No. 775,373. PATENTED NOV. 22, 1904.

E. MAXEY.

SELF SUPPORTING AND EXTENSION LADDER ELEVATOR.

APPLICATION FILED JUNE 12, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

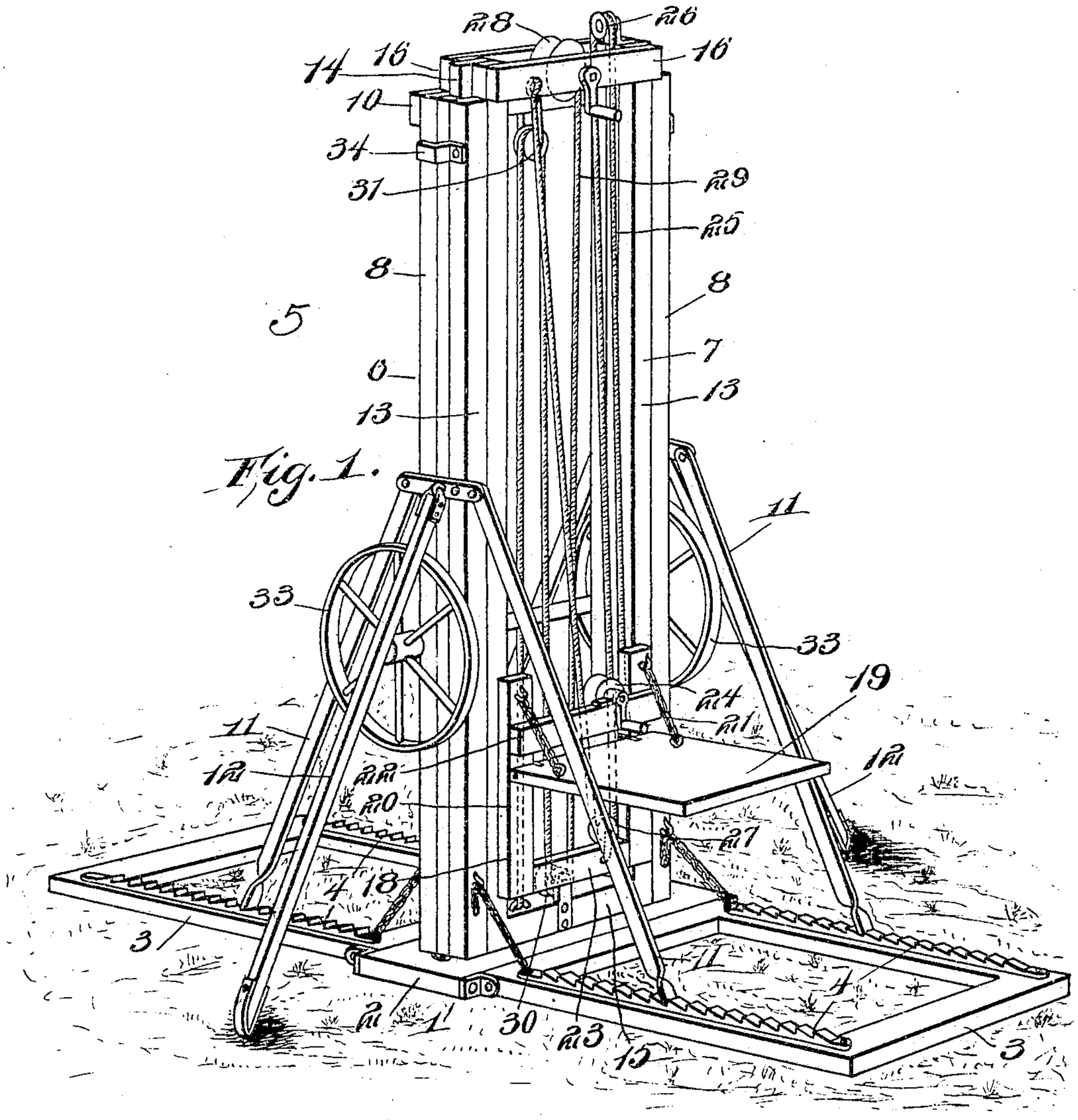
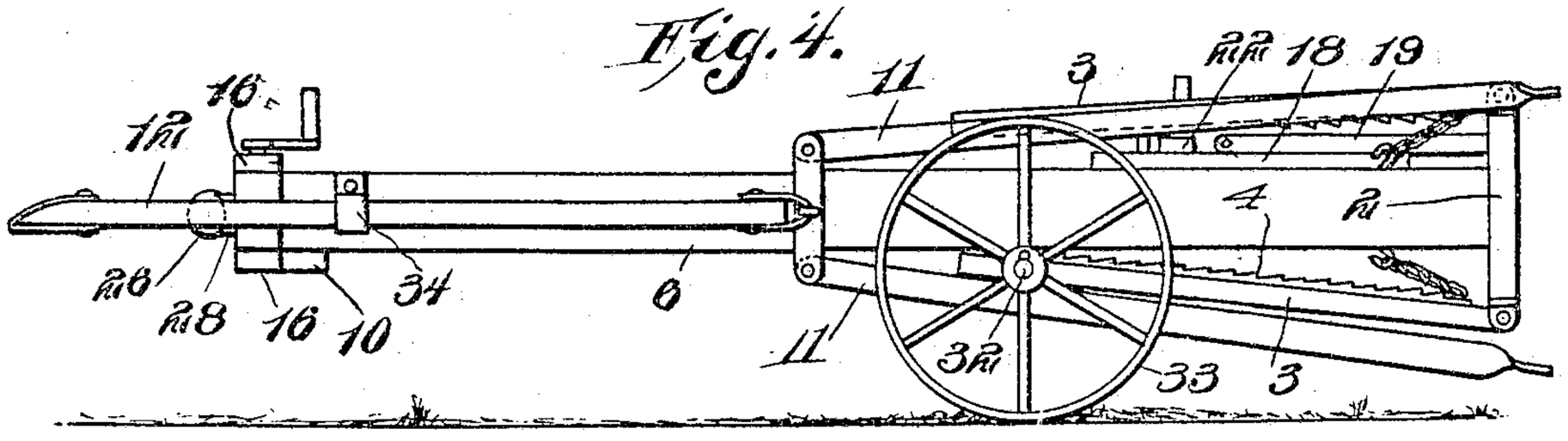


Fig. 1.

Fig. 4.



Witnesses
E. F. Stewart
F. L. Ellmore

Ernest Maxey Inventor
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Attorneys

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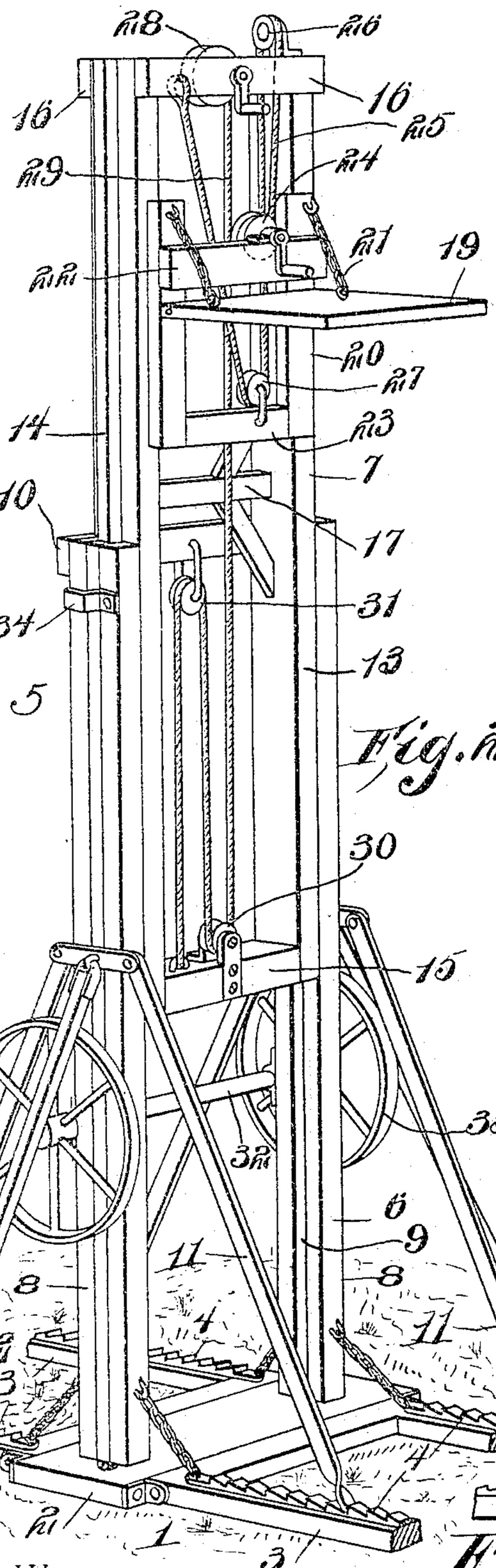


Fig. 1.

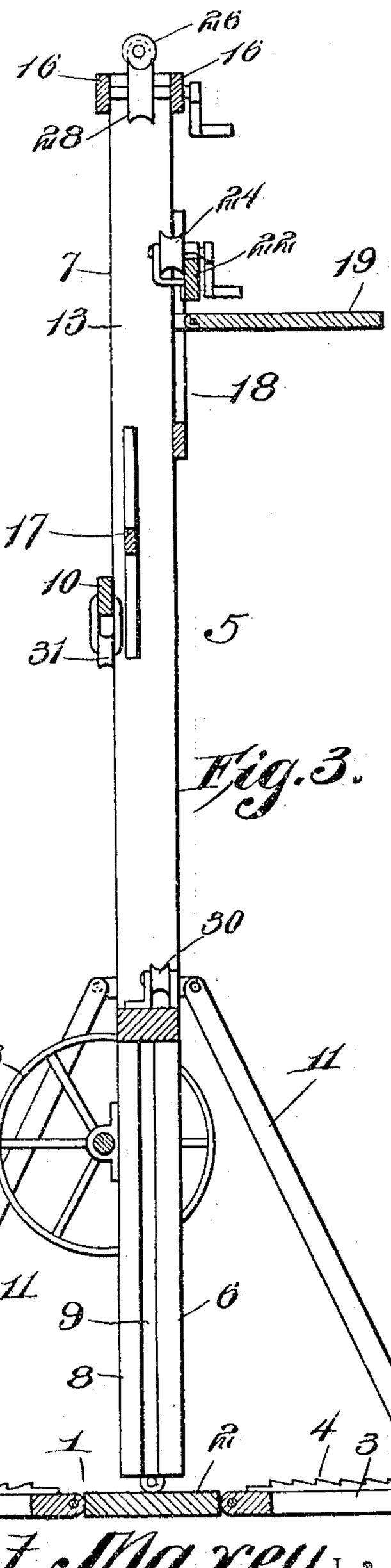
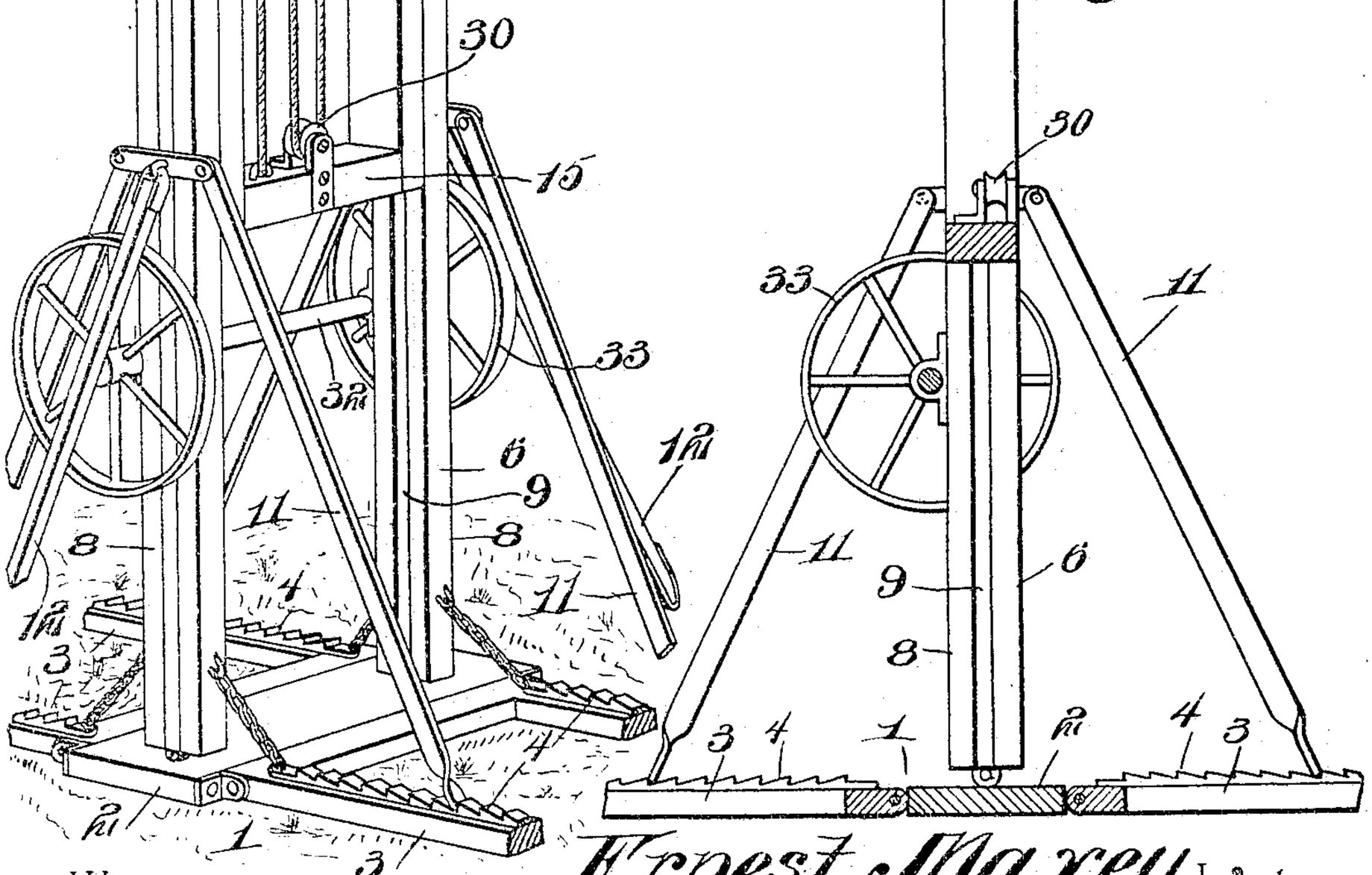


Fig. 3.



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No. 775,373. Patented November 22, 1904.

UNITED STATES PATENT OFFICE.

ERNEST MAXEY, OF FORT WORTH, TEXAS, ASSIGNOR OF ONE-FOURTH TO QUINN T. MORELAND, OF FORT WORTH, TEXAS.

SELF-SUPPORTING AND EXTENSION LADDER ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 775,373, dated November 22, 1904.

Application filed June 12, 1903. Serial No. 161,207. (No model.)

To all whom it may concern:

Be it known that I, ERNEST MAXEY, a citizen of the United States, residing at Forth Worth, in the county of Tarrant, State of Texas, have invented certain new and useful Improvements in Self-Supporting and Extension Ladder Elevators, of which the following is a specification.

My invention relates to extension ladders or scaffolds such as are employed by workmen for raising themselves and their material and tools to an elevated position, and has for its object to produce a device of this character of comparatively simple construction, which may be readily transported from place to place or set up for use and one in which the elevating operation may be performed by the occupant of the platform or scaffold proper.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of my improved device erected but non-extended. Fig. 2 is a similar view showing the device in its extended condition. Fig. 3 is a vertical longitudinal sectional elevation through the device in its extended condition. Fig. 4 is a side elevation illustrating the device folded for transportation.

Referring to the drawings, 1 designates the supporting-base, consisting of a primary central board or member 2, to which is pivoted secondary members 3, preferably in the form of open frames, each having its side bars provided upon their upper faces with a series of ratchet-teeth 4.

Sustained by the base is the extension frame or ladder 5, consisting of a primary section 6 and a secondary or extension section 7. The primary section consists of a pair of oppositely-disposed spaced uprights or standards 8, pivotally connected at their lower ends with the base-section 2 and provided upon their inner faces with longitudinally-extending grooves or guideways 9, the upper ends of the standards being connected by a transverse bar or member 10. The section 6, which is adapted to be arranged at an inclination from the vertical laterally in either direction, has pivoted to its standards brace members 11, formed at their lower ends for engagement with the teeth 4 to maintain the frame in its inclined position, the frame being further supported by transverse braces 12, pivoted at their upper ends to the standards 8 and adapted in practice to have their lower ends engaged with the ground for rendering the frame firmer and more secure. The secondary section or extension 7 consists of a pair of spaced oppositely-disposed bars or standards 13, having upon their outer edges longitudinally-disposed tongues or guides 14, traveling in the ways 9. These standards, which are arranged parallel with and adapted for longitudinal movement relative to the standards 8, are connected at their lower ends by a beam 15, at their upper ends by a pair of spaced beams 16, and between their ends by a brace 17.

Arranged for travel within and longitudinally of the section or extension 7 is a carrier-frame 18, sustaining the scaffold proper or platform 19, which is pivoted to the side bars 20 of the carrier-frame and maintained in adjustment relative thereto by chains or analogous flexible elements 21, the upper ends of the bars 20 being connected by a transverse bar 22 and their lower ends by a bar 23. Sustained by the carrier-frame 18 is a primary rotary drum or reel 24, from which a cable or its equivalent 25 extends upward over a pulley 26, supported at the upper end of the section 7, thence downward and beneath a pulley 27, attached to the bar 23, and thence upward to the bar 22, to which its end is secured in any suitable manner. From this arrangement it is apparent that when the reel or drum 24 is rotated in the proper direction for winding the cable the frame 18, carrying with it the platform 19, will travel to the upper end of the section or extension 7.

Journaled for rotation between the bars 16 is a secondary reel or drum 28, from which a cable or its equivalent 29 extends downward beneath a pulley 30, attached to the lower connecting-bar 15 of section 7, thence upward

and around a pulley 31, attached to the upper bar 10 of section 6, and thence downward to the bar 15, to which it is secured in any suitable manner. From this it is apparent that when the drum 28 is rotated to wind the cable the section or extension 7 will travel upward in the primary section 6 for the purpose of raising the platform 19 to the desired elevation.

32 designates an axle journaled in suitable bearings to the standards of section 6 and carrying transporting-wheels 33, by which the device when folded may be readily transported from place to place, while adjacent to the upper ends of the standards 8 there are secured engaging members or clips 34, with which the braces 12 when in folded condition are engaged, thereby forming handles through the medium of which the device may be manipulated during transportation.

It is apparent that in practice the section 7 will normally remain non-extended within the section 6, while the carrier-frame 18 will rest at a point adjacent to the lower end of the section 7. With the parts in this condition and supposing the device to be set up for use an initial adjustment or elevation of the scaffold 19 will be obtained by manipulation of the reel 24, while a further adjustment or elevation is secured by manipulation of the reel 28, as heretofore explained. After the desired elevation of the scaffold has been obtained the supporting-frame as a whole may be adjusted to the desired inclination from the vertical by moving the lower ends of braces 11 back and forth along the racks 4.

When it is desired to fold the device for transportation, the braces 11 are turned inward parallel with the standards 8, the secondary base members 3 folded thereover, the section 7 moved to position within section 6, and the platform 19 folded, when the entire device may be thrown upon the wheels 33 and the braces 12 engaged with the clips 34, thus permitting ready movement or transportation.

It is to be particularly noted that during the operation of elevating the platform 19 the same is accomplished by the occupant of the platform, thus obviating the necessity for a second attendant to perform this work.

From the foregoing it will be seen that I produce a device of comparatively simple construction and one which in practice will efficiently perform its functions to the attainment of the ends in view.

It is to be understood that I do not limit myself to the precise details herein set forth, inasmuch as minor changes may be made without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

The combination with a supporting-base, of a primary frame-section pivotally connected with the base for adjustment at an inclination relative thereto, braces for sustaining the frame in its adjusted positions, a secondary frame-section telescopically engaged with the primary section, a platform mounted for movement longitudinally of the secondary frame-section, an axle carried by one of the frame-sections, transporting-wheels provided on the axle, transverse braces pivotally connected with one of the frame-sections and foldable longitudinally thereof, said braces being adapted when folded to project beyond the section to form handles, and means for engaging the transverse braces to secure them in folded position.

In testimony whereof I set my hand, in the presence of two witnesses, this the 8th day of May, 1903.

ERNEST MAXEY.

Witnesses:
C. T. PYEATT,
M. B. SPOON.