May 12, 1953 C. A. CLARK 2,638,241

BOX COVER

Filed Aug. 1, 1951

Fig. 1.

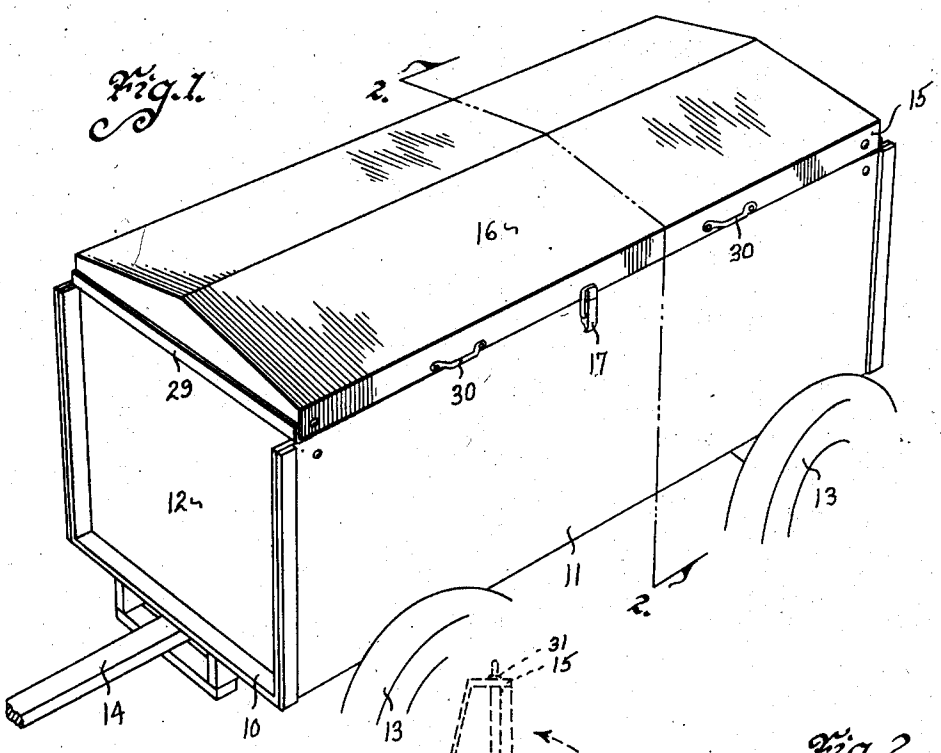


Fig. 2.

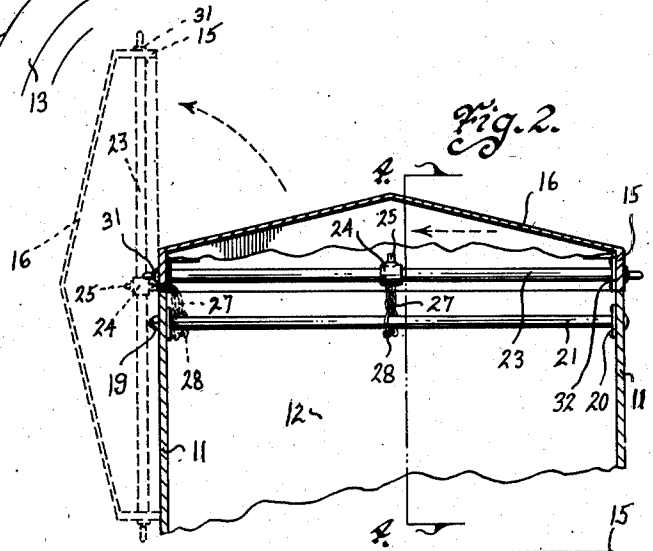


Fig. 3.

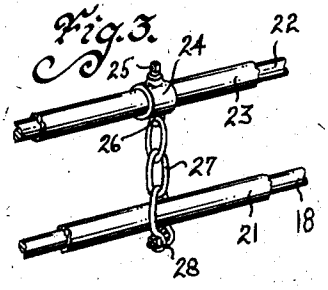
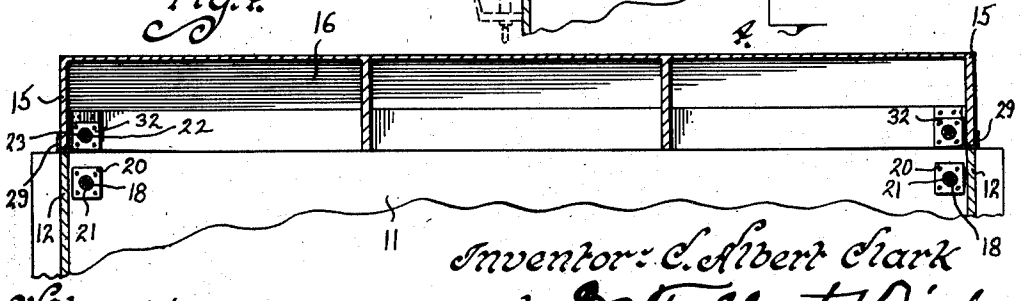


Fig. 4.



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BOX COVER

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1

My invention relates to box covers of the type preferably used on receptacles such as wagons, self-feeders or the like although it is not intended to limit it exclusively to such uses.

In farming operations when free flowing grains are loaded into a wagon box for delivery to a point distant from that at which it is loaded, it is generally the practice to place some covering over the grain not only to protect it from the elements but also to prevent any loss due to wind or the motion of the wagon while moving. Such covers are usually of canvas or the like and experience has demonstrated that it is not unusual to lose several bushels of grain from the load by having it blown or jostled from the wagon while in transit. While a more rigid and weatherproof top would be desirable, they are usually too bulky to handle, if detachable, or if not detachable, do not provide a means for the wagon box to be completely exposed without obstructions for the purpose of loading. Another use of a box cover in farming activities is found in self-feeders. These covers or tops are usually hinged on one end and open in a conventional manner. However, in high winds if the latch has been left unfastened, it frequently happens that the top will be blown open and the hinges broken or bent. These illustrations present but two situations in which my invention finds utility.

It is therefore the general aim of my invention to provide a top or cover for a depository such as a wagon, self-feeder or the like that is movably slidably mounted across the top thereof and secured by a flexible member so that when it is moved to either side respectively of the depository, it will drop over the side and be suspended thereat.

It is a further object of my invention to provide a box cover of the above class wherein the portion of the cover passing over the side of the wagon box or like can be selectively varied.

A still further object of my invention is to provide a cover for a wagon or the like having the above mentioned characteristics wherein the cover is of a rigid frame construction with a weather tight covering and is easily maneuverable by one person into and out of its operable position and when in its inoperable position leaves the wagon box completely exposed without any obstructions to the loading thereof.

Still further objects of this invention are to provide a cover of the type described that can be easily and quickly mounted on or removed from a wagon box or the like, that is economical in manufacture and efficient and durable in use.

2

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement, and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of my cover mounted on a wagon in locked position,

Fig. 2 is a cross-sectional view of this device taken on the line 2—2 of Fig. 1,

Fig. 3 is an enlarged fragmentary perspective view of one pair of cross rods used with my cover, and

Fig. 4 is a longitudinal section view of this invention taken on the line 4—4 of Fig. 2.

Referring to the drawings I have preferably used an ordinary open top wagon to illustrate the operation of my invention although its use is not limited to this one adaption. The wagon as shown in Fig. 1 has the bottom 10, side boards 11, end pieces 12, wheels 13 and the tongue member 14, all of which are standard parts. The wagon cover may be of any suitable design and preferably I make it from a rectangular rigid roof-like frame 15 having a covering 16 which may be sheet metal, canvas or any other suitable material. This cover or top is made to rest on the upper surfaces of the sides 11 and ends 12 so that it encloses the inside thereof. A snap or latch 17 is provided on each side of the frame 15 so that the cover can be held in place against accidental removal if desired.

My invention resides in the manner in which this wagon cover or top is mounted. For this purpose I arrange a tie rod member 18 between the sides 11 near the upper edge thereof at both the front and rear ends. Fig. 2 illustrates this construction at the rear of the wagon and the arrangement at the front is the same. The rods 18 are horizontal and substantially parallel to the bottom 10 and the top edges of the end pieces 12. While I secure them to the sides by means of a nut 19 so they may be easily removed, any other suitable means may be used. The plate members 20 (Fig. 4) are secured to the inside of the members 11 and serve only to add strength where the rods 18 extend through the sideboards 11. Also, for the purpose of adding strength, I provide a sleeve 21 embracing each of the rods 18 and substantially coinciding with them in length as shown in Fig. 2. It is to be observed, however, that the sleeves 21 are not essential to the use of this invention. On the inner side of the cover

frame 15 between the ends thereof at both the front and rear is the tie rod members 22 mounted in the same manner as the rods 18. These rods 22 are provided with sleeves 23 and the nuts 31 and plate members 32 serve the same purposes as the like elements 19 and 20 previously described for use with the rods 18. The rods 18 and 21 are arranged so they will be in vertical spaced relationship and parallel to each other.

Embracing the sleeve 23 on the tie rod 22 is a collar member 24 that is slidable thereon but has the set screw 25 so that it can be secured at any point on the sleeve 23 intermediate its ends. Depending from an eye 26 on the collar 24 is a flexible member 27 which I show in the form of a link chain. The lowermost link or end of the flexible member 27 is provided with a clevis 28 that slidably and loosely embraces the sleeve 21 on the tie rod 18. The use of a clevis here provides an easy means of detaching the chain from the rods 18 but for purposes of my invention an endless link would suffice.

Thus constructed, the cover or top, with the latch 17 in inoperable position, is designed to be slidable across the top of the wagon so that it will be suspended at the side thereof as shown in Fig. 2. A guide bracket 29 is secured to the top edge of both the end pieces 12 and serves as tracks upon which the cover frame 15 can be easily slid. The handles 30 are suitably placed on each side of the frame 15 to facilitate its manual manipulation.

Preferably the collar 24 is positioned about midway between the ends of the sleeve 23 so that no more than half of the top will drop below the top edge of the side 11. By this arrangement it will be found that the top is easier to handle since less of a lifting and more of a tipping action is all that is required to place it back on the tracks or guides 29.

It is pointed out that by my invention a sturdy weather proof top can be provided for a wagon or the like and at the same time the top can be positioned so as to completely expose the wagon box for loading without interference from slats or other top supporting elements. At the same time it is possible for one person to easily maneuver this top into and out of its operable position, and obviously, the top as shown in Fig. 2 can be placed on the opposite side of the wagon, if desired. Another advantage of a top or cover mounted according to the teachings of this invention is that it eliminates the need for the usual type hinges. On a self-feeder, for example, should the latch be left unfastened, a high wind would only blow the cover to a position shown in Fig. 2. It would not be torn loose as so frequently happens on hinge type covers. Once in position as shown in Fig. 2, it is observed that only half of the cover is exposed to the wind. In addition, wind pressure against this exposed portion will cause the bottom portion to bear against the wagon with the connection of the collar and flexible member acting as the pivot point. This will serve to hold the top steady and prevent damage thereto.

Some changes may be made in the construction and arrangement of my box cover without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim :

1. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a flexible member secured at one end to said cover and slidably arranged at its other end on said rod member, said cover movably longitudinally of said rod across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box.

2. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a second rod member mounted to the underside of said cover so that when said cover is on said receptacle the second rod member will be substantially parallel to and spaced above said first mentioned rod member, a flexible member secured at one end to second rod member and slidably arranged at its other end on said first mentioned rod member, said cover movable longitudinally of said rods across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box.

3. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a second rod member mounted to the underside of said cover so that when said cover is on said receptacle the second rod member will be substantially parallel to and spaced above said first mentioned rod member, a collar member slidably arranged on said second rod member and adjustably securable thereon at any point intermediate its ends, a flexible member secured at one end to said collar member and slidably arranged at its other end on said first mentioned rod member, said cover movable longitudinally of said rods across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box.

4. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a flexible member secured at one end to said cover and slidably arranged at its other end on said rod member, said cover movable longitudinally of said rod across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box, and a guide bar for said cover on each of two oppositely disposed ends of said receptacle that extend parallel to the longitudinally axis of said rod member.

5. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a second rod member mounted to the underside of said cover so that when said cover is on said receptacle the second rod member will be substantially parallel to and spaced above

said first mentioned rod member, a collar member slidably arranged on said second rod member and adjustably securable thereon at any point intermediate its ends, a flexible member secured at one end to said collar member and slidably arranged at its other end on said first mentioned rod member, said cover movable longitudinally of said rods across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box, and the positioning of said collar member between the ends of said second rod member determining what portion of said cover member will extend below the top edge of said receptacle while said cover is suspended at the side thereon.

6. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a second rod member mounted to the underside of said cover so that when said cover is on said receptacle the second rod member will be substantially parallel to and spaced above said first mentioned rod member, a flexible member secured at one end to second rod member and slidably arranged at its other end on said first mentioned rod member, said cover movable longitudinally of said rods across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box, and a guide bar for said cover on each of two oppositely disposed ends of said receptacle that extend parallel to the longitudinal axis of said rod member.

7. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a second rod member mounted to the underside of said cover so that when said cover is on said receptacle the second rod

member will be substantially parallel to and spaced above said first mentioned rod member, a collar member slidably arranged on said second rod member and adjustably securable thereon at any point intermediate its ends, a flexible member secured at one end to said collar member and slidably arranged at its other end on said first mentioned rod member, said cover movable longitudinally of said rods across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box, and a guide bar for said cover on each of two oppositely disposed ends of said receptacle that extend parallel to the longitudinal axis of said rod member.

8. In a device of the class described, an open top rectangular receptacle, a cover therefore, a rod member extending between and secured to two opposite sides of said receptacle on the interior thereof and substantially parallel to the bottom thereof, a flexible member secured at one end to said cover and slidably removably arranged at its other end on said rod member, said cover movable longitudinally of said rod across said box and over the side thereof and when moved to such position said flexible member holding said cover suspended along the outer side of said box.

C. ALBERT CLARK.

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