T. L. SMITH.

CONCRETE MIXER.

APPLICATION FILED JULY 11, 1908.

1,051,971.

Patented Feb. 4, 1913.

Fig. 3.

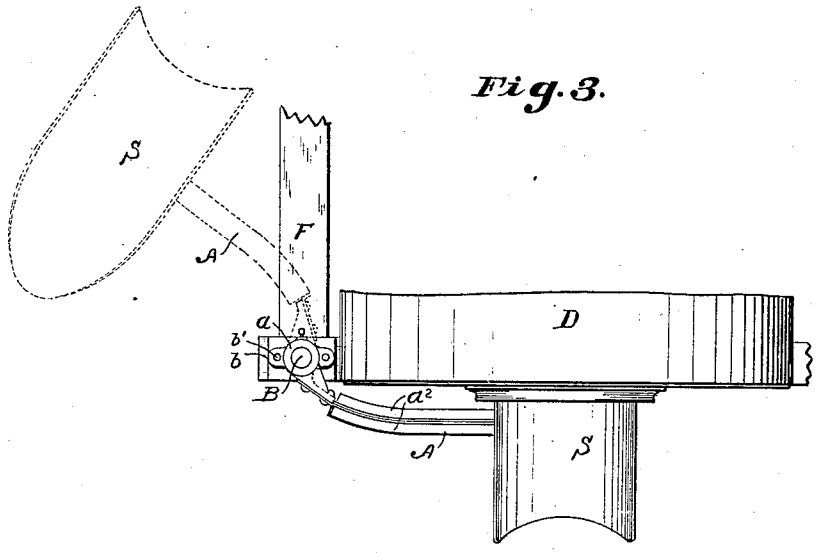


Fig. 2.

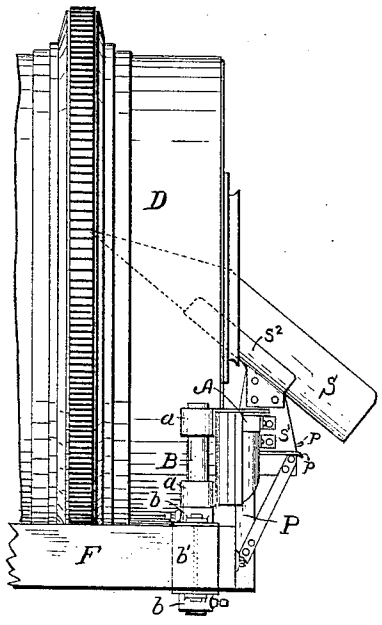
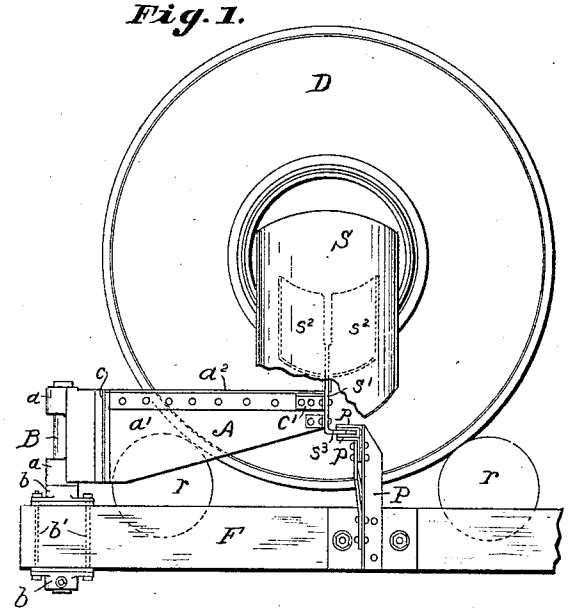


Fig. 1.



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UNITED STATES PATENT OFFICE.

THOMAS L. SMITH, OF MILWAUKEE, WISCONSIN.

CONCRETE-MIXER.

1,051,971. Specification of Letters Patent. Patented Feb. 4, 1913.

Application filed July 11, 1908. Serial No. 443,114.

To all whom it may concern:

Be it known that I, THOMAS L. SMITH, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Concrete-Mixers, of which the following is a specification.

My invention relates to improvements in concrete mixers, and the objects of my invention are to provide a discharge spout efficient and substantial in operation, and one that may be swung entirely clear of the space in front of the mixer, to facilitate the operation of the wheelbarrows or other conveyances for the concrete.

I attain these objects by the device illustrated in the accompanying drawing, which forms a part of this specification and in which,—

Figure 1 shows a front elevation of the mixer. Fig. 2 is a view looking at Fig. 1 from the left. Fig. 3 is a plan view of a portion of the mixer.

Similar letters refer to similar parts throughout the different views of the drawing.

In the three different figures, the discharge spout is shown in its operative position and in Fig. 3 the discharge spout is also shown in dotted lines, swung clear of the mixer.

Referring with more detail to the drawings, D represents the drum or mixer receptacle, F the frame work of the skid or truck on which the machine is mounted, and *r r* rollers which support the drum. As these parts may be of any usual construction, and form no part of my present invention, they are not further here described.

S represents the feed spout proper, supported on the pivoted arm A, which is in turn carried by the upright shaft B. The pivot pin, or shaft B passes through the timbers F, and also through two cast iron boxes *b b*, in which boxes the shaft is held by set screws, while the boxes are secured to the timbers and to each other by through bolts b^1. The pivot shaft is loosely engaged by two cast hubs *a a*, rigidly secured to the arm A. This arm is preferably constructed of a plate a^1 having horizontal angle irons a^2 riveted to its top edge, and vertical angle-irons *c* and c^1 also secured to it, the former as a strengthening means and the latter to afford the means of attachment for the vertical plate s^1. The discharge spout S is secured to the plate s^1 by means of two flanged and curved plates s^2. s^1 has a horizontal lip s^3 turned on its lower edge, which lip enters a recess formed by the two flanges *p* secured to the stationary post P attached to the timbers F. When the discharge spout is in its operative position, it is supported immediately by the engagement of the lip s^3 with the flanges *p p* of the standard P, directly under the spout itself, and this supporting means forms a limiting stop positioning the spout in the drum, and also affords a supporting means while the spout is partially withdrawn from the drum, this withdrawing being for the purpose of governing the rapidity of discharge.

One of the principal advantages of this construction is that as the vertical pivot B is to one side of the mixer drum, and inside of a plane passing through the head of said drum, the spout may be swung entirely away from the front of the mixer, as shown in dotted lines in Fig. 3, thus leaving an unobstructed field for the operation of the wheelbarrows.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a concrete mixer, a rotary mixing drum having a discharge opening therein, a frame on which said drum is supported, a vertical shaft on the frame at one side of said discharge opening, a horizontal arm supported on said shaft and swinging horizontally thereon, and a discharge spout attached to the free end of said arm, said spout being inclined to the vertical and adapted to be swung into the discharge opening of the drum and also away from the drum while said drum is rotating.

2. In a concrete mixer, a drum with a discharge opening therein, a frame on which said drum is supported, a vertical shaft on the frame at one side of said discharge opening, a horizontal arm supported on said shaft and swinging thereon, a discharge spout attached to the free end of said arm, said spout being inclined to the vertical and adapted to be swung into the discharge opening of the drum and also away from the drum, and means on the frame to engage and support the free end of said arm when the spout is in the discharge opening.

3. In a concrete mixer, a drum with a discharge opening therein, a frame on which said drum is supported, a vertical shaft positioned at one side of the drum and between

the end planes thereof, an arm pivoted on said shaft and curved to extend across the end of the drum, and a discharge spout secured on the free end of said arm inclined and in position to enter said discharge opening.

4. In a concrete mixer, a drum with a discharge opening therein, a frame on which said drum is supported, a vertically pivoted arm, an inclined discharge spout secured to the free end of said arm and adapted to enter the discharge opening, said arm having a horizontal flange thereon immediately below the spout, and a stationary post on the frame below the discharge opening having a recess to engage said horizontal flange when the spout is in operative position in the discharge opening.

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

THOMAS L. SMITH.

Witnesses:
E. O. MANKTELOW,
H. H. GERLACH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."