(No Model.)

L. H. BACHELLER.

FIRE ESCAPE.

No. 440,244. Patented Nov. 11, 1890.

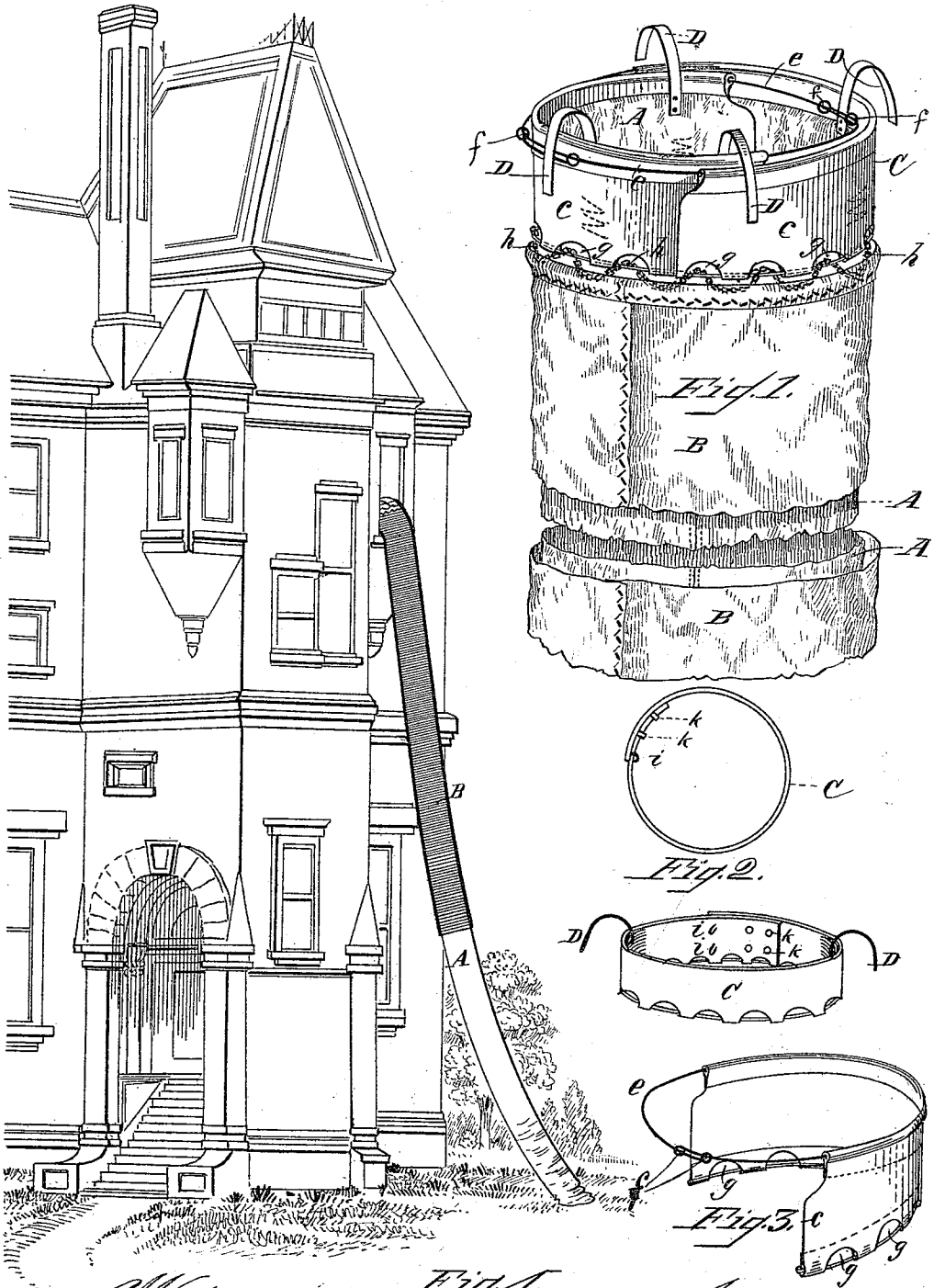

Fig. 4.

Fig. 1.

Fig. 2.

Fig. 3.

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LOIS HALL BACHELLER, OF LYNN, MASSACHUSETTS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 440,244, dated November 11, 1890.

Application filed July 2, 1890. Serial No. 357,574. (No model.)

To all whom it may concern:

Be it known that I, LOIS H. BACHELLER, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My invention relates to that class of fire-escapes usually made of strips of canvas sewed into a long tube or chute, one end of which tube can be fastened to a window-frame and the other end be thrown out and rest upon the ground; and it consists of covering the upper end of this tube of canvas or other flexible material with an encompassing tube of sheet asbestus—such as asbestus cloth—to protect it from flames which may issue from the lower windows of a burning building; and my invention further consists in attaching the upper ends of these two tubes or chutes to a metal ring, which will hold them open and permit a person to jump or slide easily into the inner tube. Such metal ring I make expansible, so that it may be enlarged or contracted to the proper size to cover the opening of any window or other openings of various sizes. I also provide hooks securely attached to the upper end of the tube or to the metal ring, and which may be hooked onto the window-sill and to the window-sash when open, and thus hold the end of the tube in place over such openings.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a section of the upper end of my improved fire-escape, showing the inner tube of fabric, the outer tube of asbestus, an expansible metal ring, and the hooks for securing it to the window. Fig. 2 is a top and perspective view of the expansible metal ring made of one piece. Fig. 3 is a perspective view of one-half of a two-part expansible metal ring. Fig. 4 is an illustration of my improved fire-escape extending from the upper window of a building to the ground.

Referring to the drawings, A is a tube or chute of fabric or other flexible material, but preferably of canvas.

B is the outer or encompassing tube of asbestus or other fire-proof material; C, the metal ring to which the upper ends of the two tubes are attached; D, the hooks for holding the metal ring over the window or other opening of the building.

In Figs. 1 and 3 I have illustrated an expansible ring made of two semi-cylindrical pieces of sheet metal *c c*, with the upper edge turned over a wire *e*, the ends of which extend outward, and each is formed in a loop *f* around the other wire, so that as the semi-cylindrical piece *c* is expanded or contracted the respective looped ends will slide upon the wire of the opposite end. The expansible ring may, however, be made in a single piece, as shown in Fig. 2, with the ends overlapping, and by means of a series of holes *k* in one end and pegs *i* in the other the ring may be expanded or contracted in the manner of a belt or collar. For the purpose of facilitating the expansion and contraction of the metal ring I attach the asbestus covering to the metal ring by binding a strong wire in the lower edge of the ring, and through openings *g* in its lower edge I pass a wire or small chain *h*, which I also pass through loops or holes in the upper edge of the asbestus cover B. The edges of the asbestus cloth from which the cover is made may be sewed together with wire to render it less liable to destruction by fire, and this cover need not extend over the entire length of the canvas tube, but ordinarily only a little lower than the bottom of the windows in the story immediately below that in which it is being used. Galvanized sheet-iron will be found a convenient, durable, and comparatively inexpensive metal from which to make the said rings.

I claim—

1. A fire-escape consisting of an inner tube of fabric or other flexible material, a two-part expansible metal ring or frame *c*, secured to one end of the tube, to adapt its opening to the size of the opening in the building where it is used, an outer tube or covering of asbestus material firmly secured over the inner tube at its upper end, and de-

vices for attaching said tubes to the building, substantially as described.

2. A fire-escape consisting of a tube or chute of fabric, an encompassing tube of asbestus, an expansible sheet-metal ring to which the ends of said tubes are attached, and two or more hooks to hold said ring in position at the upper window or other opening of a building, substantially as described.

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