

No. 774,470.

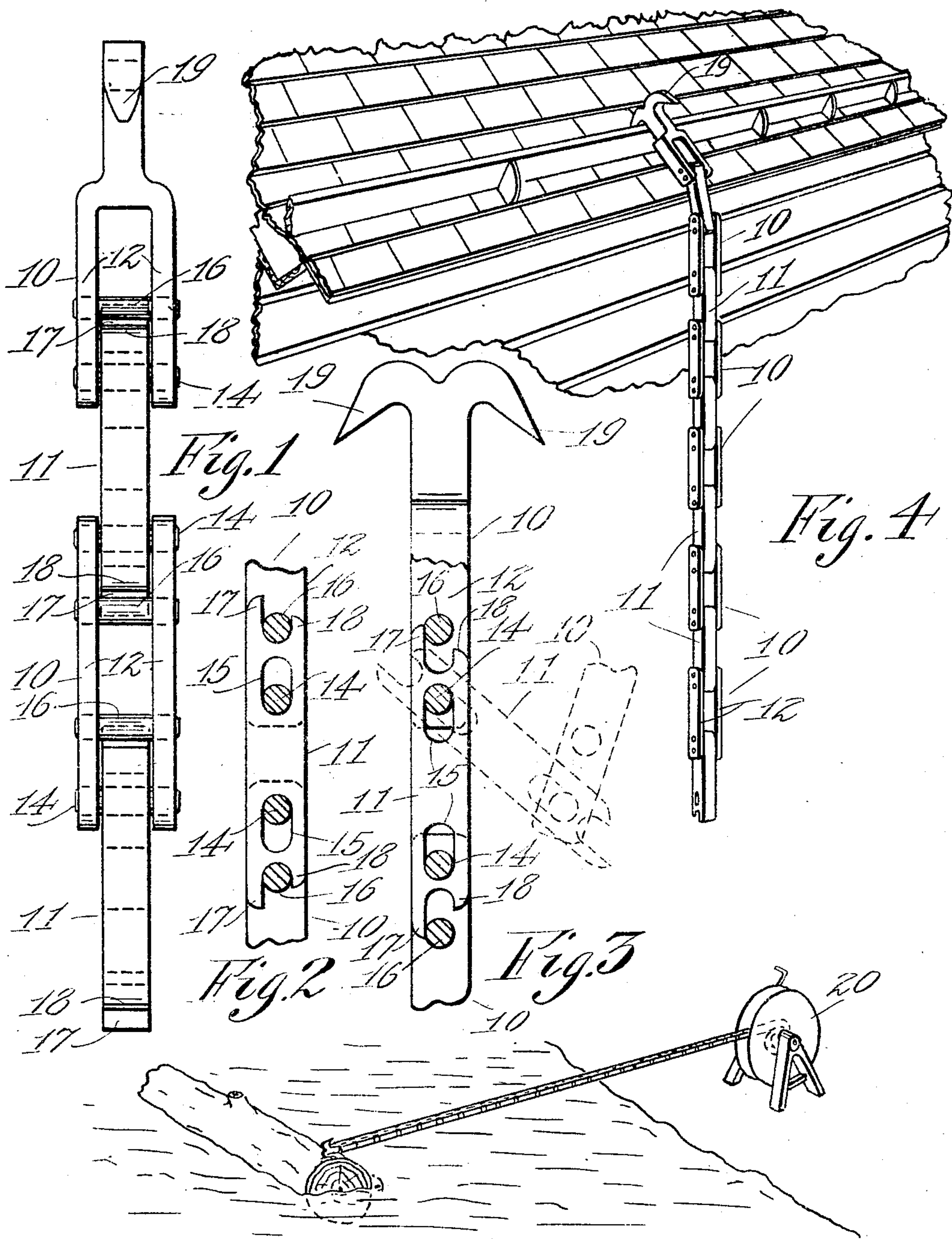
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J. HAMILTON & N. LEWIS.

FIRE ESCAPE.

APPLICATION FILED FEB. 2, 1904.

NO MODEL.



WITNESSES:

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Fig. 5

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 774,470, dated November 8, 1904.

Application filed February 2, 1904. Serial No. 191,744. (No model.)

To all whom it may concern:

Be it known that we, JOHN HAMILTON and NELSON LEWIS, citizens of the United States of America, and residents of the city of Seattle, in the county of King, in the State of Washington, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

Our invention relates to improvements in reaches, and has special reference to a device of this class of general utility in scaling buildings, cliffs, or the like or in reaching objects inaccessible to the grasp.

The object of this invention is to provide a collapsible reach of simple and inexpensive construction and which embodies essential features of adaptability and adjustability which render it non-flexible as projected and flexible as retracted, widens the scope of its usefulness, and permits of its being coiled for transportation.

The above-mentioned and other desirable objects are attained by the construction, combination, and arrangement of parts, as disclosed on the drawings, set forth in this specification, and pointed out in the appended claims.

With reference to the drawings filed herewith and bearing like reference characters for corresponding parts throughout, Figure 1 is a face view of a portion of the reach shown with the units adjusted to render the device flexible. Fig. 2 is a longitudinal section of a portion of the device shown with the units adjusted to render the reach non-flexible. Fig. 3 is a like section showing the units adjusted to render the device flexible. Fig. 4 is a view in perspective, showing a portion of a building at the eaves and the reach attached thereto; and Fig. 5 is a perspective view showing the reach engaged with a log and connected with a take-up.

This invention consists of a collapsible reach composed of a suitable number of units or links, as 10 and 11, which are arranged alternately and are pivotally connected in the form of a chain and are so connected that contiguous units or links will have a limited longitudinal movement or adjustment one on the other. Embodied with contiguous units or links are parts which interlock when the links are ad-

justed inwardly and prevent them from swinging on their pivotal connections, and thereby render the device non-flexible, and these interlocking parts are so arranged that they disengage when the units or links are adjusted outwardly and permit the links to swing on their pivotal connections, and thereby render the device flexible.

The units or links 10 each consists of opposite bars, as 12, arranged at suitable separation and connected by pivot-pins 14, seated on the bars adjacent each end, and the links or units 11 each consists of a single bar fitting freely between the ends of the bars of respective links 10 and having an elongated pivot-aperture 15 adjacent each end which receives a respective pivot-pin 14 freely and is of suitable length to permit of the desired adjustment of the links upon each other.

Seated in the units or links 10, adjacent each pivot-pin, is a catch 16, which consists of a transversely-disposed pin seated in the bars 12, close to the end of link 11, and on the ends of links 11 are opposite longitudinally-disposed ears 17 and 18, which are arranged to embrace the catches of contiguous links 10 when the links are adjusted inwardly, and thereby prevent them from swinging on their pivotal connections and render the reach non-flexible. In the present instance the ears 17 are formed somewhat longer than ears 18, so as to lie opposed to the catches 16 when the contiguous links are adjusted outwardly, and thereby serve to prevent the links from swinging on their pivotal connections in one direction when lying at any point of longitudinal adjustment, while the ears 17 are formed of suitable length to lie clear of the catches when the links lie at the outer point of adjustment, and thereby permit the links to swing upon each other in one direction when so adjusted and render the reach flexible in one direction, so that it can be coiled or wound up.

One end unit or link of the reach is formed with opposite hooks, as 19, at the free end, by means of which the reach can be engaged with projections on buildings or cliffs or made fast to logs or other objects, as desired in using the same.

When desired to use the reach to scale a building or the like, the units or links are ar-

ranged in interlocking positions as the device is projected upwardly, so as to render the projected portion of the reach non-flexible, and it will be of advantage to the operator to stand at some distance from the building or cliff and project the reach at an angle toward the projection with which it is desired to engage the hook and with the short ears 18 on the units or links opposed to the building or cliff. After the hook is made fast the units or links are permitted to slip outwardly on each other, as promoted by their own weight, and the reach will then swing inwardly toward the building or cliff, so that the climber can take advantage of the projections or crevices for footholds. If desired to project the reach in a substantially horizontal position—as, for example, to reach a log in the water—the units or links are arranged in interlocking positions, as before, as the reach is projected, and when the hook has been engaged with the log the shore end of the reach can be attached to a suitable take-up, as a rotatively-mounted drum 20, and the drum operated to wind the reach thereon. When desired to project the reach at a downward angle, it is extended downwardly with the long ears 17 lying undermost, so as to keep the reach from sagging.

This device is simple and inexpensive of construction and covers a wide field of usefulness, as it is applicable as a fire-escape and useful in mountain-climbing and logging and in numerous other ways. Furthermore, it can readily be made into a coil for transportation in a mountainous country where it would be impracticable to attempt to take a long rod or bar.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States of America, is—

1. A reach comprising a series of pivotally-connected units having a limited longitudinal movement relatively to each other, and interlocking means carried by contiguous units which prevent their swinging in either direction at one extremity of said adjustment and which permits them to swing in one direction only at the opposite extremity of said adjustment.

2. A reach comprising a series of pivotally-connected units having a limited longitudinal adjustment relatively to each other, and interlocking means carried by contiguous units which prevents their swinging in one direction at any point of said adjustment and in either direction at one extremity of said adjustment.

3. A reach comprising a series of pivotally-connected units arranged end to end the contiguous units having a limited longitudinal adjustment relatively to each other, catches on every other unit, and opposite ears on the intermediate units embracing said catches when contiguous units stand adjusted in-

wardly, one ear of each pair of said ears extended in length to also engage a respective catch when contiguous units stand adjusted outwardly.

4. A reach consisting of alternately - arranged units one composed of opposite bars and pivot-pins seated on said bars adjacent the ends, and the other consisting of a bar fitting between the ends of the first of said bars and having pivot-apertures receiving said pins and elongated to permit of limited longitudinal adjustment of contiguous units, and means on contiguous units which interlock and prevent the units from swinging on said pins when they stand adjusted inwardly relatively to each other.

5. A reach consisting of alternately - arranged units one composed of opposite bars and pivot-pins seated on said bars adjacent the ends, and the other consisting of a bar fitting between the ends of the first of said bars and having pivot-apertures receiving said pins and elongated to permit of limited longitudinal adjustment of contiguous units, and means on contiguous units which interlock and prevent the units from swinging on said pins when they stand adjusted inwardly relative to each other, said means being also arranged to prevent the units from swinging on said pins in one direction when they stand adjusted outwardly.

6. A reach consisting of alternately - arranged units one composed of opposite bars and pivot-pins seated on said bars adjacent the ends, and the other consisting of a bar fitting between the ends of the first of said bars and having pivot-apertures receiving said pins and elongated to permit of limited longitudinal adjustment of contiguous units, catches on the first said units adjacent the pivot-pins, and opposite ears on the ends of the second said units embracing the said catches when the contiguous units stand adjusted inwardly.

7. A reach consisting of alternately - arranged units one composed of opposite bars and pivot-pins seated on said bars adjacent the ends, and the other consisting of a bar fitting between the ends of the first of said bars and having pivot-apertures receiving said pins and elongated to permit of limited longitudinal adjustment of contiguous units, catches on the first said units adjacent the pivot-pins, and opposite ears on the second said units embracing the said catches when the contiguous units stand adjusted inwardly, one ear of each pair of said ears extended in length to also engage a respective catch when contiguous units stand adjusted outwardly.

Signed at Seattle, Washington, this 20th day of January, 1904.

JOHN HAMILTON.
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Witnesses:

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