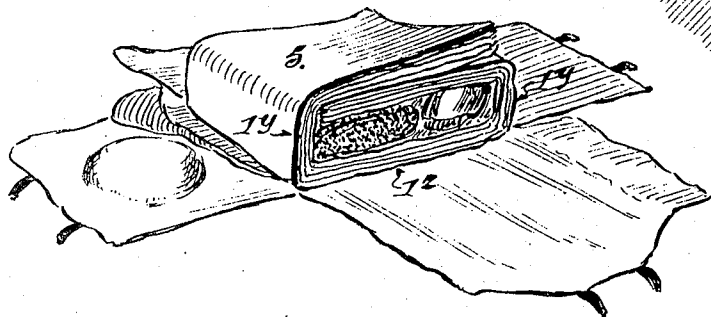
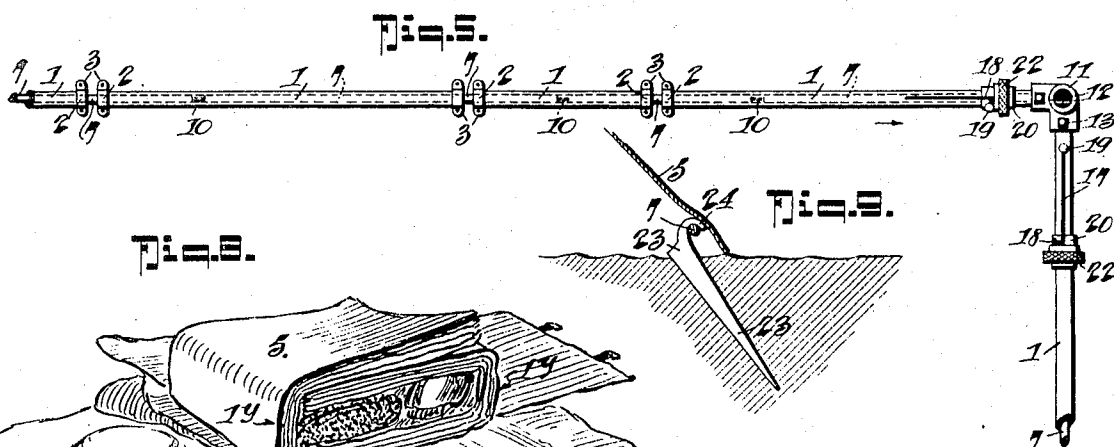
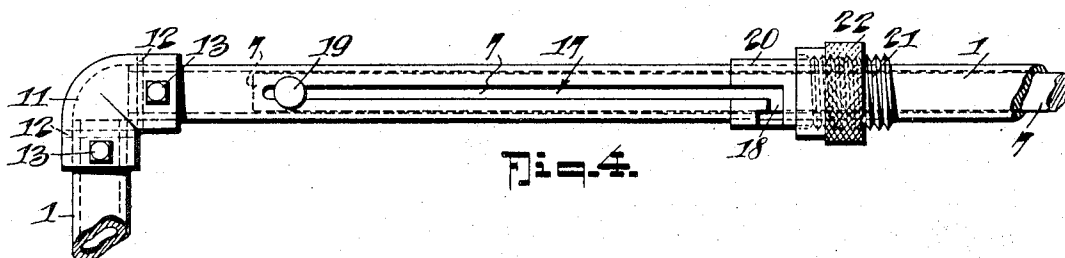
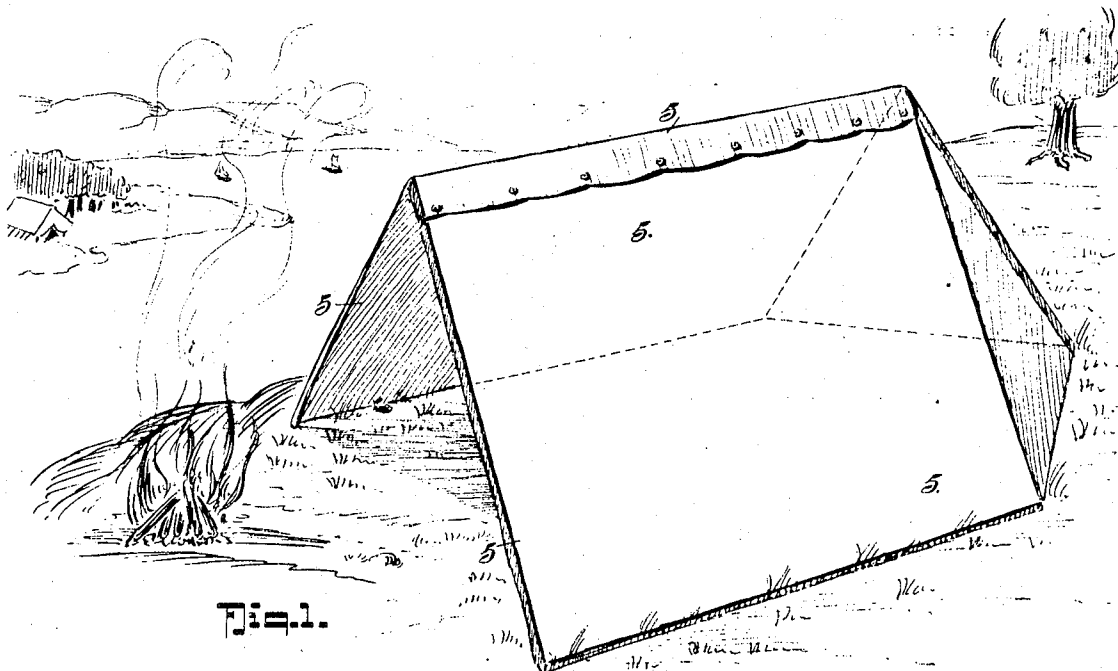


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KNOCKED DOWN OR PORTABLE STRUCTURE.
APPLICATION FILED AUG. 25, 1920.

1,374,994.

Patented Apr. 19, 1921.

3 SHEETS—SHEET 1.



INVENTOR
George A. Faik.

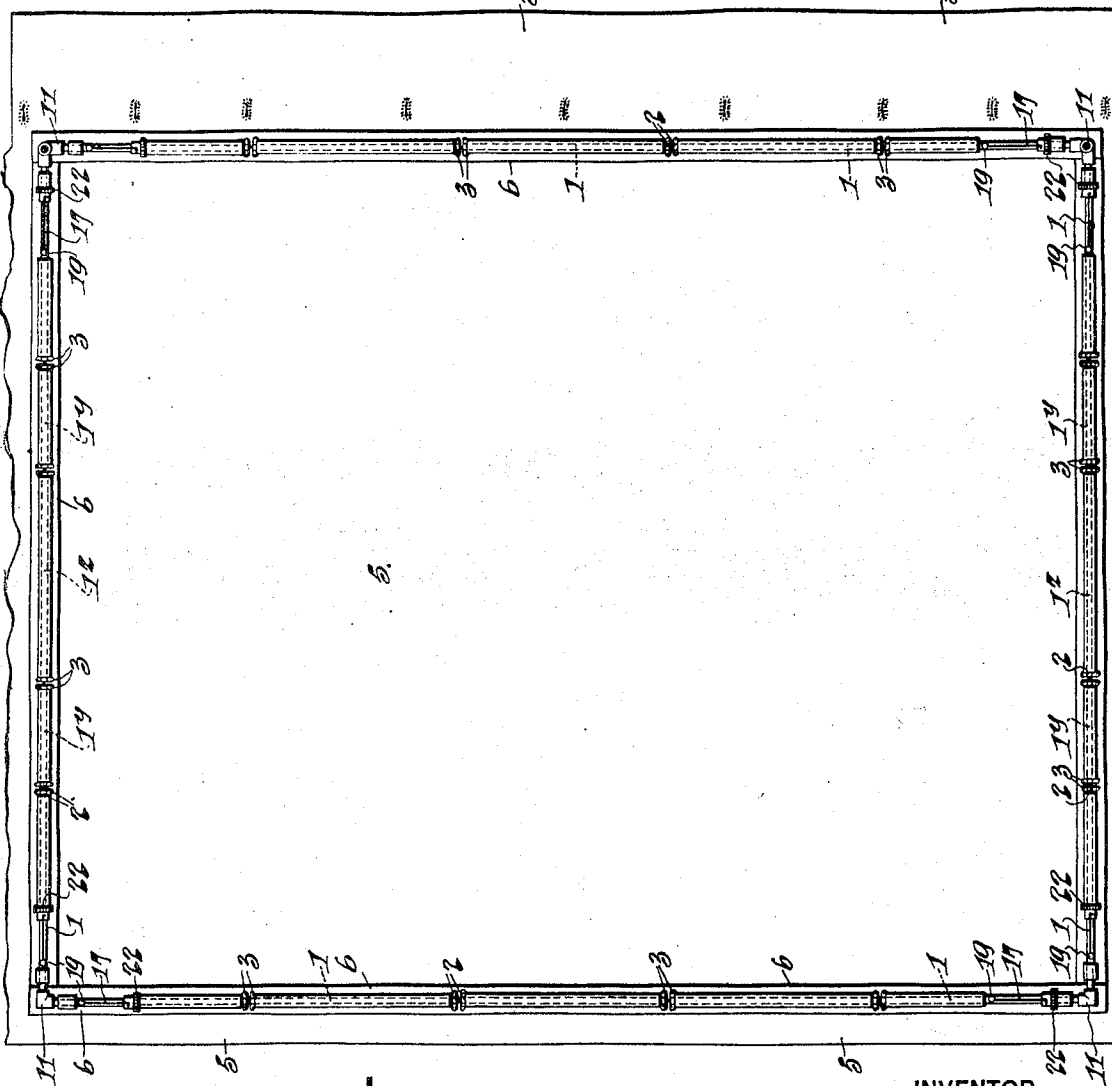
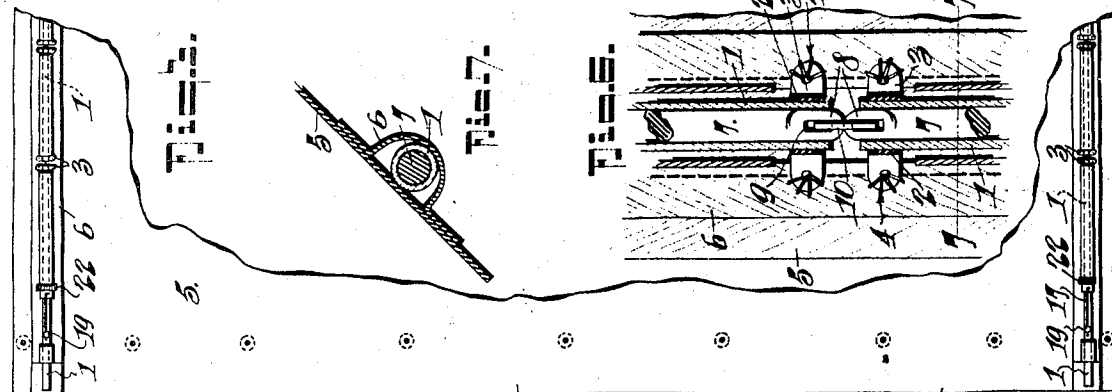
BY
Fred G. Hesterich & Co.
ATTORNEYS

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3 SHEETS—SHEET 2.



INVENTOR
George A. Faik.

BY
Fred G. Dietrich & Co.
ATTORNEYS

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3 SHEETS—SHEET 3.

Fig. 10.

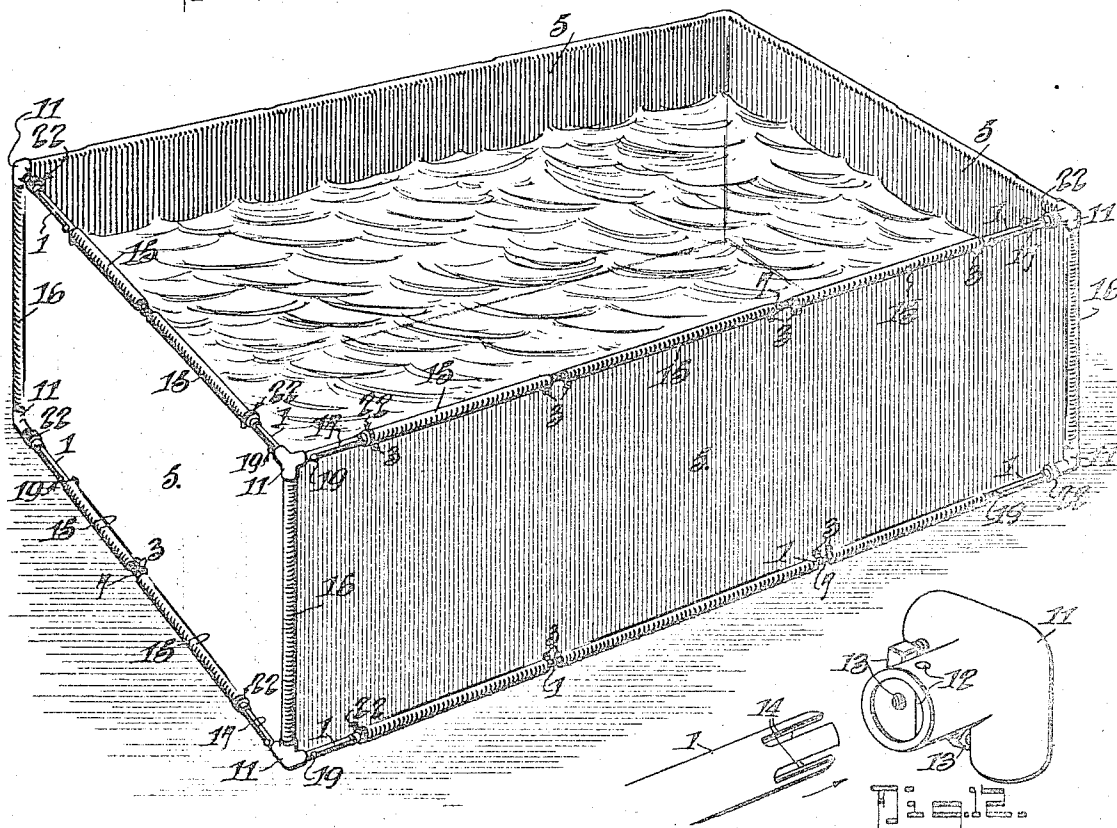
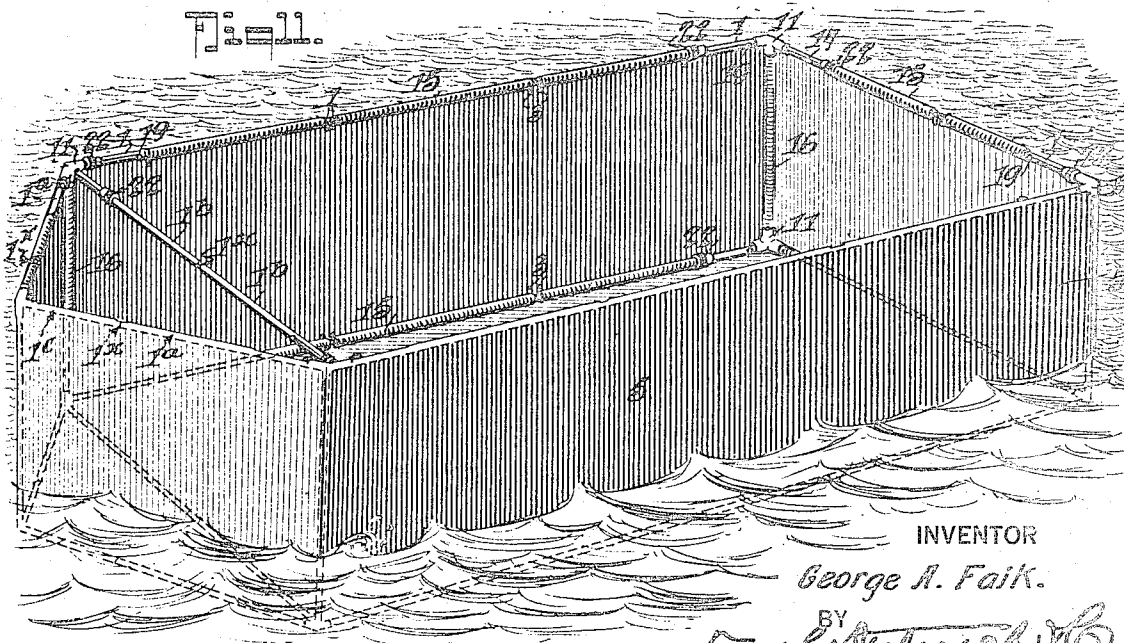


Fig. 11.



INVENTOR
 George A. Faik.

BY
Fred G. Peterich
 ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE ADAM FAIK, OF MILWAUKEE, WISCONSIN.

KNOCKED-DOWN OR PORTABLE STRUCTURE.

1,374,994.

Specification of Letters Patent. Patented Apr. 19, 1921.

Application filed August 25, 1920. Serial No. 406,001.

To all whom it may concern:

Be it known that I, GEORGE A. FAIK, (a former subject of Hungary, who has applied for citizenship of the United States,) residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Knocked-Down or Portable Structures, of which the following is a specification.

This invention has for an object to provide an improved construction of framing for use in army tents, collapsible and foldable boats and tubs, etc., and, in its general nature, comprises a frame having rigid corner unions into which are detachably socketed the ends of the tubes or collapsible frame poles, the latter being composed of a plurality of separate lengths of tubes arranged end to end and held spaced apart a short distance by suitable devices through the medium of which they are attached to the fabric covering, the ends being held spaced apart a short distance to enable folding, the tubes inclosing an inner rod which slides with neat fit in the tube and is itself composed of sections linked together by collapsible joints with retaining devices at the extreme ends of the inner rod, whereby, when the inner rod is locked to the outer tube structure, the joints of the inner rod will be wholly located within the tube sections, portions of the rods serving to close the gaps between adjacent tube section ends and also the fastening devices hold the inner rod with its sections in end contact throughout its length, thereby forming a rigid pole, as it were, for supporting the fabric of the tent, boat, tub or other structure as the case may be, the tube sections being preferably of such length as to adapt the structure to be folded up to go into an army pack.

In its more detailed nature, the invention includes those novel features of construction, combination and arrangement of parts, all of which will be first fully described, then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Figure 1 is a perspective view showing the application of the invention to an army shelter tent.

Fig. 2 is a plan of one-half of the tent.

Fig. 3 is a plan of a portion of the other half of the tent.

Fig. 4 is an enlarged detail view showing

a portion of the frame, with one of the rod fastening devices.

Fig. 5 is a detail view of a portion of the frame showing the inner rods in locked position.

Fig. 6 is a detail view, partly in section, showing the inner rod at the unlocked position with the joint exposed for folding and showing the means for fastening the tubes to the fabric.

Fig. 7 is a cross section on the line 7-7 on Fig. 6.

Fig. 8 is a perspective view of an army pack showing the tent folded into the pack.

Fig. 9 is a detail view showing how the tent may be staked to the ground.

Fig. 10 is a perspective view illustrating the adaptation of the invention to a tub for containing water or other fluid (a bath tub for example).

Fig. 11 is a perspective view illustrating the adaptation of the invention to a collapsible boat.

Fig. 12 is a detail perspective view showing the interlocking joint between the outer tube end and the corner fixture.

In the drawings in which like numerals and letters of reference indicate like parts in all of the figures, 1 represents the outer tubular sections of the frame which, in practice, when the frame is used for an army shelter tent, are made in standard lengths of six to twelve inches, although it should be understood that other lengths may be employed if found desirable.

The outer tubular sections 1 are provided with collars 2 having one or more ears 3, through which they may be sewed at 4 to the fabric 5 to hold the tubes against endwise displacement.

The tubes may also be covered by a strip of fabric 6, as shown in detail in Figs. 6 and 7, or the fabric may be looped over the tubes, as shown in Figs. 10 and 11.

7 designates the sections of the inner rod, which may be solid or tubular as desired, the ends 8 being flattened and provided with elongated eyes 9 to cooperate with the links 10. The links 10 closely conform to the flaps of the flattened portions 8 so as to hold the rods 7 in alinement when it is desired to move them to the locked or operative position.

Corner pieces 11 are provided with suitable means so that the tubes 1 may be socketed into the corner pieces in one position

only. For example, the socket members may be provided with pins 12 passing through off center and the tubes 1 may be cut with corresponding slots 14, the tubes 5 being held to the fixtures 11 by set screws 13 or other suitable devices.

As shown in Figs. 10 and 11, the fabric 5 may be folded over at 15 to inclose the tubes 1 and, when the invention is applied to water containing tubs or to boats where the vertical height is not very great, the vertical members 16 may be made of one piece tubing.

When the invention is adapted to a boat, 15 the bow poles are each composed of two tubes, 1^a and 1^c, and corresponding rod lengths, one of the tubes being a long one and the other a short one. The long tube 1^a corresponds in length to the tube 1^b of the cross pole or brace, so that, when the tube 1^a is unsocketed, it may be folded up against the tube 1^b and the "break-joints" 1^x will come together, thus making it convenient for folding.

25 The manner of fastening the rod lengths in the locked position is best illustrated in Fig. 4, by reference to which it will be seen that the end tube length 1 is provided with an elongated slot 17, merging with a bayonet slot 18, while the adjacent end of the 30 rod 7 is provided with a finger piece 19 adapted to move in the slots 17 and 18.

20 is a ferrule secured on the tube section 1 and slotted to conform to the adjacent parts of the slots 17-18. The ferrule 35 20 is threaded at 21 and provided with a milled nut 22 which, when the finger piece 19 is in the slot 18 may be screwed up against the same to prevent accidental un- 40 locking.

I prefer to provide a locking device at each end of a pole, as indicated in Fig. 2, though, under certain conditions in certain structures, one locking device may prove 45 sufficient.

Suitable stakes 23 may be provided with hook portions 24 adapted to hook over the rods 7 at the spaces between the ends of the tubes 1 and form a part of the tent equip- 50 ment. These stakes are convenient for being forced into the ground by foot pressure. They are indicated in detail in Fig. 9.

While I have illustrated my invention in its adaptation to several articles, it will be 55 clear that with more or less modifications, it may be adapted to other structures and I do not wish to be confined to the specific structures illustrated beyond what is specifically set forth in the appended claims.

60 From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, the operation and the advantages of the invention will be clear to those skilled 65 in the art.

It is to be noted, however, that in the army tent structure, at two ends of the tent structure short tube lengths 1^y are placed at each side of the central end length 1^z. The object of this is that, in folding the tent, 70 the short lengths 1^y will be those at the ends of the pack, see Fig. 8, and enables the tent to be wrapped around other articles of the pack.

It will, of course, be understood that the 75 tubes will be made in any suitable lengths to adapt the same to the particular purpose in view.

What I claim is:

1. In a structure of the character de- 80 scribed, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections slidably fitting within said tubes and flexi- 85 bly linked together, and rod and tube interlocking devices at the ends of said tubes whereby to hold the pole rod sections in endwise abutment with the joints inclosed by said tubes. 90

2. In a structure of the character de- 90 scribed, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections 95 slidably fitting within said tubes and flexibly linked together, rod and tube interlocking devices at the ends of said tubes whereby to hold the pole rod sections in endwise abutment with the joints inclosed 100 by said tubes, and a fabric body to which said tubes are secured.

3. In a structure of the character de- 105 scribed, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections slidably fitting within said tubes and flexi- 110 bly linked together, rod and tube interlocking devices at the ends of said tubes whereby to hold the pole rod sections in endwise abutment with the joints inclosed by said tubes, a fabric body to which said 115 tubes are secured, said tubes of a series being of different lengths and said rods of the same series being of correspondingly different lengths.

4. In a structure of the character de- 120 scribed, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections slidably fitting within said tubes and flexi- 125 bly linked together, rod and tube interlocking devices at the ends of said poles whereby to hold the pole rod sections in endwise abutment with the joints inclosed by said tubes, said interlocking devices com- 130 prising bayonet slots in the end tubes and studs on the adjacent rod sections slidable

in the slots and holding devices adjacent to the slots adapted to engage said studs to prevent displacement thereof when in the locked position.

5 5. In a structure of the character described, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections
10 slidably fitting within said tubes and flexibly linked together, rod and tube interlocking devices at the ends of said tubes whereby to hold the pole rod sections in endwise abutment with the joints inclosed by said tubes,
15 a fabric body to which said tubes are secured, said interlocking devices comprising bayonet slots in the end tubes and studs on the adjacent rod sections slidable in the slots and holding devices adjacent to the
20 slots adapted to engage said studs to prevent displacement thereof when in the locked position.

6. In a structure of the character described, a frame composed of end corner fixtures and poles, said poles comprising a series of tubes held in endwise alinement with their ends spaced apart, rod sections
25 slidably fitting within said tubes and flexibly linked together, rod and tube interlocking devices at the ends of said tubes whereby to hold the pole rod sections in endwise abutment with the joints inclosed by said tubes, a fabric body to which said tubes are secured,
30 said tubes of a series being of different lengths and said rods of the same series being of correspondingly different lengths, said interlocking devices comprising bayonet slots in the end tubes and studs on the adjacent rod sections slidable in the slots and
40 holding devices adjacent to the slots adapted to engage said studs to prevent displacement thereof when in the locked position.

7. In a tent structure, a section comprising a rectangular frame and a fabric sheet
45 to which the frame is adapted to be attached, said frame comprising corner fixtures and poles detachably interlocked with said fixtures, each of said poles comprising a series of tube sections and a series of rod sections slidably fitting in the tube sections and flexible joints between the respective
50 rod sections, means securing said tube sections to said fabric sheet against displacement with the opposing ends of adjacent tube sections separated to leave folding
55 places for the fabric, means by which the

rod lengths may be slid in the tube as a unit to bring the joints of the rod either wholly within the tube sections or wholly at the spaces between the ends of the same correspondingly as the rod is in the locked or unlocked position, and means for holding the rod sections fast in the locked position. 60

8. In a tent structure, a section comprising a rectangular frame and a fabric sheet
65 to which the frame is adapted to be attached, said frame comprising corner fixtures and poles detachably interlocked with said fixtures, each of said poles comprising a series of tube sections and a series of rod sections
70 slidably fitting in the tube sections and flexible joints between the respective rod sections, means securing said tube sections to said fabric sheet against displacement with the opposing ends of adjacent tube sections
75 separated to leave folding places for the fabric, means by which the rod lengths may be slid in the tube as a unit to bring the joints of the rod either wholly within the tube sections or wholly at the spaces between the ends of the same correspondingly
80 as the rod is in the locked or unlocked position, means for holding the rod sections fast in the locked position, said means comprising a stud on certain rod lengths, certain tube
85 lengths having a bayonet slot and a member for holding said stud in the bayonet slot in the locked position.

9. In a structure of the character described, a pole comprising a series of tubes
90 held in endwise alinement with their ends spaced apart, rod sections slidably fitting within said tubes and flexibly linked together, and rod and tube interlocking devices whereby to hold the pole rod sections
95 in endwise abutment with the joints inclosed by said tubes.

10. In a structure of the class described, a pole composed of a series of tubes held in endwise alinement with their ends spaced
100 apart, rod sections slidably fitting within said tubes, links connecting the ends of said rod sections together to hold said rods to abut one another endwise when in the locked position, a bayonet slot in at least one of
105 said tubes, a stud on the adjacent rod cooperating with said bayonet slot and a holding device for engaging said stud to keep it in the "lock" in the bayonet slot substantially as shown and described.

GEORGE ADAM FAIK.