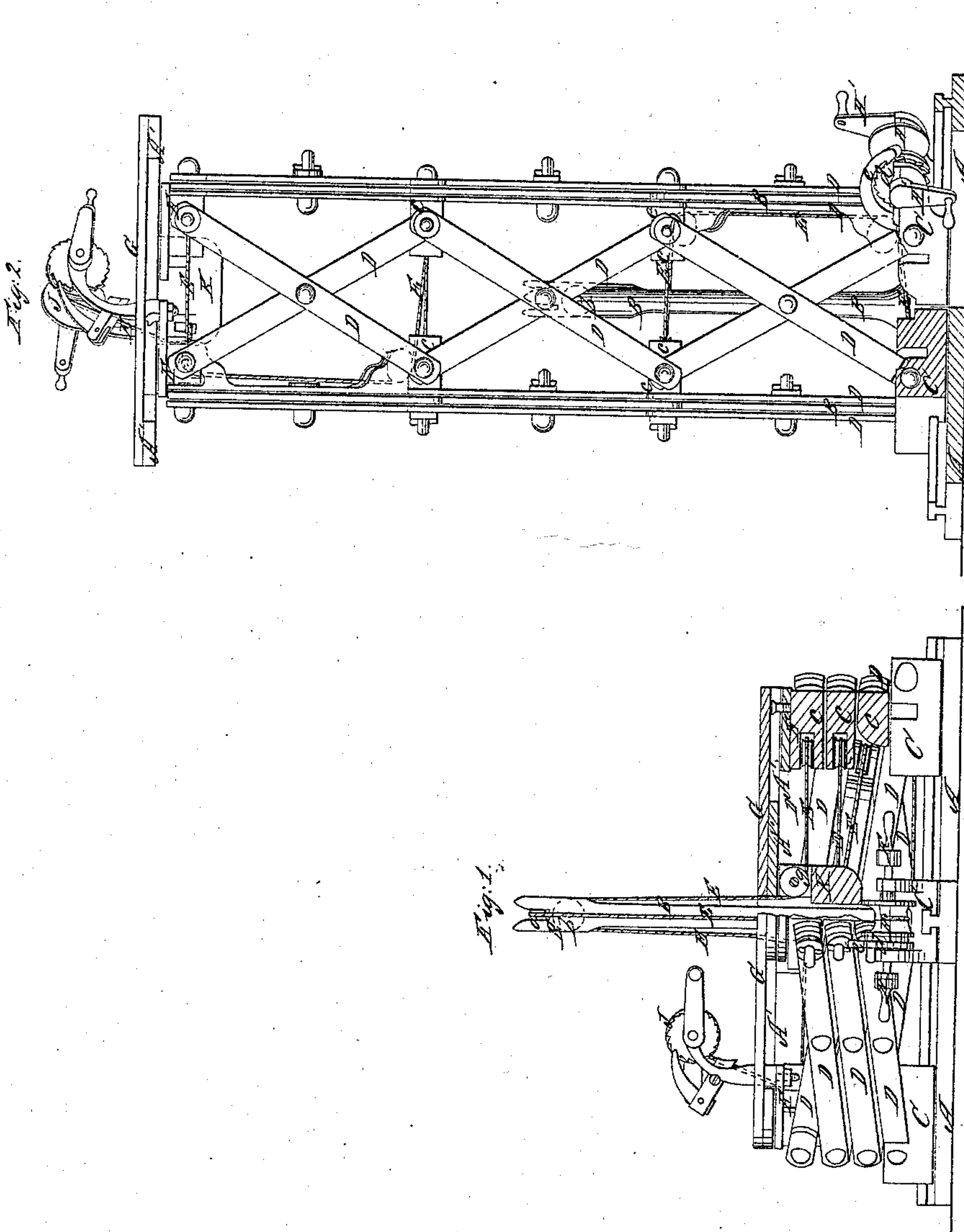


A. Morse,

Elevator.

Nº 32,265.

Patented May 7. 1861.



Witnesses:

*W. McCormick
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UNITED STATES PATENT OFFICE.

ANDREW MORSE, OF PORTLAND, MAINE, ASSIGNOR TO HIMSELF AND IRA WINN, OF
SAME PLACE.

EXTENSION-PLATFORM.

Specification of Letters Patent No. 32,265, dated May 7, 1861.

To all whom it may concern:

Be it known that I, ANDREW MORSE, of Portland, in the county of Cumberland and State of Maine, have invented a new and
5 Improved Adjustable or Extension Platform; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this
10 specification, in which—

Figure 1 is a corner elevation and half section of the improved adjustable or extension platform when the parts are in a closed state. Fig. 2, is a side view of the adjustable or extension platform showing the same
15 when the parts are in an open state and the platform is at its highest point of elevation.

Similar letters of reference indicate corresponding parts in both figures.

20 This invention is an adjustable or extension platform, intended for the use of painters in working on the outside of buildings. Or it may be used by firemen in cases of fire as a means of escape from elevated points,
25 or for any purpose to which it may be found useful.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and operation.

30 A, A, A, A, are four slide ways arranged so as to radiate from a center, from which center proceeds up perpendicularly, a pedestal B, with three grooved pulleys *a*, *a*, and *b*, in its upper end the axis of two of which are
35 at right angles to the other (*b*). The slide ways have T shaped rails, on which the four blocks C, C, slide, toward and from the central pedestal B, simultaneously; to each of these blocks are jointed two extension-levers
40 D, D, and the upper ends of each pair of these levers are jointed to pulley blocks *c*, *c*, in which are pivoted horizontally, grooved pulleys over which the pulley chain E, passes.

45 With the jointed extension levers a quadrilateral framework is made, which may be composed of any suitable number of levers all jointed together so as to open and close harmoniously; and on top of this framework a platform G rests which has on its
50 under side four horizontal slotted guide-ways A', A', A', A', which are parallel with the slide ways A, A, A, A, at the base of the frame. Into the slots of ways A', A', work
55 pins, having T heads, which are attached

to blocks F, F, F, F, to which the ends of the uppermost pairs of levers D, D, are jointed. To the top of these right angular slotted pieces A', A', the platform G, is bolted. Each pair of extension levers D, is
60 composed of three bars two of which are put parallel together and the other works between these two so that when the platform G, is down as far as it will go the edges of the levers will fit snugly together and occupy comparatively very little space. It
65 will be seen from this description that this quadrilateral extension jointed framework may be extended or contracted and that as the ends of the levers of each side of the
70 frame are all jointed together the platform will be kept in a horizontal position while the levers are distended, or when they are brought together. Therefore by moving
75 the blocks C, C, C, C, toward the pedestal B, the ends of all the levers D, D, will be drawn together and the platform will be elevated more or less as the blocks C, approach each
80 other, the power required to elevate the platform diminishing in a very rapid ratio, as the height of the platform increases. To operate these levers I attach to one of the
85 blocks C, a flanged drum or windlass H, and two hand cranks H', H', with a ratchet wheel and pawl *d*, *e*. Around the drum H, passes a chain E, which chain passes around
90 pulleys that are pivoted in the sliding blocks C, and from these blocks the chain is carried to pulleys in the corner blocks *c*, *c*, *c*, and from one of these blocks to the other the
95 chain passes, until it arrives at the sliding blocks F, F, F, F, when it is crossed diagonally from one of these blocks to the other and finally it is attached to a drum J, on
100 top of the platform G. The chain E in passing diagonally across the under-side of the platform, passes through a hub K, which is fixed to the center of the platform, in
105 which hub are four pulleys *g*, *g*, *g*, *g*, which are pivoted in the slots through which the chain passes.

A hole is cut through the center of the platform and also through the hub K, large enough to admit the pedestal B, and as the
110 chain is crossed in the center of this hole it will be taken by the pulleys on the end of the pedestal when the platform is below the end of the pedestal as shown in Fig. 1, and in this manner the chain will act on the pulleys
115 *a*, *a*, and *b*, while the platform is below a cer-

tain point, and when this platform is high enough to be operated independently of this central support the chain leaves the pulleys.

The central pedestal B, is thus used only to start the platform when the power to be applied is the greatest, particularly when heavy weights are to be raised or lowered.

The windlass on top of the platform has its bearings in arms which project up from one of the sliding blocks F, through slots which cut through the platform in a line corresponding to the movement of the block F, to which the arms are attached. This upper windlass is furnished with a pawl and ratchet and crank arms like the lower windlass so that power may be applied either at the top or at the bottom of the frame, or at both places at the same time.

In winding up the chain on either, or both

windlasses, the contractile power is not only applied to both ends of the extension jointed frame but the chain operates upon the ends of each pair of levers with the same force that it does upon the top and bottom ends, of the upper and lower levers in the frame.

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

The arrangement of the pulley standard B, radiating sliding blocks C, and rails A, with the jointed levers D, D, pulley blocks c, hub K, cord E, and windlass H, J, all in the manner and for the purposes herein shown and described.

ANDREW MORSE.

Witnesses:

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