

(No Model.)

F. A. BONE.
AUTOMATIC FIRE ESCAPE.

No. 312,076.

Patented Feb. 10, 1885.

Fig. 1.

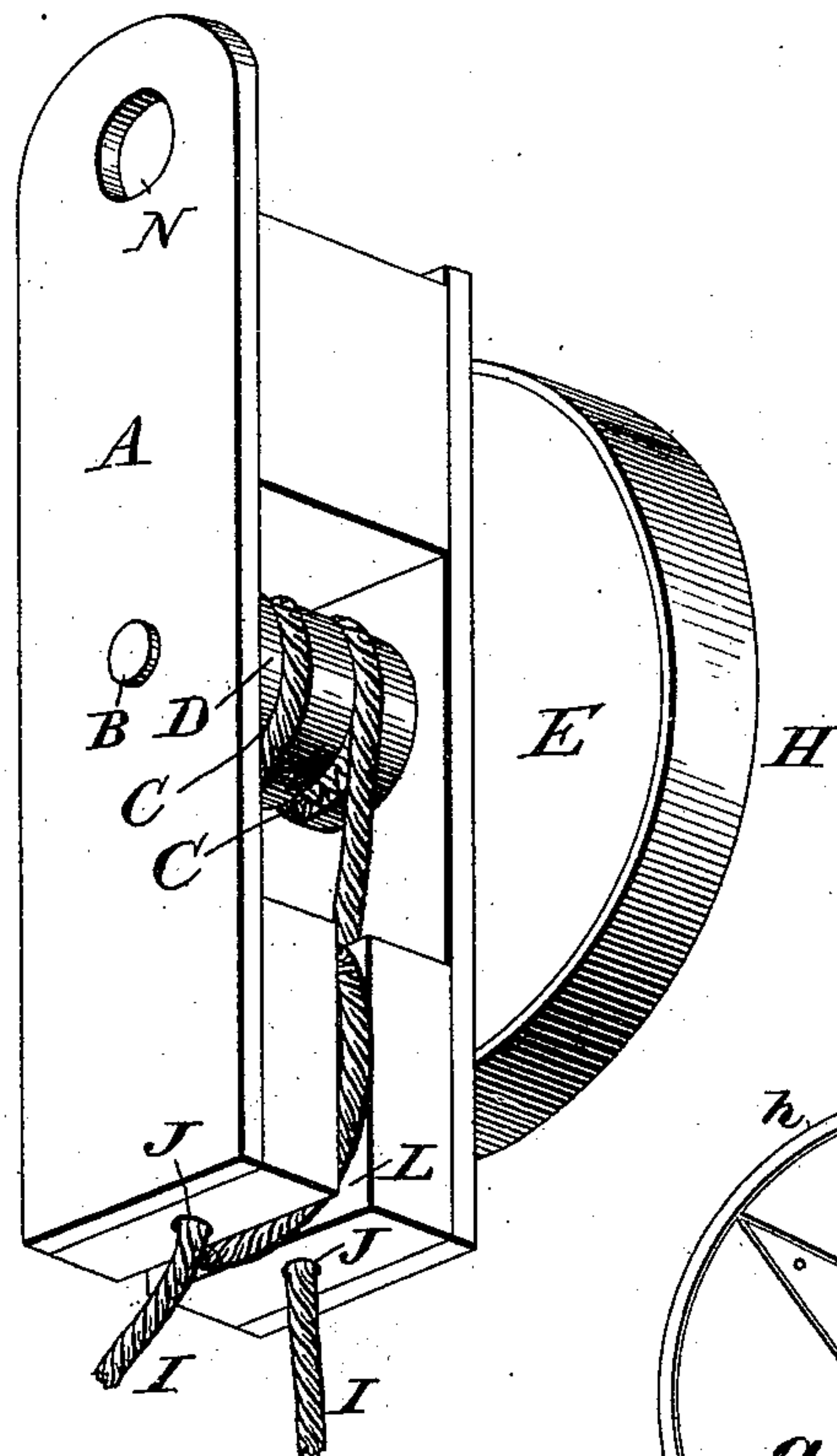
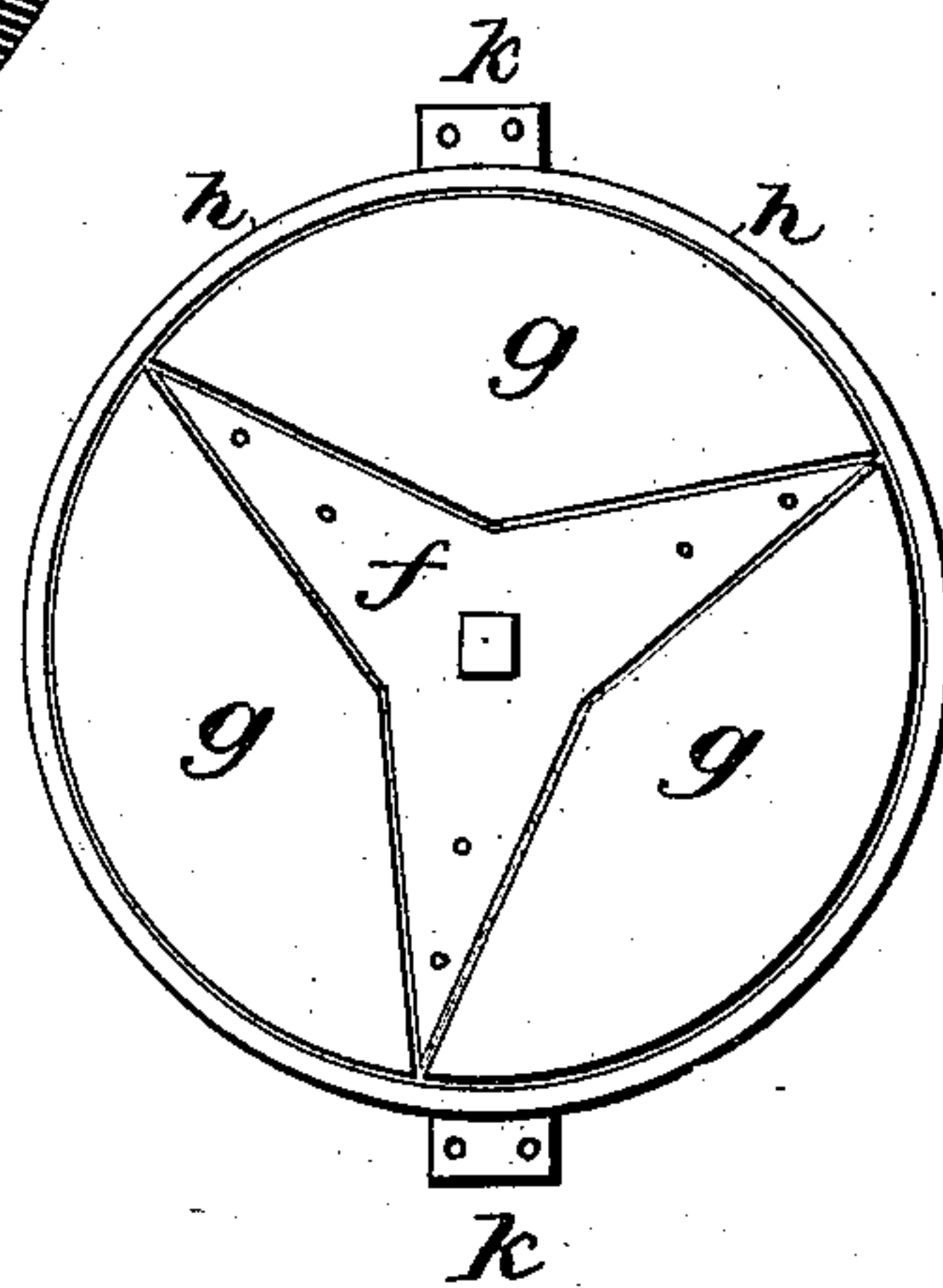
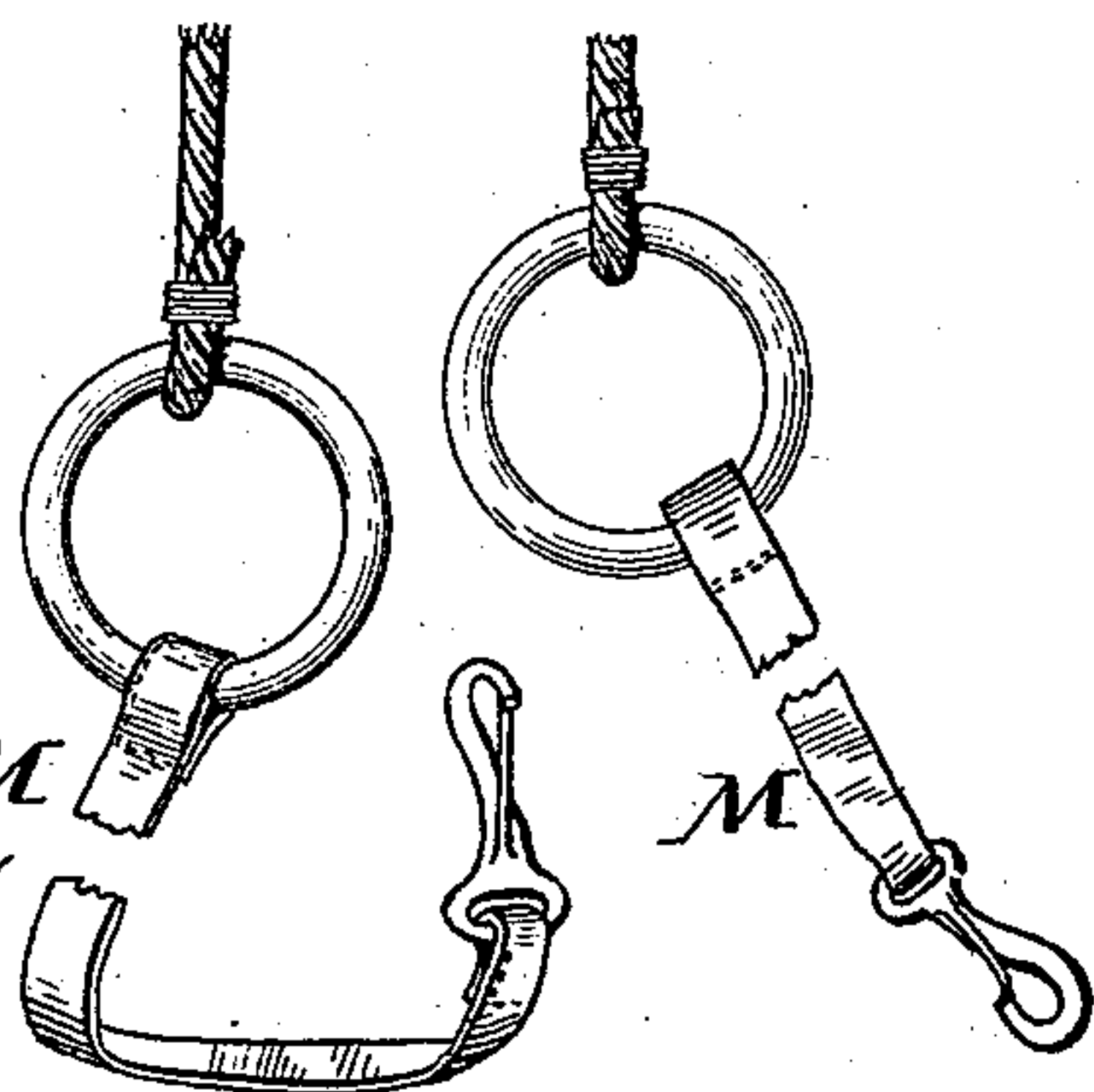


Fig. 2.



Witnesses M
Matter S. Dilatash.
Alf. B. Craver.



Inventor
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UNITED STATES PATENT OFFICE.

FRANK A. BONE, OF LEBANON, OHIO.

AUTOMATIC FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 312,076, dated February 10, 1885.

Application filed May 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. BONE, of Lebanon, in the county of Warren and State of Ohio, have invented a new and useful Improvement in Automatic Fire-Escapes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is an isometric view of my improved fire-escape, and Fig. 2 is a central vertical section of the governor of same.

The object of my invention is to provide a portable or stationary fire-escape which can be easily attached to the opening or window of a building, and which is automatic in its action, and therefore requires no previous practice or knowledge to operate it.

My invention consists of a frame, A, of suitable material, near the center of which is an axis, B, which revolves freely in the frame. Firmly attached to the axis is the roller D, which has two V-shaped grooves, C C, in it. The said grooves are slightly notched on each side to prevent the rope which passes over them from slipping; also, firmly attached to the axis is the center of the governor E, which is composed of a star-shaped center, *f*, on each side of which is fastened a disk of sheet metal, one side being shown at E, Fig. 1. Outside of the center *f* and between the disks of sheet metal are placed loosely three or more pieces of metal, *g g g*, their thickness being a little less than the center *f*.

Placed around the revolving part of the governor above described is the strap of metal H *h h*, which is fastened by the projections *k k* at the top and bottom to the frame A. The strap H is lined on the inside with leather or other suitable material and acts as a brake to regulate the speed of the governor.

At the bottom of the frame A are two longitudinal holes, J J, and a circular groove, L, for the rope I to pass through and around.

The rope I, of cotton, wire, or other suitable material, is made of the length it is desired to descend. The rope passes up through one of the holes in the bottom and around the roller, then across down around the groove in the bottom of the frame, then across and around the roller again and down through the opposite hole. A belt, M M, with a snap, is attached to each end of the rope. The hole N in the top of the frame is for the purpose

of fastening the fire-escape to the building by means of a hook or otherwise. It is operated as follows: The escape being fastened securely to the building, in case of fire it is only necessary for the person who wishes to descend to snap the belt (which is at the top) about his body and swing out of the window, and he will descend at an easy and regular speed to the ground in safety, and then the other end of the rope, with belt, will be at the top ready for another to use immediately if he wishes, and thus many can descend in rapid succession by simply placing the belt which comes to the top about their bodies and letting themselves go. The reason of the regular rate of descent is that the weight of the body on one end of the rope causes the governor E to revolve rapidly, and the centrifugal force, together with the fact that the center *f* is star-shaped, causes the freely-moving pieces *g g g*, to press outward against the fixed band H which acts as a brake, and thus regulates the speed of descent to a safe rate.

What I claim as new is—

1. In fire-escapes, the governor E, with its revolving star-shaped center *f*, freely moving blocks *g g g*, circular metal sides E, and fixed band or brake H, substantially as and for the purposes herein set forth.

2. The combination of the frame A, having the two longitudinal holes J J and circular groove L in the bottom, with the axis B and roller D, having two V-shaped notched grooves, C C, with governor E, having a revolving center, *f*, freely-moving blocks *g g g*, and band or brake H, firmly fixed to the frame A, substantially as and for the purposes herein set forth.

3. The combination of the frame A, having the longitudinal holes J J and circular groove L, with the rope I, having a belt, M M, at each end and passing through the frame A and around the roller D, with the roller D, axis B, governor E, center *f*, blocks *g g g*, and band H, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of witnesses.

FRANK A. BONE.

Witnesses:

M. A. JAMESON,
JOHANN GEO. MESSEMER.