

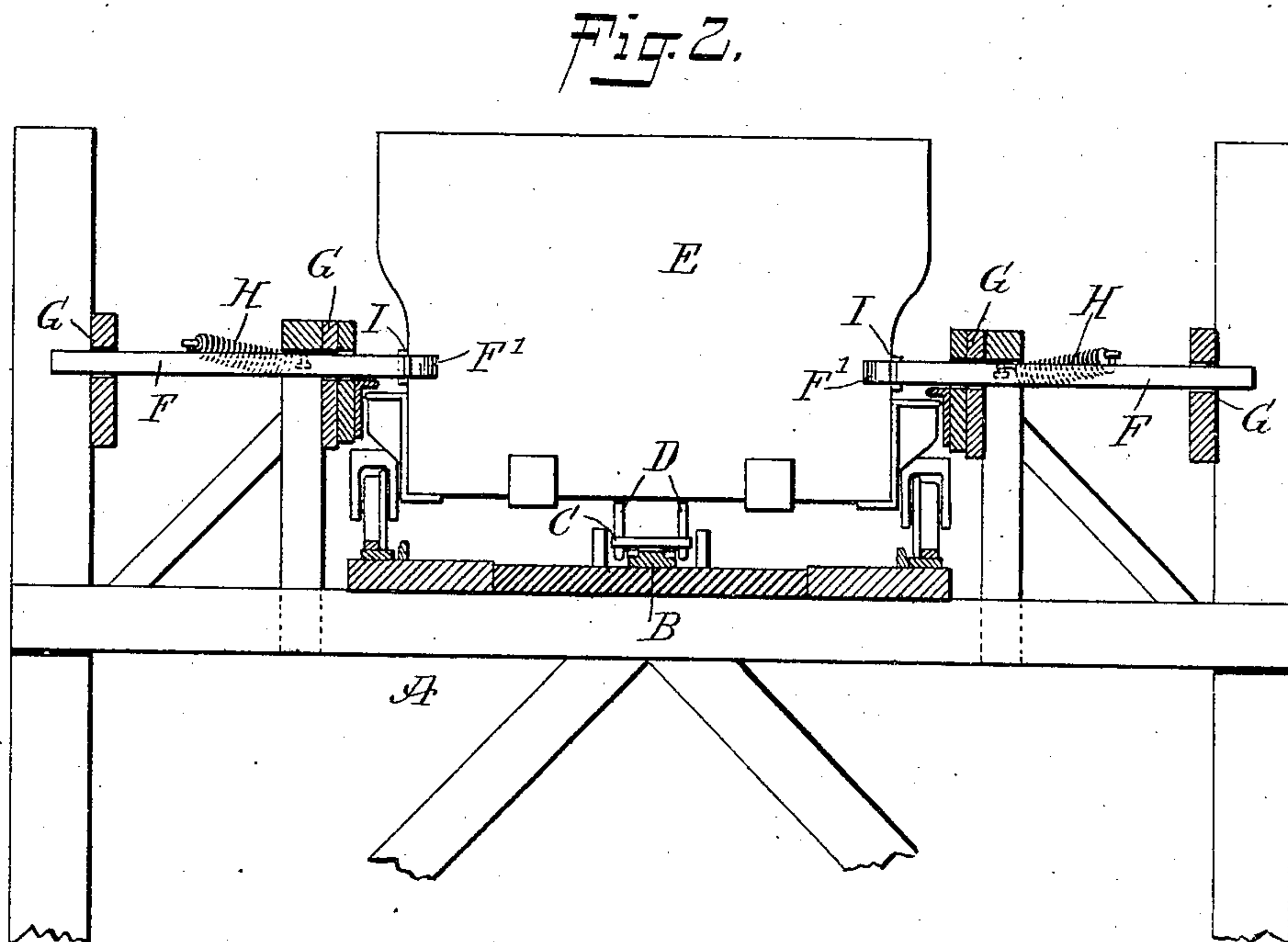
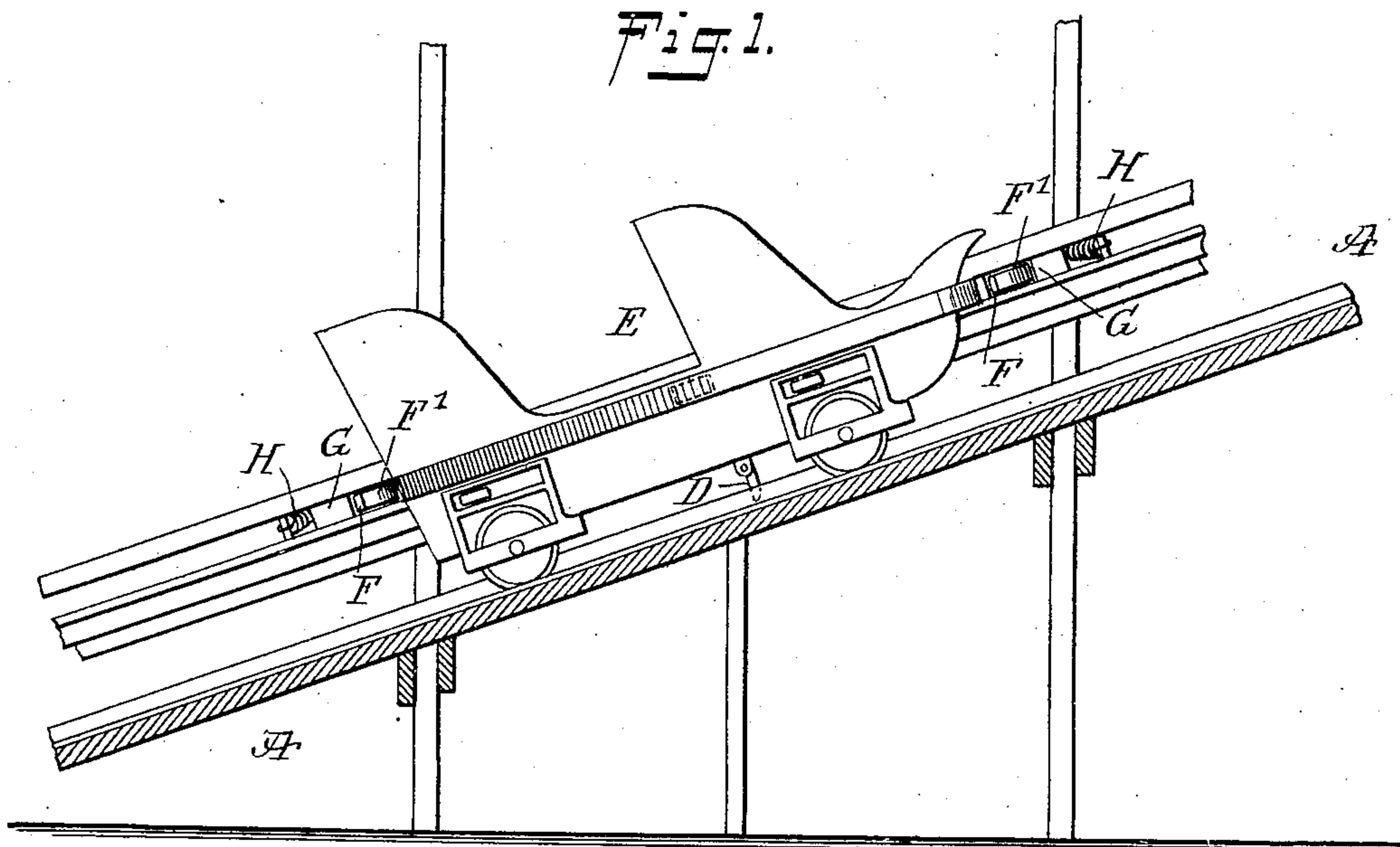
No. 869,847.

PATENTED OCT. 29, 1907.

S. E. JACKMAN.  
SAFETY DEVICE FOR INCLINED RAILWAYS.

APPLICATION FILED MAY 4, 1907.

2 SHEETS—SHEET 1.



WITNESSES

William P. Goebel.  
Rev. J. Hostetler.

INVENTOR

Stephen E. Jackman  
BY Munn & Co.  
ATTORNEYS

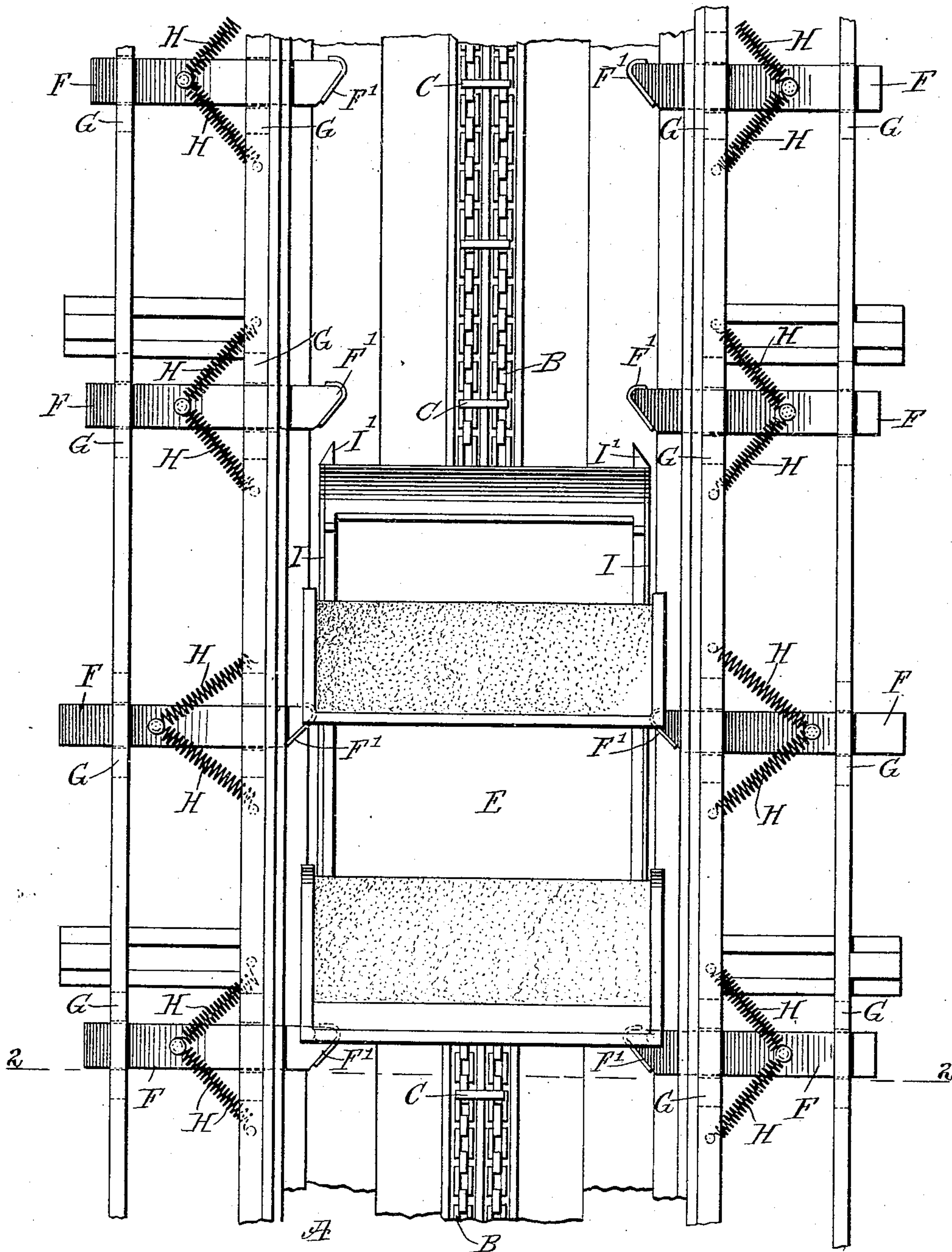
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*William P. Goebel.*  
*Rev. J. Hooster*

*Fig. 3.*

INVENTOR

*Stephen E. Jackman*

BY *Mum Co.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

STEPHEN E. JACKMAN, OF NEW YORK, N. Y.

## SAFETY DEVICE FOR INCLINED RAILWAYS.

No. 869,847.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed May 4, 1907. Serial No. 371,769.

*To all whom it may concern:*

Be it known that I, STEPHEN E. JACKMAN, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Safety Device for Inclined Railways, of which the following is a full, clear, and exact description.

The invention relates to safety devices for inclined railways, such as shown and described in Letters Patent of the United States, No. 745,962, granted to me December 1, 1903.

The object of the present invention is to provide a new and improved safety device for inclined railways, such as are used in pleasure resorts, exhibition grounds and the like, and arranged to prevent accidental return or downward movement of the car while traveling up the inclined track portion of the track in case of accident to the propelling mechanism or other cause, so that complete safety of the passengers or occupants of the car is insured.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement as applied; Fig. 2 is an enlarged transverse section of the same on the line 2—2 of Fig. 3, and Fig. 3 is a plan view of the same.

The inclined railway on which the improved safety device is applied is provided in its course with an up-track A containing an endless propelling chain B having spaced cross bars C for engaging projections or arms D depending from the bottom of the car or vehicle E, adapted to travel on the said up-track A, the said endless propelling chain B being driven by a suitable mechanism from a power house. Now in order to provide for the safety of the cars E while traveling up the up-track A, retaining arms F are provided, mounted to slide transversely in suitable bearings G arranged on the track A, as plainly indicated in the drawings, the said retaining arms being preferably arranged in pairs on opposite sides of the track. The inner ends F' of the retaining arms F extend into the path of an approaching car E and the said retaining arms F are held in an innermost or retaining position by springs H pressing the retaining arms F in an inward direction, as plainly indicated in the drawings.

Each car E is provided on its sides with rubbing irons or bearing plates I having their forward ends I' beveled (see Fig. 3), the said rubbing irons I extending longitudinally of the car E and in line with the re-

taining arms F, so that when a car travels upward on the track A the beveled ends I' engage the inner ends F' of the retaining arms F and push the same outward against the tension of the springs H. Now as the car E travels along the inner ends F' of the retaining arms F are held in an outermost position by being in contact with the rubbing irons I, and when the rear ends thereof finally leave the free ends F' of the retaining arms F, then the latter immediately slide inward into a retaining position by the action of their springs H. Now in case the propelling mechanism of the railway fails to work properly or the car E becomes disengaged from the propelling chain B, then return or downward movement of the car E is prevented as the rear end thereof abuts against the inner ends F' of the retaining arms F held in an innermost position by their springs H, so that the car is positively prevented from downward movement, to prevent accident and injury to the passengers or occupants of the car.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An apparatus of the class described provided with an inclined railway, and safety retaining arms mounted to slide on the track, projecting with their inner ends into a retaining position in the path of a car, the latter imparting an outward sliding motion to the arms, to hold the same in an outward position until the end of the car releases the arms, for the latter to return to retaining position.

2. An apparatus of the class described provided with an inclined railway, and safety retaining arms mounted to slide on the track, projecting with their inner ends into a retaining position in the path of a car, the latter imparting an outward sliding motion to the arms to hold the same in an outward position until the end of the car releases the arms, for the latter to return to retaining position, and means for returning the said retaining arms to retaining position.

3. In an apparatus of the class described, the combination of an inclined railway, a car adapted to travel thereon and provided at its sides with longitudinally extending rubbing irons having beveled heads and retaining arms movable on the track and projecting into the path of the car in line with the said rubbing irons, for the latter to engage the retaining arms and move the same into an outward position, the rubbing irons on leaving the retaining arms adhering to the latter to return to retaining positions.

4. In an apparatus of the class described, the combination of an inclined railway, a car adapted to travel thereon and provided at its sides with longitudinally extending rubbing irons having beveled heads, and retaining arms mounted to slide transversely on the track and projecting into the path of the car in line with the said rubbing irons, for the latter to engage the said retaining arms and slide the same outward, and springs pressing the said retaining arms, to return the same to retaining position at the time the rubbing irons disengage the retaining arms.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEPHEN E. JACKMAN.

Witnesses:

IRVING E. BROWN,  
DAVID O. BERGEN.