July 28, 1953 T. T. DANCIART 2,646,810

CANOPY CONSTRUCTION

Filed Aug. 22, 1950

Fig. 1

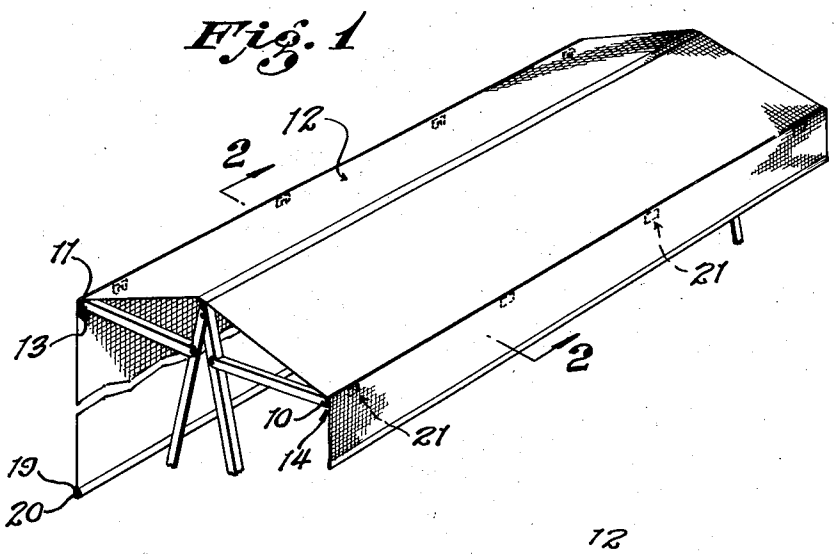


Fig. 2

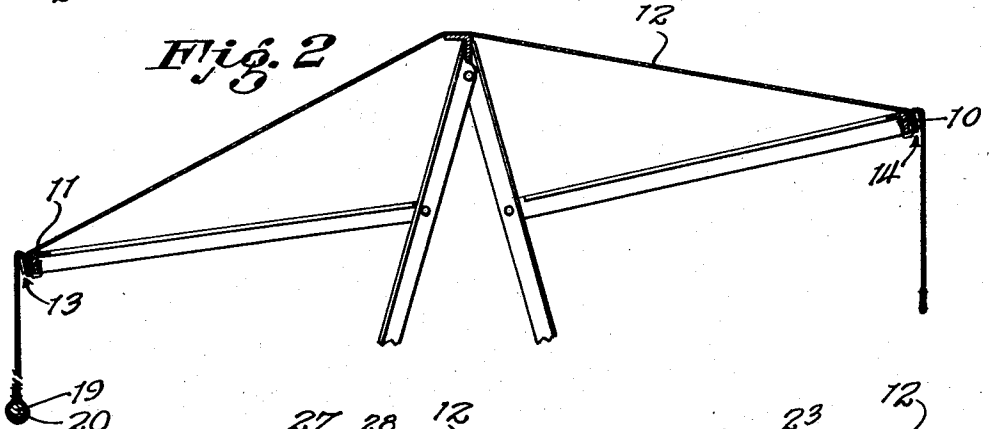


Fig. 3

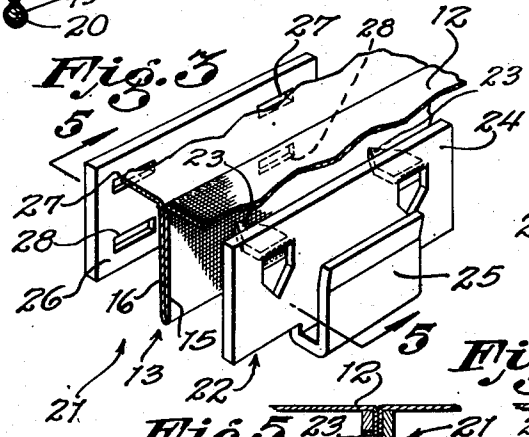


Fig. 4

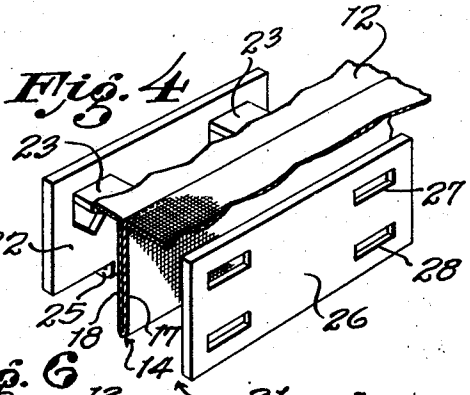


Fig. 5

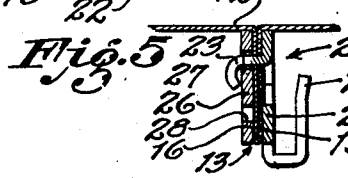
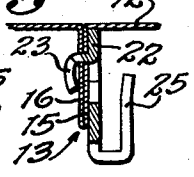


Fig. 6



Inventor,
THEODORE T. DANCIART
By Robert M. McManigal
Attorney

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UNITED STATES PATENT OFFICE

2,646,810

CANOPY CONSTRUCTION

Theodore T. Danciart, Alhambra, Calif., assignor to State Mfg. Co., Los Angeles, Calif., a corporation of California

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1 Claim. (Cl. 135—5)

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This invention relates to canopy construction and more particularly to means for attaching canopy covers to the canopy frame of swings and the like.

In a conventional canopy, the canopy cover or fabric is assembled on the front and rear canopy frame members, which members are usually made of angle iron, by providing the canopy cover with open seams or channels through which the front and rear canopy frame members are passed. This is an awkward and sometimes difficult operation. In fact, the canopy fabric is sometimes torn during this operation, particularly in instances in which the canopy fabric is weather-beaten or worn. The front and rear canopy frame members are then secured to the other parts of the canopy frame.

An object of my invention is to provide a canopy construction in which the canopy cover may be attached to or removed from the canopy frame members without disassembling the canopy frame.

Another object of my invention is to provide a canopy construction in which the canopy cover is provided with a longitudinally depending fold, and fasteners secured to the depending fold, which fasteners are adapted to be readily pushed on the front and rear canopy frame members.

Another object of my invention is to provide a canopy construction which is easy and convenient to assemble and disassemble.

Another object of my invention is to provide a canopy cover with fastening means which is adapted to be secured to the canopy fabric at the factory.

Another object of my invention is to provide a fastener which is adapted to be secured to a canopy cover, and which is slidable on the canopy frame members in order to compensate for shrinkage or expansion of the canopy cover.

Another object of my invention is to provide a fastener having means for securing it to the canopy cover and means for attachment to the canopy frame members.

Another object of my invention is to provide a fastener which is economical and easy to construct.

My invention has many other objects, advantages, and features, some of which, with the foregoing, will be set forth in the following description where I shall outline certain forms of my invention, which I have selected for illustration in the drawings accompanying and forming a part of the present specification.

Referring to the drawings:

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Fig. 1 is a perspective view of a canopy embodying my invention mounted on a conventional swing;

Fig. 2 is a cross-section taken on the line 2—2 of Fig. 1;

Fig. 3 is an exploded view of a fastener in position to be attached to the inner fold of the canopy cover;

Fig. 4 is an exploded view of a fastener in position to be attached to the outer fold of the canopy cover;

Fig. 5 is a cross-section taken generally on the line 5—5 of Fig. 3, and showing the fastener attached to the fold of the canopy cover; and

Fig. 6 is a cross-section of a modification of my invention in which no backing plate is used.

Referring to Fig. 1 of the drawings, the numerals 10 and 11 designate the conventional front and rear canopy frame members which are usually made of angle iron. Instead of providing the canopy cover 12 with open channels adapted to receive the front and rear frame members 10 and 11, at said places, the canopy fabric 12 is provided with depending folds 14 and 13, that is, longitudinally folded over portions, 17, 18, 15 and 16. The canopy cover 12 may be provided with the usual open channel 19 on the back bottom of the canopy cover, which channel is adapted to receive the usual rod 20 which serves as a weight to keep the canopy cover from flapping. The folds 13 and 14 are provided so that fasteners 21 can be secured to the canopy cover 12 without creating creases in the canopy fabric and to reenforce the canopy fabric at the points of attachment.

The fasteners 21 comprise an attaching plate 22 provided with means for securing the plate to the depending fold of the canopy fabric and means for attaching the plate to the canopy frame members and a backing plate 26, both of which plates may be made of sheet metal. As an instance of this arrangement, the attaching plate 22 is provided with one or more prongs 23 which may be stamped out of the main portion 24 of the plate and with a folded over portion or tongue 25 which is in spaced relation with the main portion 24. The backing plate 26, which prevents the prongs 23 from tearing the canopy folds 13 and 14, is provided with slots 27 through which the prongs 23 are adapted to project. I prefer to provide the backing plate 26 with additional slots 28 in order to provide slots for the prongs 23 when the backing plate 26 is in either of two positions.

Although the fasteners may be secured to the canopy covers in any desired manner, I prefer

to secure the fasteners 21 to the folds 13 and 14 in such a manner that the tongues 25 of the fasteners on one of said folds are on the opposite side of the tongues 25 of the fasteners on the other of said folds. In other words, either in the position shown in Figs. 1 and 2, or in a position in which the fasteners 21 are secured to the front fold 14 in the manner in which the fasteners are secured to the rear fold 13 in said figures, and in which the fasteners 21 are secured to the rear fold 13 in the manner in which the fasteners are secured to the front fold 14 in said figures.

As an instance of this arrangement, the fasteners 21 are secured on the rear fold 13 in such a manner that the tongues 25 are on the front side of the fold 13, that is, in the manner shown in Figs. 3 and 5. After the attaching plate 22 is positioned on the front side of the fold 13 and the backing plate 26 is positioned on the back side of the fold 13, said parts are secured together by forcing the prongs 23 through the fold 13, and the slots 27, and then forcing the prongs 23 over against the backing plate 26 as shown in Fig. 5. In this arrangement, the fasteners 21 are secured on the front fold 14 in such a manner that the tongues 25 are on the rear side of the fold 14, that is, in the manner shown in Fig. 4. After the attaching plate 22 is positioned on the rear side of the fold 14 and the backing plate 26 is positioned on the front side of the fold 14, said parts are secured together by forcing the prongs 23 through the fold 14 and the slots 27, and then forcing the prongs 23 over against the backing plate 26.

Although I prefer to provide each of the depending folds 13 and 14 with four fasteners 21, obviously, the depending folds may be provided with any desired number of fasteners, depending upon the length of the canopy and other factors. The fasteners 21 are preferably secured to the canopy cover at the factory.

After the canopy frame members 10 and 11 are completely assembled, the canopy cover 12 may be easily and readily secured to said members by merely pushing the fasteners 21 on said frame members from the bottom edges of said members. Obviously, if desired, the canopy cover 12 may be secured to the angle iron members 10 and 11 before the canopy frame is completely assembled.

It will be seen that the fasteners 21 are slidable on the frame members 10 and 11 from one position to another, and therefore the position of the canopy cover 12 with respect to said members may be easily adjusted to compensate for shrinkage or expansion of the canopy fabric.

In instances in which the front and rear canopy frame members 10 and 11 are composed in part of straight vertical members, the fasteners 21 may be secured to the folds 13 and 14 in such a manner that the tongues 25 project from the upper portion of the attaching plates 22. In such instances, the fasteners 21 are adapted to be pushed on the frame members 10 and 11 from the upper edges of said member.

In the modification of my invention shown in Fig. 6, I omit the backing plate 26. In those instances, the plates 22 are secured to the depending folds 13 and 14 by forcing the prongs 23 through the fabric and then forcing the prongs 23 over against the fabric. However, in order to provide a sturdier construction, in order to prevent the prongs 23 from tearing the folds 13 and 14, and for appearance purposes, I prefer to use the construction shown in Figs. 1 to 5 inclusive.

From the foregoing description taken in connection with the accompanying drawings, the uses, advantages, and operation of my invention will be readily understood by those skilled in the art to which the invention appertains. While I have described two embodiments of my invention, I desire to have it understood that the forms shown are merely illustrative and that the invention is not to be limited to the details disclosed herein, but is to be accorded the full scope of the appended claim.

I claim:

A fastener for attaching a canvas canopy to a frame member, comprising: a rectangular backing plate having a pair of longitudinally aligned, spaced rectangular slots therein, the longer edges of which extend in parallel relationship to the longer edges of said backing plate, a complementary rectangular attaching plate having a pair of pointed prongs integral therewith and extending laterally from the plane thereof, both of said prongs initially lying in a plane which is generally normal to the plane of said attaching plate and parallel to the longer edges thereof, said prongs being positioned to be received in said slots in said backing plate and to be folded against said backing plate to retain said plates in assembled relationship, and a tongue integral with said attaching plate, said tongue having a shank portion extending from one of the longer edges of said attaching plate in a direction opposite to the direction of said prongs and in generally parallel relationship to the plane in which said prongs initially lie, and said tongue terminating in an end portion which is laterally spaced from and generally parallel to said attaching plate, whereby application of force to said tongue in a direction at a right angle to the lower edges of said plates will result in distribution of the stresses applied to canvas positioned between said plates and pierced by said prongs.

THEODORE T. DANCIART.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
791,198	Lettre	May 30, 1905
1,828,535	Kass	Oct. 20, 1931
1,960,145	Edelheit	May 22, 1934
1,993,734	Edelheit	Mar. 12, 1935
2,022,211	Leffert	Nov. 26, 1935
2,480,509	Ripley	Aug. 30, 1949