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RENEWABLE DRIP RING AND CLOSURE SEAT FOR CONCRETE MIXERS

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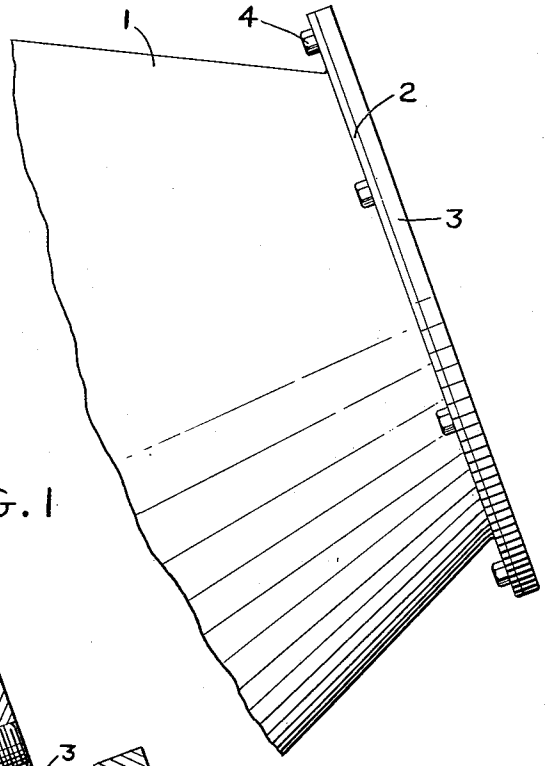


FIG. 1

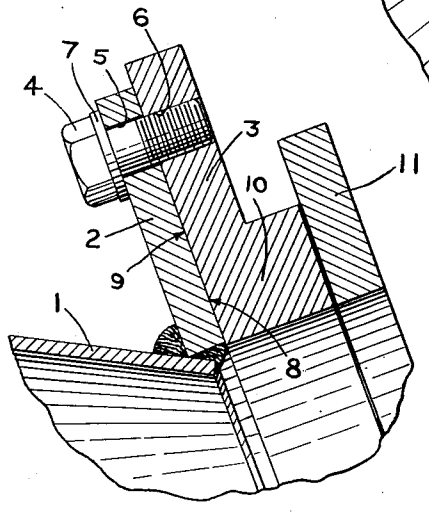


FIG. 2

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RENEWABLE DRIP RING AND CLOSURE SEAT FOR CONCRETE MIXERS

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2 Claims. (Cl. 259—175)

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This invention relates generally to rotatable concrete mixers having a single opening at the end thereof for charging and discharging, and more particularly to a drip ring and closure seat for said opening which is renewable.

In rotatable mixers, particularly those of the transit type, where an opening is provided at one end thereof, it has generally been found that a beveled edge or drip ring not only provides means for more easily discharging the mixed concrete from said mixer but in addition for seating the closure door, or a non-rotatable hopper and closure door therein.

However, it has been found that the gritty substances, forming the mixed concrete, are from time to time deposited on the drip ring causing considerable wear, necessitating replacement thereof which has been expensive because of the cutting and welding operations that were necessary.

The present invention contemplates a novel type of renewable drip ring and closure seat which can be easily installed by merely loosening and removing spaced bolts which allow the drip ring and closure seat to be replaced.

With these and other objects in view, as may appear from the accompanying specification, the invention consists of various features of construction and combination of parts, which will be first described in connection with the accompanying drawings, showing a renewable drip ring and closure seat for concrete mixers of a preferred form embodying the invention, and the features forming the invention will be specifically pointed out in the claims.

In the drawings:

Figure 1 is a side view of the open end of a mixer drum showing the invention thereon.

Figure 2 is a cross-section through the invention.

Referring more particularly to the drawings, Figure 1 shows the end of a transit-type truck mixer drum 1, which may be any suitable type of mixer drum of which there are many well known in the art. It will be understood that while this invention is shown and described in connection with a transit-type truck-mixer that it is not intended to so limit the invention but that it can be used with any rotatable type of mixing drum in which the drip ring acts either as a discharging means, a seat for a non-rotatable closure member, or both.

The mixing drum 1 is provided with an opening, shown in Fig. 2. Fixedly connected perpendicular to the axial line of the mixing drum and

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about the outer perimeter of the opening, on the outer surface of the mixing drum, is a drip ring seat 2, a substantially flat annular member, having an inner circumference equal to the outer circumference of the mixing drum 1 about said opening. The drip ring seat 2 may be preformed integrally with the mixing drum 1 or it may be connected thereto by suitable means such as welding as shown in Figure 2 of the drawings.

Figures 1 and 2 also show a drip ring member 3, which is also substantially flat and annular in construction, and provided with an inner circumference at least equal to that of the drip ring seat 2.

The drip ring member 3 is detachably mounted on the drip ring seat 2, by means of radially spaced threaded means such as bolts 4, which pass through radially spaced openings 5 in the drip ring seat 2 into contact with threaded bores 6 on said drip ring member 3, spaced to coincide with said openings 5. Lock washers 7 are provided to prevent said bolts from opening.

The inner surface 8 of said drip ring member 3 and the outer surface 9 of the drip ring 2 are flat and accordingly are adapted to engage each other intimately to prevent grit or other matter from getting therebetween to cause wear or corrosion.

An annular flange 10, projecting in the axial line of the drum 1, is formed on the outer surface of the drip ring member 3, which adapts the drip ring member 3 to engage and act as a seat for a rotatable closure member 11, only a fragment of which is shown in Figure 2 of the drawings. It is understood that the outer surface of the drip ring member 3 may be varied such as to have a beveled face, for other and different types of rotatable closure members.

In order to remove the drip ring member 3, the closure member 11 is removed, and bolts 4 loosened until the threaded bores 6 are cleared. This allows the drip ring member 3 to be removed, by merely tapping it lightly to break the surface-to-surface connection between surfaces 8 and 9 of the respective drip ring member 2 and the drip ring seat 3. A new drip ring member may be inserted to take the place of the old member if it is worn or broken, or fails to provide a proper seat for the closure member 11.

While one form of the invention has been illustrated and described, it will be understood that the invention is not to be limited to the specific construction or arrangement of parts but that they may be widely modified within the invention defined by the claims.

What is claimed is:

1. In a renewable drip ring and closure seat for rotatable concrete mixers having an end opening on the mixing drum thereof, a drip ring seat connected to and formed on the outer circumference of the mixing drum about said opening perpendicular to the axial line of said mixing drum, a drip ring and closure seat member, threaded means extending through circumferentially spaced annular openings and engaging said drip ring and closure member for detachably connecting said drip ring and closure seat member to the drip ring seat, the outer surface of said drip ring seat being substantially flat, the inner surface of said drip ring and closure seat member having a flat face for seating itself on said flat outer face of the drip ring seat, the outer surface of said drip ring and closure seat member having an annular seating means projecting laterally thereof along the axial line of the mixing drum for

seating a suitable non-rotatable end closure for said mixing drum.

2. In a renewable drip ring and closure seat member for rotatable concrete mixers as claimed in claim 1, wherein said annular seating means comprises a lateral projection having an inner circumference continuous with the inner circumference of said drip ring and closure seat member, an outer face suitably shaped to snugly engage the non-rotatable end closure means for said mixing drum.

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