G. SCOTT.

Improvement in Elevators.

No. 130,824. Patented Aug. 27, 1872.

Fig. 1

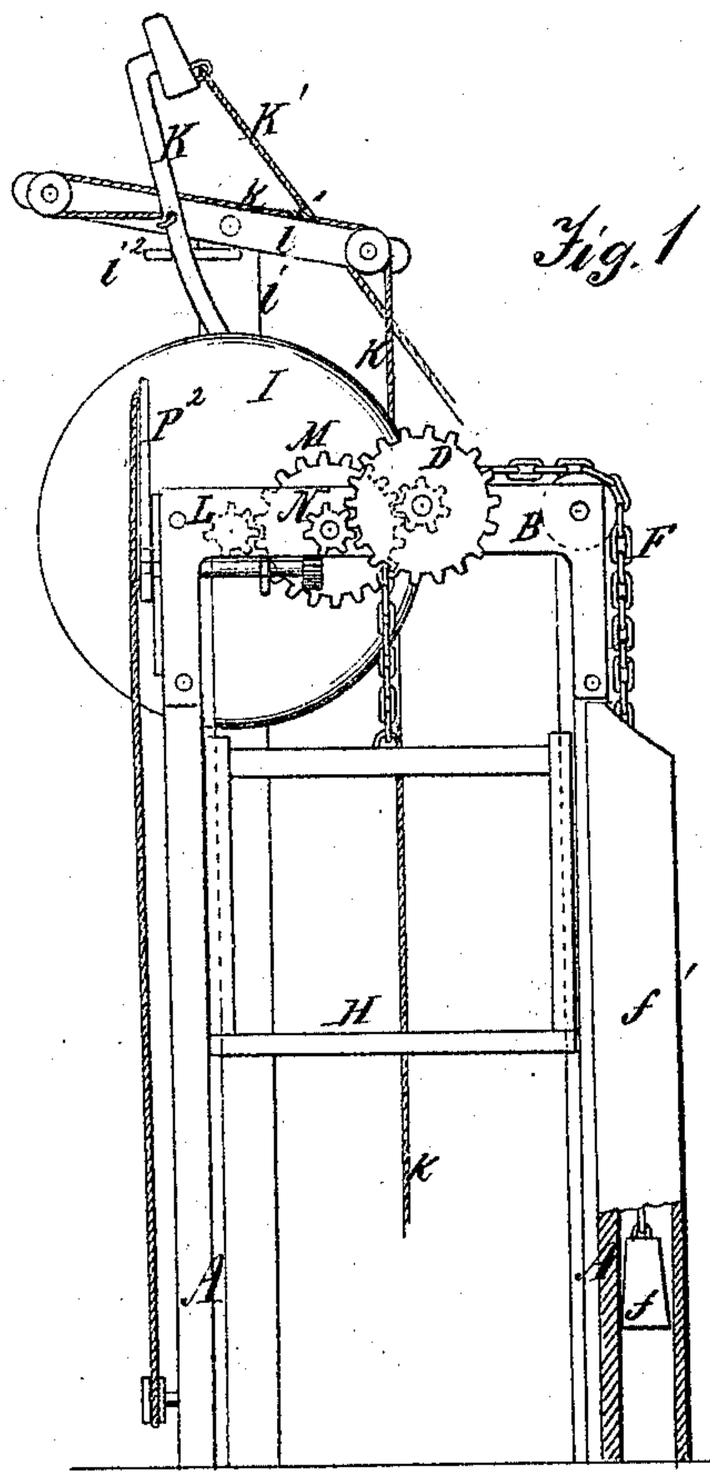

Fig. 2.

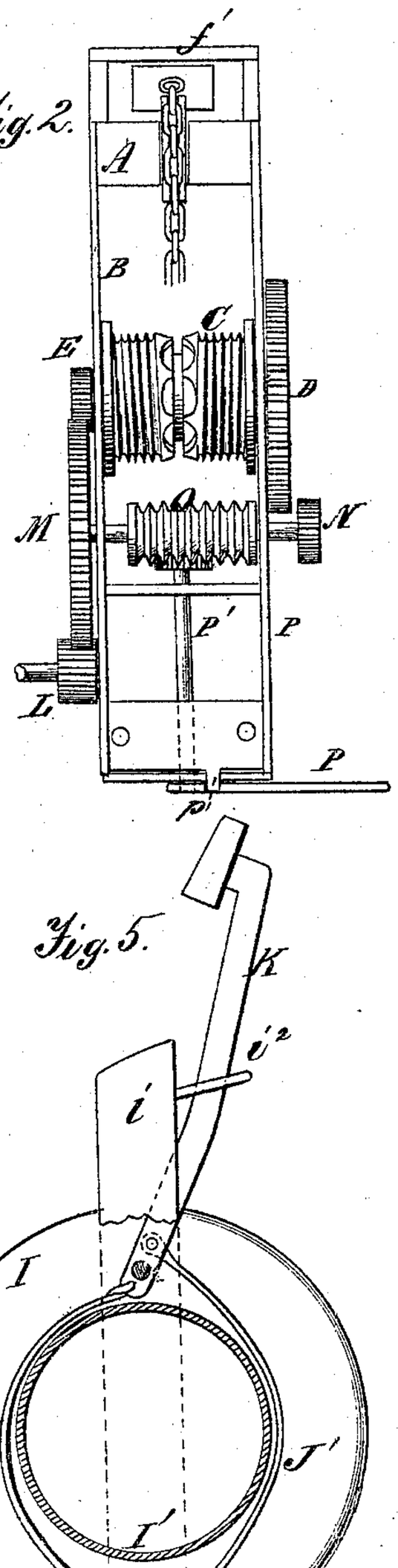

Fig. 3.

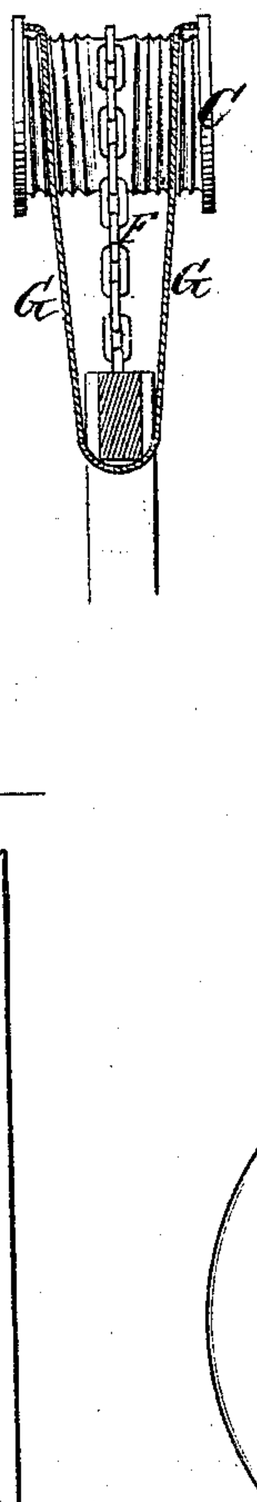

Fig. 4.

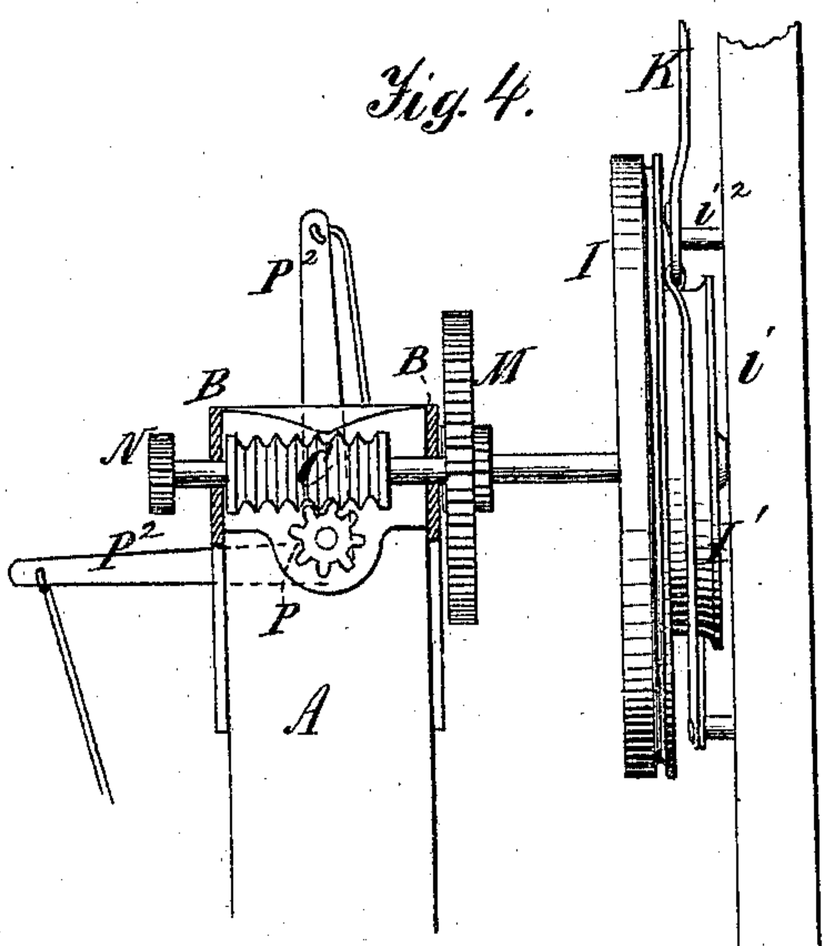

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE SCOTT, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. **130,824**, dated August 27, 1872.

Specification describing certain Improvements in Elevating Apparatus, invented by GEORGE SCOTT, of New Orleans, in the parish of Orleans and State of Louisiana.

This invention has reference to an improvement in elevating apparatus; and it consists in the manner of regulating the speed it is desired the platform having the weight should travel in its ascent or descent; of the means used in retaining the said platform at any required point in its operation; and of certain other devices to be hereinafter fully described and claimed.

In the annexed drawing, Figure 1 is a side elevation of my improved elevating apparatus. Fig. 2 is a plan or top view thereof with the brake, consisting of springs and weighted lever, and the "fly-wheel" removed. Fig. 3 is a section thereof, exhibiting the endless lifting-rope, embracing the lifting or elevating platform. Fig. 4 is also a section of the same, showing a "worm" or screw-shaft gearing with a pinion, which are operated by a lever, and are for the purpose of alternately throwing the large and small pinions, which regulate the velocity of the ascent and descent of the platform, in and out of gear with the drum for winding and unwinding the lifting-rope of said platform; and Fig. 5 represents a side view of the springs and weighted lever acting as a brake for the "fly"-wheel, and the said "fly"-wheel with a drum or annular flange constructed thereon.

Similar letters in the several figures refer to corresponding parts.

To enable others to make and use my invention I will proceed to describe it.

In the accompanying drawing, A A refer to two uprights, fastened at their lower ends to the floor of the store or warehouse within which it is desired to place the apparatus, and firmly braced and connected together at their upper ends by metallic plates B B or other suitable means. C designates a cylinder or drum, which has its bearings within the braces or plates B B by means of a shaft, to each end of which shaft, upon the outside of the said braces, is attached, respectively, a large and small pinion, indicated by the letters D and E, to be more fully hereinafter referred to. The center of this drum is so constructed (as is plainly shown in Fig. 2) as to retain the chain F properly in place while passing over it, and upon one side of its center with a right-handed spiral thread, and upon the opposite side thereof with a left-handed spiral thread, by means of which the lifting-rope G—the ends of which pass around it (the drum) while its (the rope's) bight or looped portion holds the cross-bar of the lifting platform—is caused to wind up toward the central part of said drum, and unwind toward the ends of said drum, while the platform is ascending and descending, whereby the latter is prevented from swagging, or kept in a vertical plane during its operation. The chain F is attached at one end to the platform H, and supplied at its opposite end with a weight, *f*, confined within a case, *f'*. The object of this chain and weight is, in case the lifting-rope should break, to hold the platform and prevent it from falling. I refers to the "fly"-wheel, the axle or shaft of which is journaled between and within an upright, *i*, and one of the uprights A. The periphery of this wheel is grooved for the reception of a rope with which to operate it when it is desired to elevate or lower the platform H. Upon one side of this wheel is constructed an annular flange, forming a drum, I', around which are bent or passed two curved springs, J J', both of which are fastened by means of the same pin to the upright *i* at their lower extremities, while their upper ends are so fastened to the weighted lever K, pivoted to upright *i*, as that when the said lever is vibrated in one or the other direction the said springs will be tightened or loosened around the drum I', which will firmly hold the "fly"-wheel I and prevent it from revolving when it is desired to retain the platform H at any required point, or allow the said wheel to be revolved, permitting the said platform to ascend and descend without interruption. i^1 is a support fastened to the upright *i*, and having pulleys, over which the rope or cord *k*, fastened to lever K, passes. This cord or rope, which is intended to be within reach of the operator, is for the purpose of throwing the lever K down in such a manner as to tighten the springs J J', braking the "fly"-wheel I. *k'* is another cord or rope for pulling the lever forward so as to loosen the springs when it is desired to unbrake the "fly"-wheel. i^2 is a stop for the lever K, and is fastened to upright *i*. L is a pinion which is fastened upon the shaft of the "fly"-wheel I, and which

gears with the large pinion M, gearing with the small pinion E of the drum C. Through this gearing fast motion is imparted to the said drum when the "fly"-wheel is revolved. Gearing with the large pinion D, upon the opposite side of the drum C, is another small pinion, N, which is journaled upon the end of the shaft carrying the large pinion M, and is for the purpose of communicating slow motion to the drum C. Upon the central or greater part of the shaft carrying the pinions M N is a "worm," O, which has its threads or ribs running at right angles to that of the said pinions, and gearing with a pinion, P, whose shaft P^1 runs parallel with the braces B B, and is supplied at its opposite or projecting end with a V-shaped arm or handle, P^2, by which, when either arm is operated, the pinions M N are respectively thrown in and out of gear with the pinions upon the drum C, whereby slow or fast motion of the said drum is obtained. The cords attached to the arms of the V-shaped arm P^2, and passing around a pulley fastened to one of the uprights A A, is for the purpose of conveniently operating said arm. The projection *p* is a stop to prevent the arm P from being thrown out of its proper place.

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

1. The hoisting-cylinder C, with pinions D E, in combination with pinions M N, worm O, pinion P, shaft P^1, and arm P^2, substantially as herein shown and described.

2. In combination with the foregoing parts, the fly-wheel I I′, springs J J′, lever K, support i^1 mounted with pulleys, ropes *k k′*, and stop i^2, as set forth.

In testimony whereof I have hereunto signed my name this 1st day of February, 1872, in presence of two subscribing witnesses.

GEORGE SCOTT.

Witnesses:
W. H. DIXON,
C. YERNER.