

No. 689,456.

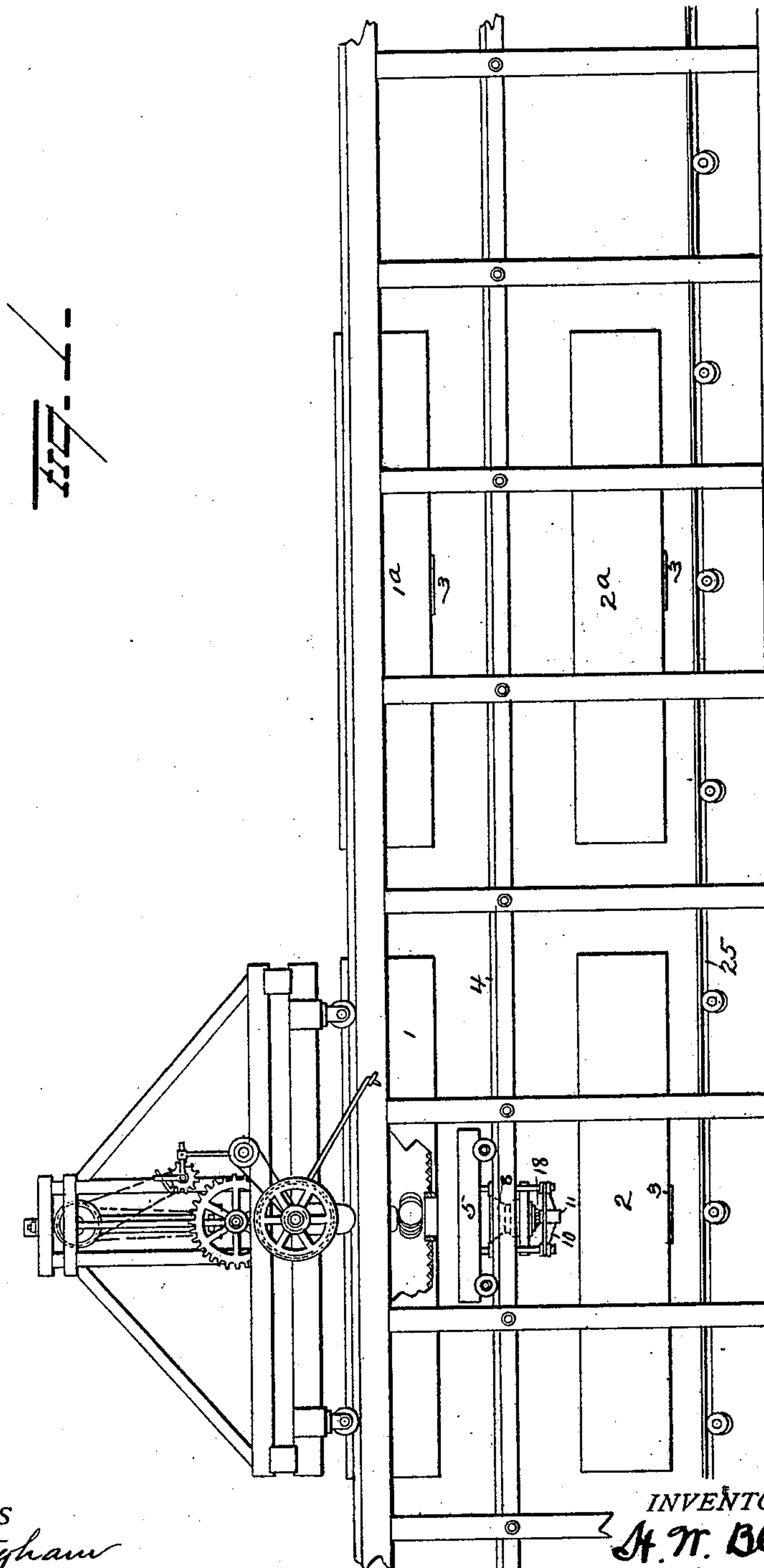
Patented Dec. 24, 1901.

H. W. BLAISDELL.
CENTRIFUGAL DISTRIBUTER.

(Application filed Jan. 7, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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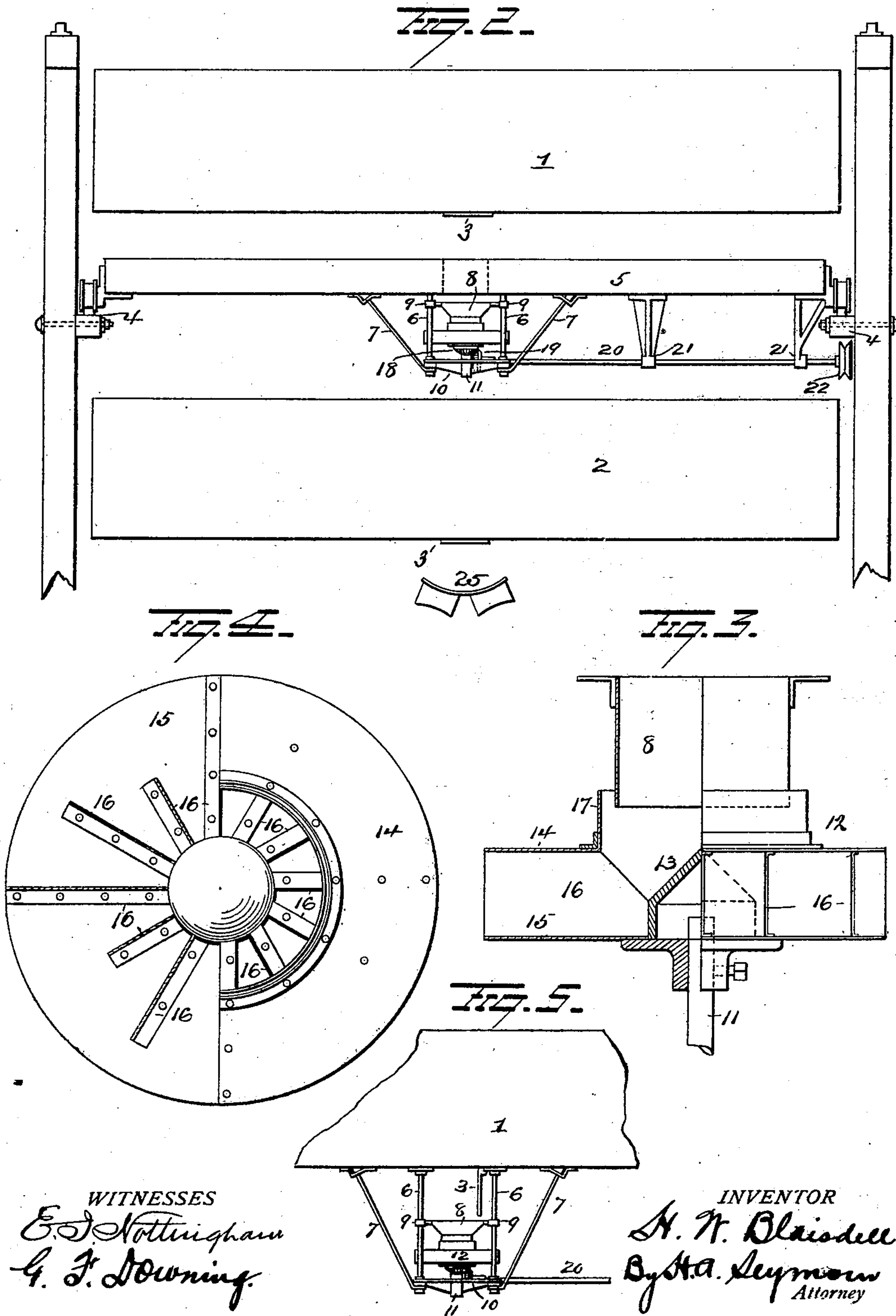
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UNITED STATES PATENT OFFICE.

HIRAM W. BLAISDELL, OF YUMA, ARIZONA TERRITORY.

CENTRIFUGAL DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 689,456, dated December 24, 1901.

Application filed January 7, 1901. Serial No. 42,391. (No model.)

To all whom it may concern:

Be it known that I, HIRAM W. BLAISDELL, a resident of Yuma, in the county of Yuma and Territory of Arizona, have invented certain new and useful Improvements in Centrifugal Distributers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved centrifugal distributer, and more particularly to an apparatus for distributing tailings in a vat, the object of the invention being to provide a device of this character which will distribute by centrifugal action throughout a vat and which will be extremely simple in construction and operation and most effectual when in use.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view illustrating my improvements. Fig. 2 is a view, on an enlarged scale, taken at right angles to Fig. 1. Figs. 3 and 4 are detail views, and Fig. 5 is a view of a modified form of my invention.

1 1^a represent vats arranged in the same horizontal plane, and 2 2^a vats located beneath them.

The vats 1 and 1^a are adapted to be filled and emptied by any approved means, which for the purpose of this invention is not necessary to describe, and all of said vats are provided with central discharge-ports normally closed by doors or gates 3, as shown.

On suitable supports adjacent to the opposite sides of vats 2 2^a, preferably above their upper ends, rails 4 are located, forming a track on which is mounted a traveling bridge 5, adapted to be moved from vat to vat for a purpose which will more fully hereinafter appear.

The bridge 5 is made with a central opening, and beneath said opening a hopper 8 is supported by standards 6, to which it is connected by brackets 9, the standards 6 being

preferably strengthened by braces 7, as shown.

Between the lower ends of the standards 6 a frame 10 is secured and supports a short vertical shaft 11, on the upper end of which is secured my improved centrifugal distributer 12, which comprises a conical casting 13, forming a deflector, secured on the upper end of shaft 11 and inclosed between parallel horizontal disks 14 and 15, respectively, separated by vertical ribs or vanes 16 of varying lengths and having flanged upper and lower edges secured to the respective disks. The upper disk 14 is made with a central opening and an upwardly-projecting collar 17 around the same and into which the hopper 8 projects. The vanes 16 are arranged in radial formation about the deflector 13 and owing to their variation in length will throw the material fed thereto with varying force, as will hereinafter appear.

The shaft 11 has secured thereon a beveled gear 18, meshing with a beveled gear 19 on the end of a horizontal drive-shaft 20, supported in suitable bearings 21, carried by the bridge 5, and the outer free end of the shaft 20 is provided with a pulley 22, adapted to be operated by a belt. (Not shown.)

When it is desired to empty the tailings from vat 1 into vat 2, the bridge is moved to the position shown in the drawings and the gate 3 in vat 1 opened, the pulley 22 in the meantime being connected by a belt with a suitable engine and the shaft 20 revolved at a rapid rate of speed and will transmit motion by gears 19 and 18 to shaft 11, carrying distributer 12, which latter will be revolved at a rapid rate of speed. The tailings from vat 1 will fall through the opening in the bridge and into hopper 8 and be fed thereby down onto deflector 13, which latter will guide the tailings between the vanes 16, and as the distributer is revolved the vanes will throw the tailings out from the lower disk, the longer vanes throwing with greater force than the shorter ones, so as to scatter the tailings evenly throughout vat 2. When vat 1 is emptied, the bridge 5 can be moved below vat 1^a and the contents thereof distributed about vat 2^a, as above explained.

A suitable conveyer 25 may be located beneath the discharge-ports of vats 2 and 2^a to carry the waste tailings to a dump.

Instead of mounting my improvements on a traveling bridge I might secure the same directly to the bottom of the upper vat, as shown in Fig. 3, in which event the standards will be of sufficient length to dispose the hopper 8 low enough to permit the gate 3 to fall, and in all other respects the distributor is constructed precisely as above described.

Various other slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A distributor comprising a horizontally-disposed disk adapted to receive thereon, the material to be distributed, ribs or vanes on said disk, a distributor located on the disk and constructed to direct material to the spaces among the various ribs or vanes, means for rotating the disk and a hopper located over and adapted to discharge material upon said distributor.

2. In a distributor, the combination with a series of vats, a track, and a bridge thereon to be moved from one vat to another, of a horizontally-disposed disk revolubly mounted on the bridge, vanes on the disk, a deflector for directing material between the vanes, means on the bridge for revolving the disk, and

means for supplying material to be distributed, to the deflector and upper face of the disk.

3. A distributor comprising parallel horizontal disks spaced apart by vertical vanes of varying lengths, the upper disk having an opening for the admission of material to be distributed and a conical deflector on the lower disk below said opening to guide the material between the vanes.

4. A distributor comprising a vertical shaft, a horizontal disk secured thereon, a deflector secured centrally on said disk, vertically-disposed vanes of varying lengths secured radially around the deflector, another horizontal disk secured on the upper edges of the vanes and having a central opening, a hopper for discharging into said opening, and means for revolving said shaft and parts carried thereby.

5. In a distributor, the combination with a traveling bridge, of a vertical shaft carried thereby, a horizontal disk secured on said shaft, a deflector secured centrally on said disk, vertically-disposed vanes of varying lengths secured radially around the deflector, another horizontal disk secured on the upper edges of the vanes and having a central opening, a hopper for discharging into said opening, a gear on said shaft, a horizontal drive-shaft carried by the bridge and a gear thereon meshing with the first-mentioned gear.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HIRAM W. BLAISDELL.

Witnesses:

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