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STRADDLE TRUCK LOAD RECEPTACLE

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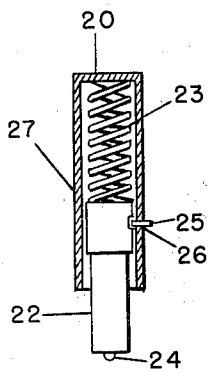
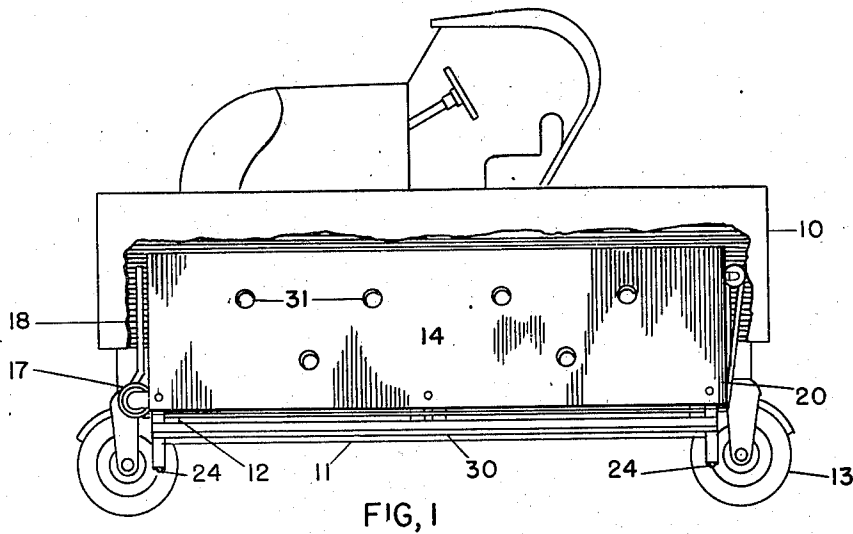


FIG. 4

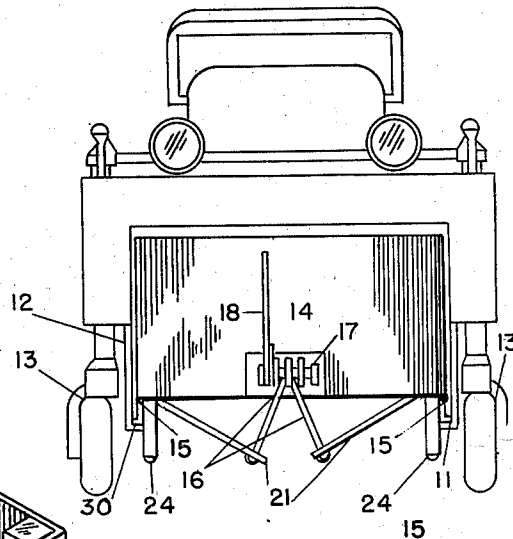


FIG. 2

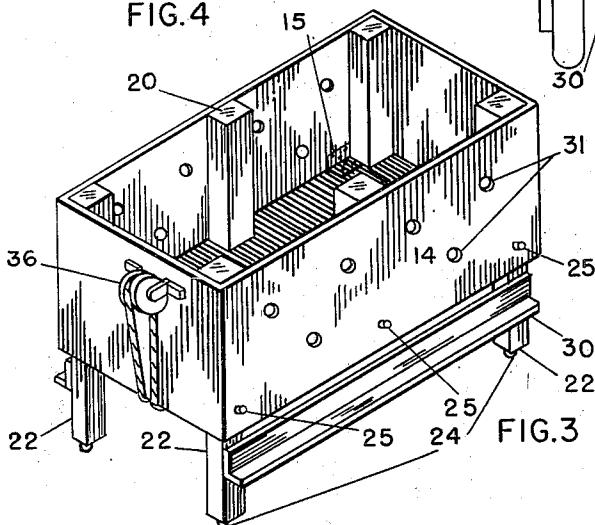


FIG. 3

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STRADDLE TRUCK LOAD RECEPTACLE

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2 Claims. (Cl. 214—65)

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to land wheeled vehicles and more particularly to straddle trucks adapted to pick up and carry bulky loads.

In the particular form of straddle truck generally used, provisions are made to clamp and engage a load of timber or other type of bulky burden with its side angles or shelves. The mechanism for these shelves is such that it moves inwardly to engage the load and outwardly to disengage or dump it. The disadvantage of this type of truck is that it is limited to the class of load that it is intended to handle. This is a limitation on the practical use of the straddle type of trucks that cuts down their capacity for use considerably.

It is an object of this invention to provide a new and improved load receptacle for straddle trucks that will avoid one or more of the disadvantages and limitations of the prior art.

It is an additional object of this invention to provide a load receptacle that may be readily engaged and disengaged by a straddle truck and be capable of being used by itself during loading periods.

Other objects of this invention will become apparent as the invention is more fully set forth.

For a better understanding of this invention, reference is made to the appended drawings and the following description in which a type of the invention is indicated, by way of example, to illustrate the general form and use of the device, while the scope and spirit of the invention is more particularly set forth in the claims.

In the drawings:

Figure 1 is a view of a straddle truck, with parts broken away, supporting a load receptacle embodying this invention,

Figure 2 is an end view of Figure 1,

Figure 3 is a detail in perspective of the load receptacle shown in Figure 1, and

Figure 4 is a sectional detail through a post used in the load receptacle shown in Figure 3.

Similar reference characters refer to similar reference parts throughout the drawings.

In the drawings a conventional type of straddle truck 10 is shown with its loading mechanism consisting of shelf angles 11 operated by the supporting braces 12 and disposed adjacent to the straddle appendaged wheels. This operates in a conventional manner and is controlled by the operator in the cabin. A load receptacle

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14 used with the truck so as to be straddled by the appendaged wheels 13 held by the shelves 11, rolled in and mounted within the frame. The receptacle consists of a container or chest preferably of rectangular form with its floor divided into two doors hinged at the lower edge of its longitudinal walls. The hinges 15 enable the doors 21 to be let down from the middle line so as to wholly dump the contents of the receptacle. The operation of the doors is provided for by two cables 16 passing longitudinally along their exterior surfaces as indicated. These cables are manipulated by a pulley and ratchet mechanism 17 operated by a handle 18 on one end wall of the receptacle and adjustably control the amount of opening of the doors. The cables are terminated on the opposite end wall of the receptacle in staples 36. The height of the receptacle is such that the floor doors 21 underneath may be fully opened without striking the ground on which the truck runs. Supporting posts 20 are provided at the corners of the receptacle and at such other places along the longitudinal wall as may be desirable. These posts 20 are hollow and fit inside the receptacle as indicated in Figure 3. They contain a plunger leg 22 reciprocable within them. Each plunger leg is under pressure from an internal coil spring 23 in the post, that serves to project it downwardly or out of the post to a limited extent. Each leg is provided with a castor or ball 24 at its lower end to allow for movement of the receptacle across the floor with a relatively small amount of frictional resistance. The holes 31 in the walls permit air circulation through the device, lighten it, and show how it is filled.

In the operation of the device the receptacle is set in a convenient place to receive the various articles to be loaded therein through its open top. When it is filled suitably, it is rolled over towards the straddle truck, or the straddle truck is run over it. The legs 22 are resiliently extended out to their full limit of length and raise the receptacle to a height that will permit its ready positioning within the straddle legs of the truck. Pins 25 insertable through holes 26 in the post wall and recess 27 within the legs, serve as an adjustment and determine the distance that the receptacle can be supported off the floor. The straddle truck is positioned over the receptacle and its mechanism 12 and shelves 11 adjusted to align with the bottom of the legs and under the casters. They are then operated to move inwardly in the conventional manner so as to engage under the bottom of angle bar 30 and to raise

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the receptacle off the floor so that it may be carried by the truck to another location.

The receptacle or chest is intended to hold and convey many kinds of materials when inclosed and carried by the straddle truck. When it reaches a predetermined location, it may be dumped by opening the floor doors 21, without removal from the straddle truck or it may be disengaged and left by the truck. The various adjustments in height of the receptacle by the use of its particular legs serve to make it convenient for loading from different platform levels. The resiliency of the legs, due to the springs 23 enable it to be loaded with less stress on the parts of the device and saving in wear and tear. The cable controls form a very convenient and simple mechanism for operating the doors that is not apt to suffer from dirt and grit or breakage, and when worn out can be replaced cheaply and expeditiously. In general, it affords an arrangement that will hold small bodied material that has been collected in a chest. The material can be raised off the ground and then carried as a unit to another location where it may be deposited as a unit still, or dumped out of the chest.

With this invention, the truck is not limited to the picking up of bulky loads. The swiftness with which this type of loaded receptacle can be used with a straddle bestows all the advantages of this type of truck on the handling of small packages and loadings having limited structural dimensions.

The receptacle has an angle frame 30 secured to the posts or structure on both sides in a substantial manner and is so arranged that the shelves 11 can slip under them when the container is to be raised. The position of the angles is such that it aligns with the shelves 11 when the straddle truck is run over the receptacle in straddle fashion, and therefore, will be able to raise it in this manner when placed as indicated in Figure 2. This leaves the legs and casters on the terrain until the truck lifts up the container. Actually the legs are lifted about three inches off the floor. The resiliency of the legs due to the coil springs 23 presses the receptacle up against the truck body without doing any damage to the truck which might occur if the judgment of the operator failed to control the operation of lifting mechanism accurately. This resiliency also helps to prevent the receptacle from being jarred loose or shaken as the truck passes over rough ground, and reduces the need for repairs thereon

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as well as to possible damage to the contents. The truck with the load is less noisy due to this lack of jarring. At the same time, the adjustment of the legs is just as adequate.

While there has been described what is at present considered to be a new and improved embodiment of this invention, it will be noted that various changes and modifications may be made thereon without departing from the principles and spirit of the invention, as sought to be defined in the following claims.

I claim:

1. In a straddle truck having a load receptacle lifting mechanism positioned between the wheels of said truck, a load receptacle comprising, in combination, container means having a downwardly opening floor, means to vary the degree of the opening of said floor, means engageable by said lifting mechanism for lifting said receptacle and resilient leg means affixed to said load receptacle, said latter means having means for adjusting the length of said leg means and for locking said leg means in predetermined fixed positions.

2. A straddle truck load receptacle comprising, in combination, an open top, plural walled container having a downwardly opening floor, means to regulate the degree of said opening, a plurality of hollow vertical posts affixed to the walls of said container, leg means slidably disposed within and extending from said posts, means for adjusting and locking said leg means in predetermined fixed positions within said posts and shock absorbing means between said leg means and the roof of said posts.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,443,594	Saives	Jan. 30, 1923
1,777,019	Samuelsson	Sept. 30, 1930
1,990,538	Fildes	Feb. 12, 1935
2,012,855	Kopshinsky	Aug. 27, 1935
2,048,580	Webber	July 21, 1935
2,071,503	Dalton	Feb. 23, 1937
2,225,076	Mosher	Dec. 17, 1940
2,266,866	Houston	Dec. 23, 1941
2,304,622	Barrett	Dec. 8, 1942
2,316,938	Dimick	Apr. 20, 1943
2,381,103	Briner	Aug. 7, 1945