April 6, 1965 G. R. ROLLINS 3,176,699

KNOCKDOWN ADJUSTABLE POSITION CANOPY MOUNTING

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FIG. 1

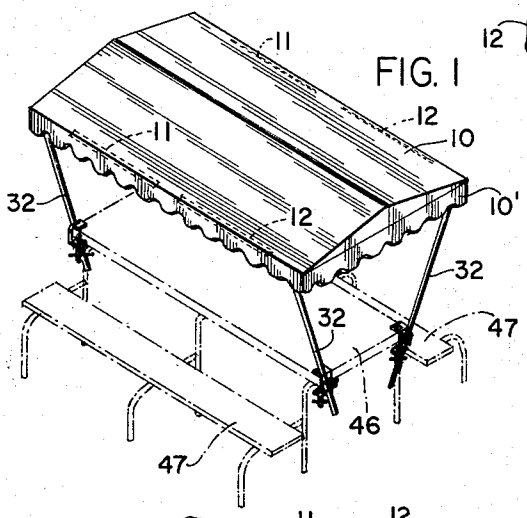


FIG. 2

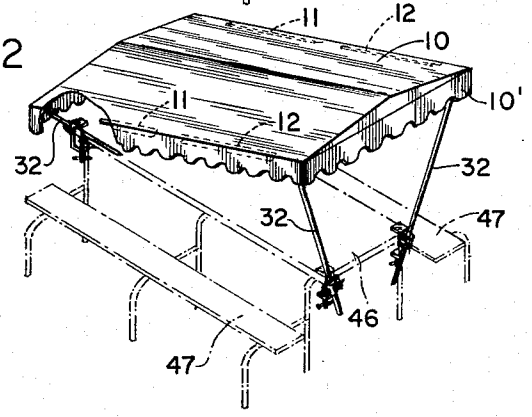
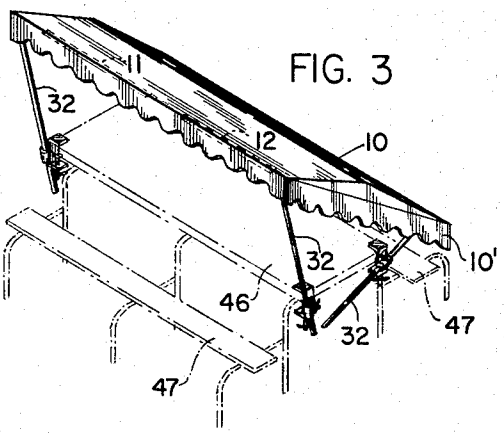


FIG. 3



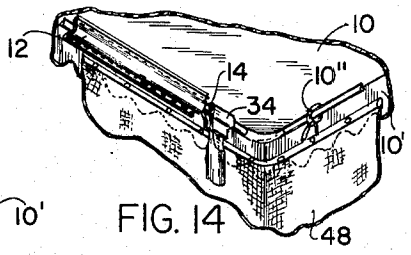
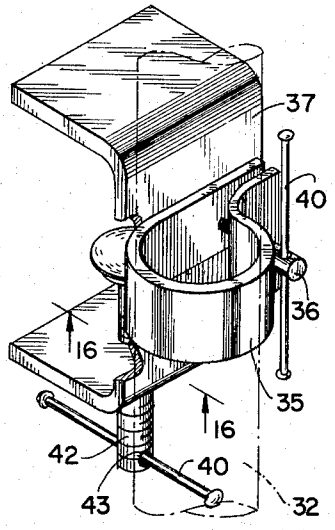


FIG. 14

FIG. 15



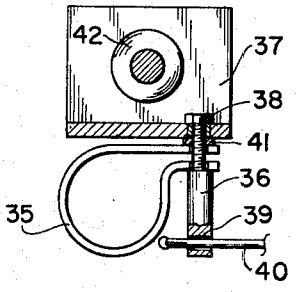


FIG. 16

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FIG. 4

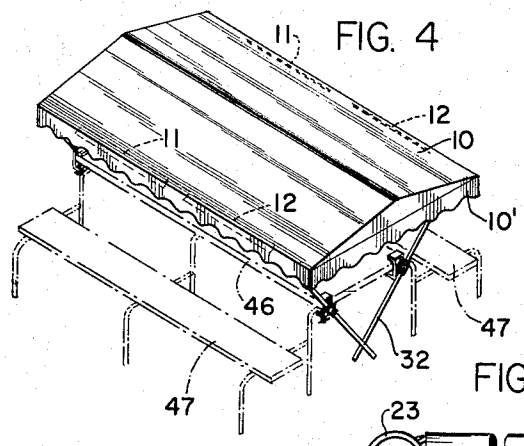


FIG. 6

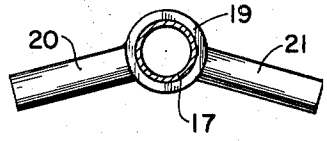


FIG. 11



FIG. 7

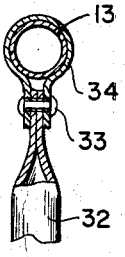


FIG. 5

FIG. 8

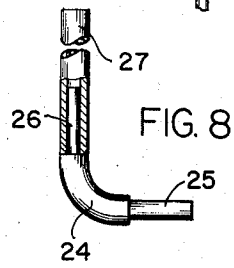


FIG. 9

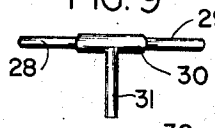


FIG. 10

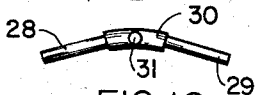


FIG. 17

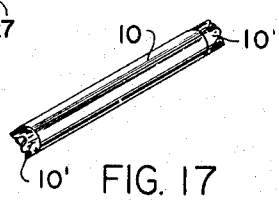


FIG. 12

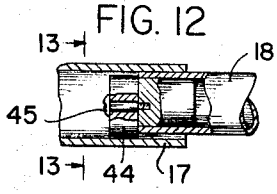


FIG. 13



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United States Patent Office 3,176,699 Patented Apr. 6, 1965

3,176,699

KNOCKDOWN ADJUSTABLE POSITION CANOPY MOUNTING

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2 Claims. (Cl. 135—5)

This invention relates to apparatus and equipment employed primarily in outdoor living including open-air activities in the nature of picnicking, relaxing, enjoying the beach and the like where it is desired to provide a shelter from the weather, including from the rays of the sun, from the wind and the rain, as well as a shield from insects and from outside sight.

The invention relates particularly to a knockdown top or canopy mounting capable of being adjusted to supports of various kinds and sizes, as well as a mounting which can be adjustably disposed in different angular positions to provide the necessary protection to conform to the desired requirements.

Fresh air and sunshine are recognized as important to man's mental and physical health and welfare and as a result sandboxes, hammocks picnic tables and the like are provided at various locations at the beach and inland. Various types of devices have been employed for providing shelter including umbrellas, canopies, screens, partitions and the like. These have not been satisfactory due, among other things, to limited application and use and consequently they have left much to be desired.

It is an object of the invention to provide apparatus by which a sheltering canopy or cover, and if desired a curtain, can be employed of the most practical application for the purposes desired, including apparatus which can be readily disposed in a relatively small compact package which can be placed in the trunk of an automobile or other location from which it can be readily removed and erected to support a canopy roof or cover for a picnic table, over a sandbox, hammock, beach spot or other place of use and which after application can be adjusted at the desired angle to give the maximum advantage.

Another object of the invention is to provide a knockdown support for a canopy or cover which support not only can be adjusted angularly but which can be adjusted as to elevation in a manner to be located closely over a picnic or other table and form a protection for the contents of the table and for the adjoining seats.

A further object of the invention is to provide a canopy or cover, a skeleton frame and supporting posts therefor, adjustably carried in brackets which can be readily attached to and detached from a table top in a manner to allow the posts to be swung from side to side of the table and with the posts at each end of the canopy movable through their supports to vary the elevation or proximity of the end of the canopy relative to the table and consequently the inclination of the posts.

A still further object of the invention is to provide a simple, practical cover or canopy, knockdown adjustable supporting structure, and a curtain, all of which can be merchandised at a relatively small price and in which the advantages and uses far exceed such price.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective illustrating one application of the invention applied to a picnic table with the latter illustrated in phantom;

FIG. 2, a similar view in a different position of adjustment;

FIG. 3, a similar view in a further position of adjustment;

FIG. 4, a similar view in a still further position of adjustment;

FIG. 5, an exploded perspective of the top or roof frame;

FIG. 6, an end elevation of the center mounting sleeve;

FIG. 7, a vertical transverse section through the post top frame connecting clamp;

FIG. 8, an enlarged plan view of one of the top frame end members;

FIG. 9, an enlarged connecting T for the connection of two adjacent top frame members;

FIG. 10, a similar view at right angles to FIG. 9;

FIG. 11, an enlarged view of a top frame center member;

FIG. 12, an enlarged section of the top longitudinal center member or ridge pole;

FIG. 13, an end elevation of such center member;

FIG. 14, an enlarged interior view of one corner of the top or roof frame with a curtain added;

FIG. 15, an enlarged perspective of one of the clamps for attaching the top mounting frame to a bench or other support;

FIG. 16, a section on the line 16—16 of FIG. 15; and

FIG. 17, a view of the apparatus in compact package form.

Briefly stated the invention is a combination top or roof in the form of a canopy or the like, a supporting frame, posts for the corners thereof, a curtain for protecting against insects or from vision, and mounting clamps. The roof frame is of several detachable smaller parts, including a ridge pole of adjustable length and embodying telescopic tubes with an eccentric by which they can be secured in fixed adjusted relation. The roof frame can be readily assembled or taken apart and the parts combined into a relatively small package for ease in storage and transportation. The posts are pivotally connected at their upper ends to the roof frame and are mounted in clips which attach to a bench or other objects and being adjustable to fit picnic or the like tables of varying sizes.

The invention is a weather shield of light weight, such as a canopy preferably of flexible sheet material 10 having a pair of spaced sleeve forming strips 11 located midway the length of the canopy adjacent each side thereof. Through the sleeve forming strips 11 and 12 extend generally parallel side bars each composed of a pair of members 13 and 14. The side member 13 has a reduced extension 15 which fits into a complementary bore 16 of the members 14 and providing in effect a complete side member.

Intermediate the side members is a central member composed of a pair of tubular telescopic sections 17 and 18 on the intermediate portion of which is located a sliding support 19 having lateral arms 20 and 21 each of which extends downwardly at an angle for complementary engagement with the end of a bar 22 having a curved opposite extremity 23 of a size and configuration to snap over the adjacent outer frame member or side bar.

The ends of the side bars 13 and 14 and the central or intermediate member 17–18 are fastened together by means of a pair of elbows 24 having reduced cylindrical portions 25 and 26 of which the portions 25 are fitted into the side members 13–14 and the portions 26 are fitted against the end members 27, the elbows 24 and the end members 27 thus forming a unitary structure.

Within the remote ends of the end members 27 are received the reduced extremities 28 and 29 of a T member 30 having a reduced extension 31 received in the end of the central member thus providing a substantially hip type roof or canopy support obviously draining or shedding precipitation.

It is necessary that the ridge pole be telescopic and

have means for securing the telescoping members in adjusted position since the side members are received within the sleeves of the cover after which the end members are attached to the side members in such a manner that the cover will maintain the members in assembled relation. In order to apply the ridge pole, the telescopic members must be collapsed and then extended into engagement with the end members and locked in adjusted position to support the cover.

Means is provided for supporting the frame with a canopy thereon including posts 32 having their upper ends secured by pivots 33 to an attaching clip 34. The posts are slidably received in attaching clips 35 mounted on a carriage bolt 36 carrying a U-clamp 37. The U-clamp 37 is secured in fixed position by means of an internally threaded sleeve nut 38 having an opening 39 for the reception of a rod wrench or rotating member 40, a lock washer 41 being disposed between the sleeve nut and the clamp for locking the parts in fixed relation. The U-clamp may be provided with an adjusted screw 42 threaded through one of its legs, such screw having an opening 43 for corresponding to the opening 39 by means of which the bolt may be rotated to secure the clamp to or release from a table top or other support.

In order to fasten the two telescopic ridge pole members 17–18 in fixed relation, the innermost of these is provided at one end with an eccentric 44 rotatably mounted on a pin or screw 45. Preferably the eccentric 44 has a diameter substantially the same as member 18. A pin 45 is offset from the longitudinal axis of both the member 18 and the eccentric 44 so that such eccentric can be disposed substantially in alignment with the member 18 in one position or offset therefrom in any other position as it is rotated. Relative rotation between the telescopic members 17 and 18 will cause the eccentric to be offset and will cause binding between the two members to secure them in fixed relation.

When the canopy is applied to a table top 46, the posts 32 can be adjusted to accommodate variations in width and length of the table and the top frame with its canopy or covering can be disposed in various elevated positions as illustrated in FIGS. 1, 2, 3 and 4 to shield from the elements, or lowered to form a protective cover for objects on the table top 46 shown in phantom and with seats 47 at each side of the same.

Since the upper ends of the posts are attached to the sides of the roof frame by means of clamps 34 as will be apparent from FIG. 5, the roof frame may be adjusted endwise within clamps on the posts to afford a greater overhang of the canopy at either end of the table.

The canopy 10 is provided with a depending border 10' which border serves to maintain the several independent elements of the top frame in assembled relation. This canopy may be easily removed to permit the several frame elements to be taken apart and combined with the corner posts and supporting brackets in a small compact package with the canopy forming the wrapping therefor.

If desired a curtain of any desired character may be provided sufficient to protect against mosquitoes and other insects or to prevent sight therethrough.

In use the device may be removed from any container or wrapping in which it is found, after which it is unfolded, the table clamps 37 removed and applied to the corners of the table 46, and the screws 42 are tightened by rod wrench 40. Then the side members 13 and 14 contained within the sleeves 11 and 12 of the canopy 10 are placed end to end and the reduced rod extensions 15 inserted in the bore 16.

On the side members 13 and 14 are slidably mounted or contained the clamps 34 connected by pivots 33 with the posts 32. The end members 27 are inserted over the reduced extensions 28 and 29 of the T members 30 and the complete end member is connected to the side members by the insertion of extensions 25 into the side members 13 and 14. The outline of the supporting frame will thus be provided beneath the margin of the canopy. The ties 10'' of the canopy are then secured about the end members thereby maintaining the frame in assembled relation.

Next the ridge pole or center member 17–18 with the sleeve 19 intermediate its ends is placed between the ends of the frame and the telescoping members 17 and 18 are extended until they receive the projections 31 of the T members 30 and upon relative rotation between the center members 17 and 18 the eccentric 44 locks the ridge pole or center member at its extended length.

Frame members 22 are disposed at right angles to the sides of the frame and are inserted beneath the canopy and between the sleeves 11 and 12 until the end of the support having the bore is telescoped over the projections 20 and 21 of the sleeve 19 and the curved clamping end 23 is snapped over the side member in the area of the joint between the sections 13 and 14 of each side member.

Next the frame and canopy with the four posts 32 are placed over the table and the posts 32 at one end are extended through the collar type brackets or clamps 35 carried by the table clamps 37 and then the posts at the opposite end are inserted through corresponding clamps. The clamps 35 may be tightened by the rod wrenches 40 in the screws 36.

To disassemble the collar type brackets or clamps 35 are loosened by the rod wrenches 40 and the posts 32 removed from the clamps 35. Next the ties 10'' are released, after which the supports 22 are removed, then the ridge pole and the ends. The side members 13 and 14 are separated and moved at right angles into parallel relation to the posts 32. Whereupon all of the posts may be rolled into a small package within the canopy.

It will be apparent from the foregoing that a simple inexpensive practical device is provided for wide use for picnics, camping, or relaxing on the beach, in one's yard or other location. The device is useful when there is little shade or when there is no shade and where there is likelihood of a quick shower it can be quickly erected or taken apart and used to protect a table and contents from wetting or from the sun, adding pleasure by its use. The device is applicable to tables of varying lengths, widths and thicknesses. It can be erected or taken apart by one or more persons. It can be folded into a small lightweight package which can be carried in the truck of an automobile or elsewhere. The device likewise may be used without the supporting clamps by inserting the posts in the sand on the beach or elsewhere.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawings and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A knockdown adjustable position canopy comprising a generally rectangular frame with separable side and end members and a telescopic ridge pole, a canopy supported in fully extended position on said frame, a post adjacent each end of each of said side members, said posts being pivotally and slideably mounted relative to said side members whereby the posts may be slideably adjusted toward and away from each other along said side members, clamping devices adjustable to the thickness of a supporting member such as a picnic table, collar type brackets pivotally mounted on the backs of the intermediate portions of said clamping devices, each of said posts being slideably received in said collar type brackets, whereby the entire structure can be adjusted to different angular positions and to various elevations.

2. A device for protecting from the weather comprising a frame of separable elements having cooperating portions which fit together to provide a generally rectangular structure having two long sides and two shorter sides all joined together, a telescoping ridge pole extending be-

tween two opposite sides, said telescoping ridge pole having eccentric locking means for holding it in adjusted telescopic positions, a canopy covering and being held in extended position by said frame and said ridge pole and holding said frame in assembled condition, posts slidably and pivotally attached to each of said long sides near the joints between said long and shorter sides, adjustable clamping devices adapted to be mounted in spaced apart relation on a support, said posts each being individually slidably and pivotally received in said clamping devices, said posts being slidable along said long sides to the desired position corresponding to the spacing between said clamping devices while said canopy remains in assembled relation, said structure being angularly adjustable to lower one side or end relative to the other side or end and also being adjustable to different elevations by sliding selected ones of said posts through their respective clamping devices.

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