To all whom it may concern:

Be it known that I, WILLIAM C. ANTHONY, a citizen of the United States, residing at Streator, in the county of La Salle and State of Illinois, have invented a certain new and useful Improvement in Body Supports and Locks, of which the following is a specification.

My invention relates to dumping bodies for vehicles and the like and primarily to supporting and locking mechanisms for the same. One object of my invention is to provide a mechanism which will support and lock the body in the horizontal position. Another object of my invention is to provide a mechanism for supporting the body in the tilted or dumping position. Other objects of my invention will appear from time to time throughout the specification and claims.

My invention is illustrated more or less diagrammatically wherein:

Figure 1 is a side elevation of my body in the horizontal position;  
Figure 2 is a side elevation of my body in the dumping position;  
Figure 3 is a vertical section on the line 3 3 of Fig. 1;  
Figure 4 is a section on the line 4 4 of Fig. 2;  
Figure 5 is a section of Fig. 4 at line 5 5 on an enlarged scale;  
Figure 6 is a vertical section on line 6 6 of Fig. 3;  
Figure 7 is a horizontal section on line 7 7 of Fig. 3.

Like parts are indicated by like characters throughout.

A is the frame of a truck. B is the running gear. C is a rack mounted on said truck frame and adapted to cooperate with the cam C′ which is secured to the bottom of the body frame C″ upon which is mounted the body C″. C′ is an eccentrically hung tail gate. C″ is a rod mounted for rotation in the rear of the body frame carrying the hooks C′′-C′′′ adapted to hold the tail gate closed. C′ is an arm mounted on the shaft C′ and adapted to contact a part of the running gear of the truck to open the tail gate automatically when the body has reached the proper inclination. C″ is a lever arm mounted on the shaft C″ connected by the rod C″ to the lever arm C″″ by means of which the tail gate may be opened manually at the will of the operator.

D is a subdividing gate removably mounted within the body on the bearings D₁-D₁′. It is eccentrically hung on the rod D² and is adapted to be opened by the lever D₃. D₄ is a counterweight which causes the rod D₀ to rotate in a direction opposite from which it has been pulled by the operator. D₅ is a chain fastened to the upper end of the lever D₄ by means of which the operator may open the gate D at will.

E is an A-shaped frame support for the forward end of the body. It is secured to the upper flange A of the channel section of the truck frame A. The extensions E₁-E₃ of the frame E rest on the upper surface of the truck frame. The lugs E₄-E₅ project under the flanges A₋-A₁ and are screw threaded for the set screws E₆-E₇ which bear against the lower surface of the flanges A₋-A₁, thus securing the frame E to the truck frame. E₈-E₉ are U bolts passing through the extensions E₁-E₃ of the frame E and about the truck frame members A₋-A. E₁₋-E₃ are ears projecting from the extensions E₁₋-E₃ and perforated to receive the ends of the chains E₋-F. The upper surface of the frame E is provided with the lug E₉.

G is a locking and controlling lever pivoted at G₀ on the frame E and provided with the upper extension G₂ adapted for use as a controlling handle. G₂ is a lateral web on the handle G and carries on its lower surface the raised portion G₃. G₄ is an arc guide secured in the handle G and projecting through a hole G₁₁ in the frame E. G₁ is a stop on the member G. G₄ is a spring bearing against the frame E and adapted normally to hold the handle G in the position shown in Fig. 6. G₅ is a lateral projection from the web G₂ and is perforated at G₁₂.

H is a hook receiving member secured to...
the forward angle of the body frame C. It is provided with the forward extension H which carries in its upper surface the raised portion H' adapted to cooperate with the similar raised portion G' in the lower surface of the web G. H' is an extension from the part H perforated at H" and adapted to fall beneath the perforation G" of the part G when the parts are in the position shown in Figs. 1, 3, 6, and 7. I is a pin adapted to penetrate and lie within the two holes. J is a chain by means of which the pin I is controlled. H' is a pocket in the rear of the member H into which the lug E" is adapted to penetrate, J' being a mount on the truck frame at J" for rotation and its upper end carries the hook J' which is provided with the raised portion J" and the upper extension or handle J' by means of which the prop may be withdrawn from the body when it is desired to let the body return to the horizontal position. K is a recess on the upper surface of the projection H' of the member H which is adapted to cooperate with the part J' of the hook J' to keep the prop in the position shown in Fig. 2, and to prevent the parts from accidentally slipping out of contact. L"-L are springs fastened to the chains E-F and adapted to cooperate with them to cushion the shock as the body moves from the horizontal to the dumping position.

The use and operation of my invention are as follows:

Normally, when the body is being loaded and until it is desired to dump it the relation of the parts is that shown in Fig. 1. The forward end of the body with the load rests upon the A-shaped frame and the lug in that frame projects into the pocket in the member H thus preventing lateral displacement of the parts. The handle which is pivoted to the A frame is pulled toward the body by its spring so that the web extending rearwardly from the handle overlaps the portion H' and the raised surfaces on the two cooperate to prevent lateral displacement. The web of the handle of course prevents the body from tipping so long as the relation of the parts is that shown in Fig. 1 or Fig. 6. In order to provide against any accidental displacement of parts these two cooperating members, that is the web on the handle and the web extending forward from the body frame, are both perforated and a pin is dropped into the perforations. In this position the body may be loaded and driven about to the place where it is desired to dump the load.

While the body is in the horizontal position the prop J rests against its forward end. Automatically it will rest in that position by means of gravity alone. In some situations it might be desirable to provide a spring J' to pull this prop rearwardly. When it is desired to dump the body the pin which holds the webs in fixed relation is removed. The locking handle is moved forward and the body being free from the web on the handle, tips and the rear tail gate is opened either automatically or at the will of the operator. When this takes place the rear portion of the load will of course be discharged and the forward portion of the load which is held in place by the dividing gate will ordinarily cause the body to return again to the horizontal position, and would thus make impossible a further automatic discharge of that portion of the load. In order to prevent this and to maintain the body in the tilted position until such time as it is desirable to dump the remainder of the load, I provide the body prop above mentioned. As the body moves to the dumping position this prop is held against it and when the body has reached a sufficient inclination the hook on the end of the prop falls into place and remaining there holds the body in the position shown in Fig. 2, even after the discharge of the rearward portion of the load. When now it becomes desirable to dump the remainder of the load, the subdividing gate is opened and when the load has been discharged the body prop is pulled out from under the body and the body automatically returns to the horizontal position and both of the gates are automatically closed. The position of the parts is then again that shown in Fig. 1 and as a precautionary measure the pin is again put in place as indicated in Fig. 3.

It will be understood that many changes might be made in the form and dimensions of the parts shown, for example the spring adapted to pull the body prop into position might be omitted; the springs adapted to cushion the rearward movement of the body might be omitted; the pin adapted to fasten the locking members together might be omitted. These, and many other changes might be made both in size and arrangement of parts without materially departing from the spirit of my invention. I wish, therefore, that my showing be regarded as in a sense diagrammatic.

I claim:

1. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the untipped position and to support the body in the tipped position, said assembly including a pivoted locking member adapted normally to hold the body in the untipped position, and a second pivoted member adapted to support
the body in the tipped position, each of said pivoted members mounted upon said vehicle alone.

2. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the tipped position and to support the body in the untipped position, said assembly including a pivoted locking member adapted normally to hold the body in the untipped position, and a second pivoted member adapted to support the body in the tipped position, each of said pivoted members mounted upon said vehicle, and in combination with said first locking member, an additional safety locking member.

3. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the tipped and the untipped position, said assembly including a fixed support for the untipped position, and a locking part fixed to said body and a locking handle pivoted on said fixed support and adapted to cooperate with the locking member on said body to hold the body in the untipped position.

4. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the tipped and the untipped position, and a spring adapted normally to hold said locking handle in the locking position.

5. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the tipped and the untipped position, said assembly including a fixed support for the untipped position, a locking part fixed to said body and a locking handle pivoted on said fixed support and adapted to cooperate with the locking member on said body to hold the body in the untipped position, and a spring adapted normally to hold said locking handle in the locking position and a pin adapted to pierce said perforations and to lock the body against movement.

6. The combination with a vehicle of a dumping body mounted thereon and adapted to be tipped with relation thereto, of a locking and supporting assembly adapted to lock and support the body in the tipped and the untipped position, said assembly including a fixed support for the untipped position, said supporting member detachable from vehicle and extending above said vehicle.

7. The combination with a vehicle having a channel section frame of a body mounted on said frame and adapted to tip with relation thereto, of a locking and supporting assembly mounted on said frame and adapted to lock and support said body in a horizontal or tipped position, said assembly including a fixed supporting member adapted to support said body in the untipped position, said member adapted to grip the channel section of said vehicle frame on its upper and lower surfaces.

8. The combination with a vehicle having a channel section frame, of a body mounted on said frame and adapted to tip with relation thereto, of a locking and supporting assembly mounted on said frame and adapted to lock and support said body in a horizontal or tipped position, said assembly including a fixed supporting member adapted to support said body in the untipped position, said member adapted to grip the channel section of said vehicle frame on its upper and lower surfaces, and additional means for securing said member to said frame comprising means encircling said frame.

9. A supporting and locking means for a tipping vehicle body comprising a locking member secured to said body, said member having in its under side a pocket and a laterally projecting perforated portion, a supporting member on said vehicle adapted to contact said locking member, a projection in the under surface of said supporting member adapted to penetrate within the pocket in the under side of said locking member, a locking handle pivoted on said supporting member and adapted to engage the upper surface of said locking member, a lateral projection from said locking handle adapted to overlie the lateral projection of said locking member and perforated to correspond to the perforation in said member, a spring adapted normally to hold said locking handle in the locking position and a pin adapted to project through said perforations.

10. A supporting and locking means for a dumping vehicle body comprising a locking member on said body, said member provided on its under surface with a depression, a projection and a perforation, a pivoted supporting and locking member on said vehicle, said member provided at its upper end with a hook adapted to contact the under
surface of said locking member and to penetrate within the depression thereof, a controlling handle attached to said supporting member.

11. The combination with a vehicle and a dumping body mounted thereon and adapted to tip with relation thereto, of a checking mechanism adapted to cushion the shock of the tipping of said body, said mechanism comprising one or more chains secured at one end to said vehicle and at the other to said body, and a spring secured at one end to said body at a point distant from the end of said chain and at the other end to a point intermediate the ends of said chain.

Signed at Streator, county of La Salle and State of Illinois, this 14th day of April, 1920.

WM. C. ANTHONY.