

No. 719,071.

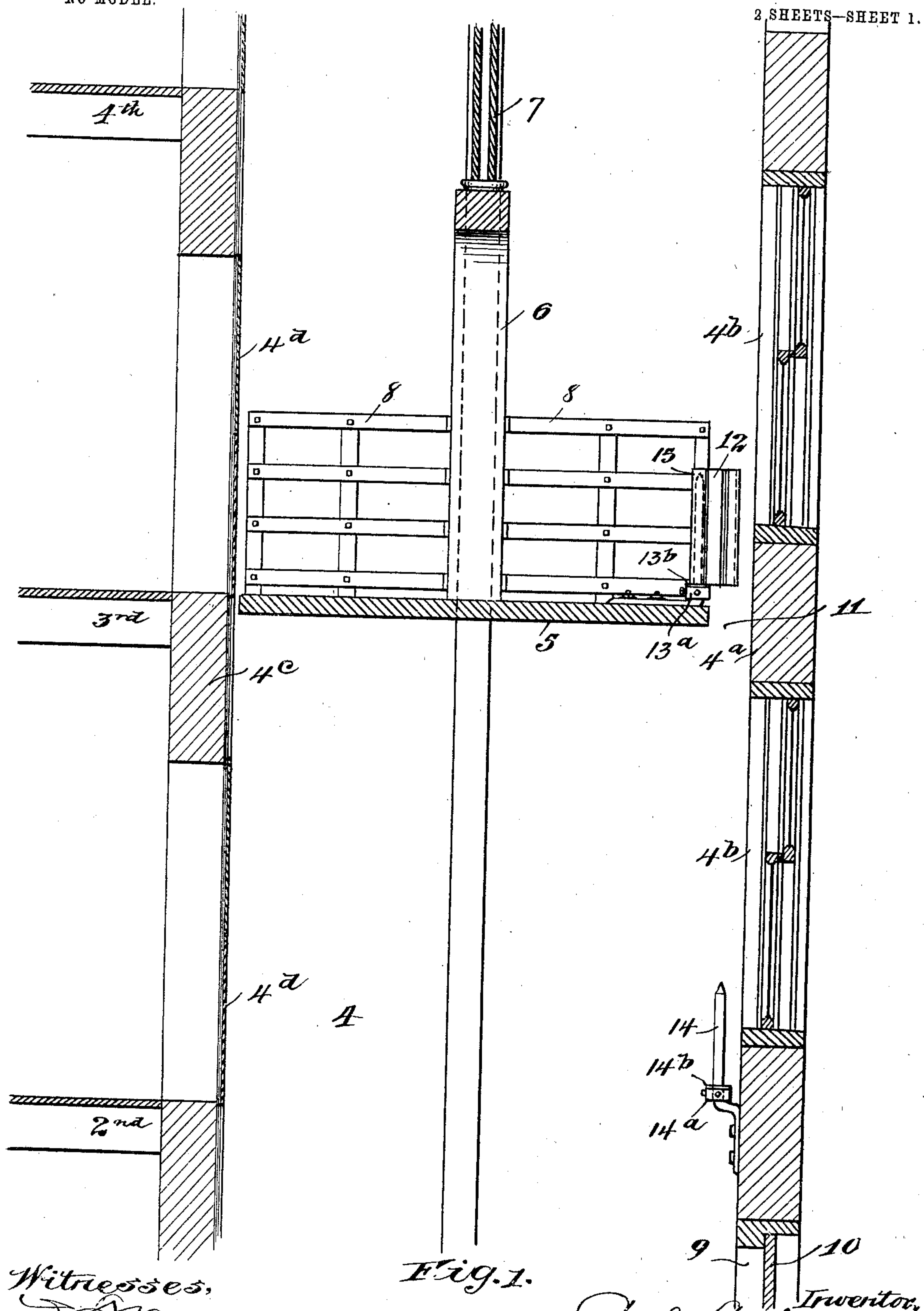
PATENTED JAN. 27, 1903.

C. ANDERSON.
ELEVATOR GATE.

APPLICATION FILED OCT. 6, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses,
J. J. Mann,
J. N. Pond

Carl Anderson
Pay Office, Iowa & Linticum
1895.

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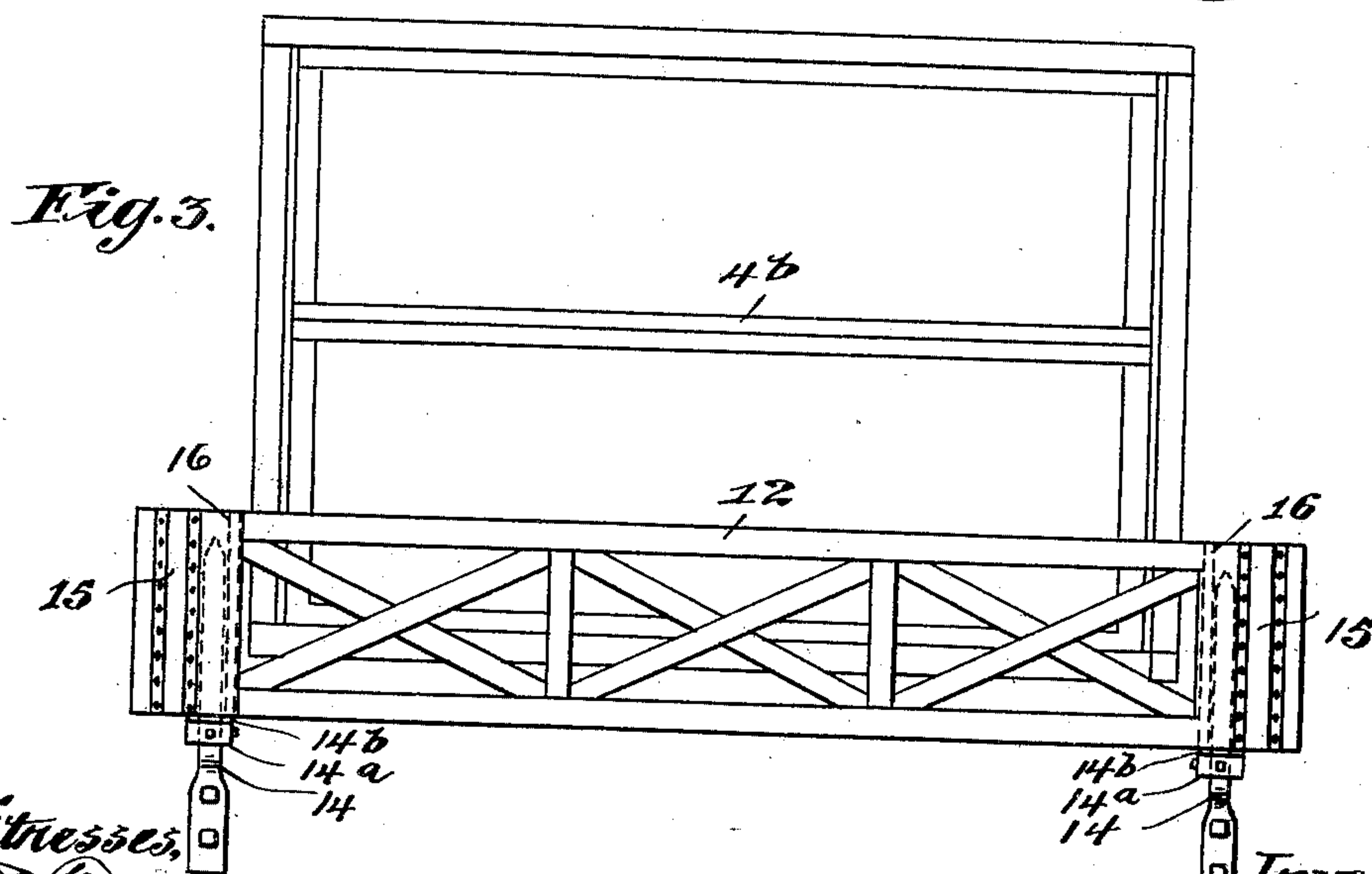
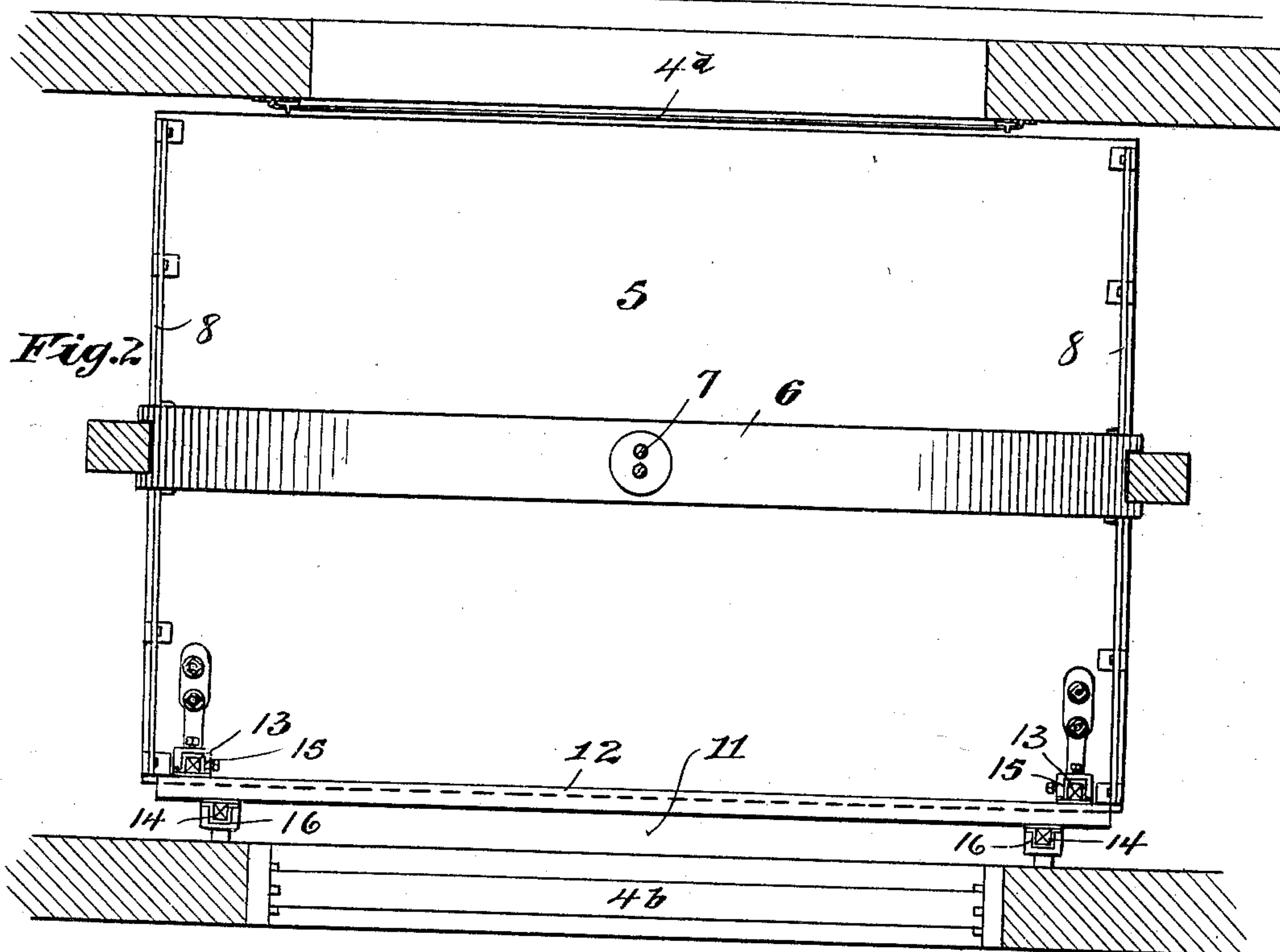
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J. J. Mann,
J. N. Pond.

Inventor,
Carl Anderson
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UNITED STATES PATENT OFFICE.

CARL ANDERSON, OF CHICAGO, ILLINOIS.

ELEVATOR-GATE.

SPECIFICATION forming part of Letters Patent No. 719,071, dated January 27, 1903.

Application filed October 6, 1902. Serial No. 126,241. (No model.)

To all whom it may concern:

Be it known that I, CARL ANDERSON, 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 Elevator-Gates, of which the following is a specification.

My invention relates to elevator-gates, and has reference more particularly to a gate or gates designed to guard one or more sides of the floor or platform of an ordinary freight-elevator while the same is in transit; and the object of my invention is to provide a gate or guard for such an elevator which shall serve its intended function while the car is in transit, but which shall be automatically withdrawn or removed when the car has reached the ground floor or landing, so as not to interfere with the loading of the car at the ground-floor.

To this end my invention resides in an elevator gate or guard so constructed and arranged that it will be automatically picked up by and securely united to an otherwise exposed side of the car-floor as the car begins its ascent and will be automatically dropped on the descent of the car and left at such a height above the ground or main entrance to the elevator-shaft as not to interfere with the loading of the car.

My invention in the preferred form in which I have embodied the same is illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical section through an elevator-shaft and car, showing the latter at the landing of the third story with my improved automatic gate guarding an exposed side of the car-floor. Fig. 2 is a transverse section through the elevator-shaft at a point above the top of the car and showing the latter in plan view; and Fig. 3 is an inside view of the front wall of the elevator-shaft at the point therein at which the movable gate or guard is deposited and picked up by the car on its descent and ascent, respectively.

Referring to the drawings, 4 designates an elevator-shaft, of which 4^a may be considered as the front wall, having windows 4^b disposed therein opposite each landing to admit light to the shaft, and 4^c may be considered the rear wall, with ordinary vertically-sliding gates 4^d located therein at each landing.

5 designates the platform or floor of an ordinary freight-elevator having the usual yoke or beam 6 and supporting-cables 7, said floor being further provided with fixed side walls or gates 8 on opposite sides thereof.

9 designates the opening through the front of the shaft at the foot of the latter, through which freight is introduced to the platform of the car when the latter is at rest in its lowermost position, said opening when the car is not in operation being ordinarily guarded by a door 10.

In the particular arrangement of car and shaft here shown the rear edge of the car-platform lies in such close proximity to the inner face of the rear wall of the shaft as to render unnecessary the provision of any guard for that side of the platform. The two shorter sides of the car are guarded by the fixed walls 8; but between the front edge of the car-platform and the opposite inner face of the front wall of the shaft there exists a space 11 of such width as to render it dangerous in case the operator or a workman or passenger should accidentally step off that side of the platform while the car is moving. By my invention I propose to provide a device which shall serve as an effective safeguard against any such accident, but which at the same time shall not interfere with the loading of the car at the ground-floor or render necessary the removal of such safeguard before the car can be loaded. This device, as herein illustrated, consists of a gate or removable side wall 12, which is automatically picked up and dropped by the car at a point just above the main entrance to the shaft through the following mechanism: To the floor of the car at the opposite ends of the front edge are rigidly secured a pair of posts 13, which preferably are formed of a height equal to or slightly less than the height of the gate 12, and to the inner face of the front wall of the shaft at points just above the main entrance 9, on opposite sides of said entrance, are mounted a similar pair of posts 14, so set as to lie parallel, with but a slight distance offset from the wall of the shaft. The posts 13 and 14 are preferably made of iron to secure the desired strength and rigidity with the least bulk and are also preferably pointed at their upper ends, as shown, for a pur-

pose hereinafter described. To the inner face of the gate 12, at the opposite ends thereof, are secured a pair of vertical sockets or catches, hereshown as in the nature of sheaths or scabbards 15, so positioned as to be in vertical alinement with the pins or posts 13 on the edge of the car-platform, and on the outer face of the gate is correspondingly located a similar pair of vertical sockets 16, so located as to be in vertical alinement with the stationary pins or posts 14. The lower ends of the posts 13 and 14 are embraced by fixed collars 13^a and 14^a, directly above which are elastic buffers, preferably in the form of annular rings of rubber 13^b and 14^b, designed to cushion the impact between the gate and its supporting devices, as hereinafter explained.

The operation of my improvement has already been to a considerable extent indicated, but may be briefly described, as follows: Assuming the car to be in the position indicated in Fig. 1 and descending, the gate 12 is supported and carried thereby through the coöperation of the posts 13 with the sockets or catches 15, and the gate thus rigidly held constitutes a guard for the otherwise exposed margin of the car-platform. As the car descends the sockets 16 on the outer face of the gate ride over the stationary posts 14, the gate coming to rest thereon and being securely held thereby, after which the continued descent of the car withdraws the posts 13 from the sockets 15, thus leaving the gate 12 supported at a point just above the main entrance 9, as shown in Fig. 3, where it is out of the way and presents no interference with the work of loading the car at the ground-floor. When the load has been received, the car begins its ascent, and in so doing the posts 13 enter the sockets 15 on the gate and when fully entered therein automatically raise the gate off the stationary posts 14 and carry the gate in guarding position until the car has again descended to the second floor. The pointing of the upper ends of the posts insures their more certain and facile entrance to their respective sheaths.

It will be observed that the hereinabove-described devices for picking up the gate on the ascent of the car and for depositing it on the descent are not only entirely automatic in their operation, but also serve as a rigid support for the gate, both when carried by the car and when left behind by the latter, and I desire it to be understood that my invention is not limited to the particular form or character of the coöperating devices for this purpose above described, since any coöperating devices that will perform the offices above stated are within the principle and purview of my invention.

Although I have shown and described my automatic-gate guard as applied to but a single side of the car, nevertheless it will be un-

derstood that a plurality or all sides of the car might be similarly guarded by merely repeating the mechanism already described on as many sides of the car-floor as are exposed and required to be guarded.

I claim—

1. The combination with an elevator-shaft and a car therein, of a gate adapted to guard an exposed edge of the car-platform during the ascent and descent of the car, and coöperating devices on said gate and on the car and the wall of the shaft, whereby on the descent of the car said gate is automatically arrested and held at a fixed point on the wall of the shaft above the ground-floor entrance, and is automatically picked up by the car and supported thereon during the ascent of the latter, substantially as described.

2. The combination with an elevator-shaft and a car therein, of a gate adapted to guard an exposed edge of the car-platform during the ascent and descent of the car, interfitting devices on the wall of the shaft and said gate through the coöperation of which on the descent of the car the gate is automatically arrested and supported on the wall of the shaft above the ground-floor entrance, and other interfitting devices on said gate and the car through the coöperation of which on the ascent of the car the gate is automatically picked up by the car and supported thereon during the ascent of the latter, substantially as described.

3. The combination with an elevator-shaft and a car therein, of a gate adapted to guard an exposed edge of the car-platform during the ascent and descent of the car, posts mounted on said exposed edge of the car, similar posts mounted on the wall of the shaft above the ground-floor entrance to the shaft, and sockets or sheaths secured on the inner and outer sides of said gate in vertical alinement respectively with said posts on the car and wall and adapted to be entered by said posts on the ascent and descent of the car, substantially as described.

4. The combination with an elevator-shaft and a car thereon, of a gate adapted to guard an exposed edge of the car-platform during the ascent and descent of the car, posts mounted on said exposed edge of the car, similar posts mounted on the wall of the shaft above the ground-floor entrance to the shaft, sockets or sheaths secured on the inner and outer sides of said gate in vertical alinement respectively with said posts on the car and wall and adapted to be entered by said posts on the ascent and descent of the car, and buffers interposed between the bases of said posts and said sockets, substantially as described.

CARL ANDERSON.

Witnesses:

SAMUEL N. POND,
FREDERICK C. GOODWIN.