No. 635,539. Patented Oct. 24, 1899.

F. J. GLASER.

FIRE ESCAPE.

(Application filed Oct. 24, 1898.)

(No Model.) 3 Sheets—Sheet 1.

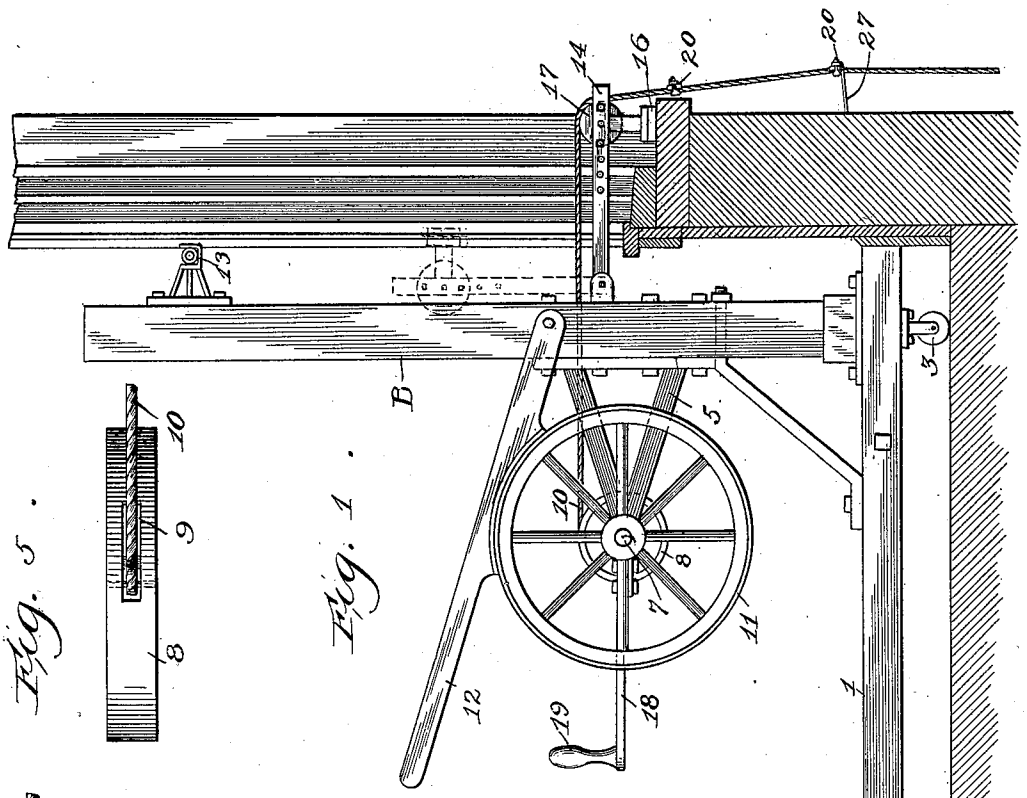


Fig. 1.

Fig. 5.

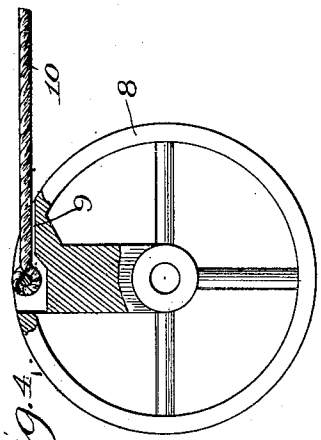


Fig. 4.

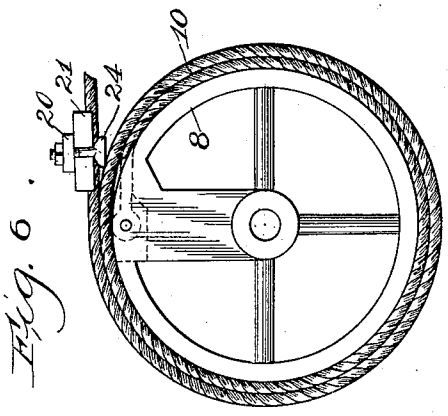


Fig. 6.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 3.

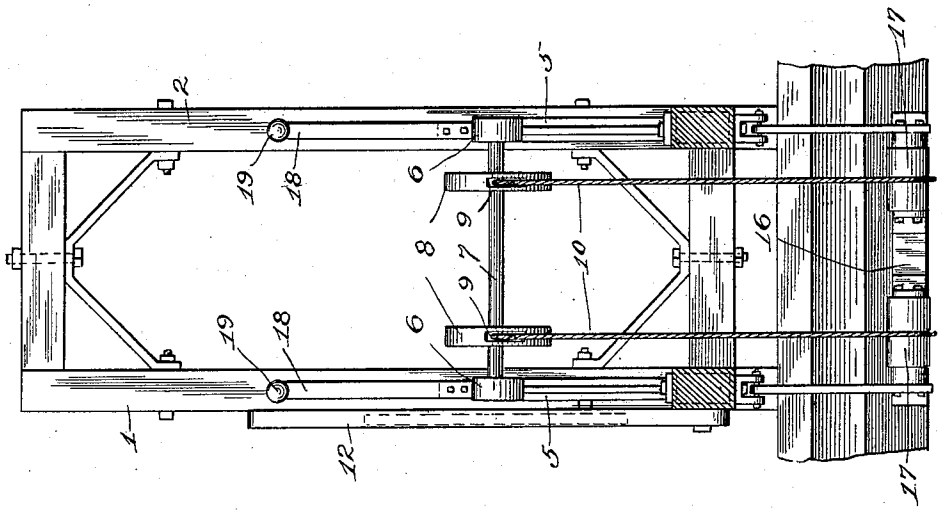
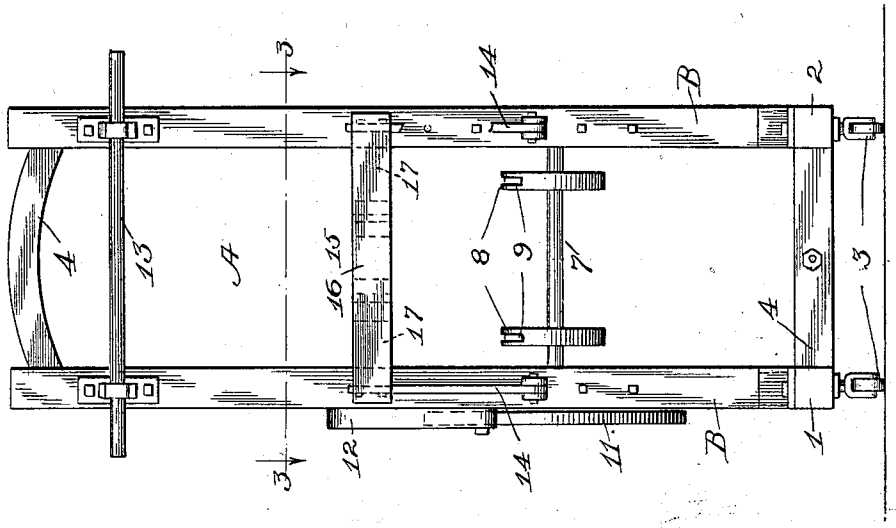


Fig. 2.



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No. 635,539. Patented Oct. 24, 1899.

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FIRE ESCAPE.

(Application filed Oct. 24, 1898.)

(No Model.) 3 Sheets—Sheet 3.

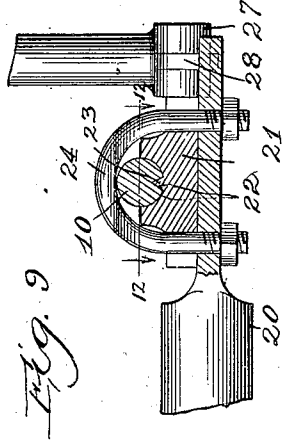


Fig. 9.

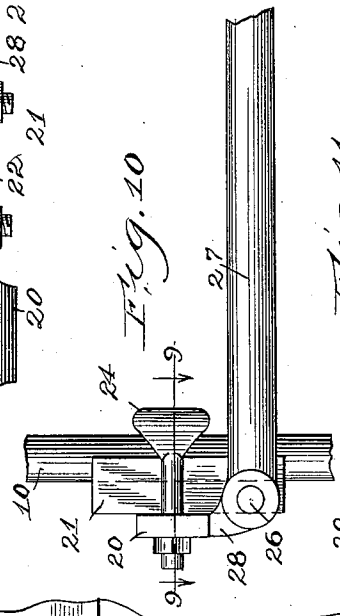


Fig. 10.

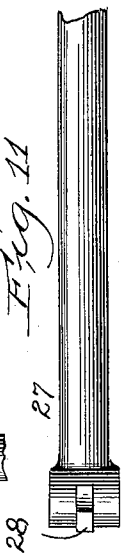


Fig. 11.

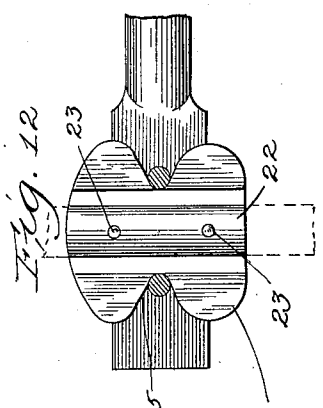


Fig. 12.

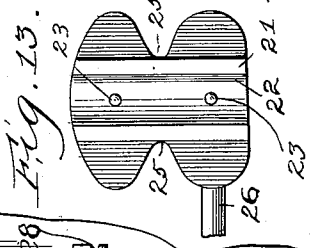


Fig. 13.

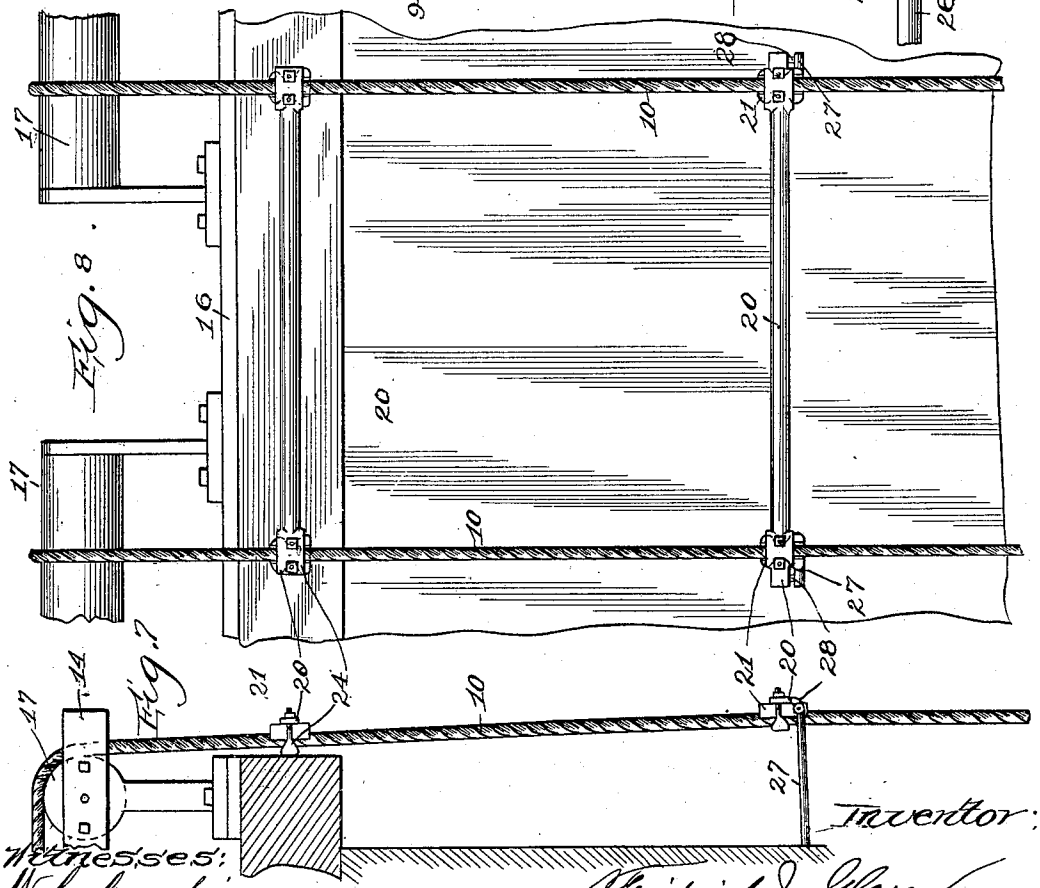


Fig. 8.

Fig. 7.

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UNITED STATES PATENT OFFICE.

FRIEDRICH J. GLASER, OF CHICAGO, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 635,539, dated October 24, 1899.

Application filed October 24, 1898. Serial No. 694,437. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH J. GLASER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby 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.

My invention relates to a novel construction in a fire-escape, the object being to provide a device of this character which can be readily brought into operation and will accommodate a number of people at one time; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a fire-escape constructed in accordance with my invention. Fig. 2 is a front elevation of same. Fig. 3 is a sectional view on the line 3 3 of Fig. 2. Figs. 4, 5, and 6 are detail views of the reel I employ. Fig. 7 is a side elevation showing the rope ladder depending ready for use. Fig. 8 is a front elevation of same. Fig. 9 is a detail sectional view, on an enlarged scale, on the line 9 9 of Fig. 10. Fig. 10 is a side elevation showing the end of one of the rungs of the ladder and devices for holding the ladder away from the walls of the building. Fig. 11 is a detail view in elevation of one of the devices for holding the ladder away from the building. Fig. 12 is a sectional view showing the device for securing the rungs of the ladder to the cables, taken on the line 12 12 of Fig. 9. Fig. 13 is a detail rear elevation showing the end portion of one of the rungs and the devices for securing same to the cables.

Referring now to said drawings, A indicates a frame composed of beams 1 and 2, which is mounted on casters 3. Uprights B are rigidly mounted on said frame A at one end thereof, and are joined by means of a cross-piece 4 at their upper ends. Mounted upon said uprights B and extending rearwardly over said frame A are brackets 5, provided with bearings 6 in their outermost ends, in which a shaft 7 is journaled. Said shaft carries a reel 8, consisting of two pulleys provided with recesses 9 in their faces, in which the ends of the cables 10 of the ladder are adapted to be secured. Said cables 10 are adapted to wind themselves upon the faces of said pulleys. Said shaft 7 also carries a wheel 11 at one end of its outer ends by means of which said reel is adapted to be turned. A brake-lever 12 is pivoted to one of said uprights B and is adapted to be brought into contact with the rim of said wheel 11 to regulate the speed at which the ladder is unwound.

My device is designed to be transported to a window and the ladder to depend from the sill thereof. To prevent said device from tipping when there is strain on the ladder, I have provided a cross-bar 13 on said uprights B, the ends of which project beyond the outer faces of said uprights and are adapted to engage the window-frame. Pivotally mounted on the forward sides of said uprights B are two arms 14, between the outer ends of which a frame 15 is mounted which consists of a foot-piece or base 16, on which are two uprights carrying a shaft on which rollers 17 are mounted, over which said ladder is adapted to run. Said frame can be mounted at any desired point between said arms 14, according to the distance of the window-ledge from the uprights B. Said base or foot piece is adapted to rest upon the window-ledge when the device is in use, as shown in Fig. 1, and when not in use said arms 14 are adapted to be turned up, as shown in dotted lines in Fig. 1. In order to enable the entire carriage to be easily moved, I have provided arms 18, carrying handles 19 at their outer ends, which are secured at their inner ends to said brackets 5. Said ladder consists of the cables 10, upon which rungs 20 are mounted at regular intervals. Said rungs 20 consist, preferably, of metal tubes flattened at their ends, which are secured to said cables 10 by means of clamps, each consisting of a plate 21, provided with a groove 22, adapted to receive the cable. In said groove 22 are two lugs 23, adapted to enter said cable. A strap-bolt 24 is passed over said plate and over the cables, the shanks resting in recesses 25 in said plate and passing through perforations in the end of the rung. By tightening the nuts on said bolt the cable is forced and clamped into the groove 22 and the rung obviously rigidly secured to

said cable. On said plate 21 is a lug 26, on which a rod 27 is adapted to be pivoted. Said rod 27 is provided with a lug 28, which is adapted to engage the projecting end of the rung to limit the pivotal motion of said rod in one direction. When said ladder is down, said rods 27 are adapted to assume a horizontal position and extend inwardly from said ladder to hold same outwardly and away from the walls of the building. When said ladder is rolled up, said rods 27 are adapted to lie parallel with the cables 10.

My device is simple, strong, and durable and can be readily operated, and when in position offers a means of escape for every person in a building.

I claim as my invention—

1. In a fire-escape, a flexible ladder comprising cables and rungs mounted on said cables, and arms pivotally mounted adjacent said rungs and adapted to abut against the walls of a building to hold said ladder away from said walls, substantially as described.

2. In a fire-escape, a flexible ladder comprising cables and rungs secured to said cables, and means for securing said rungs comprising plates provided with grooves to receive said cables, strap-bolts embracing said plates and adapted to clamp said cables in said grooves, said bolts being adapted to pass through perforations in said rungs, substantially as described.

3. In a fire-escape, a flexible ladder comprising cables and rungs secured to said cables, and means for securing said rungs comprising plates provided with grooves to receive said cables, strap-bolts embracing said plates and adapted to clamp said cables in said grooves, said bolts being adapted to pass through perforations in said rungs, and rods pivotally mounted on said plates and provided with lugs adapted to engage said rungs to limit the pivotal motion of said rods in one direction, said rods being adapted to turn on their pivots when said ladder is let down to engage the walls of the building and hold said ladder away from said walls, substantially as described.

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

FRIEDRICH J. GLASER.

Witnesses:

RUDOLPH WM. LOTZ,

H. C. BENTZ.