

(No Model.)

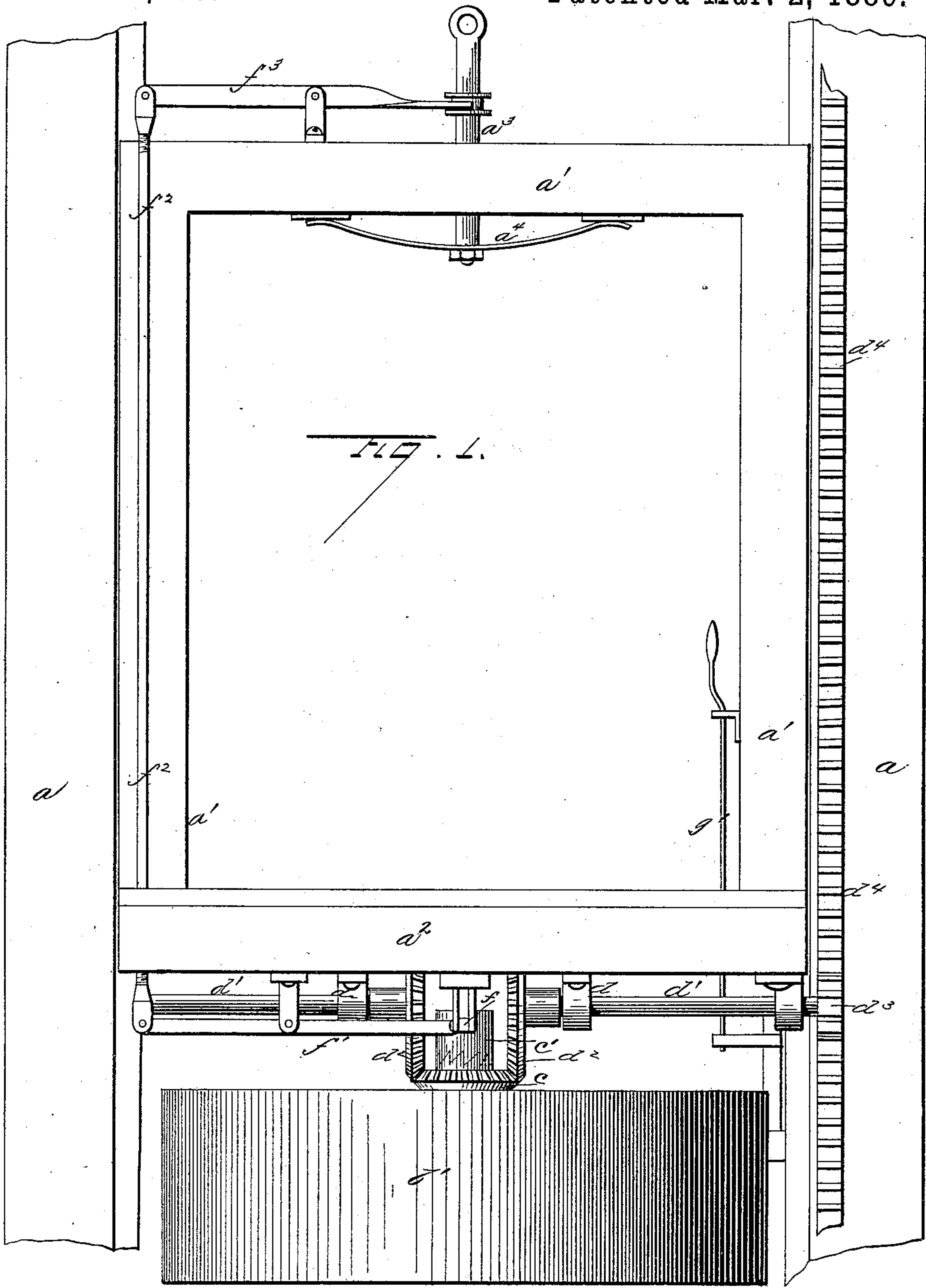
2 Sheets—Sheet 1.

A. O. WUENSCHÉ.

SAFETY DEVICE FOR ELEVATORS.

No. 337,355.

Patented Mar. 2, 1886.



Witnesses:
 A. C. McArthur
 H. S. McArthur

Inventor
August C. Winnick
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Attorney.

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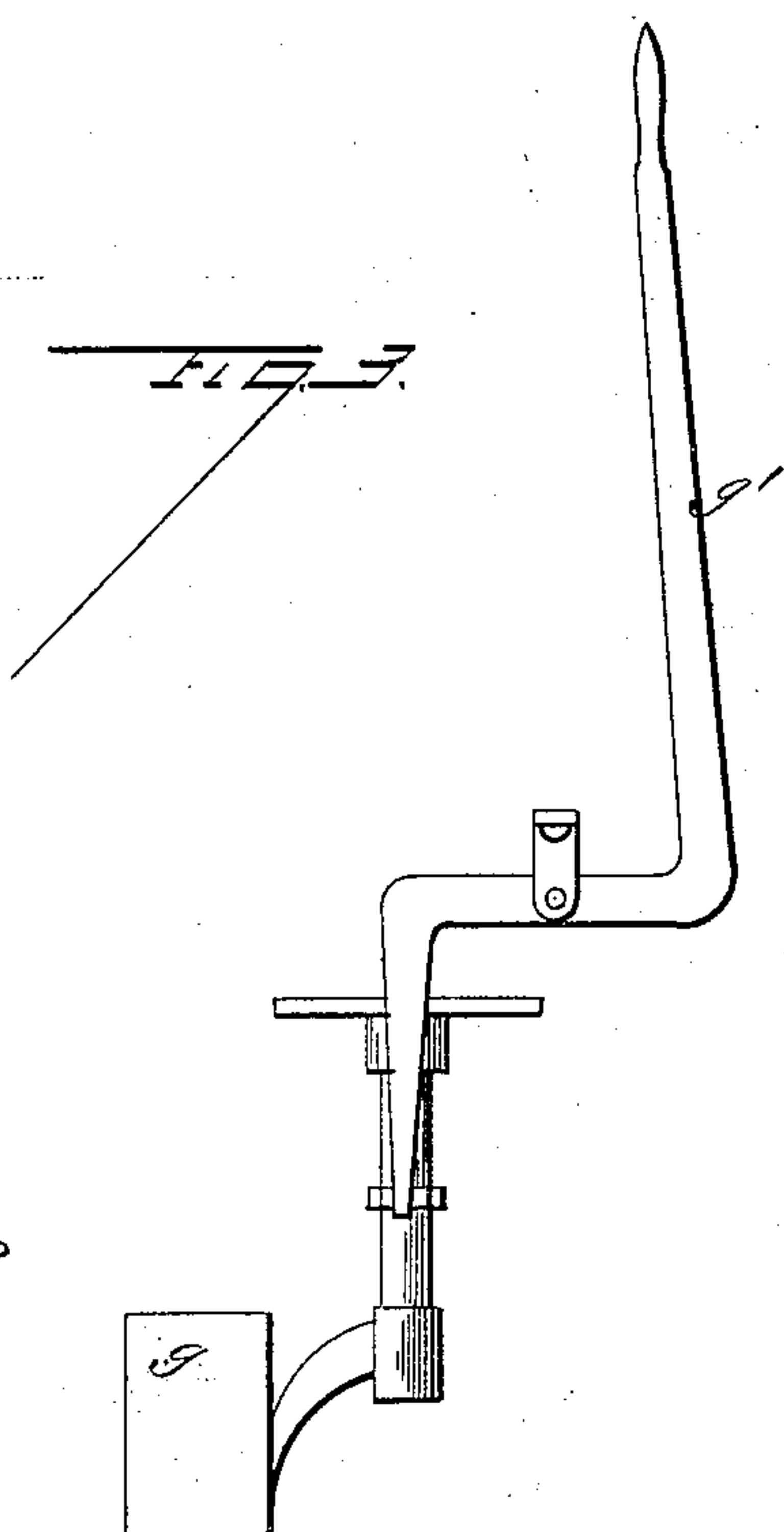
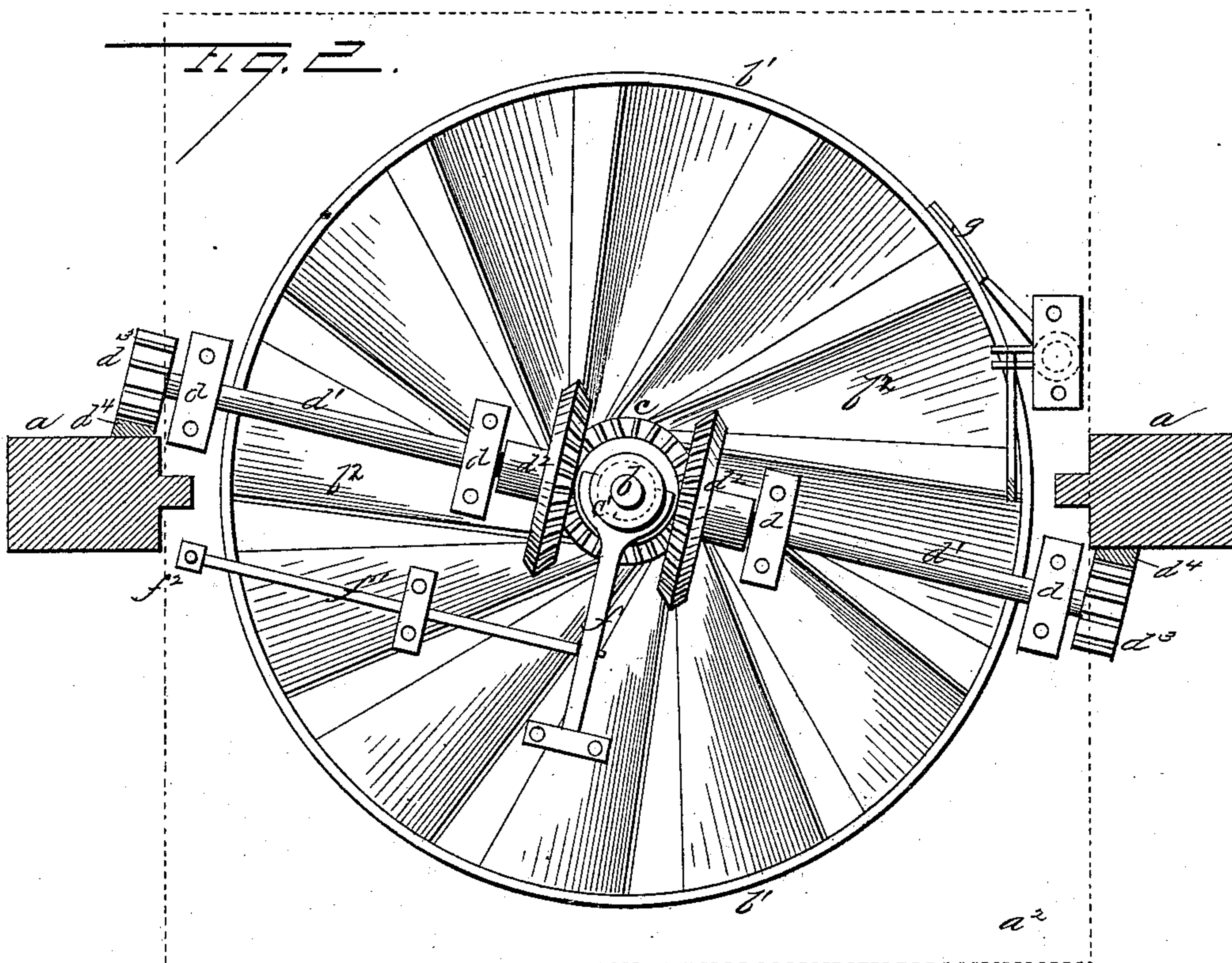
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A. C. M. Arthur
H. S. M. Arthur.

Inventor.
August C Wunsche
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Attorney.

UNITED STATES PATENT OFFICE.

AUGUST OSCAR WUENSCHÉ, OF CHICAGO, ILLINOIS.

SAFETY DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 337,355, dated March 2, 1886.

Application filed August 17, 1885. Serial No. 174,532. (No model.)

To all whom it may concern:

Be it known that I, AUGUST OSCAR WUENSCHÉ, 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 Safety Devices for Elevators, of which the following is a specification, to wit:

This invention relates to safety devices for elevators; and it consists in certain peculiarities of the construction and arrangement of the same, substantially as will be hereinafter more fully described and claimed.

In order that others skilled in the art to which my invention appertains may avail themselves of its benefits, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a side elevation of the platform of an elevator-cage with my safety devices attached. Fig. 2 is a plan view of my safety-wheel and its connections, taken just below the platform; and Fig. 3 is a detail view of the brake-lever and shoe.

a represent the upright guide timbers or frame of an elevator-shaft, and a' the frame of the cage, traveling in said shaft, as usual, and provided with the floor or bottom platform, a^2 .

a^3 is a short stud passed through the top of the cage-frame, and provided with a hook or eye for the attachment of the lifting-cable. This stud projects entirely through the frame, and has on its lower end a buffer-spring, a^4 , which serves not only to take the jar of sudden starting and stopping off the cage, but also controls the clutch upon the safety-wheel, as will be presently more particularly explained.

Upon a stud or shaft, b , projecting below or hung from the cage or platform, is placed a large wind wheel or fan, b' , which revolves with the shaft, and the wings b^2 of which act to force the air downward as the wheel revolves. Upon the same shaft is a loose bevel-pinion, c , provided with a clutch-face upon one side, and also a sliding clutch, c' , which engages with but slides upon the shaft, and when engaged with the pinion gives motion to the shaft, as presently seen.

In suitable journals, d , secured beneath the

cage, are supported the shafts d' , on the inner end of each of which is a bevel-gear, d^2 , meshing with the loose pinion, c , and on the outer ends of which are pinions d^3 , meshing with cogged racks d^4 upon the vertical frame of the elevator shaft or guides. The sliding clutch c' is shifted into and out of engagement with the driving-pinion by means of a shifting-lever, f , which is connected by a second lever, f' , with a rod, f^2 , extending upward through or alongside of the cage-frame, with the end of a third lever, f^3 , on top of said cage, the other end of this lever being engaged with the spring suspension-stud, as in Fig. 1.

In operation it will be seen that when the fan is hung to an elevator-cage and the apparatus is in perfect operation the weight of the cage and its fittings compresses slightly the spring a^4 , and by thus allowing the suspending-stud to slide upward withdraws the shifting-clutch and holds it withdrawn, so that when the cage is being operated the pinion c' runs loosely on the shaft b and the safety device does not come in use. Should, however, an accident occur, the release of the strain upon the suspending-stud allows the spring to throw the clutch into gear, and the descent of the cage, by means of the racks and gears, revolves the fan or wind-wheel rapidly, and as it acts to force the wind downward it of course exerts a lifting pressure upon the falling cage, and this will be sufficient to prevent a speed sufficient to injure either the cage or its occupants when stopped at the bottom.

It will be seen that the wheel may be caused to revolve with any desired speed by simply varying the relative size of the gearing connecting it with the stationary racks.

The descent of the cage can at any time be stopped or its speed controlled by means of the brake-shoe g , adapted to bear upon the periphery of the fan and operated by a hand-lever, g' , within easy reach of the person in charge. Thus in case of accident the cage may be stopped at any landing; but should this not be done it cannot descend rapidly enough to seriously injure any one who may be in it.

I do not desire to confine myself to the details herein described for operating the fan in connection with the elevator-cage, but shall

use any other devices suitable for the purpose and producing the same result, though I deem those herein shown as preferable.

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

1. The combination, with the cage or platform of an elevator, of a revolving fan or wind-wheel suspended from its lower side to prevent a too rapid fall, substantially as and for the purpose specified.

2. The combination, with an elevator shaft or guides and a cage suspended therein, of a wind-wheel upon said cage connected to and operated by the guides, and a clutch between the wheel and its operating devices held out of gear normally by connection with the suspension devices, substantially as shown and described, whereby the wheel is not in operation except when required by an accident.

3. An elevator shaft or guide having a cogged rack secured along its face and a cage

therein suspended upon a spring-actuated stud, in combination with a fan or wind-wheel secured upon a shaft suspended from the cage, a loose clutch-faced gear on this shaft connected by gearing with the cogged rack, and a shifting-clutch on the same shaft connected by a series of levers with the spring suspending-stud, substantially as and for the purpose set forth.

4. The combination, with an elevator-cage provided with a revolving fan operated by connection with the shaft or guides, of a brake-shoe bearing upon the periphery of said fan, and a hand-lever for operating it, substantially as and for the purpose set forth.

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

AUGUST OSCAR WUENSCHÉ.

Witnesses:

W. C. McARTHUR,
W. S. McARTHUR.