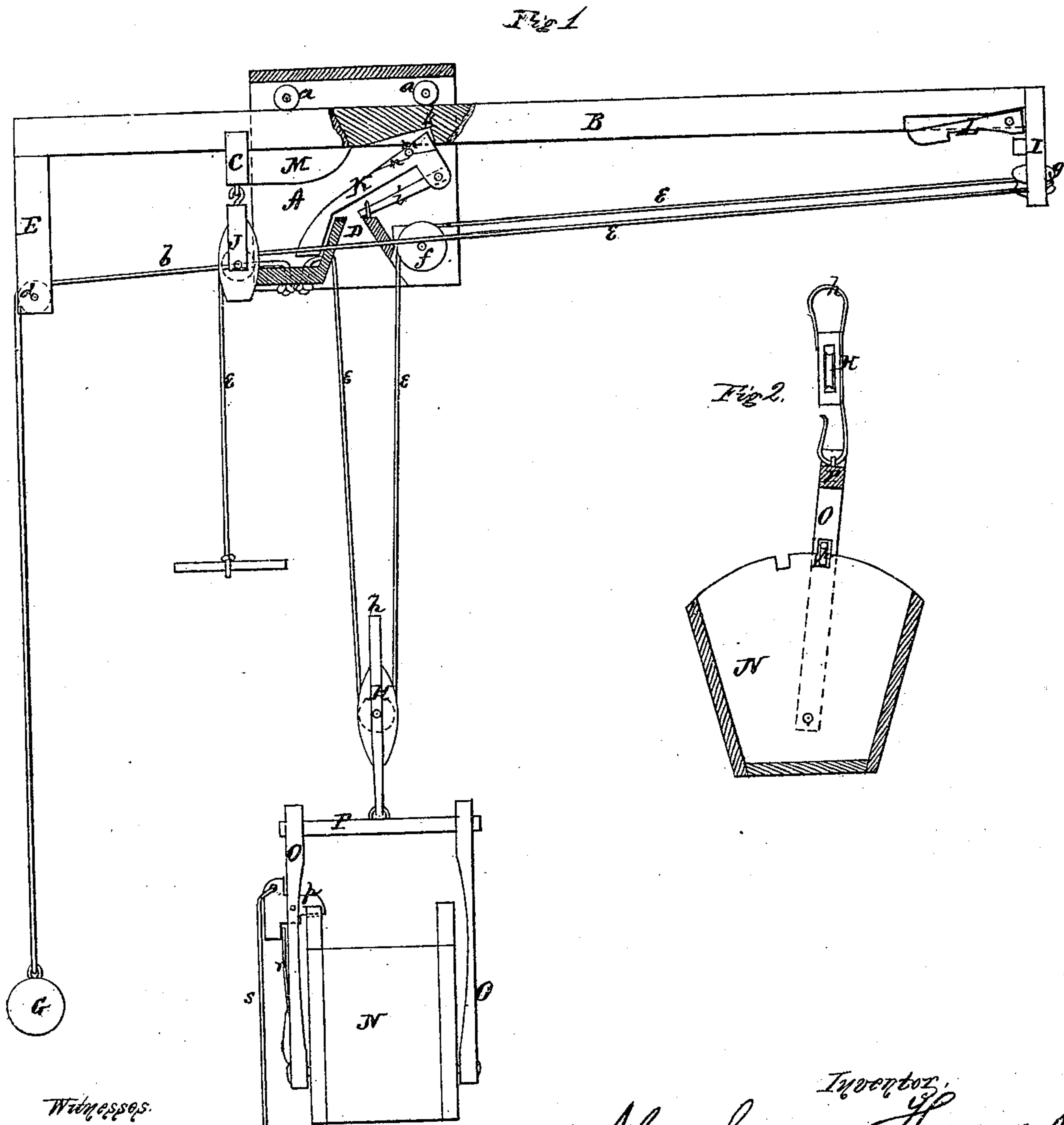


A. & G. D. THOMAS.  
HAY AND LIME ELEVATOR.

No. 102,729.

Patented May 3, 1870.



Witnesses.

Harry King  
C. L. Lewis.

Inventor.

Abraham Thomas  
Geo. D. Thomas  
per Alexander Mason

Atty.

# United States Patent Office.

ABRAHAM THOMAS AND GEORGE D. THOMAS, OF ST. THOMAS, PENNSYLVANIA.

*Letters Patent No. 102,729, dated May 3, 1870.*

## IMPROVEMENT IN HAY AND LIME ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same

*To all whom it may concern:*

Be it known that we, ABRAHAM THOMAS and GEORGE D. THOMAS, of St. Thomas, in the county of Franklin and in the State of Pennsylvania, have invented certain new and useful Improvements in Hay and Lime Elevators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of an elevator for raising hay, lime, or other articles.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side view of our elevator, the carriage being in section, and

Figure 2 is a transverse vertical section of the tub or bucket.

A represents the elevating-carriage, provided on its inside with two rollers *a a*, which rest upon and move on the beam B supporting the carriage.

On the under side of the beam B is a transverse bar, C, against which the carriage stops.

In the lower end of the carriage A is an inclined passage, D, open at both ends, the lower end being wider than the upper.

In the lower rear end of the carriage is attached a rope, *b*, which passes over a pulley, *d*, in a post, E, which projects downward from the beam B, said rope being, at its end, provided with a weight, G, for the purpose of drawing back the carriage against the bar C.

In the carriage, in rear of the passage D, is attached the hoisting-rope *e*, which passes down around a pulley-block, H, to which the hay-fork or the bucket is attached.

The rope *e* then passes up around a pulley, *f*, in the carriage in front of the passage D, thence around a pulley, *g*, in a post, I, projecting downward from the other end of the beam B.

From this point the rope *e* passes back again through a pulley-block, J, and down to the power employed for hoisting.

From the upper end of the pulley-block H projects a metal loop, *h*, which, when the load is hoisted up, projects through the passage D, and strikes a weighted lever, K, causing the same to rise and push an arm, *i*, through the loop *h*, across the top end of said passage, thus suspending the load on the same.

The lever K is bent, and pivoted in the carriage A, its longer arm being weighted at its rear end, and its smaller front end, which is bent downward, having the arm *i* pivoted to it.

When no load is on the arm *i*, the weighted end of the lever falls down, so that its angle, that is, the angle of the bent lever, will project into a notch, *k*, cut in the lower side of the beam B at a suitable point to prevent the carriage from moving on the beam while the load is being hoisted.

When the lever K has been raised, as above set forth, and its angle released from the notch *k*, the carriage moves to the other end of the beam B, it being, of course, understood that the power is still being applied to the hoisting-rope.

At the front end of the beam B is pivoted a hook, L, the rear hooked end of which falls down in the position shown in fig. 1.

When the carriage reaches the hook L, the rear end of the hook presses on the upper side of the lever K, causing its rear weighted end to drop down the angle of the lever fitting into a recess on the under side of the beam made for that purpose.

This downward motion of the weighted end of the lever K draws back the arm *i*, so as to release the load, and, at the same time, the hook L catches on a pin, *m*, in the carriage, holding the same at that end of the beam.

The load can then be allowed to descend to the place where wanted, when the fork or bucket is again drawn up, so that the loop or bail *h* will strike, and raise the lever K, in the same manner as above described.

A shoulder, *n*, on said lever at the same time releases the hook L from the pin *m*, and the weight G will draw the carriage back again to the starting point.

Near the transverse bar C, on the under side of the beam B, is a beveled bar, M, which strikes the weighted end of the lever K, releasing the arm *i* from the loop *h*, to allow the fork or bucket to descend, and, at the same time, let the angle of the lever project into the notch *k*.

For elevating hay, grain, and such articles, any suitable hay-fork may be used; but, for lime, brick, or such articles, a tub or bucket, constructed in the following manner, is used.

N represents the bucket, having inclined ends, so that it is wider at the top than at the bottom.

In the center of the sides, near the bottom, are pivoted arms, O O, which are connected above the bucket by a cross-bar, P.

In a mortise on one of the arms O is pivoted a dog or pawl, *p*, which is forced into a notch in the edge of



the side of the bucket by a spring, *r*, as shown in fig. 1, said dog being withdrawn when desired by the trip-rope *S*, causing the bucket to trip over, and empty the load. The pulley-block *H* is hooked to the cross-bar *P*.

Having thus fully described our invention.

What we claim as new, and desire to secure by Letters Patent, is—

1. In combination with the lever *K* and arm *i*, the beveled bar *M*, and notch *k*, substantially as and for the purposes herein set forth.

2. In combination with the lever *K*, with its shoulder *n* and arm *i*, the hook *L*, and pin *m*, substantially as and for the purposes herein set forth.

3. The combination of the beam *B*, with its arms *E* and *I*, and latch *L*, with the carriage *A*, with weighted lever *K*, arm *i*, opening *D*, beveled bar *M*, and pulley *H*, with bail *h*, all being constructed and operated substantially as set forth.

In testimony that we claim the foregoing, we have hereunto set our hands, this 7th day of March, 1870.

ABRAHAM THOMAS.

GEORGE D. THOMAS.

Witnesses:

LOGAN KENNEDY,

W. H. SELLER.