

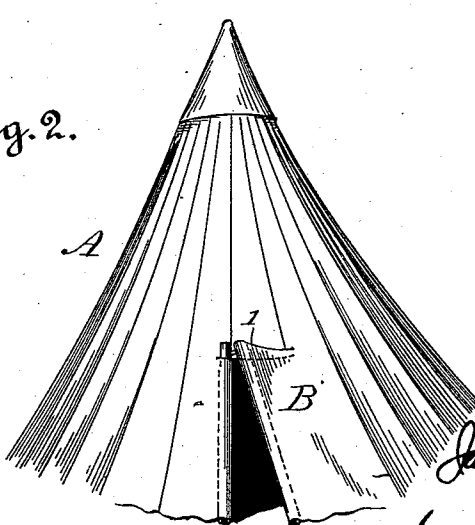
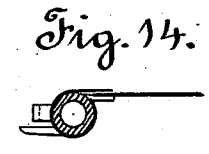
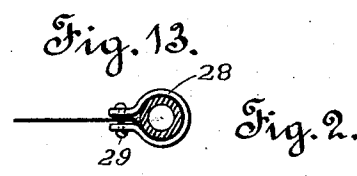
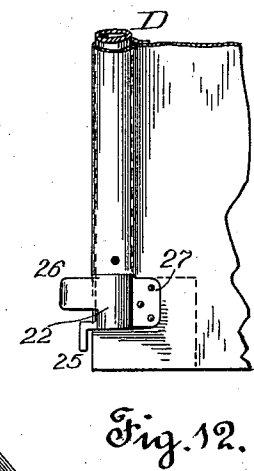
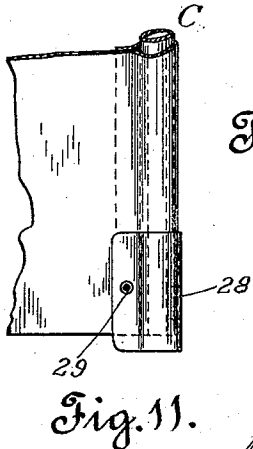
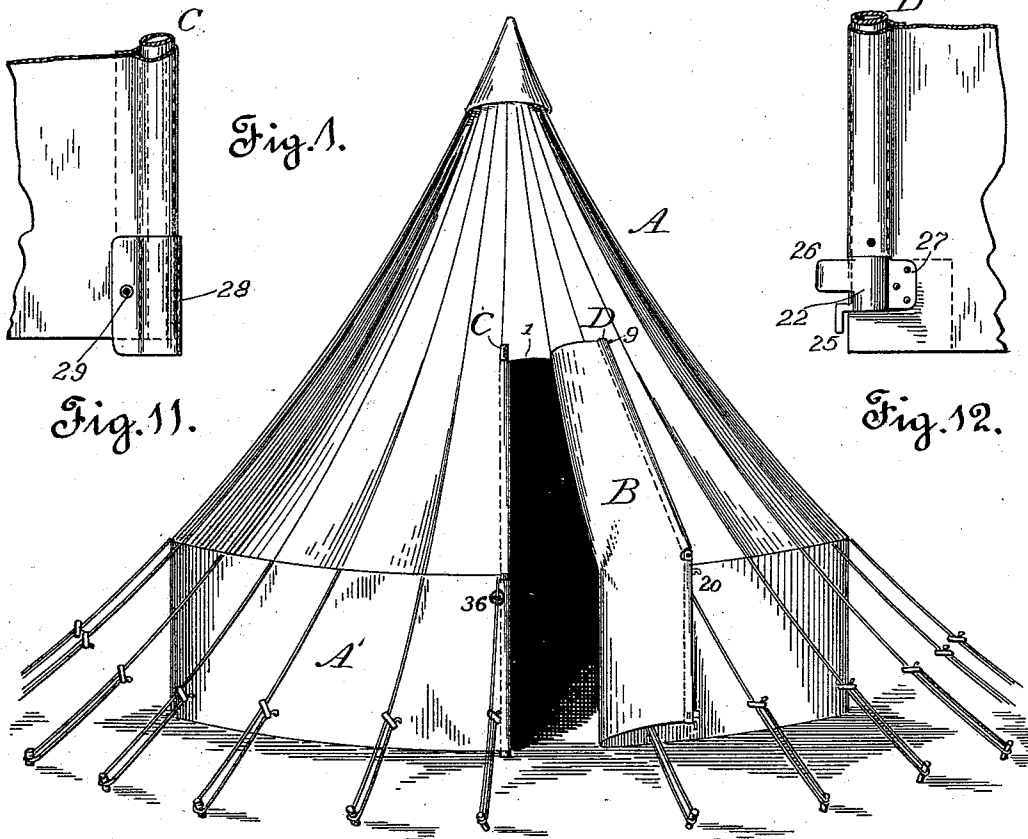
(No Model.)

2 Sheets—Sheet 1.

J. J. RINN. TENT.

No. 528,394.

Patented Oct. 30, 1894.



Witnesses.

E. Monteverde

F. H. Saly

Inventor.

James J. Rinn
by *Speas & Seely*
Attorneys

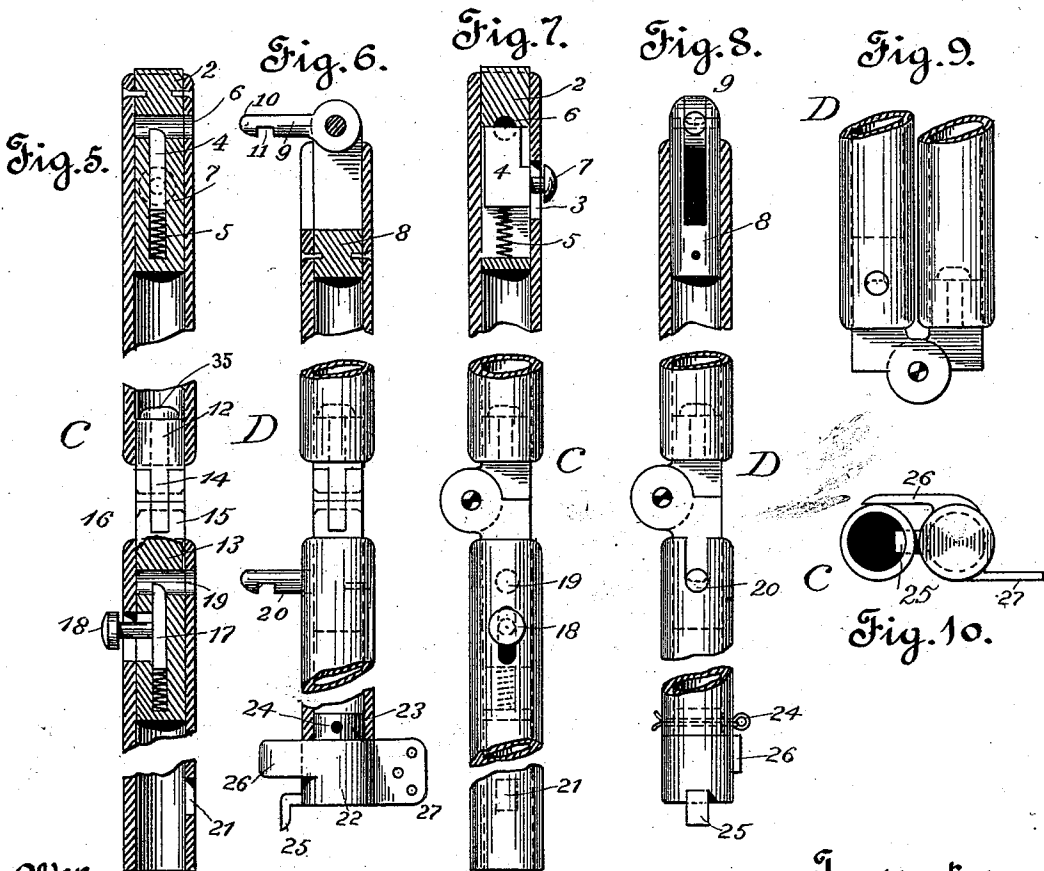
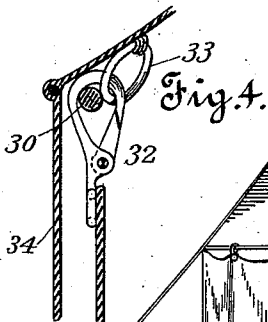
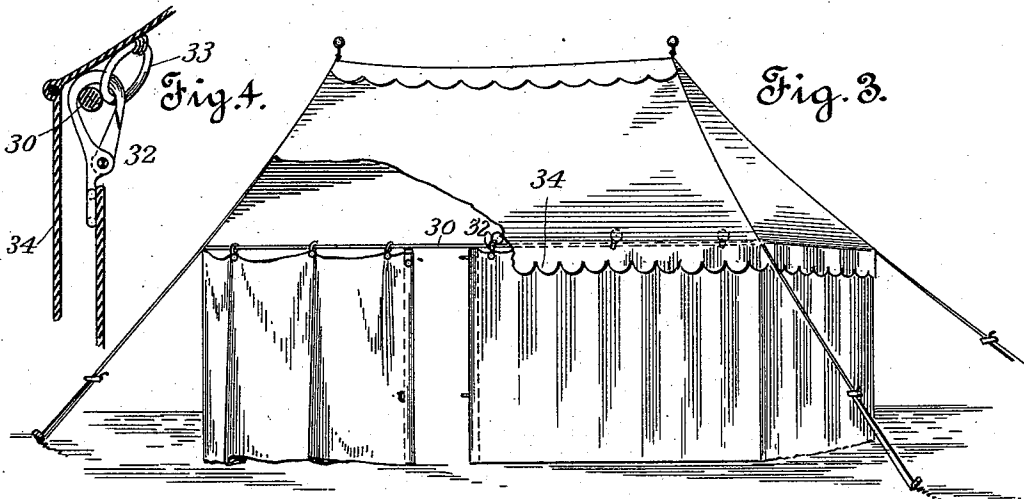
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2 Sheets—Sheet 2.

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H. Monteverde
J. N. Sney

Inventor.
James J. Rinn
 by *Spear & Seely*
 Attorneys

UNITED STATES PATENT OFFICE.

JAMES J. RINN, OF SAN FRANCISCO, CALIFORNIA.

TENT.

SPECIFICATION forming part of Letters Patent No. 528,394, dated October 30, 1894.

Application filed May 1, 1894. Serial No. 509,682. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. RINN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Tents; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to tents, and more particularly to improvements in the means for fastening the entrance flaps. I have filed in the Patent Office three applications in this general line, serially numbered respectively 488,298, 507,761 and 507,762, dated respectively October 16, 1893, and April 16, 1894. In all these cases I described and showed a tent having end poles, and means for securing the end flaps to the pole and locking them there. My present invention relates to a different kind or style of tent, viz: one without end poles and in which the entrance flaps are locked to one another in a simple and convenient way.

My invention as hereinafter described is adapted to all forms of tents constructed or set up without end poles, and I have shown in the accompanying drawings two different styles in which I employ it. One is a cone-shaped tent shaped either with or without walls, and the other a square tent having a side opening and sliding entrance flaps. In both cases I have shown as a common feature that the flaps are provided with rigid strips, preferably tubes, secured at or within the edges of such flaps, and provided with means by which they can be locked together instead of to an end pole.

My invention includes details of construction which need not be here specified, but which are fully hereinafter described, as well as shown in the accompanying drawings, in which—

Figure 1 is an elevation of a cone tent commonly known as a "Sibley" tent. Fig. 2 is a like view of the same tent with the entrance flap in another position. Fig. 3 is a perspective of a square tent with vertical walls and sliding, instead of folding, entrance flaps. Fig. 4 is a detail section of a suspension device for the sliding flap shown in Fig. 3, showing the method of fastening it to the cord and ring in roof. Fig. 5 is a section of one of the tubular stiffening pieces C for the

tent shown in Fig. 1; that is, a jointed piece adapted to a cone tent having a wall, as shown in that figure. Fig. 6 is a similar view of the meeting tube D in the other flap. Fig. 7 is a section of the tube of Fig. 5, but at right angles to the latter. Fig. 8 is a similar section relatively to Fig. 6. Fig. 9 represents the action of the knee joint when one of the tubes is folded for transportation. Fig. 10 is a bottom view of the two tubes locked together at the bottom. Fig. 11 shows one of the tubes with the canvas secured around it at the bottom; and Fig. 12 a similar view of the other tube. Figs. 13 and 14 are cross sections of Figs. 11 and 12 respectively.

Referring first to Figs. 1 and 2, A represents a tent of the "Sibley" style, having a general cone shape, and made either with or without walls A'. The construction with walls is however generally employed, and I have therefore specially adapted my invention to it.

B is the entrance flap, which opens and closes the entrance of the tent. In Figs. 1 and 2 it acts in the manner of a door, and is slitted as at 1 to widen the opening at the top. (See Fig. 1.) The edges of the canvas adjoining the opening are formed into pockets to receive stiffening pieces, which, as the construction I prefer to use, are here shown as metal tubes C and D, and which extend from the top to the bottom at each edge of the opening.

Referring first to Figs. 5 and 7, which give two views of the tube C, it will be seen that in the upper end of the tube is a cylindrical locking device 2, firmly secured. Working in a slot 3 is a bolt 4, which by means of a spring 5 is normally pushed upward partly into the transverse passage 6. A button 7 is secured to the bolt by means of which it can be pressed down. This construction forms one part of the top fastening for the two tubes, the other and interlocking part being secured to the other tube D. (See Figs. 6 and 8.) The tube D has fixed in its upper end a plug 8, slotted longitudinally so as to admit and hold a pivoted latch 9 having a beveled or rounded end 10 and a notch 11. The latch (Fig. 6) is adapted to enter the hole or passage 6, until the latch engages with the bolt 4 and locks the parts securely together until the button 7 is pressed down. It will therefore be understood that

Fig. 1 shows the tent with the lock disengaged, so as to make as wide an opening as possible, while Fig. 2 shows the lock in engagement, as it may perhaps be more customary to use it. The pivoting of the latch 9 makes the joint sufficiently universal to enable the flap to be drawn aside at the bottom or raised vertically without disengaging the joint at the top.

In the case of tents made with walls, like most Sibleys, it is necessary to make each tube in two parts jointed at the intersection of the straight wall and the cone.

In tents with straight walls extending the full height of the opening, as in Fig. 3, I may use single tubes without joints as indicated; but where the tubes must carry the canvas down at the opening to conform to the shape, I use the construction shown in Figs. 5 to 9 inclusive. Here the two sections which form each tube C or D, are open, and in them are secured plugs 12 and 13. These plugs have projecting ears 14, 15, which engage and are secured by a pin 16, so as to form a hinge or knee joint. The plug in the upper tube consists of two parts 12 and 14. The part 12 consists of a short piece of smaller thick tubing through which the part 14 passes and turns therein. The part 14 has a shoulder which bears against the outer end of the short tube 12, and a shank which passes through the piece 12 with a head 35 to hold it there. The short piece of thick tubing 12 is permanently secured by rivets or screws to the main tube C, allowing the other part 14 to turn on it. It will be seen from this construction that the hinge has a universal motion; first by turning in tube C and also around or upon the pin 16. The construction is substantially the same for both tubes C and D as will be understood by comparing Figs. 5 and 7 with Figs. 6 and 8. Fig. 1 illustrates clearly how this joint operates. I can then utilize the plug 13 to hold an intermediate locking device of the same character as that described at the top of the tubes. Thus 17 is a spring bolt and 18 the button for moving it, which in this case is at the side of the tube, instead of the front, so as to be accessible from the inside, and from the outside by means of a hole 36 in the canvas close to the tube and button.

19 is the transverse passage and 20 is the latch secured to the part of the hinge in tube D Fig. 8, which in this case need not be hinged as in Fig. 6.

Fig. 9 shows one of the tubes as D, bent upon itself by means of the joint so as to render it more convenient in transportation by shortening its length.

The means used for fastening the tubes together at the bottom are shown at the lower end of Figs. 5, 6, 7, 8, also at Fig. 10. Figs. 11, 12, 13, and 14 show the manner of fastening the canvas of the tent to the lower end of those tubes.

In the tube C is a simple slot or opening 21.

At the base of the tube D is a clip 22, having a plug 23 which fits the tube and is held within by a removable pin 24, preferably a spring cotter pin. The clip 22 has formed with it a guide plate 26, also a hook or projection 25, which enters the slot 21 and thus brings the latch 20 to the right height to enter the hole 19. When those are locked together, the lower end cannot rise and is very securely fastened. On clip 22 is also formed a plate 27 which is permanently fastened to the canvas. This manner of securing the canvas to the tube D is better shown in Figs. 12 and 14, where the pocket in which the tube is held is shown as terminating just above the clip, while the double thickness of canvas below is firmly secured to the plate 27. By taking out the pin 24 the tube can be withdrawn from the pocket, the clip remaining attached to the canvas. At the lower end of tube C, the bottom of the canvas is held by a clip 28 which encircles the tube and surrounding canvas, and is secured by a bolt or thumb-screw 29. Of course openings must be made in the clip 28 and in the canvas to register with the slot 21 in tube C and admit the hook 25.

The clip 28 is used to keep the canvas at the end of the tube C off the ground and from wearing; and for furnishing a metallic surface for the guide-plate 26 to slide on. It also clamps the canvas so that it cannot slide around to cover the slot 21 in the tube. By loosening the bolt or thumb-screw 29, the clip releases its hold on the tube and canvas and the former may be withdrawn, leaving the clip attached to the canvas by the bolt.

It will have been understood that the tent shown in Fig. 3 differs from the others mainly in being a square wall tent with a pyramidal instead of a conical roof. The entrance flaps are provided with single rigid tubes in their edges. The flaps containing the tubes are hung from the cord 30 by snap hooks as shown at 32. I can then attach stationary rings 33 to the roof of the tent and can engage the snap hooks with them so as to hold the flap or wall and the roof of the tent together when it is closed, if the weather requires it. The roof is provided ordinarily with a depending flap 34 which conceals the cord, rings and hooks. Fig. 4 will aid in making this portion of Fig. 3 clear and intelligible. In this tent, the tubes are fastened at the top in the same way as in the other. The locking device near the middle is the same as at the knee joint, except that the projecting latch folds in, the same as at the top, to permit the tube to be withdrawn from the pocket.

In going in or out of the tent, ordinarily only the middle latch is released, thus allowing the tube to swing to one side by the upper joint; but when the weather is pleasant, and it is desired to have much light and ventilation, I can release the snap hooks from the stationary rings 33 in the roof, so that the hooks may be slid along on the cord, thus al-

lowing the whole front of the tent to be thrown open. The tubes in this tent are preferably put in at the top of the pockets, leaving the bottom closed. For transportation, the tubes

5 may be latched together as when the tent is closed, and tied to one of the center poles to prevent getting bent in transportation.

To close the Sibley tent when in the position shown in Fig. 1, I latch the top ends of the tubes C and D together by the means shown in Figs. 5 and 6; that is, by inserting the latch 9 in the opening 6 and latching it. Then I slide the guide-plate 26, which is on tube D, on the front side of tube C. The hook 15 25 readily enters the opening 21 near the bottom of tube C, connecting the tubes together at the top and bottom but leaving them sufficiently apart at the middle (because of the universal joints there and at the top) to allow a person to go in or out. Then, by bringing the tubes together at the knee-joints the latch 20 enters the hole 19, as the hook resting in the opening 21 holds it just the right height to enter. The latch at the top holds it just the right distance the other way, so that it strikes the opening 19 exactly, forcing them together, until they latch, when both tubes are very securely fastened.

The tent is readily opened from the inside or outside by pressing downward on the button 18, which is in the side of the tube where the wall canvas joins it, and a small opening is left. The knee-joints furnish a good hold to press the tubes together from the outside, and on the inside the canvas forming the pockets for the tubes is not stitched for a short distance on the inside, thus allowing the fingers to clasp the tubes to bring them together.

To remove the tubes to pack them for transportation, I open the tent as shown in Fig. 1, take out the cotter pin 24, thus releasing the tube from the clip 22, fold in the latch 9 at the top of the tube, then fold the knee-joint lock as in Fig. 9, until the two pockets are parallel to each other. Then by taking hold of the joint and pulling, the tubes can readily be withdrawn from the pockets. On the other tube, I loosen the clamp 28 and withdraw the tube in same manner. The tubes are put in in the same manner but in reverse order. To arrange for transportation, they are locked together at the top and at the knee-joint as when in use; then folded back as in Fig. 9, when all four tubes are side by side in a very compact manner with no projecting parts.

The locks shown in Fig. 5 at the top and at the knee-joint are put into the tube from the end. To render this possible, the press-buttons 7 and 18 are screwed into the bolts after the lock is secured in the tube. This is done through the oblong slots in which they move in the sides of the tube. In this construction any shaped tubes may be used, round, square or triangular. By using the triangular shape and putting two flat sides together a good joint would be formed to shed the rain, but

locks would not be so easily fitted as in the round form which I have shown and described in this case. I consider this arrangement of tubes with locking devices inclosed in them, a very superior, convenient and substantial way of closing the entrance flaps of tents where there is no tent pole to fasten to, as the locking devices are thus fully protected both in use and during transportation and there is no danger of breakage of the same which might occur were they exposed.

What I claim is—

1. A tent having an entrance opening, one or more entrance flaps, stiffening tubes secured at the edges of said opening, and locking devices for securing said tubes together to close the opening; such locking devices being held within the tubes substantially as set forth.

2. In a cone tent having a vertical wall, an entrance opening and an entrance flap, a stiffening tube attached to the edge of such opening and of such flap, each tube being composed of two parts united by a knee-joint substantially as and for the purpose set forth.

3. In a cone tent having a vertical wall, an entrance opening, and an entrance flap, a stiffening tube in the edge of said opening and of such flap, each tube being composed of two parts united by a knee joint, and locking devices for securing the tubes together above and below said knee joint substantially as set forth.

4. In a tent, tubes in the edges of the canvas forming the entrance opening and a detachable swinging joint for connecting such tubes together at their upper ends, substantially as set forth.

5. In a tent, the combination with a tube as C, having in its interior a vertically sliding spring bolt, of a tube as D having a latch adapted to enter a transverse passage in said tube C and engage with said bolt, substantially as described and specified.

6. In a tent, the combination with a tube C having on its interior a vertically moving spring bolt and a transverse passage, of a tube D having at its upper end a hinged latch adapted to enter such passage and engage said bolt; thereby locking the tubes together at the top, but permitting the tubes a swinging movement, substantially as and for the purposes set forth.

7. In a tent, the combination with the tube C, having an opening near its bottom, of the tube D, having a bottom clip provided with a hook, to enter said opening, substantially as described and specified.

8. In a tent the combination with the tube C having secured within it a plug, provided with a transverse passage and carrying a sliding bolt, of a tube D, having an interior plug, to which is secured a latch for entering said passage and engaging with the said sliding bolt, substantially as described and shown.

9. In a tent having an entrance flap, a pocket formed in the edge of such flap, a tube

having an open end adapted to be inserted within said pocket, and a plug adapted to enter said tube and having the canvas below the pocket secured to it, substantially as and for the purposes set forth.

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10. In a tent having an entrance opening, jointed tubes secured to the edges of said opening, and locking devices for securing such tubes together above and below the joint, whereby the tent may be opened at the joint, but remain secured at the top and bottom of the opening, substantially as set forth.

11. In a tent having an entrance opening, stiffening tubes secured at the edges of the opening, a combined rotary and hinge joint in each tube, and locking devices for secur-

ing both tubes together, substantially as set forth.

12. In a tent having an entrance opening, stiffening tubes secured at the edges of the opening, a combined rotary and hinge joint in each tube, and top, bottom, and intermediate locks for securing said tubes together, substantially as set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 23d day of April, 1894.

JAMES J. RINN.

Witnesses:

L. W. SEELY,
GEO. T. KNOX.