

No. 688,289.

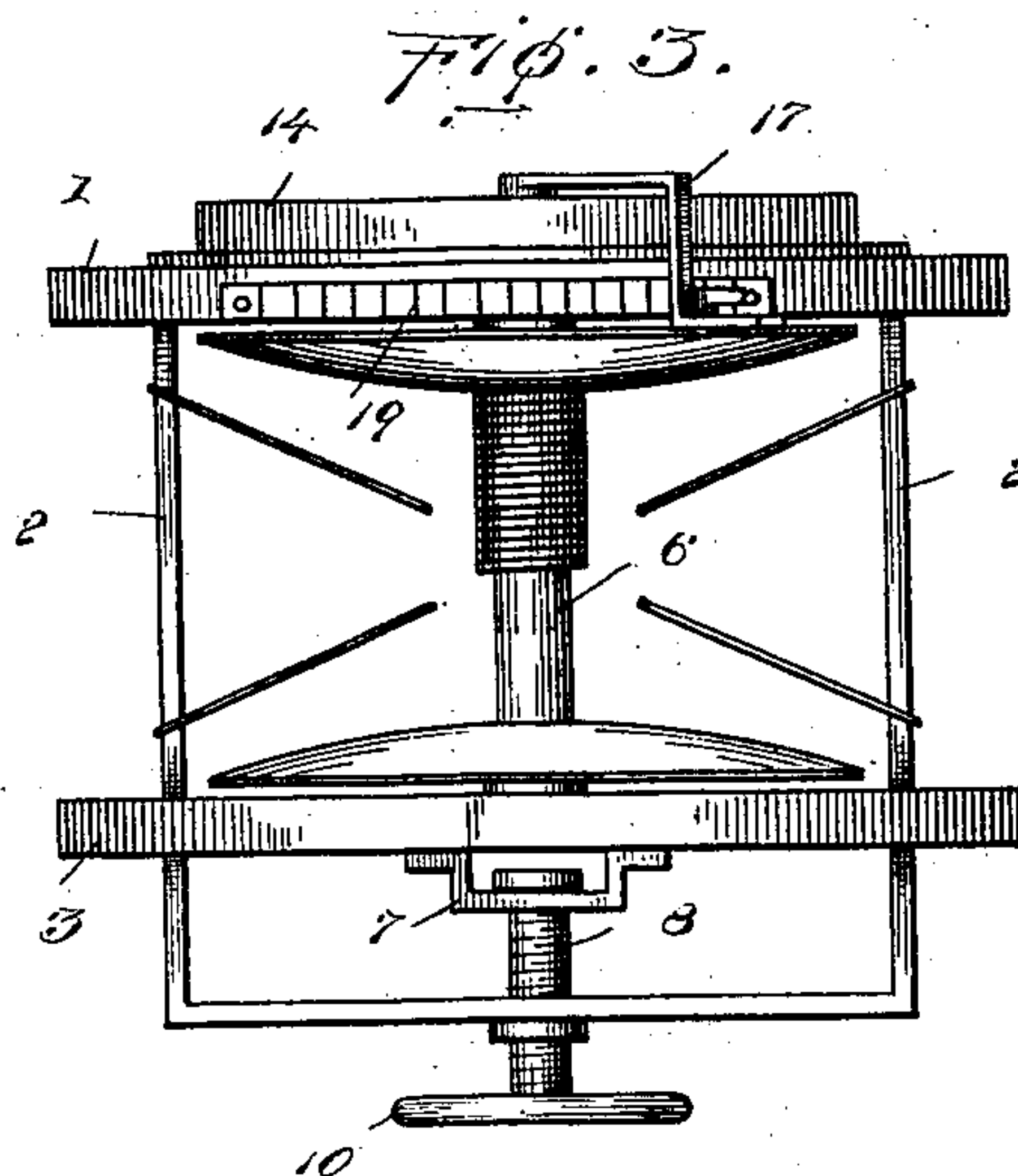
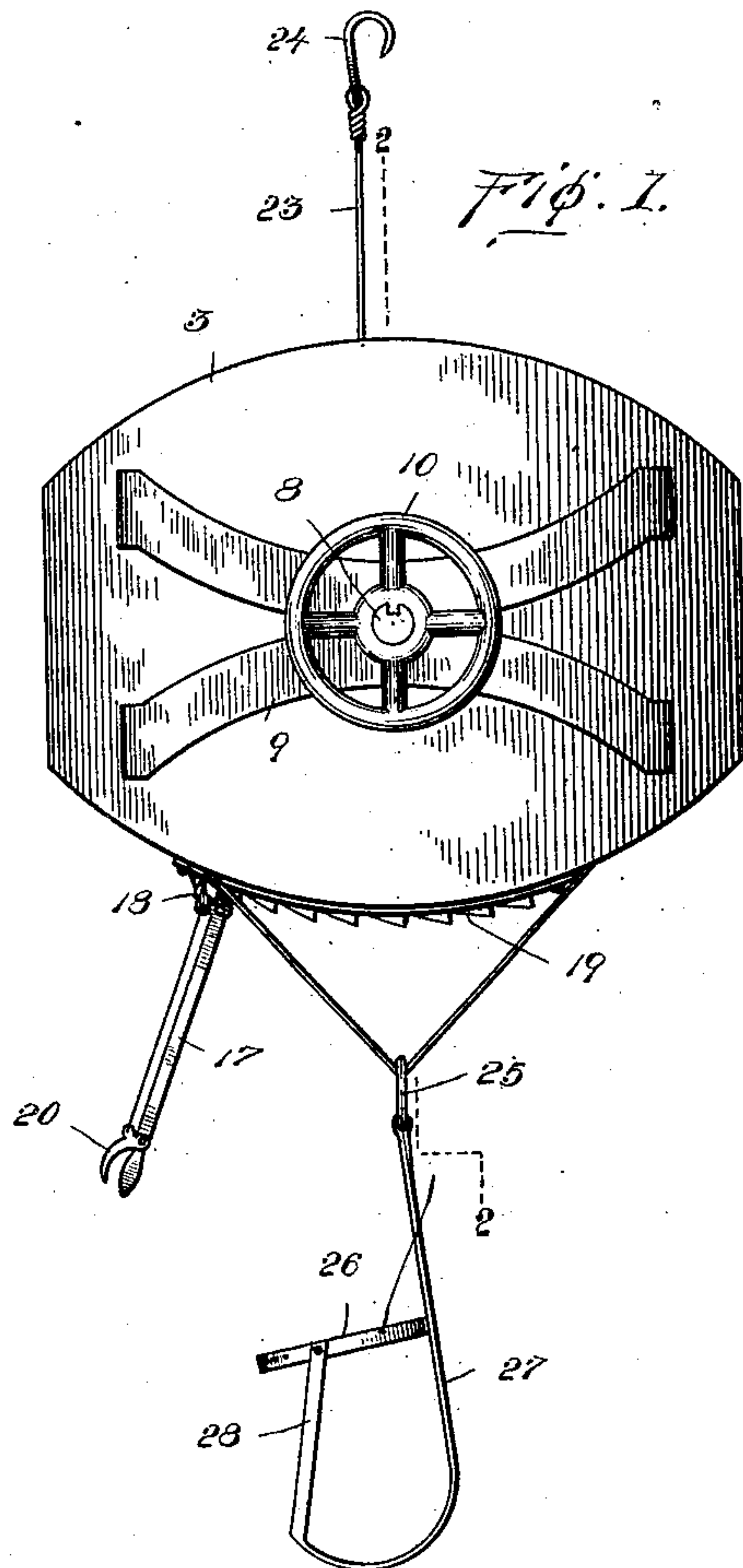
Patented Dec. 10, 1901.

H. H. BOREN.  
FIRE ESCAPE.

(Application filed Dec. 31, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

*J. W. Riley,*  
*Geo. Ackman*

By

*Victor J. Evans* Attorney

Inventor

*H. H. Boren,*

No. 688,289.

Patented Dec. 10, 1901.

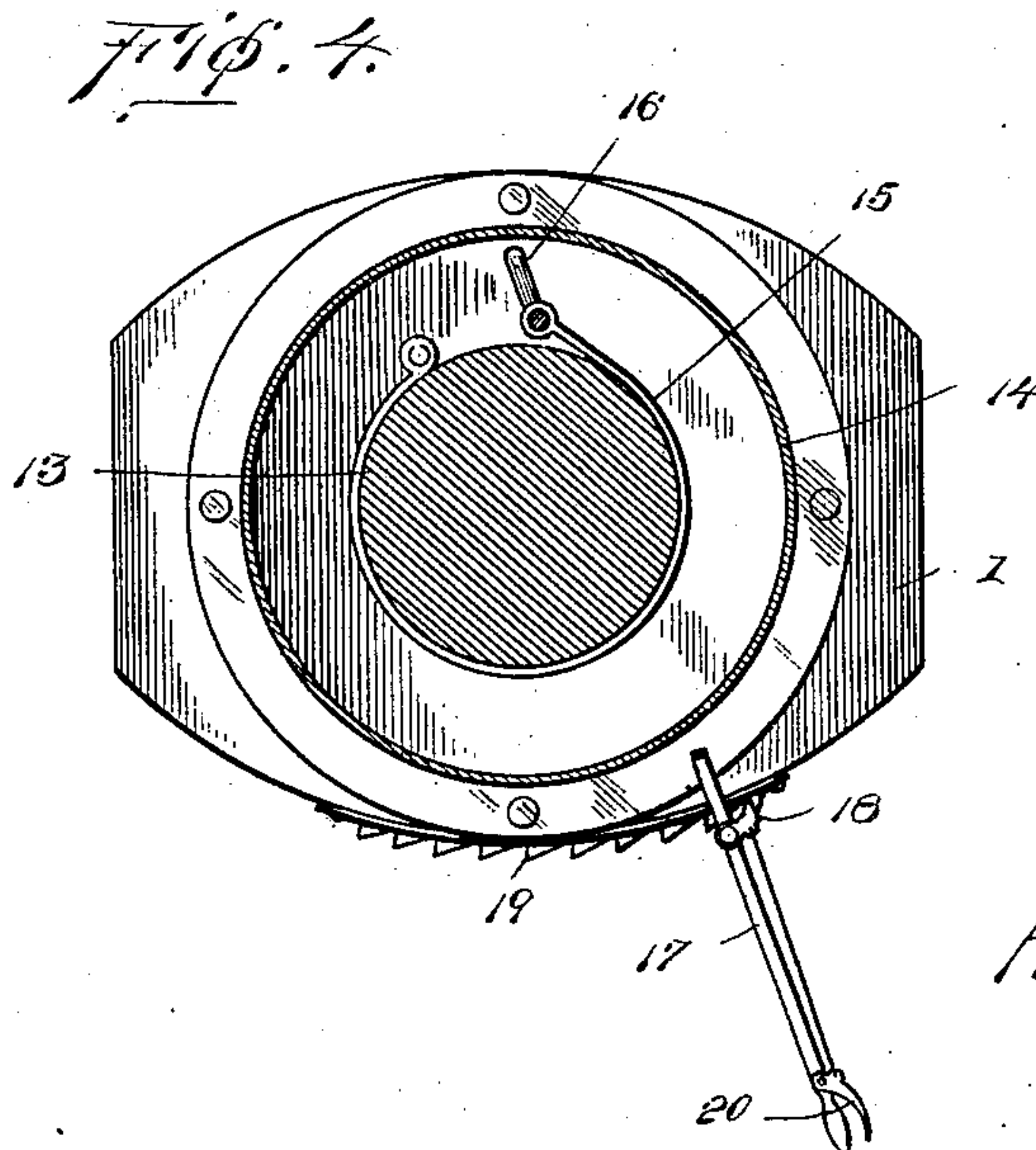
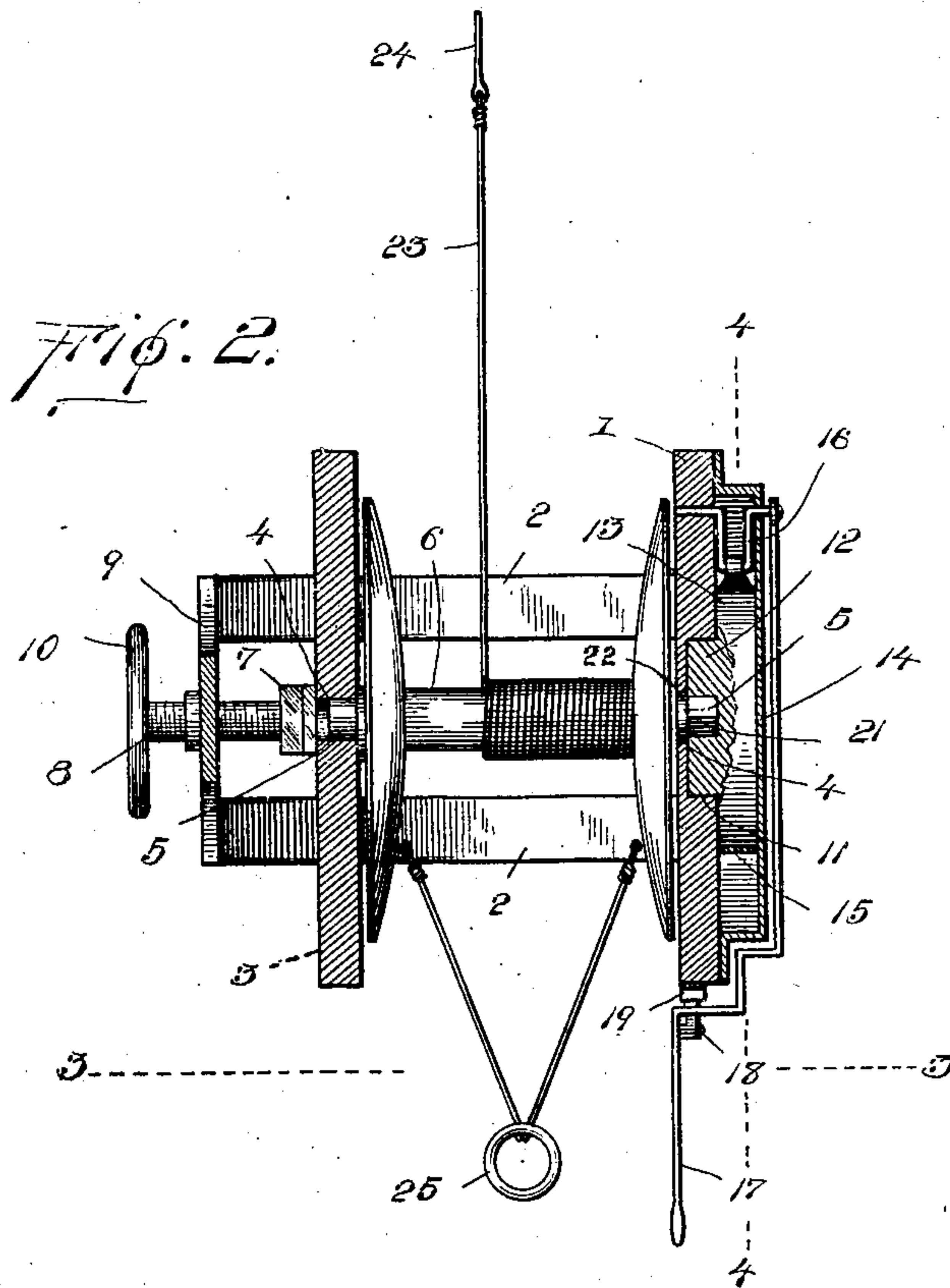
H. H. BOREN.

FIRE ESCAPE.

(Application filed Dec. 31, 1900.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses  
*Geo. W. Gray,*  
*Geo. Ackman.*

Inventor  
*H. H. Boren.*

By *Victor J. Evans* Attorney



# UNITED STATES PATENT OFFICE.

HENRY H. BOREN, OF BAKERSFIELD, CALIFORNIA.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 688,289, dated December 10, 1901.

Application filed December 31, 1900. Serial No. 41,631. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. BOREN, a citizen of the United States, residing at Bakersfield, in the county of Kern and State of California, have invented new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to new and useful improvements in fire-escapes; and its primary object is to provide a light and durable device which is designed to be held in readiness to be attached in case of a fire to a window-sill or some article of furniture in a room and by which a person may be readily lowered to the ground, novel means being employed for regulating the speed of the descent.

With these and other objects in view the invention consists in providing a frame within which is mounted a spool having a cable of suitable construction wound thereon. A disk is secured to the shaft of the spool and is embraced by a brake-band one end of which is stationary while the remaining end is secured to a crank-shaft. A lever is connected to this shaft and when swung will cause the brake-band to clamp the brake-pulley and prevent its rotation according to the force exerted on the lever. Means are provided for locking the lever in the position to which it is adjusted.

The invention also consists in providing means whereby the spool is detachably secured within the frame of the device.

The invention further consists in the novel construction and combination of parts, as will be hereinafter fully specified, and partially pointed out and distinctly claimed.

I have fully and clearly illustrated my improvements in the accompanying drawings, wherein—

Figure 1 is a side elevation of the complete device. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a section on line 4 4 of Fig. 2.

Referring to the drawings by numerals of reference, 1 designates a stationary side plate of the frame of the device, having projected laterally therefrom at each end upper and lower parallel bars 2 2, connected at their outer ends by a cross-bar or bracket 9, and on the bars 2 is slidably mounted a second side plate 3, a duplicate in general construction to the plate 1. These side plates are pro-

vided with bearing-apertures 4, in which a spool-shaft 5 is mounted. On the spool-shaft 5 is fixedly mounted the hub or sleeve of a winding-spool 6. A bracket 7 is secured to the outer face of the movable side plate 3 and extends over the aperture and end of the shaft, and in the bracket 9 is mounted a screw 8, the inner end of which is swiveled in the bracket 7. A hand-wheel 10 is mounted on the outer end of the screw 8, whereby it may be turned and the plate 3 adjusted on the bars 2.

The stationary side plate 1 has formed in its outer face a circular recess 11, concentric to the bearing-aperture therein, in which circular recess is rotatively mounted a circular central projection 12 of a brake-pulley 13, as indicated in Fig. 2 of the drawings, and centrally in the circular projection 12 is formed an angular socket 22, in which the angular end of the shaft 5 is seated, so that as the shaft and spool are rotated the brake-pulley will also turn therewith. The brake-pulley is suitably inclosed by a casing 14, as shown in the drawings.

A brake-band 15, preferably formed of steel, is secured within the casing and has one end adapted to inclose the brake-pulley 13 of central projection 12. The other end of this brake-band is connected to a crank-shaft 16, the opposite ends of which are journaled within the casing 14 and the side plate 1, respectively.

A lever 17 is secured to the end of the crank-shaft 16 which extends through the casing 14, and this lever is provided with a spring-controlled pawl 18, which is adapted to normally engage one of the teeth of a rack 19, secured to the lower end of the side plate 1. Suitable means, as a lever 20, is provided, whereby the pawl may be readily disengaged from the rack when it is desired to increase or diminish the tension of the band 15 from the brake-pulley 13. The shaft 5 of the spool 6 is square at one end, as at 21, and this squared portion engages a corresponding socket 22, formed within the center of the circular projection 12.

A cable 23 of a desired character is wound upon the spool 6 and is provided at its free end with a hook 24. This hook is adapted to be secured to a window-sill or to an article of



furniture within a room. A loop or yoke is suspended from the rods 2 and is adapted to be secured to a ring or eye 25, connected to a strap 26, which is adapted to be secured about the waist of the person to be lowered. A second strap 27 is secured to this eye or ring and serves as a seat, the same being secured to the waist-strap by means of a brace 28, as shown. After the hook has been placed in position the person to be lowered is placed within straps 26 and 27 and the lever 20 is swung so as to partly revolve the crank-shaft 16. This will cause the steel band 15 to bind upon the perimeter of the brake-pulley, and thus retard the revolution thereof. The weight of the person within the straps will cause the cable 23 to unwind, thereby revolving shaft 5 and the brake-pulley. When the speed of the brake-pulley has reached the desired point, the lever 17 will hold the band 15 clamped about the brake-pulley until it is desired to release the same.

By revolving the screw 8 the side plate 3 may be moved away from the spool 6, permitting the same to be readily removed. It will be understood that when the spool has been removed the circular projection 12 will be retained in alinement with the aperture within the side plate 3 by the walls of the circular recess 1, within which it is mounted.

In the foregoing description I have embodied the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make all such modifications as may properly fall within the scope of my invention.

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

1. A fire-escape comprising a stationary side plate having a central circular recess and a shaft-bearing, laterally-extending upper and lower bars at each side of the plate said bars being connected at their outer ends by a bracket, a second side plate mounted on the said bars, and having a shaft-bearing therein; a shaft mounted in the bearings and the side plates and having an angular end, a spool fixed on the shaft, a cable on the spool, a brake-pulley formed with a circular projection engaging in the circular recess of the stationary side plate and having a central angular socket to engage over the end of the spool-shaft, a casing inclosing the brake-pulley and side plate, a brake-band having one end secured to the brake-pulley, and the other end secured to the crank-shaft, and a lever secured to the crank-shaft to clamp the brake-band about the pulley.

2. The combination with a stationary side plate; of rods extending therefrom; a side plate slidably mounted upon the rods; a screw swiveled to the sliding plate; a bracket secured to the rods and engaged by said screw; a shaft journaled within the side plates and removable therefrom; a spool upon said shaft; a brake-pulley secured to, and revoluble with, the shaft; a casing for said brake-pulley; a band inclosing the brake-pulley and fixed at one end; a crank-shaft journaled within the casing and connected to the remaining end of the band; a lever to said crank-shaft; and means for locking the lever in adjusted position.

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

HENRY H. BOREN.

Witnesses:

BEDELL SMITH,  
H. C. DUNLAP.