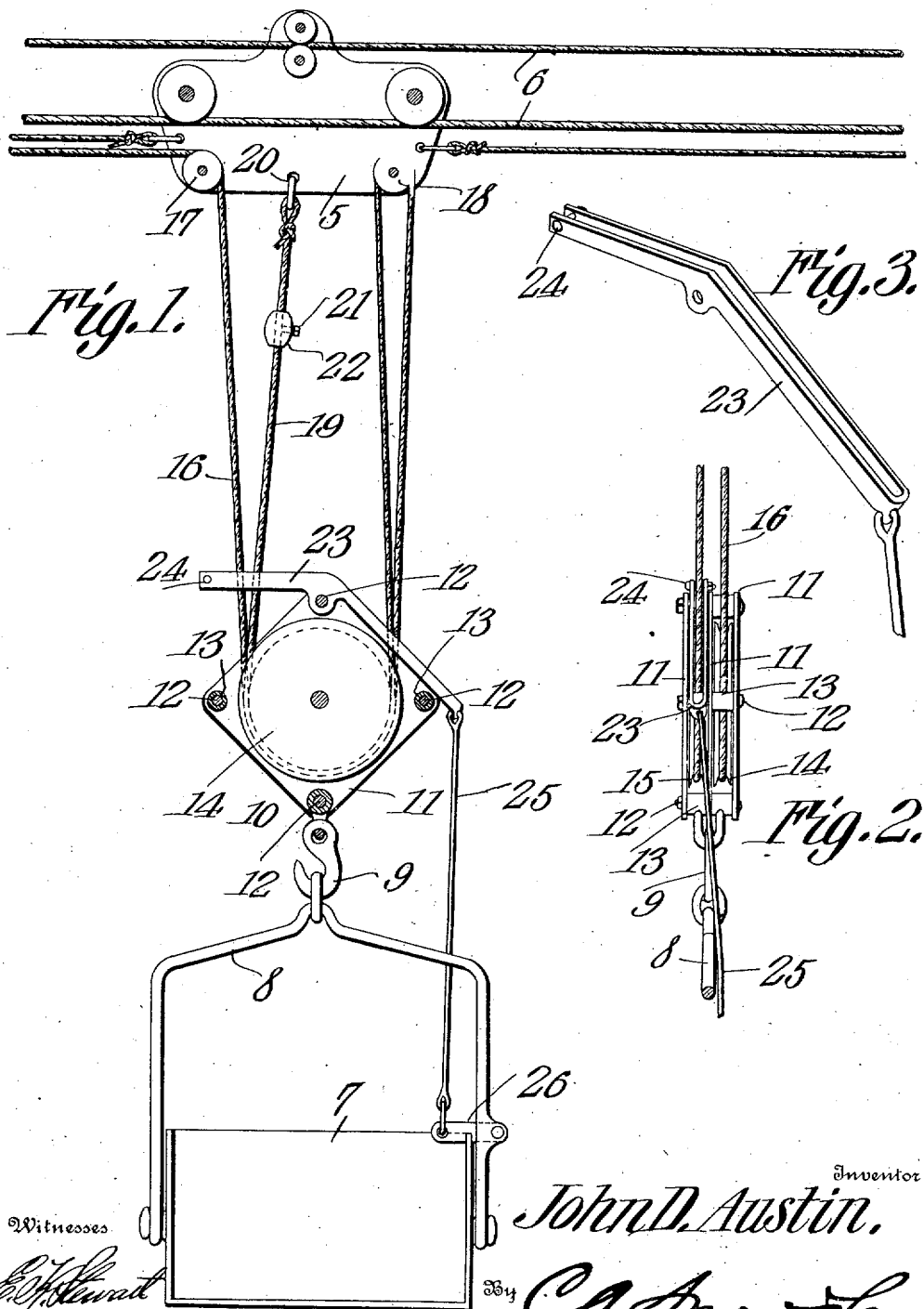


J. D. AUSTIN.
 AUTOMATIC DUMPING DEVICE FOR ELEVATED CARRIERS.
 APPLICATION FILED JULY 10, 1909.

973,247.

Patented Oct. 18, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN D. AUSTIN, OF TAMPA, FLORIDA.

AUTOMATIC DUMPING DEVICE FOR ELEVATED CARRIERS.

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Specification of Letters Patent.

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Application filed July 10, 1909. Serial No. 506,982.

To all whom it may concern:

Be it known that I, JOHN D. AUSTIN, a citizen of the United States, residing at Tampa, in the county of Hillsboro and State of Florida, have invented a new and useful Automatic Dumping Device for Elevated Carriers, of which the following is a specification.

This invention relates to that class of automatic dumping devices for the bucket of elevated carriers in which the bucket is pivotally carried by a bail which is suspended from a fall block carried by a rope carriage or other form of conveyer, the bucket and bail being locked together during the travel of the carriage, and unlocked upon its arrival at the dumping place, whereupon the bucket tilts and dumps the load.

The object of the present invention is to provide a dumping device of the kind stated which is simple in structure, efficient in action, and easily controlled, and to this end it consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to drawing hereto annexed in which—

Figure 1 is an elevation of the apparatus, the rope carriage and fall block being shown in section. Fig. 2 is an edge view of the fall block. Fig. 3 is a perspective view of the lever hereinafter referred to, detached.

In the drawings, 5 denotes a rope carriage of ordinary or preferred construction traveling on a rope way 6, and operating in the usual manner. The bucket or receptacle 7 carried by the carriage is pivotally mounted between the branches of a bail 8 which is hung on a pendent hook 9 carried by a fall block 10.

The fall block frame consists of three rectangular plates 11 connected at their corners by transverse bolts 12. These plates are spaced apart by means of sleeves 13 mounted on the bolts between the plates. Between these plates is journaled a pair of sheaves 14 and 15 respectively over which the fall rope 16 passes. On the rope carriage 5 are sheaves 17 and 18 respectively for the fall rope.

The fall rope first passes over the sheave 17 and then over the sheave 14, and back to the sheave 18 on the rope carriage. From the last mentioned sheave the rope passes back to the fall block, and after being carried around the sheave 15 thereof is extended back to the rope carriage as indi-

cated at 19, the end of the rope being fastened to said carriage as indicated at 20 at a point between the sheaves 17 and 18. To the standing end 19 of the fall rope is adjustably secured by means of a set screw 21, or other suitable means, a stop button or block 22 which is for a purpose to be presently described.

To the fall block is pivoted a lever 23 which is forked, and so located on the fall block as to straddle the portion 19 of the fall rope. That end of the lever which receives the portion 19 of the fall rope is open, so that said rope may be placed therebetween, and after the rope is in position, a bolt 24 is passed across said end of the lever whereby the rope is prevented from slipping out. The opposite end of the lever is connected by a rod, link or other suitable connection 25 to a latch 26 which is pivoted to one of the branches of the bail 8, and engages a notch in the top edge of the bucket 7, whereby said bucket is locked against tilting. When the latch is released, the loaded bucket being heavier at its front end, tilts and dumps the load, and when the bucket is emptied, it swings back, it being heavier at its rear end than at its front end when the bucket is empty, whereby the return of the bucket to horizontal position is rendered automatic.

The latch is released as herein described by raising the fall block until the lever strikes the stop 22, whereupon the lever tilts, and through the connection 25 withdraws the latch. The lever 23 is preferably pivoted to one of the bolts 12 connecting the plates 11 of the fall block frame and the lever is so positioned as to straddle the portion 19 of the fall rope. The block 22 is adjustable, so that the load may be dumped at different elevations, which is regulated by the position of the stop on the portion 19 of the fall rope.

The apparatus herein described is simple in construction, and reliable in operation, and it is devoid of complicated parts. It can be cheaply manufactured, and it effectually serves the purpose for which it is designed.

The apparatus may be employed for releasing all kinds of suspended loads, whether from a derrick, crane, steam shovel, elevated car-way, or any other apparatus of that class which uses in elevating, ropes or cables of any kind passing over one or more

sheaves, forming what is called a "block and fall", and it may also use any kind of a box, bucket, bag, or the like, as a receptacle for the load, either releasing by inverting the receptacle, or dropping its bottom.

The structure of the lever 23 may be modified in various ways, to admit the rope 19 in such a manner as to permit the stop to engage. In case very high dumping is required, the stop may be removed altogether so that the lever can strike the lower edge of the carriage 5, thus attaining the highest dumping point possible.

What is claimed is:

1. The combination with an elevated carrier and its fall block, and fall rope having its standing end fastened to the carrier; of a tiltable bucket carried by the fall block, a means for locking the bucket against tilting, a lever pivotally mounted on the fall block above the latter, and operatively connected to the locking means, and a stop on the standing end of the fall rope above the fall block and the lever, said lever being arranged to engage with said stop to release the bucket on the upward movement of the latter.

2. The combination with an elevated carrier, and its fall block, and fall rope having its standing end fastened to the carrier; of a tiltable bucket carried by the fall block,

a means for locking the bucket against tilting, a forked lever pivotally mounted on the fall block, and straddling the standing end of the fall rope, a stop on that portion of the fall rope which is straddled by the lever, and a connection between the lever and the locking means of the bucket.

3. The combination with an elevated carrier, and a pair of sheaves mounted thereon; of a fall block having a pair of sheaves, a fall rope passing over one of the sheaves of the carrier and the block, and thence over the other sheave of the carrier, and back to the other sheave of the block, and thence back to the carrier, and fastened thereto, a stop on the last mentioned portion of the rope, a forked lever pivotally mounted on the fall block and straddling the last mentioned portion of the rope, a tiltable bucket carried by the fall block, a means for locking the bucket against tilting, and a connection between the aforesaid lever and the locking means.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN D. AUSTIN.

Witnesses:

C. M. KNOTT,
JENNY OHME.