

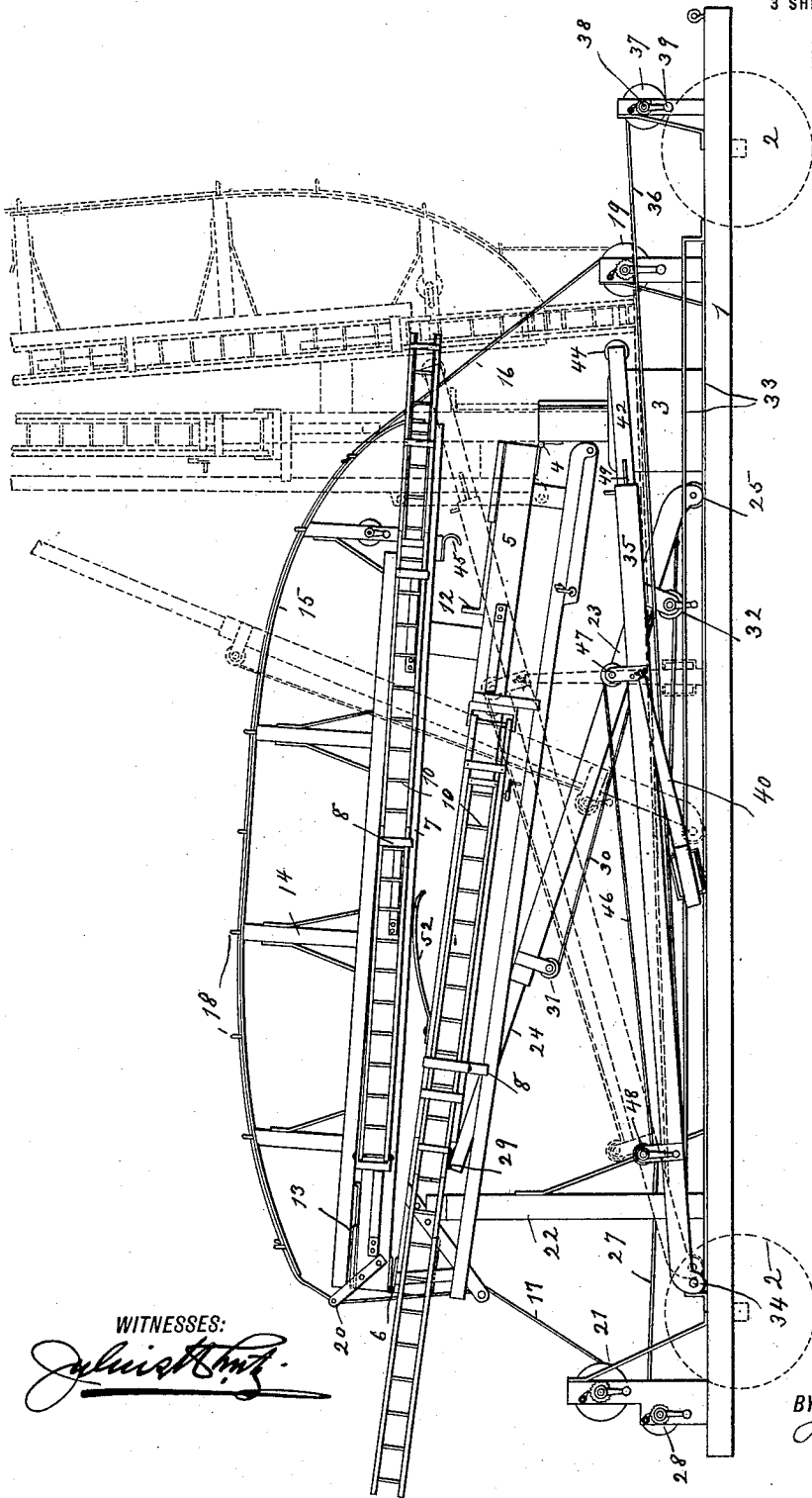
H. SPERLING.
FIRE ESCAPE.

APPLICATION FILED SEPT. 18, 1915.

1,162,413.

Patented Nov. 30, 1915.

3 SHEETS—SHEET 1.



WITNESSES:

Julius H. [Signature]

INVENTOR

Henry Sperling

BY

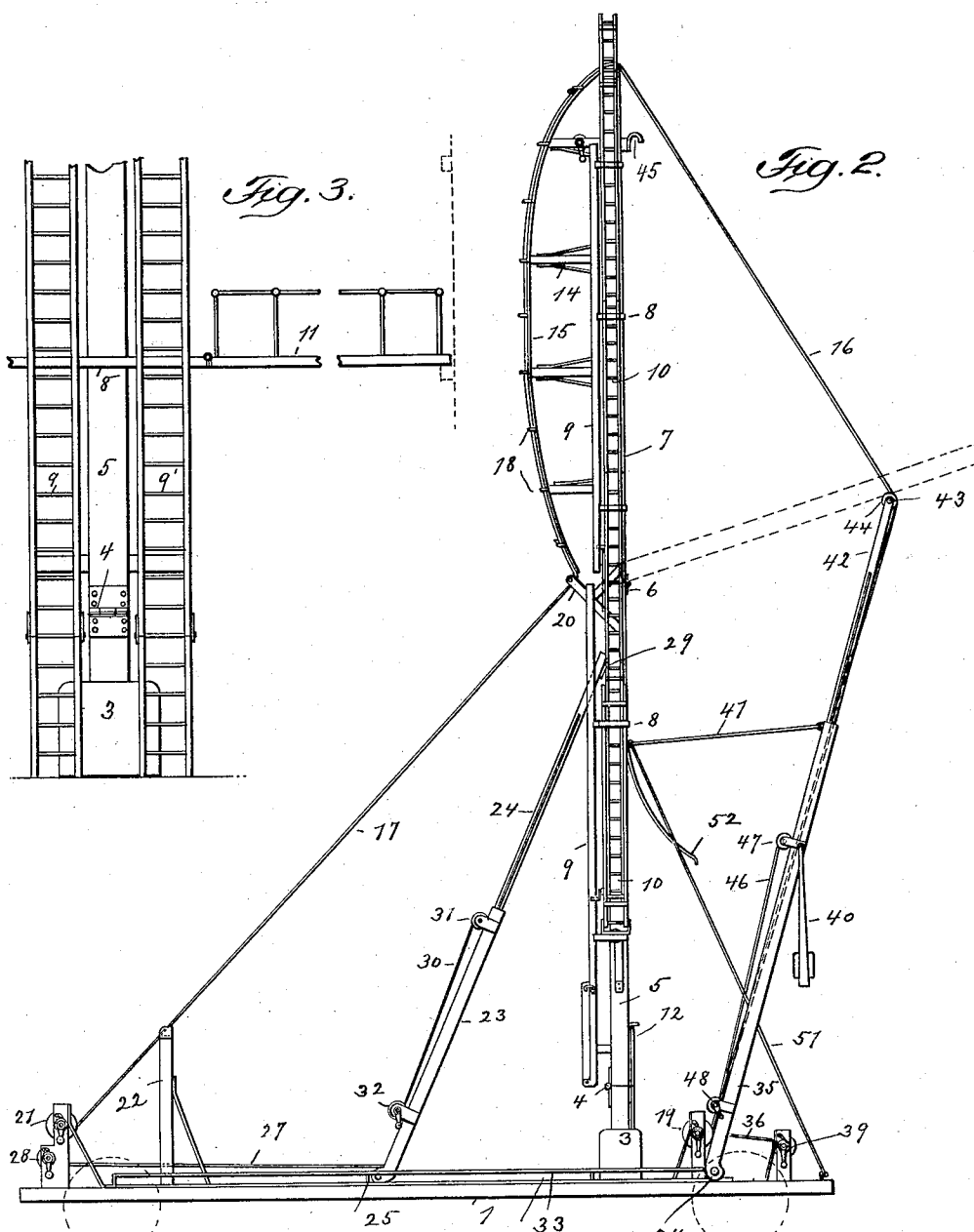
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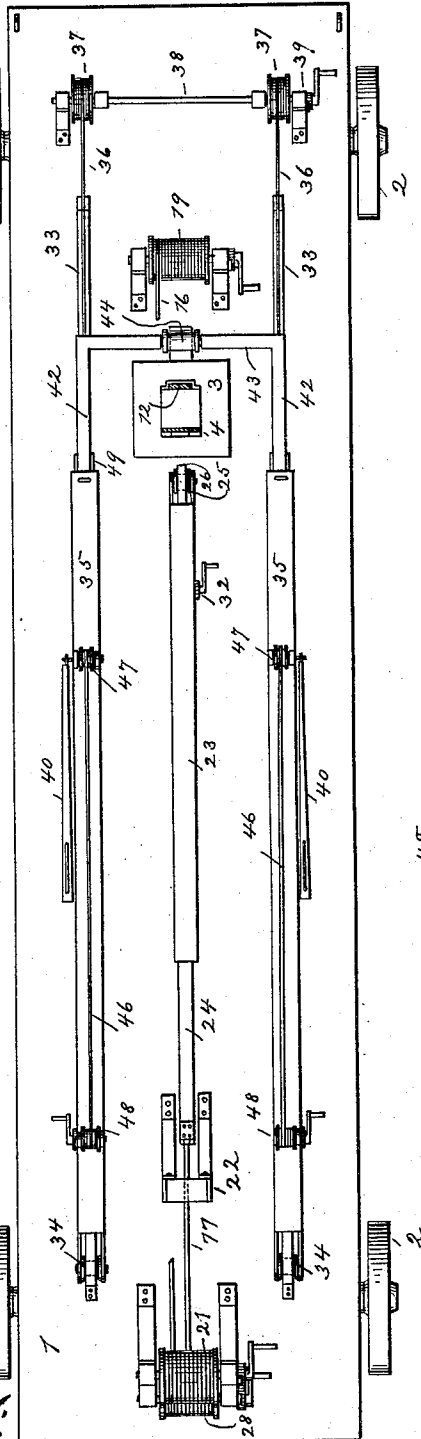
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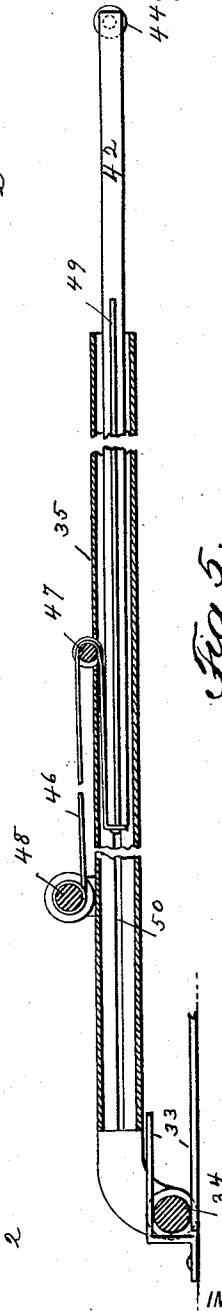
Fig. 4.



WITNESSES

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Fig. 5.



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HENRY SPERLING, OF WEST HOBOKEN, NEW JERSEY.

FIRE-ESCAPE.

1,162,413.

Specification of Letters Patent.

Patented Nov. 30, 1915.

Application filed September 18, 1915. Serial No. 51,309.

To all whom it may concern:

Be it known that I, HENRY SPERLING, a citizen of the United States, and a resident of West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to a fire-escape of the class described in Letters Patent No. 693533 issued to me February 18th, 1902.

The object of the present invention is to provide new and efficient means by which the raising of the ladders is facilitated; so that the operating winches are relieved of excessive strain.

In the accompanying drawing: Figure 1 is a side elevation of my improved fire-escape showing it folded; Fig. 2 a similar view showing it raised; Fig. 3 a detail of a portion of the lower post and ladders; Fig. 4 a plan with the post and ladders removed, and Fig. 5 a longitudinal section through one of the tubular lifting rods and adjoining parts.

The device comprises essentially, a platform 1 mounted upon wheels 2 to constitute a truck. Upon platform 1 is rigidly fitted, a base 3 to which is hinged at 4, a lower post 5. To the upper end of this post there is hinged at 6, an upper post 7, the hinges 4 and 6 being located respectively at the rear and front of the apparatus. Each of the posts 5 and 7 is furnished with a plurality of landings 8 which are connected by a series of rear ladders 9 and a series of extensible side ladders 10. The latter are hinged to the landings 8 and may be lowered into a horizontal position so as to rest with their free ends upon the window sills. In addition to the side ladders 10, the posts may also carry one or more bridges or gang-planks 11 indicated in Fig. 3. Posts 5 and 7 after being raised, may be locked in their upright position by bolts 12 and 13 respectively.

To the upper side of the upper post 7, there is secured by stays 14, a longitudinally disposed arch 15 over which pass a pair of ropes 16—17 which ropes are guided along the periphery of the arch by eyes 18. The front rope 16 passes from the hinged end of the arch to a winch 19 located at the front of the truck, while the rear rope 17 passes from the free end of the arch through a guide 20 to a winch 21 located at the back of the truck. A rest 22 projecting upwardly

from the truck in proximity to winch 21, serves to sustain the posts in a slightly inclined position when the device is folded, Fig. 1.

In order to facilitate the raising of lower post 5, there is provided, a lifting jack or post composed of a tubular member 23 that telescopes a rod 24. As more fully referred to in Patent 693533, tubular member 23 is provided with a roller 25 engaging a rail 26 and adapted to be moved along the same by a rope 27 leading to a winch 28. Rod 24 is hinged to post 5 at 29 and may be projected out of tube 23 by means of a rope 30 which is secured to lower end of rod 24 and passes over an idler 31 to a winding drum 32 carried by tube 23. It will be seen that by operating winch 28, the lower end of the jack will be moved toward the back of platform 1 during which movement it will become partly righted so as to impart an initial lift to post 5. By then operating drum 32, rod 24 will be projected upward to push said post into an upright position, in which it is held by locking bolt 12.

Novel means are provided for so swinging the upper post 7 that it will be carried into an approximately vertical position prior to the manipulation of winch 21, so that in this way, the power and time required for operating the winch and the strain to which the same is subjected, are greatly reduced. These means are as follows: Along each side of platform 1, extends a track 33 engaged by a roller 34 pivoted to the lower end of a tubular rod 35. To each rod is secured, a rope 36 the two ropes being wound on a pair of drums 37 carried by the common shaft 38 of a winch 39. To rods 35 are pivoted a pair of props 40, which will by gravity, tend to assume a vertical position, and thus hold the rods in an inclined position, when moved forward along track 33. Guy ropes 41 attached to one of the upper platforms 8 of post 5, and adapted to be detachably secured to the upper ends of rods 35, prevent the latter from dropping down, after having been raised to such a height, that props 40 have lost their footing.

The two rods 35, telescope the two shanks 42 of an inverted U-shaped yoke or frame, said shanks being connected together at their upper or protruding ends by a cross bar 43. This cross bar is furnished at its center with a pulley 44, adapted to removably engage a hook 45 extending forwardly from the upper

end of upper post 7. In order to operate the yoke, there is secured to the inner end of each shank 42, a rope 46, passing over an idler 47 of rod 35, and thence to a winding drum 48 with which said rod is provided. A feather 49 on shank 42 that engages a corresponding groove 50 of rod 35, guides the yoke in a proper rectilinear direction while it is being moved.

After the lower post 5 has been righted in the manner above described, winch 39 is operated to advance rods 35 along tracks 33, and thereby cause an initial lift to be imparted to upper post 7. The guy ropes 41 are now attached to rods 35, and then winch drums 48 are operated to project the yoke out of the rods, and thus cause the same to impart an additional and very substantial lift to post 7, so that the same assumes almost an upright position. Finally, winch 21 is operated to complete the righting of the post, it being locked in its upright position by bolt 13.

As shown the entire structure may be steadied by a pair of ropes or chains 51 that are secured to one of the upper platforms of lower post 5, and are adapted to be connected to hooks located at the forward corners of platform 1.

In order to lower the device, bolt 13 is released, winch 19 is operated to pull upper post 7 down, so that its hook 45 is reengaged by pulley 44. Drums 48 are now manipulated to lower the yoke and then winch 39 is turned back to slacken ropes 36 and thus permit rods 35 to be, by gravity, retracted along tracks 33 so as to assume their folded position. A buffer 52 projecting from lower post 5 and adapted to engage upper post 7, prevents a violent contact during the folding operation. After the upper post has been folded, bolt 12 is retracted and then lower post 5 is folded upon rest 22 while simultaneously, tube 23 is moved along rail 26, and rod 24 is telescoped so that in this way all the parts resume the position shown in full lines Fig. 1.

I claim:

1. A fire-escape comprising a platform, a lower post hinged thereto, an upper post hinged to the lower post, ladders carried by

the posts, a pair of tubular rods, carried by the platform, means for tilting said rods, and a yoke that is telescoped by the rods, and is adapted to removably engage a member on the upper post.

2. A fire-escape, comprising a platform, a lower post hinged thereto, an upper post hinged to the lower post, ladders carried by the posts, a pair of tracks extending along the platform, a pair of tubular rods, rollers on the rods that engage said tracks, a yoke having a cross-bar and telescoped by the rods, means for raising and lowering said yoke, and a member on the upper post adapted to operatively engage the cross-bar.

3. A fire-escape comprising a platform, a lower post hinged thereto, an upper post hinged to the lower post, ladders carried by the posts, a pair of tracks extending along the platform, a pair of tubular rods, rollers on the rods that engage said tracks, a yoke having a cross-bar and telescoped by the rods, means for raising and lowering said yoke, a pulley on the cross bar, and a hook on the upper post that is adapted to operatively engage said pulley.

4. A fire-escape, comprising a platform, a lower post hinged thereto, an upper post hinged to the lower post, ladders carried by the posts, a pair of tracks extending along the platform, a pair of tubular rods, rollers on the rods that engage the tracks, props pivoted to the rods, guy ropes adapted to connect the lower post with the rods, a yoke having a cross bar and telescoped by the rods, means for raising and lowering said yoke within the rods, and a hook on the upper post adapted to operatively engage the cross-bar.

5. A fire-escape comprising a platform, a lower post hinged thereto, an upper post hinged to the lower post, ladders carried by the posts, an arch on the upper post, ropes engaging the arch, a slidable and extensible rod adapted to engage the lower post, a pair of slidable rods, a yoke telescoped by said rods, and adapted to engage the upper post, and means for raising and lowering said yoke within the rods.

HENRY SPERLING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."