J. G. KURTZ & T. J. KISTER.

Fire-Escape.

No. 204,583. Patented June 4, 1878.

Fig. 1.

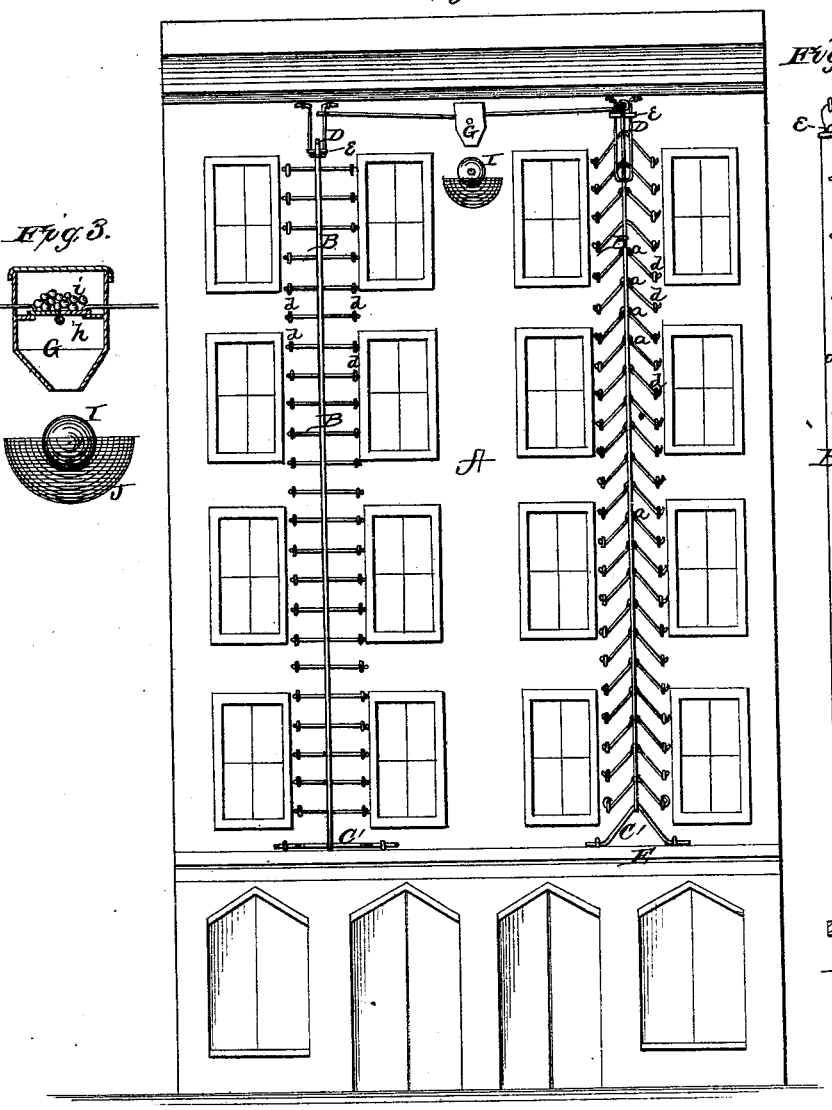


Fig. 2.

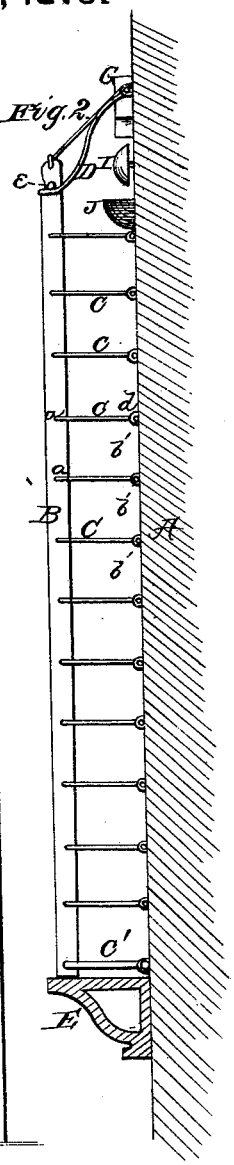


Fig. 3.

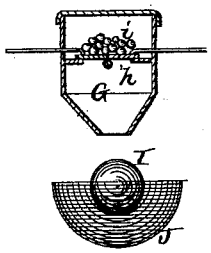
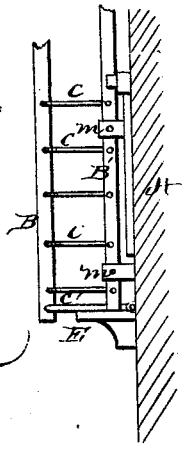


Fig. 4.



WITNESSES

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JOHN G. KURTZ AND THOMAS J. KISTER, OF MILTON, PENNSYLVANIA.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **204,583**, dated June 4, 1878; application filed November 17, 1877.

To all whom it may concern:

Be it known that we, JOHN G. KURTZ and THOMAS J. KISTER, of Milton, in the county of Northumberland, and in the State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of a fire-escape attached permanently to a building and folding close to the same; and also in combining with such fire-escape an alarm, all as hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a front elevation of a building, showing one of our fire-escapes in position for use and another folded up against the building. Fig. 2 is a side view of the fire-escape in position for use. Fig. 3 is a detailed view of the alarm which we prefer to use. Fig. 4 shows a modification of our invention.

A represents the front of a building to which our fire-escapes are attached.

Each fire-escape is constructed in the following manner: B is a flat iron bar of any suitable dimensions, perforated at such intervals as will be most convenient for rungs, hereinafter described, to pass through and form a ladder. C C represent the rungs, which are preferably made of round wrought-iron bars, bent in the center in such a manner as to form, as it were, an eye at *a*, which lies in the perforation in the center bar B. The arms of each rung C are spread apart at any desired angle, and their extreme ends form eyes *b b*, which are attached to staples or eyebolts *d d*, driven in or otherwise permanently fastened to the building. The ends of the rung C need not necessarily be bent to form regular eyes, but only so that they may be connected to the staples *d* in such a manner that they cannot become accidentally detached.

At the upper end of the central bar B a pin, *e*, is passed through the same, and extending on both sides thereof a suitable distance. A heavy wrought-iron rod, D, is bent over the central bar B, passing under the pin *e* on each side of said bar. This rod D is fastened to the wall by strong staples driven into it, into which the ends of the rod pass. This forms the top support of the ladder. The ladder can start from the ground if no impediment exists, such as awnings, cornices over the first story, &c. In this case the ladder will need no support but the solid ground. If the ladder, however, should start from the second story, the lower rung (marked C′) is made extra thick, and is so attached that when the ladder is thrown out for use it will rest upon the cornice E of the first story, and by that means form the lower support.

Ordinarily the rungs C are connected to the building close to the window-frames, so that the ladder can be folded between them close up against the wall; but where impediments, such as window-cornices, &c., would be in the way, we intend to use additional bars B′, similar to the center bar B, instead of the staples. Such extra bars are then placed on a level with the elevated brick-work, and fastened by strong staples *m* to the wall, the ends of the rungs passing through them.

When not in use, the ladder, in either case, folds against the wall, and, when wanted, a simple pull forward will throw it into its proper position for use.

In connection with this ladder we propose to use an alarm, F, which will be sounded automatically by the pulling out of the ladder, so that if anybody should attempt to use the ladder for the purpose of entering the building the alarm will be given. For such alarm we prefer to use the construction shown in Fig. 3, which consists of a cup, G, open at the bottom, and containing a valve, *h*. On this valve are placed a number of balls, *i*, and the valve connected with the top rod D in such a manner that, by turning down this rod by the throwing out of the ladder, the valve will be turned to allow one or more of the balls *i* to drop down and out of the cup G and strike a gong, I, underneath, the balls being caught by a basket, J, surrounding said gong.

It will be noticed that the ladder is double,

and a person descending can pass through from one side to the other, as the exigencies of the case may require.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A V-shaped metallic ladder attached to a building between the windows and forming a double ladder, said ladder consisting of the pivoted rungs C C′, perforated bar B, and staples *d*, or their equivalents, all constructed substantially as and for the purposes set forth.

2. The combination of a metallic ladder attached to a building, and capable of being folded flat against and opened from the same, with an automatic alarm operated by the opening of the ladder, as set forth.

3. The combination of the perforated center-bar B with pin *e* at the top, the rungs C C′, bent rod D, staples *d*, and an alarm, all constructed substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 22d day of October, 1877.

JOHN G. KURTZ.
THOS. J. KISTER.

Witnesses:
JOHN S. EVANS,
HAMMOND CADWALLAR.