No. 817,436. PATENTED APR. 10, 1906.

J. MUIR.

MEASURING DEVICE FOR CONCRETE MIXERS.

APPLICATION FILED SEPT. 28, 1905.

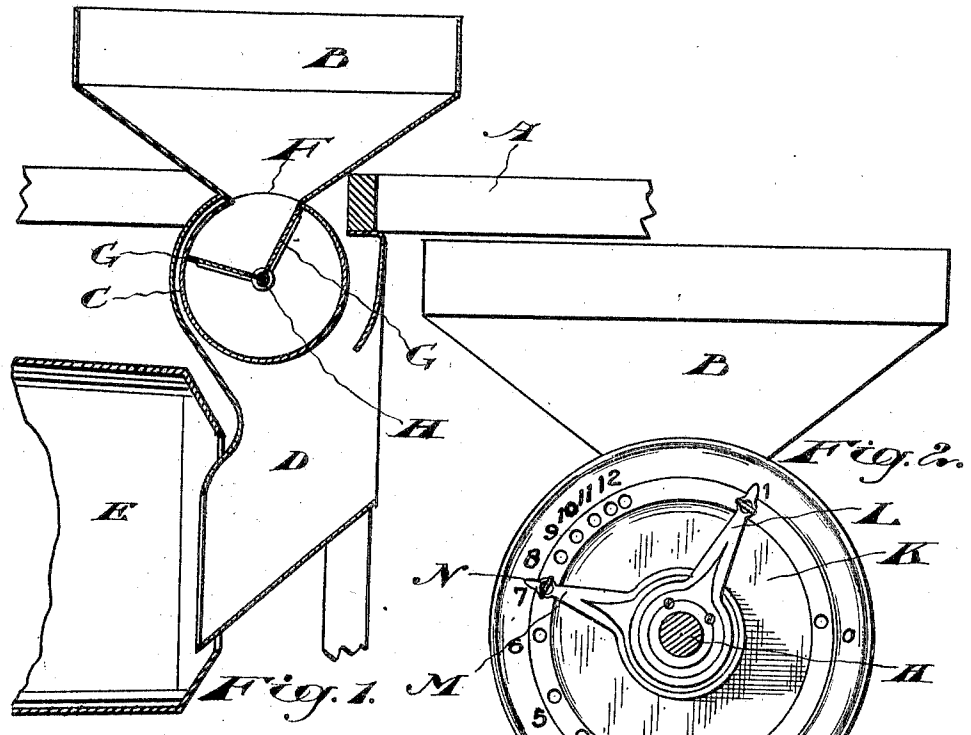


Fig. 1.

Fig. 2.

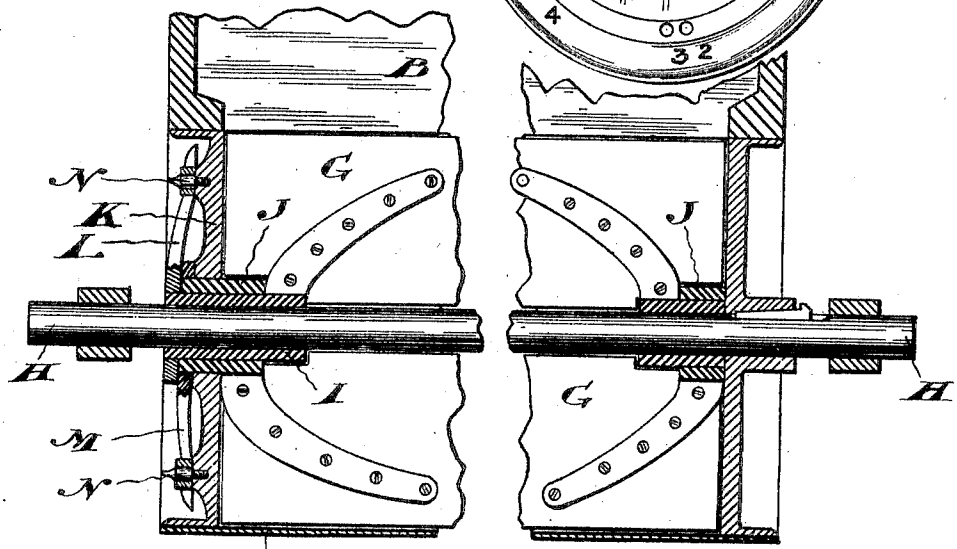


Fig. 3.

WITNESSES:

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JOHN MUIR, OF BRANTFORD, CANADA.

MEASURING DEVICE FOR CONCRETE-MIXERS.

No. 817,436. Specification of Letters Patent. Patented April 10, 1906.

Application filed September 28, 1905. Serial No. 280,484.

To all whom it may concern:

Be it known that I, JOHN MUIR, of the city of Brantford, in the county of Brant, Province of Ontario, Canada, have invented certain new and useful Improvements in Measuring Devices for Concrete-Mixers, of which the following is a specification.

This invention relates to measuring-chambers having movable or adjustable radial wings, and has for its object to devise a simpler and more effective means for hinging and adjusting the radial wings of the rotary measuring-chamber to give the proper proportion of cement to the other ingredients of the concrete.

With this object in view my invention consists, essentially, in securing one of the wings to sleeves journaled on the shaft and the other to sleeves journaled on the first-mentioned sleeves, both sleeves extending out through the ends of the cylinder, where they are provided with index-arms, clamps being provided whereby the index-arms may be secured to the cylinder ends at various angles the one to the other, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is a vertical section showing my device in position for use. Fig. 2 is an enlarged end elevation of my device. Fig. 3 is a longitudinal section on the same scale as Fig. 2.

Referring particularly to Fig. 1, A is part of the frame of concrete-mixer, on which is supported the hopper B. Below the hopper is journaled a cylindrical chamber C in such position as to close the opening of the under side of the hopper. Below the cylinder is a spout D, discharging into the end of a mixing-cylinder E, of ordinary construction, substantially as shown in the prior application hereinbefore referred to. The cylinder C has an opening F in its side, through which the contents of the hopper may flow into the interior of the cylinder. Within the cylinder are radial partitions G, hinged on the shaft H in the manner I will now describe. At each end of the cylinder one of the partitions G is secured to a sleeve I, journaled on the shaft H. The other partition is secured at each end of the cylinder to a sleeve J, journaled on the sleeve I. At one end each of the sleeves I and J extends out through the end K of the cylinder. The sleeve I has an index-arm L secured thereto, and the sleeve J has a similar index-arm M secured to it. One or both of the index-arms are provided with means whereby the radial partitions may be angularly adjusted relatively to one another. For this purpose I prefer to use clamping-screws N, which may be screwed into any one of the series of holes in the end K. In the drawings twelve of these are shown and numbered; but the exact number and spacing may be varied to produce the same results.

The shaft H is preferably keyed or otherwise secured to the cylinder, so that the latter may be rotated, the shaft H being suitably journaled in any convenient part.

It will be seen that by angularly adjusting the radial partitions the capacity of the sector-shaped chamber between them may be varied, so that when the cylinder is rotated any desired quantity of cement or other material may be received from the hopper and deposited in the spout below.

The device will be used in concrete-mixer in which a gravel-receptacle of substantially constant capacity is employed, so that by setting the index-arms L and M a desired proportion of cement to gravel may be obtained. By adjusting the arm L to the positions numbered "12" to "5" similar proportions of cement to gravel may be obtained, the index-arm M remaining at "I." With the index-arm M at zero and the index-arm L at "4" a proportion of one-quarter is obtained. With the index-arm L at "3" and the index-arm M at zero a proportion of one-third is obtained. Then by swinging the index-arm M to "2" a proportion of one-half is obtained.

As the index is clearly exposed at the end of the cylinder, the machine may be instantly set to the required proportion, which is an important advantage, as different proportions are demanded as a work progresses, owing to differences in material used or differences in the product desired.

What I claim as my invention is—

In measuring and feeding apparatus the combination of a hopper; a hollow rotary cylinder closing the lower end of the hopper and having an opening in its side; a shaft extending through the cylinder; two radial par-

titions hinged on the shaft; two concentric sleeves journaled on the shaft secured respectively to the radial partitions and each extending out through end of the cylinder; an index-arm secured to each sleeve outside the cylinder; and means for clamping the index-arms to the end of the cylinder at varying angles to one another, substantially as described.

Toronto, September 22, 1905.

JOHN MUIR.

In presence of—
IRENE BAXTER,
C. S. TAPSCOTT.