United States Patent

Miller et al.

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[54] **ADVERTISING SIGN FOR REVOLVING DRUM**

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[51] **Int. Cl.** **G09f 11/02**

[58] **Field of Search** 40/68, 51, 31, 33, 35, 72, 40/73, 74, 75, 106.42

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[57] **ABSTRACT**

A drum rotatable on a generally horizontal axis (for example, a ready-mix concrete drum) is provided with one or more signs pivoted to its periphery and carrying an off-center weight which tends to hold the sign upright so that the legend thereon will be readable in all positions of the drum. Preferably, the weight is a liquid partially filling a tube tangent to the pivotal axis upon which the sign is mounted and so disposed with reference to the sign that the liquid can flow toward the bottom of the sign to hold the sign upright.

3 Claims, 2 Drawing Figures

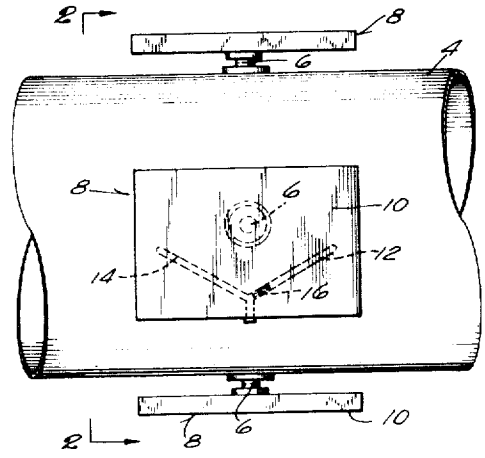


Fig. 1

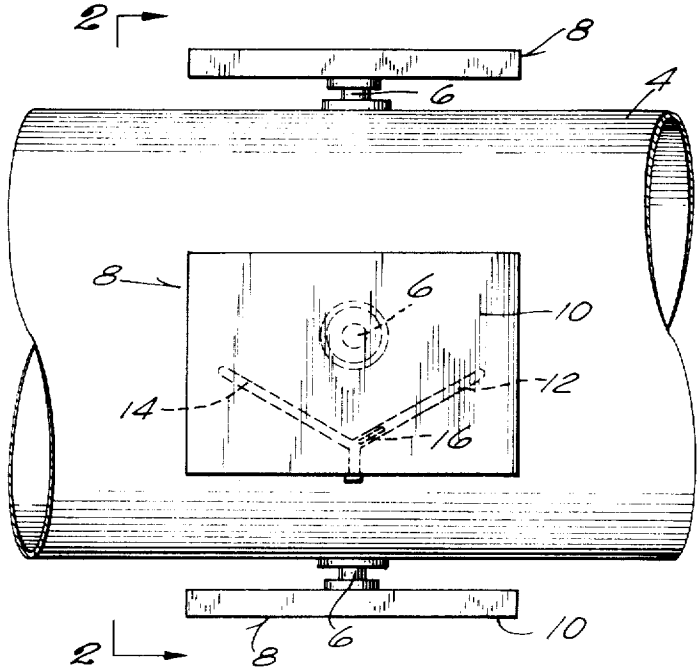
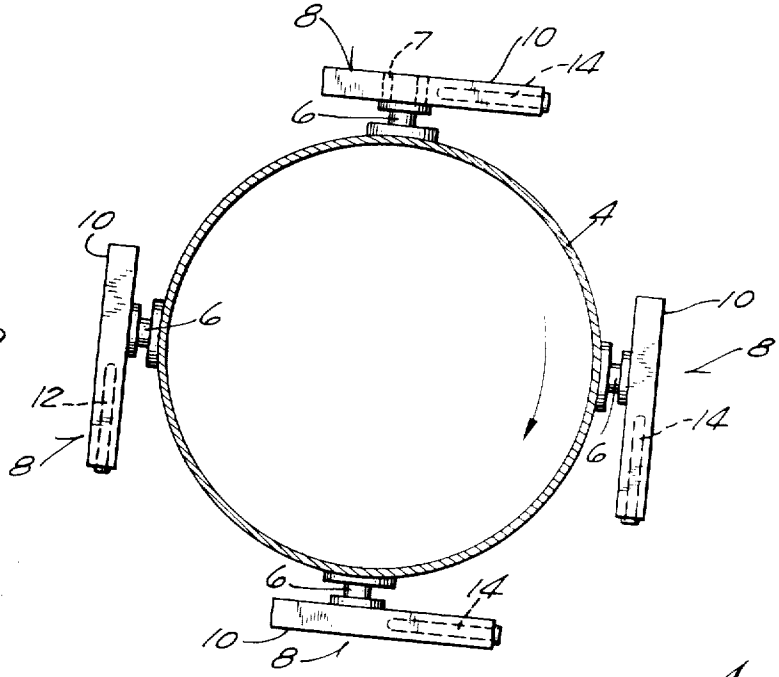


Fig. 2



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ADVERTISING SIGN FOR REVOLVING DRUM

BACKGROUND OF THE INVENTION

The sides of ready-mix concrete drums appear to offer splendid opportunities for advertising except for the fact that the rotation of the drum makes it difficult to read the sign except in one certain position of the drum.

SUMMARY OF INVENTION

Projecting substantially radially from the drum is a pin upon which a display sign is pivoted. The pin is off-center with reference to the sign. A weight at the bottom of the sign holds the sign upright as the drum rotates and turns it over when the sign reaches the opposite side of the drum. However, to initiate sign movement, and also to keep the sign from pendular swinging, it is found desirable to provide for movement of the weight on a path which is preferably tangential with respect to the axis of sign oscillation. Conveniently a tube defines this path and it is preferred to use a liquid for the weight. The tube is preferably diagonally disposed and the liquid only partially fills it. Use of liquid has provided better than putting balls or other non-liquid weights in the tube. When the rotation of the drum carries the sign over center, the weight first moves toward the level of the mounting stud and then abruptly moves back toward its lower central position. As the weight moves to the end of the tube in a location immediately below the pivot pin, it erects the sign but reacts in the tube to damp the oscillation of the sign. We have found it desirable to use mercury as the weight but other liquids such as antifreeze or even water may be used, according to climate.

In the preferred construction, we use two tubes converging downwardly below the pivot. The one which does not contain liquid is a mere counterbalance for the tube that does contain liquid. Only one of the tubes needs to contain the liquid or other weight.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a side elevational view of a drum equipped with a sign embodying the invention.

FIG. 2 is a view taken in section on the line 2—2 of FIG. 1.

DETAILED DESCRIPTION

As already indicated, the invention is particularly applicable to a drum which rotates on a horizontal axis, as does a drum of a ready-mix concrete truck.

Such a drum is shown fragmentarily and diagrammatically at 4. Studs or pins project radially from its sides. At least one of the pivot pins 6 supports a bearing 7 for sign 8. The face 10 of the sign 8 is available for advertising. The sign is preferably hollow being interiorly provided with a pair of tubes 12 and 14 which converge downwardly to a point almost directly beneath the pivot pin 6. One of these tubes contains a liquid at 16 which may be assumed to be mercury. The other tube is used merely as a means of balancing the weight of the tube which contains the liquid. Balls used instead of liquid will accomplish somewhat the same result but do not so readily damp the oscillation of the sign. Moreover, they tend to engage the end of the tube with sufficient impact so that there is a possibility of destruction of the tube.

Due to the angle of the tube which contains the liquid, the liquid can flow along the path provided thereby while remaining in a part of the sign below the pivot stud 6, where it is in a position to hold the sign horizontal and upright. The amount of liquid should be sufficiently small in relation to the capacity of the tube so that the weight thereof will be concentrated at the lower end of the tube where it will be approximately directly beneath the pivot pin.

As the drum rotates, the sign passes over the top of the drum. As soon as the pivot is inclined toward the opposite side of the drum, the mercury or other weight moves to the other end of the tube and then returns to cause the sign to turn over to a new upright position. The liquid has a damping action which tends to prevent continued oscillation of the sign. Thus the sign moves smoothly as it is inverted from one upright position to the other.

I claim:

1. The combination with a drum rotatable on a generally horizontal axis, of a display sign disposed on a plane which is tangent to said drum, means providing a mounting for said sign upon which said sign is rotatable, the mounting being normal to said sign and at right angles to said axis, said sign including a weight normally located beneath said mounting and adapted by gravity to hold the sign erect as the drum rotates.

2. A combination according to claim 1 in which the drum ready mix concrete truck drum and the weight comprises a tube in the aforesaid plane starting beneath the level of said sign mounting and the weight being reciprocable in said tube and comprising a liquid confined in the tube and only partially filling it.

3. A combination according to claim 2 in which the weight is mercury.

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