

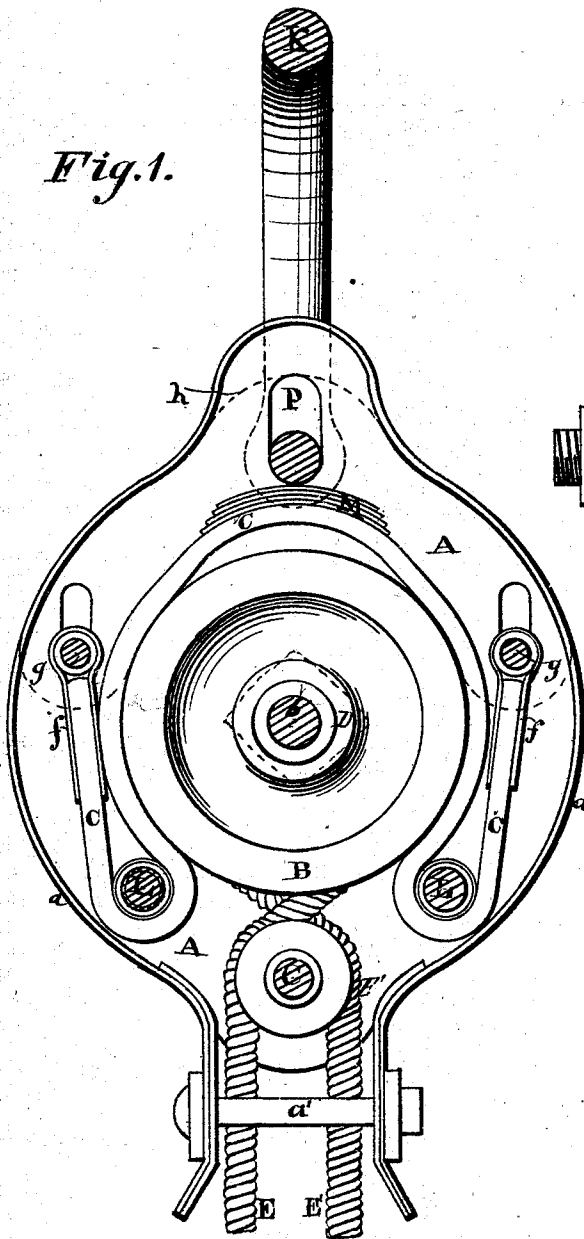
C. A. LOEFFLER.

Fire-Escapes.

No. 146,768.

Patented Jan. 27, 1874.

*Fig. 1.*

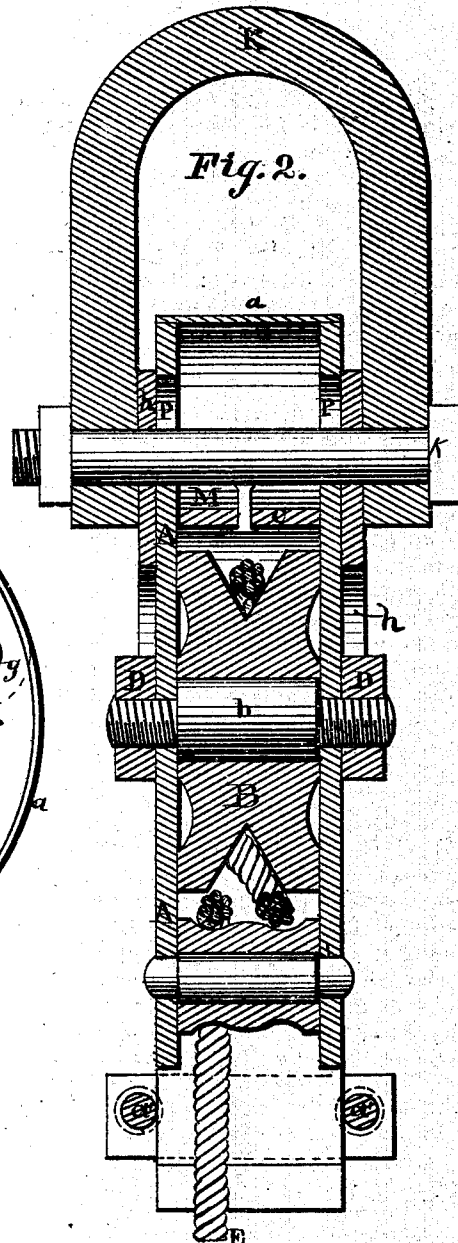


Witnesses.

Chas. H. Asham

H. A. Daniels

*Fig. 2.*



Inventor.

Carl Albert Loeffler

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# UNITED STATES PATENT OFFICE.

CARL A. LOEFFLER, OF CINCINNATI, OHIO.

## IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **146,768**, dated January 27, 1874; application filed May 22, 1873.

*To all whom it may concern:*

Be it known that I, CARL ALBERT LOEFFLER, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Life-Preserver; and I do hereby declare that the following is a full, clear, and exact description thereof, that 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 of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view of my invention, one of the metallic plates forming the frame A being removed to show the interior arrangement of the parts. Fig. 2 is a vertical lateral sectional view of my fire-escape.

My invention consists of the metallic frame A, adjustable hook *a*, pulley B resting upon the bolt *b*, brake C, auxiliary roller C', metallic pieces *h*, and bolts and staple K, and the combination and arrangements of the parts of the device, substantially as shown and described.

The frame A is composed of two flat pieces of metal having bolt-holes therein, the said pieces being held in a position as a frame by screw-bolts, which latter, projecting through said frame, are secured by nuts. In the intermediate space thus provided are located the pulleys B and C', whose bearings are the screw-bolts aforesaid. B is the main pulley, which has a deep recess on the periphery thereof for the reception of the cord or rope E, the said recess being of sufficient depth to admit therein the full size of the cord E. The said pulley has its bearings on the screw-bolt *b*. The brake C is a leather strap having attached thereto the metal loops *f* and bars *g*. The metallic loops are riveted to the leather straps and hold, within the folds of the loops, the bars *g*, which latter project through vertical slots provided in the face of the frame A on either side thereof. The brake or strap C on either side passes over the bars *L* in a reverse direction, in order the better to act as a brake

upon the pulley B. The said strap has riveted thereto the curved steel spring M, which compresses and thus acts as a brake upon the pulley, and thereby reduces the velocity of the descending body.

The roller C' is designed to give direction to the rope E, which passes over the pulley and projects at E'. The metallic pieces are designed to throw the weight of the descending body upon the strap or brake C, which strap then acts as a brake upon the pulley, as aforesaid, the force of the brake being thereby proportioned to the weight of the descending body. The bolt K projects through apertures provided in said metallic pieces, as also through the frame A.

The staple and bolt K are designed chiefly for attaching the device to any suitable projection.

The hoop-frame *a* is closely secured to frame A by the screw-bolts *a'*.

The bolt-holes of the metallic pieces *h*, while being transversely in a line with the slots P of frame A, and thereby admitting the insertion of the screw-bolt K, do not reach to the apex transversely of the slots P, whereby the weight of the descending object is caused to rest upon the bars *g*, and ultimately to act as a brake upon the pulley B.

I claim—

1. The combination and arrangement of pulley B, screw-bolt *b*, brake C, bars *L*, metallic pieces *h*, and screw-bolt and staple K, substantially as shown and described.

2. The combination and arrangement of the strap C, metallic loop *f*, bars *g*, and spring M, substantially as shown, and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of March, 1873.

CARL ALBERT LOEFFLER.

Witnesses:

M. POHLMAN,  
GEO. A. HARRIES.