

[54] SELF CLOSING TENT DOOR

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[57] **ABSTRACT**

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160/DIG. 8

A tent door apparatus is provided which is self closing and has a pair of flaps which overlap and each flap is suspended from either end with an elastic material so that the flaps can be pulled apart for entry into the tent and will automatically close when the flaps are released. The suspension elastic cords are attached at the top to the frame of the tent and at the bottom to a stake driven in the ground, and are separated to pull the flaps into overlap.

[56] **References Cited**

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Popular Mechanics December 1962 Page 147.

2 Claims, 4 Drawing Figures

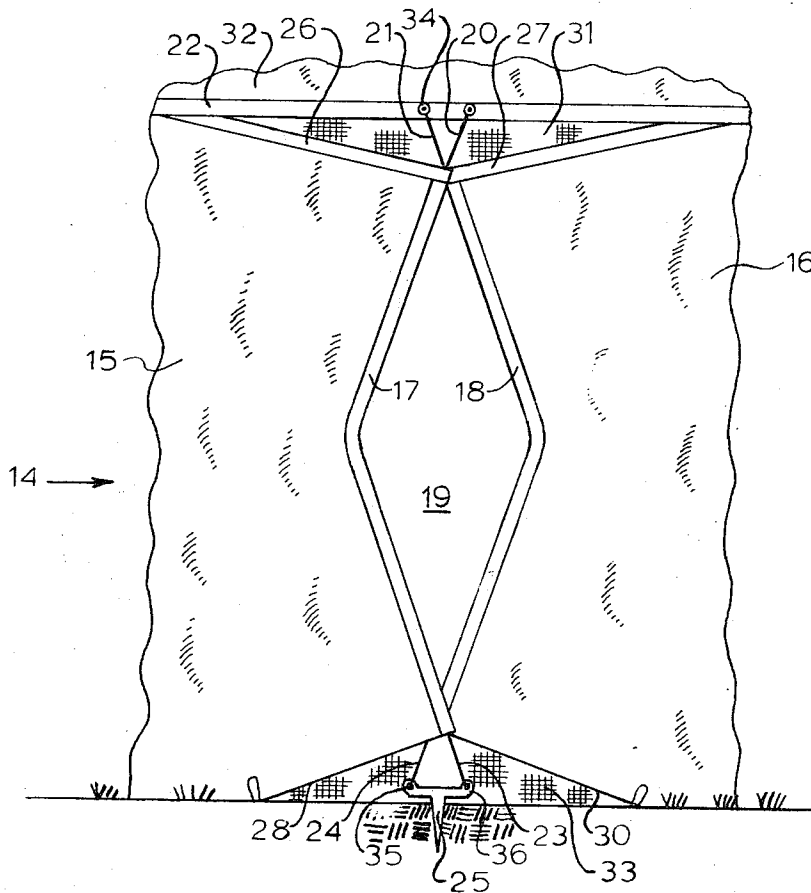


Fig. 1.

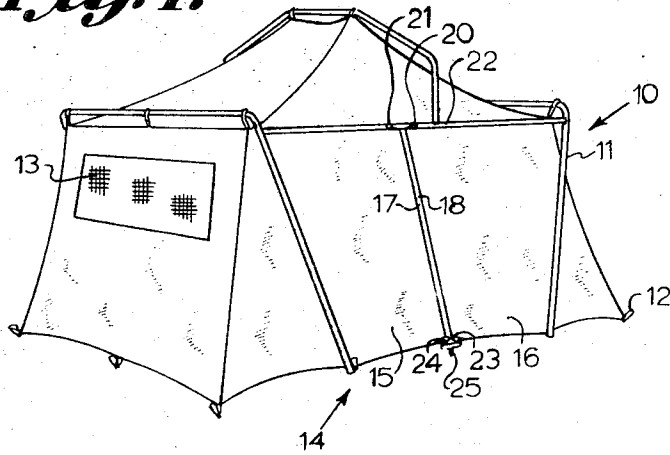


Fig. 2.

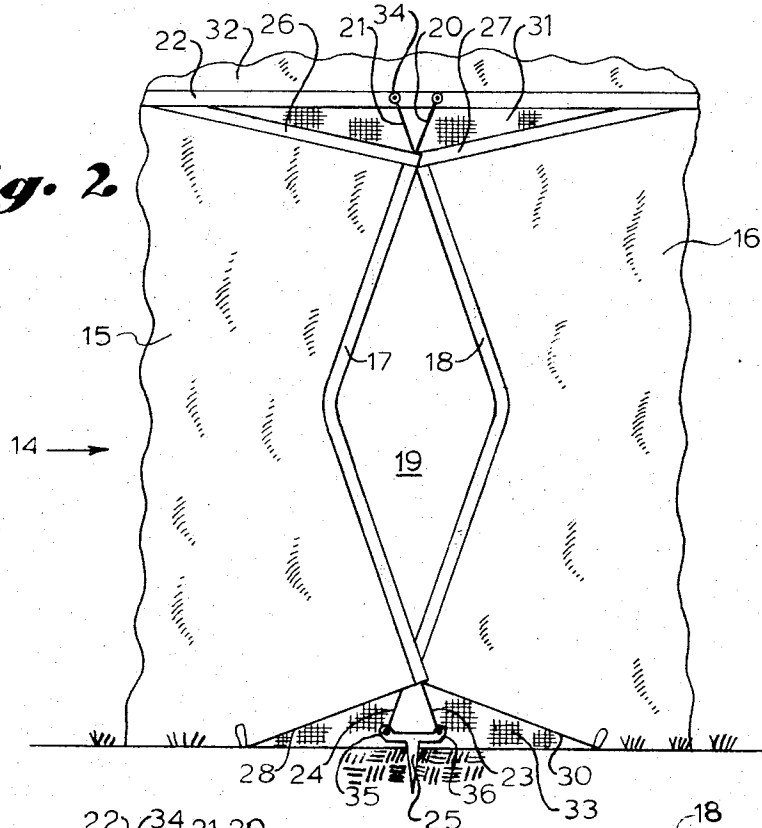


Fig. 3.

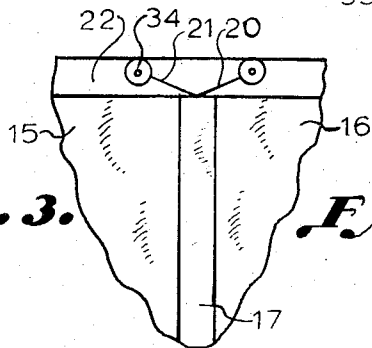
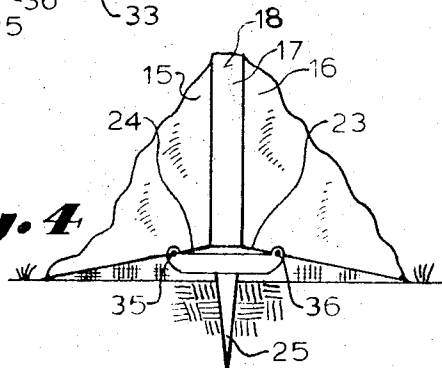


Fig. 4.



SELF CLOSING TENT DOOR

BACKGROUND OF THE INVENTION

This invention relates to doors and especially to doors for tents, and the like, which automatically close themselves when released.

In the past, numerous types of doors have been utilized for tents and similar structures which are made of flexible materials such as waterproofed canvas material. These doors typically have vertically extending zipper fronts for providing an easy opening and closing door which may provide a tight seal against insects. Other type doors typically provide cords sewn to flaps for tying the doors in a closed position. These prior art doors have been satisfactory in operation, but require the user to take time and effort each time he enters or leaves the tent to unzip and rezip the flaps or to untie and retie cords.

It is accordingly one object of the present invention to provide a tent door in which the doors may be quickly opened and will automatically close themselves when released and which will provide a sealed closure to prevent insects, or the like, from entering the tent.

It is another object of the present invention to provide a self closing door which is inexpensive to manufacture and is easy to set up when setting up a tent, or the like.

SUMMARY OF THE INVENTION

The present invention relates to self closing doors for tents, and the like, and includes pairs of flaps made of a flexible material and having overlapping elongated edges each said flap being suspended by at least one elastic member for holding one said flap edge against the other flap edge for closing an opening between the flap edges. The elastic cords are connected to each flap top and have separate elastic cords connected to each flap bottom so as to hold the flap edges taut against each other. The flaps may have top and bottom edges which may have loose screened or other flexible material to prevent the entry of insects, and the like, when the flaps are opened. Elastic cords may be attached at the top to a frame member of the tent and are connected in a crossing pattern, and similarly are connected to a stake driven in the ground on the bottom and are connected in a crossing pattern.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects, features and advantages of this invention will be apparent from a study of the written description and the drawings in which

FIG. 1 is a perspective view of a tent having a door in accordance with the present invention;

FIG. 2 is a cutaway sectional view of a self closing door on the tent of FIG. 1;

FIG. 3 is a generally sectional view of the top of the self closing flaps; and

FIG. 4 is a cutaway sectional view of the bottom of the self closing door.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, a tent 10 has a frame support member 11 between the tent in its upright position, and stakes 12 at the bottom to hold the tent to the ground. The tent also has a screened window 13 therein and a door illustrated generally at 14. The door 14 has

overlapping edges. Door 14 has a pair of flaps 15 and 16 having overlapping edges 17 and 18 which are pulled together in a taut manner. The flaps 15 and 16 are held taut by a pair of elastic cords 20 connected to the edge 17 and 21 connected to the edge 18, and each connected to a taut frame support member 22 in a separating manner with the cords 20 and 21 connected to the opposite flap edge in a crossing manner. The flaps are held at the bottom by a pair of elastic cords 23 and 24 which are held by a stake 25 driven into the ground and holding the cords 23 and 24 apart. The elastic cord 23 is connected to the edge 17 of flap 14 while the elastic cord 24 is connected to the edge 18 of the flap 16 in a crossing manner. This allows the flaps 15 and 16 to be pulled taut with the edges 17 and 18 tightly together.

FIG. 2 illustrates the door 14 in an open position and having flaps 15 and 16 having vertical edges 17 and 18, top edges 26 and 27 and bottom edges 28 and 30 respectively. The edges 17 and 18 are shown having a sewed seam or other special material to provide a strong wearing surface as well as a surface that will come together tightly when the door is closed. It should be pointed out that while the preferred embodiment has overlapping edges 17 and 18 in a closed position, the doors could come together without overlapping without departing from the spirit and scope of the invention. The upper portion of the door has the upper edges 26 and 27 connected to the top portion of the tent 32 by screen 31, and similarly the bottom edges 28 and 30 are connected to a screen 33 which is loosely connected to allow the doors to open and prevent insects from entering the top and bottom portion of the door during the opening. The elastic cords 20 and 21 can be more clearly seen in this view being attached to the upper support rod 22 through openings 34 in the rod 22. The bottom elastic cords 23 and 24 can be clearly shown attached to the stakes 25 through a pair of separated openings 35 and 36 with the stake driven in the earth to hold the bottom cords 23 and 24 in place. Thus, in operation an individual wishing to enter the door, grasps the flap edges 17 and 18 and spreads them apart thereby stretching the elastic cords 20 and 21 and 23 and 24 lowering the edges 26 and 27 of the flaps 15 and 16 while raising the edges 28 and 30 of flaps 15 and 16, as shown in FIG. 2. The individual may then pass through the opening 36, releasing the edges 17 and 18 allowing the door to automatically close as in FIG. 1.

FIG. 3 more clearly shows the upper portion of the door in a closed position with the elastic cords 20 and 21 connected to the openings 34 in the upper support rod 22 and edge 17 lapping over edge 18 of flap 16.

FIG. 4 illustrates the bottom stake 25 having a pair of openings 35 and 36 with elastic cords 23 and 24 holding flap edge 17 over flap edge 18 of the flaps 15 and 16 respectively.

It should of course be clear at this point that other embodiments are contemplated as being within the invention and that the flaps and flap edges can be made of any flexible material desired, such as treated canvas, or the like, and that the elastic cords 20, 21, 23 and 24 can be made from two interconnecting cords, one at each end of the flap edges 17 and 18 and can be of any elastic material desired, including flexible rubber cords or bands, or other elastic material. Finally, it is anticipated that the door could be made in which only one

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flap or side opens and also where the elastic cords are used only on the top of a two flap door with the bottoms of the flaps being fixed to the tent.

Accordingly, this invention is not to be construed as limited to the particular forms disclosed herein since these are to be regarded as illustrative rather than restrictive.

I claim:

1. A self closing door for tents, and the like, comprising in combination: a pair of flaps made of a flexible material and having vertically extending elongated edges; each said flap having a horizontally extending upper edge and a horizontally extending lower edge, said horizontally extending edges being movable towards each other when said door is opened; and each flap being suspended by top and bottom elastic members at each end of said elongated edge for closing and holding said flaps together to close the opening between said vertically extending elongated flap edges; one said elastic member being connected between one

end of each vertically extending elongated edge and a frame member of a tent structure; a tent stake having one said elastic member connected between the other end of each said vertically extending elongated edge and said tent stake; said tent stake having a pair of separated openings therein for attaching said elastic members; said openings being separated by a predetermined distance and said elastic members being connected between said elongated edges and said stake openings so as to cross each other; a piece of flexible material connected between said upper horizontal edges of said flaps and said tent and a second piece of flexible material connected between said lower horizontal edges of said flaps and said tent to prevent an opening into said tent when said upper and lower horizontal edges are drawn toward each other when said door is opened.

2. The apparatus in accordance with claim 1 in which said elongated edges of said flaps overlap each other when said door is closed.

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