J. McINNIS.

FIRE ESCAPE.

APPLICATION FILED MAR. 11, 1915.

1,264,878.

Patented Apr. 30, 1918.

3 SHEETS—SHEET 1.

FIG. 1.

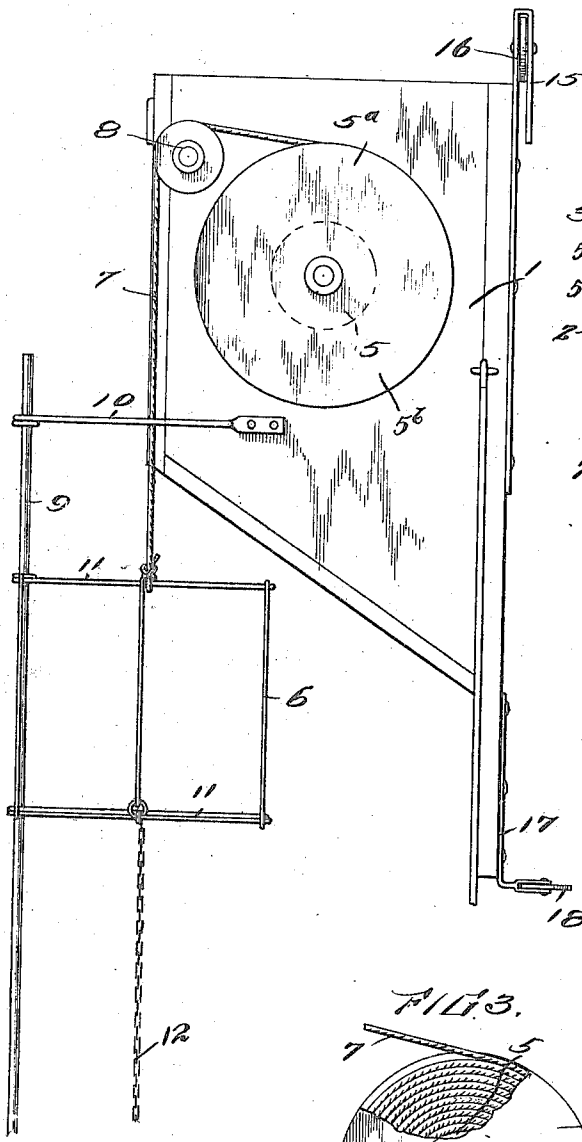


FIG. 2.

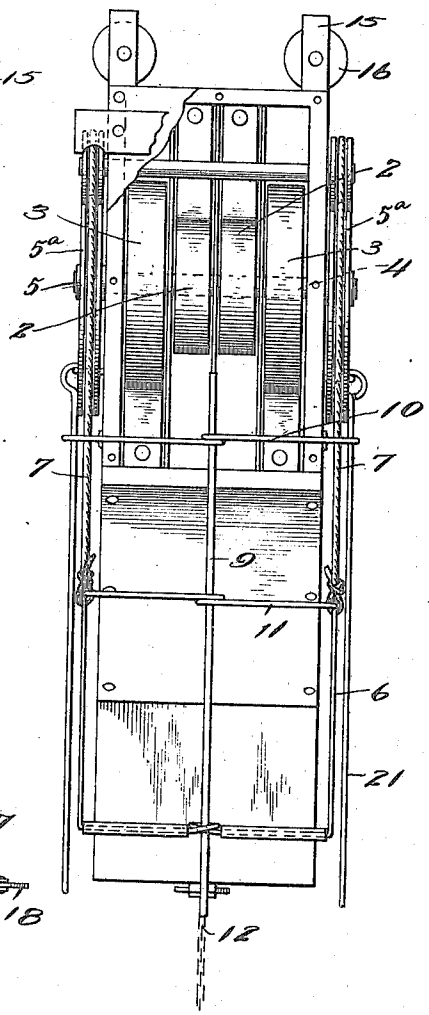
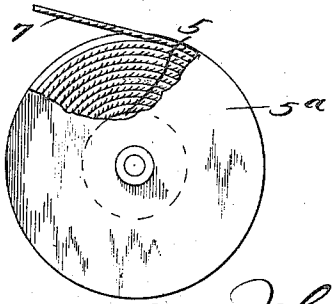


FIG. 3.



Witnesses

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3 SHEETS—SHEET 2.

FIG. 4.

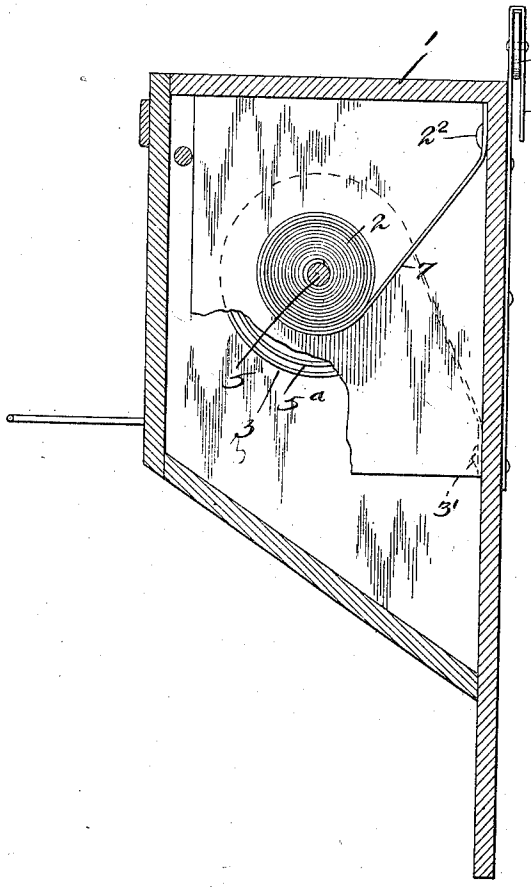


FIG. 5.

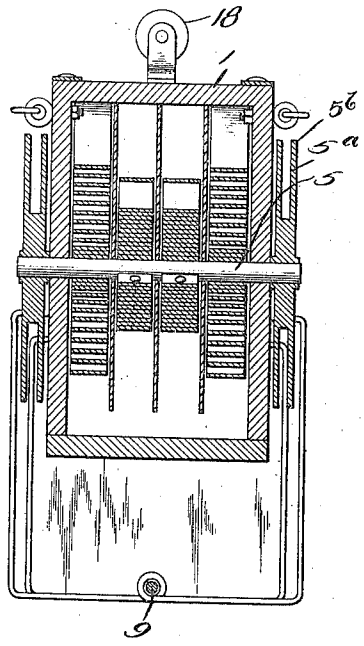


FIG. 7.

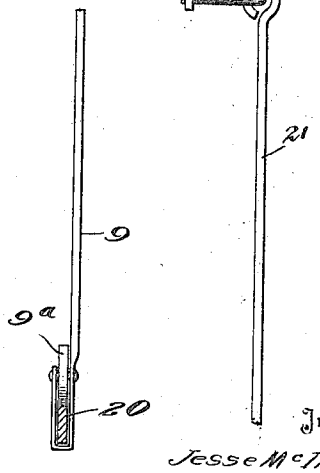
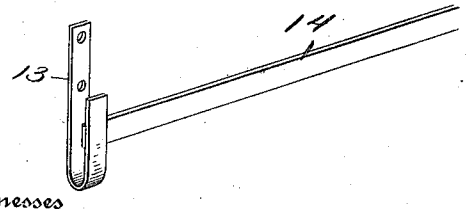


FIG. 8.

FIG. 9.



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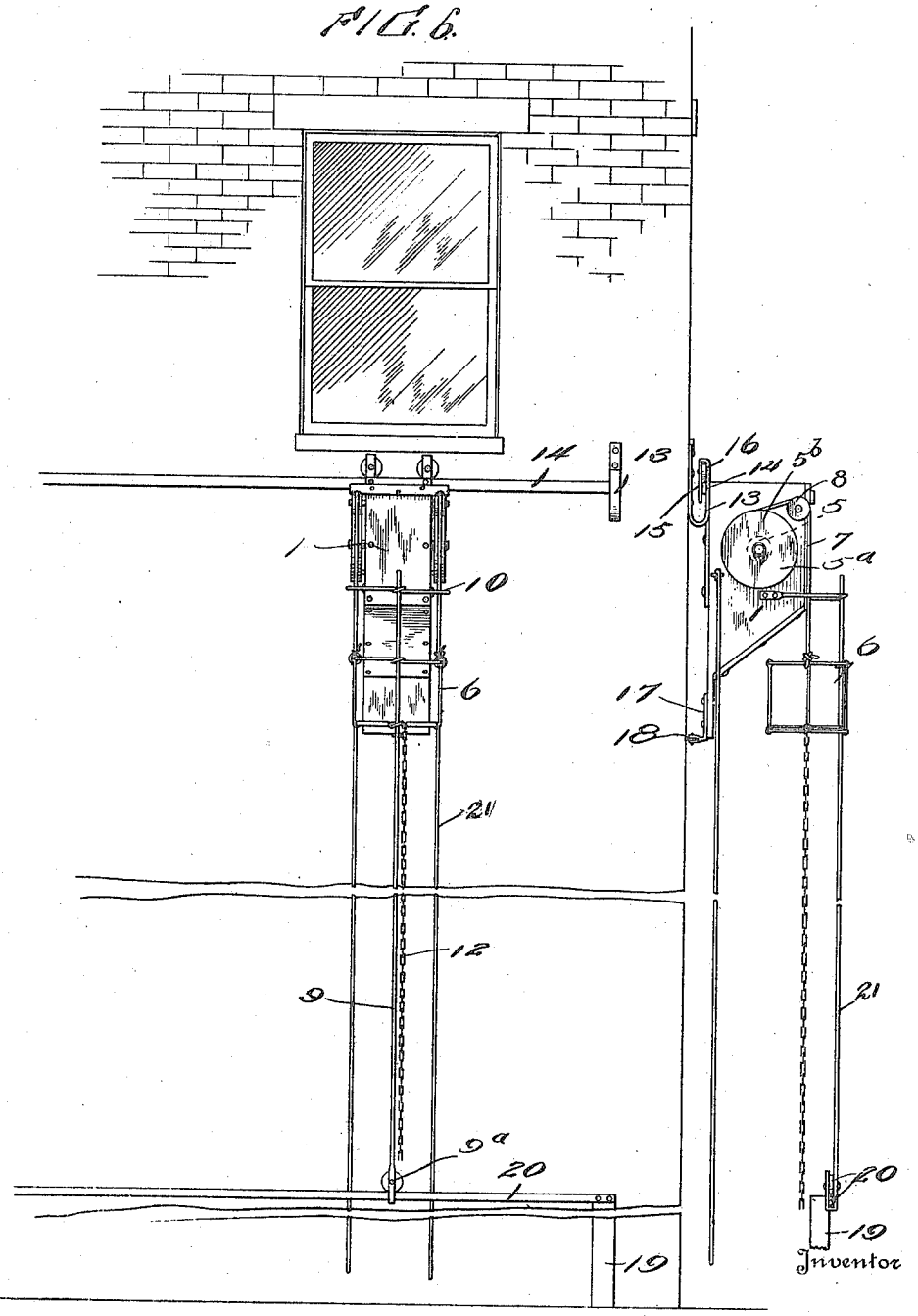
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3 SHEETS—SHEET 3.

FIG. 6.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

1,264,878. Specification of Letters Patent. Patented Apr. 30, 1918.

Application filed March 11, 1915. Serial No. 13,823.

To all whom it may concern:

Be it known that I, JESSE McINNIS, a citizen of the United States, residing at Castor, in the parish of Bienville and State of Louisiana, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to improvements in fire-escapes.

The invention, as indicated, has for its object to provide for escape from a house or building in event of the same taking fire and to provide for such escape in a ready and safe manner.

A further object is to provide for aiding escape by the weight of the person upon the descending receptacle or basket receiving such person.

A still further object is to provide for the automatic return of the basket or receptacle to initial or elevated position after the descent of the basket or the escaping person leaving the latter.

A still further object is to provide for adjusting or shifting the position of the basket or receptacle along the house or building, with respect to any desired point of escape.

The invention consists therefore of certain instrumentalities and features of construction substantially as hereinafter fully disclosed and defined by the appended claims.

In the accompanying drawings is illustrated the preferred embodiment of my invention wherein it will be understood that various changes and modifications and arrangement of parts may be made without departing from the scope of the claims, and in which drawings—

Figures 1 and 2 represent respectively a side elevation, and a front elevation, with a part broken away, of my invention.

Fig. 3 is a side elevational view of one of the pulleys having a portion of one of its sides broken away.

Fig. 4 is a partly sectional and partly side view showing of the larger and one of the smaller coiled springs, together with the housing therefor.

Fig. 5 is a horizontal section taken through Fig. 1 looking downwardly.

Fig. 6 is a general view in front elevation and an end or side elevation of my invention respectively as applied to a house or building.

Fig. 7 is an elevational view of the guide rod showing the supporting member in section.

Fig. 8 is a detached partial elevational view of one of the car or receptacle manipulating rods or members.

Fig. 9 is a fragmental perspective view of the rail for the traveling or supporting rod or member of the car or receptacle, with one of its attaching brackets.

In carrying out my invention, I employ and position within a suitable housing 1 a plurality of preferably flat-metal coiled springs 2, 2, and 3, 3, which springs are each adapted to deliver their rotary tension to a common shaft or axis 5 journaled in the housing 1 and bearing pulleys 5^a, one at each side of the housing. A predetermined number of these springs are normally compactly coiled for effecting the automatic return of the receptacle or basket to an elevated position, the coils of the other springs being uncoiled or in a relaxed position, said relaxed coils, it is obvious, will have a recoiling action as the weighted basket is making its descent and accordingly provide for gradually lowering the latter, or rather guarding against its too rapid descent, as is apparent.

The inner extremities of the springs 2, 2 and 3, 3 are secured to the shaft or axis 5, the springs 2, 2 at 2′, 2′, the points of attachment of 3, 3 being similar but not being shown. The outer extremities of springs 2, 2 are secured at 2^2 to the housing 1, while outer extremities of springs 3, 3 are secured to the housing in like manner at 3′. When the cage descends the springs 2, 2 are unwound, thereby being placed under tension while springs 3, 3 are more tightly wound about the axis 5, being thereby placed under tension, their natural tendency being to assume the unwound position.

A suitably contrived basket 6, which may be of the type shown, or other construction, is suitably suspended from cables 7 attached to and coiled around the pulleys 5^a and wound in vertical layers or coils thereon, said pulleys having guarding lateral disks 5 projecting beyond their peripheries to provide for such winding action, as will appear particularly from Fig. 5, which arrangement is desirable to compactness and simplicity of construction.

The cables 7 pass from the pulleys 5^a to and over guiding pulleys 8 suitably supported at convenient points upon the sides of the

housing 1 to provide for taking the basket suspending cables out of the range of the housing in effecting connection thereof with the basket.

9 is a rod, which has its upper end suitably received and held in fixed position preferably by means of a centrally looped outstanding stout-wire bail-like member 10 secured at its ends laterally to the housing 1, and which rod is held in guiding position with respect to the basket 6, but itself stationary, by means of the loop formed intermediate its length, said rod passing freely through loops of said members 11, allowing the basket to move independently thereof. By means of this arrangement, it will be observed that, in event of the basket not being sufficiently weighted by the occupant to cause the proper descent of the basket, or to descend with the desired rapidity, the occupant may grasp and exert the required force upon said rod or in other words pull upwardly thereon and in that way aid in effecting his descent, as is obvious. Or, in the case of a child occupying the basket, the lowering of the basket may be effected by grasping and pulling upon the chain 12 attached to the basket, say to its bottom, about centrally thereof.

The casing 1 is suitably supported with respect to the building by securing the same thereto, by means of suitable brackets 13, and rail 14, the latter being of a length to extend the distance between and include the window of the building, and may be positioned above or below the windows, the housing or casing 1 having attached thereto at its upper rear corners, brackets 15 equipped with plane-faced wheels 16 traveling upon said rail. Also to the lower rear corner edges of the housing 1 are secured brackets 17 also equipped with plane-faced wheels 18 for traveling against the building and retaining the basket out of contact with the latter, as the device may be moved from window to window in receiving the escaping persons.

Also suitably secured in position, opposite the lower portion of the building, at the sidewalk, and upon suitable supports as 19, is a rail 20 upon which also travels a plane-faced wheel 9^a carried in a U-shaped lower terminal of the rod 9 for the guidance thereof as the device is moved as above indicated.

Suitable rods 21, loosely connected to the housing 1 and adapted to be grasped by the hand, are provided for conveniently moving the device along its supporting rail by simultaneously exerting a pushing, and a pulling action upon said rods, respectively, by two or more persons standing upon the ground or sidewalk as will be readily appreciated.

From what has been stated it is believed that the operation and advantages of my invention have been made apparent, it being observed however, that the device is practically automatic in performing both its descent and ascent while provision is made for any contingency which may arise, as, for instance, in having, at hand, means adjunctive of the fire-escape, to enable the occupant of the basket to aid himself or herself in making effective his or her escape.

I claim—

1. In a fire escape, a housing, a cage suspended therefrom adapted to be lowered and elevated, means to permit the escape to be shifted in position laterally along the side of a building to which the same is applied, said means comprising a track arranged without the building wall at the desired distance from the earth, by means of brackets secured to said walls, second brackets secured to the upper, rear corners of the housing, equipped with plane-faced pulleys adapted to travel upon said rail, third brackets secured to the lower rear corners of the housing equipped with wheels traveling against the building when the escape is shifted, a second rail positioned opposite the lower portion of the building to which the device is applied, adjacent the side walk, supports provided for the second rail, a vertical rod extending downwardly from the housing, terminating in a U-shaped end portion and carrying a wheel which travels upon the second rail, and means, comprising rods, loosely attached to the sides of the housing, to manually shift the device from one position to another.

2. In a device of the type described a housing, a cage, said cage adapted to travel downwardly and be elevated, means to guide the vertical movement of the cage, said means comprising a bail-like member, a vertical rod held thereto against movement at the upper end thereof, means at the lower end of the rod to prevent independent movement thereof and means provided upon the cage loosely engaging the vertical rod permitting vertical and preventing lateral movement of the cage, said bail-like member having its ends secured laterally to the housing.

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

JESSE McINNIS.

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