(No Model.)

I. L. STOVER.

FIRE ESCAPE.

No. 283,038. Patented Aug. 14, 1883.

Fig. 1

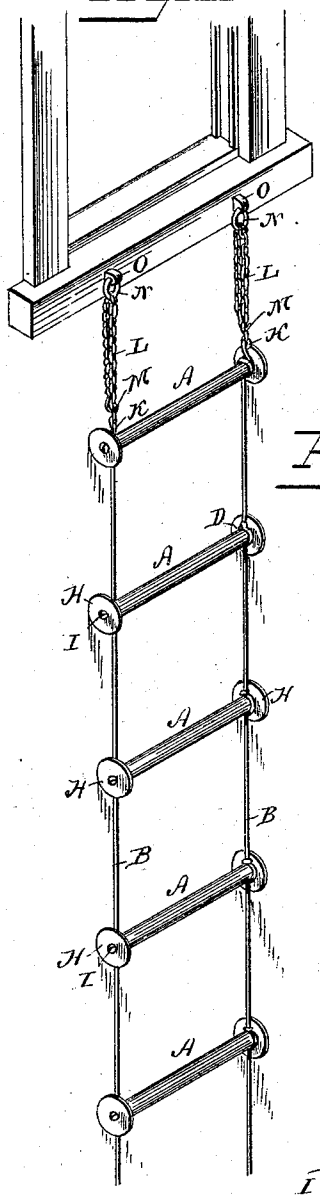


Fig. 2

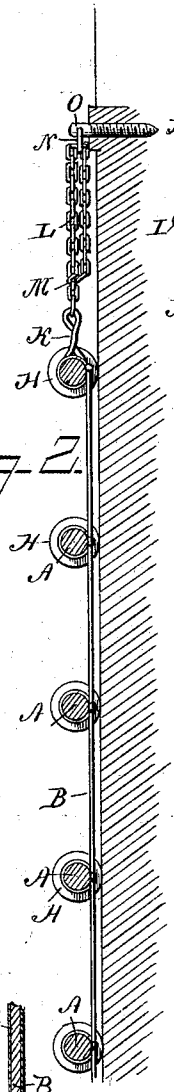


Fig. 3

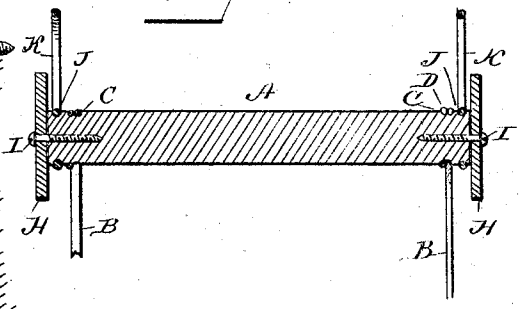


Fig. 4

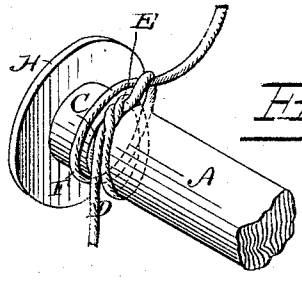
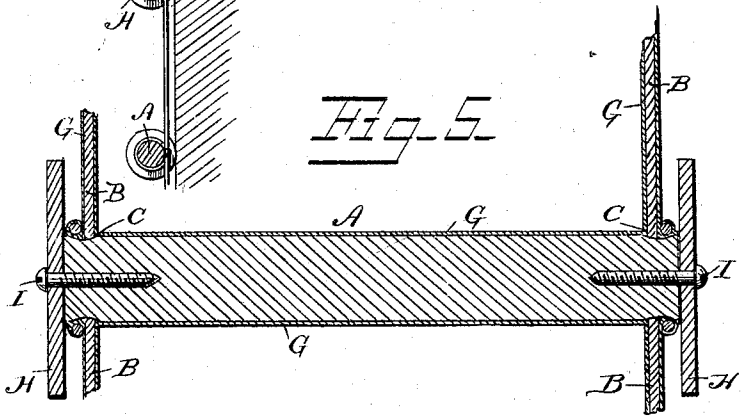


Fig. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

ISAAC L. STOVER, OF CENTRALIA, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 283,038, dated August 14, 1883.

Application filed March 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISAAC L. STOVER, a citizen of the United States, residing at Centralia, in the county of Marion and State of Illinois, have invented a new and useful Fire-Escape, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to fire-escapes of that class in which a ladder is arranged to be thrown from a window to afford a means for escape to the ground.

The invention has for its object to provide a simple, inexpensive, and efficient ladder of this class possessing superior advantages in the construction and arrangement of parts.

In the drawings, Figure 1 is a perspective view of my improved ladder in position for use. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail transverse sectional view taken through one of the rungs. Fig. 4 is a detail view in perspective, illustrating the manner in which the ropes or strands are secured to the rungs. Fig. 5 is a detail sectional view, showing the asbestus or fire-proof covering or coat of the parts of the ladder.

Referring to the drawings, A designates the rungs of the ladder, and B B the ropes or strands which connect the rungs together. The rungs are preferably formed of wood, and are provided with circumferential grooves C near their ends, in which the ropes B are arranged to encircle the rungs, as shown at D, and are tied in a single knot, E, after which another loop, F, is taken around the rung, all as shown in Fig. 4 of the drawings. This method of connecting the ropes to the rungs secures the latter firmly in position and obviates possible slipping of the same out of position. The ropes B are preferably not metallic, but are to be constructed of hemp or other such material, which admits of greater flexibility and allows the ladder to be folded or rolled up into a much smaller space when out of use than if the strands B were formed of flexible wire. These fibrous ropes and wooden rungs are also much lighter than if constructed of metal, and can be more easily transported; but, being of a combustible nature, they are provided with a coat or covering of asbestus or other fire-proof material, G, as plainly shown in Fig. 5 of the drawings.

H designates thin metallic wheels or disks, that are journaled at the ends of the rungs on pins or screws I, extending into the latter. These wheels serve to hold the ladder the proper distance from the wall of the building, and, by being journaled and capable of turning, will not mar or damage the wall in any way by friction against the same. They also serve to retain the ropes on the rungs should they accidentally become displaced from the grooves C. The top rung of the ladder is provided with grooves J J at its ends, in which are received rings or collars K, to which are secured chains L, having hooks M at their top ends. The top ends of these chains are adapted to be passed through rings N, that swing on the end of screw-bolts O, placed in the wall of the building, on the outside or inside of the window, and to be brought down and hooked into one of the links of the chain, as shown, to secure the ladder in position.

The operation and advantages of this improved ladder are obvious. It is also understood that it is useful, since it does not in any way mar the appearance of the building, in painting, building, repairing, and for other purposes.

I claim as my invention—

1. As an improved article of manufacture, the herein-described escape-ladder, comprising the rungs having the same diameter throughout their length, and provided with the circumferential grooves C near the ends, the ropes B B, tied in the single knot F in the grooves, and having another loop taken around the rung, and the flat disks H, secured to the ends of the rungs by the screws or pins passing through the disk and into the end of the rung, so that the disk is secured against the end of the latter and has its bearing on the screws, the said disks also serving to retain the ropes around the rung should they become disengaged from the slot, as set forth.

2. The combination, in a flexible ladder, with the rungs, of the ropes or strands for connecting the same, arranged encircling the rungs near their ends and tied, another outside loop being also formed around the rungs, whereby

the latter are secured firmly in position, as set forth.

3. The combination of the rungs having the grooves near their ends, the ropes or strands secured in the said grooves, and the wheels or disks journaled at the ends of the rungs on pins or screws extending into the end of the rung, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ISAAC L. STOVER.

Witnesses:
JAMES R. CASKEY,
HARLEY S. SHERWOOD.