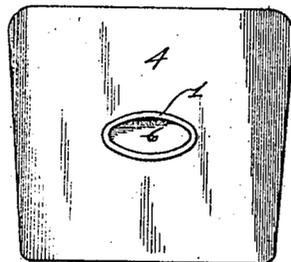
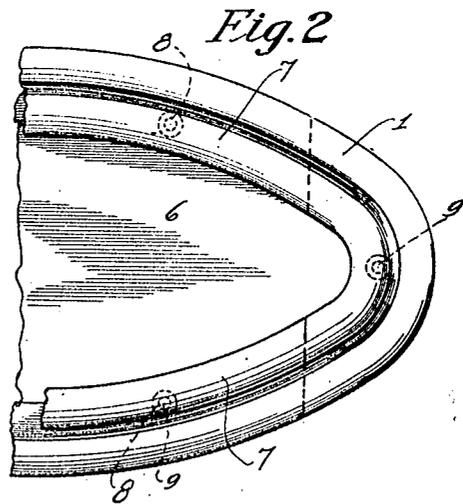
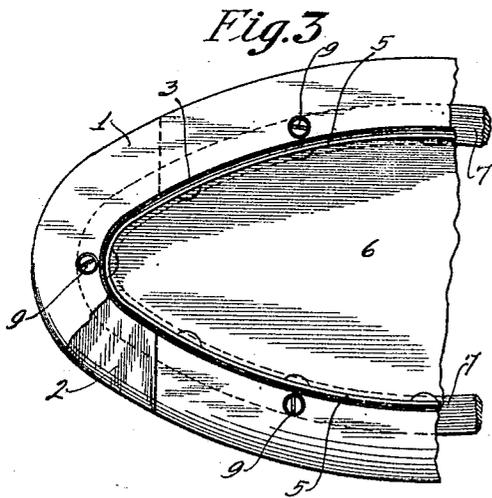
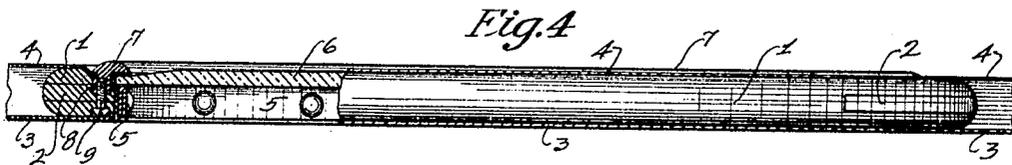


J. E. SPENCER & A. C. LILLIE.  
 AUTOMOBILE WINDOW CONSTRUCTION.  
 APPLICATION FILED AUG. 11, 1917.

1,298,593.

Patented Mar. 25, 1919.



Witnesses:  
*B. O. Albright*  
*Kathryn H. Mack*

Fig. 1

INVENTORS,  
*John B. Spencer and Arthur C. Lillie,*  
 BY  
*Arthur L. Mack*  
 Their Attorney.

# UNITED STATES PATENT OFFICE.

JOHN E. SPENCER AND ARTHUR C. LILLIE, OF LOS ANGELES, CALIFORNIA, ASSIGNORS TO  
WILLIAM H. JOHNSTON MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

## AUTOMOBILE-WINDOW CONSTRUCTION.

1,298,593.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed August 11, 1917. Serial No. 186,640.

*To all whom it may concern:*

Be it known that we, JOHN E. SPENCER and ARTHUR C. LILLIE, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Automobile-Window Construction, of which the following is a specification.

Our invention relates to improvements in automobile curtain window construction of the character disclosed in Letters Patent Number 1,219,877 granted to us March 20, 1917, and has for an object the provision of means for rendering the curtains water tight when the windows are in place, the windows being of plate glass as set forth in said Letters Patent, and means for cushioning both sides of the glass in the frame for preventing damage thereto. Other objects may appear as the description progresses.

We attain the above objects by means of the structure shown in the accompanying drawings, in which Figure 1 is an elevation of the rear curtain of an automobile with our improved window in position therein. Fig. 2 is an enlarged fragmentary rear view of the window and frame, and Fig. 3 is a similar view of the opposite side thereof, partially in section. Fig. 4 is a transverse section of the structure shown in Figs. 2 and 3. Similar characters of reference are employed in the several views of the drawing and throughout the specifications for indicating the same or like parts.

The general appearance and arrangements of the several elements of our invention differ but little from the form of window disclosed in our former patent, hereinbefore referred to, the wooden frame 1 being integrally formed with wooden inserts 2 placed in the ends for reinforcement of the structure, whereas in the other type the entire frame comprised a laminated structure. The curtain is composed of an inner and an outer thickness of material 3 and 4, of similar or different character, and the inner lining 3 has an opening cut therein to conform in size to the opening in the center of frame 1, the edges of the curtain at the opening therein being turned inwardly and tacked or otherwise secured to the inner periphery of the frame opening. A welt of single or double thickness, as at 5 is formed around and tacked to the inner edge of the curtain so that the inner edges of the welt and curtain

will be substantially flush with the depression formed around the central opening in the frame, as shown in Fig. 4.

A plate glass 6 which conforms to the size of the opening in the frame is inserted in the opening and rests upon the edges of the curtain 3 and the welt 5. The outer curtain 4 has an opening cut therein of about the size of that in the frame 1 and is placed upon the outer surface of the frame with the edges thereof extending slightly over the periphery of the glass 6. A metal retaining ring 7 of semi-circular cross section is provided for holding the outer curtain 4 and glass 6 firmly in place in the frame, the inner periphery of the ring overlapping the glass and outer curtain, as shown in Fig. 4. Lugs 8 are formed on the flat inner side of the retaining ring at frequent intervals and near the outer periphery of the ring so that a flat and uninterrupted surface may be provided for engagement with the curtain and glass.

The lugs 8 are drilled and tapped to receive the screws 9 which extend from the opposite side of the frame through suitable bores and the heads thereof are seated in counterbores formed in the frame, the screws thus serving to hold all of the elements except the inner curtain and welt firmly in position.

The structure described renders the window water tight, the two curtains 3 and 4 being held in firm contact with the glass by means of the retaining ring, and the edges of the curtains provide cushions for both sides of the glass, so that damage thereto may be prevented by usage. The lugs 8 seat in suitable bores formed in the frame 1 and the ring 7 may thus be centered in the frame.

The frames of the windows are made in several different forms, such as circular, square, hexagonal, to conform to the spaces in the curtains provided for the reception of the frames, some windows being used on the side curtains as well as the rear as shown.

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

In a structure of the character described, a frame having an opening therein, an inner curtain extending over one side of said frame and turned over the edge of the opening therein, a welt attached to the edge of said frame and said curtain around said opening, a transparent element held in said opening

on the edge of said welt, an outer curtain having an opening therein, said curtain extending over the outer side of said frame and the edge thereof around said opening overlapping the periphery of said transparent element, and a detachable retaining ring adapted to be secured to said frame for holding said outer curtain in position on said frame and between said transparent element

and said ring, the inner edges of said inner and outer curtain serving to cushion opposite sides of said transparent element.

JOHN E. SPENCER  
A. C. LILLIE.

Witnesses:

C. P. JOHNSTON,  
LUTHER L. MACK.