(No Model.)

J. H. PREATER.

ELEVATOR GATE.

No. 386,605. Patented July 24, 1888.

Fig. 1.

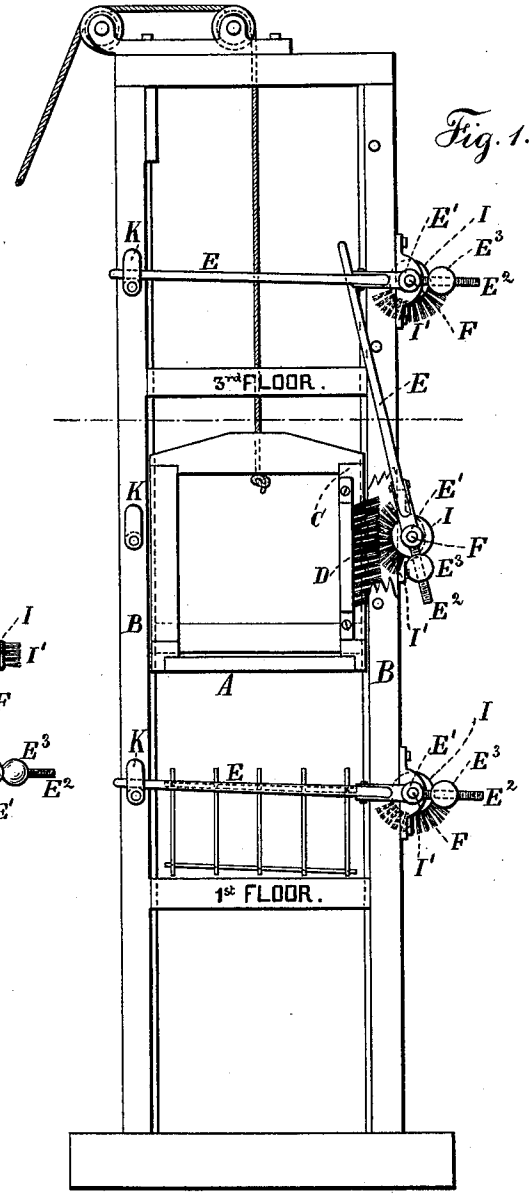
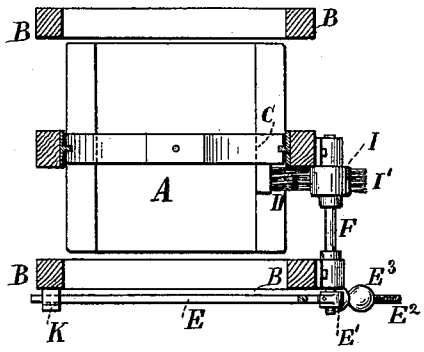


Fig. 2.



Witnesses:
J. Stail
Chas. H. Smith.

Inventor:
James H. Preater,
per Samuel W. Serrell.
Atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES H. PREATER, OF BROOKLYN, NEW YORK.

ELEVATOR-GATE.

SPECIFICATION forming part of Letters Patent No. 386,605, dated July 24, 1888.

Application filed April 25, 1888. Serial No. 271,811. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. PREATER, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Guards or Gates for Elevators, of which the following is a specification.

In the construction of elevators for storehouses or warehouses for transporting goods as distinguished from passengers only, it is necessary at each floor-level to provide a gate or guard of some description which will act to prevent persons falling down the hatchway, and many devices of this kind have heretofore been made.

My invention relates to a guard or gate for elevators having in view the objects before named.

My invention consists in a pivoted guard arm or gate connected to a rock-shaft, which rock-shaft is supported in bearings secured to the uprights or timbers forming the hatchway of the elevator, and upon said rock-shaft I secure a hub, in which hub I form a segmental brush of long bristles, and upon the side of the elevator-guideway I place a brush of bristles, the latter bristles being placed at an inclination upwardly, and as the elevator is raised the bristles of its brush engage the bristles of the segmental brush on the rock-shaft, and the meshing bristles as the elevator is raised turn the rock-shaft and elevate the pivoted guard arm or gate, and as the elevator passes upwardly the bristles are freed from each other and the guard or gate falls back to place.

I provide a counter-weight connected to the pivoted guard-arm, so that the weight to be raised can be regulated to a minimum.

In the drawings, Figure 1 is an elevation of the elevator, pivoted guard-arm, and connected parts. Fig. 2 is a sectional plan of the same.

The elevator A and the parts forming the hatchway and guides B for the elevator may be of any desired construction. Upon the side of the elevator, and upon one of its upright guideways C, I place a brush, D, of long stiff bristles, which bristles are set in the brush at an inclination upwardly. The pivoted guard arm or gate E suffices to divide or separate the apartments from the hatchway, and said pivoted guard-arm may consist of simply the arm E, as shown in the drawings, or there may be upon said arm a gate of the well-known lazy-tongs construction. This guard-arm E is connected to a hub, E′, which hub is secured upon the rock-shaft F, and upon said hub is a threaded rod, E^2, upon which is a weight, E^3. The rock-shaft F is journaled in bearings upon the uprights or hatchway, and upon said shaft is the hub I, in which is made a segmental brush of bristles, I′. These bristles are set in lines radiating from the rock-shaft F, and they are long and stiff, and this segmental brush in its normal position is upon the under side or beneath the hub I.

As the elevator is raised, the bristles of the brush D come against the bristles of the brush I′, and the bristles mesh similar to the teeth of cog-wheels, turning the hub I, the rock-shaft F, and raising the guard arm or gate E. As the elevator passes upward, and as the bristles of the brush D pass above the bristles of the brush I′, the guard-arm and its rock-shaft are no longer held, but are free to return to their normal position, the guard arm or gate at its outer end resting in the latch K and closing the passage-way to the elevator. As the elevator descends, the bristles of its brush pass easily by the bristles of the brush I′, the inclination of the bristles of the brush D allowing them to bend easily in the operation. I may prefer to employ brushes of spring-wire or similar material instead of bristles, the action being the same.

It is obvious that felt or rubber pads may take the place of the bristles, the movement with these devices being the same, practically, as with the bristles; but as these do not possess the advantageous features of the bristles I prefer to employ the bristles as more effective in their operation, it being possible, by means of the threaded rod E^2 and the movable weight E^3, to so nearly counterpoise the pivoted guard arm or gate E that the bristles in operation will not be obliged to lift much actual weight.

I claim as my invention—

1. The combination, with the pivoted guard arm or gate, of the rock-shaft F, to which said guard arm or gate is connected, the segmental

brush I upon said rock-shaft, and the brush D upon the side of the elevator-guideway, substantially as set forth.

2. The combination, with the pivoted guard arm or gate E, of the hub E′ for the same, a threaded rod, E^2, and counter-weight E^3, the rock shaft F, to which the hub E′ is connected, bearings for the rock-shaft, a hub, I, and segmental brush I′, and a brush, D, upon the side of the elevator-guideway C, substantially as set forth.

3. The combination, with the pivoted guard arm or gate E, of the hub E′ for the same, a threaded rod, E^2, and counter-weight E^3, the rock-shaft F, to which the hub E′ is connected, bearings for the rock-shaft, a hub, I, and segmental brush I′, and a brush, D, upon the side of the elevator-guideway C, the bristles or wires of the brush I′ being set in lines radiating from the rock-shaft F, and the bristles or wires of the brush D being set at an inclination upwardly, substantially as set forth.

Signed by me this 11th day of April, 1888.

JAS. H. PREATER.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.