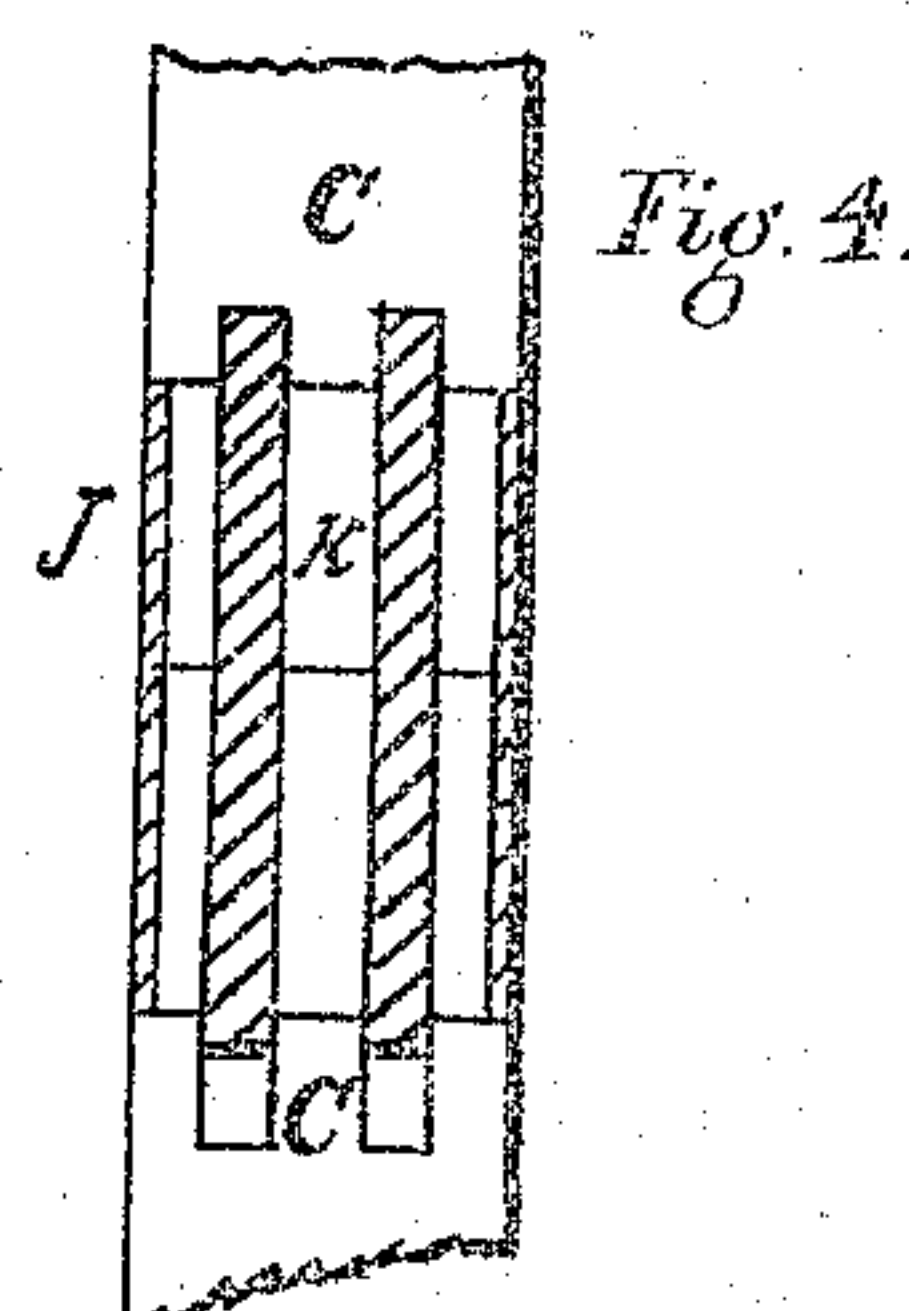
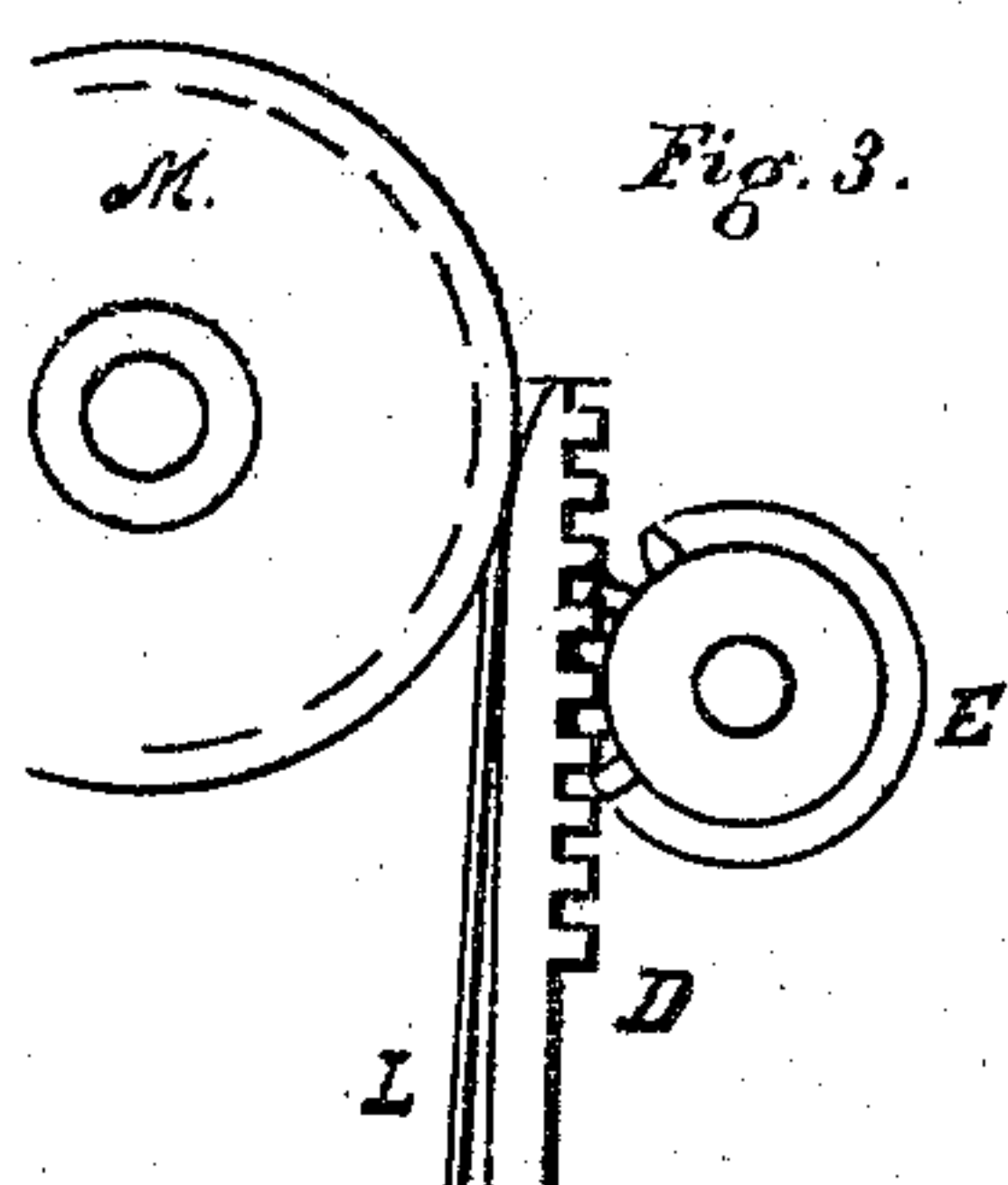
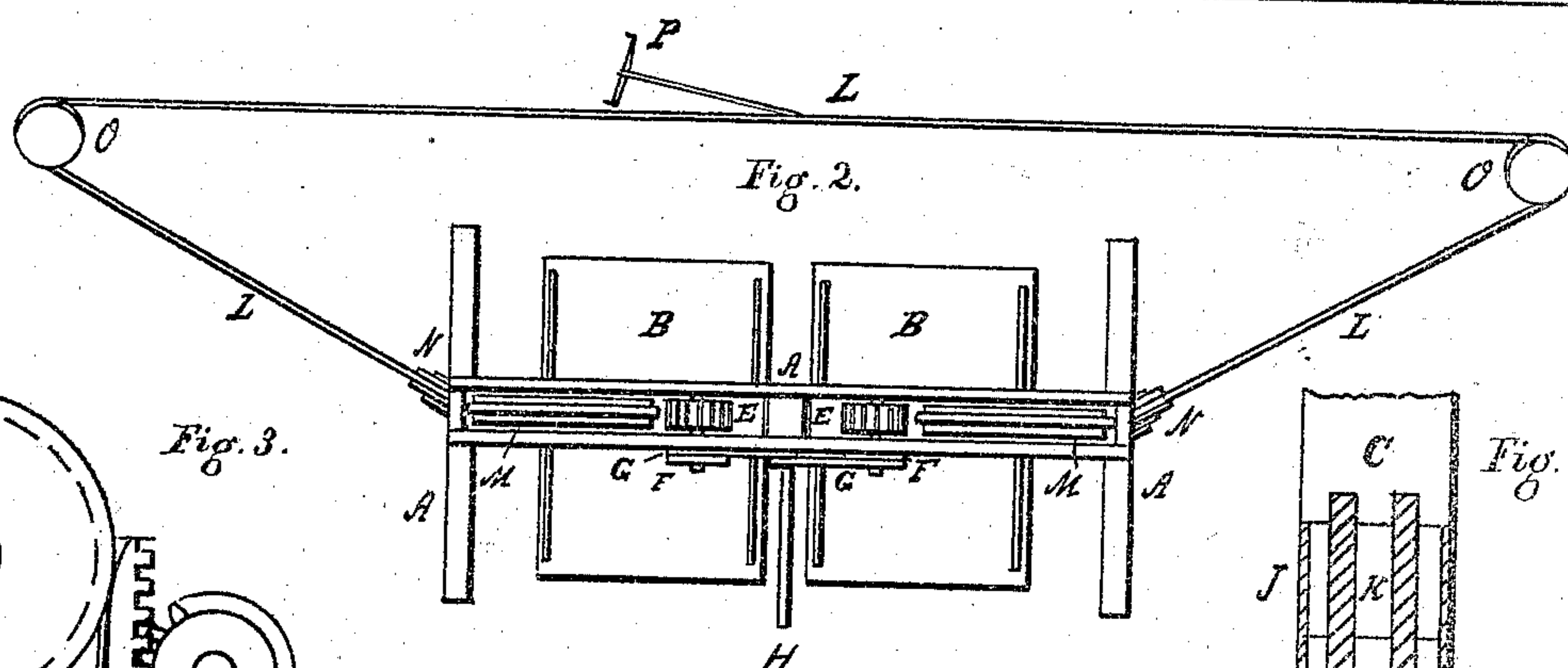
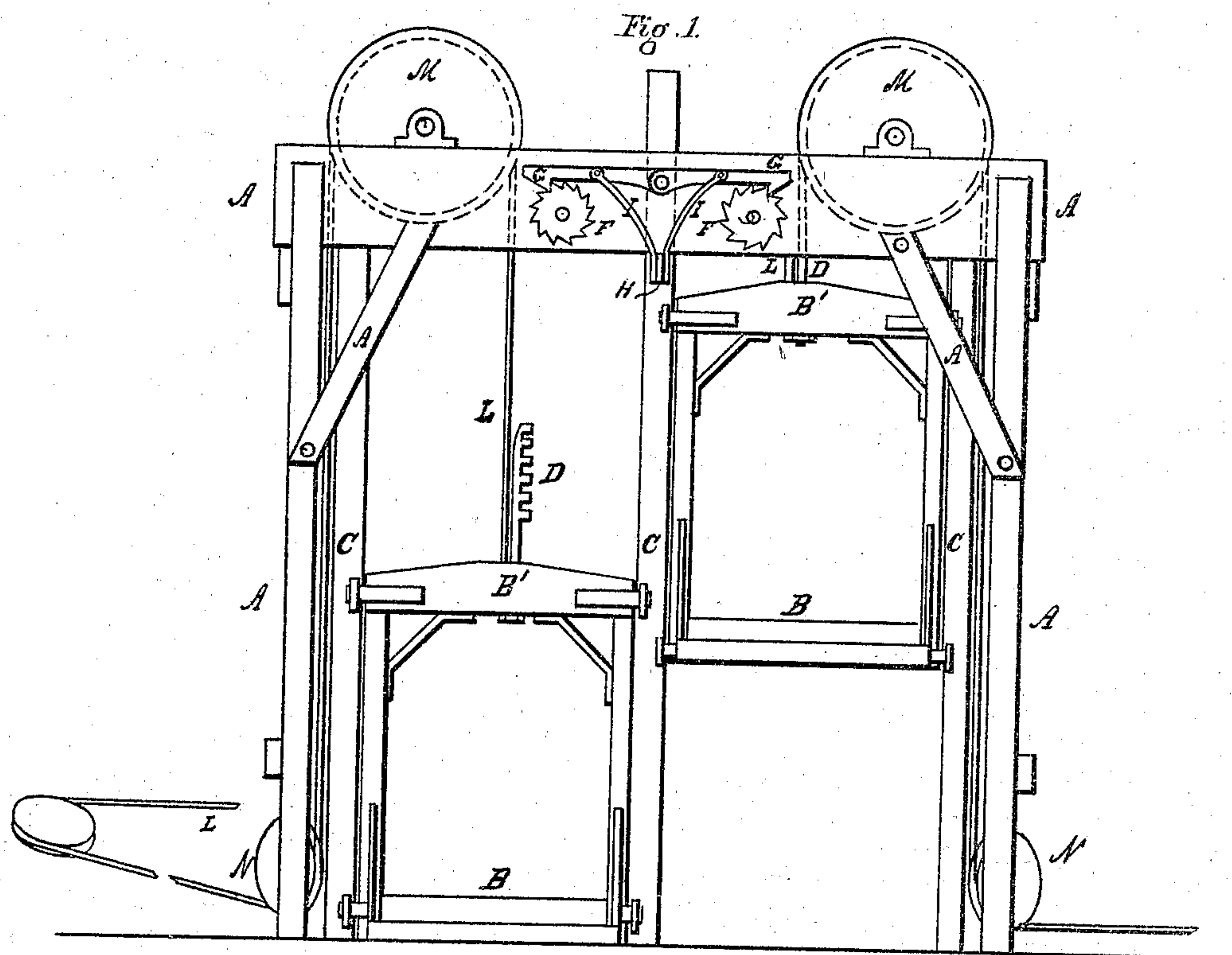


M. MAGEEAN & G. W. MARKS.
Elevators.

No. 138,337.

Patented April 29, 1873.



WITNESSES

C. J. Shipley
M. D. Warner.

INVENTOR

Matthew Mageean
George W. Marks
By Lindsey & Warner
attys

UNITED STATES PATENT OFFICE.

MATTHEW MAGEEAN AND GEORGE W. MARKS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. **138,337**, dated April 29, 1873; application filed March 24, 1873.

To all whom it may concern:

Be it known that we, MATTHEW MAGEEAN and GEORGE W. MARKS, both of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Builders' Elevators, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, and in which—

Figure 1 is a front elevation of our improved elevator; Fig. 2, a plan view of the same; Fig. 3, a side elevation of a part of the brake mechanism; and Fig. 4, a longitudinal central section through a joint of the guide-ways.

Like letters of reference indicate like parts.

Our invention relates to that class of elevators employed by builders for the purpose of conveying bricks and mortar and other material to the various stories of a building during the process of its erection. The object of our invention is to improve the construction and operation of the brake mechanism, and the means employed for the purpose of extending the guide-ways as the building is increased in height. To the end that the objects above set forth may be accomplished, our invention consists in certain novel features relating to the brake mechanism, and to the manner of uniting the sections of the guide-ways.

In the drawing, A represents a frame suitable for the purpose of supporting the various parts of the elevator. This frame is portable, so that it may be arranged on any floor of the building. B B are platforms, attached to the frames B' B', respectively. C C are guide-ways, made in sections, so that they may be extended from the frame A, wherever arranged, to the base of the building, or to any floor below the said frame. D D are racks, arranged on the frames B' B', respectively. E E are pinions, rigidly attached to shafts having suitable bearings on the frame A, and arranged so that each rack will engage a pinion when the frames B B are nearly at the top of the frame A. F F are ratchet-wheels rigidly attached to the shafts of the pinions E E', and G G are pawls engaging the said ratchets and

pivoted to the frame A. H is a lever pivoted to the upper section of the central guide-way, and I I are connecting-arms pivoted to the pawls G G and to the lever H.

When the load has reached its destination it is suspended by means of the engagement of the parts above described, and this engagement may be released by raising the free end of the lever H. In this manner the horse is relieved of the load. As soon as the car is empty it may be readily released and returned for another load.

The upper sections of the guide-ways may be made rigid to the frame A. In order to attach the lower sections of the guide-ways firmly together, and to render them capable of being readily jointed and unjointed, we provide them with a dowel-joint, constructed as follows: One end of each of the sections of the guide-ways is cut away to receive a ferrule, J, which projects considerably beyond the end of the section, and is rigidly attached thereto. The same end of the same section is also provided with the pins K K, also rigidly attached thereto, and extending into the section beyond the edge or end of the ferrule, and projecting beyond the open end of the latter, as shown. The other end of each of said sections, except those attached to the frame A, is constructed to receive the ferrule J and the pins K K, and allow the ends of the sections to come in contact with each other when the sections are united. In this manner the guide-ways may be extended to any extent, and their sections firmly united.

In order to allow the platforms to rest on the floor, or in the same plane with it, and to enable the cars to be readily operated, we arrange the draft-pulleys and rope in the following manner: L is the draft-rope, one end of which is attached to the top of the frame B'; from thence it extends vertically and passes over the wheel M; from thence it passes downward vertically and passes over the pulley N; from thence it passes over the pulleys O O, which may be arranged in any convenient position. The wheels M M have suitable bearings in the top of the frame A, and the pulleys N N have suitable bearings either near the bottom of the said frame or in any convenient

position below it. The pulleys are arranged at such distances apart that the horse, when drawing on the whiffletree P, may travel toward either pulley O the same distance that the platforms are required to be moved; and in order that either platform may be first raised the whiffletree should be attached about midway between said pulleys, as shown. By this means the horse travels just the distance that platforms are raised, and he may always travel forward; also, by allowing the platforms to reach the floor or ground, no raised ways are necessary in order to allow the load to be moved upon them or from them. It will also be observed that a double elevator may be conveniently operated in this manner, and that, as one platform balances the other, the weight of the load only is lifted.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in an elevator, of a rack and pinion, ratchet and pawl, and lever, arranged substantially as described.

2. An elevator guide-way made in sections, having one end provided with the ferrule J and with one or more pins, K K, and the other end constructed to receive a ferrule, J, and one or more pins, K K, substantially as shown and described.

MATTHEW MAGEEAN.
GEORGE W. MARKS.

Witnesses:

F. F. WARNER,
N. C. GRIDLEY.