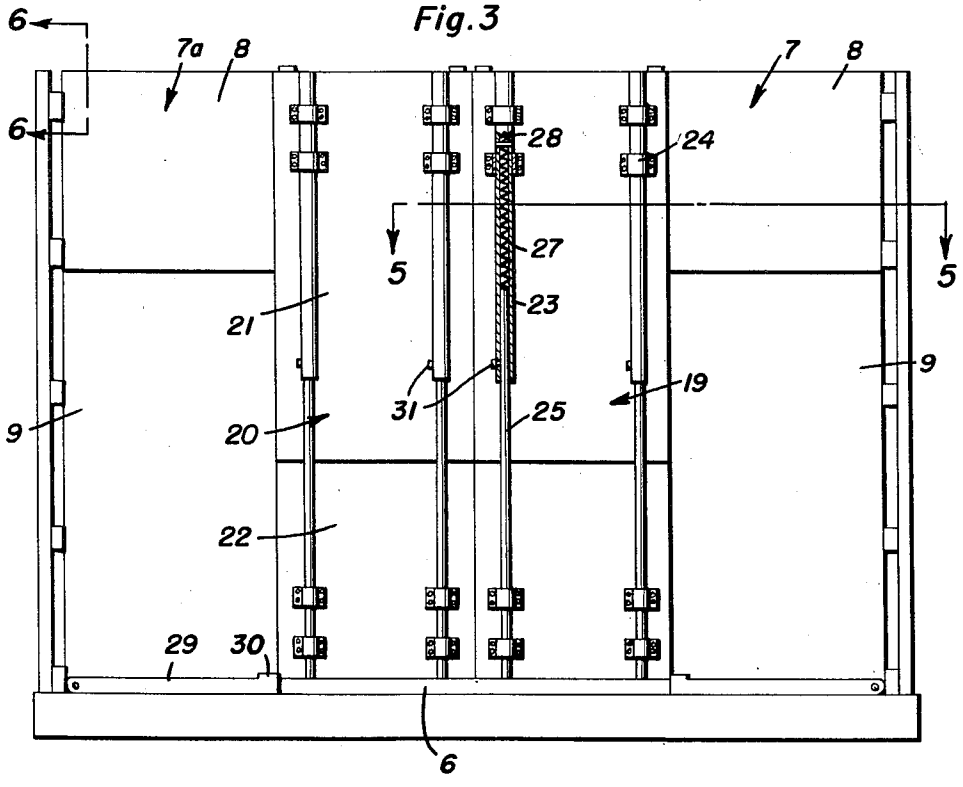
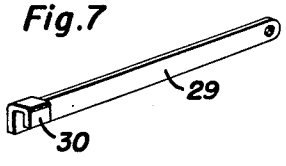


Fig.7



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ADJUSTABLE ENDGATE FOR TRUCKS

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5 Claims. (Cl. 296—51)

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The present invention relates to new and useful improvements in end gates for trucks and more particularly to an end gate for use with open or other type of truck or vehicle bodies and embodying means for adjusting the height of the end gate according to the size of the vehicle body.

An important object of the invention is to provide an end gate composed of stationary side panels and sliding center panels or doors for closing a central opening in the end gate.

Another object of the invention is to provide an end gate which is swingable on hinges at one side of the truck body whereby the entire end gate may swing inwardly of the truck, when desired.

A still further object is to provide a device of this character which is simple and practical in construction, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a rear elevational view, showing the sliding panels or doors open;

Figure 2 is a top plan view showing the sliding panels closed;

Figure 3 is a rear elevational view showing the sliding panels closed and with parts broken away and shown in section;

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 1;

Figure 5 is a fragmentary horizontal sectional view taken on a line 5—5 of Figure 3;

Figure 6 is an enlarged fragmentary sectional view of the upper channel track taken on a line 6—6 of Figure 3; and

Figure 7 is a perspective view of one of the locking bars for the doors.

Referring now to the drawings in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numerals 5 and 6 designate upper and lower channel-shaped tracks both facing upwardly, and to the ends of which a pair of stationary sheet metal side or end panels designated generally at 7 and 7*a* are suitably secured. Each side or end panel 7 and 7*a* includes an upper sheet metal panel 8 which is preferably bolted at its front surface, as at 8', to the upper track 5 and a lower

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sheet metal panel 9 which is welded at its rear surface to the lower track 6, and with the upper and lower panels overlapping each other and free at their adjacent edges to permit vertical sliding adjustment of the upper panel relative to the lower panel.

Hinges 11 connect the upper and lower panels 8 and 9 of side or end panel 7 to one side 12 of a truck body and with the lower track 6 positioned substantially close to the floor 13 of the body so that the upper and lower tracks 5 and 6 and the stationary side or end panels 7 and 7*a* may swing inwardly as a unit at one side of the truck body, as shown by dotted lines in Figure 2 of the drawing.

The outer edges of upper and lower panels 8 and 9 of side or end panel 7*a* are provided with upper and lower vertical angle iron members 14 and 14*a* which are secured to the slats 15 at the adjacent side of the truck body by nut equipped bolts 16 the nuts having eyes 17 at their outer ends which pass through openings (not shown) in the slats to receive a locking rod 18 which passes downwardly through the aligned eyes to lock the free end of the end gate to the truck body. A spacing strip 14*b* is secured between lower panel 9 and angle iron member 14*a* to compensate for the width of upper track 5 in order to aline the upper and lower angle iron members with each other. The angle iron members 14 are provided with vertically spaced bolt holes, as at 16', through which the bolts 16 are insertable selectively for vertical sliding adjustment of the panels 7, 7*a*.

A pair of sliding doors are shown generally at 19 and 20, each sliding door including an upper sheet metal panel 21 and a lower sheet metal panel 22 having their adjacent edges positioned in overlapping relation to each other. Hanger hooks 21*a* are attached to the upper edges of upper door panels 21 and slide in upper track 5 to close the opening between side or end panels 7 and 7*a* and lower door panels 22 slide in lower track 6.

A pair of tubes 23 are secured in a vertical position to the outer surface of the upper sliding door panels 21 by means of metal loops 24 and a pair of rods 25 are secured in a vertical position to the lower sliding panels 22 by metal loops 26 and with the tubes 23 telescoping or sleeved over the upper ends of the rods 25. Coil springs 27 are positioned in the tubes 23 with their upper ends engaging a cross pin 28 in the upper ends of the tubes and with their lower ends bearing against the upper ends of rods 25

to hold the upper sliding panels 21 in a raised position for traveling in the upper track 5 while the lower panel 22 travels in the lower track 6. Set screws 31 hold the tubes 23 in vertically adjusted position on rods 25 to maintain the hangers 21*a* in the upper track.

A locking bar 29 is provided for each of the sliding doors 19 and 20, one end of the locking bars being pivoted adjacent the ends of lower track 6 for vertical swinging movement and the free ends of the locking bars are formed with a channel member 30 for entering the channel of the track 6 to engage the outer edge of the adjacent sliding door to lock the same in a closed position at the center of the gate and to close the opening formed between the stationary panels 7 and 7*a*.

By attaching the end gate in position to a truck body, as indicated, the sliding doors 19 and 20 close the opening between the stationary side panels 7 and 7*a* and are locked in closed position by swinging the locking bars 29 downwardly to engage the outer edges of the sliding doors, as shown in Figure 3.

When locking bars 29 are swung outwardly, the doors 19 and 20 are free to slide in front of the stationary side panels 7 and 7*a* as shown in Figure 1, to open the doors, and the entire end gate may swing inwardly on hinges 11 against one side of the truck body by withdrawing the locking rod 18 from the eyes 17.

The upper panels of both the stationary panels 7 and 7*a* of the doors 19 and 20 being slidable vertically enables the vertical adjustment of the end gate to a desired height to fit in various types of truck bodies.

In view of the foregoing description, taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. An end gate for a vehicle body comprising upper and lower horizontal tracking bars, upper and lower panels fixed respectively to the end portions of the upper and lower bars at opposite sides of the body to provide a central opening in said gate, means securing the upper and lower panels to the sides of the vehicle body in vertically adjusted overlapping position relative to each other, and doors slidable horizontally on the bars to open and close the opening.

2. An end gate for a vehicle body comprising upper and lower horizontal tracking bars, upper and lower panels fixed respectively to the end portions of the upper and lower bars at opposite sides of the body to provide a central opening in the gate, means securing the upper and lower panels to the sides of the vehicle body in vertically adjusted overlapping position relative to each other, and automatically vertically extensible doors mounted for horizontal sliding movement on said bars to open and close the opening.

3. An end gate for a vehicle body comprising upper and lower horizontal tracking bars, upper and lower panels fixed respectively to the end portions of the upper and lower bars at opposite sides of the body to provide a central opening in said gate, means securing the upper and lower panels to the sides of the vehicle body in vertically adjusted overlapping position relative to each other, and doors slidable horizontally on the bars to open and close the opening.

4. An end gate for a vehicle body comprising upper and lower horizontal tracking bars, upper and lower panels fixed respectively to the end portions of the upper and lower bars at opposite sides of the body to provide a central opening in said gate, means securing the upper and lower panels to the sides of the vehicle body in vertically adjusted overlapping position relative to each other, and doors slidable horizontally on the bars to open and close the opening and comprising respectively upper and lower door panels and spring means holding the upper door panels raised in tracking engagement with the upper bar.

5. An end gate for a vehicle body comprising upper and lower horizontal tracking bars, upper and lower panels fixed respectively to the end portions of the upper and lower bars at opposite sides of the body to provide a central opening in said gate, means securing the upper and lower panels to the sides of the vehicle body in vertically adjusted overlapping position relative to each other, doors slidable horizontally on the bars to open and close the opening and comprising respectively upper and lower door panels, vertical telescoping bars carried by the upper and lower door panels, and spring means housed in said bars and holding the upper door panels raised in tracking engagement with the upper bar.

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