

Jan. 21, 1930.

W. G. COULTER

1,744,613

DISTRIBUTING MACHINE

Filed March 27, 1925

2 Sheets-Sheet 1

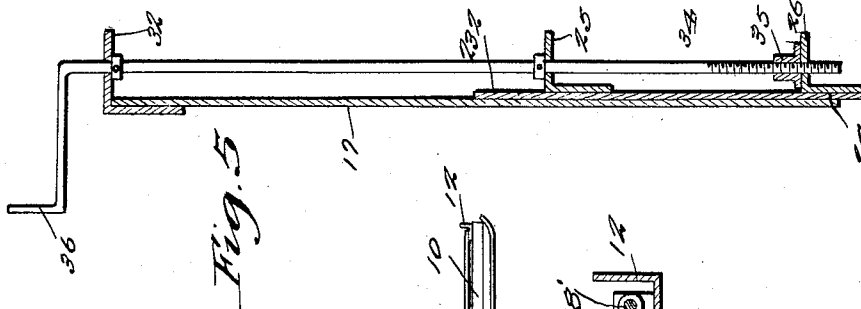


Fig. 1.

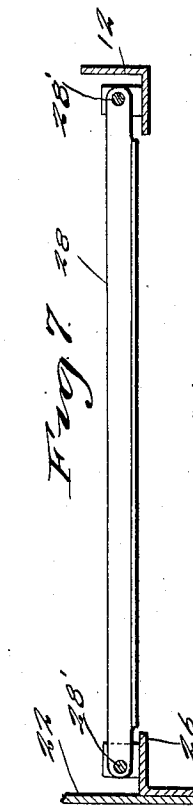
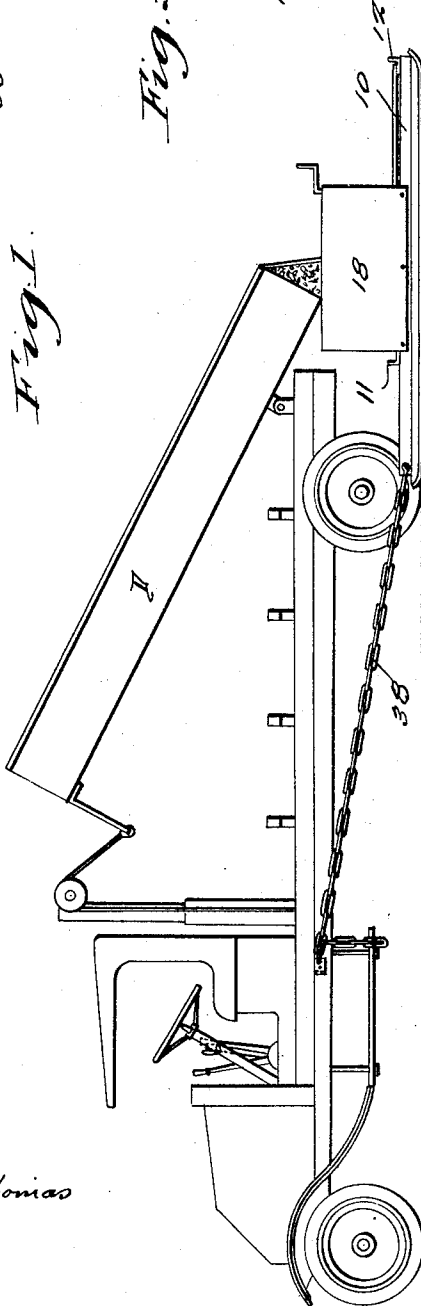
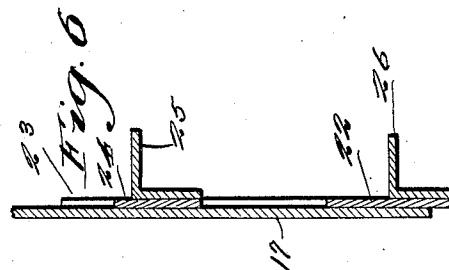
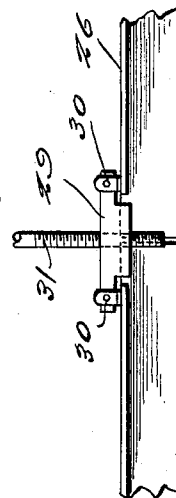


Fig. 8.



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WITNESS:

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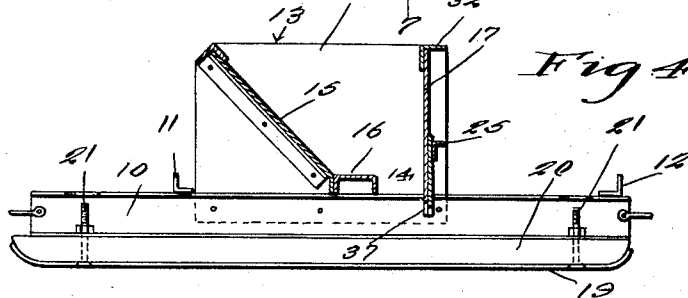
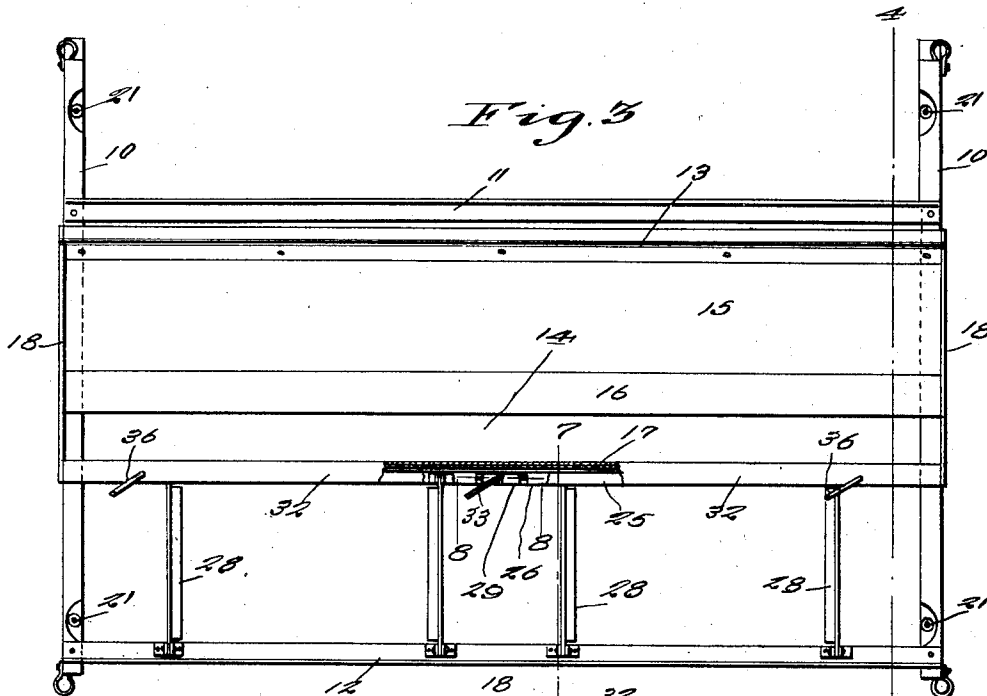
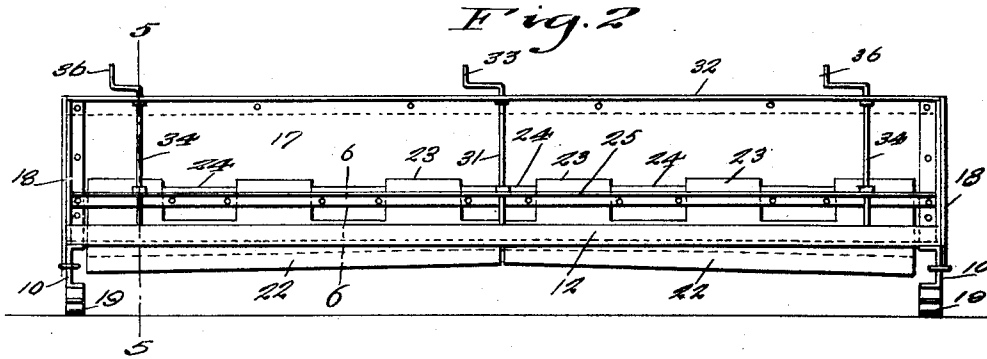
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DISTRIBUTING MACHINE

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2 Sheets-Sheet 2



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WITNESS:

UNITED STATES PATENT OFFICE

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DISTRIBUTING MACHINE

Application filed March 27, 1925. Serial No. 18,884.

This invention relates to improvements in distributing machines and has for an object the provision of a machine which is especially adapted for the distribution of crushed stone and other materials used in road construction.

Another object of the invention is the provision of a distributing machine by means of which the depth of the distributed material may be accurately regulated, so as to insure proper amounts over an entire road surface, as well as prevent waste due to irregular and uneven distribution.

Another object of the invention is the provision of a distributing machine for road construction by means of which a road may be given a desired "crown" and all curves given the desired "bank" during the process of distribution without stopping the operation of the machine.

A further object of the invention is the provision of a machine of this character which may be detachably connected to a dumping truck for the reception of material therefrom as the machine is drawn over a roadway, the invention further providing a machine which is simple and durable in construction and by means of which the cost of road construction may be materially reduced.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a side elevation showing the machine arranged for use.

Figure 2 is an enlarged rear elevation of the machine per se.

Figure 3 is a top plan view of the same.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is an enlarged section taken substantially on the line 5—5 of Figure 2.

Figure 6 is an enlarged fragmentary section on the line 6—6 of Figure 1.

Figure 7 is an enlarged section taken substantially on the line 7—7 of Figure 3.

Figure 8 is an enlarged fragmentary eleva-

tion showing the connection between the sections of the leveling blade.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the machine as shown comprises a frame which includes spaced parallel side bars 10. These bars 10 are connected by bars or beams 11 and 12 arranged respectively at the front and rear of the machine, while mounted upon and also connecting the bars 10 is a distributing trough 13 which is provided with a discharge mouth or opening 14. This trough has one of its walls inclined as at 15 and the opening 14 is provided in the bottom 16 of the trough. The wall 15 forms the front wall of the trough, while the rear wall 17 is vertically arranged. The front and rear walls are connected by side or end walls 18.

The frame may be mounted upon suitable supporting means, the latter preferably consisting of runners 19 which are spaced from the frame by removable sections 20, bolts 21 which extend through the runners 19, sections 20 and side bars 10 serving to removably hold the parts assembled. As the material passes through the discharge opening 14 in amounts regulated by the height of the trough above the roadway, this amount may be controlled by the substitution of runner sections 20 of different thicknesses so as to raise or lower the beams 10. As the material passes out of the discharge opening 14 during the movement of the trough over the road, it will be evenly distributed to a depth proportionate to the elevation of the trough.

For the purpose of further regulating the depth of the distributed material and for regulating the "crown" of the road and "banking" of the curves, there is provided a leveling blade which is formed of separate sections 22. Each of these sections is provided with spaced extensions 23 movable between spacing plates 24. A bar or beam 25 is secured to the spacing plates so that the said bar or beam will be spaced a sufficient distance from the rear wall 17 of the trough to accommodate extensions 23.

Extending outwardly from the blade sections 22 is a longitudinally disposed flange

26, the latter being connected to the rear bar 12 through the medium of brace bars 28, the opposite ends of which are pivotally secured to the bar 12 of the flange 26 as shown at 28'. These brace bars 28 serve to brace and reinforce the blade sections as the latter engage the material.

The adjacent ends of the flanges 26 of the blade sections 22 and consequently the sections themselves are connected by a member 29 which is provided with a threaded bore and whose opposite ends have a pivotal connection 30 with the adjacent ends of the flanges. Threadedly engaging the member 29 is a vertically disposed rod 31 which extends upwardly through the bar 25 and through a flange 32 extending rearwardly from the upper edge of the rear wall 17. This rod has a bearing in the flange 32 and its upper end is provided with an operating handle 33. Similar rods 34 extend through the flange 32 adjacent each end thereof and have a threaded engagement with nuts 35 carried at the outer ends of the flanges 26. The rods 34 are provided with operating handles 36.

By rotating the rod 31 by means of the handle 33, the inner adjacent ends of the blade sections 22 may be raised or lowered for the purpose of regulating the level of the material discharged from the trough and by operating the rods 34 the outer ends of the blade sections 22 may be adjusted. Thus the "crown" of the road may be accurately regulated during the movement of the machine over the road, as well as regulating the character of the "banks" at the curves. The lower edge 37 of the wall 17 is longitudinally curved so that a permanent "crown" curvature is provided for use when desired.

The machine is designed to be detachably connected with a truck having a dump body D as indicated in Figure 1 of the drawings. Any suitable means may be provided for connecting the machine to the truck, the means shown consisting of chains 38 which extend from the forward end of the runners and detachably connect with the truck frame. The machine is thus in position to receive material from the body D when the latter is in dumping position and as the machine is drawn over the road surface the material will be discharged through the opening 14 as previously explained. When the body D of the truck is emptied, this truck may be detached and a loaded truck substituted. During the substitution process, the machine will be stationary and a sufficient quantity of material will remain in the machine so that when the operation of distribution is again started no unevenness of surface will result.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as proper-

ly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. In a road machine, a frame, a supporting member arranged transversely of the frame, levelling blades spaced from said member, means to mount the blades for vertical adjustment, means to adjust the blades, and brace bars having one of their ends pivotally secured to the levelling blades and their other ends pivotally secured to the supporting member to resist relative horizontal movement of the blades and supporting member and permit of vertical adjustment of the blades.

2. In a road machine, a supporting member, means carried by said member to provide horizontally spaced guides extending transversely of the machine, levelling blades, spaced extensions carried by the blades and slidable within the guides to permit of vertical adjustment of said blades, and means to adjust the blades.

In testimony whereof I affix my signature.
WALTER G. COULTER.