

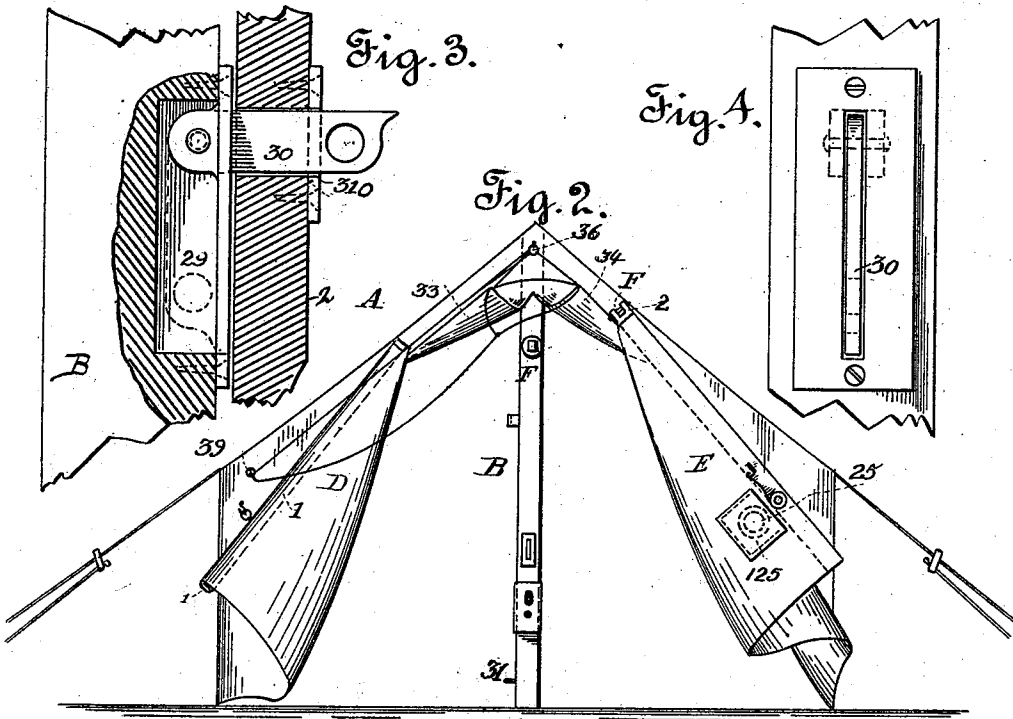
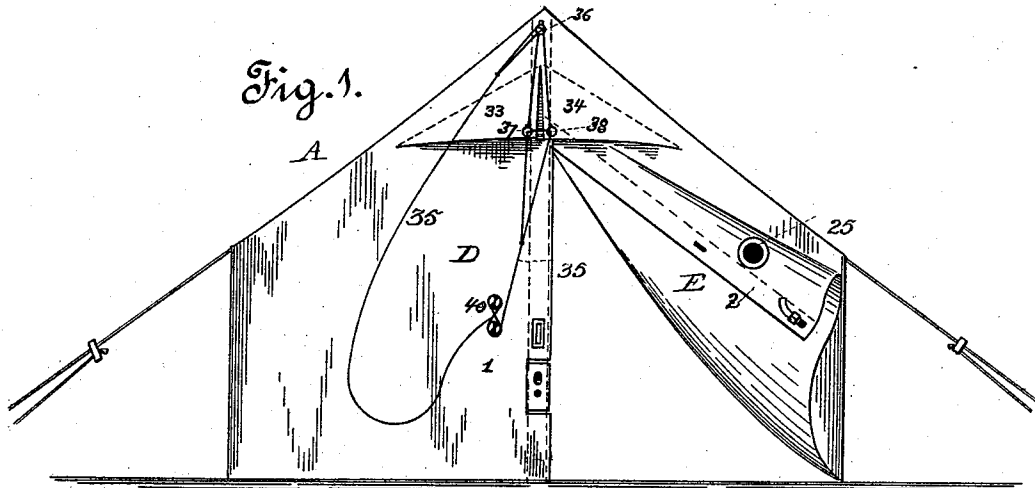
(No Model.)

2 Sheets—Sheet 1.

J. J. RINN.
TENT.

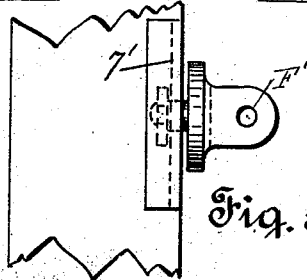
No. 528,392.

Patented Oct. 30, 1894.



Witnesses.

H. Monteverde
M. B. Luby



Inventor.

J. J. Rinn

Fig. 5. by Spear & Seely
Attorneys

(No Model.)

2 Sheets—Sheet 2.

J. J. RINN.
TENT.

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Fig. 6.

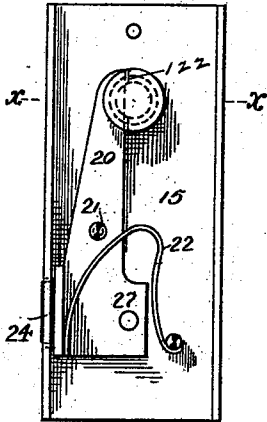


Fig. 7.

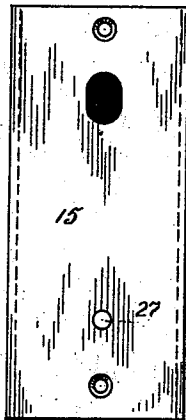


Fig. 8.

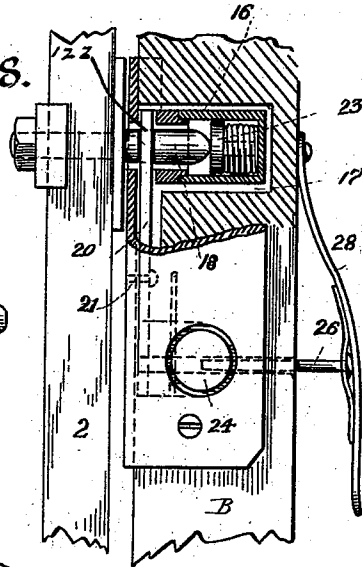


Fig. 9.

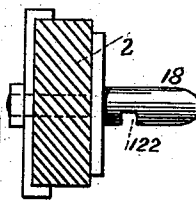


Fig. 10.

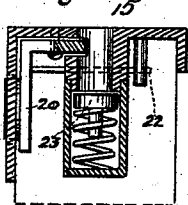


Fig. 11.

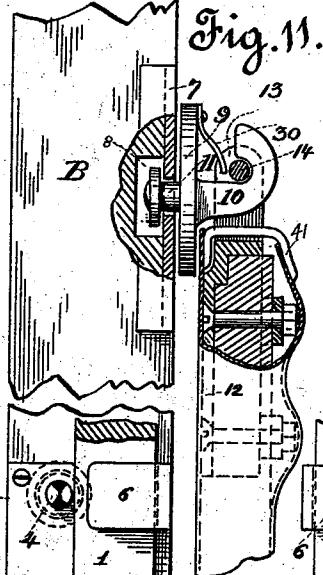


Fig. 12.

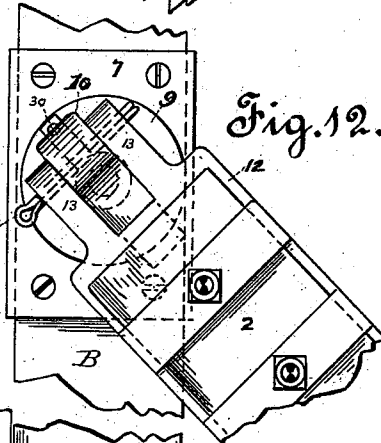


Fig. 17.

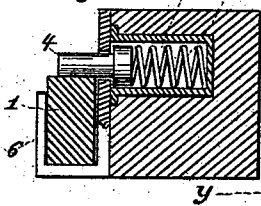


Fig. 15.

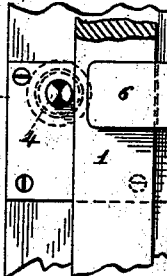


Fig. 13.

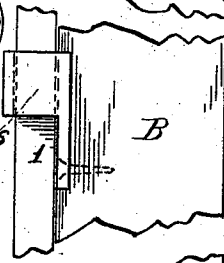
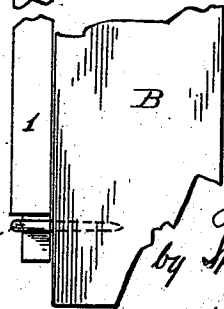


Fig. 14.



Witnesses.
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Inventor.
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by *Speas & Seely*
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UNITED STATES PATENT OFFICE.

JAMES J. RINN, OF SAN FRANCISCO, CALIFORNIA.

TENT.

SPECIFICATION forming part of Letters Patent No. 528,392, dated October 30, 1894.

Application filed April 16, 1894. Serial No. 507,761. (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 mechanical devices for closing, holding, and locking the flaps which cover the entrance opening and form the means of entrance and exit.

In an application for patent, Serial No. 488-298, filed October 16, 1893, I described and showed such a tent; and my present invention is designed to provide certain special improvements in the means for operating and securing the entrance flap.

In the patent application referred to I showed a tent having two end poles and two flaps at each end, one intended to be secured to the pole, and the other to be locked to the pole when closed. Held in a pocket in the edge of one or both of the flaps was a rigid strip of wood intended to stiffen the edge, and when bearing against the pole, to form a much closer and better fit than ordinary flexible canvas edges could possibly be made to give.

In my present invention, I propose to use these strips for the same purpose, but have made improvements in the manner of connecting the strips together and to the pole, and in the means for locking them.

My improvements also relate to a construction by which the joint at the upper end of the flaps is protected, and also by means of which both flaps may be drawn entirely aside to make a large opening in the end of the tent.

All these improvements are shown in the accompanying drawings, and are described herein in detail.

In the drawings Figure 1 is an end elevation. Fig. 2 is a similar elevation with both flaps pulled aside and the upper flap raised. Fig. 3 is a vertical section of the tent pole and the outer strip intended to be locked together with a padlock. Fig. 4 is a front elevation of the tent pole showing the hasp out of use. Fig. 5 is a side elevation of a joint between the pole and strip. Fig. 6 is a rear

elevation of the front plate of the main lock. Fig. 7 is a front elevation of the same. Fig. 8 is a side elevation and partial section of the pole and strip when locked with the main lock. Fig. 9 is a cross section of the strip, showing a top plan of the locking bolt shown in Fig. 8. Fig. 10 is a cross section of the lock at $x-x$ Fig. 6. Fig. 11 is a side elevation partly in section of the swing joint between the tent pole and the strip in the edge of the closing flap. Fig. 12 is a front view of the same. Figs. 13 and 14 show a front view of a device for fastening the inner flap to the tent pole. Figs. 15 and 16 are side elevations of the same. Fig. 17 is a cross section on the line $y-y$ of Figs. 13 and 15, taken together.

A represents a tent composed of canvas or other material, and having vertical tent poles B at the ends, which make up the height of the tent. The canvas is stretched over these in the usual way, and is preferably formed with walls, as shown in the drawings, which make part of the height of the tent. The strips 1 and 2 in the pockets formed in the edges of the inner and outer flaps D and E are shown in dotted lines in Figs. 1 and 2. I prefer to wind the inner flap D around the tent pole, as in my former patent, to insert the lower end of the strip 1 into the clip 31, and to secure it to the pole by means of the device shown in Fig. 17. A socket 3 is made in the tent pole, in which works a pin 4 constantly pressed outward by a yielding spring 5. When the rigid edge strip of the inner flap is wrapped around the pole, the pin 4 is pressed inward and the strip slips past it into a bracket 6, secured to the pole, and is there held, the pin springing out and making it impossible to withdraw the strip without pushing in the pin. Besides the detail view Fig. 17, Fig. 1 shows the inner flap as secured to the pole in this manner.

The outer flap E of the tent is ordinarily the entrance flap; and, while the inner flap is secured to the tent pole, the outer flap may be pulled aside (Fig. 1), to make an opening. In my application before referred to, I showed the joint of this flap with the main body of the tent, as formed entirely by the canvas or other material of the tent. This made a good joint, so far as freedom of motion was concerned; but since the hinge is formed en-

tirely by the fabric, and since a locking device is used at a point below to connect the flap to the tent pole, it has been found that disadvantages attend the construction. In a tent exposed to the open air, sometimes wet and sometimes dry, the canvas expands or contracts, and hence it is often difficult to lock the flap, because the locking devices do not come naturally and easily into their proper places.

In my present invention, I provide a positive metallic universal joint F between the movable flap and the tent pole, which permits a free opening motion to the flap, and provides for its accurate return to its locking position. This joint is represented in Figs. 11 and 12, which show the upper part of the tent pole and the removable strip connected together.

To the pole is secured a plate 7, which is placed over and has an opening into a socket 8 in the pole. One member of the universal joint is a plate 9, having a hook-shaped bracket 10, which is pivoted by a pin 11 in the plate 7. The strip 2 has at its upper end a channel piece having ears 13, through which passes the pin 14 which rests on the hook when in use. The dotted lines on the front of the plate (Fig. 12) and in the section (Fig. 11) show a depression in the back of the channel piece for the end of the strap 41, which is fastened to the canvas on the inner side and brought over between the ears 13, and fastened to the canvas on the outer side; thus preventing the canvas from sliding down on the strip. The strip can thus be moved outwardly by means of this pin 14, and can be turned transversely by the motion of the plate 9. This forms a universal joint; permitting the entrance flap to be moved freely, and yet holding its upper end so that no stretching or contracting of the canvas will interfere with the accurate movement of the whole flap. The pin is preferably held up to its bearings by a spring 30. By means of this construction the joint is easily detached by unhooking the top of the strip from the rotary member of the joint.

In the ordinary tent, the entrance opening is of triangular shape, either equilateral (when both sides are opened) or isosceles (when only one is turned back). It is thus difficult to see through the ordinary tent opening, because the ordinary height of a man brings his eyes to about the apex of the triangle. By slitting the canvas of the end flaps as shown in Fig. 2, and detaching the connecting joint and the inner strip, I can make a wide opening as there shown, of almost the width of the tent front, or I can simply detach the universal joint and throw only the flap E over, as shown in the right hand part of Fig. 2. Fig. 1 shows the ordinary way of operating the flap E when the inner flap D is wrapped around the tent pole. Fig. 2 shows both flaps slitted as just stated and opened to their full extent, so as to give the ut-

most amount of light and ventilation, and the easiest means of entrance and exit.

When the door of the tent is closed, the triangular flaps 33 and 34 over the entrance may be raised as shown in Fig. 2, thus securing good ventilation.

I now describe the lock which I prefer to use in this form of tent to secure the outer flap E to the tent pole, around which the inner flap has been wrapped and fastened, as before described. In making this lock, my object is to permit the outer flap to be opened either from the outside or inside, and at the same time to have no projecting knobs or shafts or removable parts. At the same time, I provide means for securing the lock, so that when once fastened it cannot be opened from the outside. This lock is specially illustrated in Figs. 6, 7, 8, 9, and 10, but is conventionally shown in Figs. 1 and 2. Referring first to Fig. 8, the tent pole B is shown in side elevation, and the outer strip 2 as locked to it on the front (all the canvas being removed for clearness). To the front of the tent pole is secured the lock plate 15, which covers the front and one side of the pole, and is shown as broken away to permit a section of the pole to be seen. The lock plate is formed with a thimble 16, which fits in an open socket 17 in the pole, in which the bolt 18 slides. This bolt is firmly secured to the outer strip 2 (Fig. 9), and when such outer strip is to be fastened, the bolt enters the thimble 16 and is held there by the latch 20. The latch is best shown in Figs. 6 and 8 taken together. Fig. 6 is a rear view of the lock plate as removed from the tent pole. The latch 20 is pivoted to this plate at 21, and a spring 22 tends to force it into engagement with the notch 122 of the bolt. The bolt has a rounded or conical head to permit it to slide past the edge of the latch until the notch engages. A spring follower 23 is seated in the thimble 16 and bears upon the end of the bolt (Fig. 8) to throw it out when released. The latch is positively released by a push button 24 working in the side of the lock plate (Fig. 6), and which is preferably a part of the latch itself projecting through a hole where it can be pressed. If this button be moved inward, the latch turns upon its pivot, and the spring follower 23 is permitted to throw out the bolt and unlock the outer flap.

The push button is of course always easily accessible from the interior of the tent, by virtue of its position in the side of the pole; but as I wish to be able to press it from the outside, I form in the canvas of the flap E a hole 25, covered by an inner flap 125, sewed down on three sides, and through which access may be had to the button. The flap may thus be locked or unlocked either from the inside or outside, which makes a very convenient construction in cases where it is desired to leave the tent locked and still have the lock easily accessible upon return.

Supposing the tent to have been locked in

the manner described, it can be unlocked by the means provided, either from the outside or inside; but it is desirable that the occupant of the tent should be able to secure himself by rendering the lock inoperative from the outside through the hole 25. This is accomplished by the pin 26 (Fig. 8), which enters a hole bored in the inner or rear face of the tent pole and then engages with the latch 20 by a hole 27 formed in it.

The pin 26 is preferably secured to leather straps or holders 28 as shown. By pushing this pin in and engaging it with the latch the occupant of the tent makes it impossible to move the push button from the outside. The hole or passage for the pin 26 is preferably drilled or bored from the front through the lock plate after the lock has been put on. This will insure a coincidence or alignment of the passage in the tent pole and the hole through the latch, which it might otherwise be difficult to have. The pin when not in use remains in place slightly drawn back, being prevented by its strap from coming entirely out.

The tent can also be locked when left by the tenant, so that it cannot be opened from the outside. This is accomplished by the means shown in Figs. 3 and 4, in which the tent pole is formed with a pocket or recess 29, in which is pivoted a hasp 30. A hole 31 is made in the strip 2 through which the hasp is passed, and then a padlock secures the hasp in place. When not in use, the hasp drops down into its socket in the pole and remains there out of the way until it is needed.

When the slitted flaps are used as shown in Fig. 2, I prefer to cover the slits by the triangular flaps 33, 34, which drop below them and exclude wind and rain from the interior, and also protect the universal joint. These flaps can be drawn aside and up by the convenient arrangement of a cord 35, working in eyes 36, 37, 38, as shown in Figs. 1 and 2. By pulling upon the slack part of the cord (Fig. 1), the flaps will be pulled upwardly and outwardly (Fig. 2) and the cord secured by winding it upon a button 39. By pulling upon the taut part of the cord (Fig. 1) the flaps will close, and enough of the slack of the cord can be wound around the button 40 to keep the flaps down and in place.

It might be thought that by raising these flaps and thus getting access to the universal joint, the outer strip might be detached, and access thus had to the interior; but it will be seen that as the outer strip is rigidly locked to the pole, it is impossible to detach the members of the universal joint.

I make the vertical diameter of the hole in plate and socket greater than the diameter of the bolt, as shown in Figs. 7 and 8, to allow for any expansion or contraction in the pole and strip or any inaccuracy in setting the upper plate 7. Shown in Fig. 11.

The edges of the upper plate 7 and the lock plate extend slightly around the pole,

as shown in Figs. 10 and 11, for additional strength to plate and pole. Also the clamps or washers on the outer strip 2 extend partly around the same to keep it from splitting, as shown in Figs. 9 and 12.

When the connection shown in Fig. 5 is used, the canvas is not slitted, but is arranged as shown in Fig. 13 in my other case filed with this. The same means are also used in this case for fastening the canvas with a strap at the lower end of strip 2.

For transportation, strips 1 and 2 are taken from the pockets and latched to the pole as when the tent is closed and the push pin in the back of the pole is pushed in. It is thus easily arranged and substantially secured.

In my application for patent referred to, I showed the inner flap as wrapped around the pole and there secured. In the present case, I have shown the inner flap as wrapped in the same manner and secured by the devices shown in Figs. 15 and 17. Now it is not necessary that the inner flap should be wrapped around the pole, because the inner strip can be secured to the side of the pole without crossing the front or wrapping behind. The spring pin and bracket shown in Figs. 15 and 17 are adapted to serve as a locking device of this character. This leaves the front of the end pole bare and avoids cutting canvas away from the inner flap to give access to the lock plate.

In order to distinguish this case from the companion case, Serial No. 488,298, I may say that the main feature of invention is the universal joint between the tent pole and the rigid strip in the entrance flap; while in pending case, Serial No. 507,762, the joint between the end pole and the rigid strip is capable of sliding vertically instead of having two permanent centers of movement as in the present case.

What I claim is—

1. A tent having an end pole and an entrance flap, a rigid strip secured at the edge of the entrance flap, and a universal joint by which the upper end of such strip is secured to the tent pole, substantially as described.

2. A tent having an end pole and an entrance flap, a rigid strip secured at the edge of the entrance flap and a universal joint between the strip and the tent pole, composed of members detachable from one another, substantially as described.

3. A tent having an end pole and an entrance flap, a rigid strip secured to the edge of the entrance flap, a detachable universal joint between said strip and pole and a horizontal slit in the entrance flap near the junction point, substantially as described.

4. In a tent, a tent pole and an entrance flap having a rigid strip secured at its edge, a universal joint between said pole and said strip consisting of a rotary member pivoted in the pole, and a swinging member pivoted to said rotary member, substantially as described.

5. In a tent, a tent pole and an entrance flap having a rigid strip secured at its edge, a universal joint consisting of a rotary plate pivoted to the pole, and having a hooked bracket, and a hinge on the end of the rigid strip connected to said bracket, so as to swing independently of the rotary movement of the said plate, substantially as described.

6. In a tent having an end pole, end flaps slitted transversely for the purpose described, and outer vertically movable flaps for covering said slits and having operating means for opening and closing them substantially as described and shown.

7. In a tent, an end pole around which one of the flaps is wrapped and removably secured, another end flap forming the entrance door and having a rigid strip at its edge, a universal joint between the said strip and the tent pole, and an automatic locking device for securing the entrance flap to the pole.

8. In a tent having an end pole and inner and outer end flaps each having a rigid strip at its edge, a locking device for the inner strip consisting of the spring pin 4 in the tent pole, and a bracket 6, whereby the inner strip when wrapped around the pole is held in said bracket by said pin, substantially as described and shown.

9. In combination with the tent pole and with the outer or entrance flap, an automatic lock, a means for releasing the lock operated from the outside, and a pin controlled from the inside for rendering the releasing means inoperative, substantially as set forth.

10. In combination with the tent pole, a strip in the edge of the entrance flap, a projecting bolt or catch fastened to said strip to engage a locking or latching device secured to the pole, and a push button for releasing said locking device and permitting the flap to be opened, substantially as set forth.

11. In combination with a tent having an end pole and an entrance flap, a lock for securing the flap to the end pole consisting of a bolt secured to said entrance flap, a socket in the pole into which said bolt enters, a latch for engaging the bolt when in the socket and

a push button for moving and releasing the latch, substantially as set forth.

12. In combination with a tent having an end pole and an entrance flap, a lock for securing the flap to the pole, consisting of a bolt secured to the entrance flap, a socket in the pole into which said bolt enters, a pressure spring in said socket, a pivoted latch for locking the bolt when in the socket, and a push button for moving and releasing the latch, substantially as described and shown.

13. In combination with a tent having an end pole and an entrance flap provided with a rigid strip at its edge, a lock for securing the said flap to the pole consisting of a notched bolt secured in said strip, a lock plate on the pole having a front opening to admit said bolt into a socket in the pole, a latch adapted to enter the notch in the bolt, and a push button for operating said latch and releasing the bolt and strip, substantially as described.

14. In combination with a tent having an end pole and an entrance flap provided with a rigid strip at its edge, a lock for securing the said flap to the pole consisting of a notched bolt secured in said strip, an angular lock plate on the pole having a front opening to admit said bolt into a socket in the pole, a spring latch-lever pivoted to the plate, adapted to enter the notch in the bolt, and a push button for operating said latch and releasing the bolt and strip, substantially as described.

15. The combination with a tent having an end pole and an entrance flap of a sliding bolt in the flap, a pivoted latch on the pole, and a push button for releasing the latch, and a pin working through the tent pole from the inside and engaging the latch, and inaccessible from the outside, substantially as described and shown.

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

JAMES J. RINN.

Witnesses:

L. W. SEELY,
J. SAULMANN.