(No Model.)

W. H. H. DOANE.

FIRE ESCAPE.

No. 285,471. Patented Sept. 25, 1883.

Fig. 1.

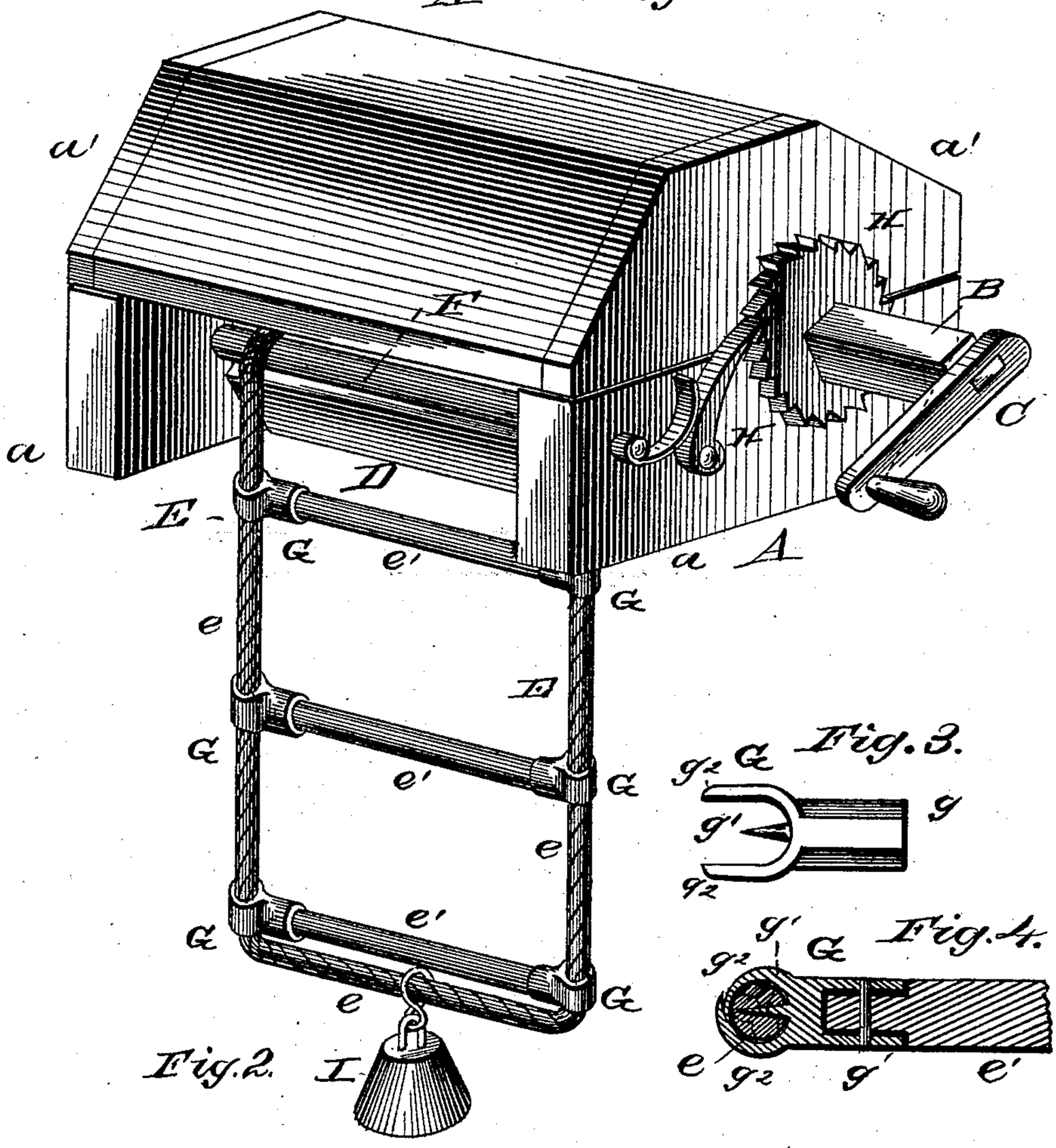
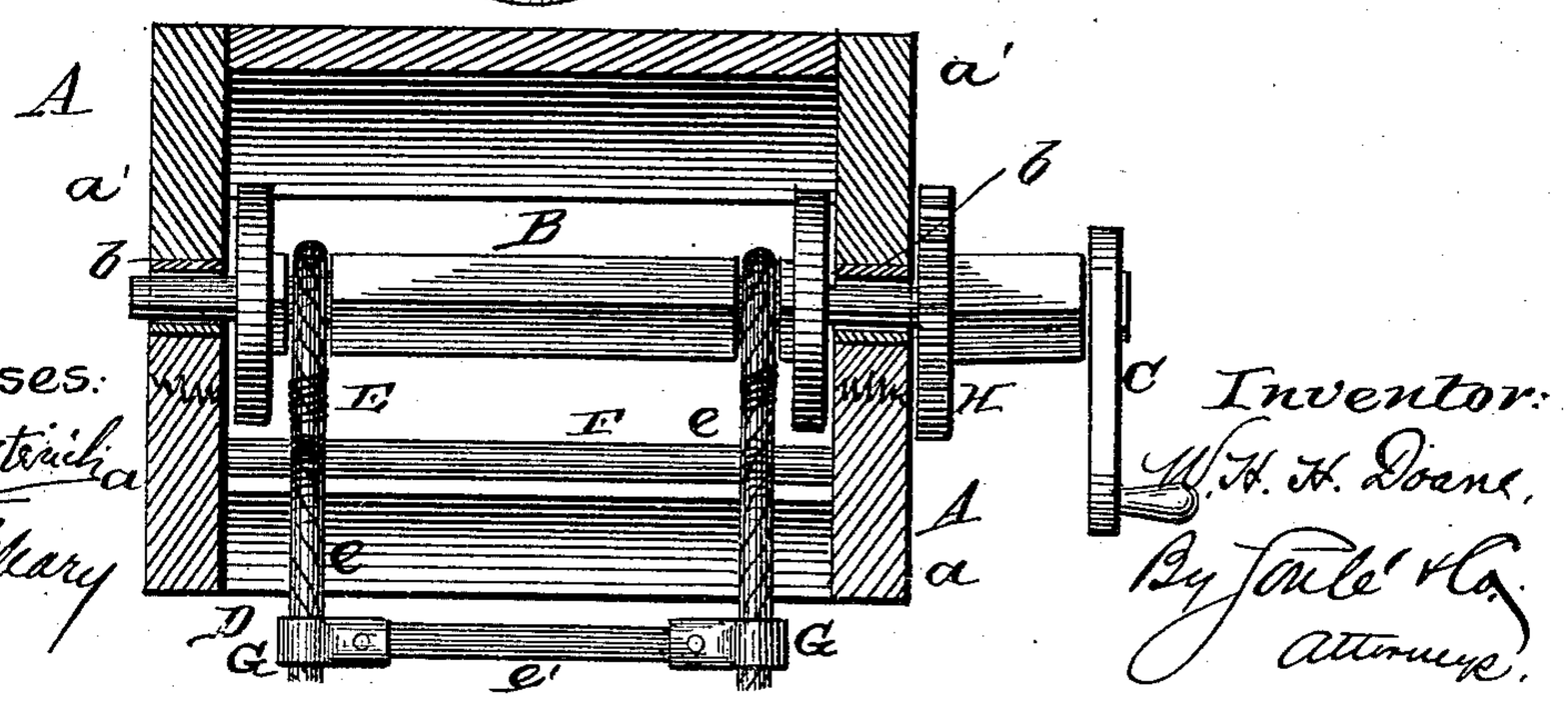


Fig. 2.

Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY HARRISON DOANE, OF MORGANVILLE, KANSAS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 285,471, dated September 25, 1883.

Application filed April 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY HARRISON DOANE, a citizen of the United States, residing at Morganville, in the county of Clay and State of Kansas, have invented certain new and useful Improvements in Fire-Escapes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to fire-escapes, the object being to provide an escape-ladder of strong and durable construction, means for raising and lowering the same, and a neat and convenient casing or box to receive and protect the ladder.

The invention consists in the improved and novel devices and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 represents a perspective view of my improvement. Fig. 2 is a vertical section of the same. Figs. 3 and 4 are detached views, illustrating the devices for securing the rounds of the ladder to the ropes.

A represents a box or casing, which may be of any preferred general construction; but is preferably formed of two separable sections, *a a'*, having bearings *b b* to receive a revolving horizontal shaft, B. One end of this shaft extends outside of the casing, and is provided with a crank, C. One side, D, of the box is left open to receive a flexible ladder, E, whose ends are secured rigidly upon the shaft B, and which is adapted to pass over a roller, F, mounted in bearings within the box A, parallel with the shaft B. The latter consists of a rope, *e*, whose ends are secured to the shaft, and which forms flexible sides or supports for the ladder, and rounds *e'*, secured to the rope sides by a combined ferrule and clip, G. This device G consists of a ferrule, *g*, adapted to fit upon the ends of the rounds, and provided with a spur, *g'*, and integral clamping-arms, g^2 g^2, adapted to receive the rope and be securely bent around the latter. The ends of each round are each secured by one of these clips G, and the rope extends across the lowest round, as shown.

The windlass or shaft B is provided with a pawl-and-ratchet device, H, of any preferred construction, one very suitable device being shown in Fig. 1.

The lower end of the ladder is provided with a weight, I, to adapt the ladder to be lowered by gravity when the pawl is raised.

The box is designed to be secured upon a window-sill, and the device, as is apparent, affords a strong and durable means of escape, which requires but little room, and is of cheap and simple construction.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A flexible ladder consisting of a rope forming the sides of the ladder and a series of rounds secured to the ropes by a ferrule having a spur and clamping-arms, substantially as set forth.

2. A device for securing ladder-rounds to the sides of a ladder, consisting of a ferrule having a spur and clamping-arms, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM HENRY HARRISON DOANE.

Witnesses:
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