

SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A SUSPENDED BUCKET

TECHNICAL FIELD OF THE INVENTION

The present invention relates to handling and utilization of cement buckets suspended from cranes.

BACKGROUND OF THE INVENTION

Concrete buckets suspended from cranes are used to distribute flowable concrete into pre – formed forms of a building project. Several operators are needed to direct the bucket to a convenient position above the form, to release the concrete from the bucket and to distribute discharged concrete. Pouring concrete efficiently and safely from suspended concrete buckets is a crucial task in a building project.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic description of the bucket of the invention with the shutter partially closed;

5 Fig. 2 is a schematic description of the bucket of the invention with the shutter closed;

Fig. 3 is a schematic description of the shutter and suspending wheels;

Fig. 4 is a schematic description of the shutter and suspending wheels
10 in an opened condition.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

In accordance with the present invention, cement is released
15 gravitationally from a suspended cement bucket by the opening of a shutter at the bottom of the bucket. Opening of the bucket outlet aperture is performed by an operator pulling a rope, the length of which is not limited. To explain the mechanism of the release of cement, reference is made now to **Fig. 1**. To bucket **10** is appended a construction frame **12**. A hose **14** at the bottom of the
20 bucket **10** receives the concrete when shutter **16** is opened. In the figure the aperture **18** is partially opened. Handle **20** is pulled by an operator (not shown)

through manipulation of the rope **22**. Spring **24** biases the handle **20** and the shutter **16** towards the bucket **10**. A second operator manipulates the flexible hose **14**, when the shutter is opened, for distributing the flowing concrete. This can however be done by the same operator opening the shutter. In **Fig. 2** the
5 handle **20** has been released by the operator, by loosening the rope **22**. The spring **24** has contracted, shutting off the shutter **16**. Concrete can no longer flow out of the bucket **10**.

The main structural features of a shutter of the invention are shown in **Fig. 3**. Shutter **40** is slidable by wheels **42** attached at its both flanks (only the
10 wheels at one flank are shown). The wheels roll on rails **44**. In **Fig. 4** the shutter is shown opened, revealing hose flange **50** of the hose described above. At this state, concrete pouring down from the concrete bucket in the direction of arrow **52** can flow downwards through the hose. The shutter **40** closes by pushing in the direction of arrow **54**.

CLAIMS

1. A suspended concrete bucket comprising a bottom shutter for
5 releasing flowable concrete gravitationally, and wherein said shutter
is slid by an operator.
2. A suspended concrete bucket comprising a bottom shutter for
releasing flowable as in claim 1 and wherein said operator uses a
10 handle to slide said shutter, and wherein said shutter is biased
towards a closed position by a spring.
3. A suspended concrete bucket comprising a bottom shutter for
releasing flowable as in claim 1 and wherein said shutter slides on
15 wheels.