

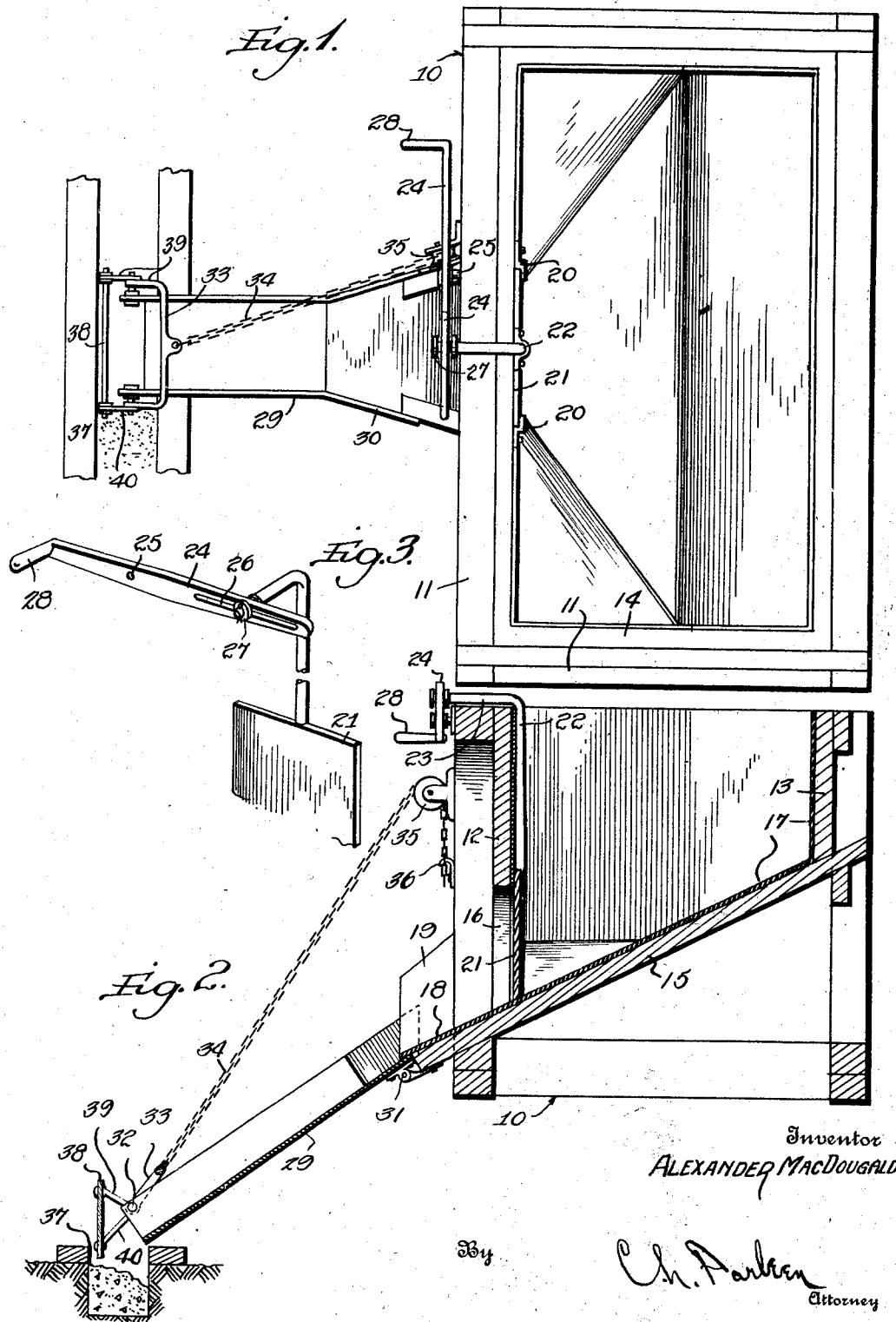
Nov. 25, 1930.

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1,782,734

CONCRETE DISTRIBUTING APPARATUS

Filed Nov. 28, 1927



## UNITED STATES PATENT OFFICE

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## CONCRETE-DISTRIBUTING APPARATUS

Application filed November 28, 1927. Serial No. 236,337.

This invention relates to concrete distributing apparatus, and more particularly to an apparatus for distributing concrete or other plastic mixtures to elongated forms.

5 An important object of the invention is to provide a novel form of apparatus adapted to distribute concrete and the like into elongated forms such as those employed in the making of road or street headers, curbs, gutters, etc.

10 A further object is to provide apparatus of the character referred to which is adapted to be mounted upon the chassis of a truck or other vehicle whereby it may be conveyed substantially parallel to the form to permit it

15 to distribute the concrete mixture therein. A further object is to provide novel means for controlling the flow of the concrete to compensate for forms of different widths and depths, and the varying speeds of the vehicle by which it is carried.

20 A further object is to provide a gate for controlling the flow of the cement mixture, and to provide novel means for actuating the gate.

25 A further object is to provide a distributing apparatus of the character referred to which includes a hopper and a vertically swinging discharge chute, the lower end of which is adapted to be arranged over a form to discharge plastic mixtures thereinto.

30 A further object is to provide novel baffle means associated with the outlet end of the chute for controlling the discharge of the material into the forms.

35 Other objects and advantages of the invention will become apparent during the course of the following description.

In the drawings I have shown one embodiment of the invention. In this showing,

40 Figure 1 is a plan view,

Figure 2 is a central transverse vertical sectional view,

Figure 3 is a detail perspective of the gate and operating means therefor.

45 Referring to Figures 1 and 2, the numeral 10 designates a hopper as a whole which is adapted to be supported on the chassis of a motor vehicle or other suitable means by which the hopper may be conveyed parallel

50 and adjacent to the form in which it is de-

sired to distribute concrete or the like. The hopper comprises suitable framing 11 which may be formed of timber, and the hopper per se may be formed as a box-like structure arranged within the framing, as shown in Figures 1 and 2. The hopper includes vertical front and rear walls 12 and 13 and end walls 14, and a sloping bottom 15, the central portion of which extends beyond the front wall 12 through a discharge opening 16 60 formed therein. The hopper is lined with sheet metal as at 17, and the central portion of the sheet metal covering for the bottom 15 also extends through the opening 16, as indicated at 18, and is provided with upturned side portions 19 forming a discharge spout. 65

Vertical guides 20 are arranged on opposite sides of the opening 16 and a gate 21 is slidable in these guides. A vertically extending rod 22 is secured at its lower end to the gate 21 and has its upper end extending transversely across the front of the hopper as at 23. A lever 24 is pivotally connected to the front of the hopper near the top thereof as at 25 and is provided at one end with an elongated slot 26 through which the end 23 75 of the rod 22 extends, washers or nuts 27 preferably being secured to the end 23 on opposite sides of the lever. An operating handle 28 is preferably carried by the upper end of the lever, as clearly shown in Figures 1 and 2. 80

A chute 29 is arranged forwardly of the hopper and is provided with an outwardly flaring upper end 30, the side walls of which are arranged outwardly of the sides of the spout 19. The upper end of the bottom of the chute is arranged beneath the spout of the hopper, as shown in Figure 2, and is pivotally connected to the hopper as at 31. Pivot pins 32 are carried by the side walls of the chute adjacent the lower end thereof, and a yoke 33 is connected to these pins. A chain 34 or other flexible element is connected at its lower end to the yoke 33, the upper end of the chain passing around a pulley 35 supported by the front of the hopper. The free end of the chain may be secured in given positions by engaging links of the chain with a hook 36 also secured against the front of the hopper. It will be apparent that the 85 90 95 100

chute is adapted to swing vertically and to be secured in adjusted positions by the chain 34 and hook 36. The apparatus described is adapted to be conveyed parallel to any longitudinal or elongated form in which concrete is to be discharged. In the present instance, the lower end of the chute is shown as being arranged over a form 37 in which concrete is to be poured to form a road or street curbing. A baffle 38 is arranged outwardly of the chute to assist in properly guiding the concrete into the form, the baffle being carried by the outer ends of the arms 39 and 40 which are pivotally connected at their inner ends to the pins 32.

The operation of the apparatus is as follows:

The hopper is filled with concrete at the point of mixing and is conveyed to the point where it is desired to discharge the concrete into the molds. The operator may lower the discharge end of the chute to a position over the form, as shown in Figures 1 and 2 whereupon the handle 28 may be depressed to elevate the inner end of the lever 26 and thus raise the gate 21. The gate may be held open to any desired degree to control the rate of flow of the cement from the hopper to the discharge spout and chute as will be apparent. The chain 34 may be operated to swing the lower end of the chute vertically according to the vertical position of the form in which the concrete is to be discharged. The baffle 38 is manually operable to control the discharge of the cement from the lower end of the chute, this element greatly assisting in evenly distributing the cement and preventing it from flowing over the outer portion of the form. Under all conditions the flow of cement may be controlled by the gate 21, and the operating elements for the gate are adapted to move it vertically without transmitting any lateral binding forces thereagainst.

From the foregoing it will be apparent that the present apparatus is adapted to eliminate the common practice of mixing concrete at a given point and distributing it in piles along a street or roadway to be manually shoveled into the forms. Thus materially less labor is employed with the present apparatus, and the work more rapidly may be performed.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

I claim:

Apparatus of the character described comprising a hopper having an opening in the bottom of the front wall thereof and a bot-

tom sloping downwardly toward said opening, guides mounted against the inner face of the front wall of said hopper on opposite sides of said opening, a gate vertically slidable in said guides, a vertically extending rod carried by said gate and having a transverse extension carried by its upper end and projecting across the front wall of said hopper, a lever pivotally connected intermediate its ends to the outer face of the front wall of said hopper and adapted to swing in a plane parallel to the movement of said gate, said lever being provided in one end portion thereof with a longitudinal slot slidably receiving said transverse extension.

In testimony whereof I affix my signature.

ALEXANDER MACDOUGALD.