March 8, 1932. C. I. LONGENECKER 1,848,959

MORTAR AND PLASTER MIXER

Filed Dec. 27, 1929

Fig. 1.

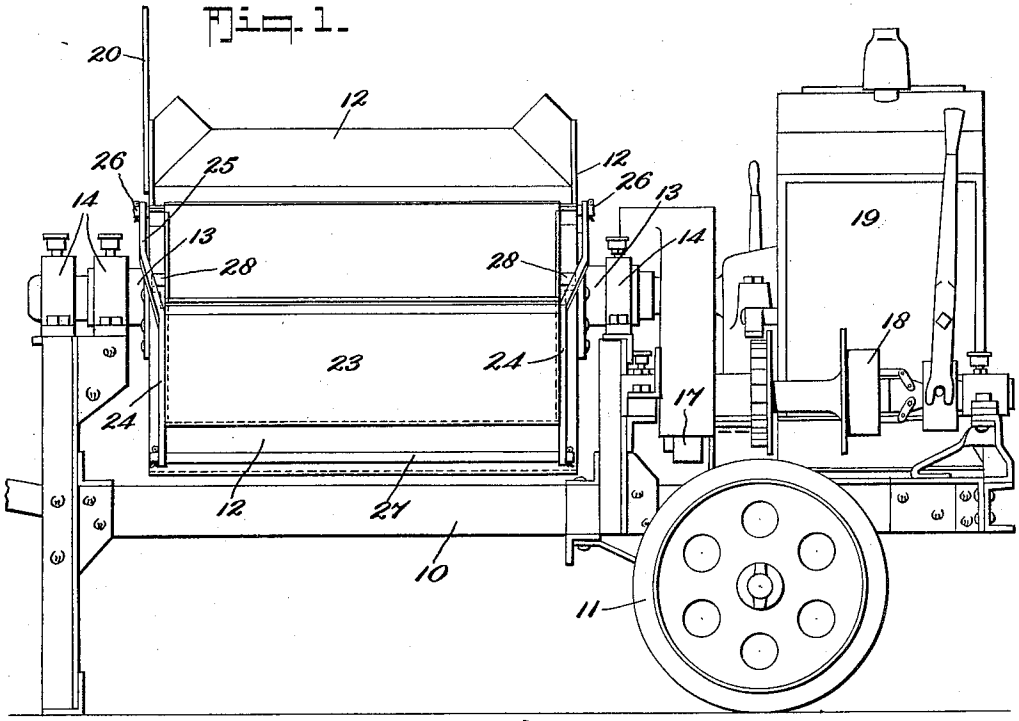


Fig. 2.

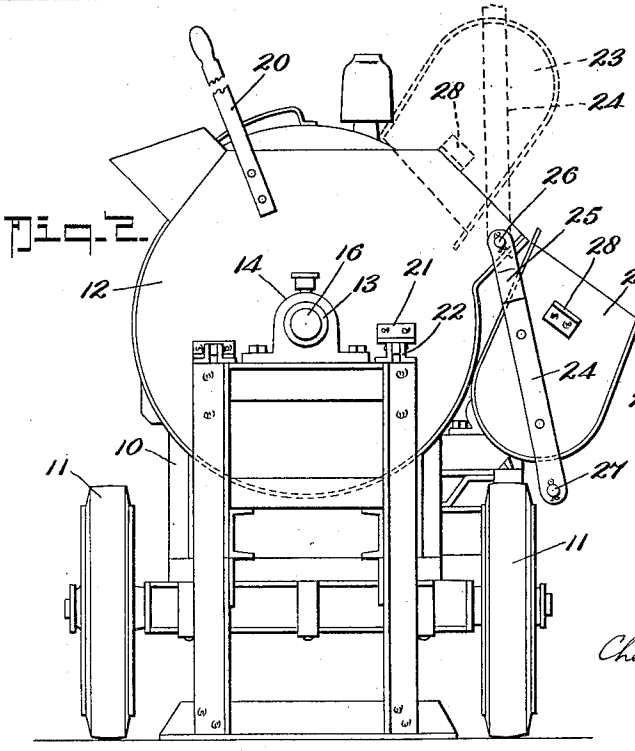
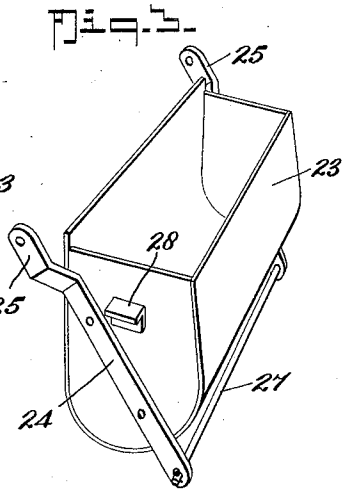


Fig. 3.



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MORTAR AND PLASTER MIXER

Application filed December 27, 1929. Serial No. 416,943.

This invention relates to mortar and plaster mixers and has for one of its objects to provide means for facilitating the introduction of lime, prepared plaster or other binding agent into the mixing receptacle.

It is common practice today in the mixing of plaster to use prepared plaster which comes in bags of approximately one hundred pounds each, which binding agent is introduced into the mixing receptacle along with the necessary amount of sand or other aggregate and there mixed. It is usual to throw the sand into the receptacle by the shovel full and to then break open a bag of prepared plaster which is then lifted over the top of the receptacle and dumped therein. In the ordinary well known form of power driven plaster mixer, however, the open top of the mixing receptacle is relatively high above the ground which results in its being necessary to lift the heavy bags of plaster a considerable distance, involving considerable hard manual labor.

It is the principal object of the present invention to provide a charging bucket or skip for the well known type of plaster mixer which is positioned substantially nearer the ground than is the top of the mixing receptacle and into which the prepared plaster may be more easily placed and then transferred with less exertion into the said receptacle.

It is a further object of the invention to so mount the charging bucket upon the mixing receptacle itself (which receptacle is usually tiltable about a longitudinal axis for discharging purposes) that the weight of the charging bucket is utilized in returning the mixing receptacle to its normal or mixing position from discharging position, and in maintaining it in said mixing position.

With the above and other objects in view which will appear as the description proceeds, the invention consists in the novel details of construction and combinations of parts more fully hereinafter disclosed and particularly pointed out in the appended claims.

Referring to the accompanying drawings forming a part of this specification in which like reference characters designate like parts in all the views:—

Figure 1 is a side elevational view of a well known form of portable plaster mixer with a charging bucket mounted thereon in accordance with the present invention;

Figure 2 is an end elevational view of the parts shown in Figure 1 as seen from the left of the said figure; and

Figure 3 is a detail perspective view of the charging bucket detached from the mixer.

Referring more particularly to the said drawings there is illustrated a well known form of plaster mixer comprising a chassis or frame 10 mounted for transport upon wheels 11 and carrying a mixing receptacle 12 journalled upon trunnions 13 in suitable bearings 14. The mixing receptacle is substantially cylindrical in form and a longitudinal shaft 16 extends axially therethrough, and through the said trunnions 13, upon which is mounted suitable mixing blades, not shown. The shaft 16 is rotated through suitable gearing 17 and clutch mechanism 18 from an internal combustion engine carried within a housing 19 upon the chassis 10. The mixing receptacle 12 is shown in its normal or mixing position in Figs. 1 and 2 and is adapted to be tilted in a counter-clockwise direction as viewed in Fig. 2 to discharging position by means of a hand lever 20 all as is well known in the art. Stop members 21 are carried by the end plates of the mixing receptacle and are adapted to engage suitable cooperating members 22 upon the frame for positioning the receptacle in its normal mixing position.

The charging bucket or skip constituting the present invention is shown in detail in Fig. 3 and comprises a bucket 23 of any suitable shape and dimensions, to each end of which is secured an arm 24 having an offset end portion 25 which is pivotally secured as at 26 to the end plates of the mixing receptacle. The opposite ends of the arms 24 extend below the bucket 23, as clearly shown in the drawings, and are preferably provided with a rod 27 extending between them which serves as a handle for raising the charging bucket from its normal position shown in full lines in Figures 1 and 2 to its dotted line po-

sition shown in the latter figure. Stop members 28 are provided upon the ends of the charging bucket 23 which are adapted to engage the end plates of the mixing receptacle 12 as clearly shown in dotted lines in Figure 2 to limit the upward movement of the bucket.

The operation of the device will be readily apparent from the foregoing, it being understood that a bag of prepared plaster after being broken open is deposited in the charging bucket and after the requisite amount of sand has been shovelled into the mixing receptacle the said bucket is elevated from its full line position to its dotted line position shown in Figure 2 by grasping the longitudinal bar 27 and lifting it upwardly. The charging bucket it will be noted, is mounted much lower than the top of the mixing receptacle so that it eliminates to a great extent, the hard labor involved in introducing the plaster into the receptacle 12.

It will be further noted that because of the mounting of the charging bucket directly upon the mixing receptacle itself, its weight is utilized for the purpose of returning the mixing receptacle from discharging to mixing position. That is to say, after the receptacle 12 has been tilted in a counter-clockwise direction as viewed in Fig. 2 to discharge its contents, the weight of the charging bucket 23 being still to the right of the axis of the shaft 16 about which the mixing receptacle tilts, will tend to automatically return the said receptacle 12 to the position shown in Fig. 2 when the hand lever 20 is released. The weight of the bucket 23 furthermore acts to hold the receptacle in this position with the stops 21 in cooperative engagement with the members 22 as will be readily understood.

While one form of the invention has been illustrated and described it is obvious that those skilled in the art may vary the details of construction as well as the precise arrangement of parts without departing from the spirit of the invention and, therefore, it is not wished to be limited to the above disclosure except as may be required by the claims.

What is claimed is:

1. A plaster mixer comprising a mixing receptacle normally balanced about a central axis, and tiltable about said axis from a mixing position to a discharging position to discharge its contents; and a charging bucket carried by said receptacle to one side of said axis, whereby the weight of said bucket constantly tends to return said receptacle to mixing position.

2. A plaster mixer comprising a mixing receptacle normally balanced about a central longitudinal axis and tiltable about said axis from a mixing position to a discharge position to discharge its contents; and a charging bucket pivoted to said receptacle to one side of said axis, whereby said bucket may be tilted relative to said receptacle to transfer its contents into said receptacle, and whereby the weight of said bucket may be utilized to return said receptacle from discharge to mixing position.

3. A plaster mixer having a mixing receptacle normally balanced about an axis and tiltable about said axis to discharge its contents, a stop for maintaining said receptacle in mixing position, and a co-operating member therefor; and a charging bucket carried by said receptacle eccentric to said axis, whereby its weight will normally maintain said stop in engagement with its co-operating member, and said receptacle in mixing position.

4. A plaster mixer having a mixing receptacle normally balanced about an axis and tiltable about said axis to discharge its contents; and a charging bucket at one side of said receptacle having a pair of arms, one end of the said arms being pivotally connected to said receptacle eccentric to its tilting axis, and the other end of said arms being provided with means whereby said bucket may be rocked about its pivotal connections to discharge its contents into said receptacle.

In testimony whereof I affix my signature.

CHARLES I. LONGENECKER.