Nov. 6, 1951 F. K. TARRANT 2,574,159

SPREADING DEVICE

Original Filed Aug. 9, 1946 3 Sheets-Sheet 1

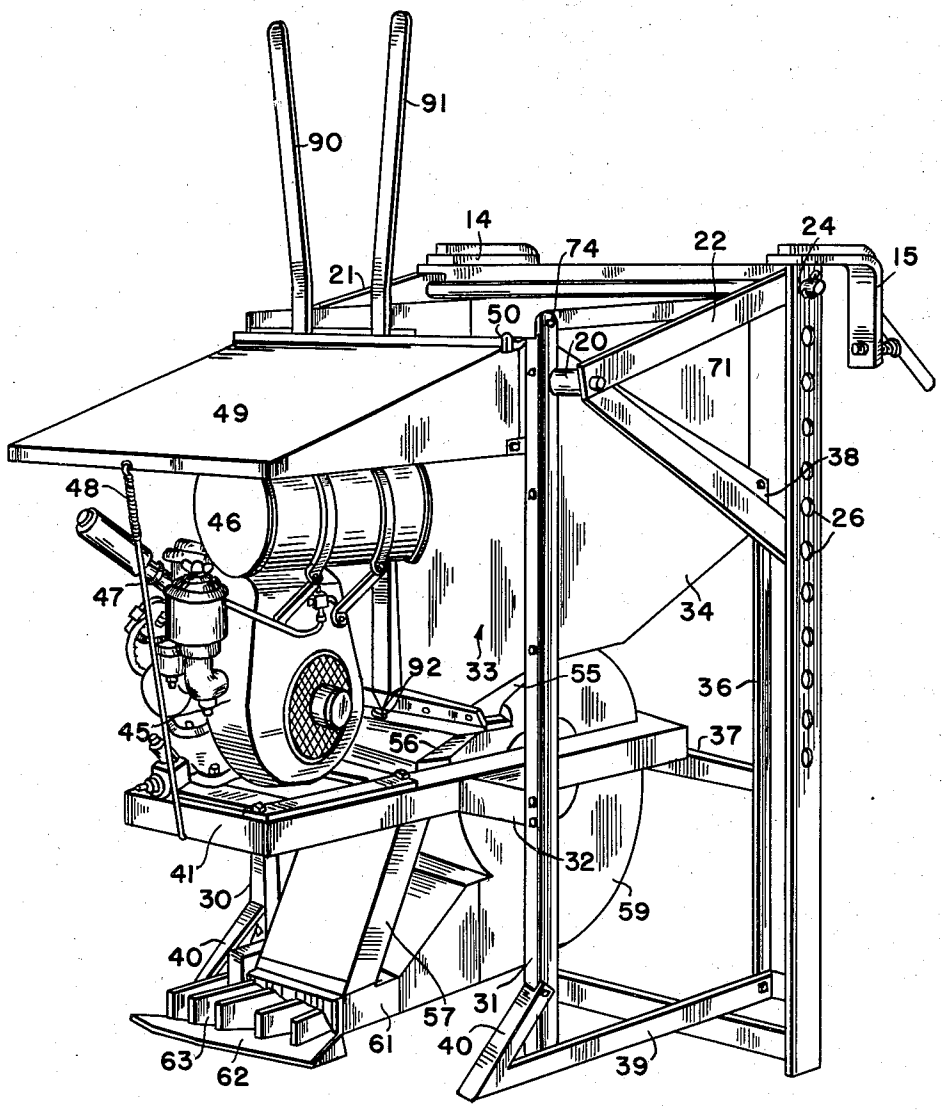


Fig -1-

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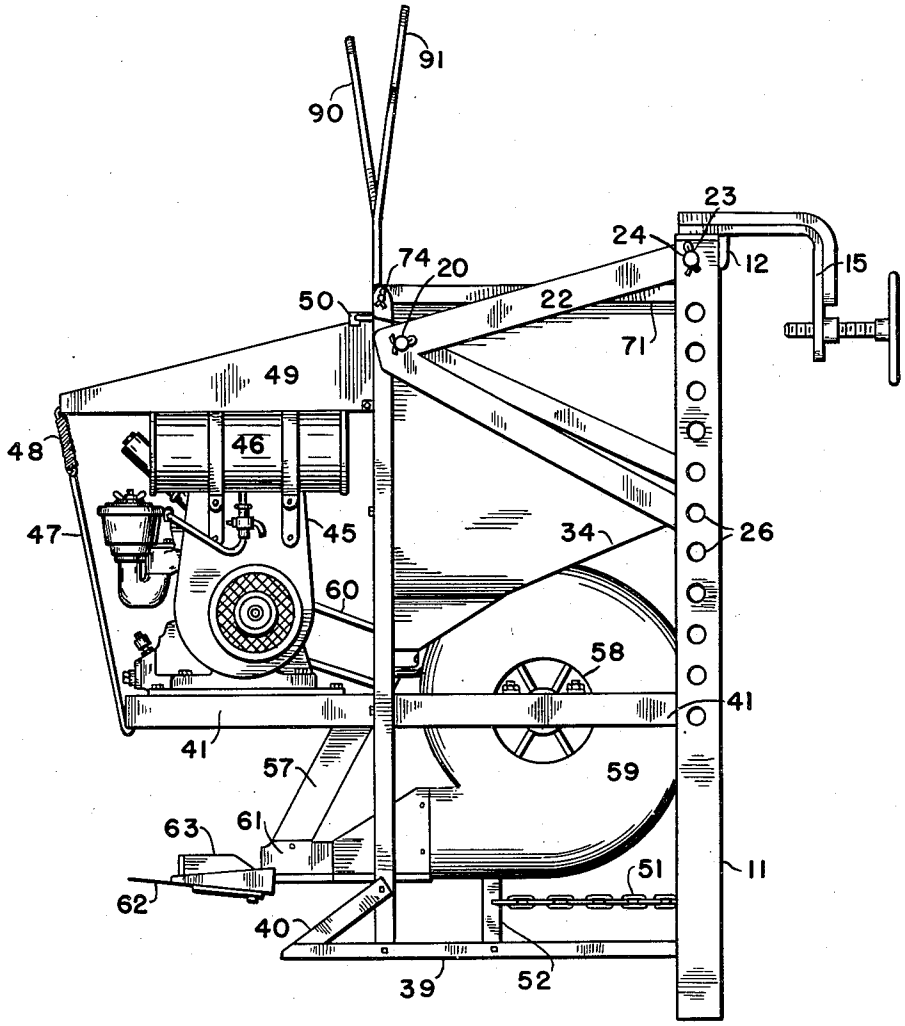


Fig-2-

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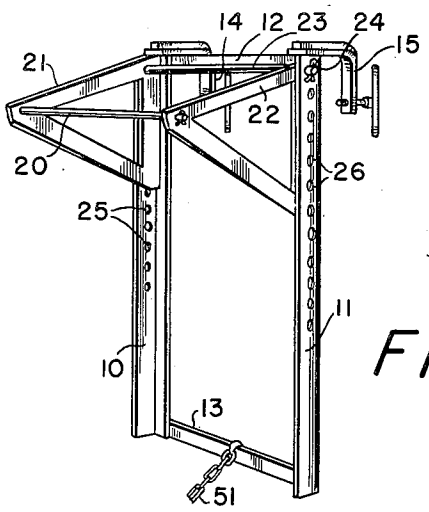


Fig-3-

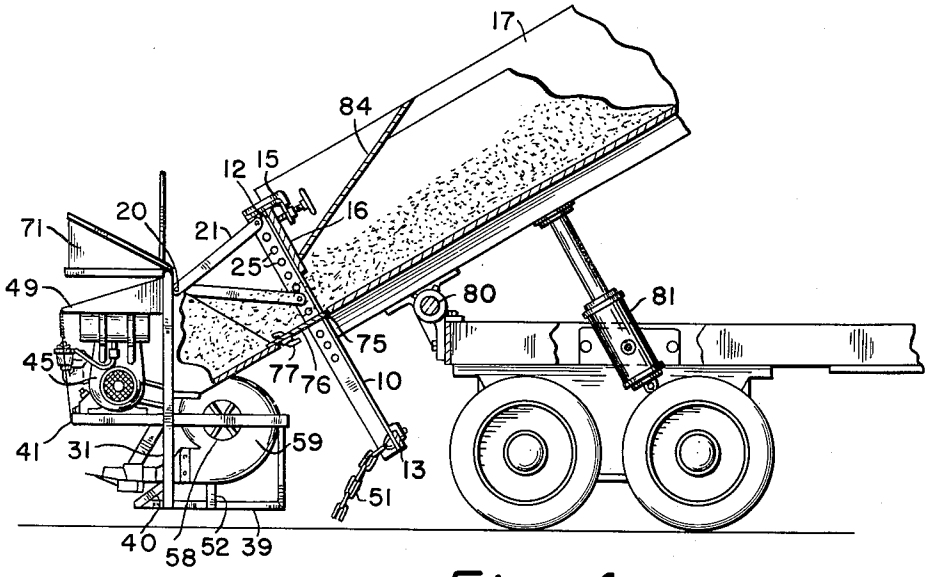


Fig-4-

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Patented Nov. 6, 1951 2,574,159

UNITED STATES PATENT OFFICE

2,574,159

SPREADING DEVICE

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Original application August 9, 1946, Serial No. 689,550, now Patent No. 2,496,504, dated February 7, 1950. Divided and this application September 27, 1949, Serial No. 118,115

2 Claims. (Cl. 275—2)

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This invention relates to a dispensing or spreading device and this application is a division of application Serial No. 689,550, filed August 9, 1946 (issued as Patent No. 2,496,504, February 7, 1950).

More particularly stated, the invention relates to a device adapted to be mounted on the rear end or tail gate of a truck for spreading material, such as salt or sand, on highways.

The invention has for its object to provide a device of the character described so constructed and so mounted that it will remain substantially horizontal whether the truck body is horizontal or tilted.

Further objects of the invention will appear from the following specification taken in connection with the drawings which form a part of this application, and in which

Fig. 1 is a perspective elevation of a device constructed in accordance with the invention;

Fig. 2 is a side elevation of the device shown in Fig. 1;

Fig. 3 is a perspective elevational view of the frame on which the mechanism is mounted; and

Fig. 4 is an elevational view, partly in section, showing the rear portion of a truck body in tilted position and illustrating how the material can pass through an opening in the end gate into the hopper of a spreading device.

In the particular embodiment of the invention illustrated in the drawings, the spreading mechanism is mounted on a frame illustrated particularly in Fig. 4 and comprising vertical angle irons 10 and 11 connected at their upper ends by a cross bar 12 and at their lower ends by a cross bar 13. Clamping brackets 14 and 15 are secured to the upper ends of the angle iron frame members 10 and 11 for the purpose of clamping the frame to the tail gate 16 of a truck body 17 illustrated in Fig. 4.

The spreading mechanism is pivotally mounted on a cross rod 20 secured to a pair of triangular frame members 21 and 22 which are connected at their upper ends by a rod 23. The rod 23, in the form of the invention shown, is mounted in alined openings 24 formed in the upper ends of the angle iron members 10 and 11 and these angle irons are provided with a series of additional alined openings 25 and 26 so that the triangular frames can be mounted in a plurality of vertical positions on the angle irons.

The spreading mechanism is mounted on a frame comprising upright frame members 30 and 31 which are connected by a cross bar 32 intermediate their ends and by a rear wall 33 of a

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hopper 34. The supporting frame for the dispensing mechanism also comprises upright frame members 36 which are connected together by a cross bar 37 and by a rear wall 38 of the hopper 34. The lower ends of the upright frame members 36 are connected to the lower ends of the frame members 30 and 31 by bars 39 which are braced wtih reference to the frame members 30 and 31 by angularly disposed members 40.

A platform or support 41 is mounted on the bars 32 and 37 and supports the engine 45 for operating the fan and dispensing mechanism, the engine preferably being an internal combustion engine having a fuel supply tank 46 and the usual parts required for such an engine. A tie rod 47, to which is connected a spring 48, is connected to the platform 41 and to a cover 49 which is pivoted at 50 to the upper ends of the vertical frame members 30 and 31.

The upper ends of the vertically extending frame members 30 and 31 are mounted on the rod 20 and the frame carrying the spreading mechanism is freely pivoted on this rod. In order to prevent this frame from swinging when the truck body is horizontal, a chain 51 connects the cross bar 13 to a member or lug 52 secured to the frame member 39. When this chain is unhooked the frame in which the spreading mechanism is mounted can swing freely on the rod 20 in the manner shown in Fig. 4.

The lower end of the hopper 34 has a converging outlet spout 55 which leads to the flared upper end 56 of a chute 57 through which the material to be spread moves by gravity. This material is blown rearwardly by a fan 58 mounted in a fan casing 59, which in turn is mounted in and extends downwardly through the platform 41. The fan is driven by a belt 60 from the engine 45. The air blast from the fan is directed rearwardly through an outlet 61 which communicates with the lower end of the chute 57 and blows the material which is fed by gravity downwardly through the chute and rearwardly to a spreader plate 62. Means is provided for directing the path of movement of the discharged material, this means consisting of vanes 63 which are angularly adjustable. The spreading mechanism is more particularly described in my Patent No. 2,476,465 of July 19, 1949.

Attention is called to the fact that the hopper 34 and the fan casing 59 are located on the opposite side of the pivot rod 20 from the engine and chute 57, thereby substantially balancing the mechanism mounted on the rod 20.

It will be noted from the illustration in Fig. 4

that the chain 51 has been detached from the spreading mechanism frame and this mechanism has swung on the rod 20 so that it remains in a horizontal position or in the same position taken when the truck body is horizontal.

In the form of the invention shown, there are provided a pair of levers 90 and 91. One of these levers, as shown at 92, is provided for the purpose of controlling the amount of material passing through the outlet end 56 of the hopper 34, this lever being connected to operate a valve or gate of the usual construction. The other lever is connected at its lower end to the vanes 63 and has for its purpose to adjust these vanes to the desired angle.

Although one specific embodiment of the invention has been particularly shown and described it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

What I claim is:

1. In combination, a vertical frame, means for supporting the frame on a truck, a second frame vertically adjustable on said frame and supported thereby, said second frame projecting rearwardly from the first frame, a third frame pivotally supported on the second frame at the rear portion thereof, and spreading mechanism carried by the third frame and mounted thereon relative to the pivotal mounting of the third frame to be substantially balanced on the pivotal support on the second frame.

2. In combination, a supporting frame, clamps for securing said frame to a truck, said frame having a second frame including brackets extending rearwardly from said frame in a direction opposite to the frame clamps, a third frame pivoted to said brackets at points spaced rearwardly of the first frame, spreading mechanism comprising an engine, a hopper and fan mounted on said third frame, said parts of the spreading mechanism being mounted on said third frame relative to the pivotal mounting of said frame to substantially balance the weight on opposite sides of said pivot.

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