March 13, 1962 J. N. DODGEN 3,024,932

COMPARTMENTED FEED BODY

Filed July 10, 1959

FIG. 1

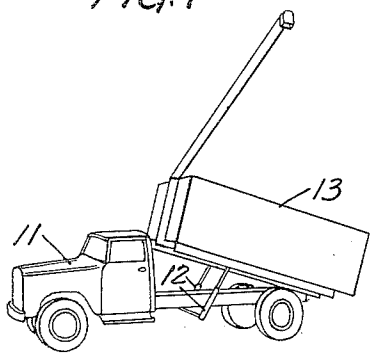


FIG. 4

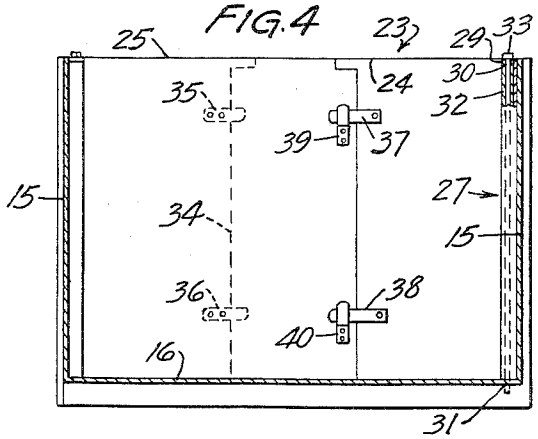


FIG. 2

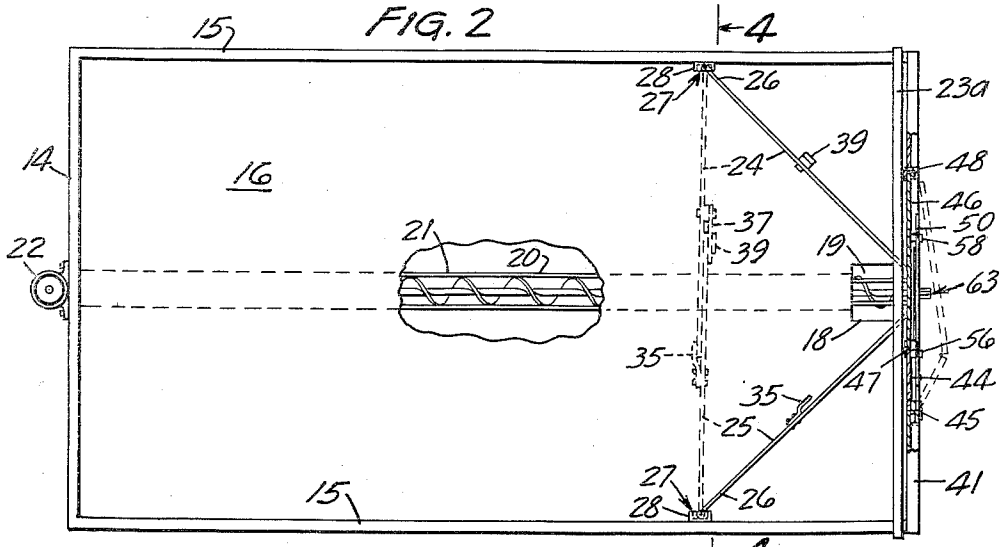


FIG. 3

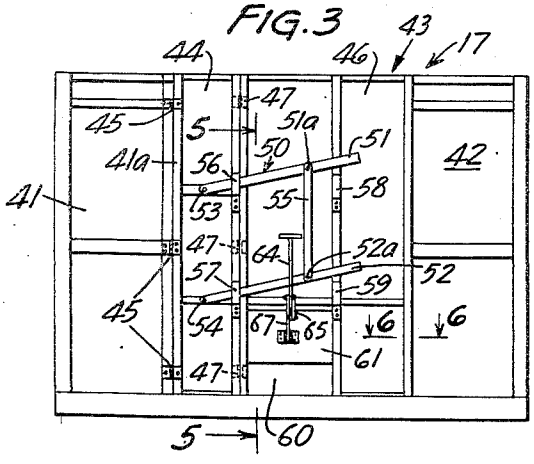


FIG. 5

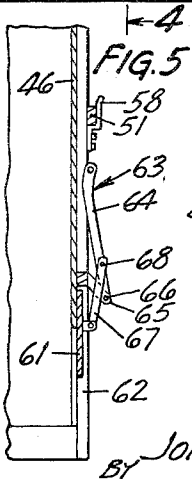
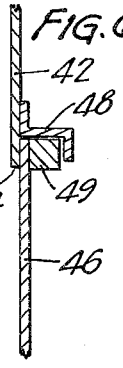


FIG. 6



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United States Patent Office

3,024,932

Patented Mar. 13, 1962

3,024,932

COMPARTMENTED FEED BODY

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Filed July 10, 1959, Ser. No. 826,291

4 Claims. (Cl. 214—519)

This invention relates to feed body structures and more specifically to multi-compartmented feed body structures.

It is often times desirable to have tiltable feed body structures arranged in compartments to permit different material to be transported and also constructed to permit rapid discharge of the material from each compartment separately. There are no known dual purpose multi-compartmented feed body structures whereby grain may be stored in one compartment and discharged in another and where grain can be discharged easily and rapidly without necessitating shovelling.

Some tiltable feed body constructions have rear door means for permitting access to the interior of the feed body when, for example, the feed body is parked at a loading dock. However, it is often necessary to discharge directly through the rear of the feed body. The rear doors of conventional feed body structures are too large to permit controlled discharge of the material therefrom and there are no known tiltable feed body constructions having rear doors incorporating controlled discharge outlet means. The present invention is directed towards providing a structure which overcomes these problems.

An object of my invention is to provide a new and improved multi-compartmented feed body of simple and inexpensive construction and operation.

Another object of my invention is the provision of a feed body with a novel apparatus for cooperatively and successively defining multiple compartments in the body and providing for ready and easy discharging of grain and the like from one of the compartments.

A further object of my invention is to provide a new and improved feed body having a walk-in access means which access means is also provided with a controllable discharge outlet.

These and other objects and advantages of my invention will more fully appear from the following description, made in connection with the accompanying drawings, wherein like reference characters refer to the same or similar parts throughout the several views, and in which:

FIG. 1 is a perspective view of the tractor incorporating my compartmented feed body structure;

FIG. 2 is a top plan view of the compartmented feed body with certain parts broken away and other parts shown in different positions by dotted lines;

FIG. 3 is a rear elevational view of the feed body showing the novel rear door and discharge gate showing the details of the rear door and discharge gate;

FIG. 4 is a cross sectional view of the feed body taken on lines 4—4 of FIG. 2 with parts of the hinge means broken away to more fully illustrate the details thereof;

FIG. 5 is a vertical section taken on lines 5—5 of FIG. 3 and looking in the direction of the arrows; and

FIG. 6 is a transverse section taken on lines 6—6 of FIG. 3 and looking in the direction of the arrows.

In the embodiment shown a dump truck or tractor **11** has a pair of lifting rams **12** for alternately raising and lowering feed body **13**. Feed body **13**, as shown, is an open top receptacle having an upright front wall **14**, spaced upright side walls **15**, a bottom or floor **16** and a rear wall structure **17**. The bottom or floor **16** is provided with an outlet **18** located adjacent the rear wall structure **17** and spaced inwardly from the side walls **15**. A chute or hopper **19** is disposed beneath outlet

18 and communicates with horizontal conveyor tube **20**. The horizontal conveyor tube **20** is centrally located and secured to the bottom side of floor **16** and houses an auger type conveyor **21**. Conveyor tube **20** terminates forwardly in an adjustable upright portion **22** which has a discharge spout for permitting grain to be discharged therethrough.

Body structure **13** is provided with a divider wall assembly **23** which separates the feed body structure into compartments and alternately functions as a funnelling means to facilitate the discharge of grain therefrom. Divider wall assembly **23** includes a pair of upright substantially planar panels **24** and **25** which have their respective outer edges **26** each secured to a side wall **15** by means of vertical hinges **27**. Each of the vertical hinge means **27** includes an upright channel member **28** secured to the inner surface of its respective side wall **15** and also includes a bracket member **29**. Bracket member **29** is secured to the upper edge of wall **15** and has an opening **30** which is in substantial alignment with channel **28**. Floor member **16** is provided with an opening **31** which is aligned with opening **30**. The outer edge **26** of each of the panel members has a sleeve **32** attached thereto which is received within channel member **28**. An elongated pin **33** is passed through opening **30**, sleeve **32**, and opening **31** to thereby secure each of the panel members in grain sealing relation with its respective side wall **15**. Panels **24** and **25** are therefore hingedly secured to their respective side walls **15** for rearward swinging into funnelling relation with outlet **18**.

FIG. 2 shows the inner portions of panels **24** and **25**, in dotted lines, being substantially parallel and in overlapping abutting relationship which in effect divides the feed body into separate compartments. When in this position panel **24** has an inner edge **34** which is received within a pair of socket assembly members **35** and **36** which in turn are secured to the front surface of panel **25**. Panel **25** has latch bars **37** and **38** pivotally secured to its rear surface and which are received in latch bar keepers **39** and **40**. Latch bar keepers **39** and **40** are secured to the rear surface of panel **24**. It will thus be seen that panels **24** and **25** respectivly are releasably secured in the overlapping abutting relationship to thereby divide feed body structure **13** into separate compartments.

Another aspect of my invention is the provision of a walk-in access means which is provided with a controllable discharge outlet. It will be seen in FIG. 2 that rear wall structure **17** has an opening formed therein which thereby defines rear wall sections **41** and **42**. Rear wall sections **41** and **42** each have upright inner free edges **41***a* and **42***a* respectively. A door assembly **43** provides a closure for opening and includes a first door section **44** hingedly secured to the edge **41***a* by a vertical hinge means **45**. A second door section **46** is hingedly secured to the outer edge of the first door section **44** by means of a vertical hinge or pivot **47**. The free edge **42***a* of rear section **42** is provided with a channel **48** which receives an upright edge **49** of second door section **46**. This channel section **48** provides a grain sealing closure for door assembly **43**. Door assembly **43** is further provided with a locking apparatus **50** for releasably locking door assembly **43** in a closed condition. Locking apparatus **50** includes a pair of locking bars **51** and **52** which are secured to the rear wall section **41** as at **53** and **54** for vertical swinging movement. A link **55** is pivotally connected to locking bars **51** and **52** as at **51***a* and **52***a* to thereby permit simultaneous upward swinging of the two locking bars. The rear wall section **41** is also provided with a pair of guiding strap members **56** and **57** which permit limited

vertical movement of locking bars 51 and 52 respectively. A pair of locking bar receiving brackets 58 and 59 are secured to the second door section 46 and receive locking bars 51 and 52 respectively when the door assembly is in locked condition.

The second door section 46 is provided with an opening 60 adjacent the floor 16. A vertically slidable gate member 61 has its edges disposed in a pair of guide channels 62 formed in second door section 46. The gate member 61 provides a closure for opening 60 and is slidable from a closed position to an open condition by an actuating apparatus 63. The actuating apparatus 63 includes a lifting lever 64 which is pivotally mounted at its lower end to an arm 65 as at 66. The other end of arm 65 is rigidly connected to the rear door section 46. A link 67 is pivotally attached as at 68 to lifting lever 64 intermediate the end thereof. The link 67 is also pivotally secured at 69 to gate 61. The gate 61 may be moved vertically by swinging lifting lever 64 upwardly about pivot 66 and gate 62 is held in an open or raised position by the over center locking of pivots 66 and 68. It will also be noted that opening 60 is positioned adjacent the outlet 18.

The panels 24 and 25 of divider wall assembly 23 will be releasably locked and closed in overlapping relation when the grain or the like is being transported. In this manner the divider wall assembly 23 functions to divide the feed body into separate compartments whereby grain and the like can be transported in the feed body structure. When the front end of feed body 12 is raised, the grain in the compartment to the rear of the divider wall compartment may be discharged through outlet 18 or opening 60. In the event that the compartment to the rear of the divider wall assembly 23 is loaded with material in bags or the like, the rear door assembly 43 provides a walk-in access means. After the rear compartment has been emptied, the latches 37 and 38 are pivoted out of engagement with keepers 39 and 40 and panels 24 and 25 are swung rearwardly until they abut the rear wall structure 17. It will be seen that the panels 24 and 25 are in funnelling relation with outlet 18 and opening 60. When it is desirable to unload directly through the rear of the feed body, outlet 18 is closed and gate 61 is then raised to thereby permit grain to be discharged through opening 60. In the event the grain is to be loaded into a bin from above, outlet 18, of course, is used so that the grain is moved by auger conveyor 21 through the adjustable upright portion 22 of conveyor tube 20. It is pointed out that several of these divider wall assemblies may be used in one feed body.

It will thus be seen from the preceding paragraphs that I have provided a new and improved feed body having dual purpose divider wall means which alternately functions as flow directing structure to permit rapid discharge of grain or the like from the feed body. Further I have provided a feed body structure with a novel rear door assembly having an outlet which permits the discharge of grain therethrough without the necessity of shovelling.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of my invention which consists of the matter shown and described herein and set forth in the appended claims.

What is claimed is:

1. An attachment for a tiltable feed body of the type having a feed outlet adjacent the rear portion thereof, the attachment comprising a pair of upright panels having lapped inner edges and having outer edges, a pair of hinging devices respectively secured to the outer edges of the panels and adapted for attachment to the respective side walls of the truck body to permit rearward swinging of the panels into funnelling relation with the grain outlet, and means for releasably securing the inner edges of the panel is lapped relation.

2. A tiltable feed body adapted for mounting on a truck or the like comprising an open top receptacle having front and rear portions and opposite side walls and having a feed outlet in the rear portion adjacent the bottom and spaced from said side walls into which the feed will flow when the front portion is tilted upwardly, a pair of upright panels extending between the side walls of the receptacle in grain sealing relation with each other and having outer edges, upright pivot means secured to the other edges of the panels and attached to the respective side walls of the truck to permit rearward swinging of the panels into funnelling relation with the grain outlet, and means for releasably securing said panels together in grain sealing relation with each other.

3. A tiltable feed body adapted for mounting on a truck or the like comprising an open top receptacle having front and rear portions and opposite side walls and having a feed outlet in the rear portion adjacent the bottom into which feed will flow when the front portion is tilted upwardly, a pair of upright panels having overlapping and generally parallel inner edge portions and having upright outer edges, upright pivot means secured to said outer edges and attached to the respective side walls of the truck body to permit rearward swinging of the panels into funnelling relation with the grain outlet, one of said panels having on the front side thereof socket means for receiving the inner edge portion of said other panels, and an interlocking apparatus on the rear side of said panels for preventing rearward swinging of said panels.

4. The structure as set forth in claim 3 wherein said feed body is provided with a trap beneath said feed outlet and conveyor means for carrying grain or the like from said trap.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,024,932 March 13, 1962

John N. Dodgen

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 16, for "is" read -- in --.

Signed and sealed this 26th day of June 1962.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents