C. F. WOODHULL.

AGITATING DEVICE.

APPLICATION FILED FEB. 13, 1920.

1,358,045.

Patented Nov. 9, 1920.

3 SHEETS—SHEET 1.

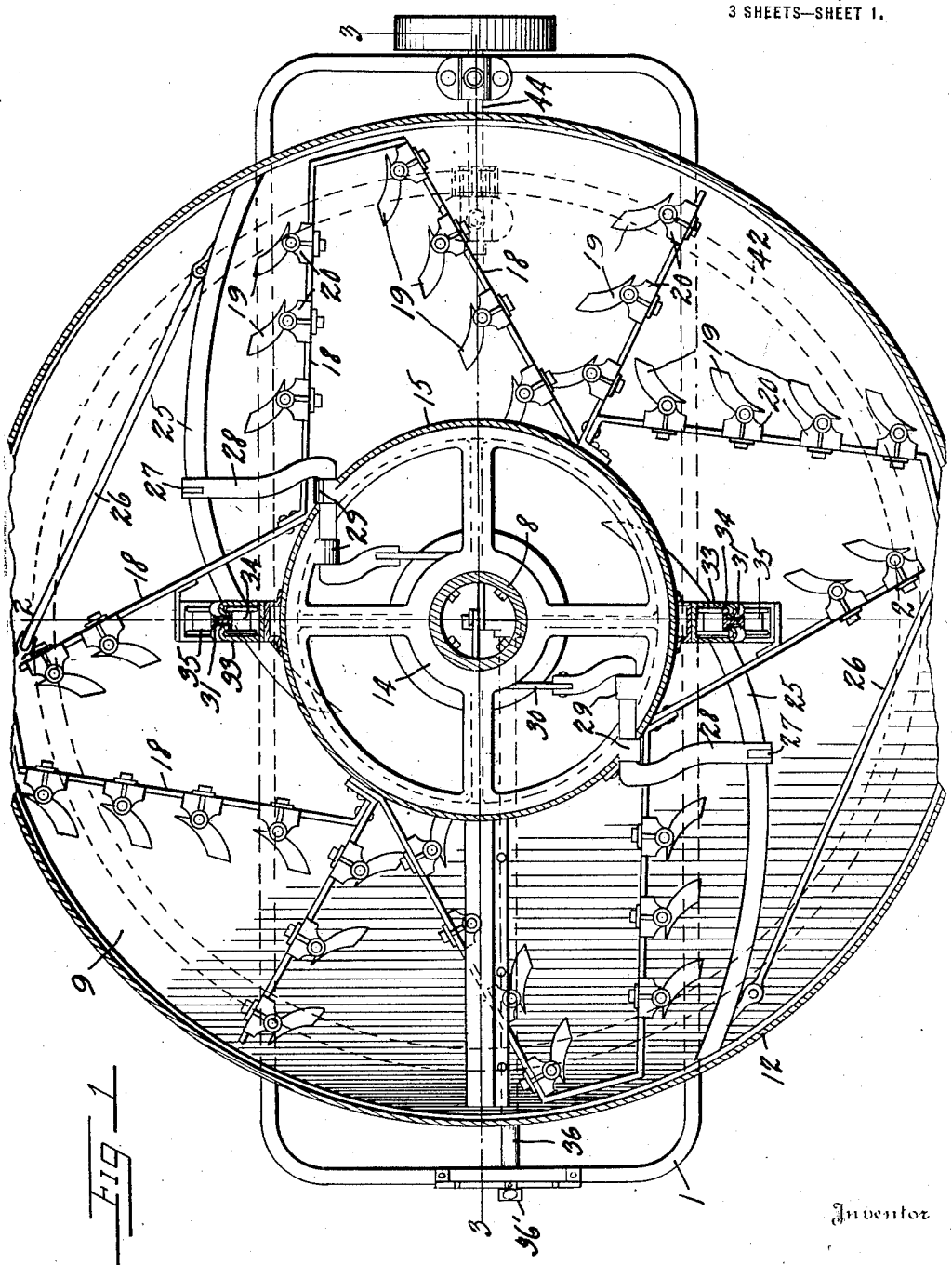

Fig. 1

Witness
John C. Jackson

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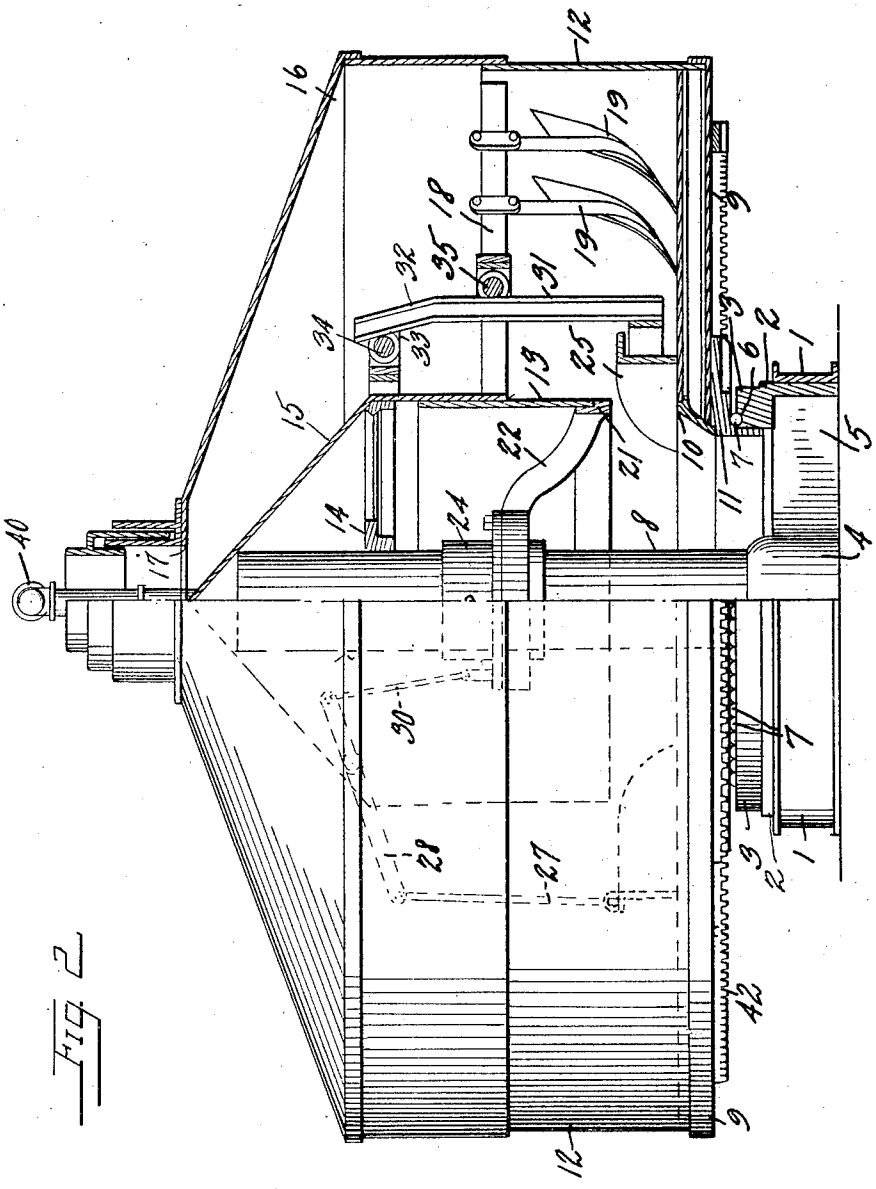

Fig 2

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C. K. Gailly

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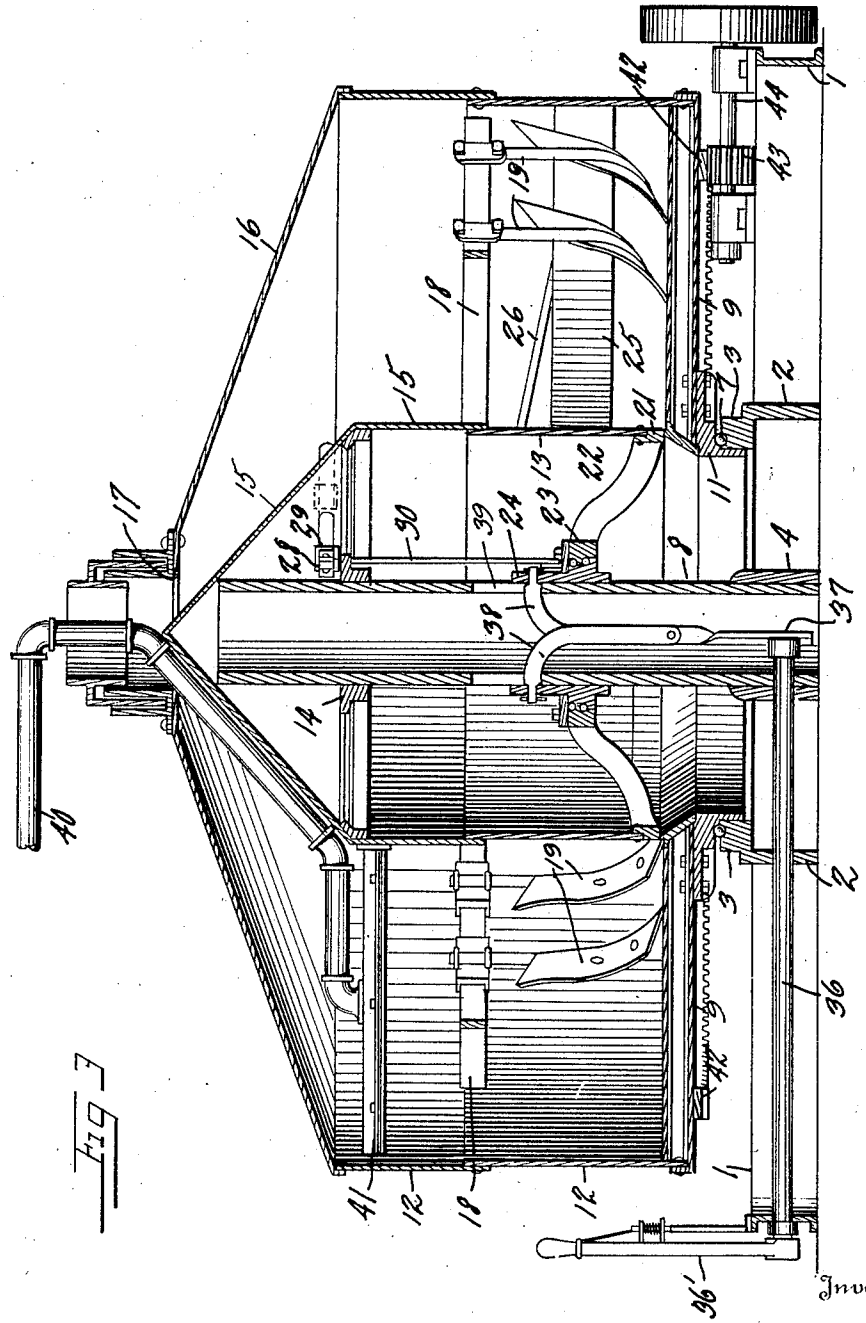

Fig. 3

Witness
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UNITED STATES PATENT OFFICE.

CHARLES F. WOODHULL, OF POPLAR, WISCONSIN.

AGITATING DEVICE.

1,358,045. Specification of Letters Patent. Patented Nov. 9, 1920.

Application filed February 13, 1920. Serial No. 358,365.

To all whom it may concern:

Be it known that I, CHARLES F. WOODHULL, a citizen of the United States, residing at Poplar, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Agitating Devices, of which the following is a specification.

This invention relates to agitating devices and more particularly to devices for hydrating lime and has for one of its objects the provision of a device of this character with improved means of operation.

Another object is to provide a device of this character that may be used for mixing any plastic materials and having improved means for discharging the mixed material.

A further object is to provide a device of this class that will have means for simultaneously operating the several parts.

These and other objects such as simplicity, durability, cheapness in manufacture and the general improvement of the art will be more fully brought out in the following specification and illustrated in the accompanying drawings in which:

Figure 1 is a horizontal sectional view of my device,

Fig. 2 is an elevation partly in section on the line 2—2 of Fig. 1, and

Fig. 3 is a sectional elevation on line 3—3 of Fig. 1.

Referring more particularly to the drawings the numeral 1 designates the base of my device having a square member 2 secured in its center. A circular bearing ring 3 is mounted in the member 2 and a circular supporting member 4 is mounted in the center of the ring 3 and held in place by braces 5. The members 2, 3, 4, and 5 may be separate pieces or may be cast as a unit as desired.

The bearing ring 3 has a groove 6 formed in its upper surface and ball-bearings 7 are mounted therein.

A center tubular support 8 is secured in the member 4.

A pan base 9 has a center opening 10 and a bearing ring 11 surrounding said opening. The bearing ring 11 is adapted to fit within and over the bearing ring 3 and rest on the ball-bearings 7. The pan is provided with sides 12 which are bolted to the base 9.

A tubular member 13 of equal height with the sides of the pan and the same diameter as the opening 10 is mounted over and adapted to close the opening 10 and is raised and lowered by mechanism hereinafter described.

A circular supporting member 14 is mounted on the support 8 and cone shaped cap 15 is secured thereto. The lower portion of the sides of said cone shaped cap being vertical and overlapping the member 13.

A cover 16 is secured to the sides 12 of the pan and has an opening 17 in its top center.

A plurality of plow beams 18 are secured to the cap 15 and have a plurality of plows 19 secured in sockets 20 formed thereon.

The member 13 is mounted on a ring 21 having arms 22 mounted in a ball-bearing mounting 23 in a band 24 slidably mounted on the tubular supporting member 8.

A plurality of discharge scrapers 25 are mounted in the pan and have their forward ends supported by braces 26 secured to one of the plow beams 18 and their rear ends supported by operating mechanism comprising a link 27 connected to one end of a crank arm 28 supported in bearings 29 on member 14; the other end of the crank arm 28 being connected to a link 30 which is in turn connected to the band 24.

I beams 31 are mounted adjacent the inner ends of the scrapers and have their free end bent inwardly on an angle at 32 and are mounted in a guide 33 having a roller bearing 34. The guide 33 being mounted on the cap 15. A guide roller 35 is also mounted on one of the plow beams 18 adjacent the I beam to prevent outward movement.

A shaft 36 having an operating handle 36′ is revolubly mounted in the base 1 and extends into the member 8 and has an eccentric connection with a link 37 which is connected to levers 38. The levers 38 extending through slots 39 in the member 8 and being connected with the band 24.

Water is admitted through pipe 40 which is connected to a sprayer 41.

A gear member 42 is mounted on bottom of the pan base 9 and is in operative engagement with a gear 43 on a stub shaft 44 journaled in the base 1. A driving pulley is shown on the shaft 44 but the shaft may receive its power in any manner and from whatever source desired.

The operation of the device is as follows:

The device being assembled the material is put in at the top through opening 17 and

falls on the cone 15 thus being evenly distributed. The power is then applied and the pan rotated, the plows and scrapers remaining stationary. When the material is sufficiently mixed the operator grasps the operating handle 36′ of the shaft 36 and turns it thus imparting an upward motion to the levers 38 which raise the band 24 and the member 13. The band being connected by links 30, crank arms 28, and links 27 to the scrapers, the scrapers will be forced down as the band rises. The angle portion 32 of the I beams 31 will by contacting with the guide member 33 force the scrapers inwardly as they are forced downwardly thus discharging the material through the opening 10 in the pan base 9.

By returning the shaft 36 to its normal position the operator will lower the member 13 and raise the scrapers and the device will be ready for a recharge.

While I have shown and described the preferred embodiment of my invention, it will of course be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention what I claim is:

1. A device of the character described comprising a base, a mixing pan rotatable upon said base and having its bottom provided with a central discharge opening, a cylindrical shell normally seating about and forming a closure for said opening, a plurality of stationary plows within said pan, discharging scrapers in said pan adjacent said opening, and means for simultaneously elevating said closure shell and lowering said scrapers into engagement with material within the pan.

2. A device of the character described comprising a base, a mixing pan rotatable upon said base and having its bottom provided with a central discharge opening, a cylindrical shell normally seating about and forming a closure for said opening, a plurality of stationary plows within said pan, discharging scrapers in said pan adjacent said opening, means for simultaneously elevating said closure shell and lowering said scrapers into engagement with material within the pan, and means automatically operating upon lowering of said scrapers to move the latter toward said discharge opening.

3. A device of the class described comprising a base, a mixing pan having a discharge opening in its bottom, said pan being revolubly mounted on said base, a tubular support mounted in said base and extending upwardly through said discharge opening, a closure for said discharge opening slidably mounted on said tubular support, a plurality of plows rigidly mounted within said pan, a plurality of discharging scrapers movably mounted within said pan and normally held out of engagement with the material being mixed, and means for simultaneously raising said discharge opening closure and bringing said scrapers in engagement with the material being mixed.

4. An agitating device comprising a base, a mixing pan having a discharge opening in its bottom, said pan being revolubly mounted on said base, a tubular support mounted in said base and extending upwardly through said discharge opening, a closure for said discharge opening slidably mounted on said tubular support, a plurality of rigid plow beams mounted within said pan, a plurality of plows removably mounted on said plow beams, a plurality of discharge scrapers movably mounted within said pan and normally held out of engagement with the material being mixed, means for simultaneously raising said discharge opening closure and for bringing said scrapers in engagement with the material being mixed, and means for revolving said pan.

In testimony whereof I hereto affix my signature.

CHARLES F. WOODHULL.