

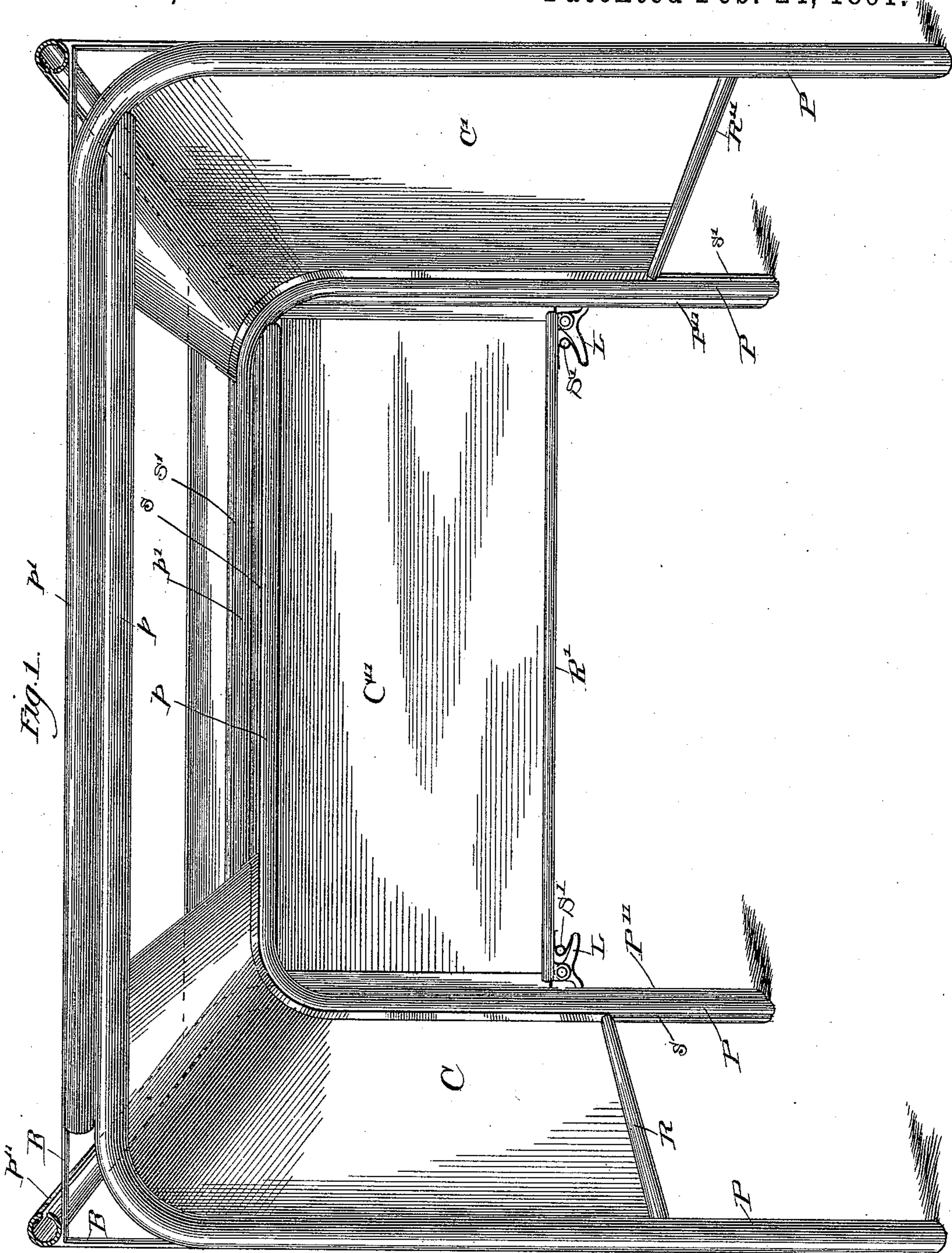
(No Model.)

2 Sheets—Sheet 1.

C. F. ZOLLER & L. S. BURROWS.
VEHICLE TOP.

No. 447,097.

Patented Feb. 24, 1891.



Witnesses:
W. H. Wood
L. J. Atwater

Inventors.
C. F. Zollner and
L. S. Burrows,
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Thurs, Atlys.

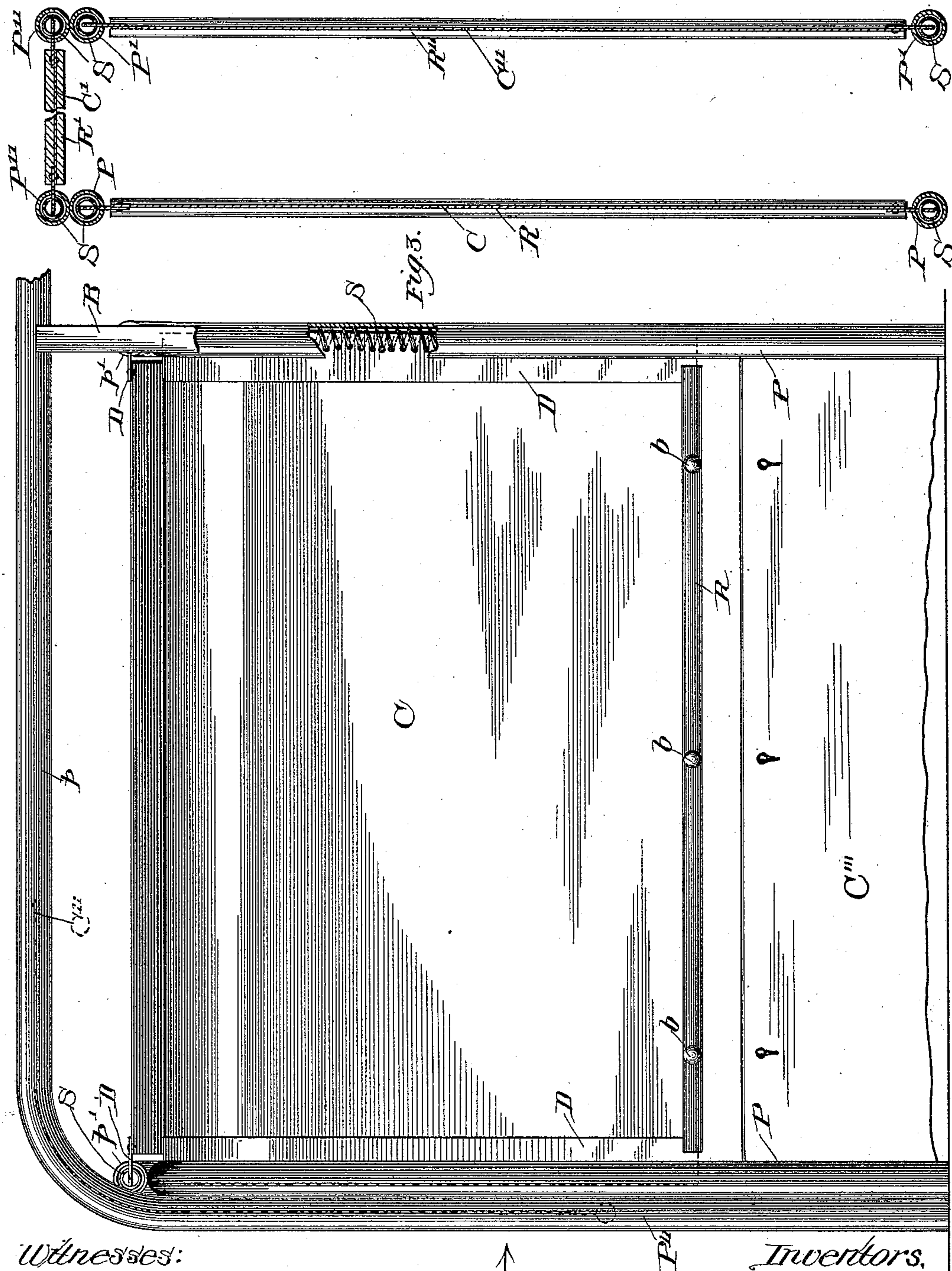
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Fig. 2.

Inventors.
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Their Attys.

UNITED STATES PATENT OFFICE.

CHARLES F. ZOLLER AND LEONARD S. BURROWS, OF FORESTON, ILLINOIS.

VEHICLE-TOP.

SPECIFICATION forming part of Letters Patent No. 447,097, dated February 24, 1891.

Application filed September 12, 1890. Serial No. 364,767. (No model.)

To all whom it may concern:

Be it known that we, CHARLES F. ZOLLER and LEONARD S. BURROWS, residents of Foreston, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Vehicle-Tops; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in curtains and curtain-supports for carriage-tops, the object of the invention being to provide a carriage with curtains and supports therefor adapted to permit the easy and rapid raising and lowering of the curtains without the use of rollers, fasteners, or other complicated devices for supporting and securing the curtains when they are raised or lowered.

The invention is fully explained in this specification and shown in the accompanying drawings, which illustrate its application to a canopy or stationary top. These drawings comprise three figures, of which—

Figure 1 is a perspective view of the interior of a top embodying my invention. Fig. 2 is a side elevation of said top, the view being in the direction indicated by the arrows in Figs. 1 and 3; and Fig. 3 is a horizontal section of the curtains and their supports.

In the views, P P are two vertical tubular posts situated at the front and rear angles of one side of the top, each of the posts being provided at its upper end with a transverse extension B extending across the top, and each of the posts being connected with its extension by a curve of ninety degrees, formed integrally with the post and extension. Each post forms with its extension and curved connection a single continuous tube, and each of these tubes has formed in its inner face a continuous slot s extending throughout the entire length of the tube. The slots in the two posts P P face each other and correspond in position with each other throughout.

Between the posts P P hangs a curtain C of any desired material, provided at its lower edge with a rigid rod R clamped to the curtain, and at its side edges with thin blades of spring metal D D riveted or stitched to the curtain, or fastened to it in any other convenient manner. These blades D D pass through

the slots in the posts P P, and have their outer edges perforated to receive the light coil-springs S S which lie within the tubes. These springs prevent lateral withdrawal of the blades D D from the post, and are at the same time so flexible that they form no resistance to the longitudinal movement of the blades in either the straight or curved portions of the tubes. It is evident, therefore, that the curtain C may be raised or lowered in the posts P P and their extensions by simply pressing the rod R upward or downward; that when the curtain is drawn completely down it will close the side of the top on which the posts P P are placed, and when it is completely raised it will lie almost wholly in the extension p p, and will leave the side of the top almost wholly open.

On the side of the top opposite the posts P P are fastened two similar posts P' P', provided with extensions p' p', which lie above and in contact with the extension p p, and are fastened permanently thereto, and at the back of the top and in close contact with the rear corner-posts P' P' are fastened two similar posts P'' P'', provided with extensions p'' p'', which extend from the rear to the front above the extensions p' p', and are held in place at the upper front angles of the top by means of braces B B, Figs. 1 and 2. The posts P' P' and their extensions are slotted like the posts P P, to receive a side curtain C', and the rear posts P'' P'' and their extensions are slotted in the same manner to receive a back curtain C''. Each of the curtains C' C'' is held in place in the corresponding posts by means similar to that already described for securing the curtain C in the posts P P, and each of the said curtains is operated precisely the same as the curtain C. When all the curtains are raised the curtain C' lies immediately above the curtain C and the curtain C'' lies above the curtain C'. A permanent stationary cover or roof may be fastened to the extension p'' in any desired manner, and may be extended forward beyond the posts P P to any desired distance; and it is evident that other posts may be placed at the front corners of such extensions and may be made to support curtains operating like the curtains C C' C'' already described. The device which we have thus de-

scribed is easy and rapid of operation, simple in construction, and extremely compact. When the curtains are down they are held securely at all points along their edges, and when they are raised they are completely out of the way and practically out of sight, and their raising or lowering involves no manipulation of parts, and scarcely any time.

We have found that in all ordinary use the curtains are held in any desired position by the friction of the parts and without any direct means for fastening them. It may be desirable in some cases, however, to supply means for fastening the curtains in order to prevent their accidental lowering, and also to prevent any possibility to rattle of the parts, and for this purpose we have provided such fastenings as are shown attached to the curtain *C'*, Fig. 1. In each of these fastenings *L* is a small latch pivoted to the rod at the bottom of the curtain and having one of its ends adapted to enter the slot in the corresponding post, and *S'* is a spring placed between the free end of the latch and the rod and adapted to force the opposite end of the latch into the slot. When it is desired to raise or lower the curtain, the rod is naturally grasped near its end, and the latch is thereby disengaged from the post, leaving the curtain free to move up or down.

In certain forms of vehicles it may be necessary to add to the square-edged curtain shown and above described a smaller supplemental curtain *C*, adapted to fit in depressions or openings in the sides of the box or body. These supplemental curtains will of course be of such various forms as may be necessary, and they may be secured in their respective places by fastening them to the body and securing them at their upper edges to the lower edges of the side curtains. For this purpose the rods at the lower edges of the side curtains are provided with buttons *b*, Fig. 2, for receiving and securing the supplemental curtains.

The drawings illustrate the application of our invention to a canopy-top carriage; but it is evident that it may be applied to vehicles of all descriptions, and to other structures with which it is desired to use curtains which may be readily raised or lowered—such, for instance, as pleasure-boats.

We are aware that details of the invention may be varied by any skilled mechanic, and we desire, therefore, not to limit our inven-

tion to the use of the specific forms and combinations illustrated in the drawings, and hereinbefore described.

Having now described and explained our invention and its operation, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the slotted tubular posts and curtains sliding in the slots and provided with the terminal rods, of locks mounted upon said rods and adapted to wedge into said slots to lock the curtains in position.

2. The combination of the posts *P P*, having the extensions *p p* joined to the posts by integrally-formed curves, and formed with slots *s*, of the curtain *C*, the blades *D D*, fastened to the side edges of the curtain and sliding in the slots *s*, and the coiled springs *S*, embracing the edges of the blades *D D* and holding them in position in the slots in the posts, whereby the blades and curtain are secured against lateral movement, but are free to move longitudinally in the post, substantially as and for the purpose set forth.

3. The combination, in a carriage-top, of a series of pairs of posts secured in place on different sides of the top and provided with lateral extensions lying in different horizontal planes above the top, and a series of curtains, each supported by one of said pairs of posts and adapted to slide longitudinally in the same, and their extensions, whereby the various curtains may be raised or lowered independently and when raised may lie in different horizontal planes in the upper part of the top, substantially as and for the purpose set forth.

4. The combination, with the slotted tubular posts, of the metal-edged curtain sliding upward in said slots to pass out of use, the spring-coils within the posts and engaging the edges of the curtain, a supplementary curtain below the first and adapted to be lowered when not in use, and means for detachably securing the upper edge of the supplementary curtain to the lower edge of the curtain first named.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

CHARLES F. ZOLLER.

LEONARD S. BURROWS.

Witnesses:

R. H. WILES,

J. A. CRAIN.