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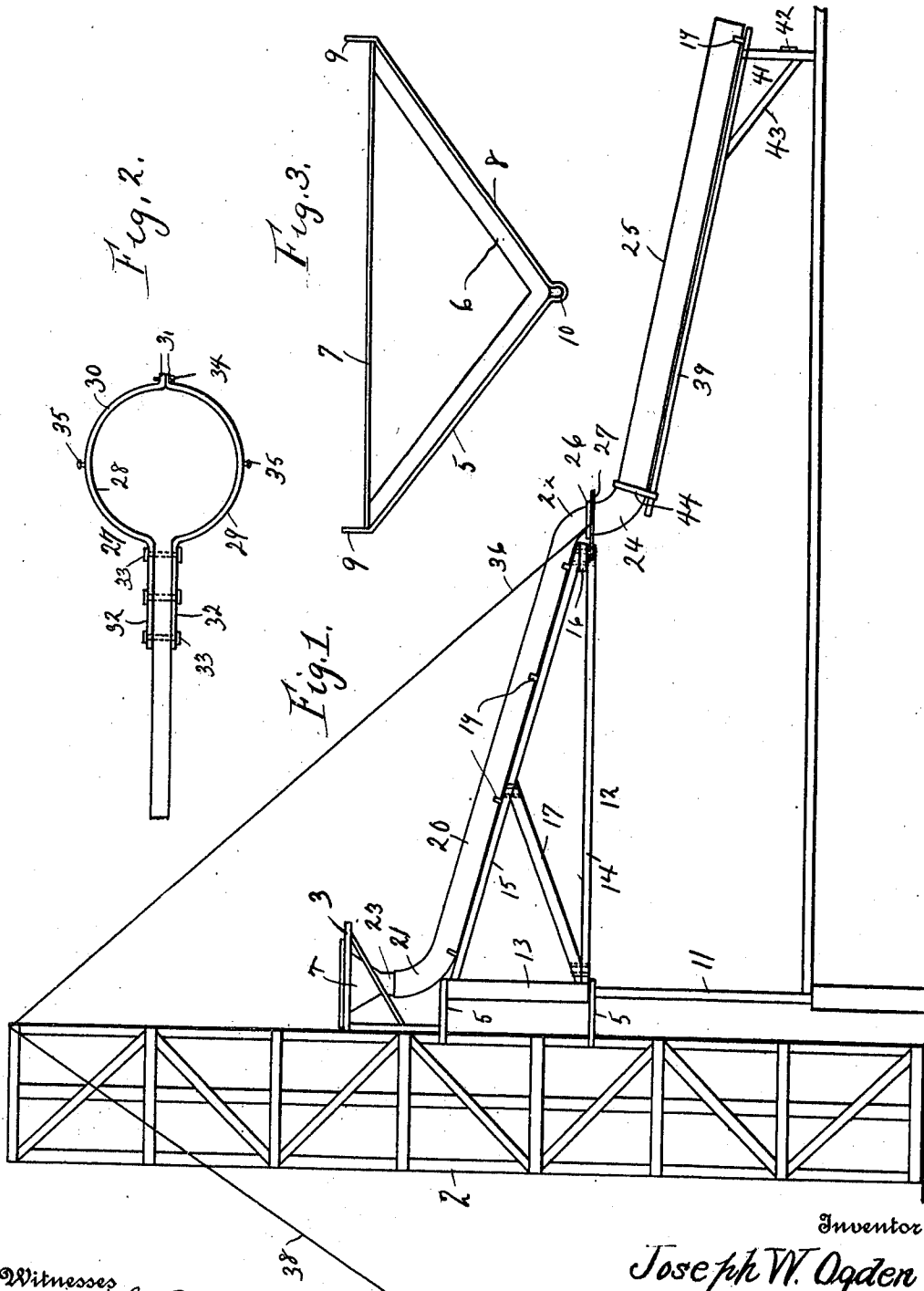
CHUTE.

APPLICATION FILED FEB. 26, 1912.

1,031,460.

Patented July 2, 1912.

3 SHEETS-SHEET 1.



Witnesses
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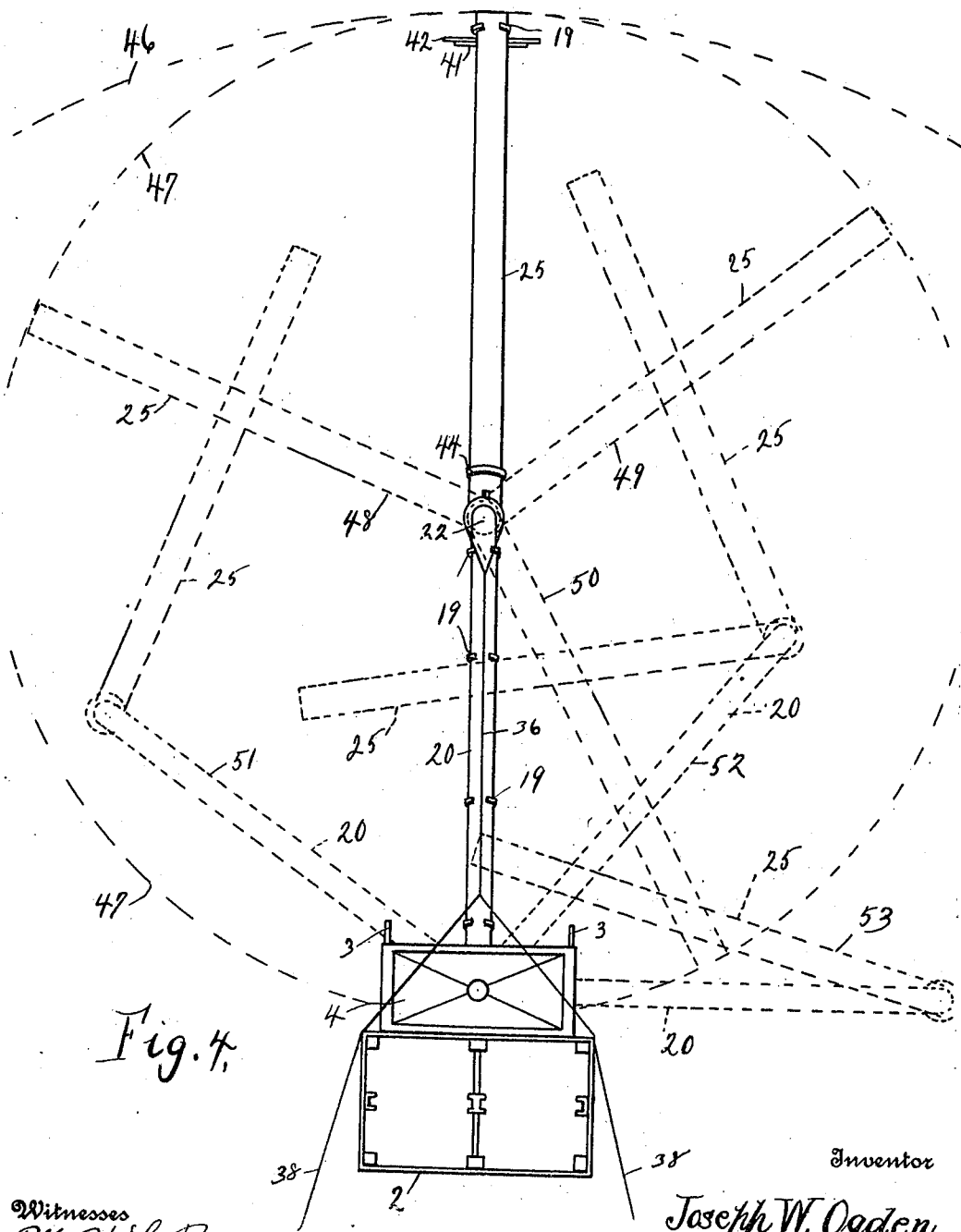


Fig. 4.

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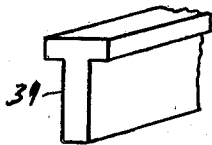
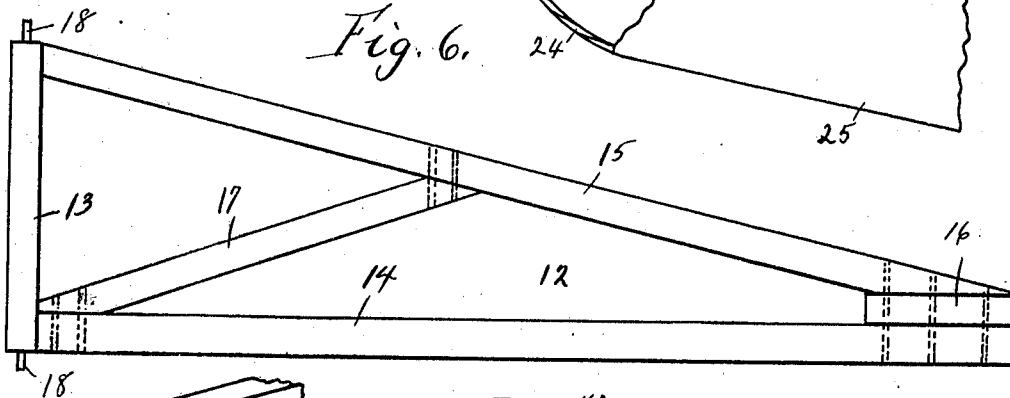
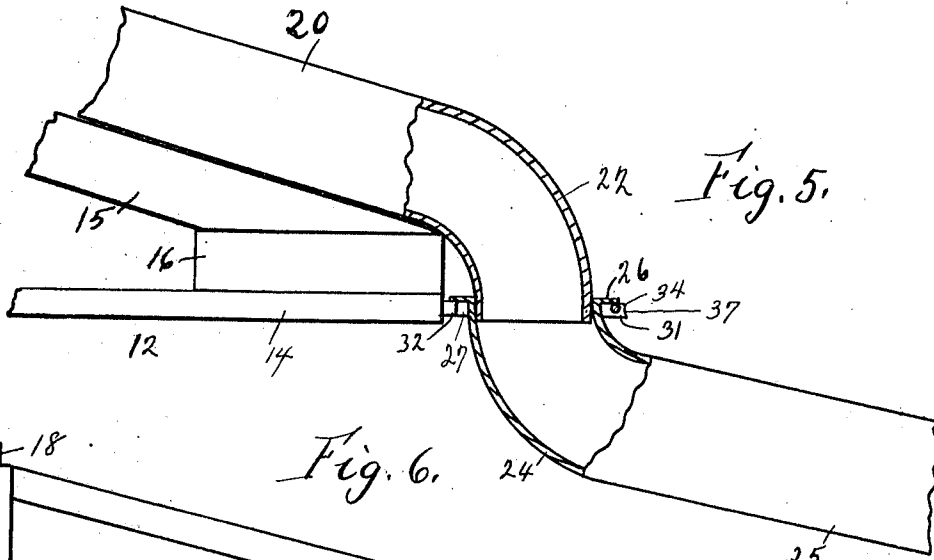


Fig. 7.

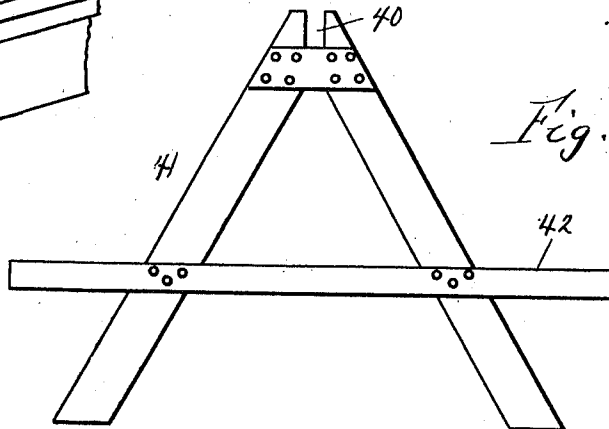


Fig. 8.

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UNITED STATES PATENT OFFICE.

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CHUTE.

1,031,460.

Specification of Letters Patent.

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Application filed February 26, 1912. Serial No. 679,924.

To all whom it may concern:

Be it known that I, JOSEPH W. OGDEN, a citizen of the United States, residing at Blackwell, in the county of Kay and State of Oklahoma, have invented new and useful Improvements in Chutes, of which the following is a specification.

My invention relates to new and useful improvements in chutes, and has for its object to provide a device of this character which will be simple in construction and comparatively light in weight, although strong and durable and one which may be used for delivering material such as concrete and grains from a central point to any predetermined point within a certain radius.

The device as here shown and described is especially adapted for use in the construction of concrete buildings and permits the concrete to be mixed at one place after which it is elevated to the chute and through said chute is delivered to the workmen at a point in close proximity to where they are working.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numeral to the accompanying drawing forming a part of this specification, in which—

Figure 1, is a side elevation of my improved chute with its supporting members showing its relation to a tower or elevator shaft. Fig. 2, an enlarged edge view of the collar. Fig. 3, a plan view of one of the triangular supports. Fig. 4, a plan view of the chute and tower showing in dotted lines, a number of positions in which the chute may be set. Fig. 5, a side elevation of one of the swiveled joints, portions thereof being shown in section to clearly illustrate the construction. Fig. 6, an enlarged side elevation of the trestle or support for the upper portion of the chute. Fig. 7, an enlarged perspective view of a section of the supporter for the lower section of the chute, and Fig. 8, an enlarged face view of the supporting horse.

In carrying out my invention as here embodied, 2 represents the tower or elevator

shaft which is of any ordinary construction such as those used about building operations, although it will be understood that any means of elevating the material may be used. This tower carries suitable brackets or supports 3, the desired distance above the ground to give the chute the proper incline. On these brackets or supports 3, is mounted the hopper 4.

Secured to the tower 2, below the supports or brackets 3 are two triangular supports 5. These supports may be made in any approved form, one of which is shown in Fig. 3, and consists of two legs 6, joined together at one end and having attached to their opposite ends the binding strip 7, which forms the hypotenuse of the triangle. To the outer faces of the legs 6 is fastened a metallic band 8, the ends of which project over the ends of the legs at an angle thereto thereby producing attaching members 9.

At the apex, the band 8 is looped to form a bearing 10 for a purpose to be hereinafter described. The lower support 5 is braced by suitable shoring 11 either resting upon the ground or on a portion of the building such as the pilings as shown in Fig. 1. Beneath the triangular supports 5 is swingingly mounted the trestle 12 consisting of an upright 13, a horizontal arm 14, secured thereto and projecting therefrom, and an angle arm 15, one end of which is fastened to the upright 13 and the opposite end fastened to the outer end of the horizontal arm 14 with a block 16 interposed between them although this is not essential but is used for producing the right pitch in the arm 15.

The angle arm 15 is supported in proximity to its center by a suitable brace 17. The upright 13 is provided at both its ends with pivot pins 18 which are journaled in the bearings 10, of the triangular supports 5, thereby permitting the trestle 12 to swing within certain limits upon the pivot pins 18. The angle arm 15 of the trestle 12, carries a number of metallic saddles 19, in which rests the upper member of the chute 20 here shown as being in the form of a pipe with an elbow at each end, designated by 21 and 22. The upper elbow 21 surrounds the spout 23 leading from the hopper 4, but is not secured to said spout so that as the trestle 12 is swung to one side the chute 20 may follow therewith as will be readily understood.

The lower elbow 22 projects beyond the outer end of the trestle and extends downward into the elbow 24 of the lower chute member 25, said lower member of the chute being supported by the flange 26 formed with the elbow 24 and resting upon the split ring 27 which surrounds said elbow 24. The split ring comprises two similar sections 28 and 29 each consisting of a semi-circular portion 30, from one end of which is produced a lug 31 and from the other end, an arm 32. The arms 32 are secured to the outer end of the horizontal arm 14 by means of suitable bolts 33 or their equivalent, and when the chute member 25 is in place the sections of the ring are drawn about the former by a bolt 34 which passes through the lugs 31. This ring carries a pair of oppositely disposed pins 35 beneath which passes the cable 36, said cable passing about the front portion of the ring through the notches 37 in the lugs 31. This cable 36 is fastened to the tower, thus supporting the outer end of the trestle 12.

38 designates the guy wires which are also fastened to the tower for steadying the same.

39 is a T beam underlying the lower chute member 25, its outer end resting in the notch 40 in the upper end of the horse 41, said horse having hand holds 42 whereby the chute may be moved from place to place, and this horse is braced by a suitable bracket 43 one end thereof being secured to the horse while the other end is fastened to the T beam. The free end of the T beam is secured to the lower chute member 25 by a circular band 44 passing about said chute member and the T beam.

In practice, the chute is moved to the desired place so that its outer end lies at the point where the material is to be delivered. When the position of the chute is determined, the material is raised through a suitable medium to the hopper 4 and from said hopper it will pass into and down through the chute to a suitable receptacle or directly upon the ground or floor, from where it may be delivered by hand or wheel barrow to the place where it is to be utilized. If the workmen do not want to handle the material after it enters the chute the end of said chute may be placed where the material is to remain.

By referring to Fig. 4, some of the different positions in which the chute may be placed can be seen. By turning both sections 20 and 25 of the chute together upon the pivot point of the trestle 12, the end of the chute will reach a distance equal to the radius of the circle 46 whose center is the pivot point of the trestle and also the center of the spout 23 from the hopper 4. By holding the upper section of the chute 20 stationary and directly in front of the tower, the outer end of said chute section 20 may

be used as the center of rotation and the outer chute section 25 rotated about this center, and the material may be delivered at any point in the circle 47 whose radius is equal to the length of the lower chute section 25. A number of positions with the chute sections utilized as here described, are shown in dotted lines and designated by the numerals 48, 49 and 50. Any point within either of these circles may be reached by the end of the chute by rotating the upper section of one side and then rotating the outer or lower end at some angle to the upper section as shown in dotted lines and designated by 51, 52 and 53.

From this description it will be noted that the chute may be so manipulated that any point within a circle whose radius is equal to the length of the combined sections of the chute can be supplied with material from a central point, and after the desired amount of material has been delivered to any one point, the chute may be readily and quickly moved to the next point where the material is wanted.

Of course I do not wish to be limited to the exact details of construction as here shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

1. In combination, a tower, triangular supports secured thereto, shoring for bracing the lowermost triangular support, a trestle pivotally mounted between the triangular supports, a hopper supported by the tower above the triangular supports, a spout leading from said hopper, a chute section mounted upon the trestle, one end thereof loosely surrounding the spout of the hopper, a second chute section, one end of which loosely surrounds the outer end of the first named chute section, and means for supporting the last named chute section.

2. In combination, a tower, triangular supports secured thereto, shoring for bracing the lowermost triangular support, a trestle pivotally mounted between the triangular supports, a hopper supported by the tower above the triangular supports, a spout leading from said hopper, a chute section mounted upon the trestle, one end thereof loosely surrounding the spout of the hopper, a second chute section, one end of which loosely surrounds the outer end of the first named chute section, a split ring carried by the outer end of the trestle for holding the inner end of the second named chute section in proper relation to the outer end of the first named chute section and a support underlying the second named chute section.

3. In combination, a tower, triangular supports secured thereto, shoring for bracing the lowermost triangular support, a

trestle pivotally mounted between the triangular supports, a hopper supported by the tower above the triangular supports, a spout leading from said hopper, a chute section mounted upon the trestle, one end thereof loosely surrounding the spout of the hopper, a second chute section, one end of which loosely surrounds the outer end of the first named chute section, a split ring carried by the outer end of the trestle for holding the inner end of the second named chute section in proper relation to the outer end of the first named chute section, a T beam underlying the second named chute section, one end thereof being attached to the inner end of the second named chute section and a horse to which the opposite end of the T beam is fastened, said horse adapted to underlie the second named chute section adjacent its outer end.

4. In combination, a tower, a pair of triangular supports secured to said tower, one beneath the other, a bearing carried by each of said triangular supports at the apex thereof and shoring for supporting the lowermost triangular support, a trestle consisting of an upright, a horizontal arm, an angle arm and pivot pins, said pivot pins being journaled in the bearings carried by the triangular supports, saddles mounted upon the angle arm of the trestle, the upper chute section lying in said saddles, said chute section having an elbow at each end, the upper elbow loosely surrounding the spout of the hopper a lower chute section having an elbow at one end loosely surrounding the lower elbow of the upper chute section and

means for supporting the lower chute section.

5. In combination, a tower, a pair of triangular supports secured to said tower, one beneath the other, a bearing carried by said triangular supports at the apex thereof and shoring for supporting the lowermost triangular support, a trestle consisting of an upright, a horizontal arm, an angle arm and pivot pins, said pivot pins being journaled in the bearings carried by the triangular supports, saddles mounted upon the angle arm of the trestle, the upper chute section lying in said saddles, said chute section having an elbow at each end, the upper elbow loosely surrounding the spout of the hopper a lower chute section having an elbow at one end loosely surrounding the lower elbow of the upper chute section, a flange formed with the elbow of the lower chute section, a split ring carried by the trestle surrounding the elbow of the lower chute section and supporting the inner end of the said chute section, a T beam underlying the lower chute section, a band for securing one end of said T beam to said chute section, a horse for supporting the opposite end of the T beam, a brace secured to said T beam and the horse, and a hand-hold carried by the horse.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOSEPH W. OGDEN.

Witnesses:

W. H. THOMPSON,
GEO. M. GETTER.