

A. & T. E. WINIARSKI.
ELEVATOR.

APPLICATION FILED SEPT. 9, 1903.

NO MODEL.

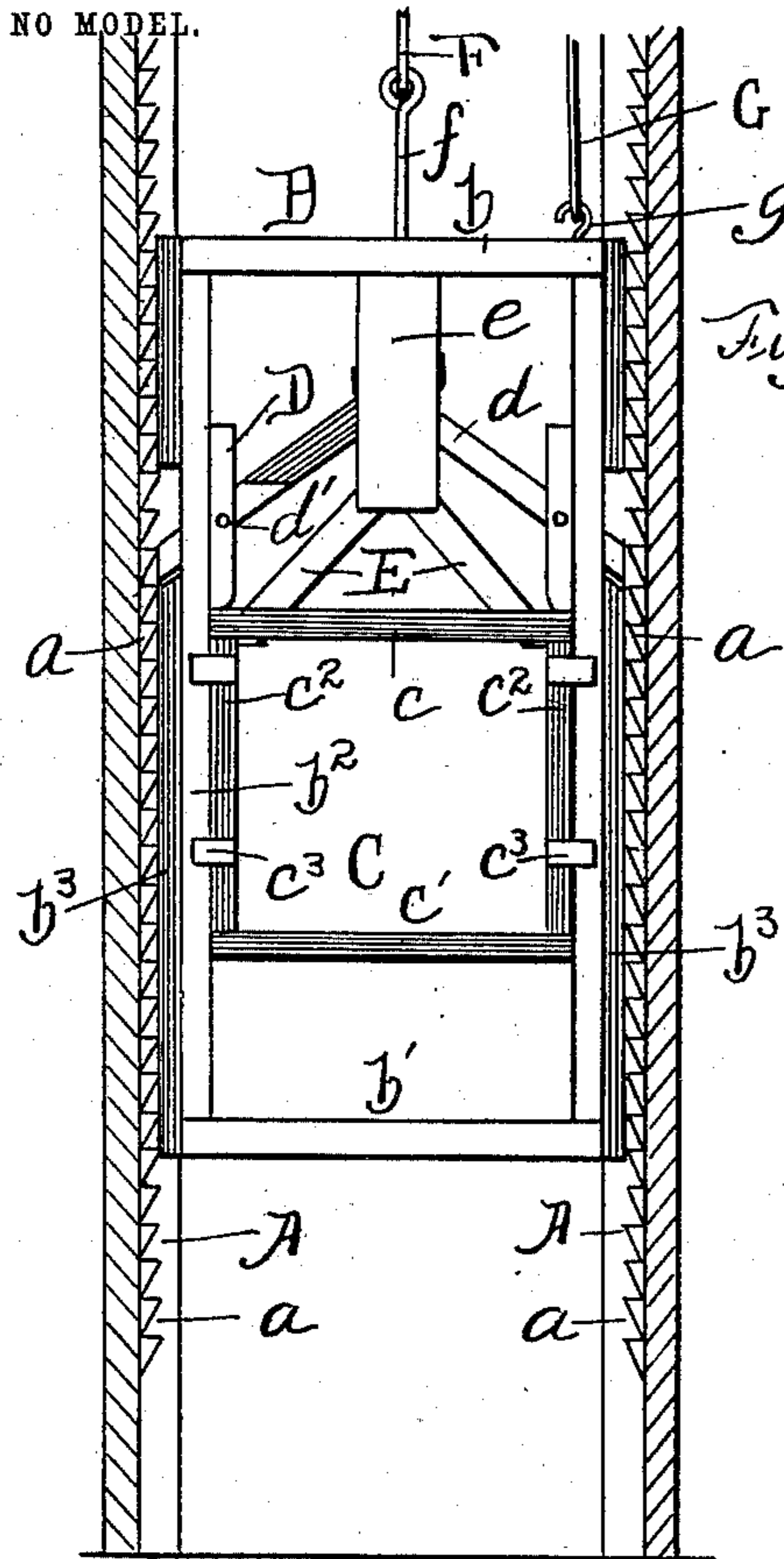


Fig. 2.

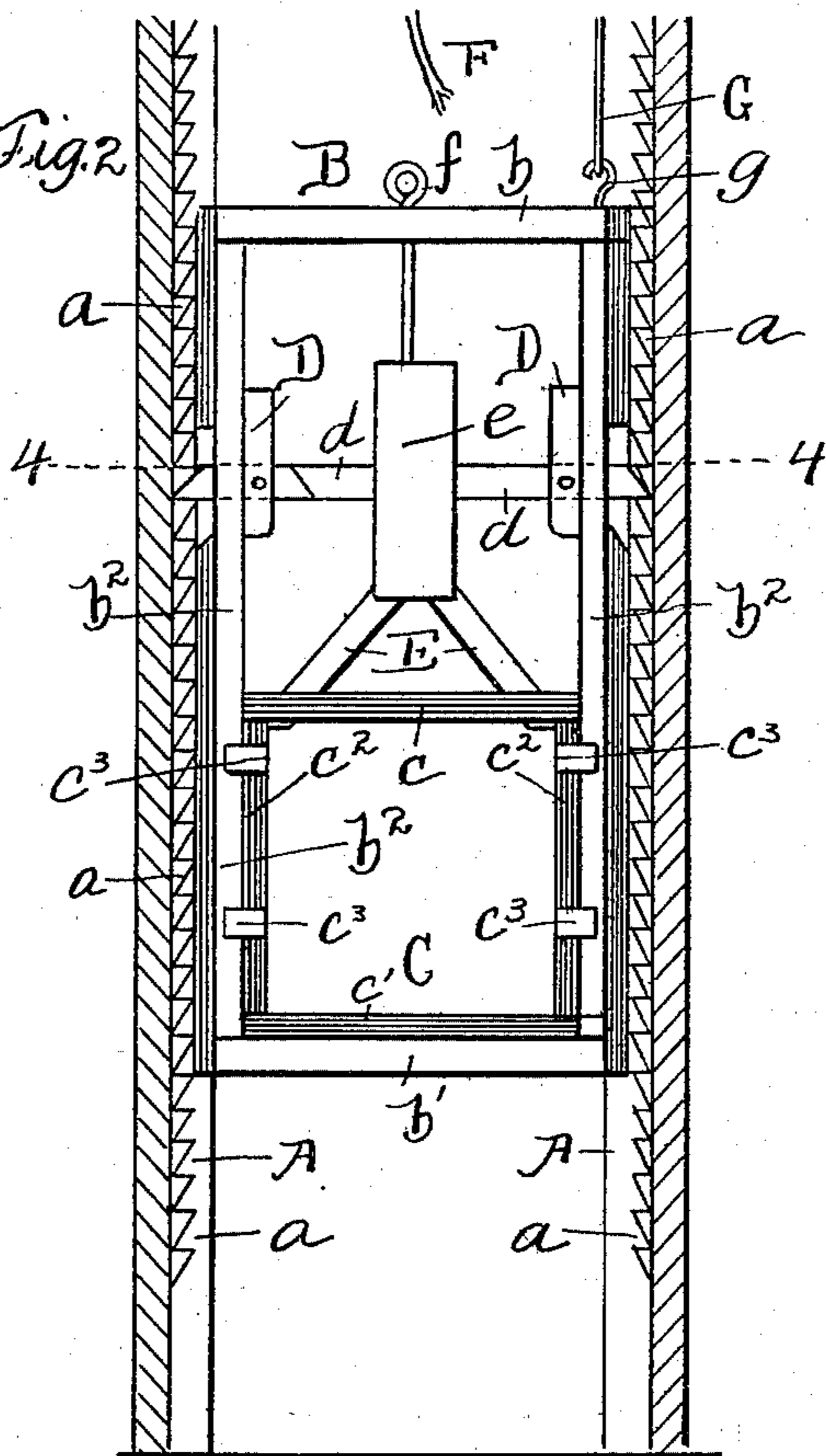


Fig. 1.

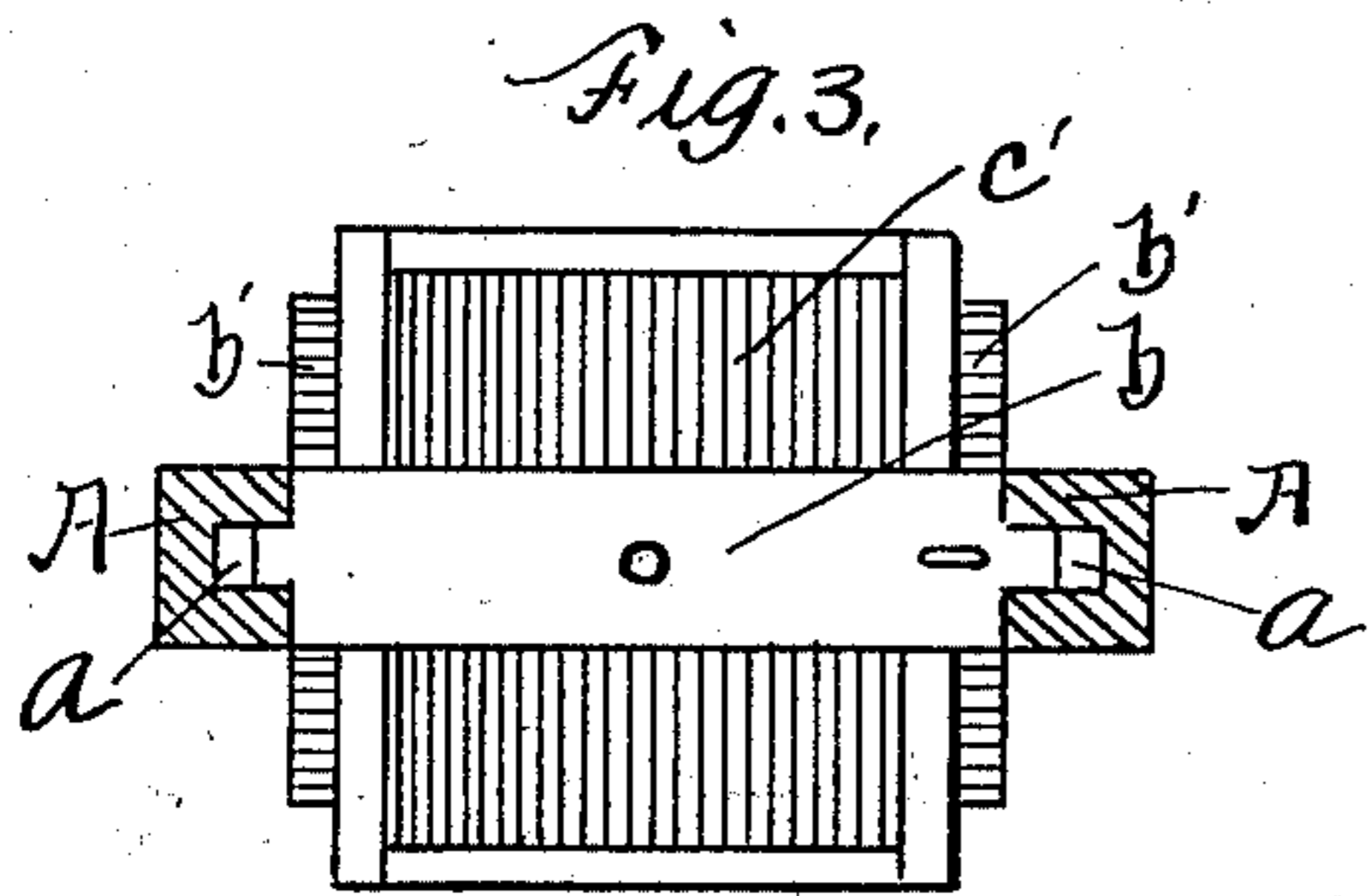


Fig. 3.

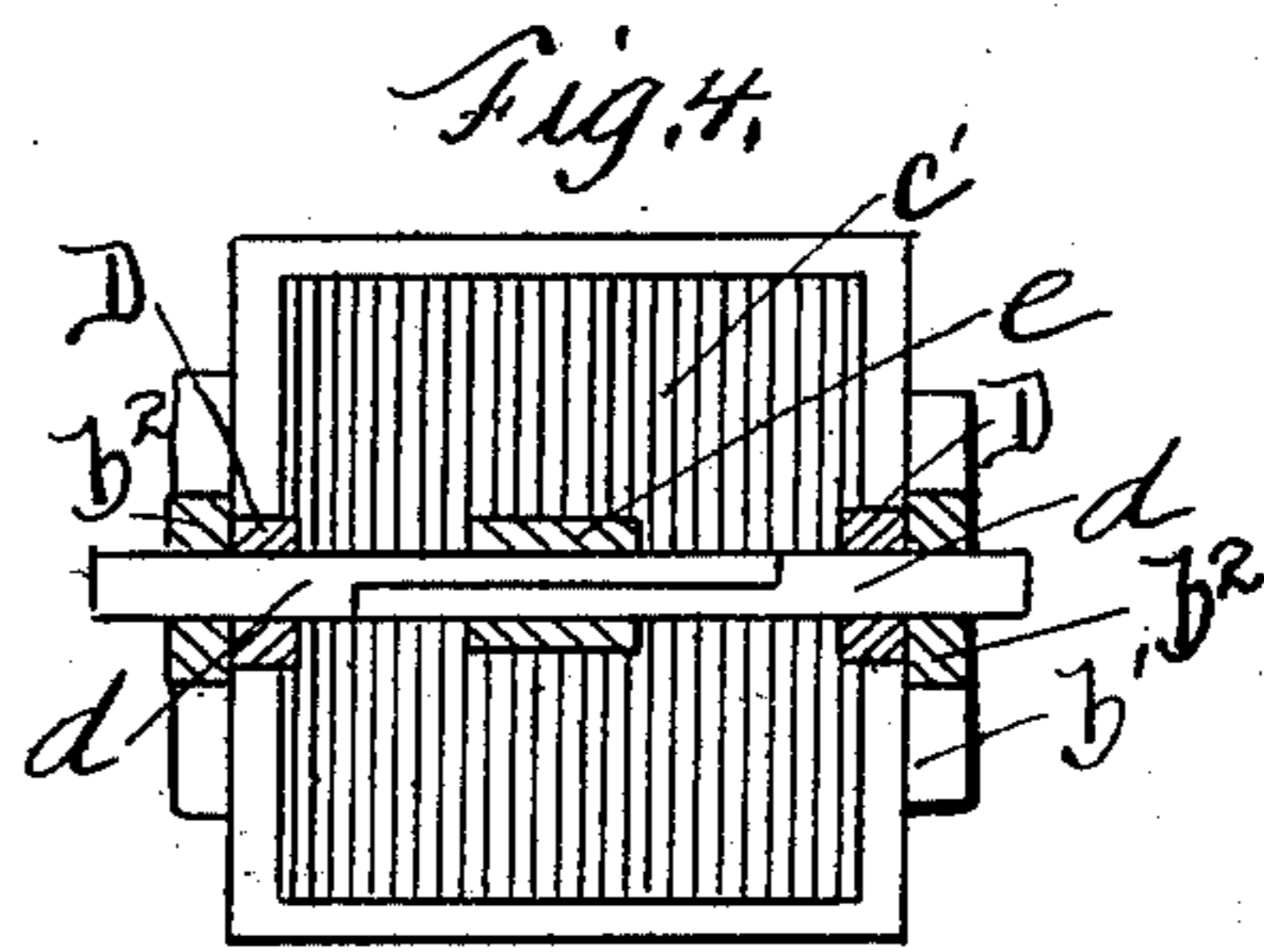


Fig. 4.

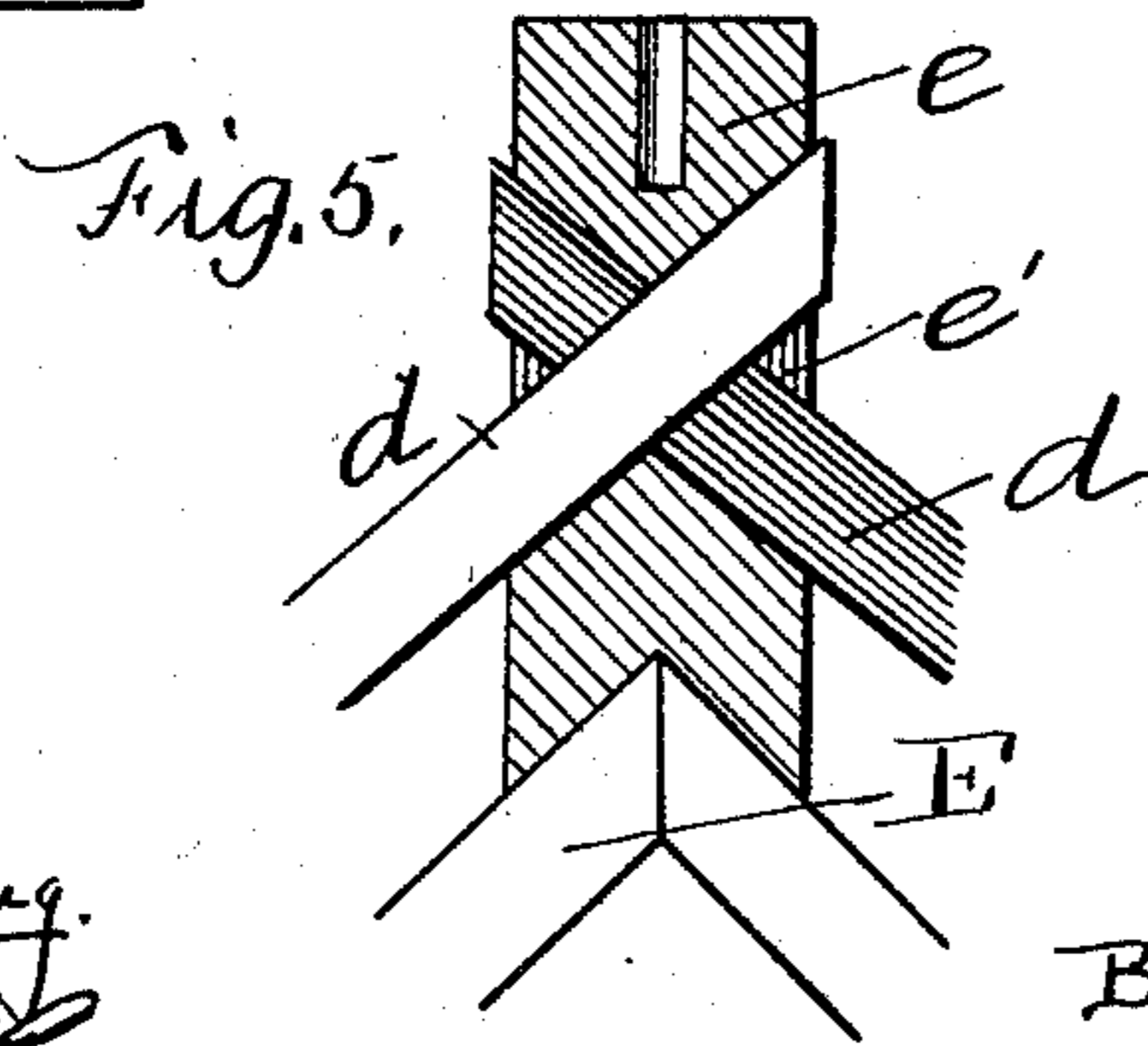


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST WINIARSKI AND TEODOR E. WINIARSKI, OF CHICAGO, ILLINOIS.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 748,449, dated December 29, 1903.

Application filed September 9, 1903. Serial No. 172,438. (No model.)

To all whom it may concern:

Be it known that we, AUGUST WINIARSKI and TEODOR E. WINIARSKI, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Elevators, of which the following is a specification.

The object of this invention is to minimize the danger incident to the operation of elevators by providing a safety appliance that will prevent the fall of the elevator in case the main supporting-cables become broken or loosened, which will be certain and instantaneous in its operation and at the same time not involved or complicated to an unnecessary degree; and the invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings illustrating the invention, Figure 1 is a section of an elevator-shaft, showing the elevator of this invention in normal position; Fig. 2, a similar view showing the main cable broken and the safety-clutch mechanism set; Fig. 3, a top view of the elevator of this invention; Fig. 4, a cross-sectional view taken on line 4-4 of Fig. 2, and Fig. 5 a detail of the supporting head or block.

As shown, the elevator is arranged to travel in a shaft provided with guides A of any usual and well-known form, and between the guides are arranged a series of upwardly-projecting teeth *a*, extending throughout practically the entire length of the elevator-shaft. The elevator proper, which is arranged to travel in the guides, consists of an outer frame B, consisting of a top cross bar or timber *b*, a bottom cross bar or timber *b'*, and side bars or rails *b²*, each side bar or rail being provided with a longitudinally-extending tongue *b³*, adapted to travel in the guideways between the oppositely-arranged notches or teeth therein without having its travel interfered with by the teeth. Within the outer frame is arranged the elevator-cage proper, C, which consists of a top cross bar or rail *c*, a floor *c'*, and side rails *c²*, each of the side rails being provided with outwardly-extending ears or flanges *c³*, which contact the side faces of the side rails of the outer frame, adapting the inner cage to travel up and down within the

outer frame independently of the movement thereof.

To the inner faces of the outer side rails are attached stop-blocks D, against which the top of the cage normally abuts, and through the stop-blocks and the side rails of the outer frame project catch-arms *d*, each of the arms being pivoted to one of the stop-blocks by means of pivot-pins *d'*, and, as is shown in Fig. 1, when the elevator is in normal position the catch-arms will converge upwardly and cross each other at their inner ends and have their outer or catch ends lie flush with the outer edges of the guide-tongue *b³*, allowing the elevator to travel up and down between the guides without interference from the teeth therein. The inner cage is supported by means of two fixedly-attached supporting-bars E, which extend into and are fixedly attached to a supporting-head *e*. The supporting-head is provided with a slot *e'*, through which project the catch-arms hitherto referred to. The elevator is normally supported by means of a cable F, which is carried up to a pulley, drum, or similar device (not shown) at the top of the shaft, which cable is attached to a bolt *f*, extending upwardly from the supporting-head, and under ordinary conditions the upper edge of the supporting-head will abut against the under face of the cross-bar of the outer frame and the upper cross-bar of the cage will abut against the stop-blocks D, in which position the cage supports the outer frame and allows the latter to travel up and down the elevator-shaft. An auxiliary cable G is attached to a suitable hook *g* on the outer frame and runs over a pulley at the top of the shaft and has a counterbalancing-weight or similar device (not shown) on its free end, and the function of this auxiliary cable will hereinafter appear.

In case the main supporting-cable breaks the entire weight of the elevator will be thrown upon the auxiliary cable, which, however, is not intended to support a great weight, but which momentarily serves to check the descent of the outer frame, allowing the cage to fall within the outer frame, as shown in Fig. 2, which fall causes the pivoted arms to be drawn down in the center

and assume a horizontal position, as shown in Fig. 2, in which position their outer or catch ends will be thrust outwardly in the teeth between the guides of the shaft, there-
5 by checking the descent of the elevator and supporting the inner cage within the outer frame rather than vice versa.

It will thus be seen that the device is simple in construction and that its operation is
10 dependent entirely upon the force of gravity and the threatened descent of the elevator if the tension has been released from the main cable which normally supports the elevator.

What we regard as new, and desire to secure
15 by Letters Patent, is—

An elevator adapted to travel within a guideway provided with teeth, consisting of an outer frame adapted to travel in the guide-
20 way, an inner cage normally supported by a main elevator-cable above the bottom of the outer frame, a main supporting-cable connected with the inner cage and adapted to support the inner cage above the bottom of

the outer frame, arms normally converging upwardly and pivoted to the outer frame near
25 their outer or catch ends, a supporting-head connected with the inner cage and provided with a slot through which the inner ends of the converging catch-arms project and within
30 which said ends are held and adapted to slide for allowing the inner ends to be moved downwardly by the downward movement of the inner cage and have their outer or catch ends thrust outwardly by such movement to en-
35 gage the teeth in the guideway, and an auxiliary cable connecting with the outer frame for arresting the movement of the outer frame and allowing the inner cage to drop therein to pull down the inner ends of the catch-arms
40 and set the catch mechanism, substantially as described.

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