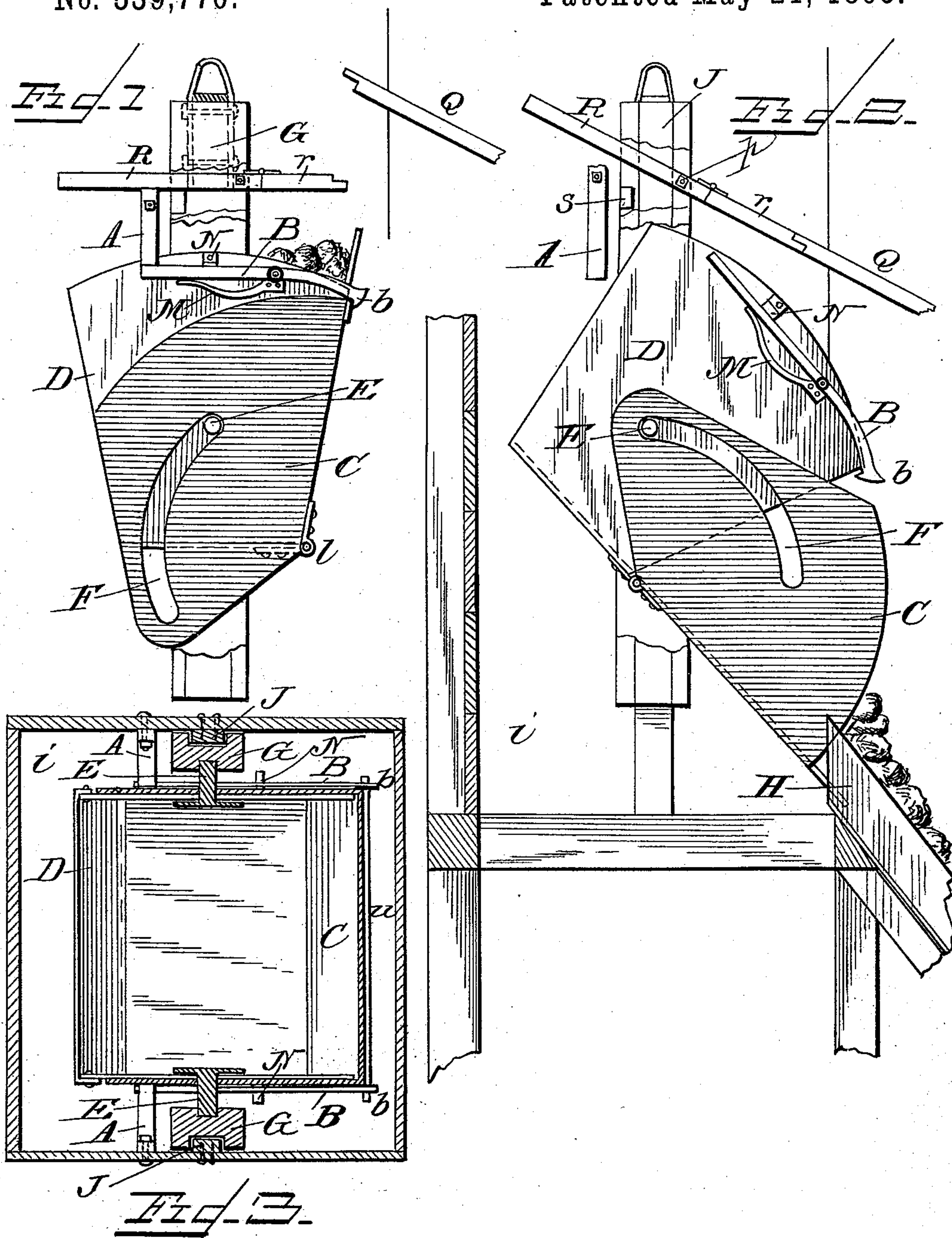


(No Model.)

M. & R. HAWKINS.
HOISTING BUCKET.

No. 539,770.

Patented May 21, 1895.



WITNESSES
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UNITED STATES PATENT OFFICE.

MOLTON HAWKINS AND ROBERT HAWKINS, OF BEACON, IOWA.

HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 539,770, dated May 21, 1895.

Application filed May 29, 1894. Serial No. 512,872. (No model.)

To all whom it may concern:

Be it known that we, MOLTON HAWKINS and ROBERT HAWKINS, citizens of the United States, residing at Beacon, in the county of Mehaska and State of Iowa, have invented certain new and useful Improvements in Hoisting-Buckets; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of hoisting buckets used in lifting coal from the shaft of a mine, and which is automatically tilted to dump the load onto a chute or in a suitable car or receptacle placed for its reception. The bucket is constructed with special reference to be used for purposes of loading and unloading when the material is raised and dumped by automatic appliances.

The improvement will be understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a hoisting-bucket, showing its relative position prior to dumping the load, the catch being in engagement with the trip. Fig. 2 is a view similar to Fig. 1, showing the bucket as it appears when dumping the load. Fig. 3 is a horizontal section of the bucket on a plane passing through the journals of the bucket.

Similar letters refer to corresponding parts in the several views.

Referring to the drawings the letter L represents a hoisting bucket having lateral journals E on which it turns when discharging the load. This bucket is composed of two sections D and C, which are hinged together at l, each section being opened on the inner or opposing end. The sides of the section C overlap the sides of the section D and have curved slots F and formed in the arc of a circle whose center corresponds with the hinged point l. The journals E pass through the curved slots F and engage with the closed ends thereof and limit the outward movement of the section C. A catch B is pivoted to the section D and has its end b constructed to engage with and hold the section C closed

against the open end of the section D. A spring M is arranged to operate on the catch B to hold its end b in engagement with the section C against accidental displacement. A stop N limits the movement of the catch in one direction.

While one catch may be sufficient yet it is preferred to have two, one on each side of the bucket to engage with the section C or the ends of the cross-bar u near each end thereof to obviate unequal strain which in time will distort and render the bucket unfit for use.

In the drawings i represents a shaft or frame having vertical guides J on which run a hoist G having a bail at the upper end to which the hoisting rope is attached in the usual manner. The side bars of the hoist receive the journals E of the bucket. A stop A is located within the path of the catch B to engage with the latter when the bucket reaches the proper elevation so as to release the section C and discharge the load.

H indicates a chute for conveying the coal or other substance to a convenient point where it is stored or received in a car or other receptacle.

In applying the bucket to a shaft having a chute the parts will be proportioned and arranged so that when the load is dumping the bottom of the section D, the end of the section C, and the chute H will align or nearly so to facilitate the dumping of the load.

The operation of the invention is as follows: The bucket after being loaded is elevated in the manner set forth, and when it reaches the proper elevation the stops A engage with the catches B and release the section C, which under the outward pressure of the coal swings outward and causes the tilting of the bucket on the journals E. The end of the section C overlaps the end of the chute H and the sides thereof close the space and bridge the gap between the edges of the sides of the section D and the sides of the chute H and prevents lateral spilling of the coal. The section C is closed by hand or mechanism may be provided to close it automatically after the load is discharged.

Q indicates a run above the chute H for conveying the check of the miner to the weighing boss. A tilting platform R is located

above the bucket and is pivoted to the hoist at *p* and is constructed to engage with the check run *Q* to be tilted thereby to deliver the check onto the run *Q*. A stop *S* supports the platform *R* in a horizontal position. The outer end portion *r* of the platform is hinged to yield upward on the descent of the hoist in the event of the said end passing above the end of the check run. The meeting ends of the platform and the check run are halved so that the upper sides will come flush and not impede the descent of the check.

When the bucket is loaded at the bottom of the shaft the miner, whose load is to be elevated, places a check which is a metal piece resembling a coin, upon the platform *R*. As the bucket reaches the upper limit of its travel the platform *R* is tilted and the check placed thereon starts down the run *Q* to the weighing boss who is enabled thereby to determine to whom the load should be credited.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A hoisting bucket composed of two sec-

tions, one section mounted on journals, and adapted to tilt, and having an open end, a second section hinged to the tilting section, and normally closing the open end, and having sides which embrace the closed sides of the tilting section, said sides being provided with curved slots to receive the journals, means for holding the two sections closed, and a tripping device substantially as described.

2. In combination with a hoist, a tilting bucket, an inclined check run, and a tiltable platform mounted in the hoist and adapted to receive the miner's check, and arranged to be engaged and tilted by the check run and brought into coincidence therewith when the bucket is dumped, substantially as described.

In witness whereof we affix our signatures in presence of witnesses.

MOLTON HAWKINS.
ROBERT HAWKINS.

Witnesses:

MARY HAWKINS,
ELLA LOGUE,
NASH LOGUE.