C. W. LEVALLEY.

CONCRETE MIXING APPARATUS.

APPLICATION FILED OCT. 28, 1910.

1,067,181.

Patented July 8, 1913.

Fig. 1.

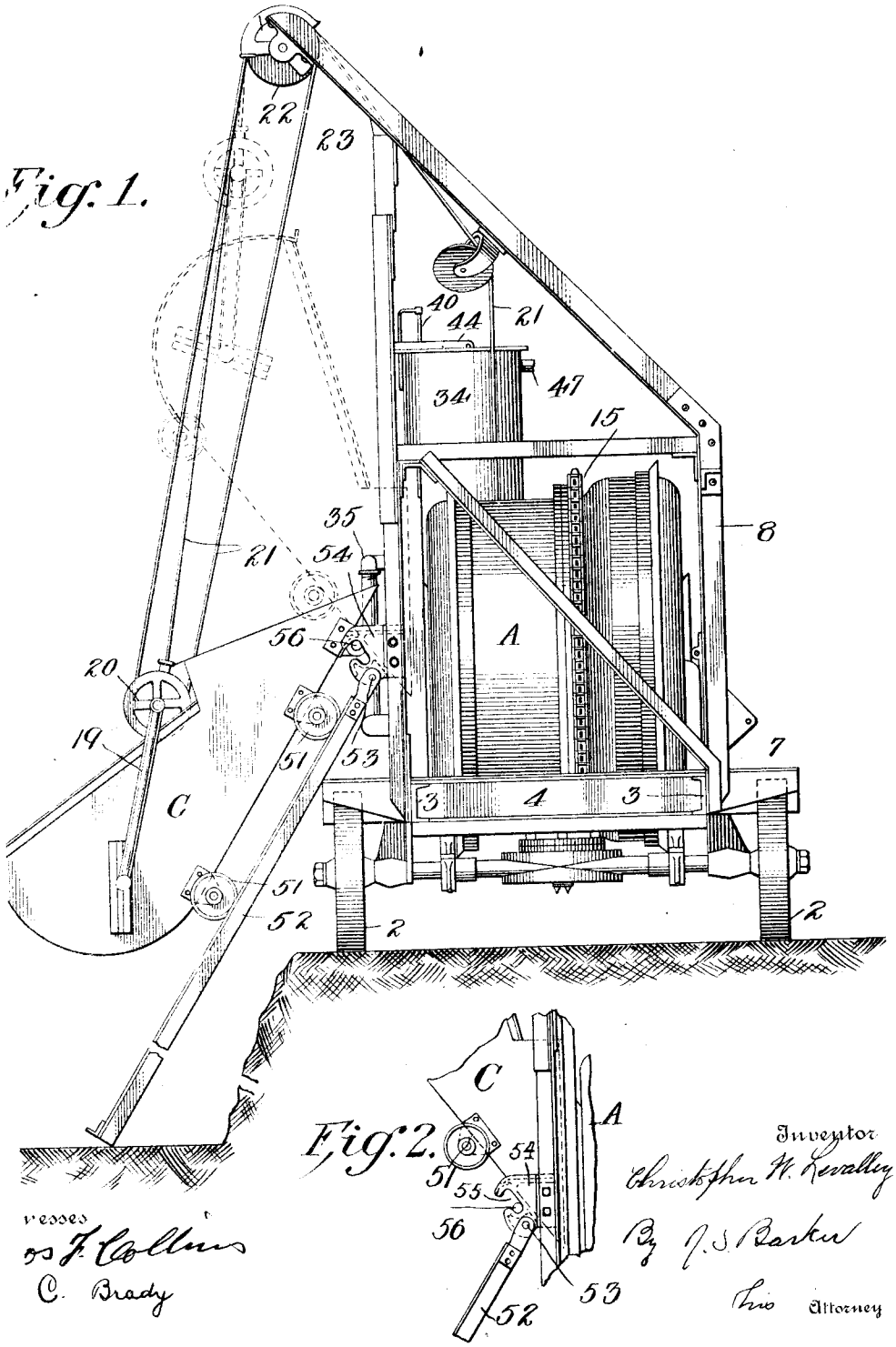


Fig. 2.

Witnesses

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CONCRETE-MIXING APPARATUS.

1,067,181. Specification of Letters Patent. Patented July 8, 1913.

Application filed October 28, 1910. Serial No. 589,556.

To all whom it may concern:

Be it known that I, CHRISTOPHER W. LEVALLEY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Concrete-Mixing Apparatus, of which the following is a specification.

My invention relates to improvements in loading apparatus adapted to be used in connection with large concrete mixing machines.

In the accompanying drawings Figure 1 is a side elevation of an apparatus embodying my improvements, and Fig. 2 is a detail view illustrating the manner of supporting the tilting loader when in position to deliver its contents.

In the accompanying drawings, A represents the rotary drum of a concrete mixing machine. This may be of any usual or preferred construction and is typical of a machine or apparatus to which the loader, in which my present invention is embodied, delivers. This drum is represented as being mounted upon a portable truck 2 carrying an upright framework 8 that surrounds the drum and serves to support the loader. This frame extends above the drum in order to carry the overhead supports for the lifting devices that control the movements of the tilting batch loader C. This upright framework may be of usual or approved construction, and is represented as having an overhead extension 23 in which is mounted a pulley 22 around which passes the cable 12 that controls the movements of the loader. Further description of the framework is unnecessary, as it forms no part of the invention herein presented.

The drum is driven by a motor of any usual or preferred construction, but this is not illustrated in the drawings. The motor, through suitable gearing, not shown, drives the chain 15 by which the drum is turned.

The batch loader, designated as a whole by C, is of a form adapted to rest upon the ground and to receive the dry ingredients for a batch of concrete, and to be tilted when supported adjacent to the receiving end of the drum to discharge its contents into the latter. It is provided with a set of wheels 51 arranged to run upon tracks of a skid 52 which may be of considerable length, as indicated in the drawings, thus permitting the loader to move a considerable distance from the drum to receive its load. The skid is pivoted at 53 to bracket pieces 54 carried by the upright frame 8. The bracket pieces are formed with open sockets 55 into which the laterally projecting ends of a cross shaft or bar 56 carried by the loader C near its nose or spout end are adapted to enter when the loader is drawn up the skid toward the discharge end of the drum. The loader is provided with a swinging bail 19 carrying a sheave 20 around which passes the cable 21 by which the movements of the leader are controlled. This cable passes over head sheaves 22 in the overhanging extension 23 of the upright frame 8, and is directed thence to a winding drum or spool 24 not represented in the drawings.

The open sockets 55 are each provided with two seats for the ends of the cross shaft 56, an upper set with which the shaft comes into engagement when it first enters the sockets and where it remains while the loader is being tilted, turning about the shaft as a pivot. As the loader comes to its discharging position, as indicated in Fig. 2, it drops slightly, the shaft 56 then occupying the lower seats in the open sockets. This arrangement constitutes a sort of loose or separable pivot that permits the loader to move close to the receiving end of the drum just before it discharges, but supports it at sufficient distance therefrom while tilting to allow the nose of the loader free movement without interfering with the drum or any of the stationary parts of the apparatus.

What I claim is:—

1. In a loading mechanism for a concrete mixing apparatus, the combination of a tilting batch loader for delivering material to the mixing apparatus, an inclined support for the batch loader along which it is bodily movable, a separable pivot for the loader comprising a rod carried thereby, and stationary brackets having open sockets, into which the shaft enters, mounted adjacent to the upper end of the inclined support, and means for drawing the batch loader up the incline and tilting it about the said pivot.

2. In a loading mechanism for a concrete mixing apparatus, a tilting batch loader adapted to deliver to the mixing apparatus a loose pivot for supporting the batch loader while being tilted comprising a cross head carried by the loader and brackets with

sockets in which the said cross head is loosely seated, the cross head occupying a position nearer the end of the drum when the batch loader is elevated into discharging position than that occupied while it is being tilted, and means for tilting the loader.

3. In a loading device for a mixing apparatus, the combination of a tilting loader having a discharge spout, a support for the loader when in position to be filled, a pivot for the loader about which it tilts to discharge, the pivot being loose and arranged to permit the spout end of the loader to fall a short distance toward the mixing apparatus, under the influence of gravity, when the loader has assumed the discharging position.

4. In a loading mechanism for a mixing apparatus, the combination of a tilting receptacle to receive and deliver the material to the mixing apparatus, a support along which the said receptacle is bodily movable, a loose pivot for the receptacle located in position to arrest its bodily movement along the support when it arrives in position to be tilted and to discharge comprising pivotal projections carried by the loader receptacle and open socket pieces with which the said projections engage, the said open sockets each having a pair of seats, those into which the projections first enter and where they remain while the receptacle is being tilted being above the others, the lower seats being arranged to receive the said projections when the receptacle is tilted to final discharge position whereby said receptacle at the time of discharge approaches the vessel into which it delivers, and means for moving and tilting the said loading receptacle.

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Witnesses:

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