R. McD. BROWN.

DISTRIBUTER.

APPLICATION FILED JUNE 15, 1912.

1,067,093.

Patented July 8, 1913.

2 SHEETS—SHEET 1.

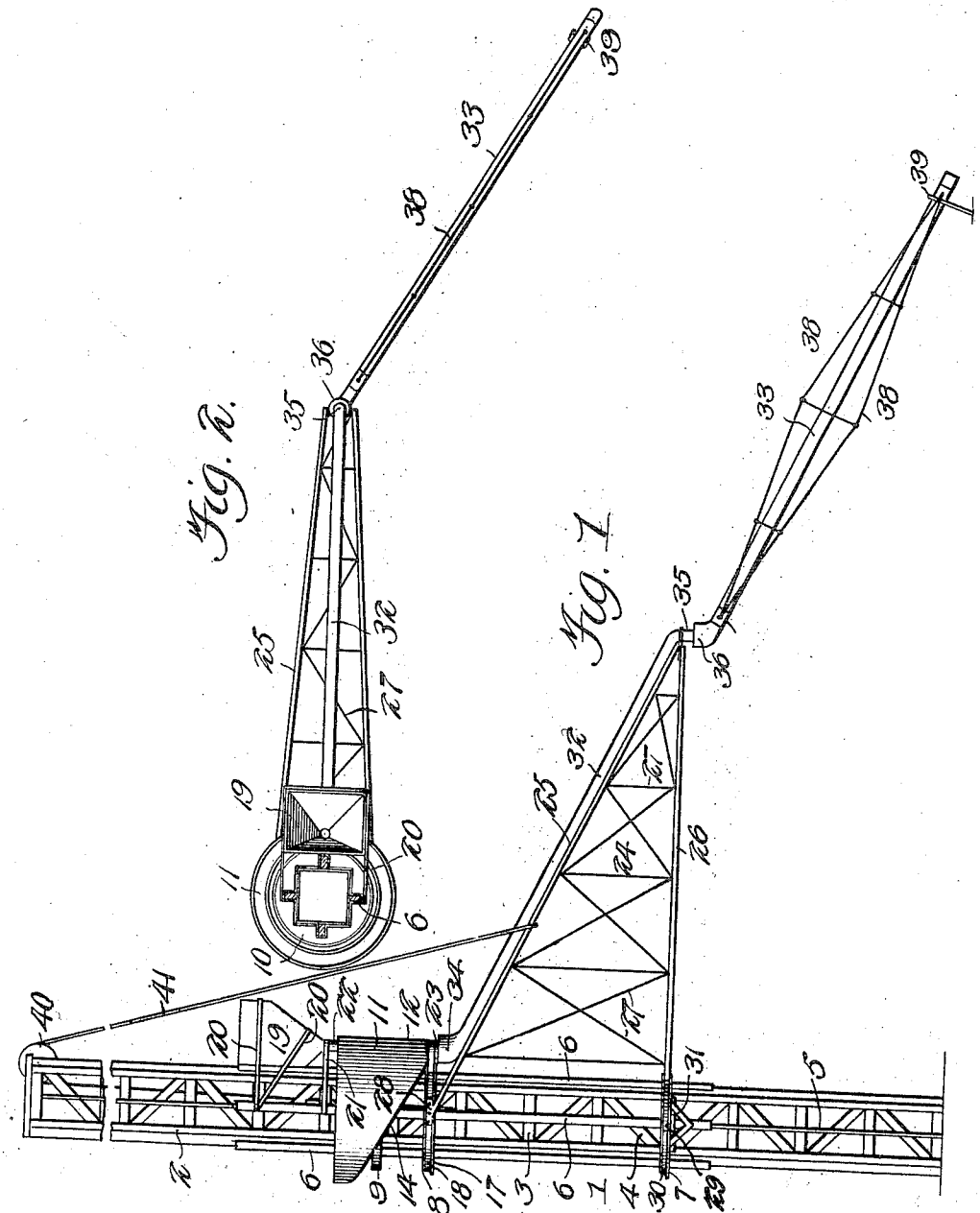


Fig. 1.

Fig. 2.

Witnesses

Hugh Ott.

J. A. Garner

Inventor

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2 SHEETS—SHEET 2.

Fig. 3.

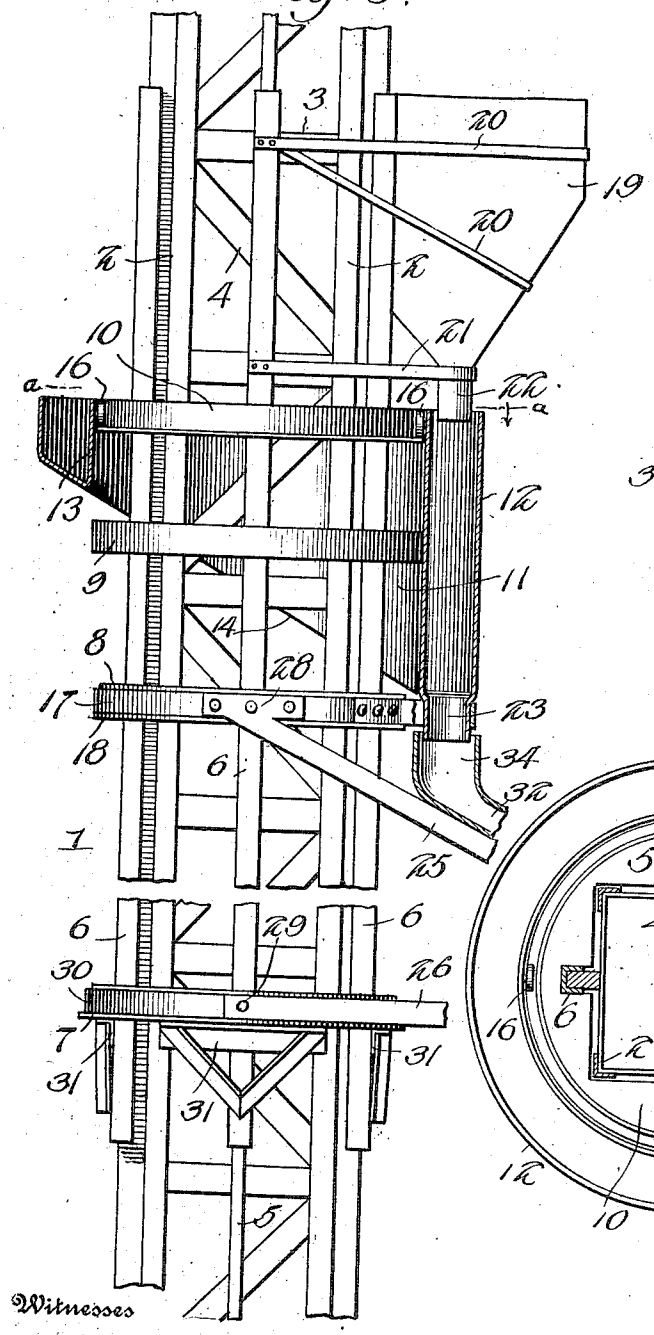


Fig. 5.

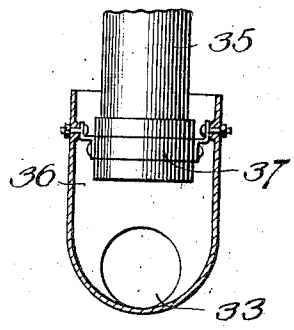
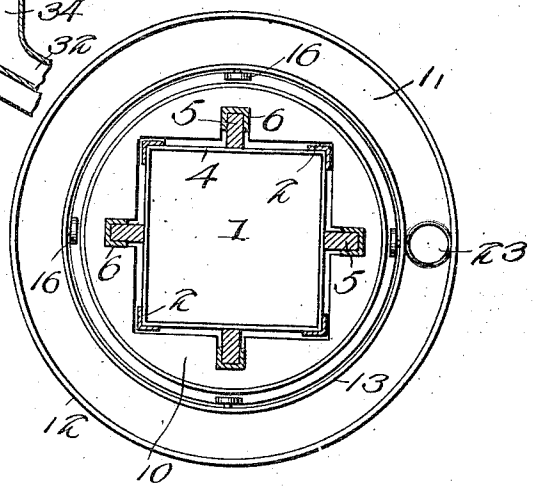


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT McDOUGALL BROWN, OF CHICAGO, ILLINOIS.

DISTRIBUTER.

1,067,093. Specification of Letters Patent. Patented July 8, 1913.

Application filed June 15, 1912. Serial No. 703,863.

To all whom it may concern:

Be it known that I, ROBERT M. BROWN, a resident of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Distributers, of which the following is a specification.

This invention is an improved distributer for use in distributing concrete and other material to any part of construction work where needed, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of a distributer constructed in accordance with my invention. Fig. 2 is a plan of the same. Fig. 3 is partly a detail side elevation and partly a sectional view, showing a portion of the tower and also showing the receiving hopper, the distributing hopper and the swinging beam. Fig. 4 is a detail horizontal sectional view of the same on the plane indicated by the line *a*—*a* of Fig. 3. Fig. 5 is a detail plan, showing the joint between the swinging beam and the distributing pipe.

In accordance with my invention, I provide a tower 1 which is here shown as comprising uprights 2 and cross bars 3 and braces 4 connecting the uprights, the uprights being parallel and the tower being rectangular in transverse section. Medially arranged on the sides of the tower are vertical guide rails 5. These guide rails are engaged by channeled slide rails 6 which are movable vertically on the guide rails and are connected together by heads 7, 8, 9 and 10. The slide rails and the said heads constitute a carrier frame or element which is vertically movable on the tower. A distributing hopper 11 which is annular in form, with an outer wall 12 and inner wall 13 and an inclined bottom 14 is arranged around the tower and the carrier frame or element and mounted on the heads 8, 9 and 10 for rotation in a horizontal plane. The said distributing hopper is here shown as provided at its upper end with rollers 16 which bear on the upper head 10 and as having its lower end connected to a hook or ring 17 which is arranged to revolve on the circular head 8, the latter being provided with a lower supporting flange 18 to hold the said hook or ring and the distributing hopper. A receiving hopper 19 is secured to the carrier element as by means of metallic straps 20 and bars 21 and is provided at its lower end with a nozzle 22 or spout which discharges into the upper end of the distributing hopper. The distributing hopper is provided with a discharge spout 23 arranged at the bottom thereof at the deepest side.

A swinging beam or arm 24 extends from one side of the tower and is adapted to be turned in any direction thereon. This beam or arm is here shown as comprising a pair of inclined upper bars 25, a pair of horizontal lower bars 26 and braces 27 which connect the said bars together, the said bars being secured together at their outer ends. The inner upper ends of the inclined bars 25 are connected by angle irons 28 to the hook or ring 17. The inner ends of the bars 26 are secured as at 29 to opposite sides of a ring 30 or hook which is mounted for revolution on the lower head 7. It will be understood that the distributing hopper and the beam or arm being thus connected are adapted to swing together to any point around the tower. Brackets 31 are here shown secured on the outer sides of the slide rails and arranged under and serving to support the lower heads 7—8. I also employ a distributing pipe which comprises an upper member 32 and a lower member 33. The upper member of the distributing pipe is arranged in an inclined position and is secured on the upper side of the arm or beam 24, to turn therewith and has an upturned upper end 34 forming an intake to receive material from the spout of the distributing hopper. The lower end of the member 32 is turned downwardly as at 35 and discharges into the upturned upper end 36 of the lower member 33. The upper end of the member 33 is connected to the downturned end of the upper member 32 by a universal joint 37 and, hence, the lower member of the distributing pipe may be swung in any direction from the outer end of the beam or arm 24 and may be also arranged at any desired inclination so that any point may be reached, within the radius of action of the machine at which it may be desired to deposit concrete, sand, gravel or other similar building or other material. The lower member of the distributing pipe is strengthened by means of trusses 38 and, is also provided near its lower end with supporting legs 39

The sheave 40 is mounted in the top of the top of the tower and is engaged by a hoisting rope 41, one end of which is attached to the beam or arm 24. By this means the carrier with the beam or arm, the distributing pipe and the receiving and distributing hoppers may be raised to any desired elevation on the tower according to the height of the point, at which it is desired to distribute material. When the carrier has thus been elevated it may then be secured to the tower as by bolting the slide rails 6 to the guide rails 5 or in any other suitable manner or by any suitable means.

While I have herein shown and described a preferred form of my invention, I would have it understood that changes may be made in the form, proportion and construction of the several parts without departing from the spirit of my invention and within the scope of the appended claims.

I claim:—

1. A distributer of the class described comprising a tower, a carrier mounted for vertical movement on the tower, a fixed receiving hopper secured to the carrier, and a revoluble distributing hopper and beam or arm mounted on the carrier, the said distributing hopper being arranged to receive material from the receiving hopper and the beam or arm being provided with a distributing pipe.

2. A distributer of the class described comprising a tower, a carrier mounted for vertical movement on the tower, a fixed receiving hopper secured to the carrier, and a revoluble distributing hopper and beam or arm mounted on the carrier, the said distributing hopper being arranged to receive material from the receiving hopper and the beam or arm being provided with a distributing pipe, the said pipe comprising an upper member on the beam or arm and a lower member connected to the beam or arm by a universal joint.

3. A distributer of the class described comprising a tower, a receiving hopper on the tower, a swinging distributing element mounted for movement around the tower and means movable with said distributing element to feed material thereto from said receiving hopper.

4. A distributer of the class described comprising a tower, a carrier mounted for vertical movement on the tower, a receiving hopper on the carrier, a swinging distributing element mounted on the carrier for movement around and concentric of the tower, and means also carried by the tower to feed material through the distributer element to the receiving hopper.

5. A distributer of the class described comprising a tower, a non-refillable receiving hopper on the tower, a swinging distributing element mounted for movement around the tower, and means movable with said distributing element to feed material thereto from said receiving hopper.

6. A distributer of the class described comprising a tower, a receiving hopper mounted for vertical movement on the tower, a distributing element mounted for vertical movement on and also for swinging movement around the tower, and means movable with said distributer element to feed material thereto from said receiving hopper.

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

ROBERT McDOUGALL BROWN.

Witnesses:
OLIVER C. WISE,
JOHN M. WEAVER.