

(No Model.)

F. A. NEIDER.
CARRIAGE CURTAIN LIGHT.

No. 470,699.

Patented Mar. 15, 1892.

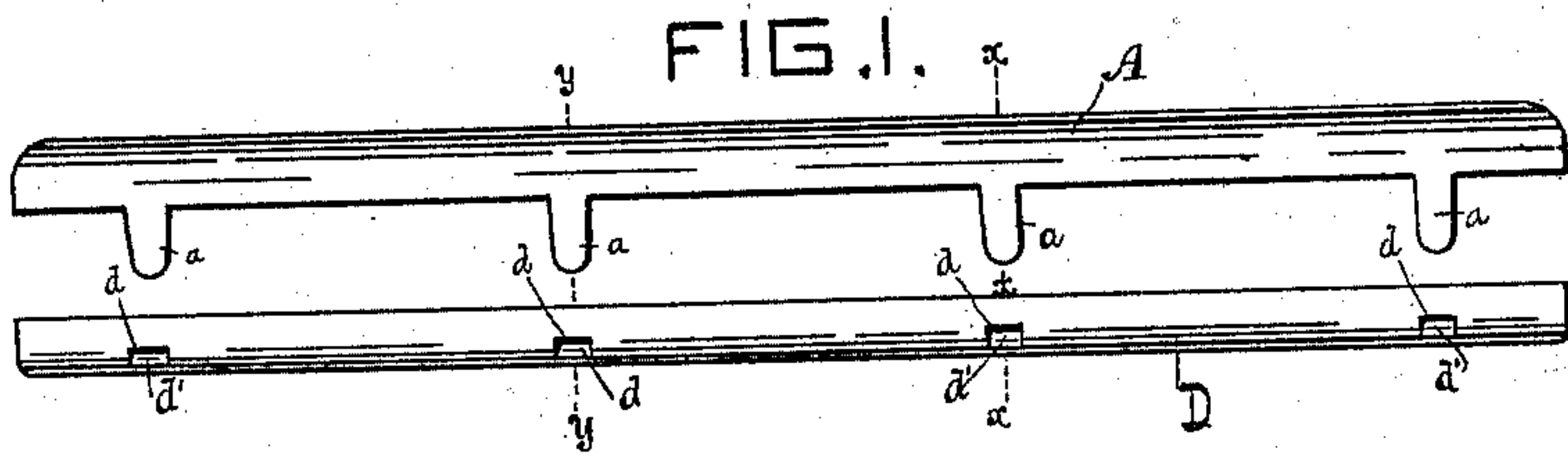


FIG. 2.

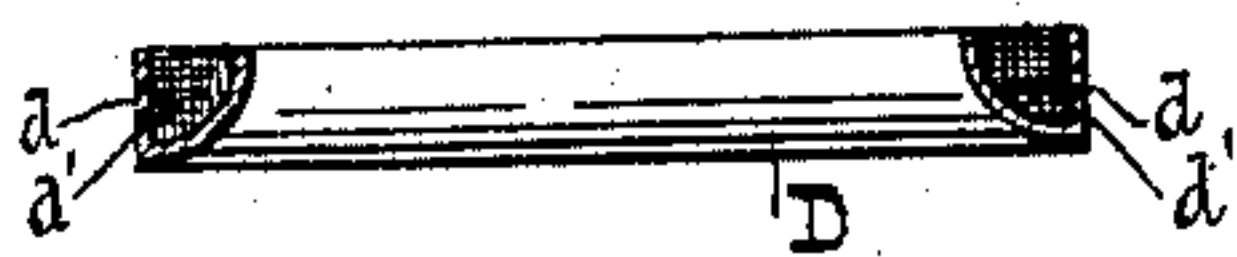


FIG. 3.



FIG. 4.

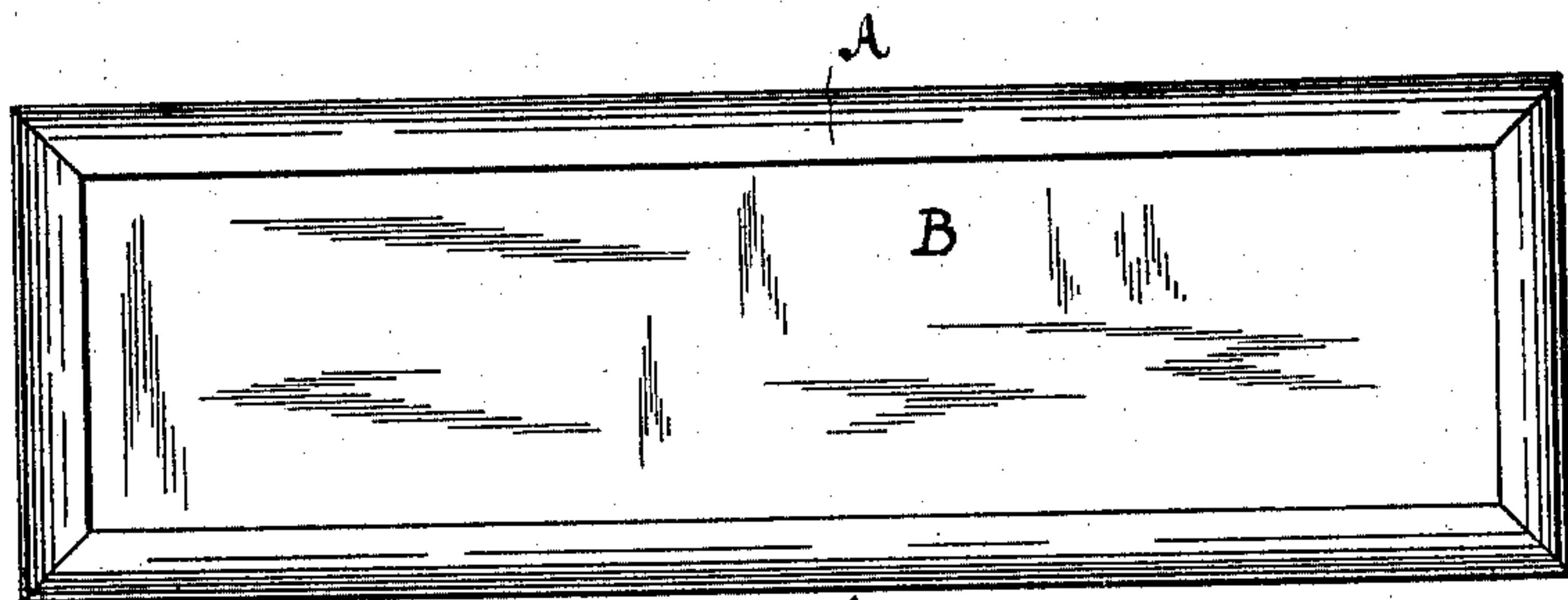


FIG. 6.

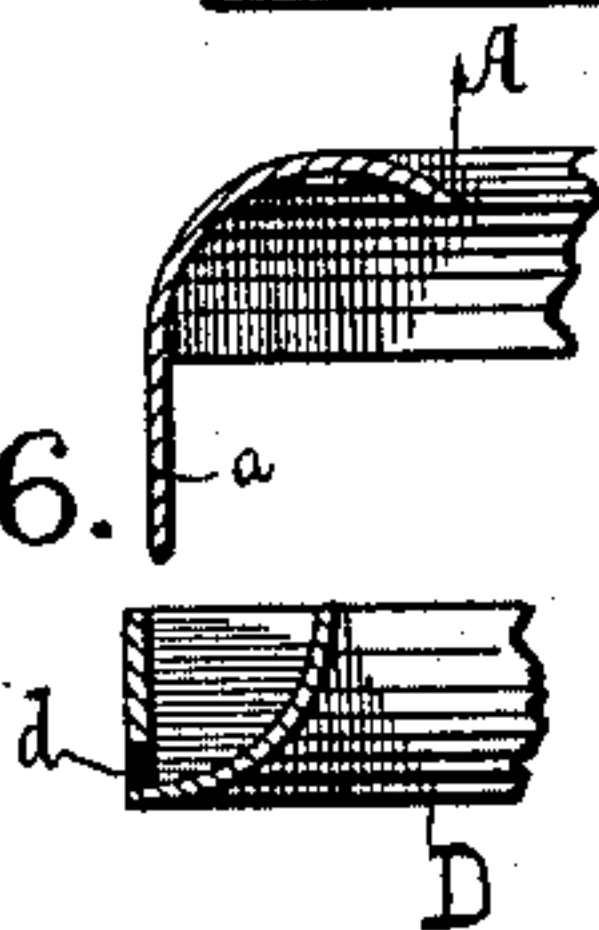


FIG. 5.

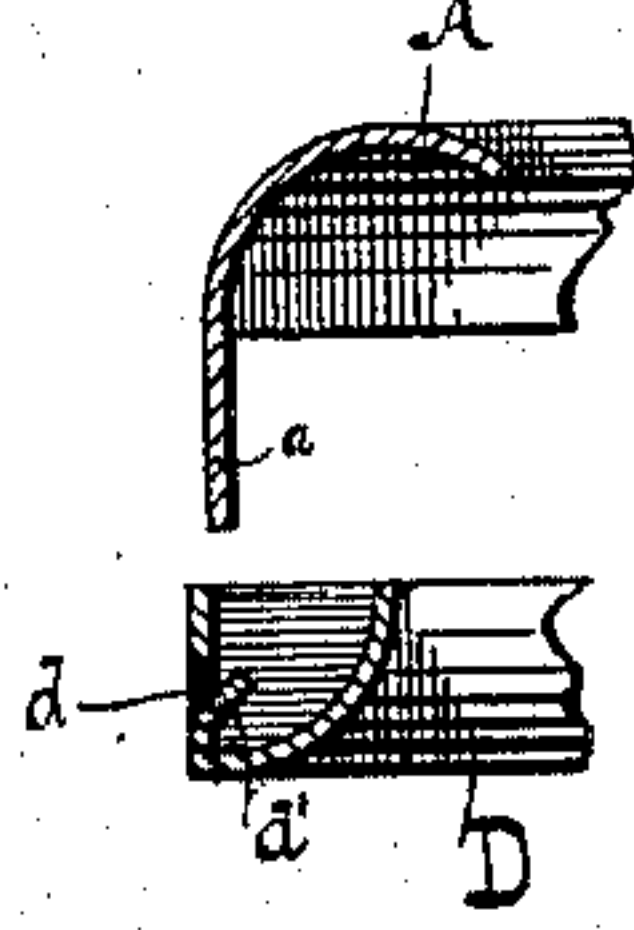
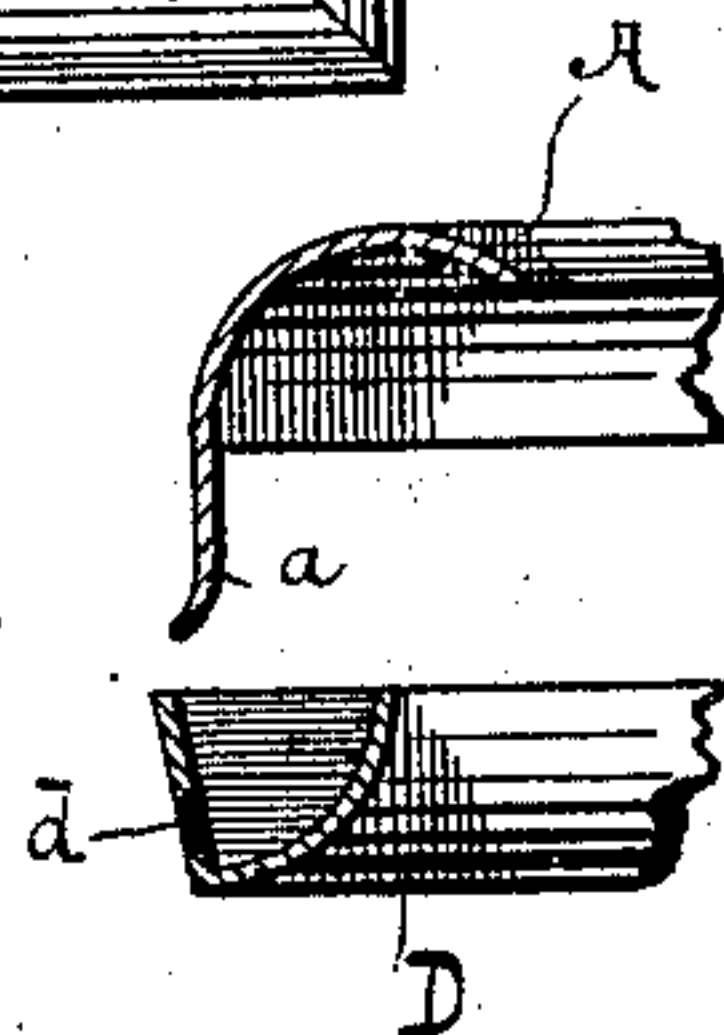


FIG. 7.



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CARRIAGE-CURTAIN LIGHT.

SPECIFICATION forming part of Letters Patent No. 470,699, dated March 15, 1892.

Application filed October 13, 1890. Serial No. 367,955. (No model.)

To all whom it may concern:

Be it known that I, FRED. A. NEIDER, a citizen of the United States, and a resident of Augusta, in the county of Bracken and State of Kentucky, have invented certain new and useful Improvements in Carriage-Curtain Lights, of which the following is a specification.

My invention relates to carriage-curtain lights, and particularly to means for securing the outside frame and glass in place.

In all curtain-lights heretofore made the frames were liable to work loose in a short time, allowing them to play upon the curtain goods and cut them. This defect arose principally from the fact that the clinching-points securing the outer frame and glass were turned down at substantially a right angle, and as the frames formed with clinching-points were necessarily of light metal the movement of the curtain in use and the strain brought upon them in folding up the curtain partially straightened out the points and loosened the frames from the curtain goods. To overcome this objection, I have provided an inside fastening-frame through the side walls A, on which the points are deflected, hooked, and clamped, so that no strain short of that which would break the points will separate the outer and inner frames or slacken their bite upon the curtain goods.

In carrying out my invention it is not necessary to make any changes in the outer frame or the glass light. It is only necessary to apply to any of these old devices my improved inside frame, which costs no more, if as much, as the ordinary frame and is quite as easily applied.

In the accompanying drawings, in which like parts are similarly indicated in the various views, my invention is fully illustrated. In connection with these views I will describe it, and then particularly refer to and point out its novel features.

Referring to the drawings, Figure 1 is a side elevation of the outer and inner frames separated from each other. Fig. 2 is a transverse sectional view of the inside frame through line *xx* of Fig. 1. Fig. 3 is a similar sectional view of the device complete and applied for use, taken in the same plane as Fig. 2. Fig. 4 is a front elevation of the device complete. Fig. 5 is a detail view, in transverse section,

through line *yy* of Fig. 1, upon a greatly-enlarged scale. Figs. 6 and 7 are similar views of modified forms of my invention.

The outside frame A, with its clinching-points *a*, and the glass B within it are applied to the curtain C C' in the usual manner preparatory to securing them in place by my inside frame D. The body of this frame is formed up from sheet metal in the usual manner, after which the perforations *d* to receive the clinching-points *a* of the outside frame A and the lips *d'* to turn the points outwardly through these perforations are formed in its outer longitudinal walls. I form these perforations and lips with beveled or chisel-pointed tools, which sever three sides of the openings and press the lips *d'* inwardly at the same time.

After the outside frame with the glass in it is placed on the curtain, with the clinching-points passing through the outside goods C and the lining C', the curtain is turned face downward upon a block in the usual manner. The inside frame is placed over the inwardly-projecting points *a* and forced and firmly held down upon the inside goods.

In forcing the inside frame to place the points *a* are deflected through the perforations *d* by the lips *d'*. The projecting ends of the points *a* are then pressed inwardly against the walls of the inside frame, as shown in Fig. 3. The two frames and the glass are thus held firmly in place. Now it will be seen that the points are hooked over the outer edge of the perforation in the inside frame and that no strain that can be brought upon the curtain in ordinary use has any tendency to straighten out the clinching-points or vary the position of the frames relatively to each other, and the clinching-points are barely noticeable when the curtain-light is in place. There is therefore a neat finish presented upon the inside as well as upon the outside of the curtain.

In the modification shown in Fig. 6 the lip *d'* is dispensed with and plain perforations made at the bottom or angle formed by the side wall and curved molding of the frame. In this form the curved wall or molding deflects the points through the perforations when the inside frame is forced to place. The points are turned down against the side walls, as in the preferred form.

In the modification shown in Fig. 7 the side walls are inclined and plain perforations made through them. In this form the ends of the clinching-points will slide down the inclined walls until they come to the perforations, and will then strike the lower walls of the perforations and, as the frame is forced to its seat upon the inside lining C', be deflected through the perforations ready to be clinched down, as in the form previously described. In this form the tips of the clinching-points are preferably given a slightly-outward inclination to facilitate their easy passage through the perforations. It is evident that in closing the frames together these points will before reaching the perforations be deflected inwardly and when they come opposite the perforations will spring back partially through them.

I claim—

1. An inside fastening-frame for carriage-lights, having its side walls perforated, and deflecting-surfaces to turn the clinching-points of an outside frame out through the perforations, so that said points may be hooked over

the side walls of the inside frame to clamp and hold the outer and inner frames firmly upon the curtain, substantially as shown and described.

2. The inside clinching-frame D, having the perforations *d* in its side walls and intumed deflecting-lips *d'* below said perforations to turn the clinching-points of an outside frame out through said perforations.

3. The combination, in a carriage-curtain light, of the frame A, having clinching-points *a*, the glass B, and the inside clinching-frame D, having its side wall perforated, and deflecting-lips *d'* opposite said perforations to turn the clinching-points out through said perforations, whereby they can be bent down against the outer faces of the side walls as the frames are forced into position on the curtain, substantially as shown and described.

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Witnesses:

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