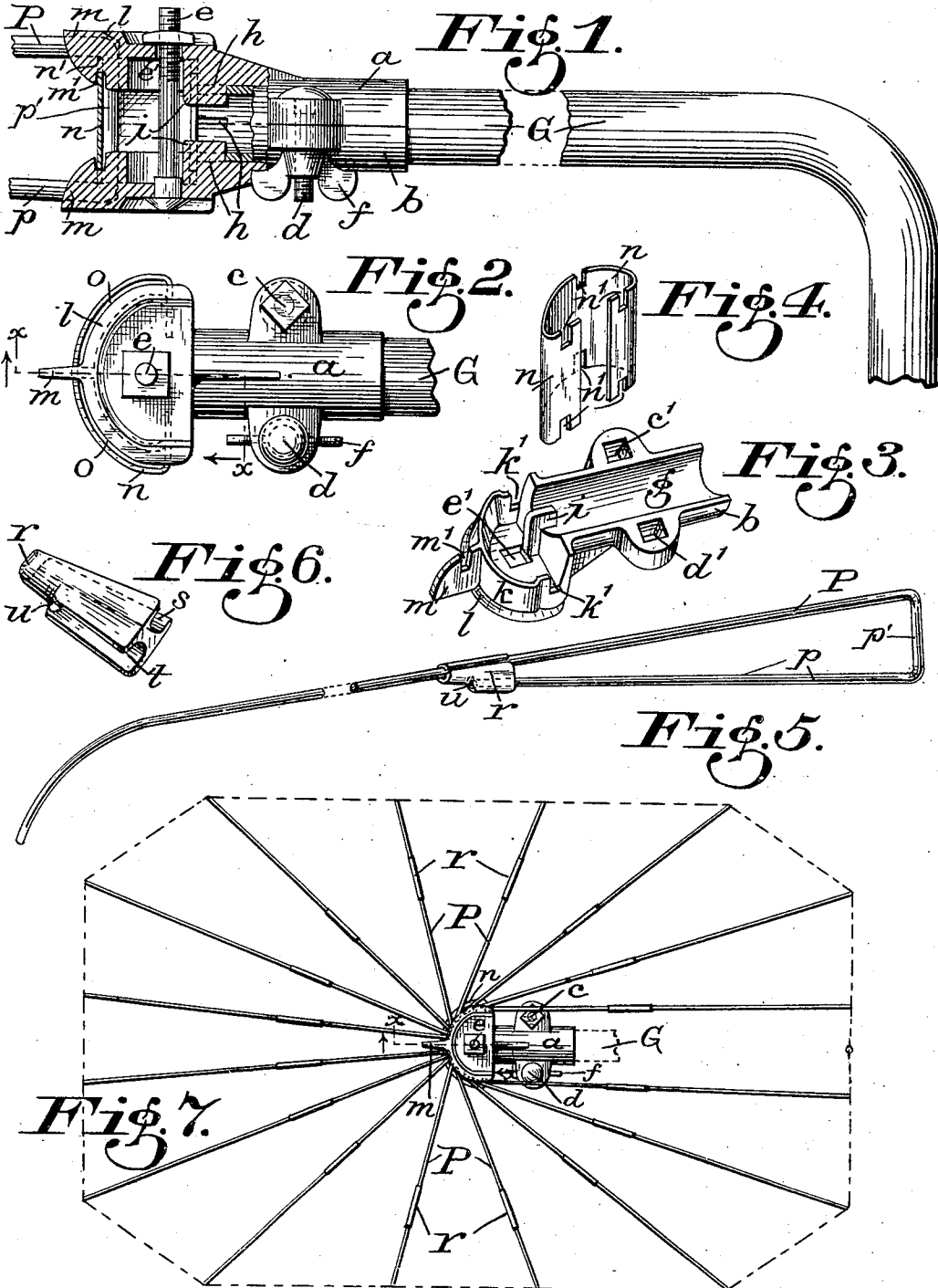


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HEAD AND RIB FOR VEHICLE CANOPIES.
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HEAD AND RIB FOR VEHICLE-CANOPIES.

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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 Heads and Ribs for Vehicle-Canopies; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My present invention relates directly to special improvements in head and ribs for vehicle canopies;—or for that class of tops removably supported solely from a standard.

Some of the principal objects and purposes of this invention consist primarily, in so improving a head and ribs for vehicle canopies or tops, as to give more rigidity, strength, and durability to same, thereby prolonging the lives of said canopies. Also, to simplify the construction of said head, and yet produce one that will hold more ribs than heretofore. Also, to construct and form said ribs so that the rib proper and its brace will be integral and in one part,—instead of separate parts as heretofore;—and further, to simplify and save time and labor in forming and constructing a coupling or means of connection between said rib and brace. Also, to so construct said head and ribs as to make a saving in time and labor,—thereby providing a head and ribs that can be manufactured at a minimum cost.

My invention consists essentially, referring briefly and in general terms to the construction of the several parts of the device, of the upper and lower sections or halves, the clip or retaining band,—which when assembled comprise or make up the head;—and the ribs, each provided with the novel coupling or connecting means; and other minor details of construction; and the very peculiar and novel construction, arrangement, and combination of these various mechanical elements, as will be hereinafter more fully and elaborately described in detail and set forth in the subjoined claims in accordance with the statutes in such cases made and provided therefor.

Referring to the annexed drawing illustrating my invention and constituting a formal part of this specification, and wherein the same letters of reference are employed to indicate or point out the same parts wherever occurring throughout the several views:—Figure 1, is a side view partially in section and broken away, of my improved head and ribs for vehicle canopies, when assembled in operative position:—taken on line $x-x$ of Figs. 2 and 7. Fig. 2, is a plan view of the head. Fig. 3, is a perspective view of the lower section or half of the head;—in detail. Fig. 4, is a perspective view of the clip or retaining-band;—in detail. Fig. 5, is a perspective view of one of the ribs, brace and coupling;—in detail. Fig. 6, is a perspective view of one of the couplings;—in detail: and Fig. 7, is a plan view illustrating the practical application of my invention.

In describing my said invention specifically, and referring in detail to the various mechanical parts or elements of construction of my improved head and ribs for vehicle canopies, as shown throughout the several views of the drawing and indicated thereon by means of the reference letters as aforesaid;— a and b refer to the upper and lower sections or halves respectively, of the head;—which are intended to be constructed out of suitable metal the same as the rest of the improved parts of my invention,—and are exactly alike in shape and construction, and formed on each side with an off-set or ear provided with bolt-eyes or openings c' and d' at the rear, and in front by similar bolt eyes or openings e' ;—said eyes being preferably square or rectangular in form—as fully shown in Fig. 3—for the reception of bolts c , d , and e —preferably of the style formed with a square base at the head for the purpose of preventing said bolts from turning, and thus retaining said sections more securely together in forming the head. Bolt c ,—which is provided with an ordinary form of nut,—is intended when in position to be slightly tapped or spread on the end so as to insure the nut from working off, and in practice I intend to preferably form the off-set or ear on this side of each of the sections, slightly higher than the off-set or ear on the opposite sides thereof, so that when thumb-nut f with which bolt d is provided, is run or turned up

on said bolt, it will cause the concaved or grooved portion *g* of said sections,—which when assembled form the socket in the head in which horizontal tubular-arm *G* is in practice inserted and rests therein when supporting the canopy;—to more firmly grip and bind said arm at this portion, the extreme end thereof being provided with recesses or notches *h*,—which for convenience I preferably make four (4) in number;—two of which it will be obvious, will readily engage lugs *i* of said upper and lower sections,—see Figs. 1 and 3: while opposite end terminates in an elbow, which in practice is connected and joined by means of a coupling, to a vertical support or standard attached to the floor or other suitable portion of the vehicle:—it not being necessary to here show said coupling and standard, as they constitute no part of this invention.

As shown in Figs. 1, 2 and 3, each of the head sections has a vertically-extending flange, *k*, and a projecting ledge, *l*, said ledges being preferably slightly beveled. The respective flanges and ledges are preferably formed of a semi-elliptical shape and the flanges project toward each other in the same plane. Secured between the respective head sections is a retaining band, *n*, conforming in shape to the curvature of the flanges, *k*; this band being located on the outer sides of the flanges and removed therefrom a distance preferably about equal to the diameter of the rib, *P*. The preferable manner of securing this band, *n*, in position is by providing the same with a series of notches, *n'*, adapted to engage with notches, *k'*, formed in the respective head sections and also with a notch, *m'*, in a projecting lug, *m*, on each section, so that when the head sections are clamped together, the retaining band will also be firmly clamped between the same. The upper and lower edges of the retaining band are removed from the projecting ledges a distance about equal to the diameter of said rib, *P*, and said band forms, in connection with the flanges, *k*, a channel of a semi-elliptical shape extending about the head, which channel is open at the top and bottom as indicated at *o*; this channel being of a depth substantially equal to the depth of the head when assembled. Each of the said ribs, *P*, has its brace, *p*, formed integrally therewith, as indicated in Fig. 5; the metal forming the rib and brace being so bent as to provide a straight vertical portion, *p'*, between the same, which vertical portion is of a length substantially equal to the depth of the channel in the head. The outer end of the brace, *p*, is secured to the rib by a clip, *r*, of novel construction. This clip is formed of one integral piece of preferably malleable metal, although sheet metal may be employed.

The main body of the clip is formed on its top and bottom with open channels, *s* and *t*; the upper channel, *s*, extending throughout the entire length of the clip and adapted to receive the rib, and the lower channel, *t*, extending to a point near the end of the clip and terminating in a shoulder or seat, *u*, and adapted to receive the brace, with the end of the brace resting against said shoulder or seat. After the rib and brace have been placed in position in the clip, the sides of the channels are bent about the same by swaging or otherwise and soldered.

In assembling the parts, the vertical portions, *p'*, of the ribs and braces are lined up in the head channel described, with the respective ribs and braces projecting from the upper and lower openings, *o*. By this construction it will be seen that the ribs will be free to be swung laterally in either direction, but will be confined in the channel by the adjacent rib portions, *p'*, and will also be prevented from vertical movement by the projecting ledges. The projecting lips or lugs, *m*, form stops, so that when the ribs are swung to folded position, and their ends secured together by any suitable means, they will be maintained in this position. These projecting lugs are preferably placed at a central point with respect to the channel, so that the ribs and canopy top, in their folded position, will project in a line with the supporting standard, *G*.

By the construction of the rib and brace, as described, with the connecting portion, *p'*, a very stiff and substantial support for the canopy top is provided, for the reason that all strain on the ribs and braces will be taken by these vertical portions, *p'*, which are held securely in position in the channel. The construction also provided for a long bearing or hinge for the ribs and braces.

By thus attaching the ribs to the head as above described, I am not limited to any number of ribs, as my construction gives me the advantage of employing from 8 to 20, which is found to be all that is necessary; although by making said head larger even more ribs could be used. It will now be readily understood that by simply moving or spreading said ribs apart similar to a fan,—as fully shown in Fig. 7;—and regulating the length of said ribs and their order of arrangement in said head accordingly, canopies or tops of different contours or shapes may be formed, suitable for various classes of vehicles; such for example as carriages; automobiles; or even a small size for baby cabs; I have however here indicated by dotted lines the outline of one shape or style of canopy, constructed in the ordinary manner with a cord extending around the outer edge thereof, over which the fabric is stretched; the ends of said ribs being preferably

curved—see Fig. 5—but said end may of course be straight if so desired, and the edge of the canopy fringed in the usual manner and the eyelet opening or eye in center of the canopy may be covered by a tassel or other style of ornament connected to the end of bolt *e*, which as shown in Fig. 1 is intended to extend above the head for this purpose.

Having now described my invention as set forth in my improved head and ribs for vehicle canopies:—what I claim is:—

1. In a device of the character described, a head or support, and a series of ribs and braces, each of said braces being connected to its corresponding rib at a point midway the length of said rib, and each of said ribs and braces being connected at their inner ends by a straight vertical integral portion, said vertical portions of said ribs and braces being hinged to said head or support, substantially as specified.

2. In a device of the character described, a head or support, and a series of ribs and braces, each rib and its brace being formed from one integral piece bent at the inner ends of said brace and rib to form a straight vertical portion, said straight vertical portions being hinged to said head or support, and means for connecting the outer end of the brace to said rib at a point removed from the outer end of said rib, substantially as specified.

3. In a device of the character described, a head or support having a curved channel, and a series of ribs and braces, each rib and its brace being connected by a straight vertical portion at their inner ends, said straight vertical portions being located in said curved channel, substantially as specified.

4. In a device of the character described, a head or support formed with a curved channel, said channel extending from side to side of said head and being open at the top and bottom, and a series of ribs and braces, each rib and its brace being connected at their inner ends by a straight vertical portion, said vertical portions being located in said channel with the respective ribs and braces projecting from said top and bottom openings, substantially as specified.

5. In a device of the character described, a head or support, a curved flange at the top and bottom of said head or support, said flanges extending from side to side of said head or support, a retaining band connected to said head or support located on the outside of said flanges, said flanges and band forming a curved channel in said head or support, and a series of ribs and braces hinged in said channel, substantially as specified.

6. In a device of the character described, a head or support, a curved flange at the top and bottom of said head or support extending from side to side thereof, a retaining band

connected to said head or support located on the outside of said flanges, said flanges and band forming a curved channel in said head or support open at the top and bottom, ledges on said head or support in proximity to the top and bottom of said channel, and a series of ribs and braces hinged in said channel, substantially as specified.

7. In a device of the character described, a head or support, one end of said head or support having a divided socket and means for clamping the same together, the opposite end of said head or support having a curved channel extending from side to side thereof and open at the top and bottom, and a series of laterally movable ribs and their braces having straight vertical portions hinged in said channel, substantially as specified.

8. In a device of the character described, a head or support, one end of said head or support having a divided socket and means for clamping the same together, a series of ribs and braces, each rib and its brace being connected at their inner ends by a straight vertical portion, and means for hinging said straight vertical portions to the opposite end of said support from said socket, substantially as specified.

9. In a device of the character described, a head or support, a curved channel extending from side to side of said head or support and open at the top and bottom, a series of laterally movable ribs and their braces having straight vertical portions hinged in said channel, and a stop located substantially mid-way of said series of ribs, substantially as and for the purpose specified.

10. In a device of the character described, a head or support formed in two parts, means for clamping the parts together, a projecting flange on each of said parts, a band clamped between said parts cooperating with said flanges to form a curved channel in said head, and a series of ribs and their braces hinged in said channel, substantially as specified.

11. In a device of the character described, the rib *P*, brace *p*, connecting portion *p'* integral with and connecting said brace and rib, and means for connecting the outer end of the brace to said rib, substantially as specified.

12. An improved rib for vehicle canopies consisting of a long arm, a short arm or brace formed integral therewith, a coupling provided with a channel or groove which engages said rib, and another channel or groove provided with a bearing seat which receives said brace; all substantially as described.

13. In a device of the character described, a rib, a brace, the inner ends of said rib and brace being connected integrally together, a clip, a channel on the upper side of said clip to receive the rib and a channel on the lower side of said clip to receive the brace, and a

2 seat in said lower channel for the end of the
brace, substantially as specified.

14. In a device of the character described,
the rib P, brace p , part p' integral with and
connecting the inner ends of said rib and
brace, and the clip r , having the channels s
and t , formed at different inclinations to each
other to conform to the inclinations of said

rib and brace and connecting the same, sub-
stantially as and for the purpose specified. 10

In testimony whereof, I affix my signature,
in presence of two witnesses.

WILLIAM J. SLYDER.

Witnesses:

MICHAEL O'CONNOR,
G. K. HEFFNER.