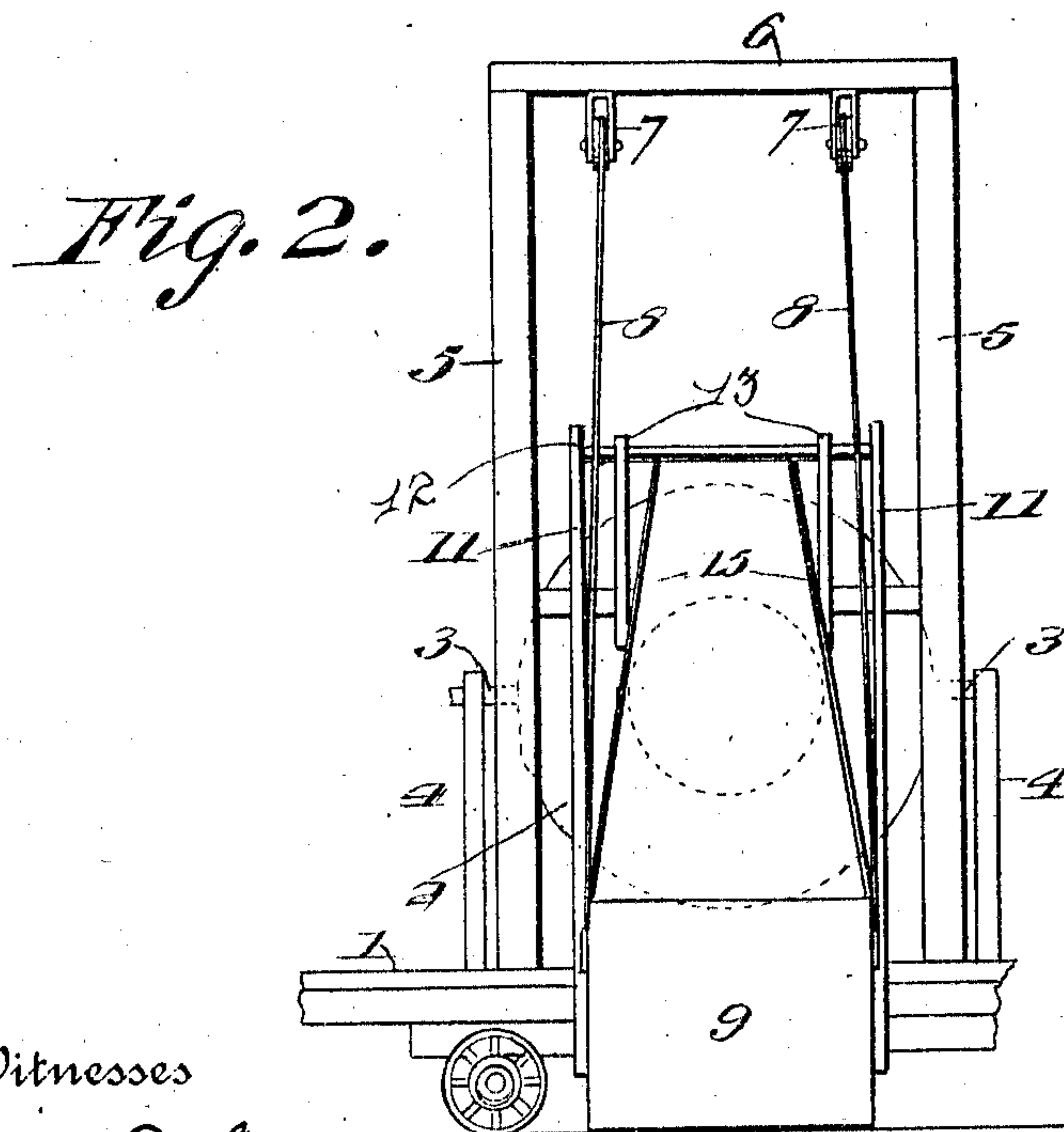
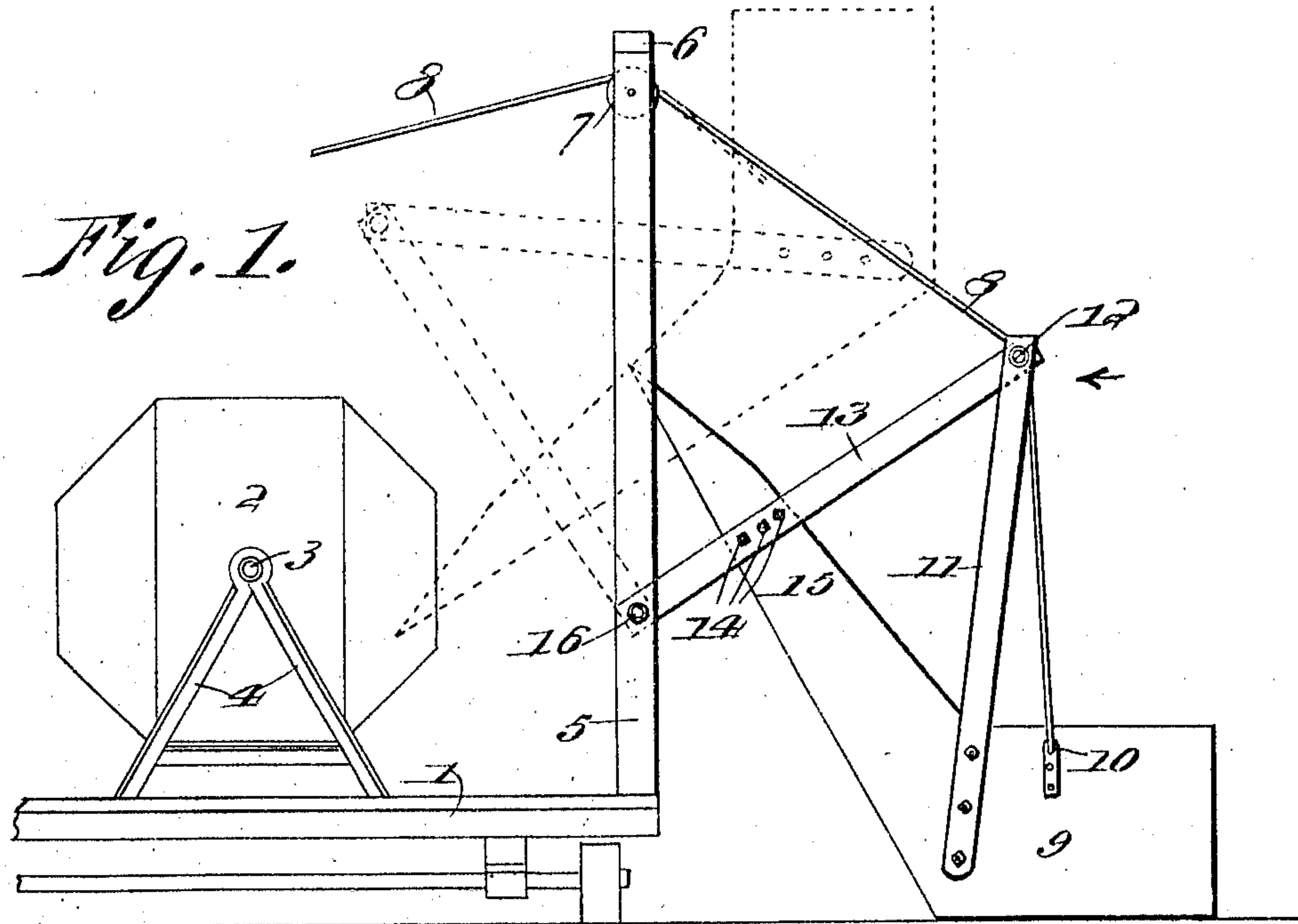


W. A. COOK.
 LOADER FOR CEMENT MIXERS.
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UNITED STATES PATENT OFFICE.

WILLIAM A. COOK, OF SOUTH BEND, INDIANA.

LOADER FOR CEMENT-MIXERS.

978,136.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. COOK, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Loaders for Cement-Mixers, of which the following is a specification.

This invention relates to certain new and useful improvements in loaders for cement mixers and the like, and it has for its objects among others to provide an improved and simplified construction for this purpose whereby the lifting of the load is made easier. I also fulcrum the bucket so that it will have a rocking motion causing it to be projected with its spout into the open end of the mixer when discharging the material, and to withdraw out of the way when the bucket is returned empty to place to receive a new load.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention, in its preferred form, is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation showing the application of the invention. Fig. 2 is a view at right angles to Fig. 1, looking in the direction of the arrow in Fig. 1.

Like numerals of reference indicate like parts in the different views.

Referring to the drawings 1 designates the platform of the cement mixer which *per se* may be of any of the well known forms of construction, of which 2 is the revoluble receptacle of the mixer, 3 its journals mounted in suitable standards 4 rising from the platform, while from the said platform rise the standards 5 connected at their upper ends by a cross piece 6.

7 are pulleys suitably suspended from the cross piece 6 as seen best in Fig. 2 and over which pass the lifting ropes or the like 8 which latter are designed to be connected with some suitable source of power, such for instance as the winding drum of a hoisting engine, not shown. The other ends of the said ropes are secured in any suitable manner to the sides of the bucket 9 as seen at 10, the points of connection of the ropes with the bucket being near the center of

gravity of the load. Attached to the sides of the bucket at a point in front of the points 10 are the ends of the bars 11 which rise above the upper edge of the bucket proper and are connected at their upper ends by the cross bar 12. The lifting ropes 8 pass loosely over this cross bar.

13 are bars secured to the spout 15 of the bucket as at 14, one end being pivotally connected with the standards 5 as at 16 and their other ends connected with the cross bar 12. The front ends of the bars 13 project a short distance below the bottom of the spout as seen best in Fig. 1, in order to allow of the requisite movement of the spout, as will soon be explained.

The operation will be apparent from the foregoing description, especially when taken in connection with the annexed drawings; briefly stated, it is as follows:—As shown by full lines in Fig. 1 the bucket is in its lowermost position ready to be filled; when filled the engine is started and the lifting ropes being attached to the bucket as described, the bucket is raised; as the bucket rises turning upon the points 16 the pull on the ropes will elevate the bucket until the cross bar 12 is carried away from or out of contact with the ropes which will complete the discharge by pulling directly on the bucket. At the start the effect of this disposition of the parts will be to increase the effectiveness of the pull of the ropes and thus lift the load easier. The cross bar 12 simply changes the direction of the pull of the ropes at the start. As the lifting progresses the bucket is rocked upon its fulcrum at 16 giving a rocking motion to the spout, causing it to project into the open end of the mixer 2 when discharging material thereinto, and to withdraw out of the way when the bucket is returned empty to its normal position on the ground ready to receive another load. The dotted lines in Fig. 1 clearly illustrate the position the parts assume when the bucket is dumping its load into the mixer.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is;—

1. A loader for cement mixers comprising a framework, a bucket provided with a spout, bars rigidly secured to said spout and pivotally mounted in said framework, connections between the body of said bucket

and said bars, and means for lifting said bucket.

2. A loader for cement mixers comprising a framework, a bucket provided with a spout, bars rigidly secured to said spout and pivotally mounted in said framework, brace bars rigidly secured to the body of said bucket and having connection with said pivot bars, and means for lifting said bucket.

3. In a device of the character stated, a vertical framework, a bucket provided with a spout, means for pivotally mounting the spout on a horizontal axis on said framework, bars rising from the bucket to the rear of its pivot, a cross bar connecting the upper ends of said bars, a pulley on the frame above the pivot of the spout and a lifting rope passed over said pulley and attached to the bucket and having a bearing on said cross bar during a portion only of the lifting movement.

4. In a device of the character stated, a vertical framework, a pivotally mounted bucket having a spout pivoted on a horizontal axis of said framework, bars rising from the bucket to the rear of its pivot, a cross bar connecting the said bars, a lifting rope attached to the bucket to the rear of the attachment of said bars, and a pulley mounted on the framework above the

pivot of the spout and over which said rope passes, the construction being such that the rope contacts with said cross bar during a portion only of the lifting operation.

5. A loader for cement mixers comprising a framework, a bucket provided with a spout, bars rigidly secured to said spout and pivotally mounted in said framework, connections between the body of the bucket and said bars, and a lifting rope connected to said bucket, said connections being provided with a bearing adapted to support the said lifting rope during the initial lifting movement of the bucket.

6. A loader for cement mixers comprising a framework, a bucket provided with a spout, bars rigidly secured to said spout and pivotally mounted in said framework, brace bars rigidly secured to the body of said bucket and connected with the pivot bars, and a lifting rope for said bucket, said brace bars being provided with a bearing adapted to support said lifting rope during the initial lifting movement of the bucket.

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

WILLIAM A. COOK.

Witnesses:

JOHN J. SCHINDLER,
A. J. SCHINDLER.