

(No Model.)

2 Sheets—Sheet 1.

J. J. RINN.
TENT.

No. 528,393.

Patented Oct. 30, 1894.

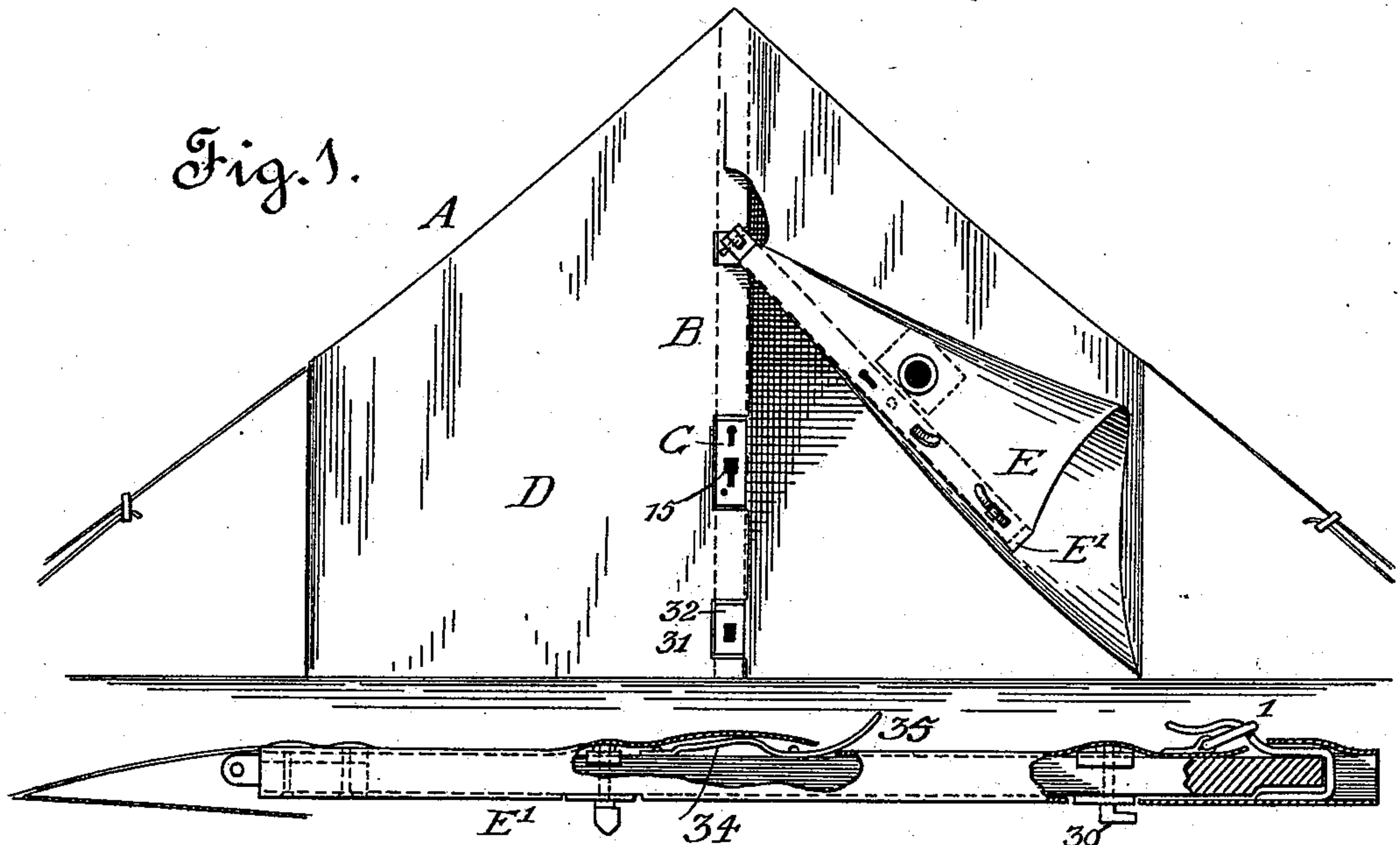


Fig. 3.

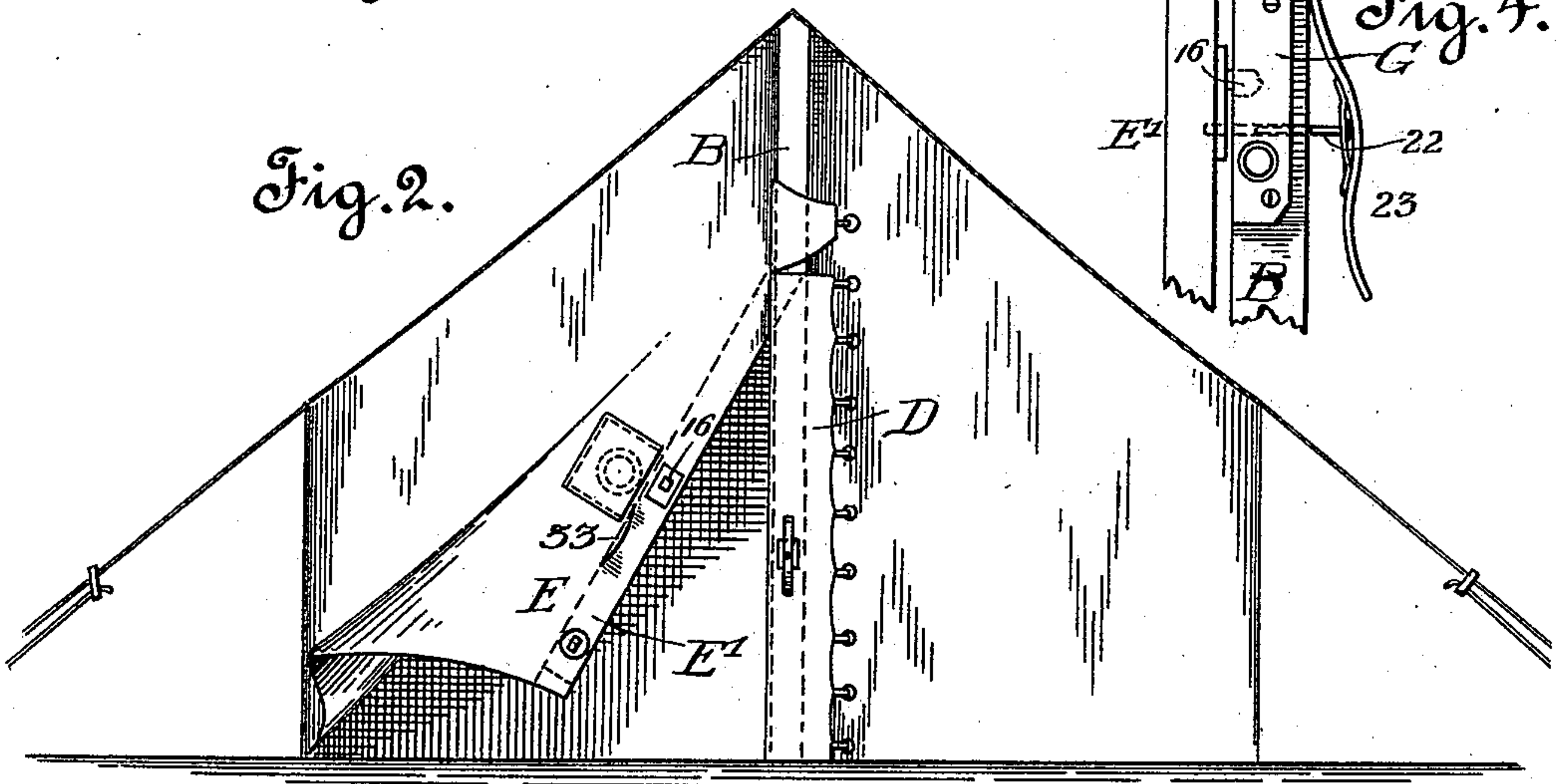
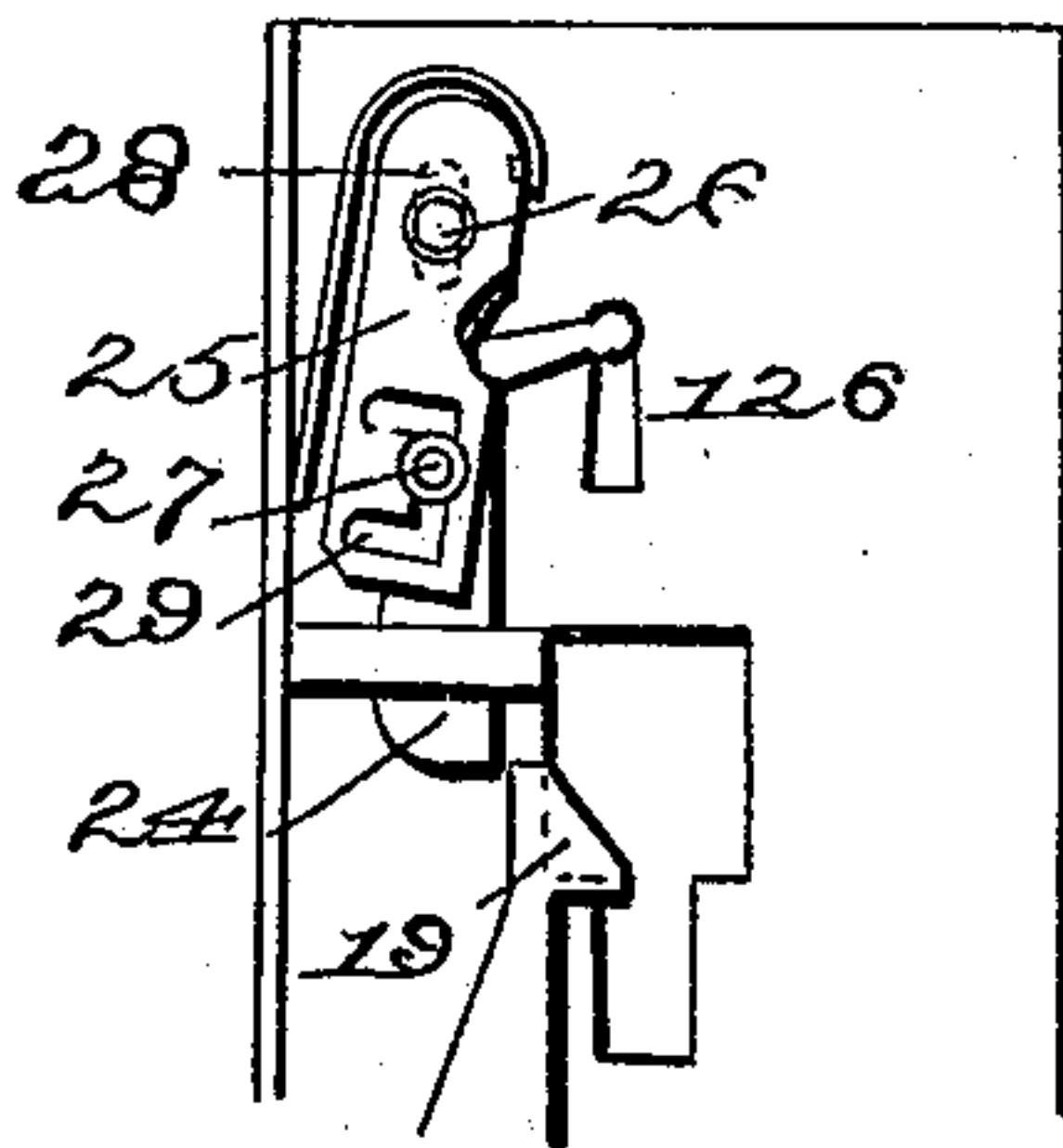


Fig. 4.

Witnesses.

H. H. Monteverde,

Mr. R. Bryan



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

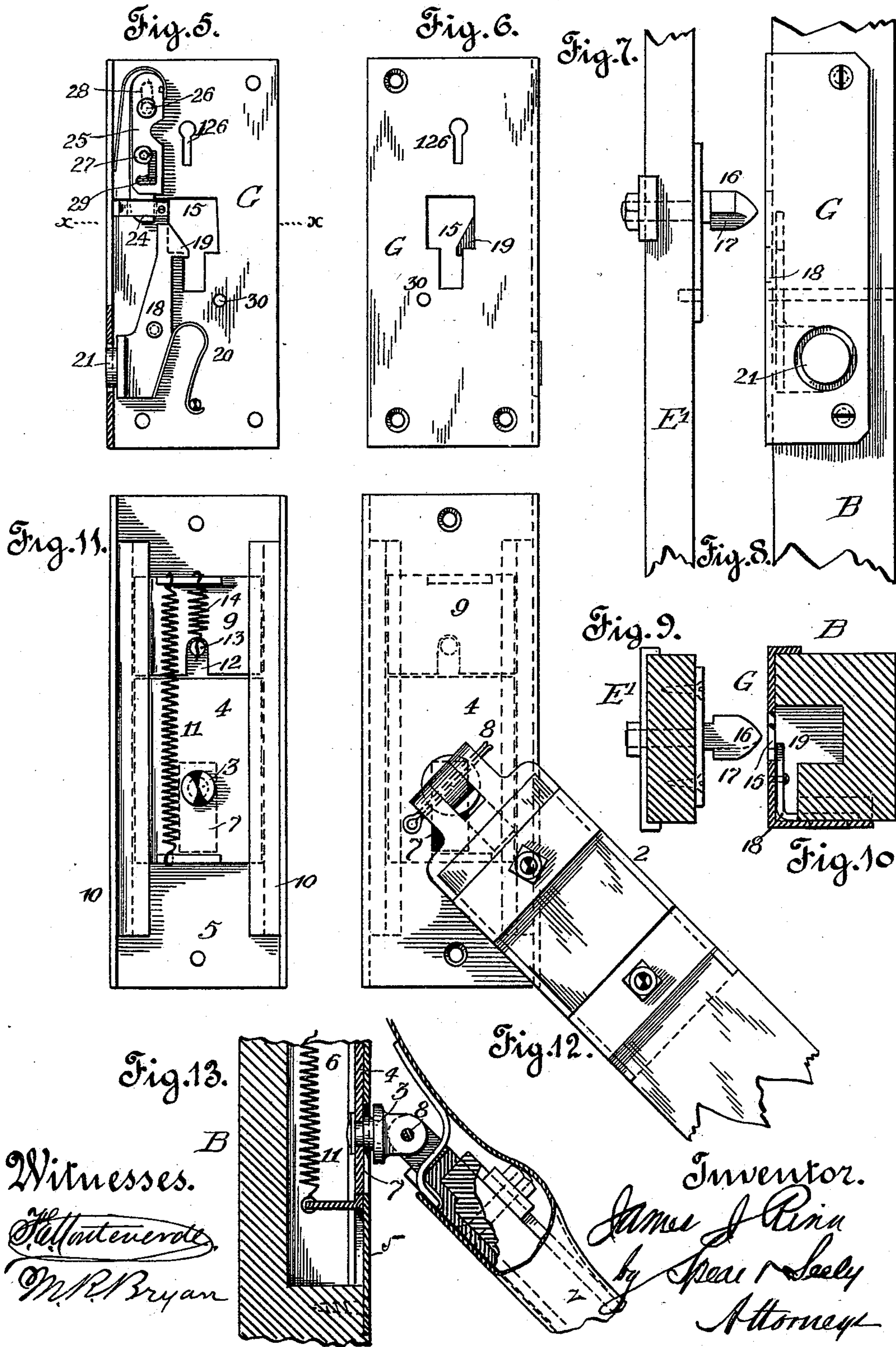
(No Model.)

2 Sheets—Sheet 2.

J. J. RINN.
TENT.

No. 528,393.

Patented Oct. 30, 1894.



UNITED STATES PATENT OFFICE.

JAMES J. RINN, OF SAN FRANCISCO, CALIFORNIA.

TENT.

SPECIFICATION forming part of Letters Patent No. 528,393, dated October 30, 1894.

Application filed April 16, 1894. Serial No. 507,762. (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 the kind and style of tents shown in my application for patent, Serial No. 488,298, filed October 16, 1893, and in an application for improvements thereon filed April 16, 1894, Serial No. 507,761.

In the application first referred to I showed a tent having end poles, and at the entrance end two flaps, one of which was wrapped around and removably secured to the pole, while the other (which formed the ordinary entrance flap) was provided at its edge with a rigid strip adapted to be locked to the pole on the outside, by a lock operated by a knob and spindle somewhat in the manner of an ordinary door lock.

In the second application referred to, I improved the lock, so as to avoid the use of projecting knobs or shafts for working it; thus making it more convenient to lock the pole and strip together for transportation; and I also described and showed a universally jointed connection between the rigid strip of the entrance flap and the end pole, which gave a free movement to the flap, and at the same time insured an accurate engagement of the locking device, irrespective of any stretching or contracting of the textile material of the tent.

In the present case, I use the end pole as before, and secure the inner flap to it, to form one side of the front. The other side of the front, viz: the outer, or entrance flap, is provided at its edge with a rigid strip, connected as before by a universal joint to the tent pole. I design, however, in this construction, to lock the strip to the pole by means of a longitudinally sliding motion, in which the universal joint takes part; that is to say, the operation of locking the strip and pole together is performed by sliding the strip on the pole downward, instead of bringing the strip and pole together in a direct line, as in both the other cases.

Aside from these general features, the invention also includes details of construction which I do not here specify, but which are fully hereinafter described, and are also shown in the accompanying drawings, in which—

Figure 1 is a front elevation of a tent with the outer flap opened. Fig. 2 is a rear view of the same parts, supposed to be taken from the inside of the tent. Fig. 3 is a side elevation of the outer rigid strip and the canvas surrounding it, the latter being partly broken away, to show the attachment of straps for moving the strip and supporting it at the bottom. Fig. 4 is a detail view of the tent pole and strip as locked, showing the removable pin for preventing the sliding motion of the strip. Fig. 5 is a rear view of the main lock. Fig. 5^a is a similar view showing the bolt in a partly raised position. Fig. 6 is a front view of the same. Figs. 7 and 8, taken together, represent the main lock for the pole and strip in side elevation; Figs. 9 and 10, taken together, a cross section of Figs. 7 and 8. Fig. 11 is a rear view of the face plate at the junction of the strip and pole to show the sliding motion, and the buffer spring at the point where the universal joint is placed. Fig. 12 is a front elevation of the same. Fig. 13 is a longitudinal section looking sidewise at the position of the universal joint.

A represents the tent and B the end pole. D and E are respectively the inner and outer flaps of the tent. The inner flap D is shown as wrapped around the pole, and secured removably by hooks and rings, or if preferred by fastening means shown in my other application referred to.

It is not essential to the correct working of my tent that what I term the "inner flap" should be wrapped around the pole. If it were secured to the side of the pole without wrapping, the front of the pole would be left bare, and there would be no necessity for cutting canvas from the inner flap to expose the locks in front. If the inner flap be provided with a rigid strip at its edge, such a strip can be locked to the end pole without wrapping in various ways; for instance as shown in Figs. 13 and 17 of my contemporary application.

The attachment of the inner flap to the pole ordinarily remains in place while the tent is

in use. The entrance flap E is provided with a rigid strip E' at its edge, held in a pocket formed in the canvas and supported at the bottom by a strap and buckle 1 (Fig. 3). The strip is connected at its upper end to the pole by a universal joint. Shown in Figs. 12 and 13. This joint is composed of a clamp 2 secured to the top of the strip, to which is hinged a rotary pin 3. The pin works in a bearing of the sliding plate 4, which is movable upon the pole and is guided by the stationary plate 5 (Fig. 11). The plate 5 covers a socket or recess 6 in the pole, and has an elongated slot 7 to allow the sliding motion to the strip. The pin thus has a rotary motion in the plate, allowing the strip to swing sidewise, while it can also be readily moved outward on the pin 8, which is the fulcrum of the hinge, and it can also be pulled downward in operating the lock and holding devices. This pin 8 is an ordinary spring cotter pin which is easily removable for detaching the joint, but has a strong frictional hold which prevents its accidental displacement. This tent flap E is locked in place by sliding the strip downward upon the pole and then fastening it. The lock will be described hereinafter, but, as will be readily understood, the universal joint is so constructed as to be permitted a sliding movement and yet remain in operation as a joint. The sliding plate of the joint is practically made in two parts as shown in Fig. 11, numbered respectively 4 and 9, and both of which are held in guides 10 formed in the stationary plate 5. The two parts 4 and 9 are held together by a spring 11, and the part 9 has a slot 12 which works upon a fixed pin 13. A spring 14 connects this pin to the part 9, holding it down on the pin. The purpose of this construction is to form a buffer to prevent the pivot of the universal joint from being broken or jarred by the recoil of the main spring when the strip is unlocked. In pulling the strip down, the spring 11 yields and the plate 4 moves down far enough to permit the main lock to be fastened. The recoil of plate 4 is consequently against the yielding plate 9 and therefore the rotary part of the universal joint is saved from striking violently against the upper end of the slot in which it works.

I now describe the means I prefer to use for locking the strip to the tent pole by a sliding motion. The main lock is shown at G in Fig. 1, this letter representing the front plate attached to the tent pole, and having an elongated slot 15 for the locking bolt 16 on the entrance flap. This bolt is best shown in Figs. 7 and 9. It is firmly secured to the rigid strip E' of the entrance flap, and has a pyramidal pointed head with one corner cut away to a bevel as at 17 (Fig. 7). A latch 18 is pivoted to the lock plate, and has a beveled head 19, which projects partly over the slot in the lock plate and is ordinarily held in that position by a spring 20. When the

entrance flap is to be locked, the bolt is inserted into the upper enlarged part of the slot, its cut away or beveled part enabling it to pass the head of the latch. The edge of the flap is now pulled down (the universal joint yielding), and the bolt 16 enters the lower part of the slot, forcing back the latch, which immediately springs out over it and prevents it from rising again. It is thus held from being pulled outwardly by the narrow part of the slot and from being pulled upwardly by the head of the latch. The latch is operated to disengage the bolt by a push button 21 connected to it, and which works in a passage formed in the tent pole. The effect of moving this button is to force the head of the latch back from over the bolt. When this takes place, the main spring 11 of the universal joint pulls the entrance flap and the locking bolt upward. The bolt can then be pulled easily out of the slot 15 in the tent pole and the flap opened. The push button is shown as in the other application filed at the same time as the present case; that is, accessible from the outside through a hole in the entrance flap which is protected and covered on the inside by a patch (Fig. 2).

In Fig. 4 is shown an independent locking pin 22 having its head secured to a strap 23 which prevents it from becoming misplaced. This pin, which passes through a hole bored through the tent pole and plate 5 at 30, and into the strip E of the entrance flap, renders it impossible to move the strip by operating the push button from outside. It is intended as a protection for the occupant of the tent from unauthorized intrusion.

When the tent is left by the occupant it is desirable that some means should be provided for rendering the push button and latch inoperative from the outside except by the owner. For this purpose I employ the device shown in Fig. 5. A sliding bolt 24 is adapted to lock the pivoted latch and is controlled by a tumbler 25 accessible by means of a key from the outside through the hole 126. The parts are shown in Fig. 5 as unlocked, leaving the main latch free; but it is clear that if the bolt 24 is caused to drop down vertically behind the latch, no pressure upon the push button can move the latter. The tumbler 25 is pivoted on the pin 26 attached to the plate and extending through the slot 28 in the said bolt 24 and serves to limit the movement of the bolt. The bolt is held in a raised position by means of the tumbler 25 having the slot 29 with the lateral branches at the ends thereof. A pin 27 on the bolt moves in this slot, entering the upper branch thereof when in a raised position and is held therein until the tumbler is shoved aside by the key inserted in the opening 126.

In Fig. 3 is shown at 39 a hook which is secured to the strip E' of the entrance flap and which is adapted to enter a recess 31 in the tent pole and be caught and held when the

strip is pulled down by a slotted plate 32 which covers the recess. Any number of these fastenings may be used besides the main lock, and their purpose is to keep the strip up firmly against the pole throughout its extent while the main locking device is in use. By using one or more of the fastenings in addition to the main lock, it is possible to use a very light strip in the entrance flap, because it is supported in so many different places. The entrance flap of the tent, as well as of the tent shown in my contemporary application, is intended to be closed from the inside in the following manner, which makes it convenient to secure a hold on the strip E' for this purpose: The canvas forming the pocket is left unstitched for a short space on the inner side, as shown at 33, allowing the fingers to pass between the outer canvas and the front of the strip into the loop formed by the strap 34, which is used to pull down the strip from the inside; and its loose end projecting through the canvas is used to pull it down on the outside, as at 35. In the other case filed with this, no strap is used, as it is fastened by pressing the strip against the pole, as may readily be done with the hand in this position.

To fix the pole and strip for transportation, I disconnect the universal joint by removing the cotter pin 8, unfasten the strap 1 at the bottom of the strip so that the strip can be withdrawn from the pocket in the edge of the flap, release the other flap from the pole, connect the joint as before by the cotter pin, and lock the strip to the pole, as when the tent is closed, with the pin 22 pushed in. The strip and pole are thus securely fastened together.

What I claim is—

1. In a tent, a recessed end pole, an entrance flap having a rigid strip at its edge, and a locking bolt secured to said strip, said bolt being adapted to enter said recess directly and to be secured therein by a downward movement in said recess.

2. In a tent, an end pole, an entrance flap

having a rigid strip at its edge, a bolt secured to said strip, a recess in the pole in which is a latch, and a vertical slot in the pole, for permitting the direct entrance of the bolt and its downward movement to engage with the latch.

3. In a tent, an end pole, an entrance flap having a rigid strip in its edge and adapted to be locked to the pole and a sliding universal joint between the strip and the pole, substantially as set forth.

4. A tent having an end pole and end flaps, one of which is attached to the pole, a rigid strip in the other or entrance flap, a universal joint between said strip and the pole, having a sliding connection whereby the strip can slide upon the pole, and a lock for locking said strip to the pole by a sliding movement of the strip upon the pole, substantially as set forth.

5. In combination with the pole of a tent a rigid strip in the entrance flap adapted to be locked to the pole by a sliding motion, and one or more auxiliary catches adapted to be engaged or disengaged by the sliding motion of the strip at the same time as the main lock, substantially as described.

6. The combination with the tent pole, of the rigid strip in the entrance flap, a lock adapted to be engaged by a sliding movement of the strip and a pin on the inside entering the tent pole and strip to prevent the releasing of the latter from the outside, substantially as set forth.

7. In combination with the tent pole, the rigid entrance strip universally jointed thereto, and vertically movable, a spring buffer for absorbing the upward recoil of said strip, substantially as set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 9th day of April, 1894.

JAMES J. RINN.

Witnesses:

L. W. SEELY,
J. SAULMANN.