April 24, 1956 R. L. BLANCHARD 2,742,912

TENT WITH EXPANSIBLE ALL-PURPOSE FRONT OR FLY

Filed Nov. 4, 1949 2 Sheets-Sheet 1

Fig. 1.

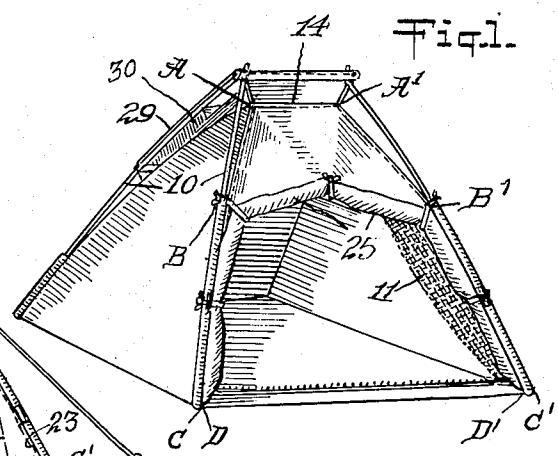


Fig. 2.

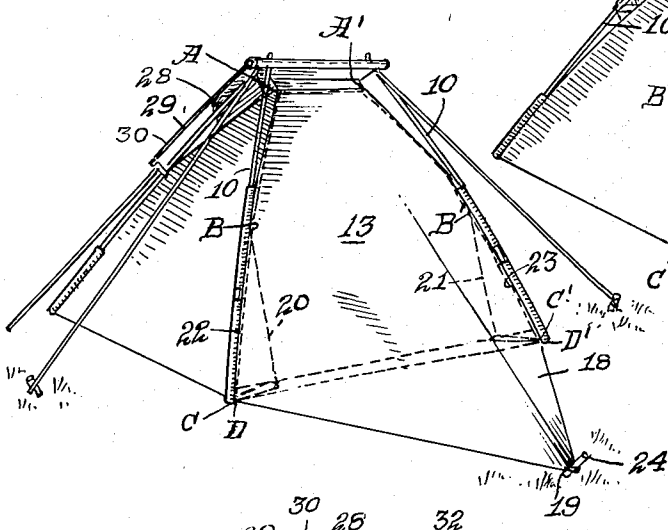


Fig. 3.

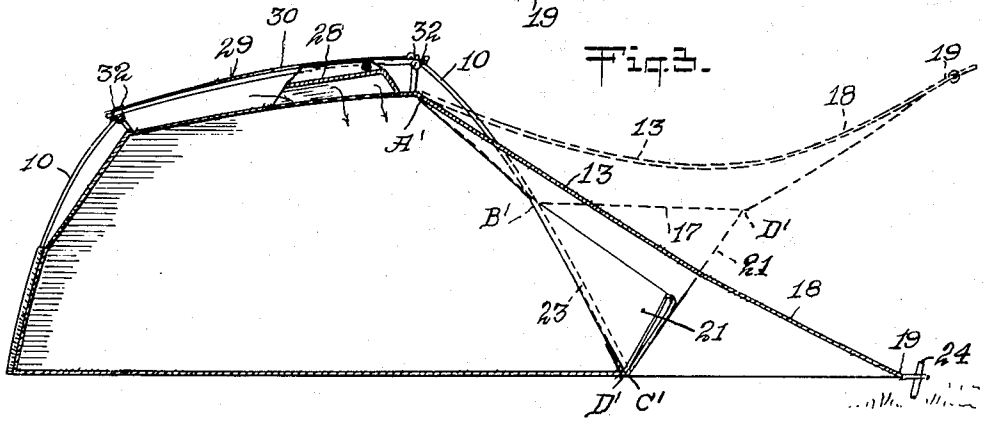
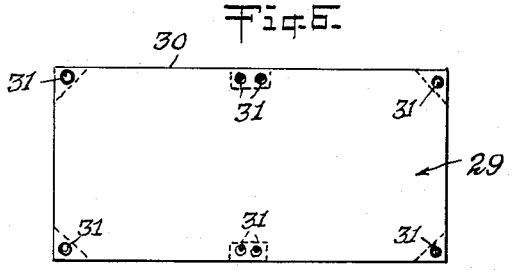


Fig. 6.



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Fig. 4.

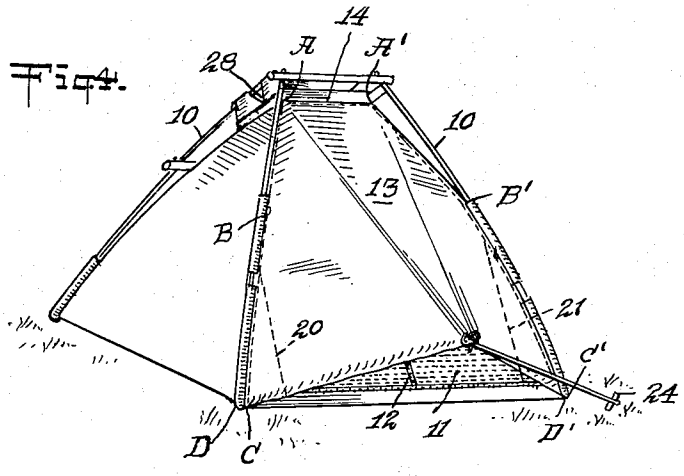


Fig. 5.

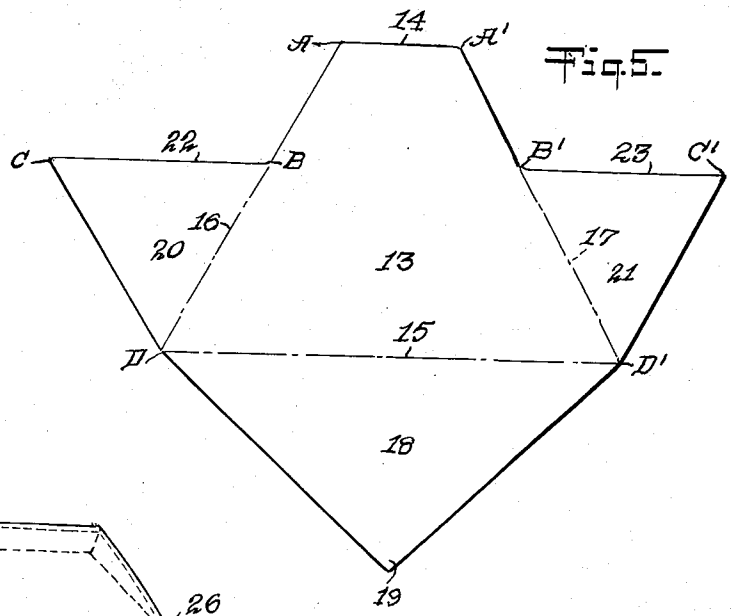
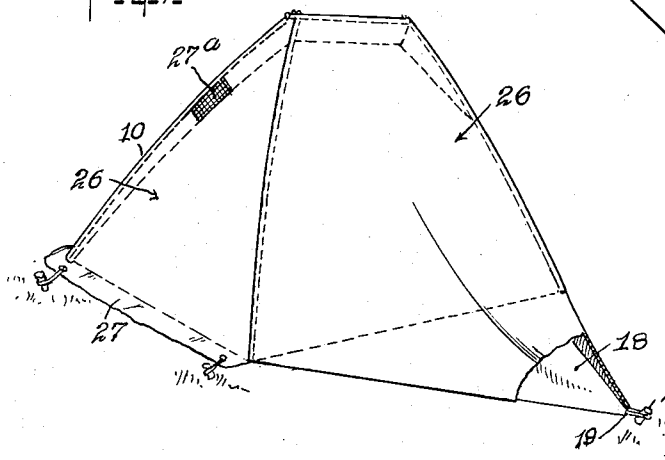


Fig. 7.



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TENT WITH EXPANSIBLE ALL-PURPOSE FRONT OR FLY

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9 Claims. (Cl. 135—1)

This invention relates to new and useful improvements in tent constructions and has particular reference to an improved front or fly for the tent.

It is an object of the present invention to provide a tent which is so constructed as to permit the ingression of air and sunshine in fair weather, but which nevertheless provides complete protection against rain, wind and snow.

It is still a further object of the present invention to provide a tent which may be easily adapted to meet all weather conditions.

Still a further object of the present invention is to provide a tent having a minimum amount of parts and which can be assembled and disassembled simply and easily.

Still another object of the present invention is to provide a tent whose components for use during different weather conditions are an integral part of the tent itself.

Still another object of the present invention is to provide a tent which is streamlined to the ground line and which can be completely enclosed preventing the infiltration of snow or rain.

Still a further object of the present invention is to provide a tent having all of the desired advantages, which is nevertheless relatively inexpensive to manufacture and simple to construct and assemble.

In brief and general terms, the invention includes the provision of a front fly which includes, in part, a main body conforming generally, when in a flat and substantially taut condition, to the front of the tent. At the lower end of this main body and in union therewith, there is provided an extension, which is transversely coextensive with the lower end of the main body along its line of juncture with that body, the extension being tapered forwardly from its line of juncture with said body and terminating in a substantially pointed end. Along and in union with the lower half of the side margins of the main body, there are provided gussets, which, if considered in a flat and substantialy taut condition, are of triangular shape when the line of their juncture with the respective side margins of said body is considered in conjunction with the two outer edges of the respective gussets. One of the two outer edges of each gusset is attached to the tent proper, immediately adjacent its front opening, the other of said outer edges being free so as to permit the gussets to naturally assume a folded condition when the fly is moved downwardly from open position to closed position, in which latter position the side edges of said extension effect a snug fit with the ground surface.

With this general construction, it is perceived that the lower portion of the front can be expanded to raise it or lower it as desired, to act as a canopy or marquise with the gussets at the sides acting as side walls when expanded to prevent the ingress of rain, snow, drafts, etc. Of course, it is understood that as the front of the tent may assume different shapes or particular outlines, the particular shape of the main body of the improved fly may change therewith but the addition of the lateral gussets

and the lower forward triangular extension remain the same in each instance.

The present preferred form which the invention may assume is illustrated in the drawings, of which:

Fig. 1 is a perspective view of the tent with the front fly folded back against the front wall;

Fig. 2 is a perspective view showing the front fly in full use and staked down to completely prevent ingress of snow, rain, etc.;

Fig. 3 is a vertical longitudinal cross section showing the front fly staked down in full lines and elevated in dotted lines;

Fig. 4 is a perspective view of the tent with the front fly raised along its lower edge to permit some ingress of air, but still providing protection against ordinary wind and rain;

Fig. 5 shows the blank form of the front fly before it is attached to the front of the tent;

Fig. 6 is a plan view of a special rain cover for the top of the tent; and

Fig. 7 is a perspective view of a cover for the whole tent in extremely cold weather conditions.

Referring now merely to the specific forms of the invention shown in the drawings, it is to be noted that the tent generally speaking, is of the same general type as shown in my co-pending application, Serial No. 9,695, filed February 20, 1948, and entitled "Explorer's Folding Tent," which application has since matured into Patent No. 2,543,684, dated February 27, 1951. This sort of tent has a body portion which is suspended within a tent frame and substantially out of contact therewith. It has a front wall generally closed at will with netting and with ordinary fly members or closure flaps. In the present modification, the above mentioned type of fly has been changed to the form herein disclosed and hereafter described in detail.

The tent herein illustrated as embodying the present invention is of such shape that it, when viewed from the front, or back, or either side, may be regarded as there presenting a trapezoid in outline, although the tent may be of any other appropriate shape. The tent frame shown is formed of the flexible members **10**, which may be, and preferably are, tubular sections joined together. The tent body is a unitary structure with its top, side, rear and bottom walls united, the front wall being in the form of a netting **11**, adapted to be closed along certain lines, as by "Zipper" means, and is adapted, when not in use, to be folded back into its position shown in Fig. 1 and there suitably retained in a suspended condition. It will be seen that the frame members at the front of the tent slope forwardly and downwardly in a diverging relation to each other and are disposed in a contiguous relation to the corners of the tent at the front thereof.

In accordance with my invention, I therefore attach to the tent body a front fly piece which is made of suitable material and is illustrated in blank form in Figure 5, the blank being so shaped as to include a main body portion **13** generally defined by the lines **14, 15, 16** and **17**, which present the form of a trapezoid. At the lower forward edge of this body portion and in union therewith along the line **15**, there is provided an extension **18**, the boundary line **15** and the side edges D–**19** and D'–**19** of which, when the blank is considered in a flat condition as shown in Fig. 5, presents a triangle defined by the line **15** and the edges D–**19** and D'–**19**. The extension **18** is coextensive with the body portion **13** along its line of juncture **15** with the body portion, the extension being tapered forwardly from said line of juncture and terminating in a well defined point at **19**. To the lower portions of the body portion **13** and in union with the same

along the lines **16** and **17**, are connected gussets **20** and **21**, the edges **22** and **23**, respectively, of which are adapted to be connected to the tent proper, immediately adjacent its front opening. The outer corresponding edges C—D and C'—D' are free so as to permit the gussets **20—21** to naturally assume a folded condition when the fly is moved downwardly from open position, indicated in dotted lines in Fig. 3, to closed position, best shown in Fig. 2, in which latter position the side edges D—**19** and D'—**19** of the extension **18** effect a snug fit with relation to the ground surface as will be readily understood from an inspection of Figs. 2 and 3. When it becomes desirable to open the tent by lifting the extension **18** to its dotted line position shown in Fig. 3, the gussets **20** and **21** are permitted to expand into a relatively taut condition, as will be understood from an inspection of Fig. 3, so as to then serve as side walls for the main body portion **13** of the fly, whereby the interior of the tent may be protected from lateral winds, rain and the like.

It will be understood that the fly may be retained in a relatively taut condition when extended, as illustrated in dotted lines in Fig. 3, inasmuch as it is effectively anchored to the tent proper along the lines A—A', A—B, A'—B', B—C, B'—C', as will be readily understood when it is taken into account that the main body portion **13** of the fly, reference being had to Fig. 5, is connected alongt he line A—A', to the peak of the tent proper as shown most clearly in Fig. 2; the side edges A—B and A'—B' of the body portion **13** of the fly (reference being had to Fig. 5) are connected, respectively, to the opposite sidewalls of the tent proper adjacent the front opening thereof, as best shown in Fig. 1; and the edges B—C and B'—C' of the respective gussets **20** and **21** are similarly attached to the tent proper immediately adjacent the front opening of the tent. Here it may well to mention that the connection just described as between the fly and the tent proper may be effected by joining the parts together in any well known manner which may be regarded as appropriate in the art of tent manufacture.

With the fly herein shown connected, as described, to the tent proper the apex **19** of the extension **18**, as shown in full lines in Figures 2 and 3, may be staked at **24** so that it will be anchorod closely to the ground to provide a complete protection from the wind, rain, etc., under extreme weather conditions, it being noted, however, that as shown in dotted lines, in Figure 3, the fly may be elevated to form a sort of marquise permitting ample ventilation of the tent and yet protecting the occupants from the heat of the sun. This last arrangement may also be useful when the open front of the tent faces a fire, intended to give warmth to the tent occupants, because the heat of the fire burning beyond the limits of the fly will warm the tent in cold weather and yet permit the sparks and smoke from the fire to escape upwardly without entering the tent. In Figure 1, the lower portion of the front fly is shown at **25** as rolled up against the front of the tent to form a free entrance into the tent.

In Figure 4, the lower edge of the fly is rolled up slightly and then staked to the ground as shown, to provide ample protection from snow and rain and yet allow full ventilation.

In Figure 7, the tent is shown with the improved fly staked closely to the ground and the tent is also provided with an extra cover **26** for extreme cold weather. This cover is provided with a marginal flange **27**, which can be staked down, the cover **26** being provided with lateral openings such as **27***a* in the form of a netting or grill to provide for top ventilation.

As shown in the above mentioned patent, the top of the tent is provided with a ventilator hood **28** (Figure 3). In rather windy, wet weather, it is possible to support over the top of this ventilator a protecting cover **29**, which, as shown in Figure 6, is in a form of a sheet **30**, having series of grommets **31** disposed along the sides and at the corners of the sheet. As shown in Figure 3, these grommets are adapted to be slipped over the upwardly extending pins **32** of the frame members and when thus disposed, will permit functioning of the ventilator hood and yet protect it from the rain.

Operation

From a consideration of the above objects and the detailed specification, it is clear that there has been provided a simple, efficient tent with an all purpose storm front or fly which can be quickly and easily adjusted into various positions to meet different conditions of weather as set forth. This invention is achieved by attaching to the tent proper the herein illustrated fly consisting preferably of a single piece of material, which includes a pair of gussets connected to the tent proper adjacent to the front opening thereof and further including a forwardly extending portion, which is preferably triangular when considered in blank. By this exceedingly simple element and the manner in which it is attached, the various positions of it can be readily achieved to meet the various conditions set forth. The application of this invention is identical in principle regardless of the size of the tent. The only variation will be in the shape of the main body portion of the fly, since such body portions should conform in general to the particular outline of the entrance end of the tent with which the fly is to be employed.

While the invention has been described in detail and with respect to the preferred form shown in the drawings, it is not to be limited to such details and forms since many changes and modifications may be made in the invention without departing from the spirit and scope of the invention in its broadest aspects. Hence, it is intended to cover any and all forms and modifications of the invention which may come within the language or scope of any one or more of the appended claims.

What I claim as my invention, is:

1. A tent construction including a tent body having an entrance opening, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times to facilitate extension and folding of said gussets as said fly is respectively raised and lowered to open and closed positions with relation to said opening, an extension connected to the lower margin of said main body and having opposite side edges extending forwardly along the ground line in close proximity thereto when said fly is maintained in a closed relation to said opening.

2. A tent construction including a tent body having an entrance opening, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times to facilitate extension and folding of said gussets as said fly is respectively raised and lowered to open and closed positions with relation to said opening, an extension transversely coextensive with and connected to the lower margin of said main body and having opposite side edges extending forwardly along the ground line in close proximity thereto

when said fly is maintained in a closed relation to said opening.

3. A tent construction including a tent body having an entrance opening, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times to facilitate extension and folding of said gussets as said fly is respectively raised and lowered to open and closed positions with relation to said opening, said gussets being in folded condition within the confines of the tent body while said fly is maintained in its closed position and being in a relatively taut condition without the confines of the tent body while said fly is maintained in a raised and forwardly extending position.

4. A tent construction including a tent body having an entrance opening, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times to facilitate extension and folding of said gussets as said fly is respectively raised and lowered to open and closed positions with relation to said opening, an extension connected to the lower margin of said main body and having opposite side edges extending forwardly along the ground line in close proximity thereto when said fly is maintained in a closed relation to said opening, said gussets being in folded condition within the confines of the tent body while said fly is maintained in its closed position and being in a relatively taut condition without the confines of the tent body while said fly is maintained in a raised and forwardly extending position.

5. A tent construction including a tent body having an entrance opening, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times to facilitate extension and folding of said gussets as said fly is respectively raised and lowered to open and closed positions with relation to said opening, an extension transversely coextensive with and connected to the lower margin of said main body, said extension being tapered forwardly and terminating in a substantially pointed end and having opposite side edges extending forwardly along the ground line in close proximity thereto when said fly is maintained in a closed relation to said opening.

6. A tent construction including a tent body having a top wall, a ventilator in said top wall, a frame outside said tent body and from which said tent body is suspended, a cover stretched over said frame in an enveloping relation to said tent body and forming therewith an insulating space, a ventilator in said cover and through which ventilation is maintained between the interior of said tent body and the exterior of said cover by way of said insulating space and the first mentioned ventilator.

7. A tent construction including a tent body having a top wall, a ventilator in said top wall, a frame outside said tent body and from which said tent body is suspended, a cover supported by said frame in an enveloping relation to said tent body and forming therewith an insulating space, said cover being provided at its lower margin with a laterally extending flange adapted to assume a contiguous relation to the ground line and there anchored in such relation, a ventilator in said cover and through which ventilation is maintained between the interior of said tent body and the exterior of said cover by way of said insulating space and the first mentioned ventilator.

8. A tent construction including a tent body having an entrance opening at its side and a top wall, a ventilator in said top wall, a frame outside said tent body and from which said tent body is suspended, a cover supported by said frame in an enveloping relation to said tent body and forming therewith an insulating space, a ventilator in said cover and through which ventilation is maintained between the interior of said tent body and the exterior of said cover by way of said insulating space and the first mentioned ventilator, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, and a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which in the case of each gusset is connected to said tent body adjacent said opening and the other of which in the case of both gussets remains free at all times, and an extension connected to the lower margin of said body and having opposite side edges adapted to extend forwardly along the ground line in close proximity thereto when said fly is maintained in a closed relation to said opening.

9. A tent construction including a tent body having an entrance opening, a frame outside said tent body and from which said tent body is suspended, a front fly including a main body connected at its upper end to said tent body at a point above said opening and connected at its upper side margins to said tent body at points adjacent said opening, a pair of gussets connected to the lower side margins of said main body, each of said gussets presenting a pair of side edges, one of which side edges in the case of each gusset is connected to said tent body adjacent said opening and the other of which side edges in the case of each gusset remains free at all times, an extension connected to the lower margin of said main body and having opposite side edges extending forwardly along the ground line in close proximity thereto when said fly is maintained in a closed relation to said opening, a cover supported by said frame in an enveloping relation to said tent body and said extension when said fly and said extension are maintained in a closed relation to said opening, said cover conforming generally to said tent body and said extension and forming with said tent body an insulating space.

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