

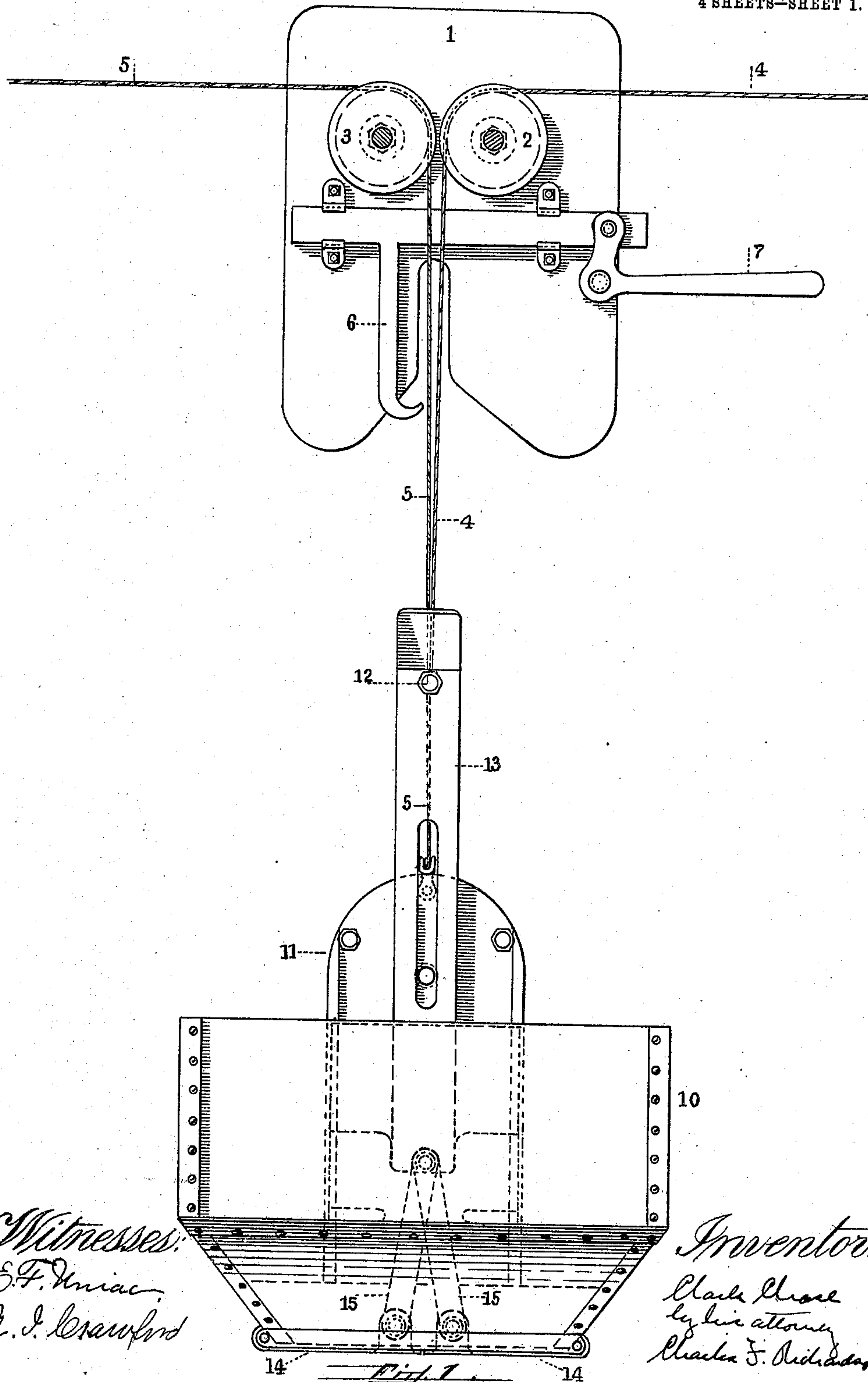
No. 885,910.

PATENTED APR. 28, 1908.

C. CHASE.
HOISTING BUCKET.

APPLICATION FILED MAR. 16, 1907.

4 SHEETS—SHEET 1.



Witnesses:
E. F. Amiac
A. J. Crawford

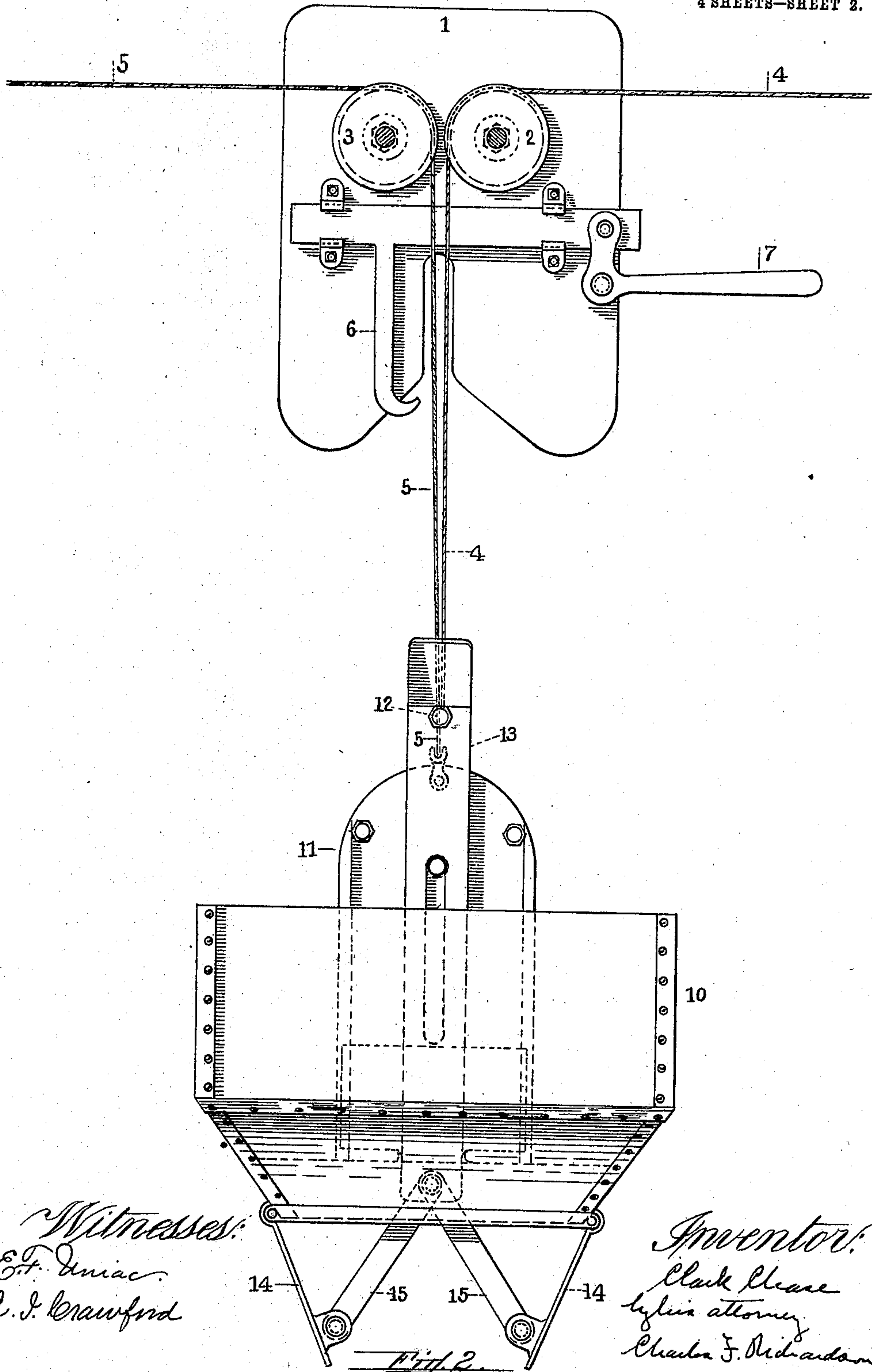
Inventor:
Charles Chase
by his attorney
Charles F. Richardson

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4 SHEETS—SHEET 2.



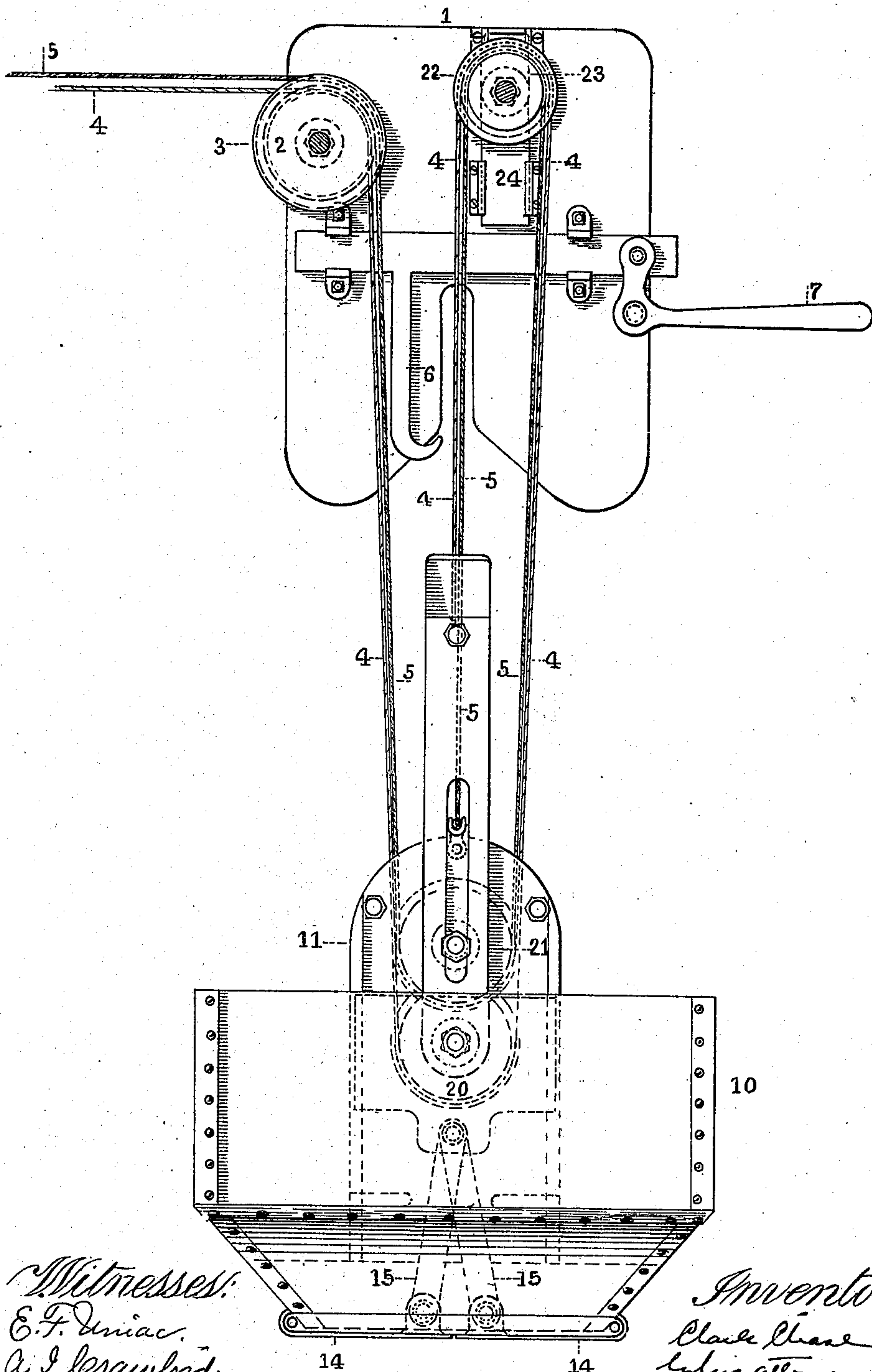
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4 SHEETS—SHEET 3.



Witnesses:
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Charles F. Richardson

Fig. 3.

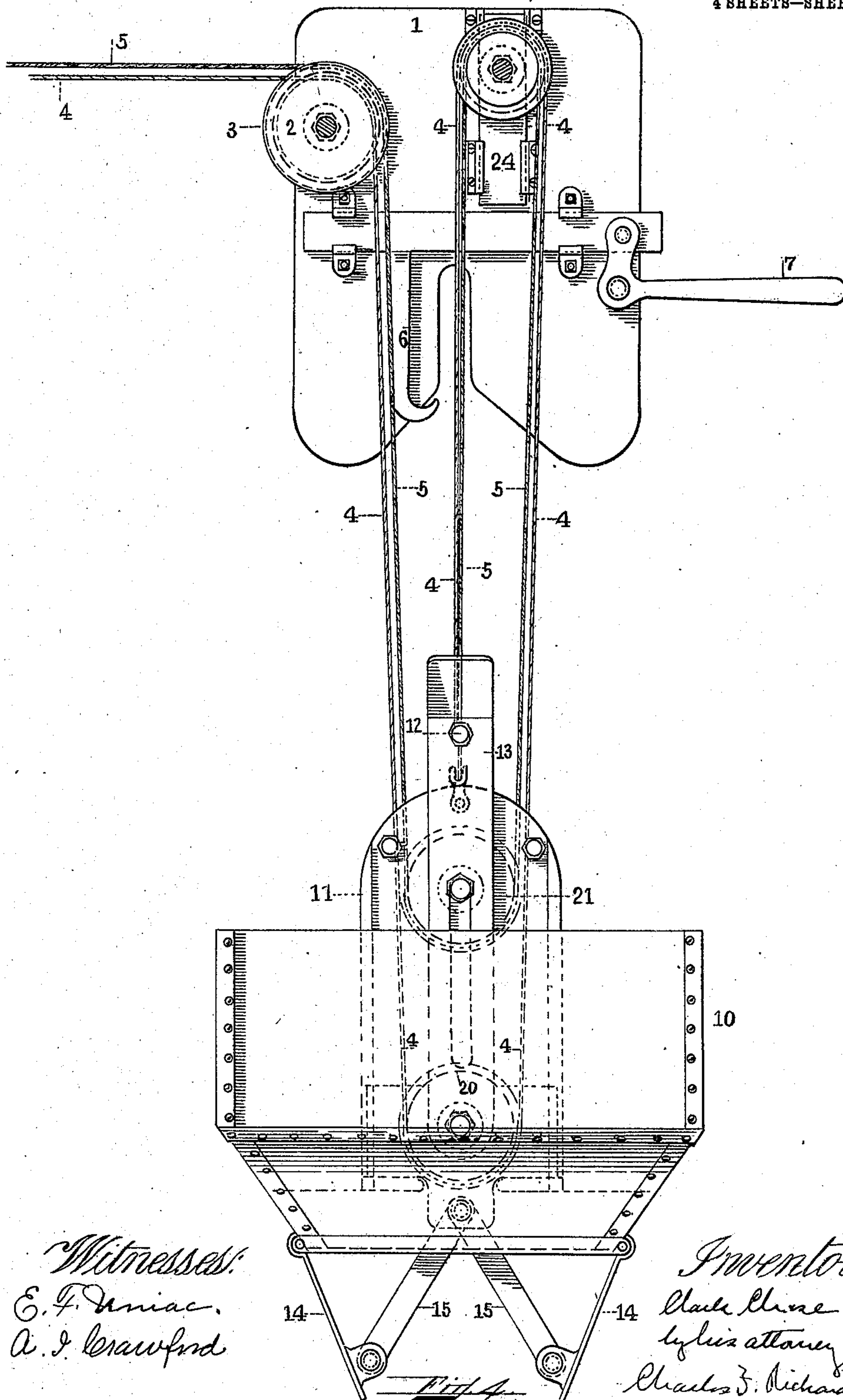
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

CLARK CHASE, OF FALL RIVER, MASSACHUSETTS.

HOISTING-BUCKET.

No. 885,910.

Specification of Letters Patent.

Patented April 28, 1908.

Original application filed September 24, 1906, Serial No. 335,874. Divided and this application filed March 16, 1907.
Serial No. 362,635.

To all whom it may concern:

Be it known that I, CLARK CHASE, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Hoisting-Buckets, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to hoisting buckets.

The first object of said invention is to operate a bucket which, by means of two ropes, may be raised and lowered, and caused to assume an emptying position, or a position for the reception of material.

The second object is to provide said bucket with additional means whereby when either one or both of said ropes sustain the weight of the bucket, said weight has a tendency to move a movable member or slide.

Other objects will appear hereinafter.

A reference to application No. 335,874, filed by me, September 24, 1906, for United States Letters Patent for improvements in carriers, and of which this application is a division, shows how my invention may be of great utility when used in connection with a movable slide on a carriage, for the purpose of locking the carriage to its support. However, for the sake of illustrating my invention in this application, there is substituted for the carriage, a fixed support having thereon a movable member, slide, or equivalent support, operatively connected by ropes to the bucket.

In the drawings illustrating the best mode now known to me of embodying my invention, Figure 1 shows apparatus employed to attain the first object of my invention; the bucket being suspended by ropes and closed; Fig. 2 shows the bucket suspended and open; Fig. 3 shows apparatus employed to attain not only the first object of my invention, but also the second; the bucket being suspended and closed; while Fig. 4 shows the bucket open.

A fixed support 1 has two pulleys 2, 3; a hoisting rope 4 passing over pulley 2, and a dumping rope 5 passing over pulley 3. These ropes 4, 5, are made fast to my improved hoisting bucket 10; the dumping rope 5, to a standard 11 of the bucket, and the hoisting rope 4, to a bar 12 of a movable bail 13, which is mounted in the standard 11, and which controls means for opening the bucket. Movably mounted to the support 1, is a

hooked member 6, which by any suitable means, as a lever 7, may be moved into and out of position to receive and to release the bar 12, of the bail 13. The bucket 10 has a movable bottom consisting, preferably, of two doors 14 opening downward and outward. Each is pivoted to a side of the bottom of the bucket, and to links 15, which in turn are pivoted to the bottom portion of the bail 13. The latter being mounted in suitable guides in the standard 11, is free to move; that is, the bucket may be moved in relation to the bail, or the bail, in relation to the bucket.

The operation of the bucket shown in Figs. 1 and 2 is as follows: It will be assumed that the bucket 10 has been lifted off the hooked member 6, the latter moved out of the path of the bar 12 of the bail 13, and the closed bucket lowered into position shown in Fig. 1. The hoisting rope 4, attached to the bail 13, being taut, the entire weight of the bucket is suspended either by the hoisting rope, alone, through the bail 13, links 15, doors 14, and sides of the bucket 10; or jointly by the dumping rope 5, and the dumping rope 5 attached to the standard 11. To dump the bucket, the dumping rope 5 is made fast, and the hoisting rope 4 is released to the extent desired; the weight of the bail, links, doors, and any material that may be in the bucket and borne by the doors, acting downward and throwing the doors open, thereby placing the bucket in discharging position, as shown in Fig. 2. To close the doors of the bucket, either the hoisting rope 4 may be pulled up, the weight of the bucket being borne by the dump rope 5, or the dump rope 5 lowered, the hoisting rope 4 being held stationary. In either event, the doors of the bucket close the bottom thereof. The bucket can, to the extent desired, be lowered or raised while closed, by simultaneously pulling upon the hoisting rope 4 and the dumping rope 5; or by pulling alone on the hoisting rope 4. In fine, by means of the hoisting rope and the dumping rope, the bucket can be raised and lowered and dumped, to any extent desired.

When the bucket is used in combination with a movable slide 24, Figs. 3 and 4, and is employed, say, in locking a carriage to its support, as is shown in my said application No. 335,874, filed September 24, 1906, there is a hoisting sheave 20 mounted in the bail 13, and a dumping sheave 21 in the standard 11 of the bucket 10, for the hoisting and the

dumping ropes 4, 5, respectively, while a hoisting slide sheave 22, and a dumping slide sheave 23, are mounted in a movable slide 24; the hoisting rope 4 being led over the hoisting pulley 2, the hoisting bucket sheave 20, the hoisting slide sheave 22, and made fast to the bar 12 of the bail 13; and the dumping rope 5 being led over the dumping pulley 3, the dumping sheave 21, the dumping slide sheave 23 in the movable supporting member or slide 24, and then fixed to the standard 11 of the bucket 10. By means of these ropes and the hoisting and lowering sheaves, the bucket becomes operatively connected to the movable supporting slide 24, and obviously while the bucket 10 is off of the hook 6 and is sustained by either the hoisting rope 4, or the dumping rope 5, or by both, passing over the hoisting and dumping slide sheaves on the movable member 24, the weight of the bucket is partially borne by the said member, and the latter moves until restrained, or the weight of the bucket is removed from the ropes, and is borne by the hook.

As the operation of opening and closing the doors 14 of the bucket 10 by the manipulation of the hoisting rope 4 and the lowering rope 5 shown in Figs. 3 and 4, is the same as that already explained in connection with the apparatus shown in Figs. 1 and 2; the sheaves 20, 21, 22, 23, simply controlling an additional loop in each of the ropes, a further description seems unnecessary and is therefore omitted.

The preferred form of my invention is shown in Figs. 3 and 4. If there is no movable supported member of slide 24, to be operated by the weight of the bucket, then the hoisting and dumping ropes 4, 5, can be led from the pulleys 2, 3, Figs. 1 and 2, di-

rectly to the bail 13 and the standard 11 in the bucket; the sheaves 20, 21, 22, 23, becoming idle, and the bucket being in substance, that shown in Figs. 1 and 2. Should either one or both of the pulleys 2, 3, be for any reason mounted as upon a slide, or movable member, then, obviously, the tub shown in Figs. 1 and 2, would, when supported by either one or both ropes, tend to move the slide or member. This latter proposition is so evident that a drawing illustrating it is omitted. In short the bucket shown in Figs. 3 and 4 is adapted to be used where there is, or is not a movable slide to be operated by the weight of the bucket.

It is to be understood that once knowing the principle of my invention, those skilled in the art to which it appertains, can embody it in many different forms without departing from the spirit thereof. I therefore desire to protect my invention in the broadest manner legally possible.

What I claim is:—

In a tub provided with an outlet and means for opening and closing said outlet; a dumping sheave mounted in the tub; a dumping rope made fast to the tub and in engagement with said sheave; a bail movably mounted in said tub and operatively connected to said means for opening and closing said outlet; a hoisting sheave mounted in said bail; and a hoisting rope made fast to the bail and in engagement with said hoisting sheave.

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

CLARK CHASE.

Witnesses:

FRANCIS J. V. DAKIN,
E. F. UNIAR.