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E. W. SEAMAN  
KNOCK-DOWN TENT FRAME

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2 Sheets-Sheet 1

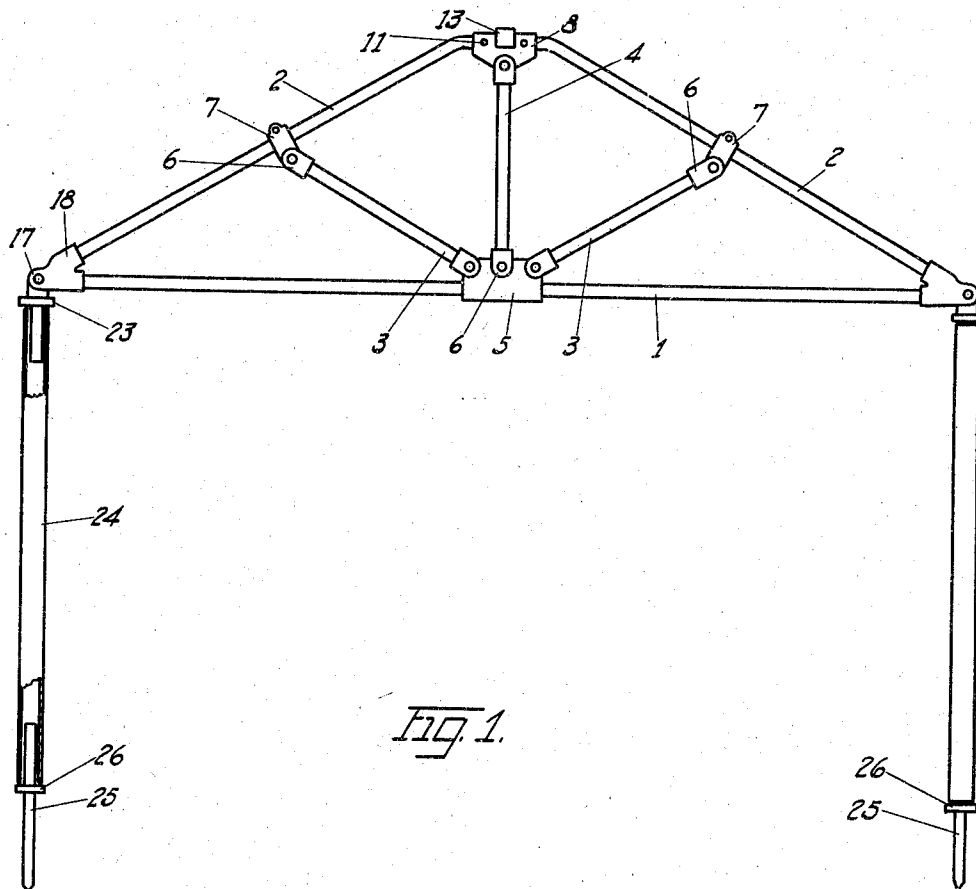


Fig. 1.

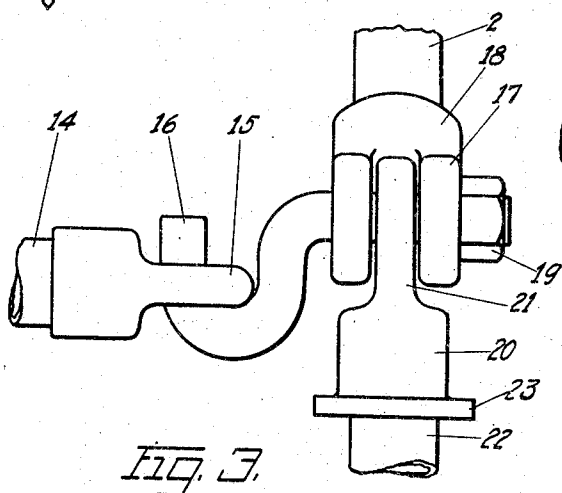


Fig. 3.

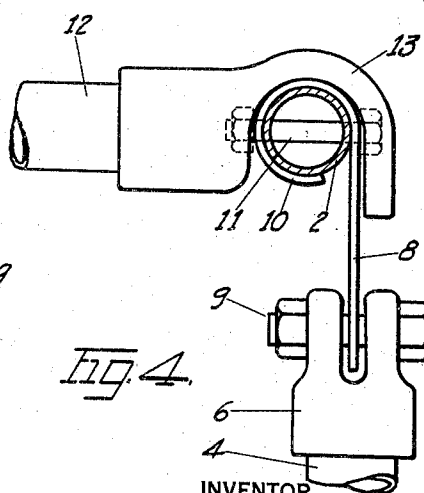


Fig. 4.

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## UNITED STATES PATENT OFFICE

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## KNOCKDOWN TENT FRAME

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The invention to be hereinafter described relates to tent frames and more particularly to those of the knock-down or collapsible type.

5 The construction of the present invention has been more particularly designed and provided for a special use—i. e. grave side funeral services. Here, of course, it is desirable to provide a sure shelter about the  
10 grave in the quickest, simplest and least ostentatious way and one which will, at the same time withstand rough weather, while completely avoiding all such obstacles as guy-ropes over which people so readily trip at  
15 such times. Likewise, such a structure should be so arranged and disposed as to readily receive those to be sheltered, through any side or end as might be most convenient to those assembled. Another prime requisite is  
20 that it should be as rigid as practicable, in place, and should be easily and quickly removed and replaced with the minimum of labor. As a matter of practical commercial production to meet the great competition of  
25 its market, it should be inexpensive of construction, and made as nearly as practicable of regular standard materials which may be readily procured in the average community in large quantities and at low prices. It  
30 should be durable, to avoid frequent repairs and renewals and it should be, as nearly as practicable “fool proof” so that it may be assembled, set up and taken down by any  
35 average person without difficulty or confusion.

It will be found that a tent made in accordance with the present invention fully and adequately meets all of the above mentioned desirable requirements and many  
40 others which will appear upon more detailed examination.

It is also obvious, for instance, that it may have a great variety of other uses than that particularly specified. It may be equally well  
45 used for camping, hunting, fishing, general shelter, storage and many other purposes and, of course, it is to be understood that the invention is not to be in any sense or degree limited as to use. It is to embrace definitely,  
50 all possible uses to which it may be put.

In order to more clearly disclose the construction, operation, and use of the invention and the assembly and dismantling of a tent frame, according to the present invention, reference is hereby made to the accompanying  
55 drawings forming part of the present application. Throughout the several figures of the drawings like reference characters designate the same parts in the several views.

In the drawings:—

Fig. 1 is an end elevation of the frame, partly broken away;

Fig. 2 is a top plan view;

Fig. 3 is an enlarged detail of the connections between the end and side members; and  
65

Fig. 4 is a like detail of the connections between the top or ridge pole and the end member.

As shown in the drawings, the frame is rectangular in plan and the present detailed  
70 description will be in accordance with such showing. It is obvious, and to be understood, however, that it may equally well be triangular, hexagonal, octagonal, and of various  
75 other plan outlines. The differences in construction for such other outlines would be simple adaptations of the idea or invention herein disclosed and it is intended to include  
80 all such within this application and within the scope of the claims hereto appended.

Referring to the drawings in detail, 1 indicates the lower base or horizontal member  
85 which, with the inclined or top members 2 and the connecting braces 3 and 4 constitute a substantially triangular end truss. The  
90 members 1, 2, 3 and 4 may be all of simple tubing or pipe material readily available anywhere at low cost. It only remains to select the diameter and length most suitable for the frame to be made. Preferably, the members  
95 2 are one piece, simply bent at an angle in the middle and this angle flattened for a short distance to present a short length parallel to the base 1 and above the center thereof. An alternative construction is of two mem-  
100 bers 2 connected at the top, in any suitable way, by a short piece parallel with the base 1 and above the center thereof. To complete the triangle the ends of the members 1 and 2 are securely seated in sockets 18 of suitable

angle or corner fittings or castings in the nature of double ferrules. Each such double ferrule carries on its free end a pair of spaced parallel eyes 17, for a purpose to be later disclosed. In order to strengthen and stiffen the truss and render it thoroughly rigid against deflecting strains, the braces 3 and 4 are provided. The brace 4 is disposed at the center, between the center of base 1 and the parallel portion of 2. It is provided with a ferrule or cap 6 on each end carrying a pair of spaced parallel eyes or a clevis. The caps 6 may be separate from and suitably secured to, or formed integral with, the brace 4. At the upper end, a hook plate 8 is made fast by a bolt 9 passed through the eyes of cap 6 and its lower end which lies therebetween. This plate is extended up and folded over and around that part of member 2 which is parallel with base 1, as at 10, and is rigidly held thereto by bolts 11 passed through 2 and both branches of 8 folded thereabout, all as clearly shown in Fig. 4. As will be seen on reference to Fig. 1, there are two such bolts 11 and they are widely spaced, near opposite ends of the flattened portion of 2, for a purpose to be later disclosed. To the lower end of 4 is similarly connected the upper edge of another plate 5, similar to plate 8 except that the short branch is substantially parallel with the long branch instead of being extended around it. The parts are so constructed and proportioned that, when assembled, the loop or U of plate 5 will be snug against the lower side of base 1. The braces 3 are connected at their lower ends to plate 5 in the same manner as is brace 4. They are also connected in the same manner at their upper ends to regular standard ring clamp awning fixtures 7 slidably mounted on 2 and secured at any point therealong by the usual clamping bolt, as will be readily understood. If desired, the brace 4 may be made in two sections connected by a turn-buckle or other tightening means, not shown. The same applies to the braces 3. By adjusting the fixtures 7 to the proper point to take up all looseness the truss may be quickly, certainly, and permanently made rigid and securely resistant to deflecting strains. In a rectangular frame, such as that herein illustrated there are two such triangular trusses, a description of either applying equally to the other. In the frame illustrated, the side or eave poles may comprise pipes or tubing 14 of any well known standard variety provided at each end with sockets or cap ferrules similar to ferrules 6, and each having an eye 15. Each eye 15 is adapted to slip over or receive the free end of a connecting hook bolt 16 the opposite end of which is passed through the eyes 17 and an interposed eye 21, to be hereinafter referred to, and is then drawn tight to position by a nut 19 turned in upon the end thereof. With the four hook-bolts thus engaged

and drawn tightly home the ends and sides are securely attached, yet there is ample flexibility at the four corners. This, together with the ridge pole 12 and top braces 27 constitutes the top of the frame. It will be obvious, of course, that the eye 15 and hook of hook bolt 16 may be substituted each for the other—a simple reversal.

Ridge pole 12, may be another piece of tubing similar to the eaves poles 14. Its opposite ends are each provided with sockets or cap ferrules having flattened U-shaped hooks 13 adapted to slip down over the flattened upper part of the members 2 and lie between the projecting ends of the bolts 11—see Figs. 1 and 4. When the ridge pole is thus dropped into position it holds the tops of the trusses spaced the same distances as are the corners, and the ridge pole itself stopped against lateral movement in either direction, by bolts 11. To complete and brace or stiffen the top thus formed, diagonal brace rods 27 of simple standard material are used. They are hooked onto or similarly suitably connected in any well known manner to regular standard awning fixtures or rings clamps 7, adjustably clamped at any desired point along the length of the eaves poles or ridge pole. If desired, one double clamp may be used on the ridge pole for the two brace rod ends, or two single clamps, whichever may be preferred. Of course, now, as soon as the brace rods have been adjusted and secured the whole top becomes a firm strong, resistant open frame structure.

The top frame, so assembled, may be placed on the surface to be covered by the tent and four extreme corners will rest on the four points where the supporting posts are to go. So, these points are thereby marked for future setting of the posts, as will later appear.

Between the eyes 17, at each corner is a third eye 21 on the ferrule 20 of a short stub post 22 provided with a stop collar 23, as shown in Fig. 3, the hook bolt 16 passes through the aligned eyes 17 and 21 and thereby flexibly ties them together. The collar 23 may be integral with 22 or with 20, or it may be as a washer forced on either, or a nut threaded on either, or as a pin passed through. Or it may be any other well known stop. The stub post is adapted to slip into and be received by the upper end of a tubular post 24 of standard pipe or similar material. The lower end of the post receives the upper part of an anchor pin 25 provided with a suitable stop 26 similar to stop 23. Clearly, the stops may be equally well carried by posts 24.

The method of erection may be as follows:—

After the top has been completed as hereinbefore set forth the pins 25 will be driven to the desired depth at the points marked for the posts and the frame will then be lifted one

corner at a time, the respective post 24 being seated over its pin 26 and the corresponding stub post 22 seated in the upper end of the post. The whole structure is then ready.

5 The canvas is simply hooked on in well known manner by hooks attached to its edges and engaged over the eaves poles, and trusses and about the posts, in much the same manner as the curtains of a sleeping car berth are hooked in place, sufficient overlap being provided to insure a continuous wall wherever desired.

10 At different points the material suggested has been referred to as tubes or pipe or posts, or rods of standard or other readily available supply. Bars, poles and similar parts are equally understood as falling within such terms. Of course, the parts may be made to order either in part or in whole, but as a commercially practical thing, the parts already on the market as standard material and needing only to be assembled in accordance with the teaching of the invention, are in every way preferable.

25 Many changes may be made in the construction, arrangement and disposition of the various parts of the invention, within the scope of the appended claims, without departing from the field and scope thereof and it is meant to include all such within this application wherein only a single prepared form has been shown merely for purposes of illustration and with no intention of so limiting the invention thereto.

35 It is thought that the construction, operation and use of the invention will be clear from the preceding detailed description.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:—

40 1. In a tent frame, an end truss, an eave pole, a support, and a connecting means engaged by said eave pole and passing through said support and said truss.

45 2. A tent top frame comprising an end truss comprising upper and lower members, said members having substantially parallel medial portions, a connecting plate secured to the medial portion of the upper member, 50 and means projecting horizontally therefrom on opposite sides of the central vertical line thereof, in combination with a ridge pole having one end formed with a hook formed to snugly engage about said upper member and said interposed plate between said projecting means, said hook being formed to snugly engage said upper member and said interposed plate on opposite sides of the axis of said member to brace the same against 60 movement in either direction endwise of said ridge pole, and said projecting means serving to aid in centering said hook on said upper member and preventing lateral sliding of said hook on said upper member.

55 3. A tent frame top comprising an end

truss comprising upper and lower members, said members having substantially parallel medial portions, an upper connecting plate extending about said medial portion of the upper member and having a web depending therefrom, means projecting from the face of said plate on opposite sides of the central vertical line thereof, a lower connecting plate extending about the medial portion of the lower member and having a web extending upward therefrom, and means connecting said webs to brace said members by each other, in combination with a ridge pole having one end formed with a hook formed to snugly engage about said upper member and said interposed plate between said projecting means, said hook being formed to snugly engage said upper member and said interposed plate on opposite sides of the axis of said upper member to brace the same against movement in either direction endwise of said ridge pole, and said projecting means serving to aid in centering said hook on said upper member and preventing lateral displacement of said hook on said upper member.

90 4. A tent frame top comprising an end truss comprising upper and lower members, said members having substantially parallel medial portions, an upper connecting plate extending about said medial portion of the upper member and having a web depending therefrom, means securing said upper plate rigidly to said upper member, said means having portions projecting beyond the front face of said upper plate and on opposite sides of the central vertical line thereof, a lower connecting plate extending about the medial portion of the lower member and having a web extending upwardly therefrom, and means connecting said webs to brace said members by each other, in combination with a ridge pole having one end provided with a hook formed to snugly engage about the upper member and said upper interposed plate between said projecting portions, said hook being formed to snugly engage said upper member and said upper interposed plate on opposite sides of the axis of said upper member to brace the same against movement in either direction endwise of said ridge pole, and said projecting portions serving to aid in centering said hook on said upper member and preventing lateral displacement of said hook on said upper member.

Signed at Sandusky, Ohio, this 11th day of February, 1929.

ERNEST W. SEAMAN.