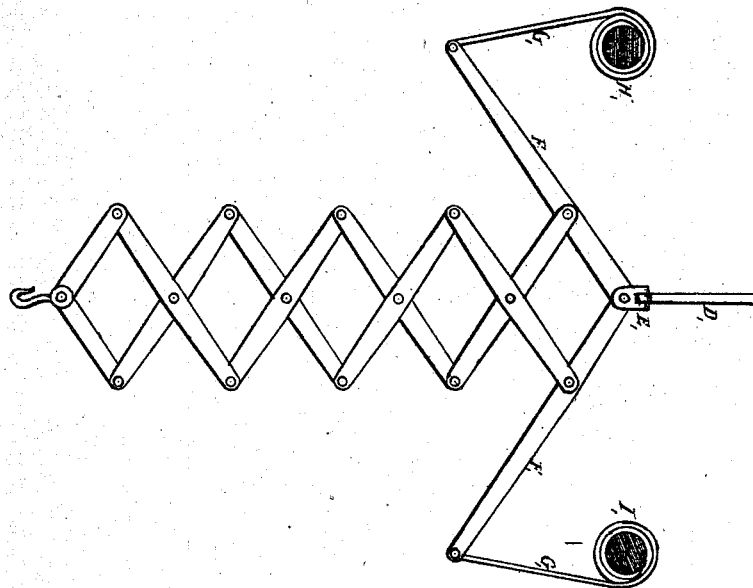
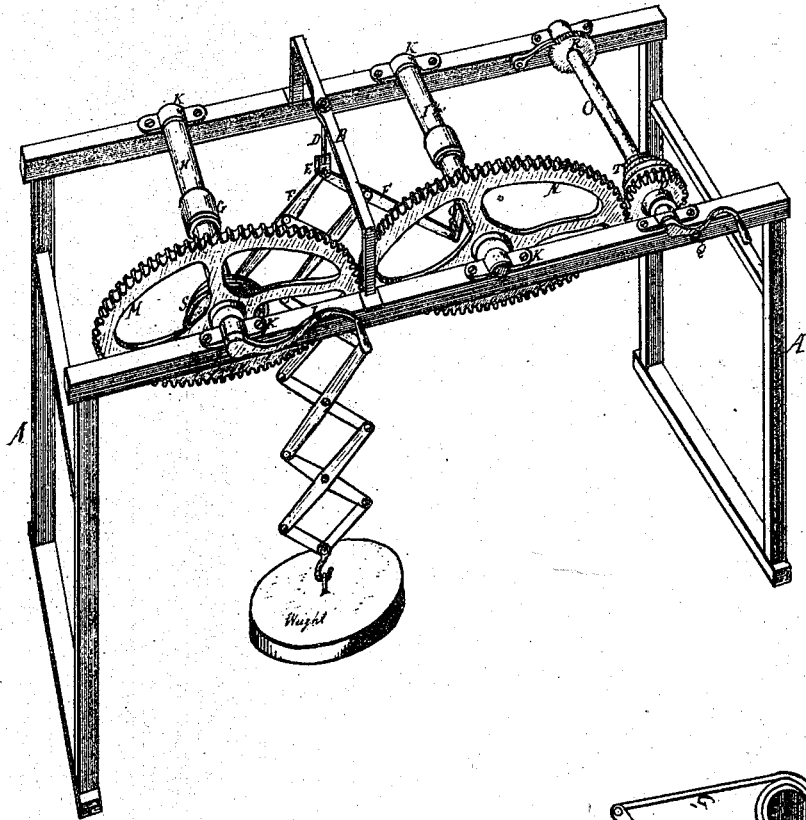


N. Parrish,

Elevator.

No. 107,807.

Patented Sept. 27. 1870.



Witnesses:

*A. Lodeman
S. R. Bulch*

Inventor:

Nathan Parrish

United States Patent Office.

NATHAN PARRISH, OF KALAMAZOO, MICHIGAN.

Letters Patent No. 107,807, dated September 27, 1870.

IMPROVEMENT IN HOISTING-MACHINES.

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

I, NATHAN PARRISH, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain improvements in Hoisting-Machines, of which the following is a specification.

Nature and Object of the Invention.

My invention relates to the combination of lazy-tongs with gearings, the object being to effect a speedy and yet powerful hoisting-machine.

Description of the Accompanying Drawing.

Figure I is a perspective view of the machine embodying my invention.

Figure II represents the combination of the lazy-tongs with the two shafts of the gearing.

General Description.

A is the frame of the machine.

B is a cross-bar attached to the same.

On this bar the lazy-tongs C are hung by means of an adjustable screw-bolt, D, and the double joint E, so as to allow the lazy-tongs to swing in all directions.

The upper two bars F of the lazy-tongs are extended beyond their attachment to any desirable length, by which a leverage power is obtained.

The extensions of these upper bars of the lazy-tongs are joined to the ropes or belts G, fastened to the shafts H and I of the gearing, which rests in bearings K, at equal distances from the point of suspension of the tongs.

For hoisting smaller weights, the crank L on the shaft H is used; the wheel M on this shaft working with the wheel N of equal size on the shaft I, both shafts will turn with equal velocity.

The belts G are wound up and the longer ends of the bars F raised; thus the lazy-tongs are contracted and the weight is hoisted.

For larger weights an extra shaft, O, with the pinion P and the crank Q, is applied. The pinion working upon the wheel N, the power required for raising the burden is diminished in proportion as the diameter of the pinion is smaller than that of the wheel N.

The shaft O bears besides a ratchet-wheel, R, the object of which is to hold the weight in any desirable height.

Where the machine is placed in the upper part of a building an endless rope may be attached to the shives S and T on either of the shafts H and O, by which the gearing may be put in motion and the weight raised.

Claims.

I claim as my invention—

1. The combination of the frame, the shafts, and gearing, and the lazy-tongs, the latter connected to cross-bar B by means of staple and double joint, to the shafts H and I by means of straps or chains attached to levers F F, the whole arranged as and for the purposes set forth.

2. The extension of the two bars of the lazy-tongs to any desirable length beyond their attachment with the next two bars below, said bars serving as levers, substantially as and for the purposes set forth.

NATHAN PARRISH.

Witnesses:

A. LODEMAN,
S. R. BALCH.