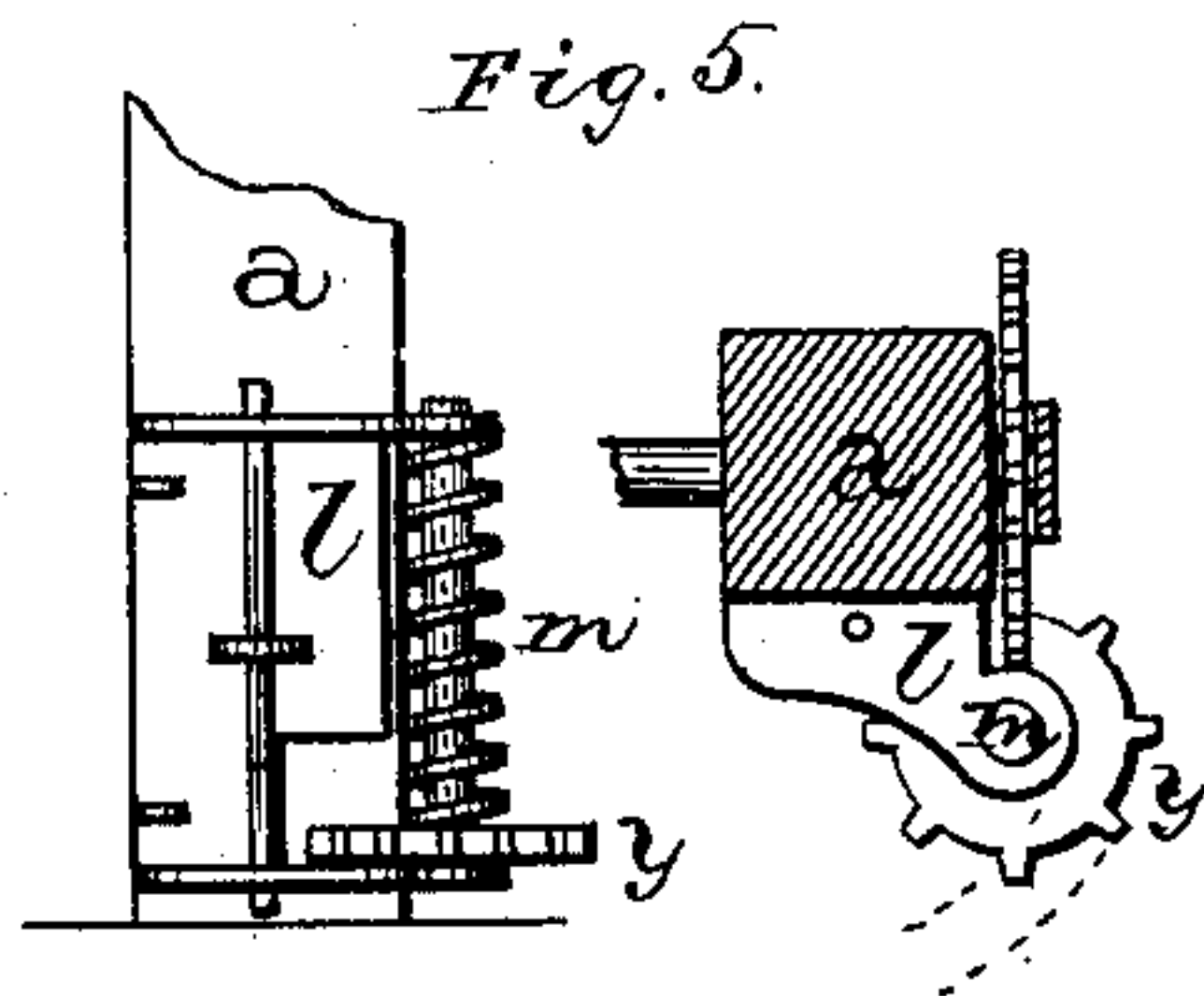
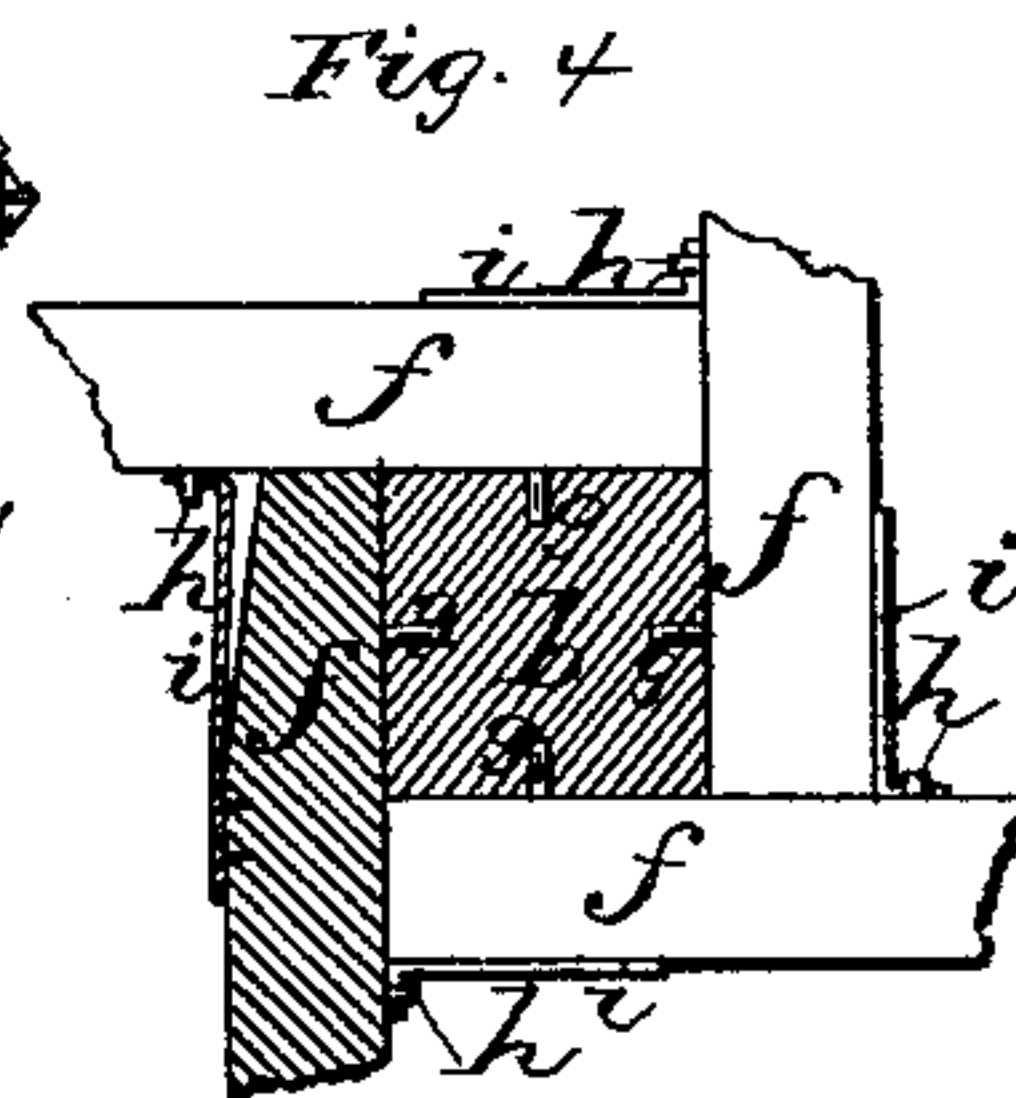
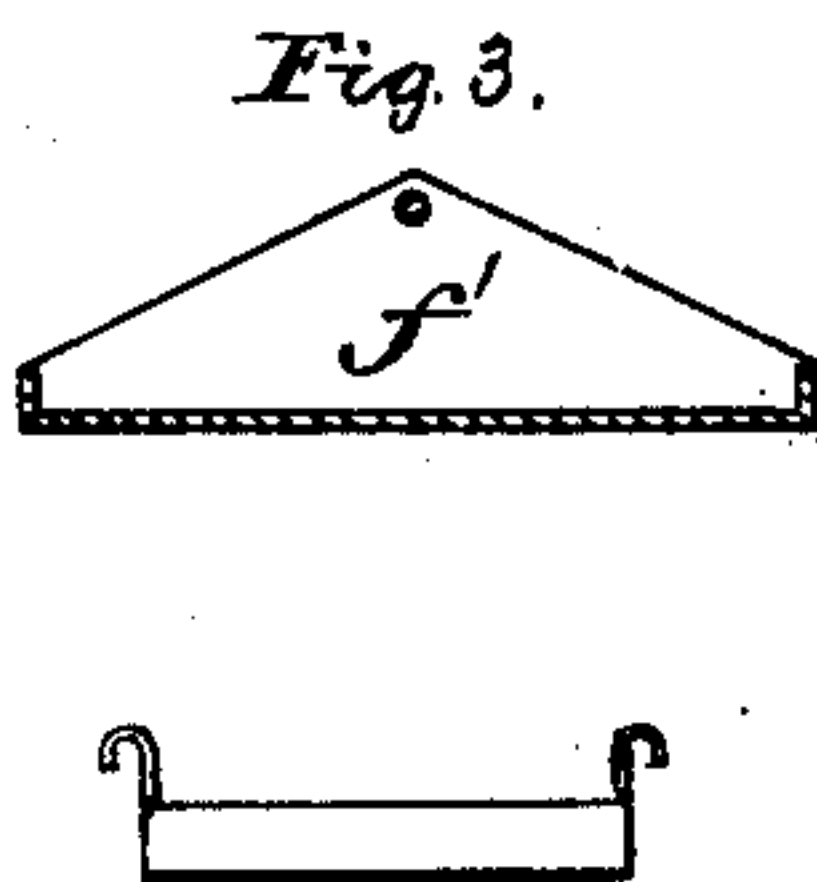
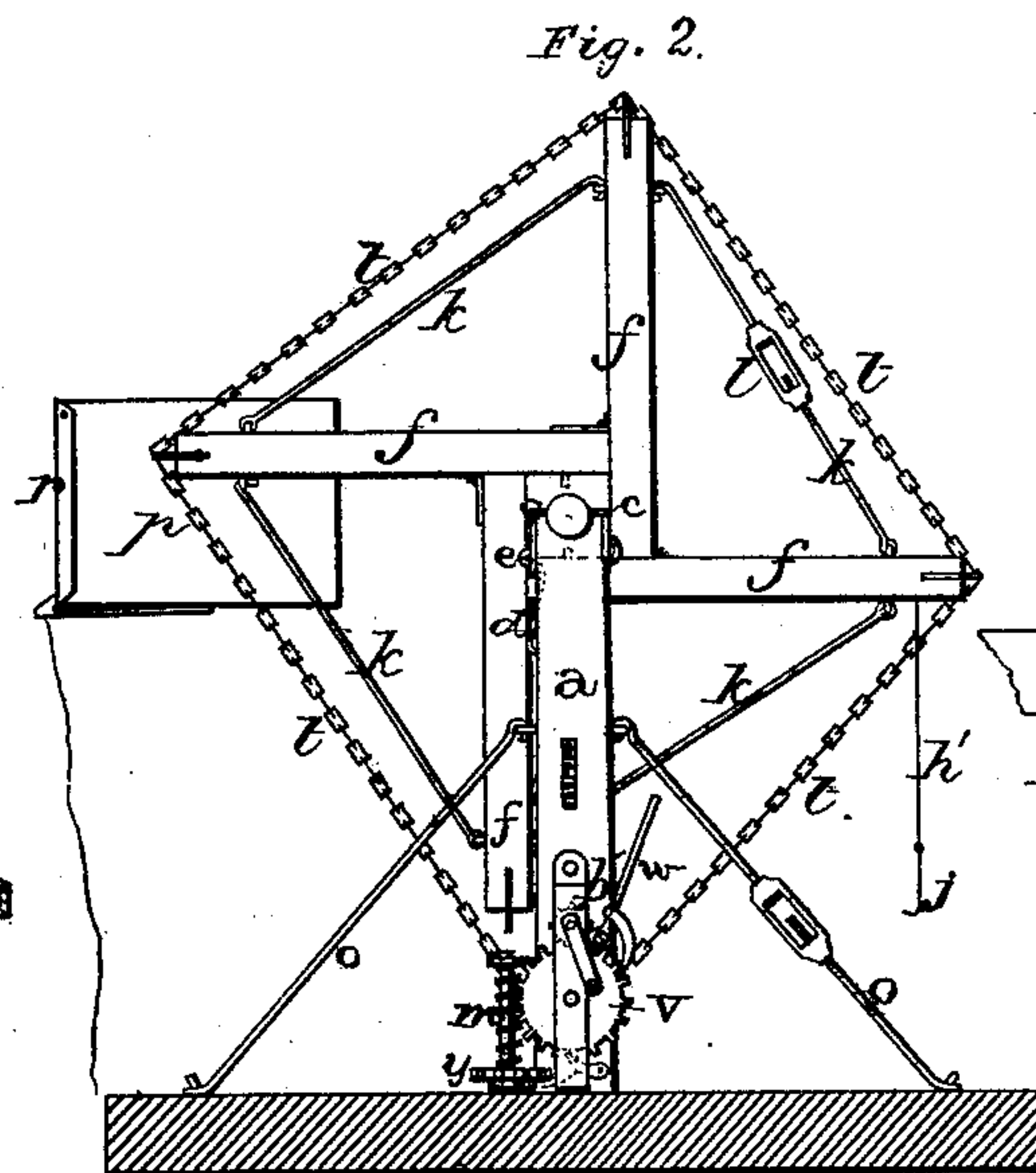
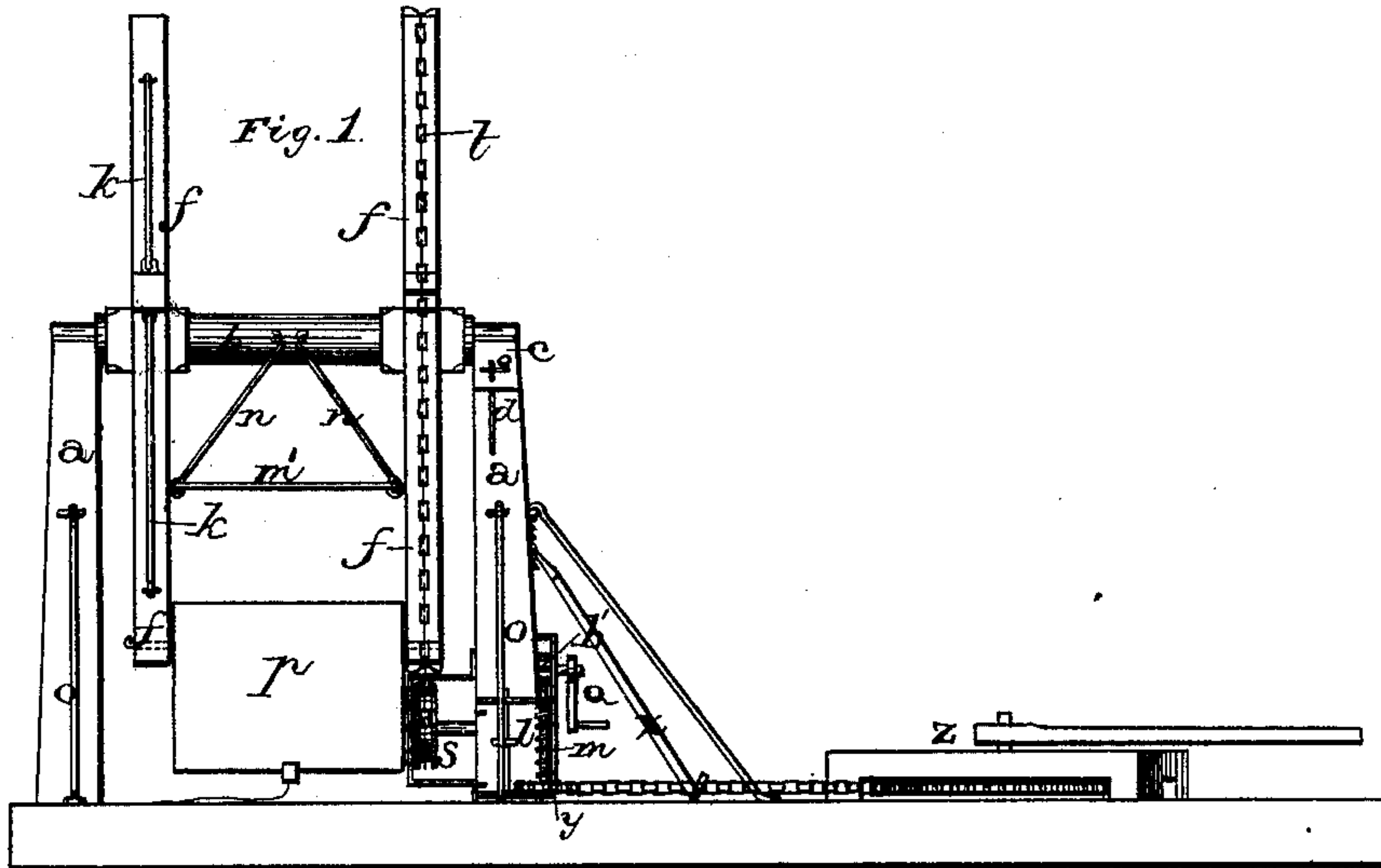


A. M. McLERAN.

APPARATUS FOR UNLOADING AND ELEVATING GRAIN,
BRICKS, &c., FROM WAGONS.

No. 195,298.

Patented Sept. 18, 1877.



WITNESSES

J. W. Garner
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per
F. A. Lehmann, Atty

UNITED STATES PATENT OFFICE.

ALVORD M. McLERAN, OF TABOR, IOWA.

IMPROVEMENT IN APPARATUS FOR UNLOADING AND ELEVATING GRAIN, BRICKS, &c., FROM WAGONS.

Specification forming part of Letters Patent No. 195,298, dated September 18, 1877; application filed August 17, 1877.

To all whom it may concern:

Be it known that I, A. M. McLERAN, of Tabor, in the county of Fremont and State of Iowa, have invented certain new and useful Improvements in Elevators; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in elevators; and it consists in the peculiar construction and arrangement of devices whereby grain, bricks, or other articles may be raised to any desired height, as will be more fully described hereinafter, reference being had to the accompanying drawings, which form part of this specification.

a represents two standards, upon the tops of which is journaled a shaft, *b*, one end of the shaft being fastened by means of a plate and screws, the other being provided with a hinged plate, *c*, which is secured by means of the spring-catch *d* and pin *e*.

Projecting from the sides of this shaft, near its ends, are a number of arms, *f*, of a length in proportion to the height to which articles are to be elevated. These arms are secured to the shaft by means of the projections *g*, which are placed on the sides of the arms near their ends, which are in contact with the shaft *b*, and the arms are fastened together by means of the hooks *h* and the spring-catch *i*, with which one of them is provided. In order to still further secure these arms, their outer ends are connected by means of the braces *K*, one end of each brace being bent over in the shape of a hook and fastened into an eye, so that they can be disconnected at will.

In order to prevent the arms *f* from becoming loose from continued use or other causes, one of the connecting-rods *K* is provided with a swivel, *l*, by means of which they can be tightened when necessary.

In order to prevent the two sets of arms *f* sagging laterally outward from one another, they are securely fastened in position by means of the connecting-brace *m'* and the hooked rods *n*.

The standards *a* are braced by means of the

rods *o*, one or all of which are provided with swivels, as shown.

Between the lower ends of two of the arms *f* is pivoted a receiving-box, *p*, which is balanced so as to always retain an upright position, and is provided with a pivoted end board, *r*, by means of which the contents of the box are discharged. On the inner side of one of the standards *a*, near its bottom, is secured a toothed wheel, *s*, which meshes with the endless chain *t*, that passes under the toothed wheel *S* and over the ends of the arms *f*. Upon the outer ends of the shaft, upon which the wheel *S* is secured, is placed a spur-wheel, *V*, which is operated by means of a pinion, *b'*, and crank *Q*. On the under side of this cog-wheel *V* is a spring-dog, which presses against its teeth, and, while allowing the wheel to turn freely while the grain or other articles are being elevated, would instantly arrest their descent should any of the elevating mechanisms give way.

Where greater power is required to raise an article than can be obtained by means of the crank and pinion described, a pawl and lever, *w*, can be employed.

Fastened in any suitable manner to the bottom of the standard *a*, on the opposite side from that on which the pawl and hand-lever *w* is secured, is a frame, *l*, which supports an endless screw, *m*, that meshes in with the operating cog-wheel *V*, and which has a toothed wheel, *y*, secured to its bottom. At a suitable distance from the elevator is placed an ordinary horse-power, *Z*, from the driving-wheel of which an endless chain passes around the wheel *y*, thus enabling horse-power to be applied in raising heavier weights than could be managed by a man. By means of the hinged frame, in which the endless screw is secured, the power can be employed or disconnected at will.

When it is desired to unload grain from a wagon, the operation of my invention is as follows: The loaded wagon is driven then between the standards *a*, and the receiving-box *p* is lowered to the level of the wagon-bed. The opposite ends of the projecting arms *f*, from which the receiving-box is secured, are provided with ropes or chains *h'*, terminating in hooks or catches *j*, and these hooks are fast-

ened under the front end of the wagon-bed. By turning the crank *c* in the proper direction the front end of the wagon-bed is elevated, and, upon removing the tail-gate of the wagon, the grain will pass from the wagon to the receiving-box *p*. The horse-power or hand-lever is then employed, and the receiving-box ascends to the chute, the pivoted end board *r* is released, and the grain is at once discharged from the receiving-box, and passes down the chute into its proper receptacle. The operation is repeated until the wagon has been entirely emptied.

In the elevation of bricks from the pile to the masons, platforms *f'* are used in place of the receiving-box *p*, each platform being provided with a tray, upon which the bricks are placed. The tray is placed upon the platform and the whole elevated, as before described.

In the elevation of bricks two platforms are usually employed, journaled to opposite ends of the projecting arms *f*, thus greatly increasing the speed, one platform being loaded at the ground, while the other is unloaded at the top of the building.

In order to still further brace the frame against the strain exerted by the use of the horse-power, a lever, *X*, having its lower end braced against the ground and its upper one catching in a ratchet on the side of the stand-

ard, is used. Should the frame become loose and sag toward the horse-power it can be instantly braced in position again by tightening this lever against the standard.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the standards *a*, shaft *b*, arms *f*, receiving-box *p*, and elevating ropes or chains *h'*, provided with hooks *j*, whereby the contents of a wagon can be emptied into a receiving-box, substantially as shown.

2. The combination of the shaft *b*, arms *f*, studs *g*, hooks *h*, and spring-catches *i* with the braces *K*, whereby the arms *f* may be secured rigidly in position or detached at will, substantially as described.

3. In an elevator, a hinged frame, *l*, provided with operating mechanism, by means of which horse-power can be employed or detached at will, the whole operating substantially in the manner and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this the 20th day of July, 1877.

ALVORD M. McLERAN.

Witnesses:

H. WEST,
J. M. WOODS.