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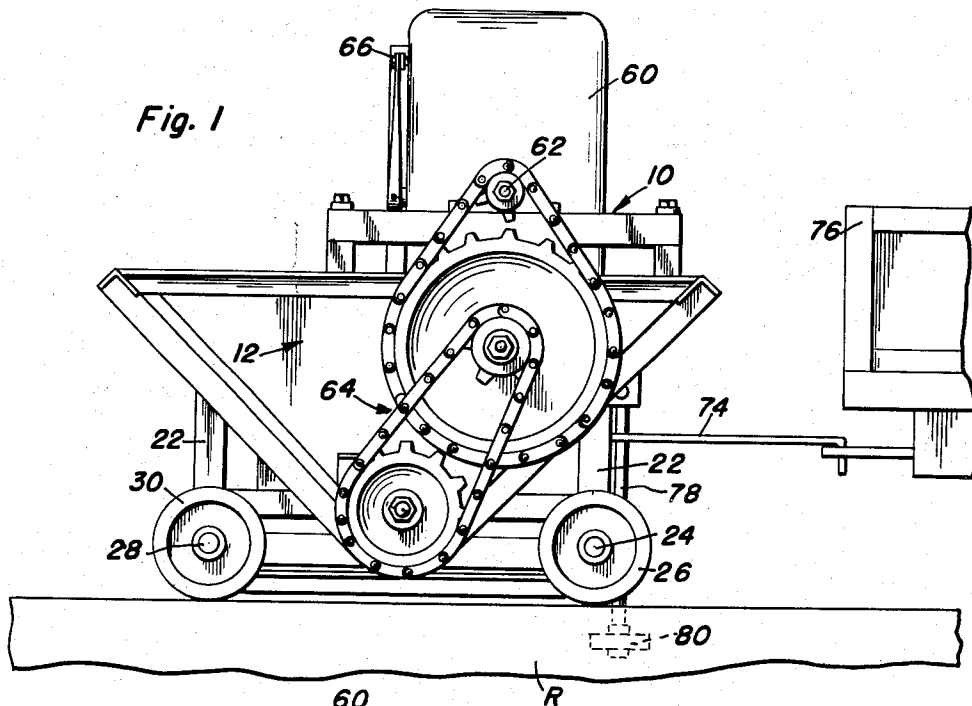
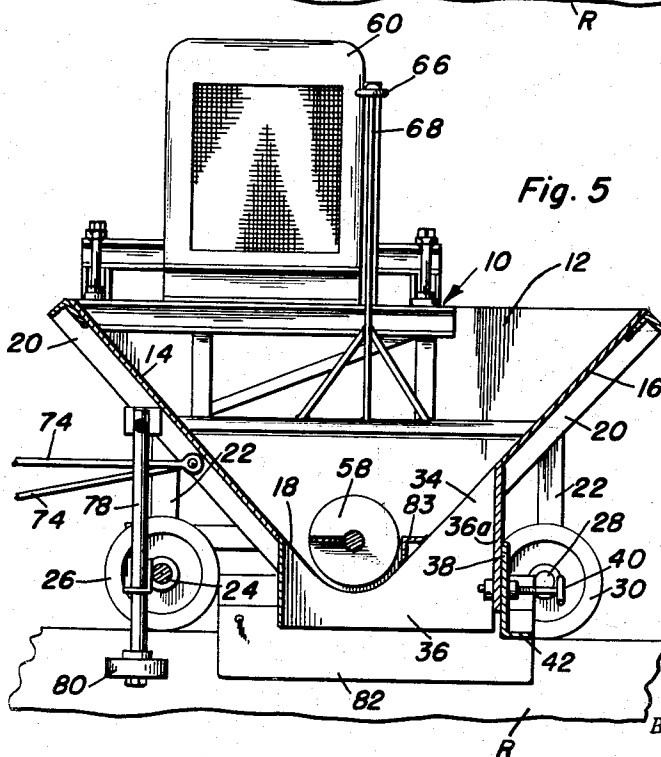
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2,660,937

APPARATUS FOR WIDENING ROADWAYS

Filed July 10, 1950

3 Sheets-Sheet 1



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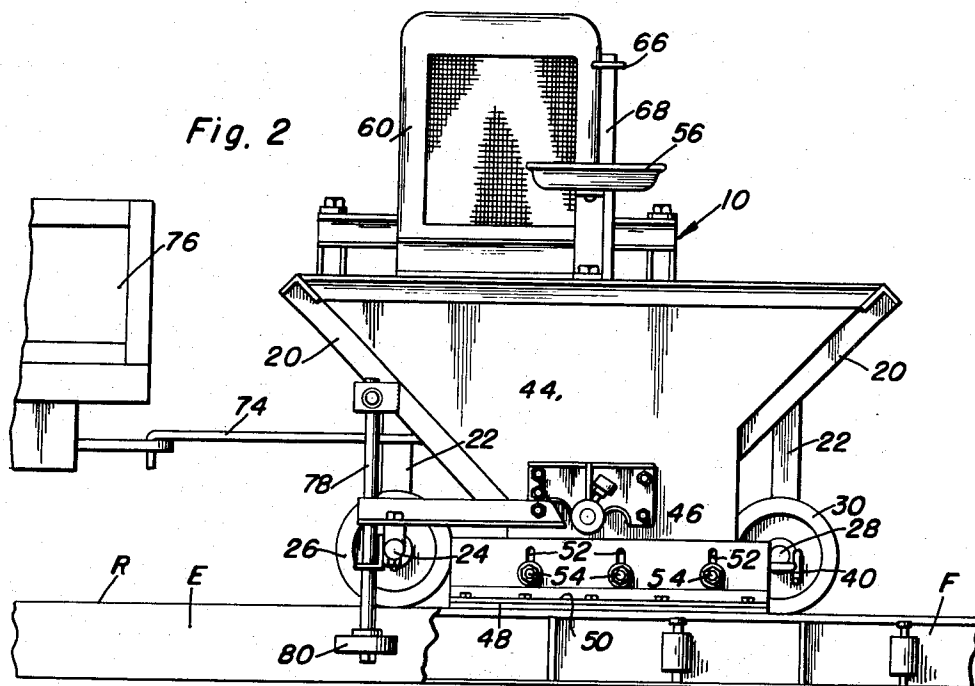
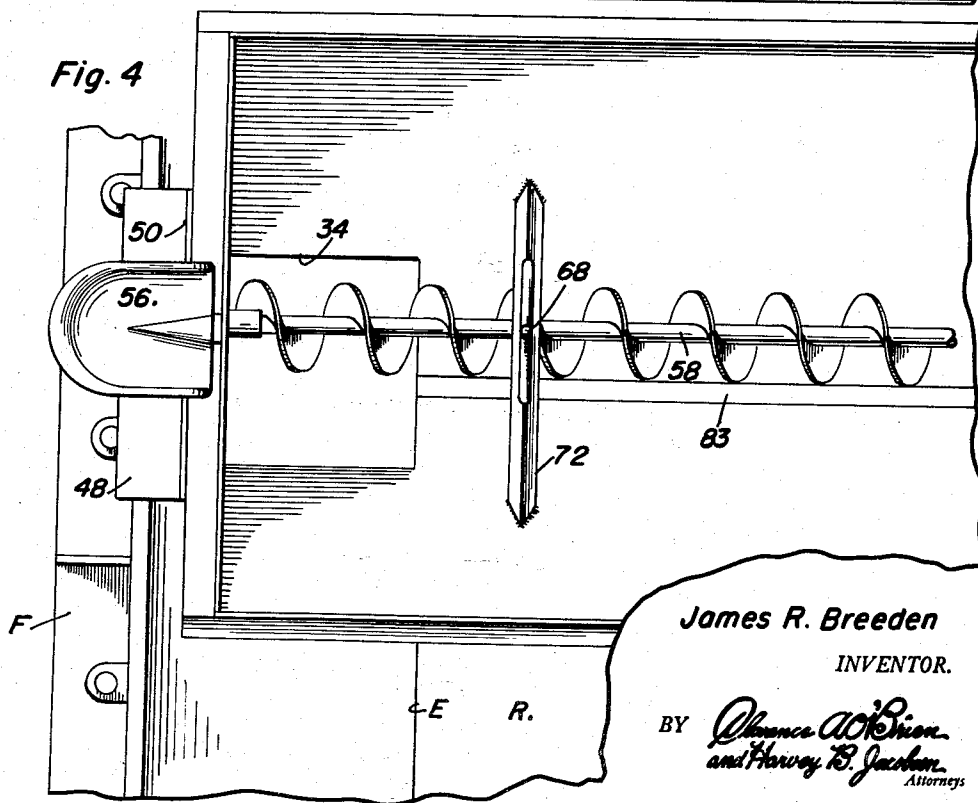
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APPARATUS FOR WIDENING ROADWAYS

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3 Sheets-Sheet 2



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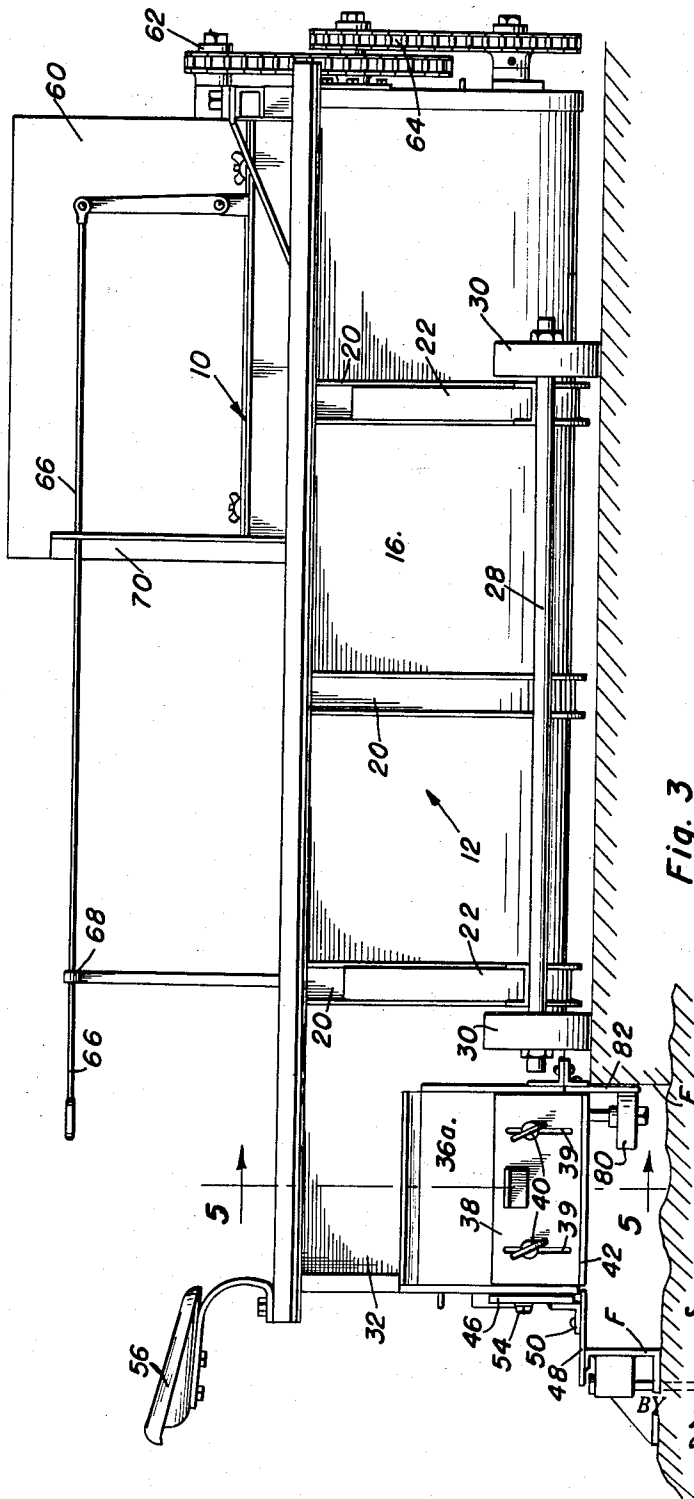
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APPARATUS FOR WIDENING ROADWAYS

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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APPARATUS FOR WIDENING ROADWAYS

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Application July 10, 1950, Serial No. 172,835

3 Claims. (Cl. 94-46)

1

This invention relates to new and useful improvements in concrete hauling and dispensing machines and the primary object of the present invention is to provide a device that will ride upon a roadway and lay concrete adjacent the roadway to increase the width of the roadway.

Another very important object of the present invention is to provide a wheeled trough having a dispensing end that will overhang a roadway over which the trough is propelled and a power operated worm within the trough for remixing concrete in which aggregate may have become segregated during transportation, and directing the remixed concrete toward the dispensing end of the trough.

Another object of the present invention is to provide an apparatus for widening roadways involving a dispensing trough having a delivery end that will overhang one side edge of a roadway and novel and improved means for guiding the trough and retaining one end of the trough over the side edge of the roadway as the trough is moved over the roadway.

A further object of the present invention is to provide a concrete hauling and dispensing machine that is so constructed as to have a large capacity for concrete but one that is actually compact in structure.

A still further aim of the present invention is to provide a road widening apparatus including a trough having a discharge end that will overhang the side edge of a roadway and an operator's seat mounted on the overhanging discharge end to permit clear observation of the concrete as it is discharged from the trough.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of the present machine supported upon a roadway and attached to a prime mover;

Figure 2 is a side view of the machine taken from the opposite side of Figure 1;

Figure 3 is a rear elevational view of Figure 2;

Figure 4 is an enlarged fragmentary top plan view of Figure 3; and,

Figure 5 is a detail vertical sectional view taken substantially on the plane of section line 5-5 of Figure 3.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present

2

invention, the numeral 10 represents a frame composed of a horizontal trough 12 having downwardly and inwardly inclined forward and rear walls 14 and 16 that are joined at their lower ends by a smoothly curved bottom wall member 18, preferably integrally formed with the walls 14 and 16.

The walls of the trough are reinforced and strengthened by any suitable number of structural members including groups of vertically inclined channels 20 certain of which support depending arms 22. The lower ends of the arms 22 on the forward wall 14 are horizontally apertured to receive a forward shaft 24 having wheels 26 thereon, and the lower ends of the arms on the rear wall 16 are also horizontally apertured to receive a rear shaft 28 having wheels 30 thereon.

The shafts 24 and 28 extend longitudinally of the trough 12 and the wheels 26 and 30 are disposed transversely of the trough whereby the trough may be moved laterally over a roadway R.

One end 32 of the trough 12 overhangs one side edge E of the roadway R, see Figure 3, and is provided with a delivery opening 34 in which vertical guide plates 36 are mounted. The opening 34 extends through the walls 14, 16 and 18 but mostly through the wall 16 as shown in Figure 5.

An elongated screed and finishing member 38 is adjustably secured to the rearmost of the guide plates 36a by fasteners 40 that enter vertical slots 39 in the member 38 for vertical adjustment of the member 38, and the member 38 includes a flat horizontal portion 42 whose lower face will be flush with the upper surface of the roadway. The member 38 and its portion 42 extend the length of the overhang end portion 32 as shown in Figure 3.

The end portion 32 is provided with a vertical end wall 44 that supports an elongated strip 46 that is connected to an elongated pliable or rubber member or skirt board 48. The member 48 is reinforced and connected to the strip 46 by a flexible or pliable strip 50, and the strip 46 is vertically slotted, as at 52, to receive fasteners 54 carried by the wall 44 for vertical adjustment of the skirt board. The skirt board 48 is sufficiently stiff to strike off the fresh concrete to the elevation of the top of the forms but pliable enough to ride over irregularities of the road form without tearing up the forms or injuring the machine as a steel guide plate would do.

A concrete form F parallels the edge E and underlies the skirt board 48 thereon as shown best in Figure 3 of the drawings. An operator's seat 56 is supported on the end portion 32 to per-

mit an operator to observe concrete discharged through the opening 34 and is so located as to permit an operator to observe concrete as it is remixed and forced through the trough toward the opening 34, the latter operation being performed by a conveyor screw 58 that is disposed horizontally within the trough 12 and which includes end portions that are rotatably supported in bearings carried by the end walls of the trough.

The frame 10 supports a power plant 60 whose drive shaft 62 is connected to the end of the screw 58, remote from the seat 56, by a drive connection 64. The clutch of the power plant is actuated by a horizontally slidable rod 66 that is slidably supported by bearings 68 and 70. The former bearing 68, being supported by a cross-rail 72 mounted within the trough.

The forward wall 14 and more specifically two of the member 22 carried by the forward wall 14, support a pair of tongue members or pull bars 74 that are attached to a prime mover or vehicle 76 whereby the machine may be pulled over the roadway.

Means is provided for guiding the machine as it is pulled over the roadway and for retaining the end portion 32 overhung with respect to the edge E. This means comprises a vertical rod 78 depending from the wall 14 at the end portion 32 and which supports a horizontal roller 80 at its lower end that rides against the edge E.

A splash shield 82 depends vertically from the trough and is located close to and parallels the edge E to restrict the splashing of concrete upon the surface of the roadway.

An elongated angle iron 83, is mounted in the trough and is welded to one wall of the trough. The angle iron 83 extends the full length of the trough to form a small shoulder for the auger blades to turn against. The angle iron 83 prevents larger rocks in the concrete from getting underneath the worm and causing the worm to stop rotating, or to be bent if forced to rotate.

In practical use of the present invention, the trough 12 is filled with concrete and the machine is pulled over the roadway R. As the rod 66 is pulled, the screw 58 is rotated to remix the concrete and conduct the concrete toward the opening 34 whereupon the concrete will pass through the opening and lie between the form F and edge E.

The member 38 will smooth the concrete level with the surface of the roadway and will push excess concrete forwardly.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A concrete hauling and dispensing machine comprising an elongated horizontally disposed remixing trough, wheels supporting said trough and adapted to permit lateral movement of the trough over a paved roadway, said trough including an end portion adapted to overhang one side edge of a roadway, the said end portion of said trough having a dispensing opening therein, a pliable smoothing member adjustably secured to the said end portion of said trough and including a horizontal portion adapted to overlie a form paralleling the side edge of a roadway overhung by the said end portion, and means carried by said trough for engaging the side edge of a roadway to align the trough as the latter is moved over the roadway.

2. A concrete hauling and dispensing machine comprising an elongated horizontally disposed remixing trough, wheels supporting said trough and adapted to permit lateral movement of the trough over a paved roadway, said trough including an end portion adapted to overhang one side edge of a roadway, the said end portion of said trough having a dispensing opening therein, a member adjustably secured to the said end portion of said trough and including a pliable horizontal skirt board adapted to overlie a form paralleling the side edge of a roadway overhung by the said end portion, guide means for the trough and mounted at the said end portion of the trough, and a horizontally disposed worm mounted in the trough for remixing concrete and for directing remixed concrete in the trough toward said opening.

3. The combination of claim 2 and an elongated angle iron fixed in said trough and extending through the length of the trough, said angle iron constituting a shoulder against which said worm rides to prevent large rocks from getting underneath the worm.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,933,377	Low	Oct. 31, 1933
1,967,693	Webb	July 24, 1934
1,974,133	Carter	Sept. 18, 1934
2,011,417	Robb	Aug. 13, 1935
2,027,907	Harvey, Jr.	Jan. 14, 1936
2,068,164	Cadwell	Jan. 19, 1937
2,089,094	Kime	Aug. 3, 1937
2,092,248	Guthrie	Sept. 7, 1937
2,095,414	Hemstreet	Oct. 12, 1937
2,201,493	Jorgensen	May 21, 1940
2,297,978	Oswald	Oct. 6, 1942
2,303,486	McConaughay	Dec. 1, 1942
2,522,610	Gordon	Sept. 19, 1950
2,544,113	Snead	Mar. 6, 1951

OTHER REFERENCES

Roads and Streets, January 1948, pages 62 and 63.