No. 706,605. Patented Aug. 12, 1902.

W. J. SLYDER.

FOLDING CANOPY FOR VEHICLES.

(Application filed Apr. 14, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

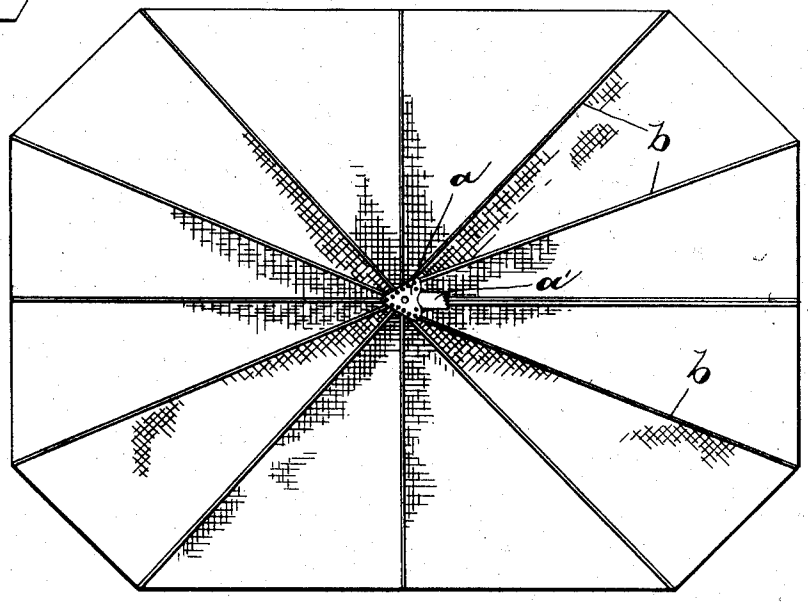


Fig. 2

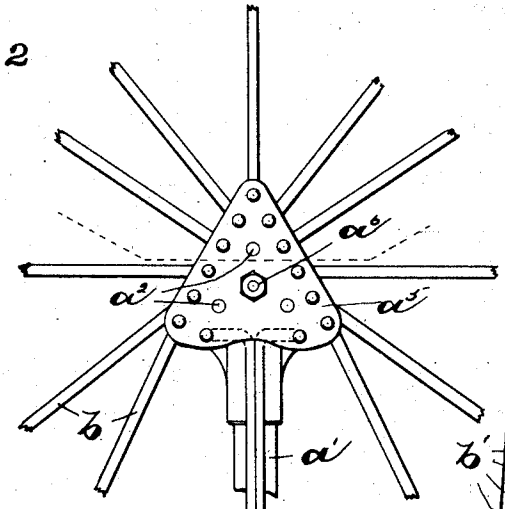


Fig. 3

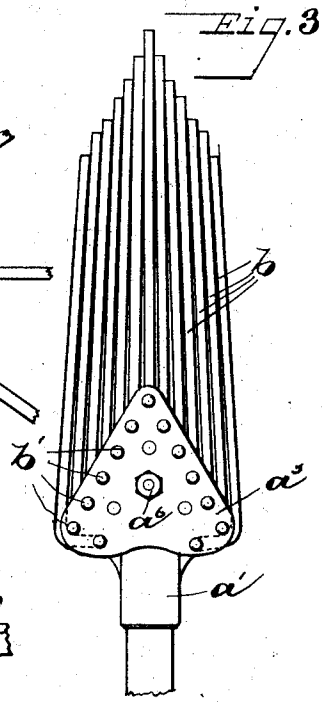
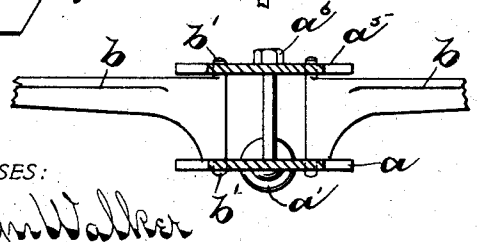


Fig. 4



WITNESSES:

L. Llewellyn Walker

Clifton P. Grant

INVENTOR

William J. Slyder

BY Stanley and Brownell

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 706,605. Patented Aug. 12, 1902.

W. J. SLYDER.

FOLDING CANOPY FOR VEHICLES.

(Application filed Apr. 14, 1902.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5

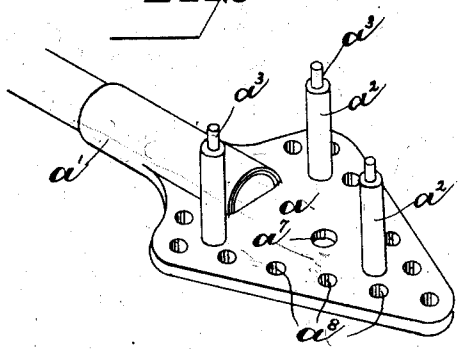


Fig. 6

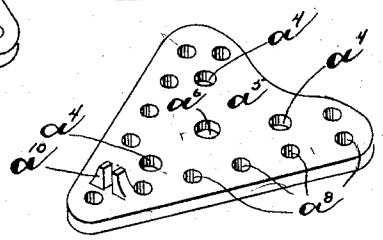


Fig. 7

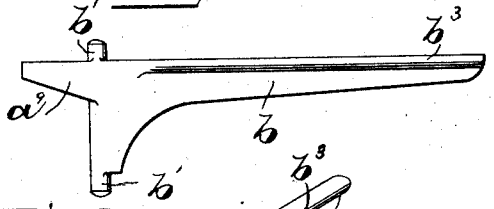


Fig. 8

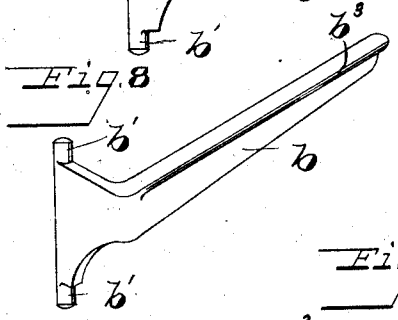


Fig. 10

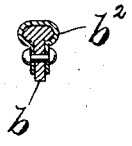
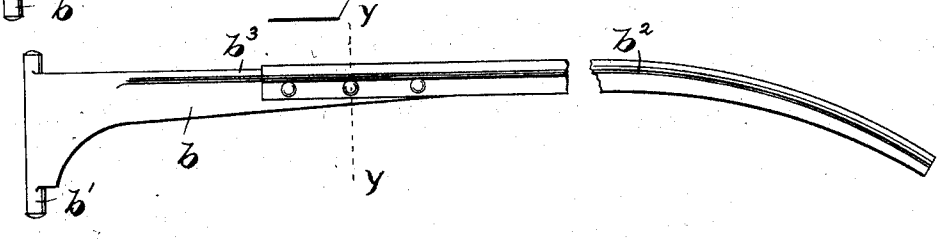


Fig. 9



WITNESSES:

J. Llewellyn Walker

Clifton P. Grant

INVENTOR.

William J. Slyder

BY Stanley and Brownell

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM J. SLYDER, OF TROY, OHIO, ASSIGNOR OF ONE-HALF TO HEMAN F. DOUGLAS, OF TROY, OHIO.

FOLDING CANOPY FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 708,605, dated August 12, 1902.

Application filed April 14, 1902. Serial No. 102,831. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. SLYDER, a citizen of the United States, residing at Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Folding Canopies for Vehicles, of which the following is a specification.

My invention relates to folding canopies particularly adapted for carriages and similar vehicles; and the object of my invention is to provide a canopy simple, strong, and economical in construction, that can be readily opened and closed and easily repaired. I attain these objects by the constructions and combination hereinafter described, and set forth in the accompanying drawings, in which—

Figure 1 is a canopy embodying my invention. Fig. 2 is a detail showing the central support with the extending ribs in their open position. Fig. 3 is a detail of same with the ribs in their closed position. Fig. 4 is a sectional view on the line $x\ x$ of Fig. 2. Fig. 5 shows the lower plate of said support; Fig. 6, the upper plate of said support; Fig. 7, the central forwardly-extending rib; Fig. 8, one of the end rearwardly-extending ribs; Fig. 9, a rib and the extension on the rib, and Fig. 10 a section through the line $y\ y$ of Fig. 9.

Like parts are represented by similar letters of reference in the several views.

In the drawings, a represents the lower plate of the central support, having the extending arm a' preferably formed integrally therewith, said arm being supported in any suitable manner to carry the frame. The columns a^2, attached to said lower plate, have the reduced ends a^3 to extend into the perforations a^4 of the upper plate a^5, the bolt a^6, extending through the perforations a^7 of the respective plates, binding the upper plate in position on said columns. The perforations a^8 of the respective plates are arranged opposite each other and receive the respective ends of the trunnions b', formed at the inner ends of the supporting-ribs b to carry the ribs. The trunnions I preferably cast integrally with the ribs in a single piece, as shown in the drawings, which makes the ribs stiff and much easier to cover than when wire or braced flexible ribs are used. The plates of the central support I preferably form substantially heart-shaped, which permits the use of the straight ribs, except the two end ribs which come together when the canopy is opened and which are at their inner ends turned substantially at right angles, as shown in Fig. 8, so as to swing parallel with the adjacent ribs when the canopy is closed. The central forwardly-extending rib I preferably provide with the rearwardly-extending projection a^9 to engage the slotted projection a^{10} of the upper plate, so that the ribs on the respective sides will close toward the fixed positions of this central rib.

For the purpose of making a single support answer for canopies of different dimensions I provide the extension b^2, preferably U-shaped in cross-section and of any desired length, adapted to fit over the flange b^3 of the rib b, and, if desired, they may be further secured in any suitable manner, as by riveting, as shown in Figs. 9 and 10; but usually the U-shaped attachment is sufficient in making a firm strong connection.

It will be seen that my construction is such that the central support with its extending ribs may be made in large quantities, of malleable iron or other suitable material, and by reason of the adjustable extensions are adapted for canopies of varying sizes.

The canopy being in its closed position is opened by taking hold of the end ribs and swinging them on their trunnions until they come together parallel with each other, and to close the canopy it is obvious this operation is reversed.

Having thus described my invention, I claim—

1. The combination with a central support consisting of separable plates having a series of oppositely-disposed perforations, of a series of ribs having lateral oppositely-extending trunnions at their inner ends formed integrally therewith pivoted in said perforations and adapted to swing in unison in a horizontal plane to open and close the canopy, and means for holding said plates in engaging position with said trunnions, substantially as specified.

2. The combination with a central support substantially heart-shaped consisting of separable plates having a series of oppositely-

disposed perforations, of a series of ribs having lateral oppositely-extending trunnions at their inner ends formed integrally therewith pivoted in said perforations and adapted to swing in unison in a horizontal plane to open and close the canopy, means for holding said plates in engaging position in said trunnions and interengaging projections on one of said ribs and plates to fix the radial position of said rib, said ribs further having flanges formed thereon and U-shaped parts adapted to fit over said flanges to form extensions for said ribs, substantially as specified.

In testimony whereof I have hereunto set my hand this 31st day of March, A. D. 1902.

WILLIAM J. SLYDER.

Witnesses:
H. F. DOUGLAS,
LEONARD H. SHIPMAN.