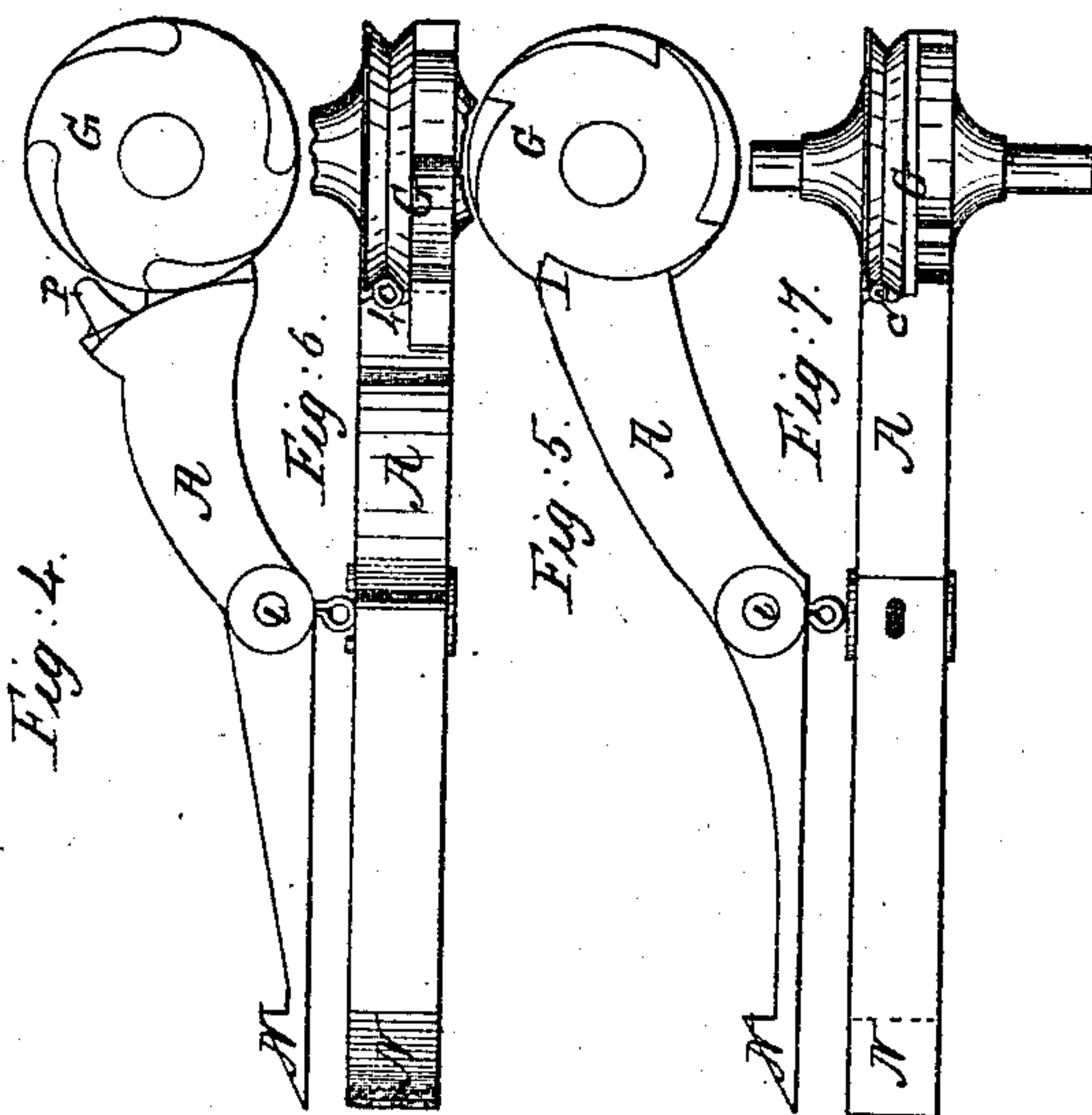
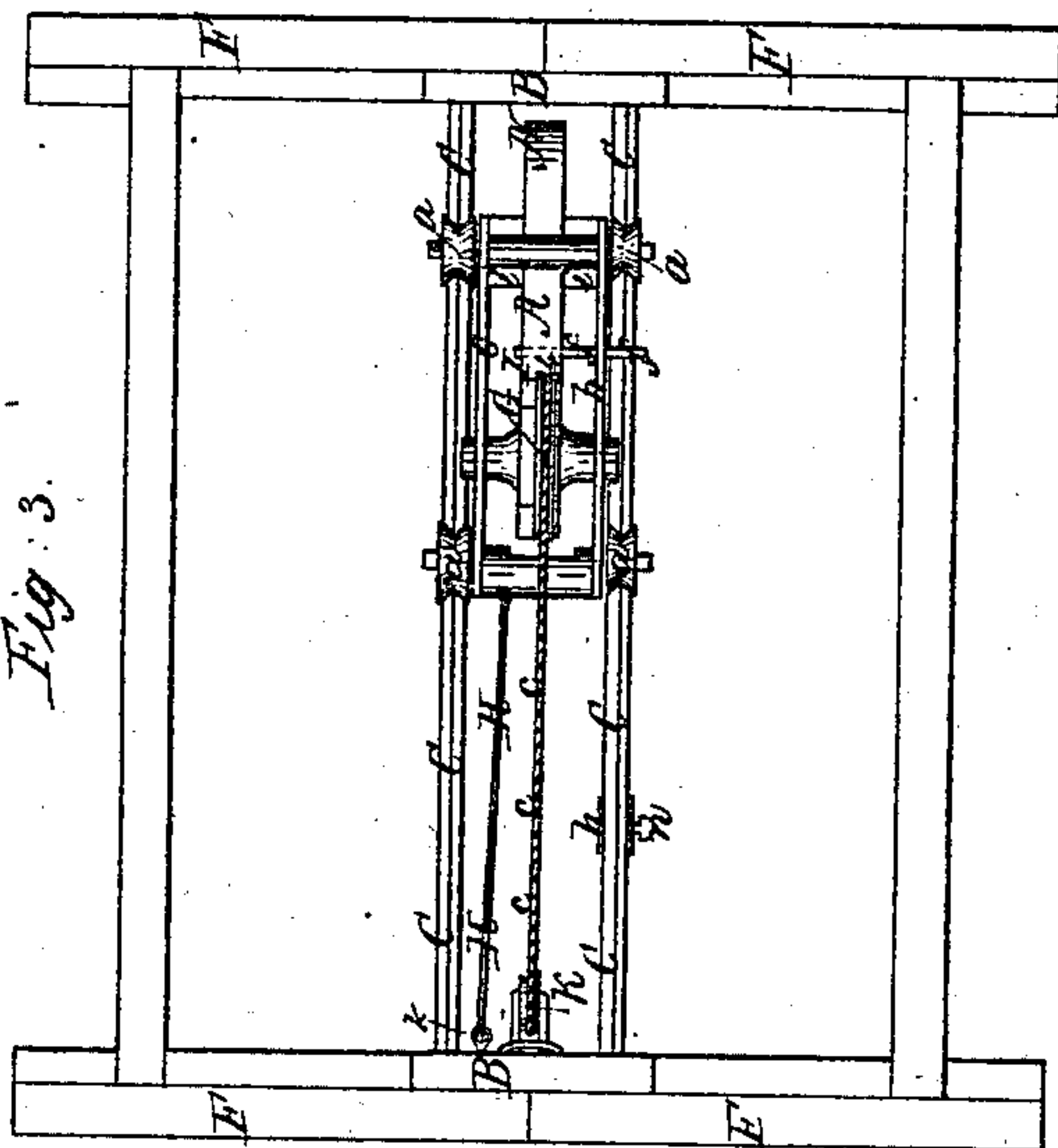
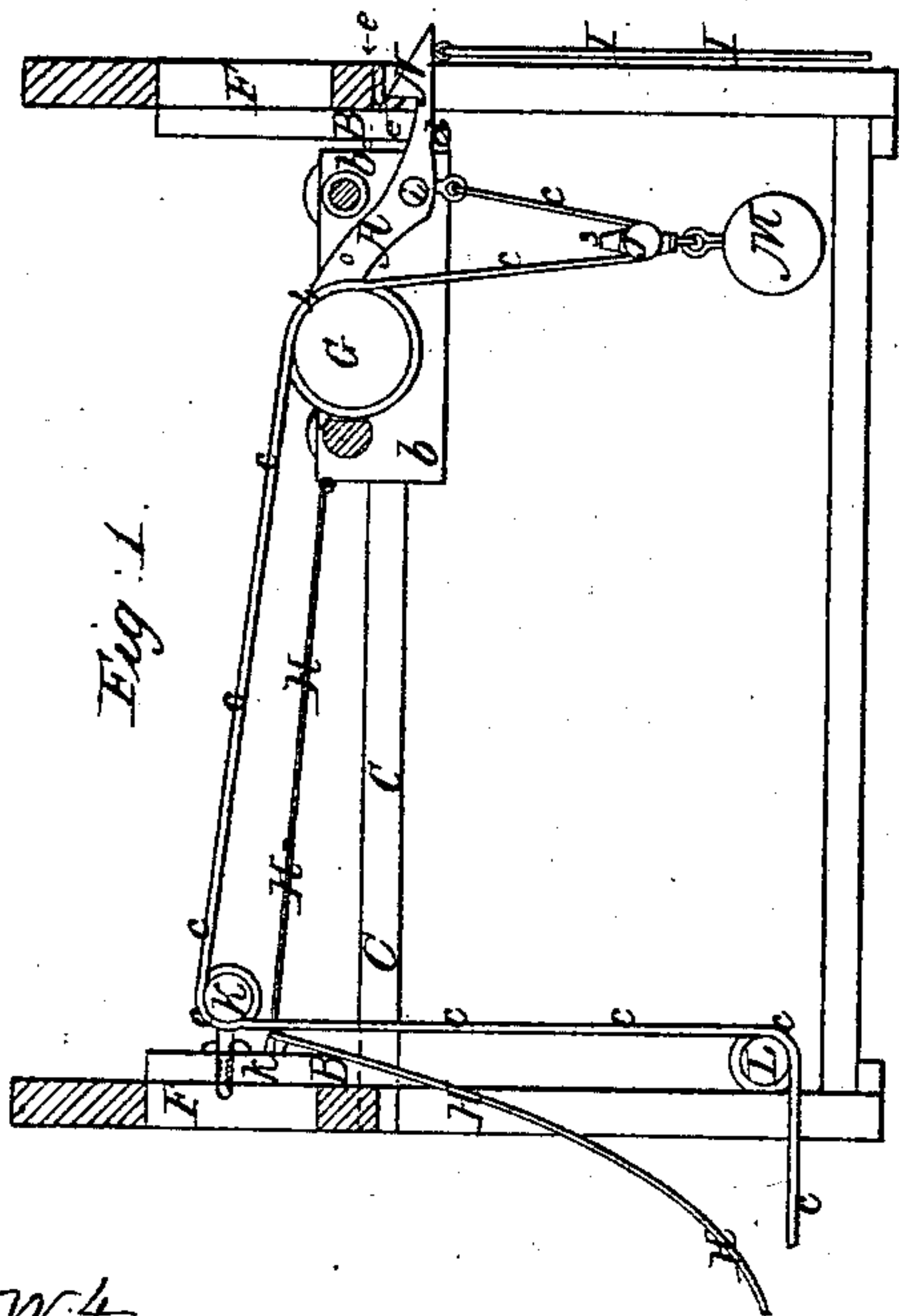
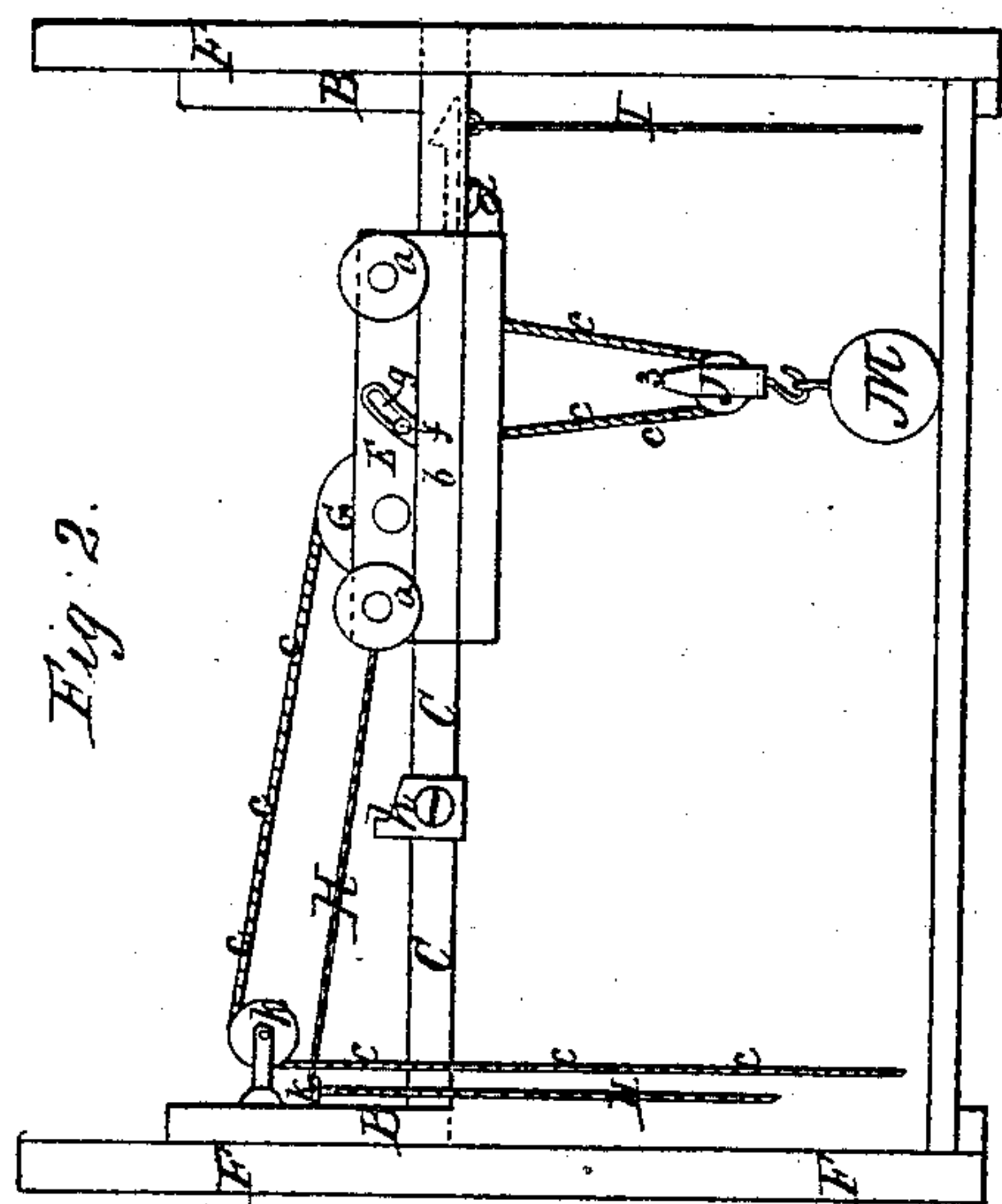


J. E. HOLLISTER.
ELEVATOR.

No. 84,744.

Patented Dec. 8, 1868.



Witnesses;
A. J. P. P. P.
Ch. P. P.

Inventor,
Josiah E. Hollister

United States Patent Office.

JOSIAH E. HOLLISTER, OF CALAIS, VERMONT.

Letters Patent No. 84,744, dated December 8, 1868.

IMPROVEMENT IN 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 I, JOSIAH E. HOLLISTER, of Calais, in the county of Washington, and State of Vermont, have invented certain new and useful Improvements in Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a central vertical longitudinal section.

Figure 2, a side elevation.

Figure 3, a top view, and

Figures 4 and 5 represent each a side elevation of a detached brake, and an end view of the grooved and ratchet-rim pulley, which operates in connection with the brake.

Figure 6 represents a top view of fig. 4, and

Figure 7, a bottom view of fig. 5.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to new and improved elevator, designed for hoisting hay and grain in barns, and its principal novelty consists in the peculiar construction of the brake in the grooved and ratchet-rim pulley, and in the combination and arrangement of the two latter, and in other parts of the apparatus.

The object of this invention is to retain the raised load, weight, or substance, when once elevated to any desired height, until it can be moved, by moving the carriage, car, or frame, arranged on an elevated track, to any place of deposit beneath.

In the present instance, the track C is secured to a cross-beam, D, between two rafters F, and to hangers B, depending from the rafters, but any other supporting-device may be used, and in any other locality.

The grooved wheels *a* of a car, E, run on the tops of a track, C, so as to move the car, in either direction, the whole length of the track.

A car, on an elevated track, is no new device, and I make no claim to its use alone, but what I have invented are the brake A and the pulley G, both constructed, combined, and arranged to operate together, as hereafter more fully described. Other parts of the apparatus, combined with the first above named, are also considered as part of my invention.

Between the sides *b* of the car, a pulley, G, rotates on suitable bearings, and this pulley is grooved, as shown, to receive the hoisting-rope (or chain) *c*.

The brake A is pivoted at *i* to the sides of the car, and a spring, *d*, secured to the bottom of the former, holds the extended or hook-end of the brake upward, with its upper end in contact with the ratcheted edge or rim of the pulley, and with the hoisting-rope *c* passing over the same.

The extended end of the brake has a hook-end, N, by which to anchor the car when hoisting a load, said hook-end engaging with a plate, *e*, or other suitable device, arranged for that purpose.

From one side of the brake a rod, *f*, projects, as shown, and this rod passes through a slot, *g*, in the side of the car, and outward over the track C.

An adjustable and movable tripping-cam, *h*, is applied to said track by means of a set-screw, *n*, which holds said cam, when set in any place on the track or rail.

To the rear end of the car a draw-rope, H, is attached, which passes through an eye, *k*, and downward, as shown.

From the extended end of the brake a tripping-rope, I, depends, by which to liberate the hook from the plate *e*, so as to move the car by hauling on the rope H.

One end of the hoisting-rope *c* is fastened to the brake directly under the fulcrum or pivoted bearings *i*. This hoisting-rope passes, from the point first named, around, downward, and through an ordinary tackle-block, J; thence upward, between the upper end of the brake, at 4, and the groove in the pulley, and over the latter, and back to and over a wheel, K; thence downward, and under a pulley, L, if desired to use a horse for hoisting, the end of the brake at 4 being fitted to the rope, so as to gripe it, and hold the load when elevated to any height.

A hook depends from the lower end of the tackle-block, by which to hook into the weight M or load to be elevated.

In practice, the car is anchored, as shown in fig. 1, the load or substance secured to the hook of the tackle-block, power applied to the hoisting-rope, and the load raised to the desired height. If only a part of the full height, the car is liberated by hauling on the tripping-rope I to release the hook from the plate *e*, but if the load is raised to the full height, the top projection 3, on the tackle-block, comes against the under side of the brake, at or near the edge of the pulley G, and raises the upper end of the former, and releases the hook from the plate *e*, and allows the car to run back on the rails C to deposit the load where desired.

This depositing or lowering the load is effected by hauling on the tripping-rope I, or by setting the cam in the shaft or rail in the right place to raise the rod *f* and the upper end of the brake, when the car is moved back, all as clearly shown in figs. 2 and 3.

When the load has been hoisted, and the brake raised from the pulley by the projection 3 on the tackle-block, or by other means, the strain or tension on the hoisting-rope should be maintained till the car is run back, so as to clear the hook-end N of the brake from the plate *e*, when the hoisting-rope may be gradually slackened, and the spring *d* throws the extended end of the brake upward, and the upper end into contact with the rope, binding or griping the latter between the brake and the pulley, and holding the load in its elevated position, to be moved by moving the car, at the same time the catch or pawl-portion P, forming a part of the upper end of the brake, engages the ratchet-rim of the pulley, and not only prevents it turning back, but also prevents excessive jamming or abrasion of the hoisting-rope between the pulley and the upper end of the brake.

When the load has been deposited, the car is run

forward, and anchored, as before, and ready for hoisting another load.

This improved elevator may be used for other purposes than hoisting hay or grain. It may be employed for moving heavy freight from one railroad-car to another, or for loading or unloading freight in or about freight-houses or store-houses, or for moving sun-dried bricks to the kiln, and for various other purposes.

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

1. Combining the brake A and the pulley G with the car, as and for the purpose specified.

2. The hoisting-rope *c* and tackle-block J, in combination with the brake A and pulley G, for the purpose and substantially as described.

3. The tripping-rope I, applied to the hook-end N of the brake, as and for the purpose specified.

4. The draw-rope H, in combination with the car E and eye *k*, as and for the purpose specified.

5. The adjustable and movable cam *h*, constructed as described, and applied to the rail C, for the purpose and substantially as described.

6. The rod *f*, in combination with the brake A and the cam *h*, for the purpose and substantially as described.

7. The plate *e* or holding-device, in combination with the hook-end of the brake A, for the purpose and substantially as described.

8. The combination of all the operative parts specified, when arranged to operate substantially as and for the purposes set forth.

Witnesses: JOSIAH E. HOLLISTER.

A. J. SIBLEY,

CHS. SIBLEY.