

(No Model.)

3 Sheets—Sheet 1

J. E. SANDBERG & M. AKESON.

FIRE ESCAPE.

No. 326,336.

Patented Sept. 15, 1885.

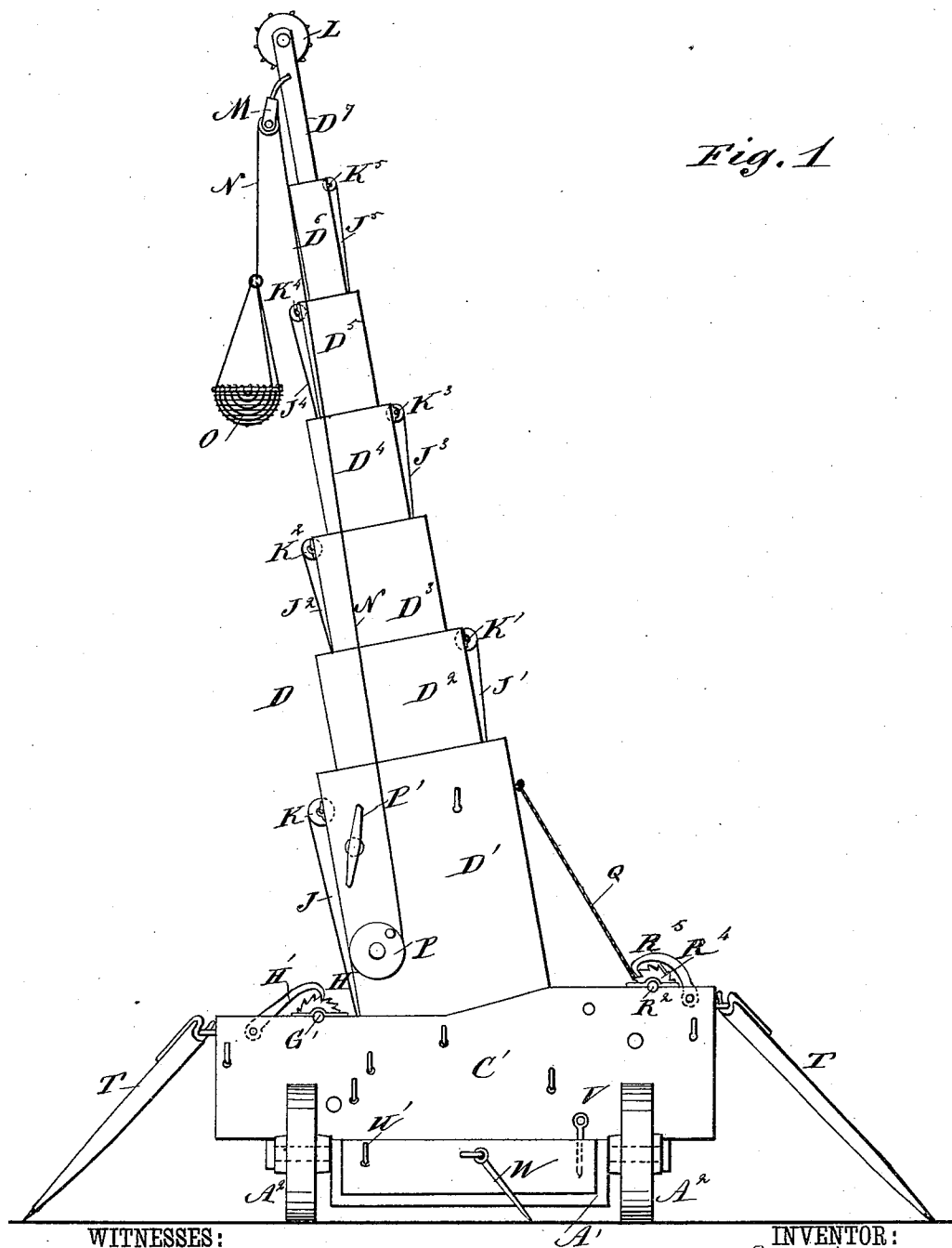


Fig. 1

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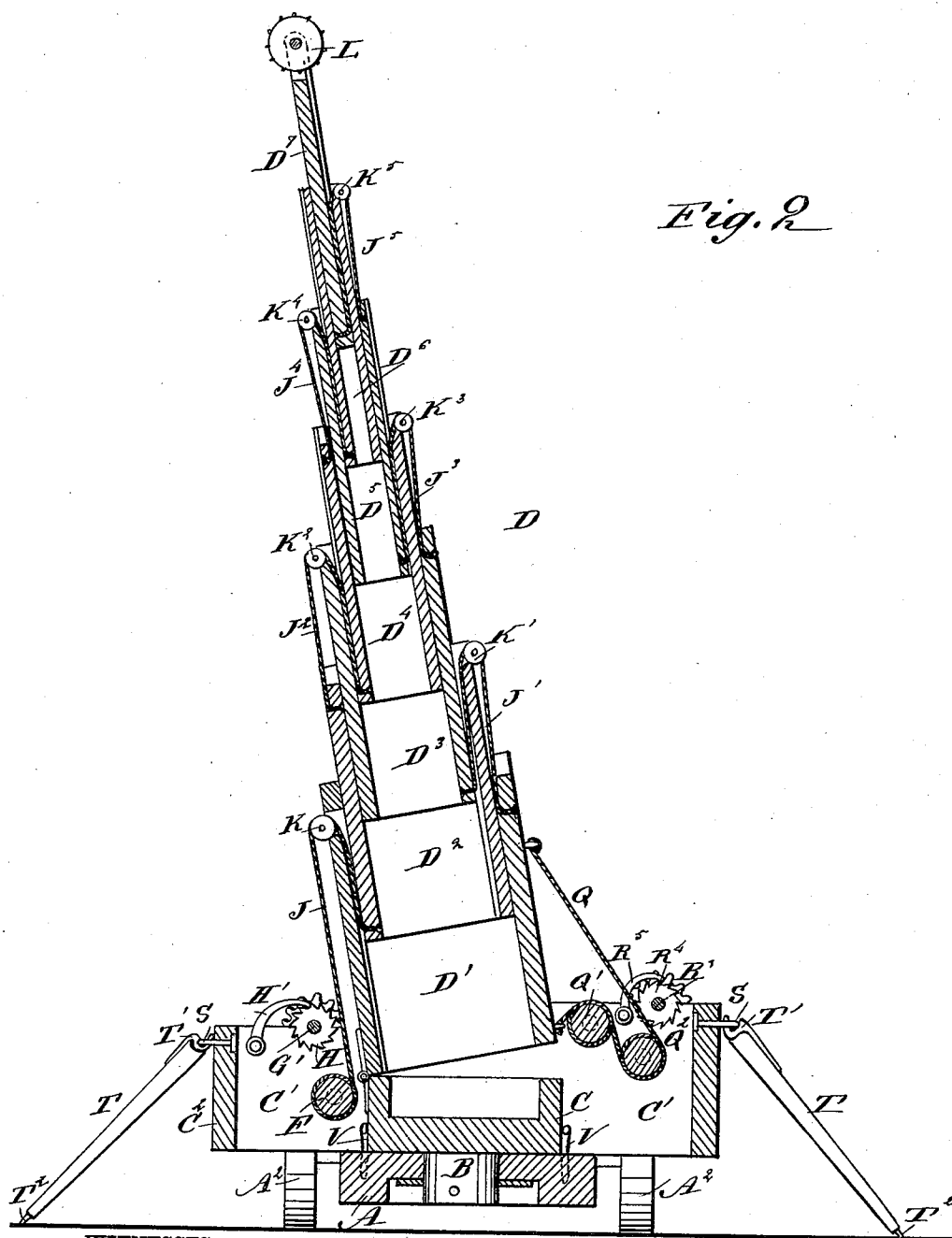
Munn & Co.

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FIRE ESCAPE.

Patented Sept. 15, 1885.



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FIRE ESCAPE.

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Fig. 5

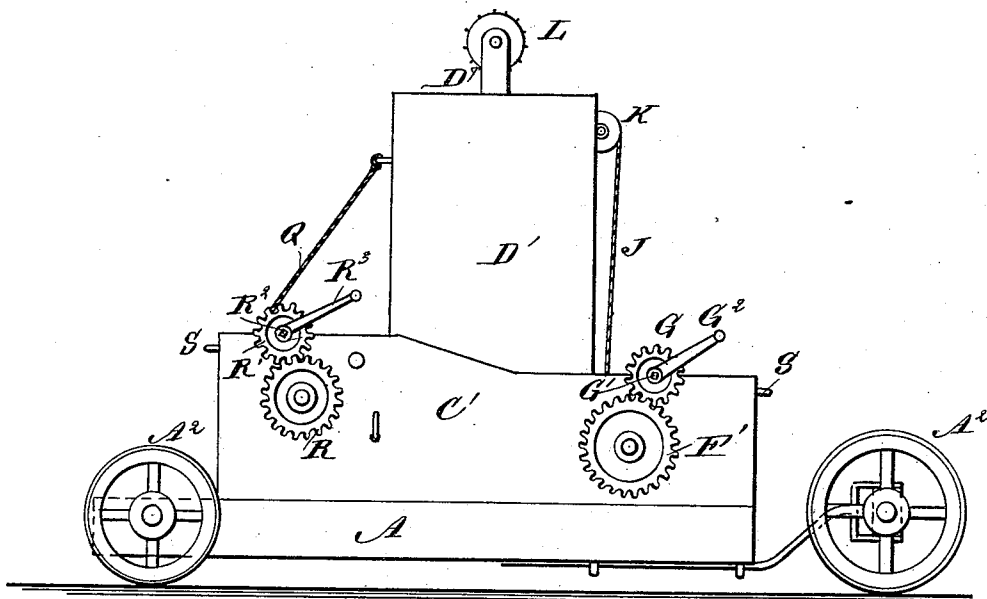
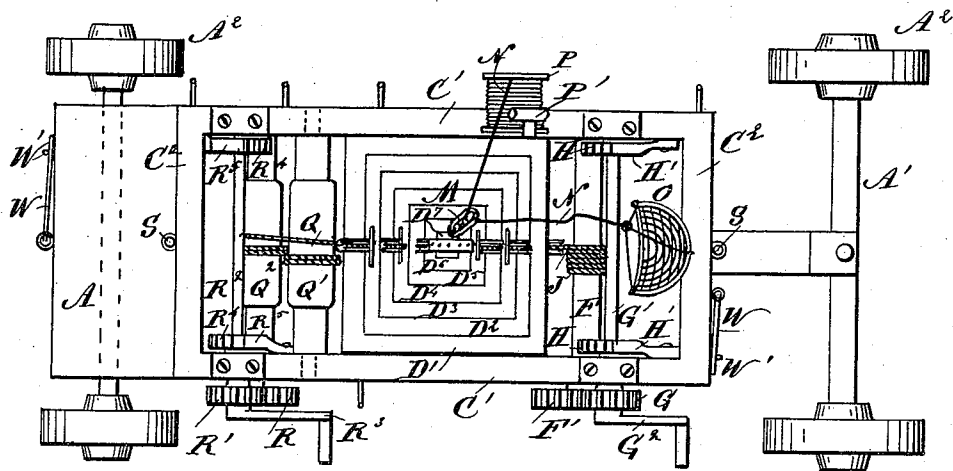


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN ERICKSON SANDBERG AND MAGNUS AKESON, OF BUTTE CITY,
MONTANA TERRITORY.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 326,336, dated September 15, 1885.

Application filed June 11, 1885. (No model.)

To all whom it may concern:

Be it known that we, JOHN ERICKSON SANDBERG and MAGNUS AKESON, of Butte City, in the county of Silver Bow and Territory of Montana, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved fire-escape, which can easily be transported to the fire, elevated to reach to the tops of the highest buildings, and inclined toward or from the buildings as necessity may require.

The invention consists in the construction and combination of parts and details, as will be fully described hereinafter, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end view of my improved fire-escape, showing the same raised. Fig. 2 is a cross-sectional elevation of the same, also raised. Fig. 3 is a side view of the same lowered. Fig. 4 is a plan view of the same, also lowered.

The wagon-platform A is provided with the axles A', carrying wheels A², one of which axles is made U-shaped, or bent at the ends so as to bring the bottom of the platform A as near to the ground as possible. A pivot, B, is fitted to turn in the platform, and on the top of said pivot a base-section, C, is secured, which is adapted to turn on the platform A. To the base C two side plates, C', are secured, which are united by end pieces, C², the side pieces, C', and the end pieces, C², forming a box. On one edge of the top of the base C the lower edge of the bottom section, D', of the telescopic tower D is hinged, the said telescopic tower being formed of the sections D' D² D³ D⁴ D⁵ D⁶ D⁷. One section slides within the other, and all of the sections are of the same height, so that when the telescopic tower is lowered the upper ends of the several sections will be flush, as shown in Figs. 3 and 4. A winding-drum, F, is journaled in the side pieces, C', and on the end of said

drum a cog-wheel, F', is mounted, which engages with a pinion, G, on a shaft, G', having a crank, G², which shaft G' also carries two ratchet-wheels, H, with which locking-pawls H' engage. A cable, J, is secured on the drum F, passes over a pulley, K, on the top of the lowest section, D', and is secured to the lower part of the section D². On the opposite side of the tower D a cable, J', is secured to the upper part of the section D², passes over a pulley, K', on the top of the section D³, and has its lower end secured to the lower part of the section D³. A cable, J², is secured to the top of the section D², passes over a pulley, K², on the top of the section D³, and has its other end secured to the lower part of the section D⁴. A cable, J³, is secured to the upper part of the section D³, passes over a pulley, K³, on the top of the section D⁴, and has its lower end secured to the lower part of the section D⁵. A cable, J⁴, is secured to the upper part of the section D⁴, is passed over a pulley, K⁴, on the top of the section D⁵, and has its other end secured to the lower part of the section D⁶. A cable, J⁵, is secured to the upper part of the section D⁵, passes over a pulley on the top of D⁶, and has its other end secured to the lower part of the top section or pole, D⁷. In the forked upper end of the pole or uppermost section, D⁷, a pulley, L, is journaled, which has spikes on its rim. A pulley, M, is held on the uppermost section or pole, D⁷, a short distance from the upper end of the same, and over the said pulley a rope or cable, N, is passed, from one end of which a strong wire basket or cage, O, is suspended, which has one side flattened, so that it can slide up the side of the building. The other end of the rope N is secured to and wound on a drum, P, on the side of the bottom section, D', on which bottom section a cleat, P', is also provided for fastening the rope N. The hoisting-rope J is always arranged at that side of the bottom section, D', which is hinged; and on the opposite side a cable, Q, is secured to the bottom section, D', at the top and bottom, and is passed a number of times around two winding-drums, Q' and Q², of which the latter is provided on its end with a cog-wheel, R, engaging with a pinion, R', on a shaft, R², having a crank-handle, R³. On

one end, the shaft R^2 is also provided with ratchet-wheels R^4 , with which pawls R^5 engage. A strong staple, S , projects from the top of each end piece, C^2 , and serves to receive a hook, T^1 , on the upper end of a brace, T , provided on its lower end with a spike, T^2 . On each end of the truck-frame A a strong brace-rod, W , is hinged in such a manner that its end can be rested on the ground or rested on a suitable hook, W' , on the end of the truck-frame. Pins V are provided, which can be inserted in the apertures in the truck platform or frame A , for the purpose of holding the box at the bottom of the extensible part in place when the same is swung transversely to the platform or truck.

A greater or less number of telescopic sections may be used in the construction of the telescopic tower, according to the height it is desired to reach by means of the tower.

The operation is as follows: The apparatus is drawn to the fire and the truck is placed in front of the building and parallel with same, and then the base C and the side pieces, C' , and end pieces, C^2 , uniting them, are turned on the pivot B until the side pieces, C' , are at right angles to the building. The telescopic tower is then raised by winding the cable J on the drum F . The cable J pulls upward the section D^2 , which in turn pulls up the section D^3 , and so on, all the sections being raised at the same time. If desired, the tower can be swung against the building until its pulley L rests against said building, the spikes on the said pulley preventing the upper part of the tower from swinging laterally.

To swing the tower in the manner set forth, the drums Q' Q^2 are revolved by means of the crank R^3 on the shaft R^2 in such a manner as to wind that part of the rope Q connected with the bottom of the section D' on the drum Q' , and to unwind that part connected with the top part of the bottom section. The tower can be tilted more or less, as may be desired.

To rescue persons, the basket O is raised by winding the rope N on the drum P , and when the persons are all safe in the basket it is lowered. In case the lower stories are on fire, the basket can be held from the building by suitable guy-ropes. When all the persons have been rescued, the lowest section, D' , of the tower is swung down on the base C , the cable J is unwound from the drum F , so as to

permit one section to slide down into the other, the side pieces, C' , are turned with the base C so as to rest on the truck, and the apparatus is drawn away.

Before raising the tower the lower part is securely braced by means of the braces T , and the bolts or braces W on the ends of the truck, to prevent tilting in either direction. The telescopic tower can be erected or lowered in a very short time.

The entire apparatus can be made of wood or metal. If made of wood, the end parts of the sections must be strengthened and protected by means of suitable irons.

The telescopic tower can be raised in about twenty seconds. The raised tower can also be used as a flag pole.

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

1. A fire-escape consisting, essentially, in a truck having a body, A , a base, C , swiveled thereon, and having sides C' and ends C^2 , a series of telescopic sections, D' D^2 D^3 D^4 D^5 D^6 , the lower one of which is hinged at one edge to one side of the swiveled base C , the drum F , journaled in the sides C' , the pulley K on the upper end of the bottom section, D' , the cable J , passed from the drum over pulley K to the lower end of the section D^2 , the cables J' J^2 J^3 J^4 , connecting the remaining sections in the manner set forth, the top piece, D^7 , and its cable J^5 , the pulley M on the top piece, the drum P on the bottom section, D' , the cable, N , passed from the drum P over the pulley M , and having the basket O , the cable Q , secured at both ends to the lower telescopic section, D' , the drums Q' Q^2 , around which said cable is wound between its ends, and the operating-shaft R^2 , substantially as set forth.

2. In a fire-escape, the combination, with the base and the hinged section D' , secured thereto, of the cable Q , secured at its opposite ends to the upper and lower ends of said section, the drums Q' Q^2 , around which said cable is wound between its ends, and the operating-shaft and gears, substantially as set forth.

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MAGNUS AKESON.

Witnesses:

JOHN FINDLAY,
ANGUS MORRISON.