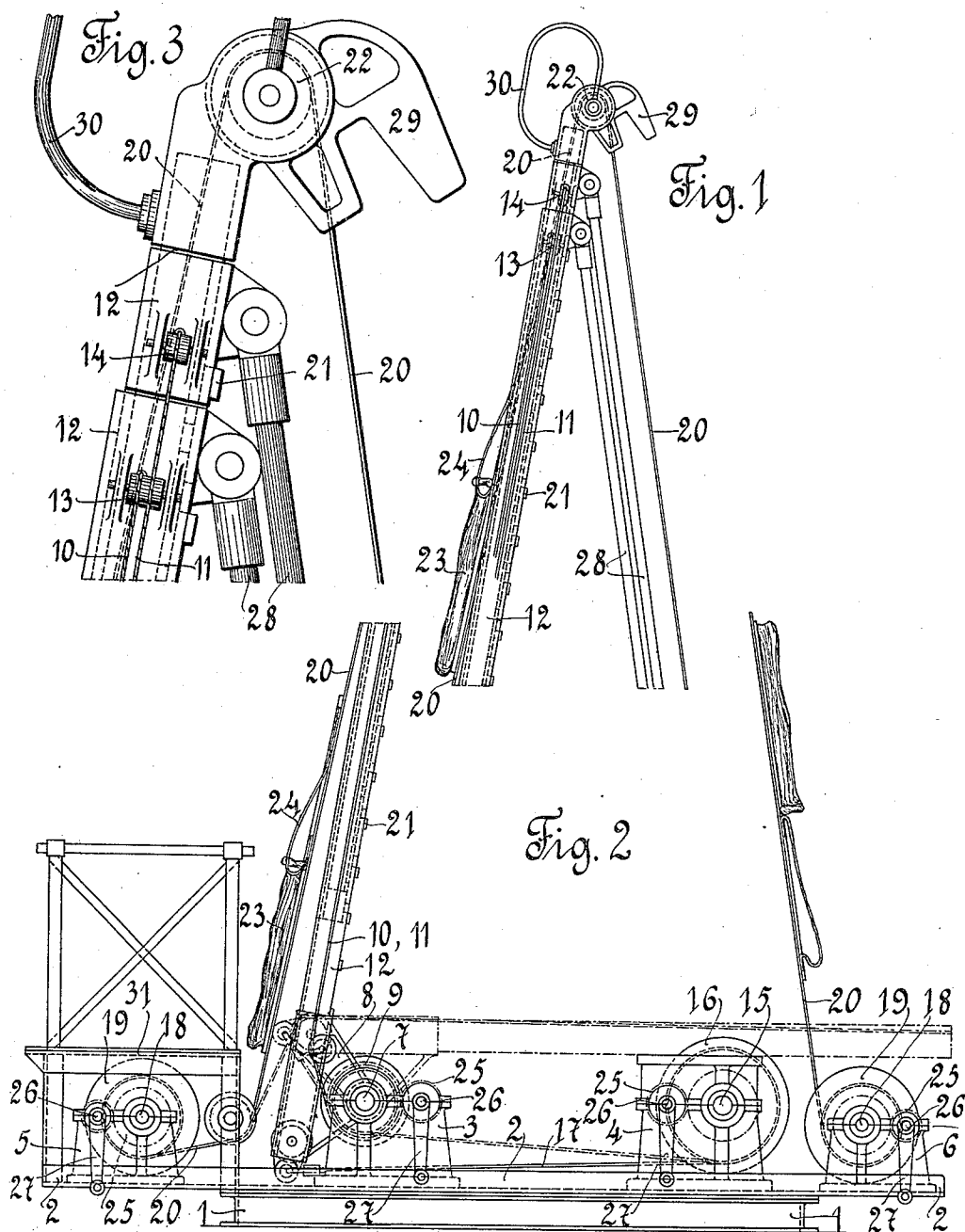


1,043,959.

D. MÜLLER.  
FIRE ESCAPE.  
APPLICATION FILED DEC. 15, 1911.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.



Witnesses—  
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2 SHEETS—SHEET 2.

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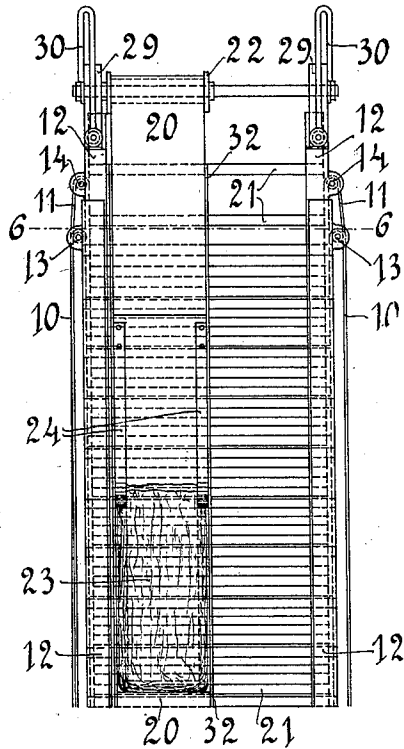


Fig. 4

Fig. 7.

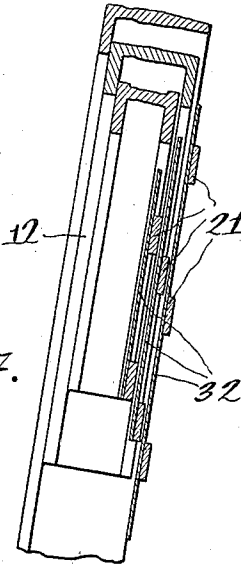


Fig. 5

20 32 21

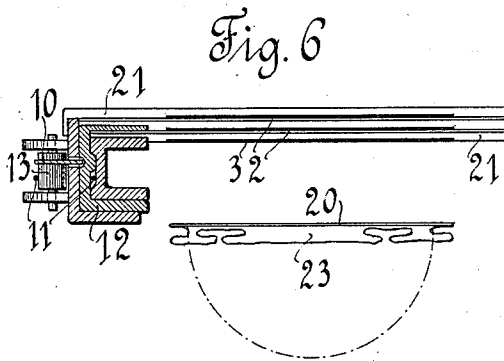
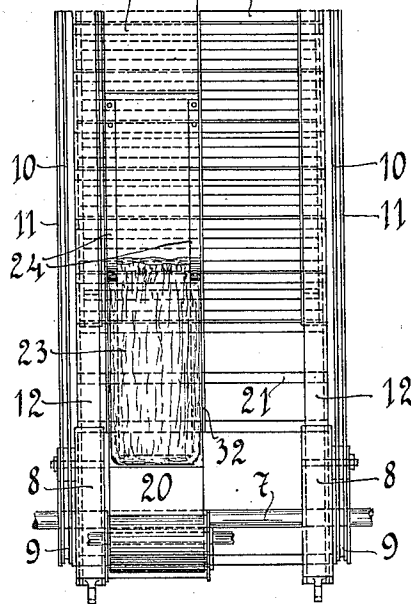


Fig. 6



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# UNITED STATES PATENT OFFICE.

DAVID MÜLLER, OF MOSBACH, GERMANY.

## FIRE-ESCAPE.

1,043,959.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed December 15, 1911. Serial No. 665,985.

To all whom it may concern:

Be it known that I, DAVID MÜLLER, a subject of the German Emperor, residing at 16 Zwingerstrasse, Mosbach, Baden, Germany, have invented a certain new and useful Improved Fire-Escape, of which the following is a specification.

This invention relates to a fire escape for saving persons from burning buildings.

The device consists of a band which runs from a winding drum, provided behind a telescoping ladder, over a guide roller provided at the upper end of the ladder and down the front of the ladder to a second winding drum, and which at certain distances apart is provided with pockets for the reception of the persons to be saved.

In the drawing is shown a constructional form of the invention.

Figure 1 shows the upper, and Fig. 2 the lower part of the escape in side elevation. Fig. 3 shows the upper part of Fig. 1 to an enlarged scale. Fig. 4 shows a front elevation of the upper part of the device. Fig. 5 shows the lower part of the ladder and the band, also in front elevation and Fig. 6 shows a part of the section on the line 6-6 of Fig. 4 to an enlarged scale. Fig. 7 shows parts of the three sections of the ladder in vertical section also to an enlarged scale.

On a circular disk 1 (Fig. 2) which can be rotatably mounted on a transportable frame are secured two parallel rails 2 on which are seated four pairs of bearing supports 3, 4, 5 and 6. In the supports 3 is mounted a shaft 7 on which are mounted two supports 8 which engage with the lower ends of the telescoping ladder, and at the side thereof are two rope drums 9 (Figs. 2 and 5). To the latter are secured the ends of two ropes 10 and 11 (Figs. 1-6) which pass along the outer sides of the ladder uprights 12, over rollers 13 and 14 provided at the upper ends of said uprights (Figs. 1, 3, 4 and 6) and then down the inner sides of the uprights 12, to the lower ends of which the other ends of said ropes are secured. In the supports 4 (Fig. 2) is mounted a shaft 15, on which are mounted two rope drums 16. On these are wound two ropes 17 which engage with the lower ends of the ladder uprights 12. In each of the supports 5 and 6 is mounted a shaft 18, on each of which is mounted a drum 19. To these drums are secured the ends of a band 20

(Figs. 1-6) which on the erection of the ladder passes behind the rungs 21 of the ladder, over a guide roller 22, mounted at the upper end of the ladder uprights 12 (Figs. 1, 3 and 4) and then down the front of the rungs 21 of the ladder. On the upper side of this band 20, there are provided at certain distances apart, a number of pockets 23 (Figs. 1, 2, 4, 5 and 6) and laterally above each two straps 24. The shafts 7, 15 and 18 (Figs. 3) are by means of gearings 25, connected to other shafts 26, mounted in the same supports, which are provided at both ends with cranks 27.

The ladder 12, 21 is erected on the rotation of the shaft 15 by means of the rope drums 16 and the ropes 17. By raising the supports 28 provided at the upper ends of the ladder uprights (Figs. 1 and 3) the erection of the ladder can be facilitated. The extending of the ladder is effected by rotating one shaft 26 by means of the rope drums 9 and the ropes 10 and 11.

For the purpose of saving persons from a burning building, the ladder 12, 21 is extended such a distance that the hooks 29 provided at the upper ends of the ladder uprights 12 (Figs. 1, 3 and 4) come to rest upon the sill of the window of the corresponding story. When this has been effected, the band 20 by the rotation of the shafts 18 on which the drums 19 are mounted is moved in such manner that one of the pockets 23 comes on the front side of the ladder 12, 21, and is a short distance from the upper end thereof. The person to be saved now steps from the window sill over the roller 22 into the pocket 23 holding the rails 30, which are provided at the upper ends of the ladder uprights 12 and then passes his arms through the straps 24. The pocket 23 is then, by the corresponding rotation of the shaft 19 and the movement of the band 20 allowed to descend such a distance that the person can step out of the pocket to a stage 31 provided above the shaft 19 from which steps lead to the ground. The pocket 23, which is nearest the roller 22 is now brought into the position hereinbefore referred to so that another person can step into the pocket and be lowered by means thereof.

On the front of the rungs 21 are provided strips of metal 32 (Figs. 4-7) which pass from the upper to the lower ends of the separate parts of the ladder, and on which

the band 20 can easily slide when loaded. These strips of metal 32 similar to the band 20, only cover the left hand side of the rungs 21 so that the right hand half remains free that the firemen can ascend and descend, (Figs. 4 and 5).

What I claim as my invention and desire to secure by Letters Patent is:—

10 A fire escape comprising a ladder consisting of a number of telescoping parts, a horizontal shaft, around which the ladder pivots, two winding drums disposed one in front of and the second behind said horizontal shaft, a guiding roller at the upper end of  
15 said ladder, a band, passing from one of the winding drums, over the said guiding

roller to the other winding drum, pockets on the upper side of said band, said pockets being disposed at suitable distances apart, means for bringing the ladder into an elevated position, means for extending and telescoping said ladder, and means for rotating the winding drums and moving the said band from one drum to the other. 20

In testimony whereof I have hereunto  
signed my name to this specification in the presence of two subscribing witnesses. 25

DAVID MÜLLER.

Witnesses:

AUGUST O. RIMMER,  
A. O. TITTMANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."