D. W. COPELAND.
Carriage-Curtain.

No. 198,573. Patented Dec. 25, 1877.

Fig. 1.

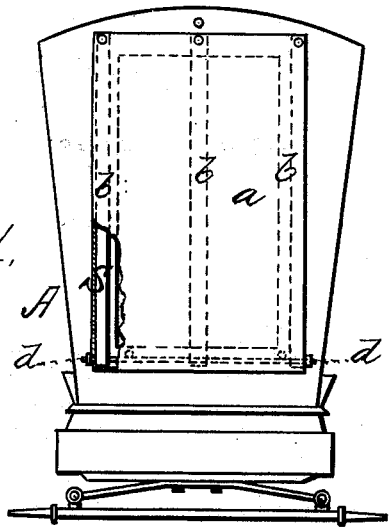



Fig. 2.

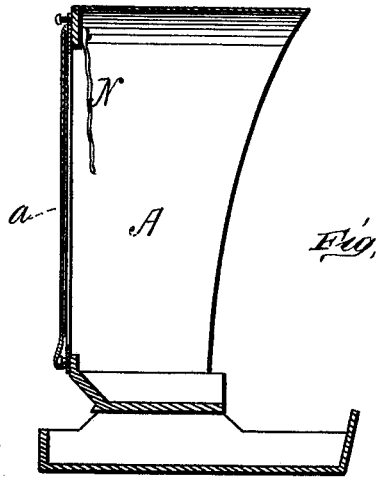



Fig. 3.

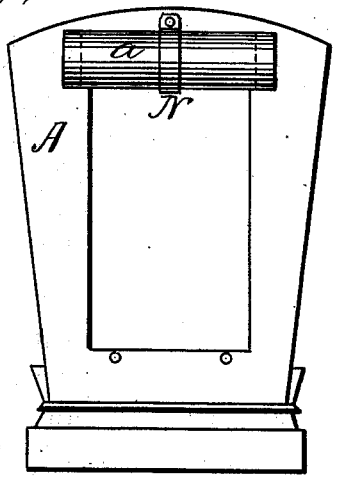
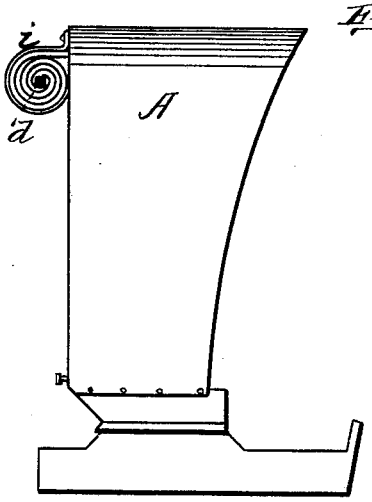



Fig. 4.




WITNESSES
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# UNITED STATES PATENT OFFICE.

DAVID W. COPELAND, OF THERESA, NEW YORK.

## IMPROVEMENT IN CARRIAGE-CURTAINS.

Specification forming part of Letters Patent No. **198,573**, dated December 25, 1877; application filed November 24, 1877.

*To all whom it may concern:*

Be it known that I, DAVID W. COPELAND, of Theresa, in the county of Jefferson and State of New York, have invented a new and valuable Improvement in Carriage-Curtains; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a rear view of a carriage, showing my invention applied. Fig. 2 is a vertical section thereof; and Figs. 3 and 4 are, respectively, side and end views of the curtain rolled up.

This invention has relation to improvements in curtains for vehicles, railway-carriages, and other purposes.

The object of the invention is to devise a curtain that will be wound up automatically in a tight roll without the use of rollers, springs within the rollers, or cords.

The nature of the invention consists in combining, with a flexible curtain secured at one edge to the upper edge of a window or other opening in a carriage or other object, a spring or springs secured to the said curtain in the direction of its length, which will readily unwind when the curtain is drawn down, and as readily react when the said curtain is released, thereby rolling up the same, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a covered vehicle, the rear end of the tilt of which is closed by a curtain, *a*. This curtain is provided at intervals with sheaths *b*, in which are inserted and suitably secured the coiled springs S. These springs are of the description used in propelling clock and other mechanisms, and when free coil up tightly through the reactive force. The upper end of these springs is secured, in any suitable manner, along with the curtain, to the upper edge of the opening, upon the inside or outside of the vehicle, as I may elect, and their lower ends to a light tension-bar, *d*, that serves to keep the said springs properly spaced, and prevents them from forming vertical folds in the curtain. The lower end of this curtain is secured to the vehicle-body by any of the usual modes, such as buttons and button-holes, or straps and buckles; and similar devices may be used in connection with the lateral edges of the said curtain, for the purpose of closing any gap between them and the jambs of the opening, and of raising or lower the curtain to a greater or less extent, as may be required. In its normal position the spring is tightly wound up, as shown at *i*, Fig. 4, and the curtain is rolled up therewith. It is lowered by seizing its lower part and unwinding the said spring or springs. If the curtain be released from its lower fastenings, the springs immediately react and wind up the curtain automatically. This being done, the curtain is secured, and the spring relieved of its weight, by the usual fastening-strap N. It may, however, be dispensed with.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the curtain *a*, of the coiled spring or springs S, substantially as specified.

2. The combination, with the flexible curtain *a*, of the coil-spring S, sheathed therein, substantially as specified.

3. The combination, with the curtain *a* and the coil-springs S, of the end tension-rod *d*, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

D. W. COPELAND.

Witnesses:
M. J. UTLEY,
F. J. MASI.