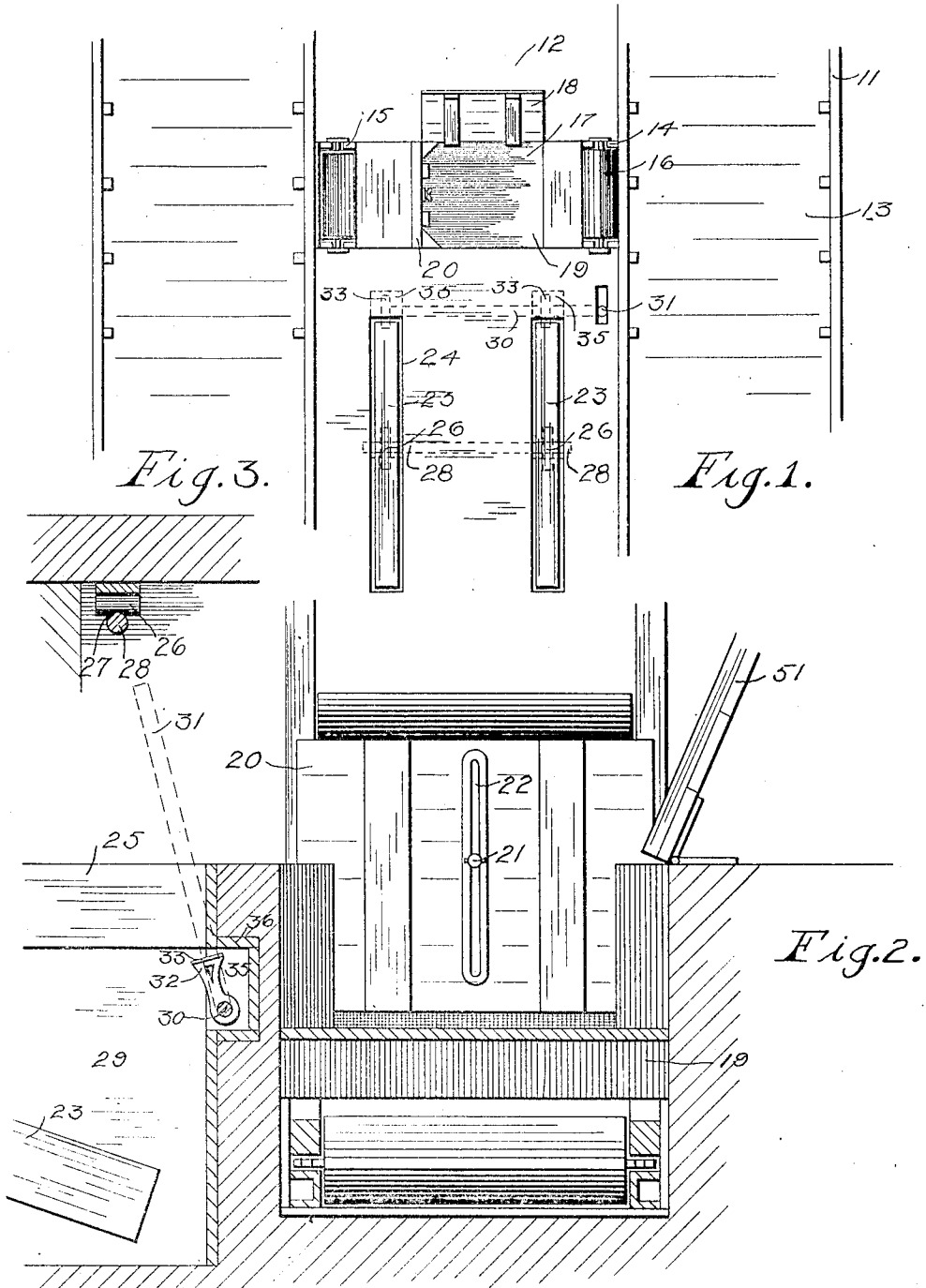


A. F. MEYER.
DUMP FOR ELEVATING DEVICES.
APPLICATION FILED JULY 20, 1912.

1,060,349.

Patented Apr. 29, 1913.

2 SHEETS-SHEET 1.



WITNESSES
McBurg
Mildred J. Roman

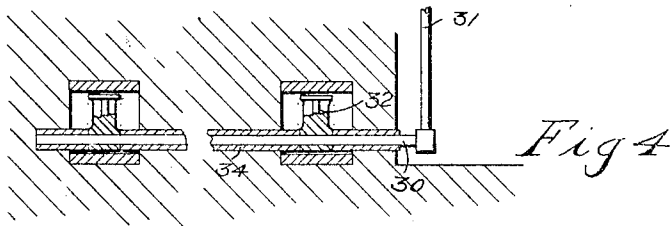
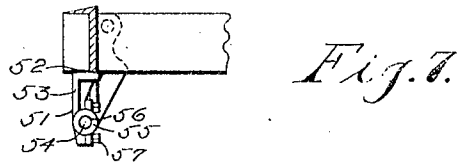
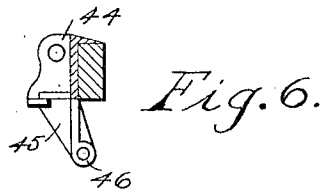
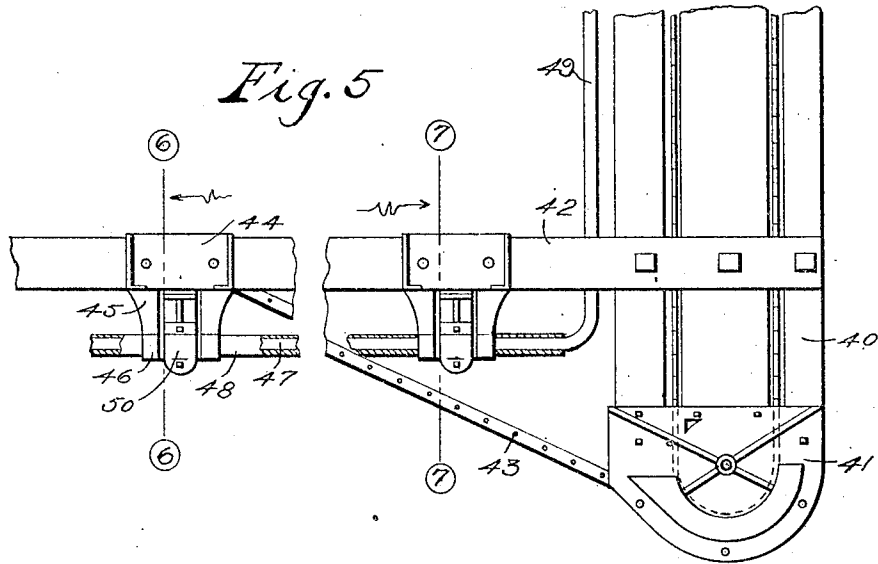
INVENTOR
Alfred F. Meyer
by *LaPorte & Brown*
Attys.

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2 SHEETS--SHEET 2.



WITNESSES

McBerg
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UNITED STATES PATENT OFFICE.

ALFRED F. MEYER, OF MORTON, ILLINOIS.

DUMP FOR ELEVATING DEVICES.

1,060,349.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Continuation of applications Serial No. 584,876, filed October 1, 1910, and Serial No. 634,170, filed June 19, 1911. This application filed July 20, 1912. Serial No. 710,619.

To all whom it may concern:

Be it known that I, ALFRED F. MEYER, a citizen of the United States, residing at Morton, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Dumps for Elevating Devices, of which the following is a specification.

This invention has reference to elevators for receiving and conveying grain to a position to be discharged into the bins, hoppers or receptacles of a crib or granary.

The invention has for one of its objects to provide an elevator for a corn crib or grain bin which may be arranged either in the driveway of the crib or bin or placed on one side of the crib or bin, or in the crib alongside the driveway.

The invention has for a further object to provide an elevator for a crib, preferably arranged in the driveway thereof and so constructed that a wagon driven into the crib may pass between the opposite legs of the elevator and when said wagon is dumped its contents may be scooped up by the conveying means of the elevator and conveyed to a point near the top of the crib and discharged into means for delivering the material into different bins or receptacles in said crib.

A further object of the invention is to provide in one unitary structure an elevator for a crib which shall be stationary and preferably disposed in the driveway of the crib, and dumping means, such as dump-logs built in conjunction with the elevator to become a part of the crib and manually released when the wheels of a wagon have been run onto the logs, for tilting or dumping the wagon whereby its contents may be delivered to the elevator for elevating and delivering same to different portions of the crib.

A further object is the improvement of various details of arrangement and construction of the dump and the manner of mounting the same.

This application is a continuation of my two prior applications bearing Serial Numbers 584,876 and 634,170, respectively, as to all subject matter which is common to the said applications.

In the drawings Figure 1 is a partial plan view of an elevator constructed according to my invention, showing the elevator legs, dump-logs and chute. Fig. 2 is a cross-section,

somewhat enlarged, showing the receiving portion or boot of the elevator and the controlling means for the dump-logs; Fig. 3 is a detail showing the pivoted supports for the dump logs; Fig. 4 shows in detail the rocking rod for controlling the dump-logs and the manner of supporting same. Fig. 5 is an elevation of the lower portion of a slightly modified form of my elevator and dumping arrangement. Fig. 6 is a sectional view on line 6—6 of Fig. 5. Fig. 7 is a sectional view on line 7—7 of Fig. 5.

In the drawings, referring particularly to Fig. 1, numeral 11 designates the entire crib or housing preferably provided with a centrally disposed driveway 12 extending from one end of the crib to the other between bins 13 located on opposite sides thereof. In the length of the crib or housing the bins may extend from one end to the other or the same may be sub-divided to form a series of bins if desired.

This invention has reference to an elevator for elevating corn or other grain into the bins and this particular application is drawn to my improvements in regard to the dumping apparatus for dumping the wagon and discharging the grain into the chute from where it is conveyed by the elevator to the discharge spout in the upper part of the crib and discharged into the bins.

I prefer to combine with the elevator, in one unitary structure, the dumping apparatus, consisting of dumping logs and manually operated means for controlling said logs. Usually in devices of this character and particularly with outside or inclined elevators employing a drag, adapted to have a swinging relation with the elevator, it is necessary to have a wagon-jack to be operated by the same power as the elevator, but with my device all such supplementary and expensive apparatus is entirely done away with. This is accomplished preferably by constructing the floor of the driveway mostly of cement with the proper openings and depressions to receive the apparatus, including the elevator and dump, so that the apparatus becomes a part of the crib and is fixed relative to said crib, although the floor may be built up of wood or in any other suitable manner.

The elevator proper comprises the legs 14 and 15 having running therein the buckets 16 arranged on an endless con-

voyer so as to pick the material from the bottom of the chute and lift it to the discharge spout. The upper part or head of the elevator will not be described as that is not essential to an understanding of this invention, but the description will be limited to the boot of the elevator, and the arrangement of the dumping apparatus.

As stated before the booth and the dumping apparatus are embedded in the cement or concrete which forms the driveway; however an opening 17 is left in the concrete or cement in which the boot of the elevator is embedded. This opening 17 is closed by the floor of the elevator except where the trap-door 18 is provided, this door being hinged to be raised and lowered. The opening covered by this trap door 18 is wide enough to receive the discharge of grain from the wagon. In the boot and the opening 17 and beneath the trap-door 18 is provided the inclined floor 19 which extends from the edge of the door 18 down to the portion of the boot where the bucket loads or picks up the grain. At the lowest end of this inclined floor 19 is provided the gate 20 which may be raised and lowered to be adjusted in any desired position and fixed there by the set screw 21, operating through slot 22 in said gate 20. This gate is also lowered when the trap-door 18 is lowered so as to be entirely out of the way.

Associated and forming a part of the elevator or crib is the dumping mechanism consisting of the dump-logs and the manually operated means for controlling said logs. In the cement floor of the driveway and to one side of the elevator are arranged the two logs 23 spaced part and extending longitudinally of the driveway so that the wheels of the wagon may be run thereon. These logs 23 are positioned in recesses 24 in the floor, which recesses are lined with wood strips 25 as shown. These logs are mounted so that they may be oscillated or tilted and a convenient way of mounting them is shown in Fig. 3. Brackets 26 are disposed on the lower side of said logs which brackets are provided with recesses 27 which fit on the rod 28, see Fig. 3. My object in mounting the logs 23 in the manner shown in Fig. 3 is, that said logs must be readily removable from the driveway bed or recess in which they have movement. When the logs are depressed or have been oscillated into a dumping position, material will find its way into the recesses or depressions in which said logs move and naturally must be cleaned out, and so the logs will have to be removed. My pivot means will allow the logs to be lifted out without manipulation of any parts and as easily replaced. The recesses 24 in the floor beneath that portion of the logs which are positioned nearest the elevator are cut deep

as shown at 29 in Fig. 2, while the other portion of the recess, being that beneath the front portion of the logs are very shallow and only deep enough to seat the logs so that when they are in their normal inoperative position their upper faces are flush with the floor of the driveway. These logs are located in a substantially horizontal or inoperative position and the construction for so holding or supporting said logs comprises the rocking rod or bar 30 having the operating handle 31 which extends through a slot in the floor of the driveway. On this rod 30 are provided the supporting members or brackets 32 which have the substantially horizontally supporting portions 33 which are adapted to be moved beneath the inner ends of the logs 23 and thereby support said logs in a horizontal position. The rod 30 is located below the floor line of the driveway and is embedded in the cement or concrete. To permit its ready rotation it is journaled in the sleeve 34, which is necessarily formed in sections as shown. In the cement or concrete forming the driveway and at a point opposite the termination of the logs 23 are provided the pockets 35 which are lined with boards 36 and which open out into the recesses 29. These pockets form chambers for the reception and operation of the brackets or members 32, permitting them to be moved into and out of operative relation with the logs 23. The location of the operating lever 31 is far enough to one side of the driveway to be out of the way and not interfere with the passage of persons, vehicles or machines therethrough.

The operation of this structure is obvious, after a consideration of the drawings in connection with the foregoing description and is as follows: A loaded wagon may run on to the logs 23 with the end gate approximate the elevator. The trap-door 18 is raised and the gate 20 is adjusted as desired. After the elevator is set in motion the lever 31 is moved to the right, looking at Fig. 2, thereby moving the brackets or members 32 into the receiving chambers 35 and depressing the inner ends of the logs 23 of the support whereby said logs will tilt as shown in Fig. 4 which causes the wagon and wagon body to assume an inclined position with the front end uppermost and thereby discharging the material on to the inclined floor and from thence to the elevator. After the grain is completely discharged from the wagon, it will be drawn forward and thereby return the logs to their horizontal position when the operating rod or lever 31 will be moved toward the left looking at Fig. 2 to position said brackets or members 32 beneath the dump-logs 23 and hold or support them in the horizontal position.

The construction shown in Fig. 5 is substantially the same as that previously described. In this figure the numeral 40 designates the vertical legs of the elevator having the boot 41. In this form are provided the horizontally extending base members or supports 42 between which is provided the inclined floor 43 leading to the boot 41. The same form of a trap door and gate is used in connection with this inclined floor as previously described.

Attention is called to the particular manner of mounting the means for holding and supporting the dump-logs in the horizontal position. Brackets 44 are secured to the horizontal members 42, said brackets having the depending members 45 which are spaced apart as shown and provided at their lower ends with the aligned sleeves or bearings 46. Mounted to turn in this sleeve or bearing 46 is the rod or shaft 47 which, as in the construction previously described is journaled in the protecting sleeve 48, which is embedded in the cement or concrete. This shaft 47 is provided with the operating rod 49 which projects into the same relative position as the handle 31. The form of the holding and supporting members is somewhat different in this modification. These members, or lugs 50 are secured to said shaft 47 between the spaced depending members 45 and are formed in two parts; the larger part 51 having a substantially horizontal extension 52 on which the inner end of the dump logs are adapted to rest, and also having the vertical body portions 53 with the semi-circular bearing 54 formed in the lower end portion thereof. The smaller member 55 of this holding member or lug is merely a clamping member and having the complementary semi-circular bearing 56, the two parts or members being clamped about the member 47 by means of bolts 57.

It is to be noted that I have provided a dump arrangement and apparatus for a grain elevator which is built in as a part of the crib, being embedded in the cement or concrete, which forms the driveway. The parts are out of the way and do not interfere with the passage through the driveway of the crib and are convenient for operation and readily accessible for purposes of repair and otherwise.

What I claim is:—

1. In an apparatus of the character described, a driveway bed formed with longitudinal spaced recesses which are shallow for approximately one half their length and deeper for the remainder of their length, pivotal means mounted in said spaced recesses, dumping means mounted on said pivotal means and arranged in said recesses with end portions thereof resting on the bottoms of the shallow portions of said recesses, means to support the other end por-

tions of said dumping means and retain them in normal position, and means to actuate said supporting means so as to permit said ends of the dumping means to be depressed into the deeper portions of said recesses.

2. In an apparatus of the character described, a bed made of concrete, said bed formed with longitudinal spaced recesses which are shallow for approximately one half of their length and deeper for the remainder of their length, dumping logs pivotally mounted in said recesses with one end portion thereof resting on the bottoms of the shallow portions of said recesses; an operator's rod journaled in said bed and means on said operator's rod to support said logs and retain them in their normal positions, said supporting means being adapted to be withdrawn to permit portions of said logs to be depressed in the deeper portions of said recesses.

3. In an apparatus of the character described, a bed made of concrete, said bed formed with spaced longitudinal recesses, and a material receiving compartment spaced from the ends of said recesses, said longitudinal recesses being shallow for approximately one half of their length and deeper for the remainder of their length; dumping logs pivotally mounted in said recesses; an operator's rod journaled in said bed; a hand rod connected with said rod and extending up through said concrete and above the surface thereof, and members on said operator's rod adapted to support said logs to retain same in a normal horizontal position in said longitudinal recesses and adapted to be withdrawn to permit said logs to be tilted to discharge material from a conveyance into said compartment.

4. In an apparatus of the character described, a bed made of concrete, said bed being formed with longitudinal spaced recesses and a transverse recess spaced from the ends of the longitudinal recesses, said longitudinal recesses being shallow for approximately one half of their length and deeper for the remainder of their length, dump logs pivotally mounted in said longitudinal recesses with portions thereof resting on the bottoms of the shallow portions of said recesses, means for supporting the ends of said logs adjacent said transverse recess, and means for actuating said supporting means, said transverse recess forming a material receiving compartment.

5. In an apparatus of the character described, a bed made of concrete, said bed formed with longitudinal spaced recesses which are shallow for approximately one half of their length and deeper for the remainder of their length, dumping logs pivotally mounted in said recesses with one end portion thereof resting on the bottoms

of the shallow portions of said recesses; said bed having pockets formed in the end walls of said longitudinal recesses, an operator's rod journaled in said bed, supporting means mounted on said rod and positioned in said pockets so as to normally support the end of said logs, said rod being adapted to be actuated so as to withdraw said supporting means from beneath said logs and to permit them to be depressed.

6. In an apparatus of the character described, a bed made of concrete, said bed formed with longitudinal spaced recesses which are shallow for approximately one half their length, and deeper for the remainder of their length, a rod embedded in said bed and intersecting said longitudinal spaced recesses; dumping logs arranged in said recesses with one end portion thereof normally resting on the bottoms of the shallow portions of said recesses; members attached to said logs to rest on said rod forming a pivot for said dump logs, an operator's rod journaled in said bed and means on said operator's rod to support said logs in their normal position.

7. In an apparatus of the character described, a bed of concrete, said bed being formed with longitudinal spaced recesses, said longitudinal spaced recesses being shallow for approximately one half their length and deeper for the remainder of their length, the end wall of the deeper portion of each longitudinal recess being formed with a pocket, linings for the walls of the recesses and said pockets, dump logs pivotally mounted in said longitudinal recesses with the end portions thereof resting on the bottoms of the shallow portions of said recesses and with the other end portions positioned in the deeper portions of said recesses and terminating approximate said pockets, supporting means positioned in said pockets adapted to maintain said logs in a

normally horizontal position, and means to withdraw them into said pockets to permit said logs to be moved on their pivots.

8. In an apparatus of the character described, a bed made of concrete, said bed being formed with longitudinal spaced recesses, said recesses being shallow for a portion of their length and deeper for the remainder of their length, dumping logs pivotally mounted in said recesses, the end wall of the deeper portion of each recess being formed with a pocket adjacent the ends of the logs, a rod mounted in said bed and extending through said pockets, means on said rod positioned in said pockets adapted to support the ends of said dump logs, protective means surrounding said rod and embedded in said bed and forming a bearing for said rod, and means to actuate said rod to withdraw said supporting means from beneath said logs to permit their being moved on their pivots.

9. In an apparatus of the character described, in combination, a driveway bed arranged with dumping log receiving openings or recesses; a rod in said bed and crossing said openings or recesses; dump logs arranged in said openings or recesses; brackets secured on the lower side of said logs and depending therefrom, and provided with recesses to adapt the brackets to rest on said rod and to permit the logs and brackets to be readily removed from the openings or recesses and off the rod; and hand operated means to normally hold the logs in a substantially horizontal position in said drive-way bed.

In testimony whereof I affix my signature, in presence of two witnesses.

ALFRED F. MEYER.

Witnesses:

JOHN GETZ,
W. R. LACKLAND.