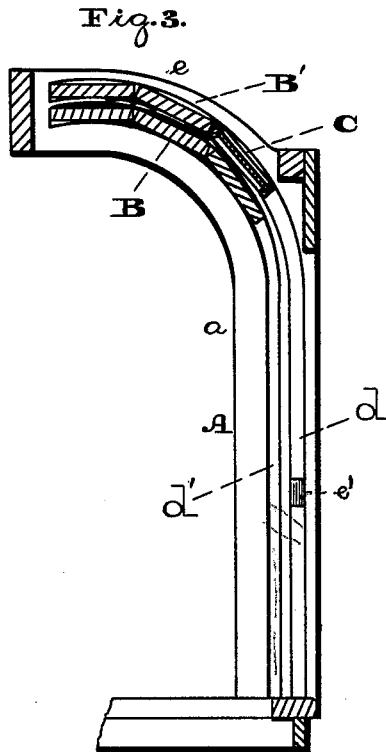
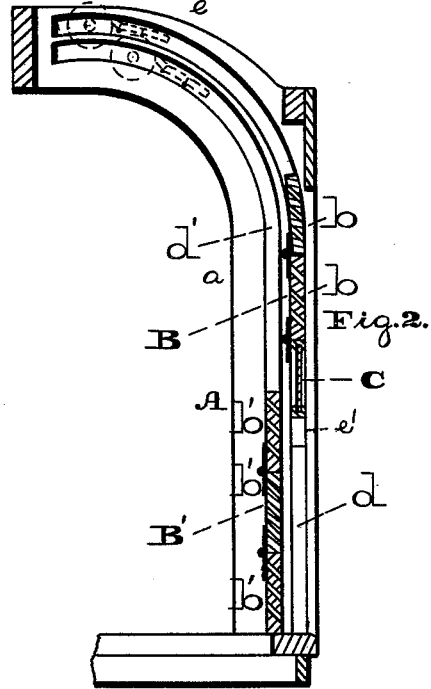
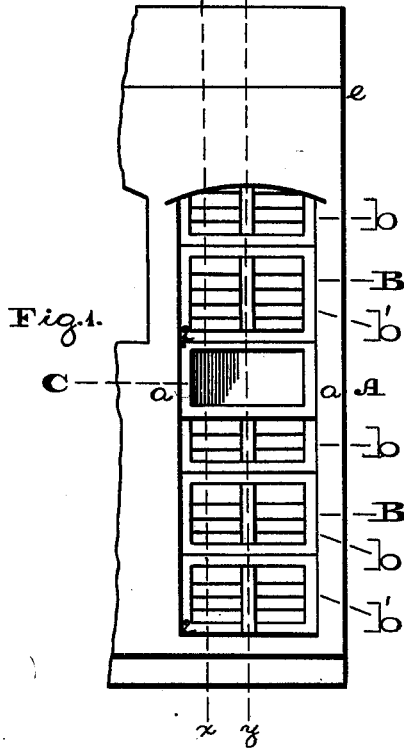


J. G. & G. M. BRILL.
Car-Shutter.

No. 202,920.

Patented April 30, 1878.



Witnesses:
Lewis F. Brown,
As. P. Grant.

Inventors:
John G. Brill,
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UNITED STATES PATENT OFFICE.

JOHN G. BRILL AND GEORGE M. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-SHUTTERS.

Specification forming part of Letters Patent No. 202,920, dated April 30, 1878; application filed December 13, 1877.

To all whom it may concern:

Be it known that we, JOHN G. BRILL and GEORGE M. BRILL, both of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Cars, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side view of a portion of a car embodying our invention. Fig. 2 is a vertical section in line *x x*, Fig. 1. Fig. 3 is a vertical section in line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention relates to improvements in the class of open and other cars; and it consists in dispensing with curtains usually employed for wet weather, and other blinds, and substituting therefor blinds which may be readily folded out of the way by change of direction from vertical to horizontal, or somewhat horizontal, position, the blinds being in flexible sections, upper and lower, working independently of each other.

It also consists in providing the blinds with windows to admit light when the blinds are in use, said windows being connected to and moving or folding with the blinds.

Referring to the drawings, A represents a portion of the body of a car, the sides of which, in the class of open or summer cars, as is well known, are made of a light frame or uprights rising from the platform, which leave said sides almost entirely open, and in wet weather said sides are closed by curtains, the car thereby becoming damp, close, and dark, and other inconveniences and discomforts are occasioned.

In lieu of the curtains, as stated, or of other blinds, we apply to the side uprights or upright portion *a* of the sides of the body blinds B B', which consist of an upper and lower section, the sections being formed of parts hinged together and fitted in grooves *d d'* in said uprights or upright portions, which uprights or portions are extended transversely overhead, or at the roof portions or carlines *e*, the grooves *d d'* extending in curved directions in said portions *e*.

The blinds or sash-blinds are upper and lower, and they will be provided with catches

or fastenings, so as to be held at any desired height, the downward movement of the upper sections being limited by a stop, *e'*, in the uprights or posts. At the bottom of the upper section is a window, C, the frame of which is hinged to the adjacent frame of the upper blind, and it also fits in the groove *d* of the uprights *a*.

When the cars or windows are to be kept open, the blinds will be raised, and they change directions from vertical to horizontal, or somewhat horizontal, positions, and they fold or enter the roof portions *e* of the car, where they will be properly secured, the hinges of the sections *b b'* permitting the blinds to accommodate themselves to the curvature of the grooves in the portions *e*. (See Fig. 3.)

In stormy or wet weather, if the cars are open, the blinds are lowered, the lower sashes reaching to platforms, and the upper sashes lowering to such extent that the windows C will be at or about the height of the eyes of the people occupying the seats of the cars, (see Figs. 1 and 2,) whereby the sides of the car will be completely inclosed and protected from the weather, light and air will be admitted, people can see out and into the car, the flapping and inconvenience of curtains are avoided, and the blinds may be readily operated to permit the admission and exit of passengers into and from the car.

We construct each blind of an upper and lower section, which work independently of each other, the lower section to be kept down as a guard, and raised when passengers wish to get in or out of the car. The upper section is to be raised in good weather, and lowered as a sun-shade or as a protector in bad weather.

By this construction, when the weather is bad, it is not necessary to disturb the upper section, and it is only necessary to raise the lower section to provide access to and from the car, the space, however, being enlarged by somewhat raising the upper section.

In good weather the upper section is run into the roof portion or carlines *e*, and the lower section may still be employed as a guard, without, however, depriving the car of light and air. In bad weather, both sections are closed, and, while air may be admitted, the

windows C admit the necessary light in the car, which would otherwise be darkened and allow the entrance of rain, &c.

More than one window may be employed for the upper sash, and the lower sash may be constructed with windows similar to the upper sash. Owing to the overhanging portions receiving the folded or disused blinds, the height of the car is not increased.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The car provided with blinds formed of upper and lower flexible sections B B', mov-

able each in its own set of grooves in the uprights and carlines independently of each other, and operating substantially as and for the purpose set forth.

2. The car-blinds formed of upper and lower flexible sections B B', in combination with the windows C attached thereto, and operating substantially as and for the purpose set forth.

JOHN GEORGE BRILL.
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Witnesses:

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