

L. S. Chichester,

Coal Elevator.

No. 93,677.

Patented Aug. 17, 1869.

Fig. 2.

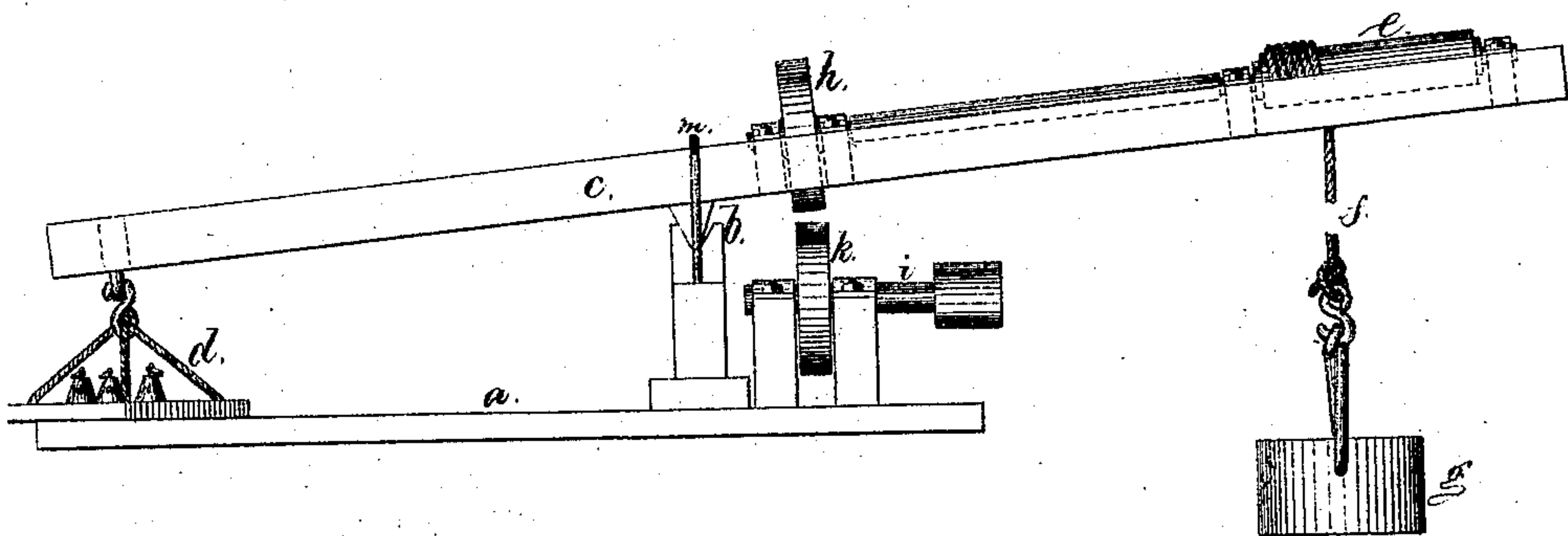
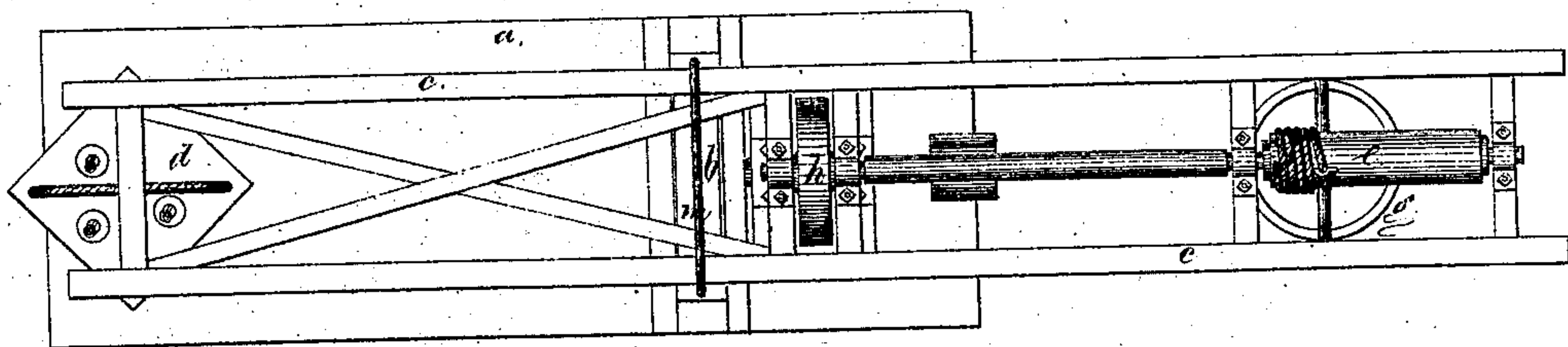


Fig. 1.



Witnesses,

Chas. H. Smith
Geo. D. Weber

Lewis S. Chichester

United States Patent Office.

LEWIS S. CHICHESTER, OF BROOKLYN, NEW YORK.

Letters Patent No. 93,677, dated August 17, 1869; antedated August 5, 1869.

APPARATUS FOR ELEVATING AND WEIGHING COAL, &c.

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

To all whom it may concern:

Be it known that I, LEWIS S. CHICHESTER, of Brooklyn, in the county of Kings, and State of New York, have invented and made a certain new and useful Improvement in Elevating and Weighing Coal, and other substances; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a plan, and

Figure 2 is a side elevation, representing the improved weighing and elevating-apparatus.

Similar marks of reference denote the same parts.

Various devices have heretofore been made for elevating coal and other articles from canal-boats, barges, &c., but no opportunity was given in such apparatus for weighing the coal in the act of elevating it, so as to keep an account of the weight, without interfering with the delivery of said material.

My apparatus accomplishes the aforesaid object, and consists in an elevating and weighing-apparatus combined in such a manner that the introduction of the given weight into the bucket, and the consequent turning of the scale, bring into action the elevating-mechanism, thereby causing the apparatus to be automatic.

In the drawing, I have represented one of the modes in which my invention may be put into practice.

a represents a platform, of any desired character;

b, the knife-edge fulcrum of the scale-beam *c*;

d is the weight; and

e is a windlass-barrel, mounted upon the scale-beam *c*.

From this barrel *e* is a rope or chain, *f*, to the bucket *g*, and *h* is a gear or friction-wheel on the shaft of the windlass *e*, contiguous to a similar wheel, *k*, on a shaft, *i*, that is continuously revolved by competent power.

The rope *f* is to be let out a sufficient length, so that the bucket will reach the desired place. The rope is then clamped, so that the bucket will only run down to the same point each time, and thereby the leverage on the scale-beam will not be varied.

The scale-beam is now balanced, and then the proper weight added to equal the load to be weighed.

This weight *d* separates the wheels *h* and *k*, the bucket runs down to its place and hangs from the scale-beam by the chain *f*.

If, now, coal or other material should be added to the bucket, sufficient to turn the scale-beam, then the wheels *x* and *k* coming together, the barrel *e* will be revolved and the bucket elevated, and upon the bucket being emptied, the scale-beam will turn again the other way, separating the wheels *h* and *k*, and allowing the bucket to descend.

The barrel *e* might be placed transversely of the beam, so as not to vary the leverage in winding on the rope or chain, and in cases where more convenient, the rope or chain may be led under and over friction-pulleys, between the scale and the bucket, so as to hoist the bucket at the most convenient position.

Friction-wheels, or gears, or other convenient mechanism may be employed to actuate the elevating-portion of this apparatus.

A retaining-bar, *m*, above the fulcrum *b*, prevents the scale-beam being lifted from said fulcrum when the weighted bucket brings the wheels *h* and *k* together.

In place of the weight being applied directly to the beam *c*, it might be applied to a lever or steelyard, graduated and connected to the beam *c*.

What I claim, and desire to secure by Letters Patent, is—

The windlass or barrel *e*, mounted upon the scale-beam, in combination with the revolving wheel *k*, and bucket to contain the material to be elevated, substantially as and for the purposes set forth.

In witness whereof, I have hereunto set my signature, this 9th day of December, 1868.

LEWIS S. CHICHESTER.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.