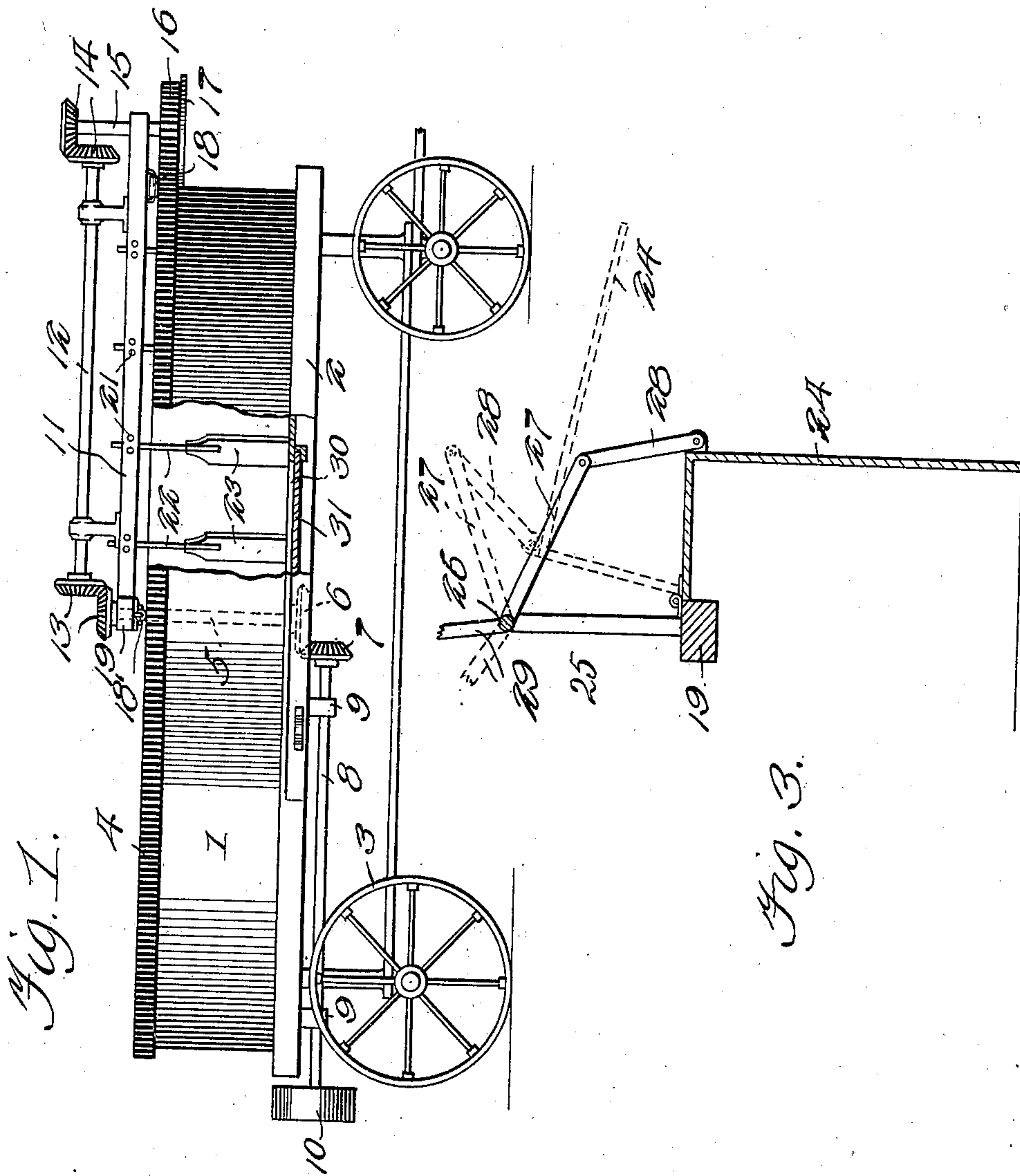


995,920.

F. J. SMITH.
MIXING MACHINE.
APPLICATION FILED OCT. 15, 1910.

Patented June 20, 1911.
2 SHEETS—SHEET 1.



Witnesses

Hugh R. Holt
Wm. Bagger.

Inventor

Felix J. Smith.

By

Victor J. Evans

Attorney

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2 SHEETS—SHEET 2.



Hugh Helt
Wm Bagger

Felix J. Smith

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

FELIX J. SMITH, OF LINDSEY, OHIO, ASSIGNOR OF ONE-THIRD TO EDWIN B. SMITH
AND ONE-THIRD TO VERNON ERNSBERGER, BOTH OF FREMONT, OHIO.

MIXING-MACHINE.

995,920.

Specification of Letters Patent. Patented June 20, 1911.

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To all whom it may concern:

Be it known that I, FELIX J. SMITH, a citizen of the United States of America, residing at Lindsey, in the county of Sandusky and State of Ohio, have invented new and useful Improvements in Mixing-Machines, of which the following is a specification.

This invention relates to devices for mixing mortar, cement, concrete and other plastic compounds of a like nature.

The invention has for its object to produce a readily portable device of simple and inexpensive construction which may be efficiently utilized for the purpose of mixing various plastic compounds.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawings,—Figure 1 is a side elevation, partly in section of a device constructed in accordance with the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional detail view, enlarged, taken on the line 3—3 in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

The circular or cylindrical mixing pan 1 of the improved device is fixedly mounted upon a platform 2 which in turn is suitably supported upon a running gear including transporting wheels 3, 3. Formed or secured upon the mixing pan 1 adjacent to the upper edge of the latter is an exteriorly disposed rack flange 4.

A vertical shaft 5, which is supported for rotation centrally in the mixing pan, carries at its lower end a bevel pinion 6 meshing with a bevel pinion 7 upon one end of a main driving shaft 8 which is supported for rotation in brackets or bearings 9 upon the underside of the platform 2. The driving shaft 8 carries adjacent to its outer end

a pulley 10 adapted to be belted to a suitable motor or to a source of power of any description.

Suitably mounted upon and loosely engaging the upper end of the shaft 5 is an arm or bar 11 provided with bearings on its upper face for a horizontal shaft 12 which is connected at one end by miter gearing 13 with the shaft 5. The opposite end of the shaft 12 is connected by miter gearing 14 with the upper end of a vertically disposed shaft 15 which is supported for rotation in the outer end of the arm 11, said shaft 14 being provided adjacent to its lower end with a gear wheel 16 meshing with the rack flange 4 upon the pan or receptacle 1, said gear wheel 16 being provided with a flange 17 that catches beneath the rack flange 4, thereby preventing upward displacement of the gear wheel 16 and the parts associated therewith. The arm 11 carries an anti-friction roller 18 riding upon the upper edge of the pan 1.

A second radial arm 19, similar to the arm 11, is provided, said arm extending from the shaft 5 to the rim or edge of the pan 1, being equipped with an anti-friction roller 18' riding upon the upper edge of said pan 1. The arm 19 may be connected with the arm 11 by a brace 20 to insure strength and stability of the device. The arms 11 and 19 are each provided with clips or clamps 21 and 21' for the passage of the handles 22 and 22' of suitably constructed shovels or scrapers 23 and 23' which are substantially alike, except that the shovels connected with the two arms 11 and 19 are adapted to move the material engaged thereby relatively in opposite directions, that is to say, toward and away from the rim of the pan or receptacle 1. The arm 19 is also provided with a hingedly supported scraper 24 and with uprights 25 supporting a rock shaft 26 having radially extending arms 27 which are connected with the scraper by means of links 28. The rock shaft 26 also has a lever 29 by means of which the scraper may be raised to a non-engaging position or lowered to a position in which it will actively engage the bottom of the pan for the purpose of conveying the material contained therein in the direction of a discharge aperture 30 in the bottom of the pan for which a suitable slide or closure 31 is provided.

As will be readily seen from the foregoing description, taken in connection with the drawings hereto annexed, when power is applied to the shaft 8, motion will be transmitted through the shafts 5 and 11 to the vertical shaft 15 carrying the gear wheel 16 which meshes with the rack flange at the upper edge of the pan. A direct pull will thus be exerted upon the outer end of the arm or bar 11 and from there transmitted through the brace 20 to the arm or bar 19, said arms or bars carrying the shovels whereby the contents of the pan will be thoroughly agitated and mixed. When the contents of the pan has been sufficiently treated, the scraper 24 may be lowered to a position engaging the bottom of the pan, the contents of which may thus be conveyed to the discharge opening.

20 This device is extremely simple in construction, and it has been found very efficient in operation. One advantageous feature of the device is that when other power is not available it may be readily worked

by hand or animal power which may be applied directly to the outer extremities of the arms or bars 11 and 19.

Having thus described the invention what is claimed as new, is:—

In a mixing machine; a fixed circular pan, an axial shaft supported for rotation in said pan, a radial arm supported upon said shaft for rotation about the latter, said arm being extended beyond the periphery of said pan, means carried by said arm actuated by said shaft and engaging the periphery of said pan to cause the rotation of said arm about said shaft, mixing elements carried by said radial arm, and means for transmitting motion to said axial shaft.

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

FELIX J. SMITH.

Witnesses:

GEO. C. RINGS,

NELSON H. MILLER.

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