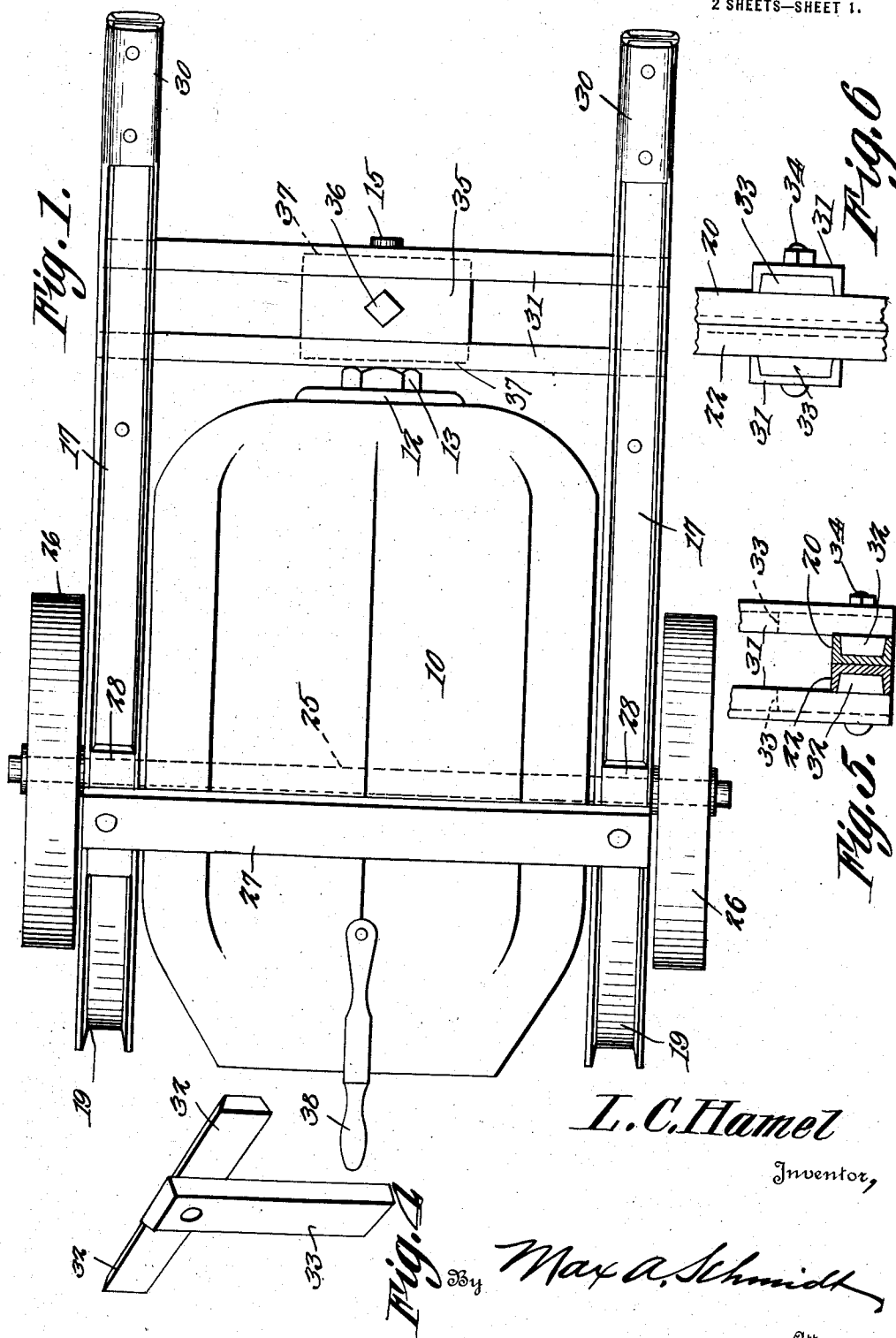


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CONCRETE MIXER.
APPLICATION FILED JULY 19, 1916.

Patented Apr. 24, 1917.

2 SHEETS—SHEET 1.



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Inventor,

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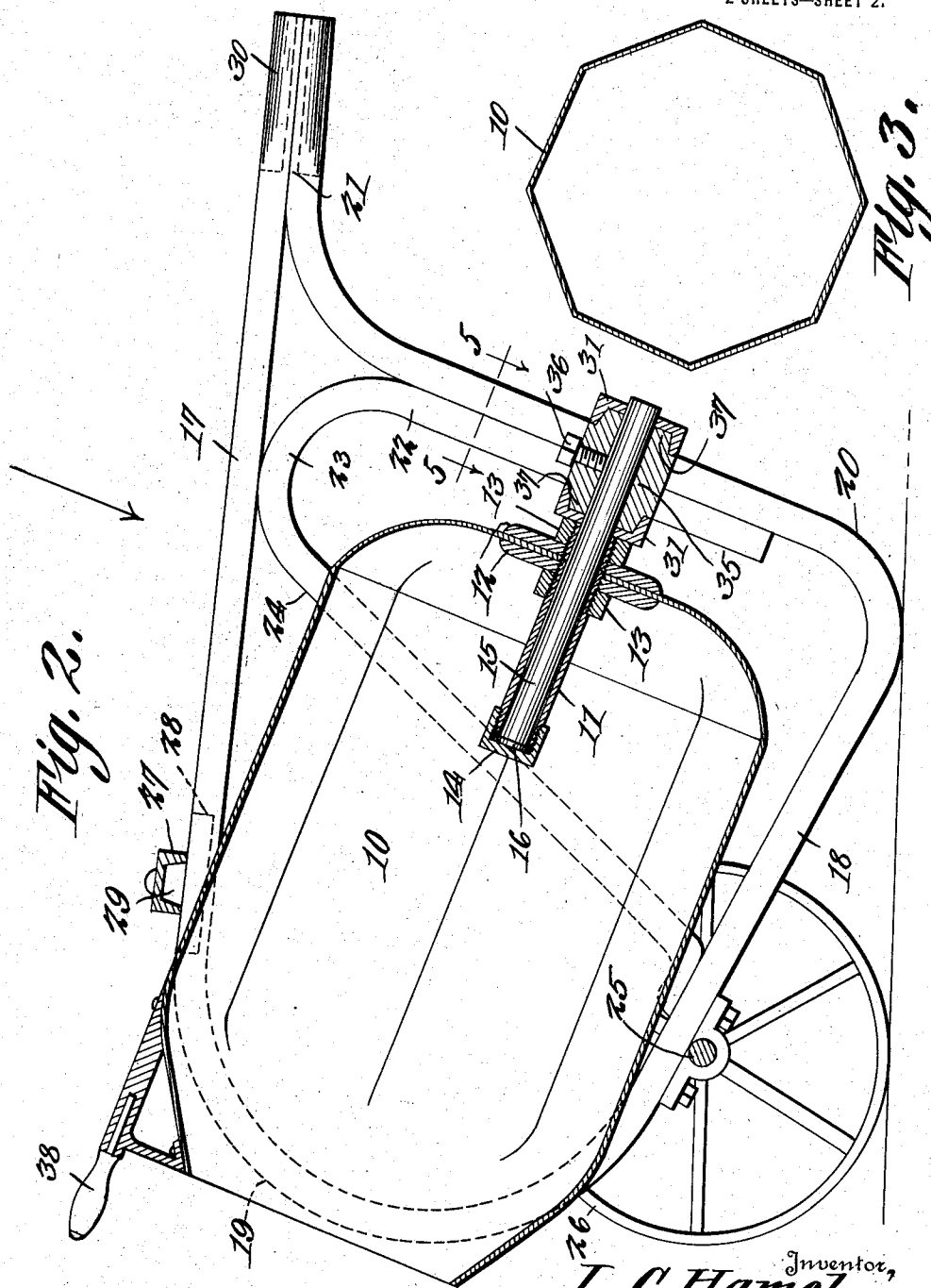


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

LOUIS C. HAMEL, OF APPLETON, WISCONSIN.

CONCRETE-MIXER.

1,223,385.

Specification of Letters Patent.

Patented Apr. 24, 1917.

Application filed July 19, 1916. Serial No. 110,100.

To all whom it may concern:

Be it known that I, LOUIS C. HAMEL, a citizen of the United States, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Concrete-Mixers, of which the following is a specification.

This invention relates to concrete mixers of the portable type, and its object is to provide a simple and efficient hand operated machine to take the place of the wheelbarrow and the small batch mixer, so that the materials may be taken from the piles where they are dumped by the wagons, and mixed and discharged directly into the forms.

The machine consists of a mixing drum mounted on a two-wheeled truck or barrow, and so supported that the concrete may be easily mixed, and carried to the forms and dumped thereinto.

In order that the invention may be better understood, reference is had to the accompanying drawings forming a part of this specification, in which the preferred embodiment of the invention is shown, it being understood that various changes and modifications in the structural details may be made without departure from the spirit and scope of the invention as claimed hereinafter.

In the drawings—

Figure 1 is a plan view of the apparatus, looking in the direction of the arrow in Fig. 2; Fig. 2 is a central longitudinal section of the apparatus; Fig. 3 is a cross-section of the mixing drum; Fig. 4 is a perspective view of a detail portion of the device; Fig. 5 is a sectional detail on the line 5—5 of Fig. 2, and Fig. 6 is an elevation of the parts shown in Fig. 5.

Referring specifically to the drawings, 10 denotes a mixing drum which is preferably octagonal in cross-section, and opens at one end to receive and discharge the material, this end being also reduced. To the other end of the drum is fixed a bearing in the form of an elongated sleeve or tube 11 threaded at each end. One end of the sleeve passes through the rear end wall of the drum and through disks 12 located on the inside and the outside thereof, and on this end of the sleeve are screwed nuts 13, which latter, when they are tightened up against the disks, fasten the sleeve securely to the drum. The other end of the sleeve extends for a short distance into the drum and is

closed by a cap 14. The sleeve is arranged co-axially with the drum, and is designed to receive a stationary shaft 15 carried by the truck frame and forming the axis about which the drum rotates. The end of the shaft 15, adjacent to the cap 14, is headed over the end of the sleeve, as shown at 16, to prevent the latter from working off the shaft.

The mixing drum 10 is carried by a two-wheeled truck or barrow, the frame of which comprises laterally spaced side sections between which the drum is located. Each side section of the frame comprises a top bar 17 and a bottom bar 18 which are connected at their forward ends by a curved bend 19. At its rear end the bottom bar 18 has an upward bend 20 to the corresponding end of the top bar 17. This frame member is in one piece and is composed of channel steel suitably bent to the shape shown. The upper end of the rear portion 20 of the frame member is bent rearward parallel to the rear end of the top bar 17, beneath the same and in contact therewith, as shown at 21, the channel of the bar 17 being at the top and the channel of the part 21 at the bottom, so that these parts may be placed back to back. The side frame section also has a brace consisting of a channel bar 22 extending along and secured to the rear bar 20 and having at its upper end a forward bend 23 to the bottom of the top bar 17, and then a downward and forward bend 24 to the bottom bar 18, to which latter it is bolted or otherwise fastened.

The bottom bars 18 of the respective sides of the machine support the axle 25 of the wheels 26, said axle also providing a cross-connection between the sides of the truck.

The frame bars of the respective sides of the truck also have cross-connections whereby the sides are secured in laterally spaced relation. One of these connections is adjacent to the forward ends of the top bars 17, the same being a channel bar 27 placed so that its channel is at the bottom and seating at its ends on the top bars. In the channels of the top bars seat blocks 28 having a transverse lug 29 on top seating in the channel of the bar 27. Bolts passing through the bars 27, the parts 28 and 29, and the bars 17, complete the fastening of the cross-connection. The parts 28 and 29 are castings, and made in one piece.

The channels of the rear ends of the top

bars 17 and the parts 21 are provided with fillers 30 and said ends serve as handles for operating the truck.

A cross-connection between the parts 20 and 22 of the two sides of the truck frame is also provided. The parts 20 and 22 are placed back to back, the channels facing outward. The cross-connections are parallel channel bars 31 having their channels facing inward. In the channels of the parts 20 and 22 seat blocks 32 having a transverse lug 33 on the outside of the channels, said lugs seating in the channels of the bars 31, with bolts 34 passing therethrough and completing the fastening. This connection is the same as the one at the forward ends of the top bars 17.

Midway between their ends, the channel bars 31 carry a block 35 which supports the shaft 15, the latter passing through a hole in the block and being made fast by a set screw 36. The channels of the bars 31 face each other, and the block 35 has reduced end portions 37 seating therein. The shaft 15 also passes through the bars 31 and thus serves to hold the block 35 fixed therebetween.

At the forward, or discharge end of the drum 10 is a suitable handle 38 for rotating the same to mix the material.

The drum 10 is located above the axle 25, and it extends on opposite sides thereof in the direction of the length of the truck. It will therefore be seen that the drum can be readily emptied by merely swinging the rear end of the truck frame upward, whereby it tilts about the axle 25, and its forward end and the corresponding end of the drum tilt downward, and the material is discharged.

In operation, the material to be mixed is thrown into the drum 10 and the latter is rotated to mix the same, after which the truck is wheeled to the forms and the material is dumped thereinto, after which the truck is wheeled back to the place where the

material is piled and the drum is filled for the next batch. When the drum is being filled, and also when it is rotated to mix the material, the rear end of the truck frame is allowed to swing down until the lower ends of the frame parts 20 rest on the ground, as shown in Fig. 2, the same therefore serving as a prop and holding the truck stationary, and the drum in this position of the truck frame is held inclined downward and rearward to prevent the material from working out of the forward or discharge end.

I claim:

1. A concrete mixer comprising a rotatable mixing drum, a wheeled support for the drum, said support being tiltable about its axle, and the drum extending in the direction of the length of the support, a shaft supporting the drum, a prop on the support behind the axle for limiting the downward tilt of the rear end of the support, and a support for the drum shaft carried by the prop.

2. A concrete mixer comprising a rotatable mixing drum, a wheeled support for the drum, said support being tiltable about its axle, and the drum extending in the direction of the length of the support, a shaft supporting the drum, a prop on the support behind the axle for limiting the downward tilt of the rear end of the support, said prop comprising laterally spaced side members, a cross-connection between said members and consisting of spaced channel bars having their channels facing; a block mounted between said bars and seating at its ends in the channels thereof, and a shaft supporting the drum and passing through the channel bars and the block therebetween.

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

LOUIS C. HAMEL.

Witnesses:

ELMER COLE,
Mrs. E. J. COLE.