

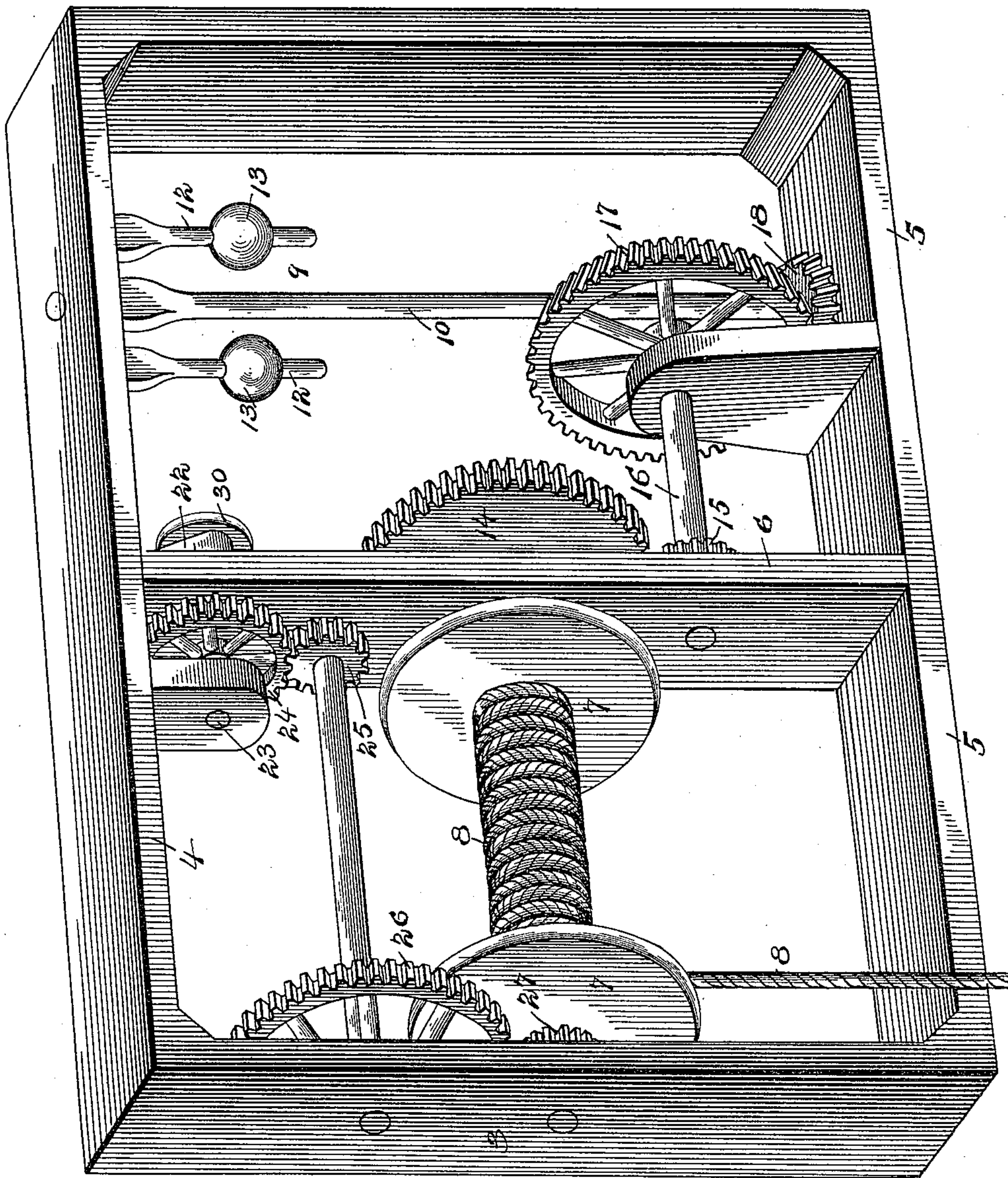
(No Model.)

2 Sheets—Sheet 1.

W. S. PARMAN.  
FIRE ESCAPE.

No. 518,272.

Patented Apr. 17, 1894.



Inventor

William S. Parman,

Witnesses

E. K. Stewart,

N. W. Wiley

By his Attorneys,

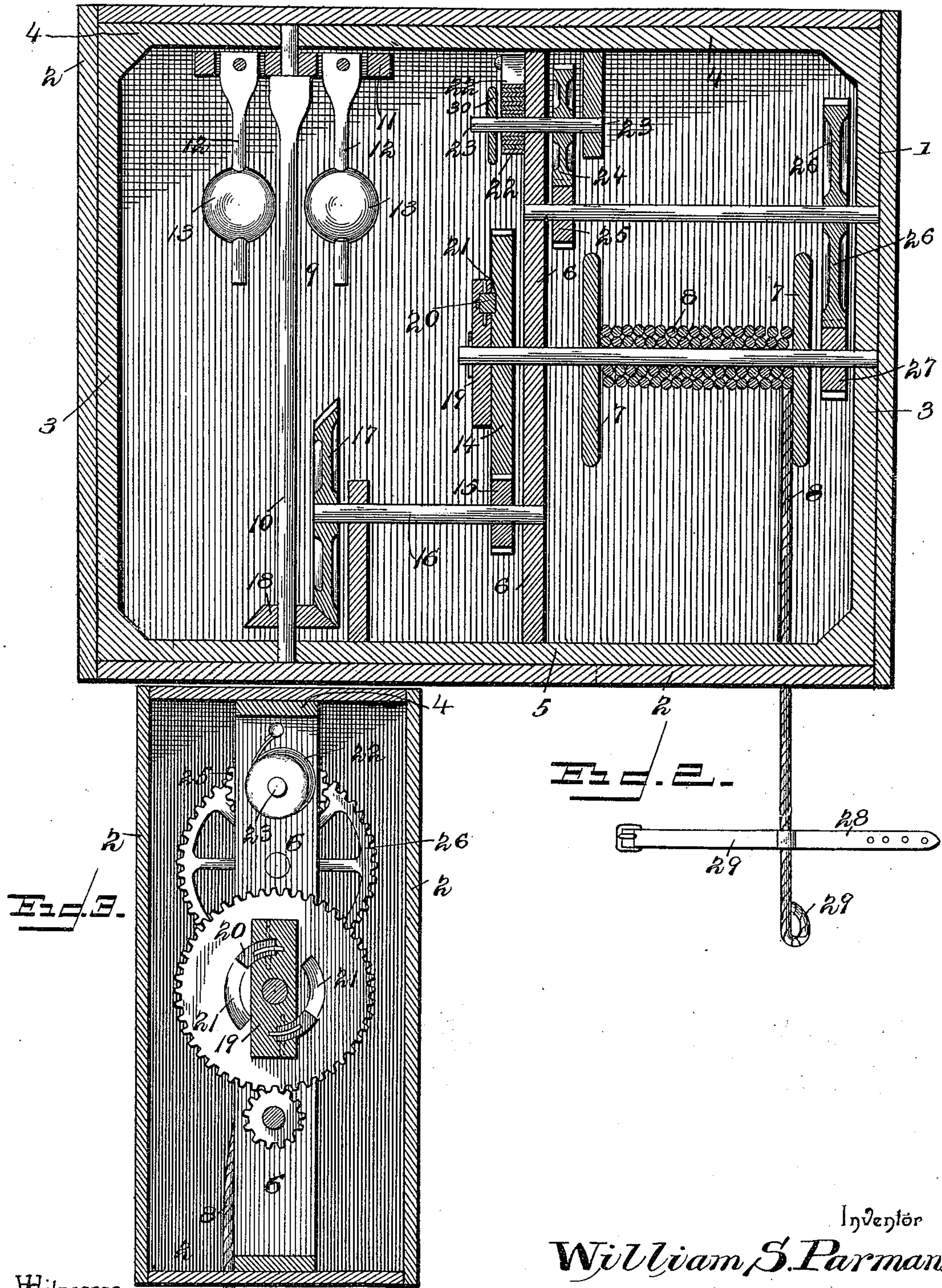
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*J. H. Riley*

By *his* Attorneys,

Inventor  
*William S. Parman*  
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# UNITED STATES PATENT OFFICE.

WILLIAM SHOCKLEY PARMAN, OF STILLWATER, OKLAHOMA TERRITORY,  
ASSIGNOR OF ONE-HALF TO WILLIAM R. ADAMS AND JAMES F. FARRER,  
OF SAME PLACE.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 518,272, dated April 17, 1894.

Application filed September 12, 1893. Serial No. 485,317. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SHOCKLEY PARMAN, a citizen of the United States, residing at Stillwater, in the county of Payne and Territory of Oklahoma, have invented a new and useful Fire-Escape, of which the following is a specification.

The invention relates to improvements in fire escapes.

10 The object of the present invention is to improve the construction of fire-escapes, and to provide a simple and inexpensive one, which will regulate the descent of a person, and in which the rope or cable after a descent will  
15 be readily rewound for another descent.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed  
20 out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a fire-escape constructed in accordance with this invention, the casing being removed. Fig. 2 is a vertical longitudinal sectional view, the fire-escape being arranged  
25 within its casing. Fig. 3 is a transverse sectional view.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.  
30

1 designates a rectangular frame constructed of suitable metal and arranged within a box or casing 2, and composed of vertical sides 3 and a top and bottom 4 and 5, and provided with  
35 a vertical bar 6. The frame has mounted in it a drum 7, the shaft of which is journaled in suitable bearings of one of the sides of the frame and the vertical bar 6. The drum has wound around it a rope or cable 8, which is  
40 fireproof, and which is adapted to be unwound from the drum during the descent of a person or object.

The unwinding of the rope or cable 8 is regulated to prevent a too rapid descent by a  
45 governor 9 connected with the drum by suitable gearing, and comprising a vertical shaft 10 journaled in the top and bottom of the frame and provided at its upper end with a head 11 arranged adjacent to the top of the  
50 frame, and cam levers 12 fulcrumed at their upper ends in openings of the head 11 and

provided with adjustable weights 13, which when the governor shaft 10 is rotated are adapted to swing outward and upward to carry the cams of the levers 12 into engagement  
55 with the lower face of the top of the frame to retard frictionally the rotation of the governor shaft and to regulate the unwinding of the rope or cable from the drum.

The shaft of the drum is connected by gear  
60 wheels 14 and 15 with one end of a counter shaft 16, which has its other end connected by bevel gears 17 and 18 with the governor shaft.

The gear wheel 14 is loosely mounted on the shaft or journal of the drum, and is connected  
65 with the latter by a clutch composed of a head 19 mounted on and fixed to the drum shaft, spring actuated pawls 20 arranged at opposite ends of the head, and a series of tapering recesses 21 arranged in the form of a circle  
70 and each shouldered at one end and adapted to be engaged by a pawl of the head when the rope or cable is unwinding, and adapted to pass the pawls freely when the drum is rotating in a reverse direction for winding up the  
75 cable or rope, whereby during the operation of winding up the rope or cable the governor will be disconnected or cut off, in order that the rope or cable may be rapidly returned to its normal position.  
80

The rope or cable is rewound on the drum by a coiled or barrel spring 22, which has one end secured to the frame and its other end fixed to a shaft 23; the shaft 23 is connected  
85 by gear wheels 24 and 25 with an upper counter-shaft; and the latter is located above the drum and is connected with the same by gear wheels 26 and 27. By this construction the spring is connected with the drum and is adapted to wind up the rope or cable with  
90 great rapidity.

The rope or cable may be constructed of wire or of hemp saturated with a suitable substance to render it fireproof, and it is provided at its lower end with a strap 28 and a loop 29,  
95 or any other suitable means, whereby a person may connect himself with the rope or cable. The device is adapted, besides operating as a fire-escape, to be employed at mines and similar places for raising and lowering various  
100 things.

It will be seen that the fire-escape is simple



and comparatively inexpensive in construction, that it is capable of readily regulating the descent, and that it is adapted to return the rope or cable quickly to its normal position.

5 The casing containing the fire-escape is provided at its bottom with a suitable slot or opening to permit the passage of the rope or cable. The spring shaft is journaled on the vertical bar of the frame and extends on opposite sides  
10 thereof, and is provided adjacent to the spring with a disk 30 to protect the latter.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or  
15 sacrificing any of the advantages of this invention.

What I claim is—

1. In a fire-escape, the combination of a frame, a drum mounted in the frame and provided with a rope or cable, a vertically disposed governor shaft arranged adjacent to the drum, and provided at its top adjacent to the frame with a head, gearing for connecting the drum and the governor shaft, the cam levers  
25 fulcrumed on said head and arranged to engage the frame and provided with adjustable weights, a clutch carried by the drum for connecting said gearing with the same when the rope or cable is unwinding, a spring for re-  
30 winding the rope or cable, and gearing connecting the spring with the drum, substantially as described.

2. In a fire-escape, the combination of a

frame, a drum having a shaft journaled in the frame and provided with a rope or cable, 35 a vertically disposed governor shaft mounted in the frame, and provided at its top with a head arranged adjacent to the frame, the cam levers fulcrumed on the frame and provided with adjustable weights and adapted to en- 40 gage the frame a lower countershaft journaled in the frame, beveled gearing connecting one end of the lower countershaft with the governor, gear-wheels 14 and 15 connecting the lower countershaft with the drum 45 shaft, the gear wheel 14 being loosely mounted on the drum-shaft, a clutch fixed to the drum shaft and arranged to engage the gear wheel 14 when the drum is rotating for un- winding the rope or cable, a spring shaft, a 50 coiled spring mounted on the spring shaft and having one end connected to the same and having its other end secured to the frame, an upper countershaft, and gear wheels connecting one end of the upper countershaft with 55 the spring shaft and the other end of the upper countershaft with the drum, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 60 the presence of two witnesses.

WILLIAM SHOCKLEY PARMAN.

Witnesses:

W. B. WILLIAMS,

JOHN F. WILLIAMS.