No. 761,806. PATENTED JUNE 7, 1904.

D. A. WOODHOUSE.

FIRE ESCAPE.

APPLICATION FILED NOV. 18, 1901.

NO MODEL.

Fig. 1

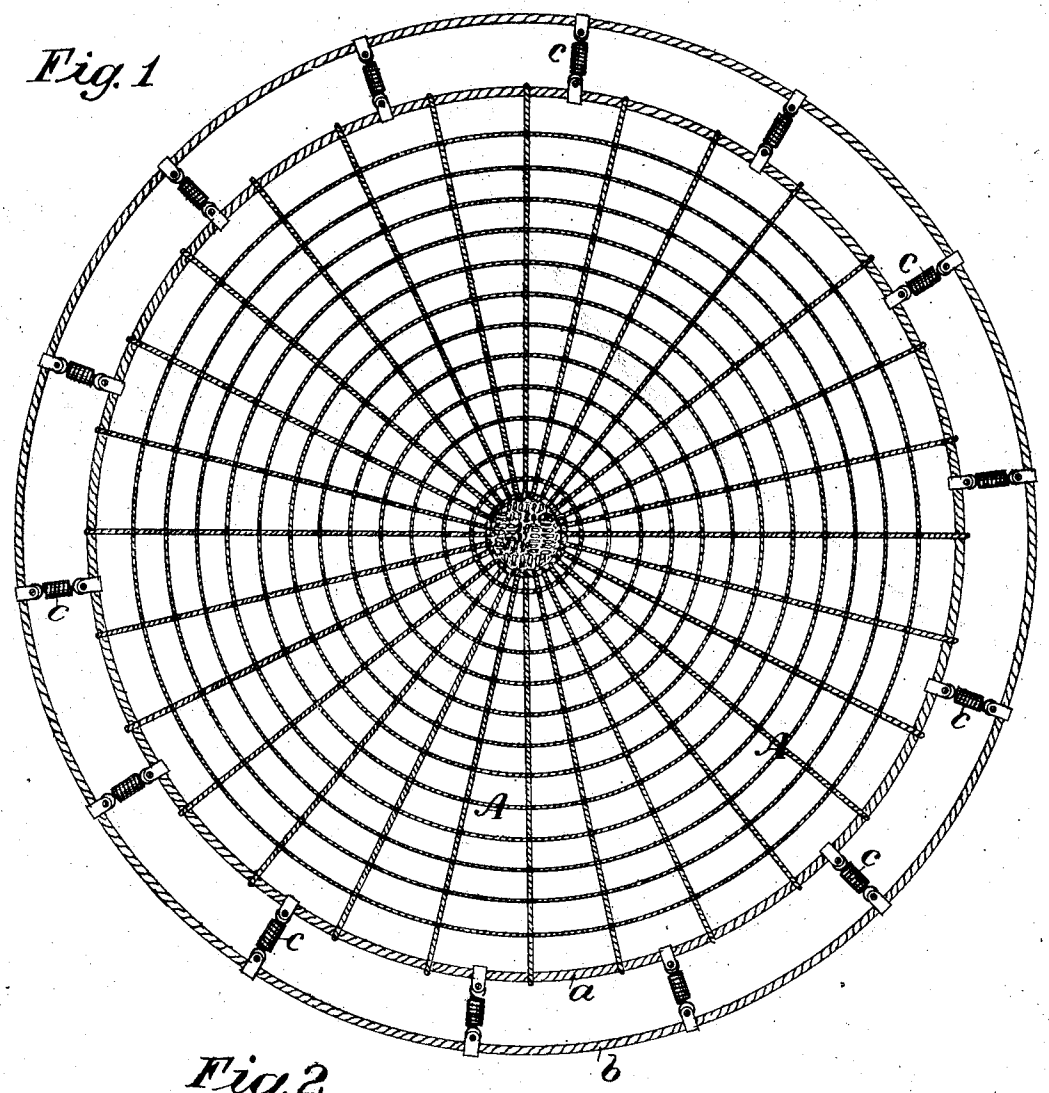


Fig. 2

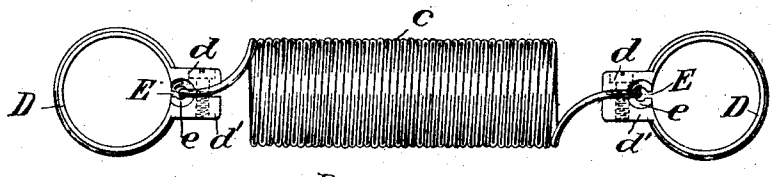
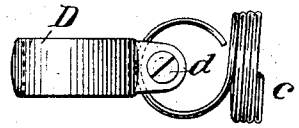


Fig. 3



Witnesses
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By his Attorneys
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 761,806. Patented June 7, 1904.

UNITED STATES PATENT OFFICE.

DANIEL A. WOODHOUSE, OF NEW YORK, N. Y.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 761,806, dated June 7, 1904.

Application filed November 18, 1901. Serial No. 82,662. (No model.)

To all whom it may concern:

Be it known that I, DANIEL A. WOODHOUSE, a citizen of the United States, residing in the borough of Manhattan, New York city, State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

The invention relates to life-nets, and comprises the combination with or addition to an ordinary flexible or rope net of a surrounding flexible or rope ring, between which and the edge of the ordinary net is interposed a series of springs. Ordinary life-nets are usually circular, and at the edge provision is made for the convenient grasp of the fireman. This is generally accomplished by forming the edge of a rope that may be conveniently grasped at points between the radial strands of the net or between the points of attachment of the rope to the net which it surrounds and of which it forms the edge. These structures are flexible and may be conveniently rolled up for transportation. I purpose combining with such a net a rope or flexible member placed around it and connected with it at a suitable number of points by interposed springs. I thus do not impair the flexible character of the whole structure and at the same time accomplish the object of this invention, which is to cushion the impact of a person jumping or falling into the net and relieving the fireman of the sudden shock or strain incident thereto.

In the accompanying drawings, Figure 1 is a plan view of a complete net constructed according to my invention; Fig. 2, a detail view showing the spiral springs employed and the attaching-clamps with which they are connected; and Fig. 3, a view at right angles to Fig. 2, showing one clamp and the end of a spring attached thereto.

A indicates an ordinary fireman's net, shown as made of rope and having a peripheral or edge rope *a* to be grasped by the fireman. Outside of this rope and at a suitable distance therefrom I arrange a rope *b* and connect the two by spiral springs *c*. The rope *b* being held by the fireman, the springs cushion or take up the shock of impact when a person strikes the net. Of course, so far as some features of my invention are concerned, the central portion of this device may be constructed in any appropriate way. In all cases, however, I purpose that the entire structure shall be flexible. To this end the springs may be attached to the net and to the rope *b* in the following manner: Clips D are placed over the ropes and contracted to clamp them by means of screws *d* or other suitable devices passing through the projecting lugs or ears *d'*. The ends of the springs are hooked into apertures E in the lugs between the screws and the ropes, and these apertures are reamed out at each side, as shown at *e*, to afford a substantially universal-joint connection between the spring and clips. These details may be varied.

The net, as shown, is composed of a solid central portion, from which ropes radiate to the edge rope *a*, and these radial ropes are tied together with a series of concentric ropes.

The springs *c* hold the rope *b* at a proper distance from the central portion or body of the net, so that it may always be conveniently grasped.

I claim as my invention—

1. A fire-escape net comprising a flexible central portion, a surrounding flexible member, interposed spiral springs, and universal-joint connections between the ends of the springs and the central and surrounding parts of the net.

2. A fire-escape net comprising a central flexible net having a continuous rope edge, a continuous rope surrounding it, clamps embracing the ropes and having projecting lugs, securing devices for drawing the lugs together, apertures in the lugs between said devices and the ropes, and coiled springs whose ends are hooked into the apertures.

In testimony whereof I have hereunto subscribed my name.

DANIEL A. WOODHOUSE.

Witnesses:

KATHARINE MACMAHON,

WILLIAM A. STAHLNE.