

No. 713,220.

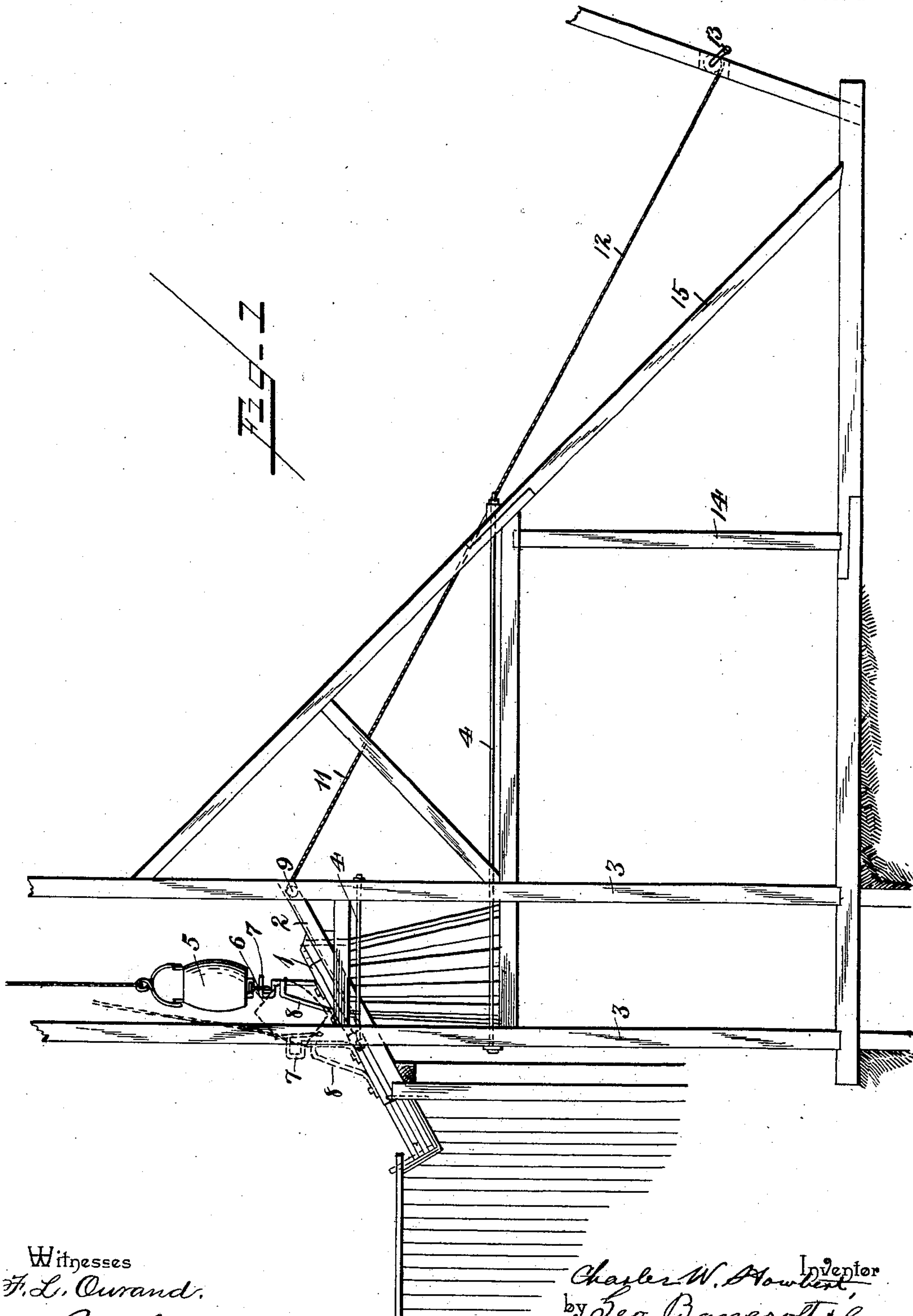
Patented Nov. 11, 1902.

C. W. HOWBERT.
DUMPING DEVICE.

(Application filed May 12, 1902.)

(No Model.)

3 Sheets—Sheet 1.



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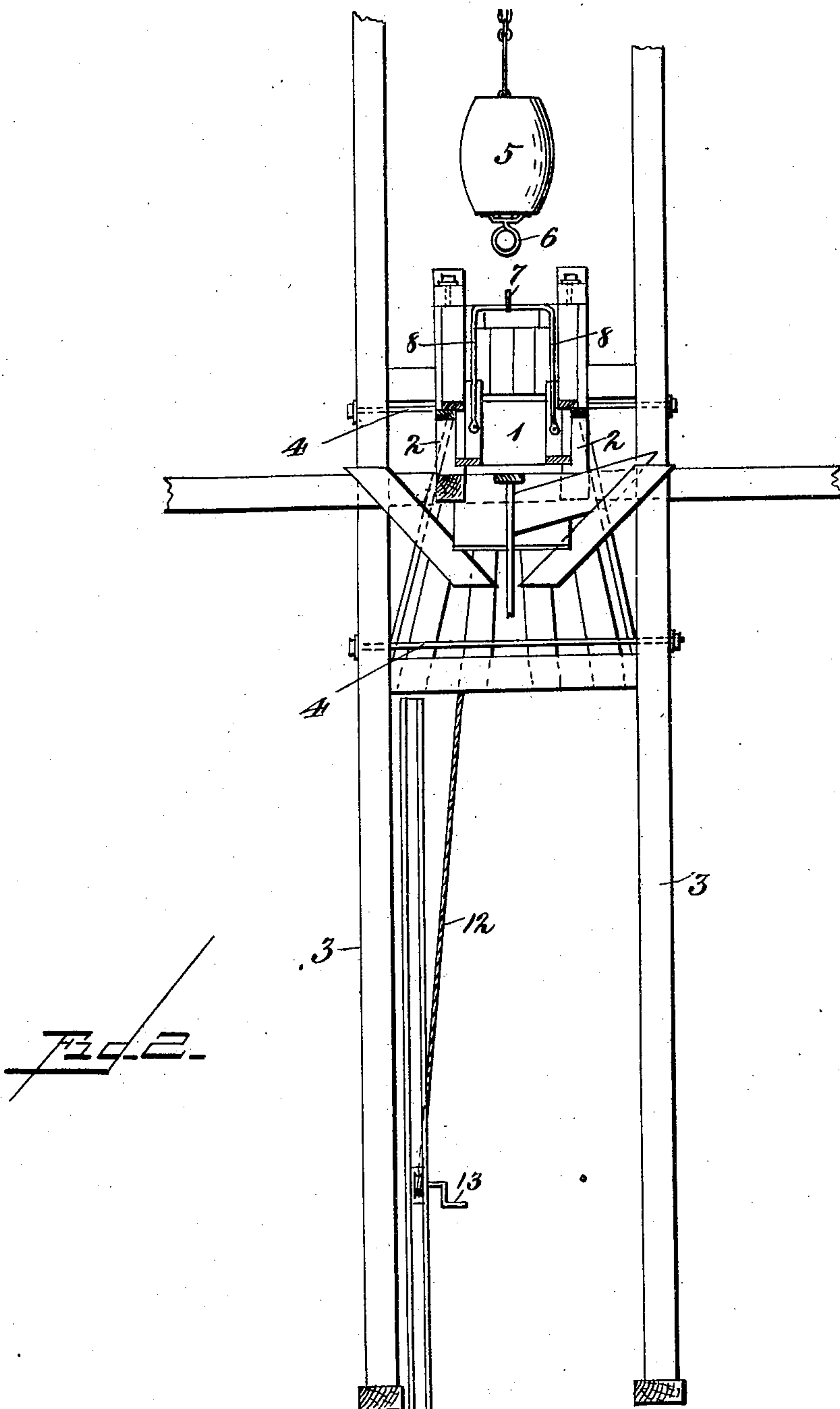
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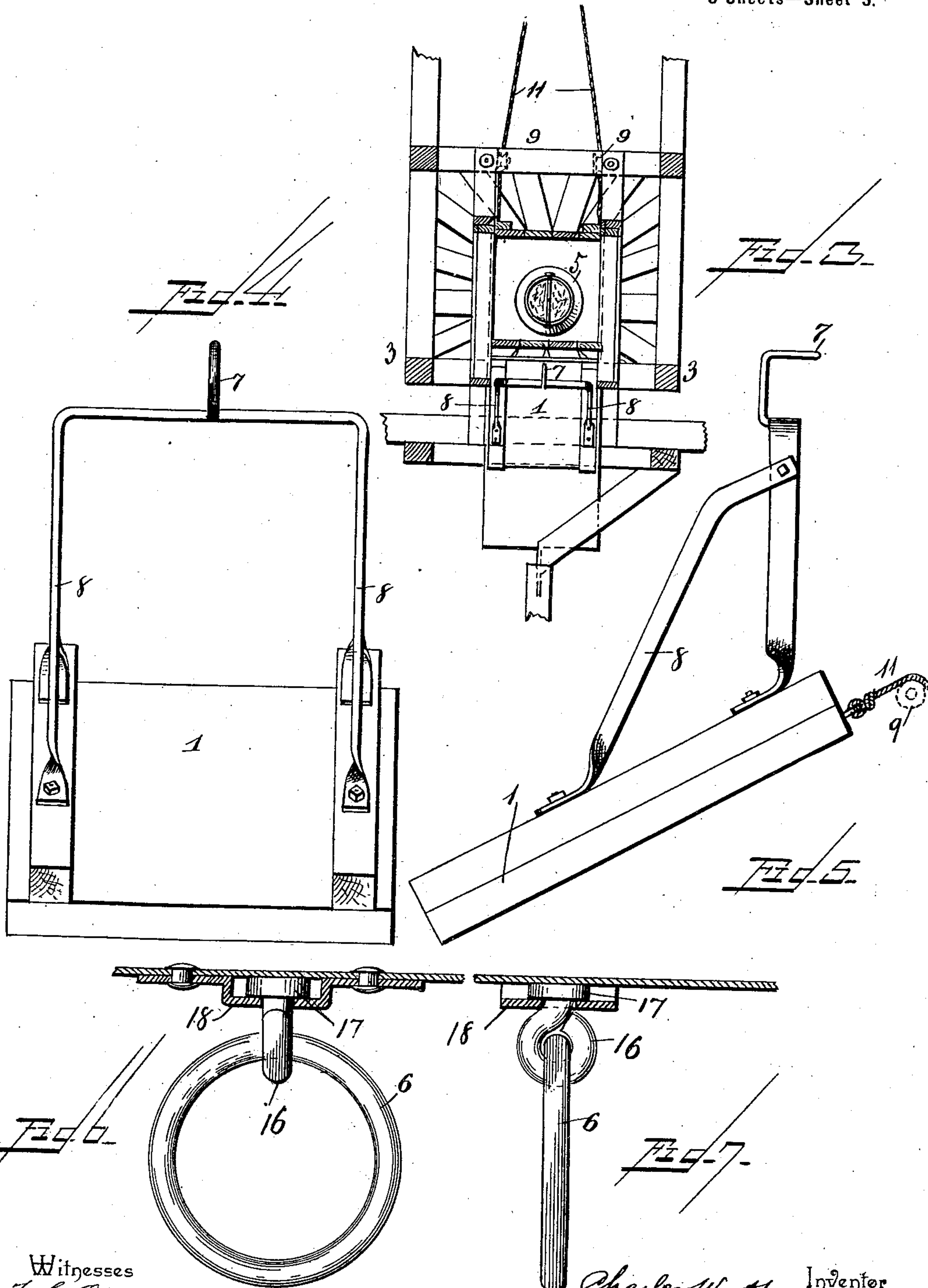
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

CHARLES W. HOWBERT, OF CRIPPLECREEK, COLORADO.

DUMPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 713,220, dated November 11, 1902.

Application filed May 12, 1902. Serial No. 107,006. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HOWBERT, a citizen of the United States, residing at Cripplecreek, in the county of Teller and State of Colorado, have invented new and useful Improvements in Dumping Devices, of which the following is a specification.

My invention relates to dumping devices for use in connection with mining and the like, and has for its object to so construct the same that by the simple manipulation of a crank or the like by the operator the mine may be closed and the bucket dumped, the door being returned to its original position upon the release of the same.

In the drawings forming a part of this specification, and in which like symbols of reference represent corresponding parts in the several views, Figure 1 is a side view of a mine or shaft with my device applied to the same. Fig. 2 is a vertical section looking from the dump side of the device. Fig. 3 is a sectional plan view of the device; Fig. 4, an end view of the hook and its supporting-frame. Fig. 5 is a side view of the hook. Fig. 6 is a view of the swivel-ring, and Fig. 7 is a view of the swivel-ring taken at right angles to Fig. 6.

1 represents the sliding door of the dumping device sliding in ways 2, formed in the main frame, said main frame consisting of the usual vertical timbers 3 and cross-rods 4.

5 represents the bucket, and 6 the swivel-ring connected to the bottom of the same and with which the hook 7 of the sliding door 1 engages when the same is brought in contact during the operation of the device.

16 is a hook or eye having a shank 17 and a head 17, swiveled within a housing 18, which is secured to the bottom of the bucket. In the hook or eye 16 the ring 6 is secured.

8 represents braces at the side of the hook, the same supporting the hook and also acting to keep the bucket in its proper position on the door when in its inverted or dumping position.

9 represents rollers or pulleys upon which work ropes 11, the same having a common connection with rope 12, connected with a windlass or crank 13, operated by the engineer or attendant. The ropes 11 are secured at the sides of the sliding door 1.

14 and 15 are timbers bracing the main frame or structure.

The operation of my device is as follows: When it is desired to dump the bucket, the engineer or attendant operates the crank 13, the bucket having been raised by engineer above the sliding door, so that the ring on bucket will hang at a point where the hook on sliding door will come. When the door is pulled up, shaft is closed and ring engaged by hook. The attendant then releases brake on engine, and the bucket tips over and dumps. He then throws his engine in gear and pulls bucket back into original position. The bucket 5 has almost invariably a whirling motion, and the ring 6 being of large diameter—about ten inches—it is readily engaged by the hook. When the bucket is dumped, as shown in dotted lines, and the crank released, the door slides back by gravity on ways 2 and is ready again for use.

Of course the material operated upon may be deposited at any point desired.

Having now fully described my invention, what I claim is—

1. In a device for hoisting and dumping, a bucket having secured to its base a swiveled hook with a ring secured thereto, whereby the bucket may be dumped.

2. In a dumping device, a bucket, a swiveled ring connected to the bottom of the same, a sliding door carrying a hook adapted to engage the swiveled ring, and means for operating the door.

3. In a dumping device, the combination, of a bucket, a swiveled ring connected to the same, a sliding door, and a hook on the sliding door adapted to engage the swiveled ring.

4. In a device of the character described, a bucket having a housing secured to its base, an eye with a shank having a head swiveled within said housing, and a ring loosely mounted in said eye.

5. In a dumping device, a bucket, a swiveled ring connected to the bottom of the same, a sliding door carrying a hook adapted when operated to automatically engage the swiveled ring, close the shaft, and direct the dumped material from the shaft.

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

CHARLES W. HOWBERT.

Witnesses:

R. E. ZAHNISER,
H. C. WOODHOUSE.