

END GATE.

1,371,036.

2 SHEETS—SHEET 1.

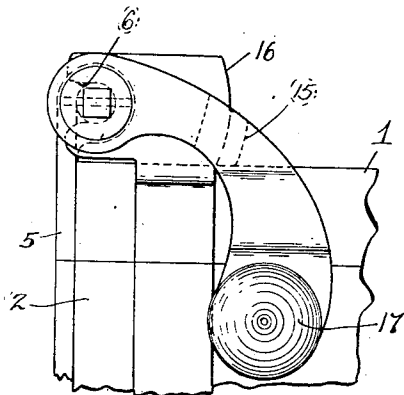
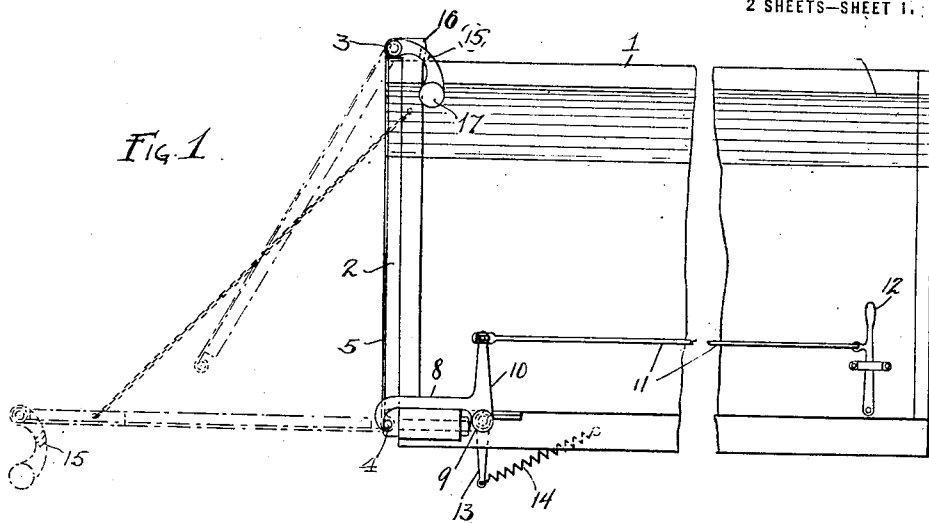


Fig. 3

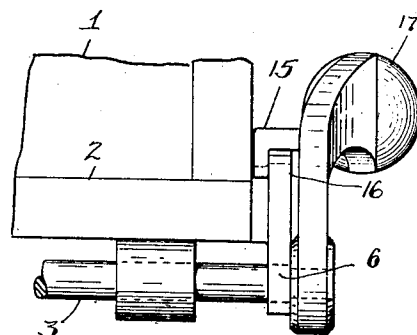


Fig. 4

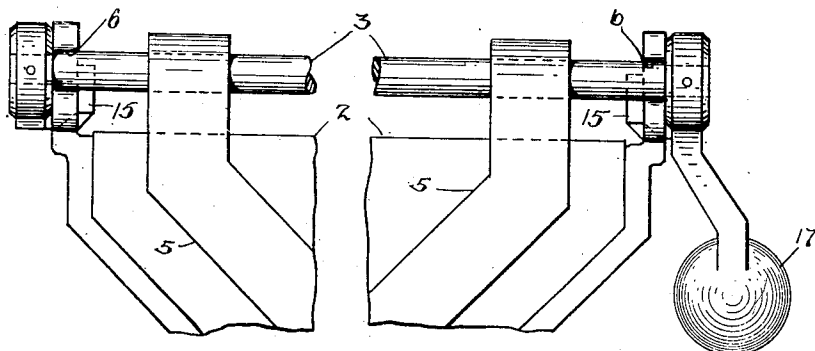


FIG. 2

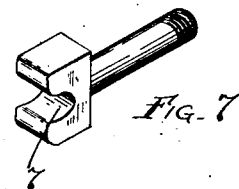
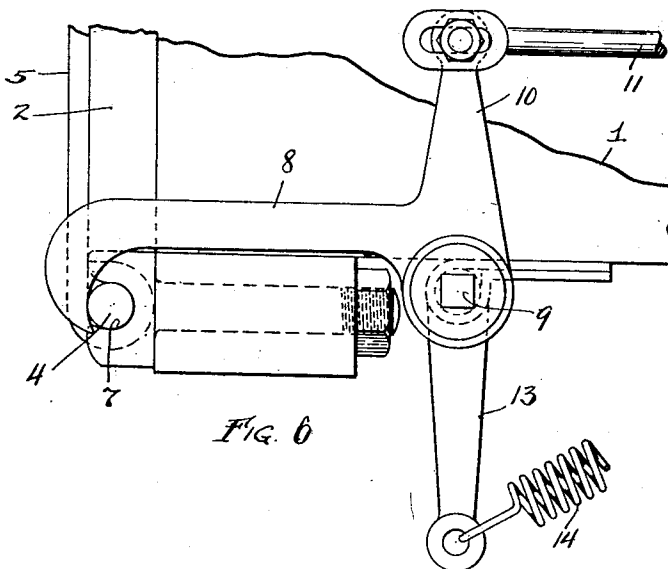
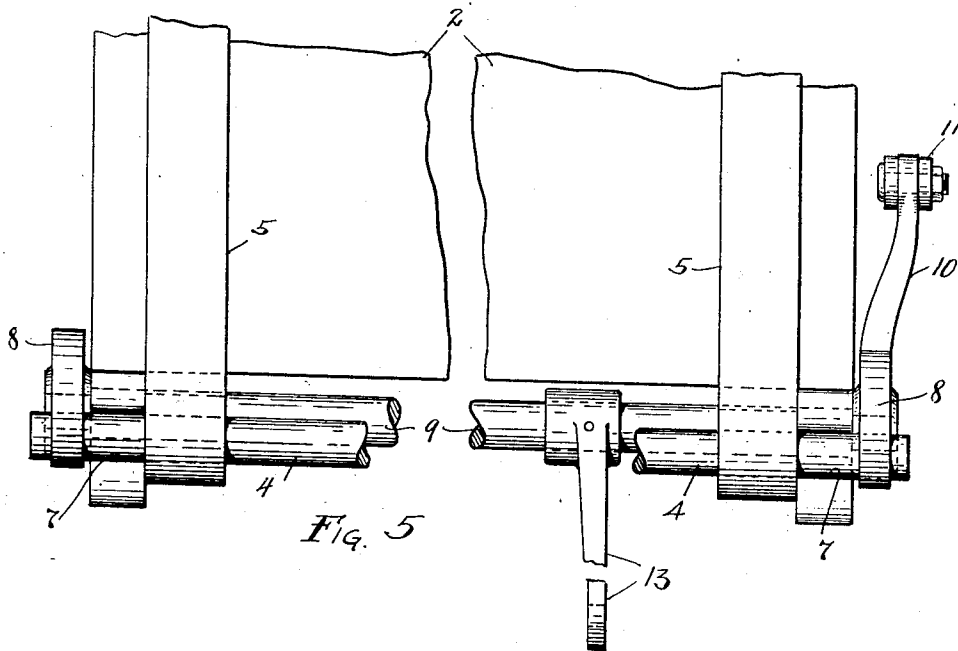
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D. E. LE FORCE,
 END GATE.
 APPLICATION FILED FEB. 17, 1919.

1,371,036.

Patented Mar. 8, 1921.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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END-GATE.

1,371,036.

Specification of Letters Patent.

Patented Mar. 8, 1921.

Application filed February 17, 1919. Serial No. 277,396.

To all whom it may concern:

Be it known that I, DARRELL E. LE FORCE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in End-Gates, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present improved construction of end-gate has as its main object the provision of one that will be especially suited for use with a tilting type of body, such as is frequently used on power trucks for the handling of bulk materials. A further object of the invention is to provide an end-gate which may be optionally swung from either its upper or lower end, and one that may be readily operated to open in either fashion indicated, and at the same time be securely retained in its closed position.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims, the annexed drawings and the following description setting forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—

Figure 1 is a broken side elevational view of a body equipped with my improved construction of end-gate, the latter being shown in full lines in its closed position, and in dotted lines in each of its two possible open positions; Fig. 2 is a rear elevational view of the upper portion of such end-gate on a larger scale; Figs. 3 and 4 are respectively a side elevation and a plan view of such upper end of the gate; Fig. 5 is a rear elevation of the lower portion of the gate on a larger scale; Fig. 6 is a side elevation of the same; and Fig. 7 is a perspective view of a detail.

The form and size of the body 1, of course, are matters of indifference. The gate 2, proper, is also of familiar construction, whether made of metal or wood, but differs from prevailing constructions in the manner in which it is hung. Thus trans-

verse rods or shafts 3 and 4 are attached to its upper and lower ends respectively, being secured thereto by means of a pair of vertical straps 5 formed at their projecting extremities with loops in which said shafts are held. The ends of these shafts project beyond the sides of the gate so as to be received in open sockets 6 and 7, respectively, of the form best indicated in Fig. 7, which illustrates one of the sockets 7 at the lower end of the body for receiving the corresponding shaft 4.

This lower shaft is held in such sockets 7 by means of latches 8 that have ends formed to hook over the shaft, such latches being mounted on a shaft 9 oscillatorily secured to the under side of the body, and the one being provided with an angularly related arm 10, that is connected by means of a rod 11 to an operating lever 12 at the forward end of the body, as shown in Fig. 1. There is also provided on shaft 9 an oppositely projecting arm 13 that is connected by a tension spring 14 to the body in such fashion as to normally hold the latches 8 in their operative position. The ends of the latter are beveled so that the shaft 4, striking thereagainst when the door swings shut, will raise the latches sufficiently to allow the shaft to seat in the sockets 7, whereupon the latches close over the shaft, as will be readily understood.

In the case of the upper shaft 3, latches 15 are mounted thereon adapted to engage with suitable projections 16 on the sides of the vehicle body, as best shown in Fig. 4. When the latches are thus in engagement with the corresponding catches, this upper shaft is securely held in the sockets 6, and, the straps 5 being rotatable about the shaft 3, the door is free to swing as indicated by the upper dotted position on Fig. 1. It will be allowed thus to swing when the body is tilted in order to dump the same, by simply releasing the latches 8 that engage the lower shaft. When, however, it is desired to use the gate as a platform, latches 15 are swung so as to release the shaft from the sockets, whereupon the gate may be dropped into the lower position shown in dotted outline in Fig. 1, it being understood that it will be retained in this position by suitable chains or like flexible means connecting the same with the body. In order to facilitate the oscillation of the shaft 3 to release the same in the

manner just described, one of the latches 15 is provided with a weighted extension in the form of a ball 17 that at the same time provides a convenient handle, so that by grasping the same and rotating the shaft in a counter-clockwise direction, the upper end of the gate is released.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A closure for a vehicle body or the like, comprising a gate selectively swingable at its upper or lower edge, a combined pivot and latch-actuating shaft rotatably mounted parallel to the upper edge of said gate, a pivot shaft immovably held parallel to the lower edge of said gate; cooperating latch elements upon the vehicle body and said upper shaft; open pivot sockets upon said vehicle body for the ends of the respective upper and lower pivot shafts; latch mechanism upon said vehicle body for engaging the outer ends of said lower shaft when they are seated in said sockets, a tension spring normally retaining said mechanism in operative position, beveled faces on the free ends of said

latches permitting the automatic latching of the gate, and operating means to swing said latches and release the lower shaft.

2. A closure for a vehicle body or the like comprising a gate selectively swingable at its upper or lower edge, a pivot shaft rotatably mounted at the upper edge of said gate, latch elements fixed to the ends of said pivot shaft one of said latch elements being formed with a weighted handle, projections on said vehicle body cooperating with said latch elements; a pivot shaft immovably held parallel to the lower edge of said gate; open pivot sockets upon said vehicle body for receiving the ends of the respective upper and lower pivot shafts; a latch shaft mounted on said vehicle body parallel to the lower pivot shaft and adjacent thereto when said shaft is seated in said sockets; latch arms fixed to the ends of said latch shaft and adapted to engage the lower pivot shaft when seated in its sockets; operating arms fixed to said latch shaft at one end and centrally thereof, a tension spring mounted on the vehicle and connected to one of said operating arms and manual means connected to the other operating arm to swing said latch arms and release the lower shaft.

Signed by me this 15th day of February, 1919.

DARRELL E. LE FORCE.