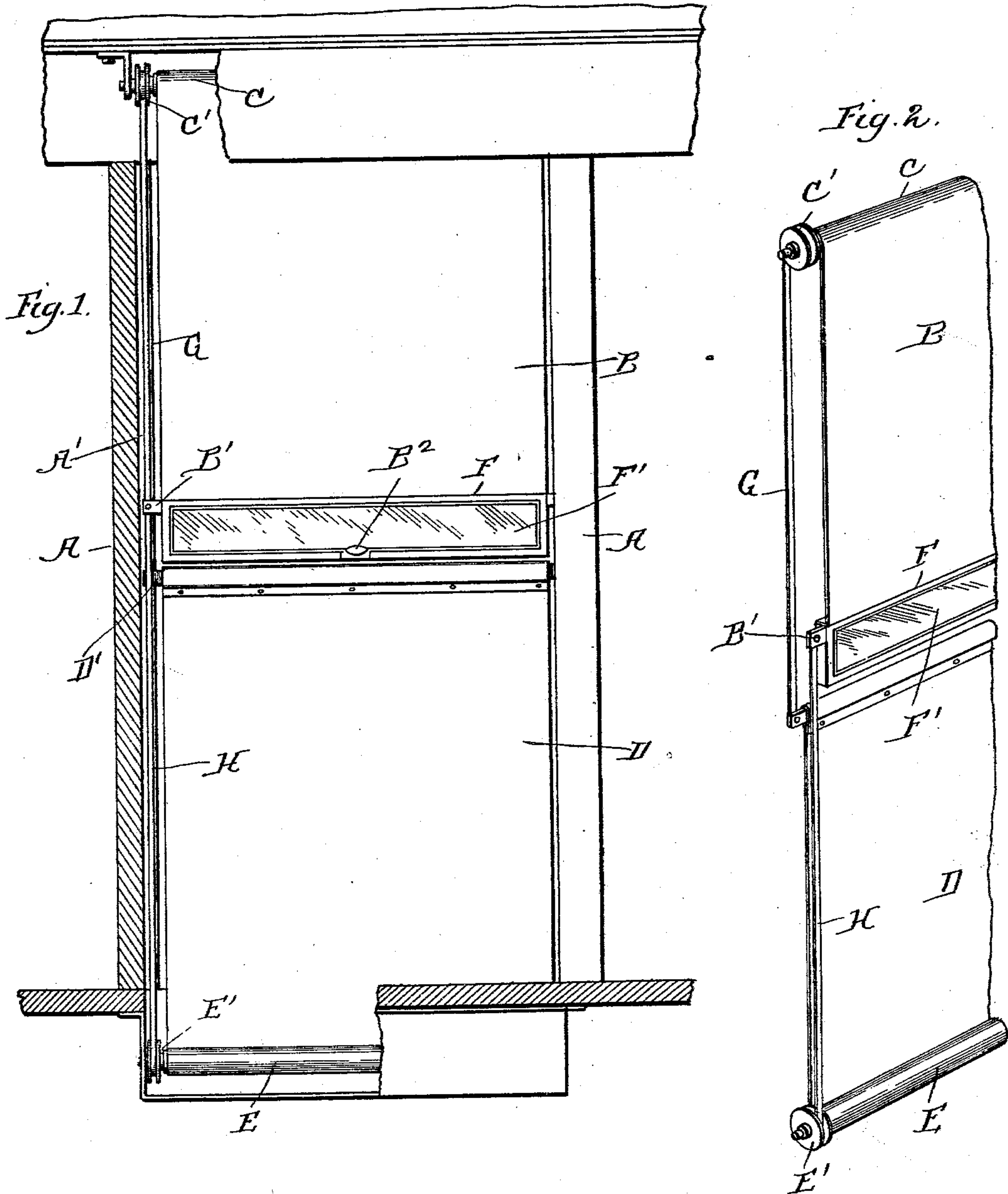


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C. S. SAPP.  
CLOSURE FOR STREET CARS.  
APPLICATION FILED MAY 9, 1903.

NO MODEL.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES S. SAPP, OF WILMINGTON, DELAWARE.

## CLOSURE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 740,929, dated October 6, 1903.

Application filed May 9, 1903. Serial No. 156,380. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. SAPP, a citizen of the United States, residing at Wilmington, county of Newcastle, and State of Delaware, have invented a certain new and useful Improvement in Closures for Street-Cars, of which the following is a specification.

My invention relates to a new and useful improvement in closures for street-cars, and is adapted to that class of cars known as "open" or "summer" cars, in which the seats extend transversely across the car and the passengers alight from the side of the car between the seats; and the object of my invention is to provide a closure for each space between the seats, whereby the space may be closed during inclement weather, but may be quickly and easily opened to allow the passengers to board or alight from the car.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an outside elevation of a portion of the car having my improvement applied thereto; Fig. 2, a perspective view of one side of my closure.

In open or summer cars, in which the seats extend transversely across the car, vertical posts A extend upward opposite each line of seats, and the usual practice is to close this opening in inclement weather with a curtain which is rolled or extends into the roof of the car and when pulled down extends to a point near the bottom or floor of the car. When all of these curtains are pulled down, it is extremely inconvenient for the passengers, as they cannot see through the curtains, to ascertain the whereabouts of the car, and to raise or lower the curtain to the full extent is also considerable inconvenience.

The purpose of my invention is to provide a double curtain, one passing upward and the other downward when opened, the upper curtain carrying a sash with a pane of glass

therein, through which the passenger may look.

In the drawings, B represents the upper curtain, which is designed to be rolled upon a roll C, located near the roof of the car and journaled in suitable bearings.

D represents the lower curtain, which is designed to roll upon a roll E, journaled in suitable bearings in a boxing below the floor of the car. To the lower end of the upper curtain is secured a sash F, in which is secured a pane of glass F', and when the curtains are closed this sash is in a convenient position for the passengers to look through to ascertain the whereabouts of the car. Each of the posts A is provided with grooves A' upon each side, which are designed to guide the curtains and also to contain the bands for operating the same. To each end of the upper roller is secured a grooved pulley C' and to each end of the lower roller is secured a grooved pulley E'.

G is a band which is connected to the upper end of the lower curtain and passes upward and around the pulley C' and is coiled in an opposite direction to the upper curtain. H is a band or cord which is connected to the lower end of the upper curtain and passes downward around the pulley E and is coiled in the opposite direction to the lower curtain. Thus it will be seen that by raising the upper curtain by the thumb-catch B<sup>2</sup> the band H will be uncoiled, and thus revolve the roller E, rolling the lower curtain downward, and this lower curtain will pull upon the band G and so revolve the roller C that the upper curtain will be rolled upon said roll, and the action will be just the reverse when the upper curtain is pulled downward or the lower curtain pulled upward. By changing the relative size of the pulleys C' and E' the division between the curtains can be made at any point desired—as, for instance, by increasing the size of the upper pulleys C' the lower curtain can be made much longer and the curtains would meet at a point farther up than that shown in the drawings. By this arrangement it will be seen that with a very small movement in raising the upper curtain the lower curtain will be lowered correspondingly and leave a sufficient opening for the passengers to board or alight from the car.



Of course while I have shown the sash F narrow this sash may be made any size desired, according to the construction of the car, and I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new and useful is—

10 1. In a closure for street-cars, upright posts provided with grooves upon their opposed faces, two curtains arranged to travel between the posts, a roll journaled in suitable bearings at the top of the car to which the  
15 upper curtain is secured, a roll journaled in suitable bearings near the lower end of the car to which the lower curtain is secured, pulleys secured to the ends of said rolls, a band secured to the upper end of the lower  
20 curtain and coiled upon the upper pulleys in the opposite direction to the upper curtain, and a band secured to the lower end of the upper curtain and coiled about the lower pulleys in the opposite direction to the lower  
25 curtain, as and for the purpose specified.

2. In a closure for street-cars, upright posts provided with grooves upon their opposed faces, two curtains arranged to travel between each set of posts, a roll journaled in  
30 suitable bearings near the roof of the car to which one end of the upper curtain is secured, a roll journaled in suitable bearings beneath the floor of the car to which the lower end of

the lower curtain is secured, pulleys secured to the ends of said rolls, bands secured to the upper end of the lower curtain and coiled  
35 about the upper pulleys in the reversed direction to the upper curtain, bands secured to the lower end of the upper curtain and coiled about the lower pulleys in the reversed  
40 direction to the lower curtain, and a sash provided with a pane of glass secured to the lower end of the upper curtain, as and for the purpose specified.

3. In a device of the character described, 45 upright posts, two curtains arranged to travel between each set of posts, a roll journaled in suitable bearings near the roof of the car upon which the upper curtain is adapted to roll, a roll journaled in suitable bearings  
50 near the bottom of the car upon which the lower curtain is adapted to roll, means for guiding said curtains in their movement, means for causing the lower curtain to be lowered when the upper curtain is raised, or  
55 vice versa, and a glass sash secured to the free end of one of the curtains, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses. 60

CHARLES S. SAPP.

Witnesses:

NORRIS C. MORGAN,  
GEORGE F. STEWART.