

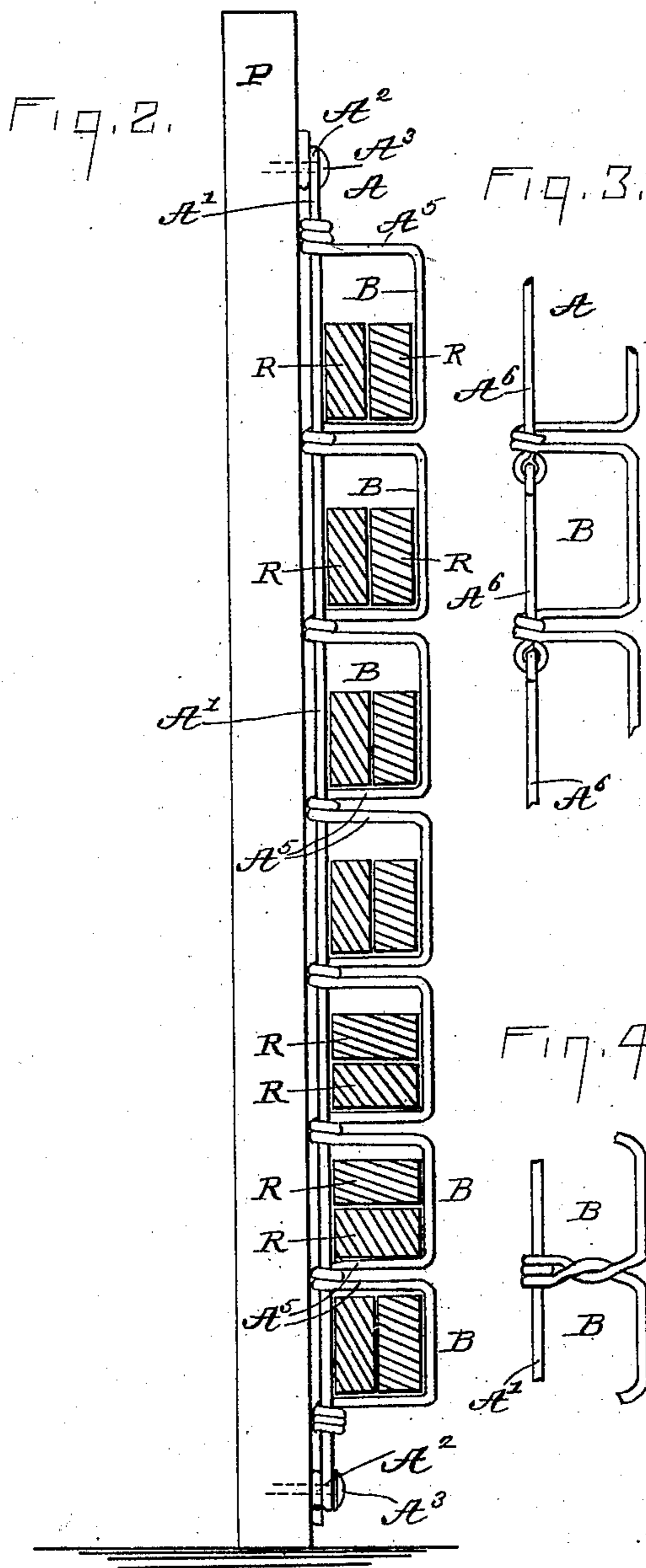
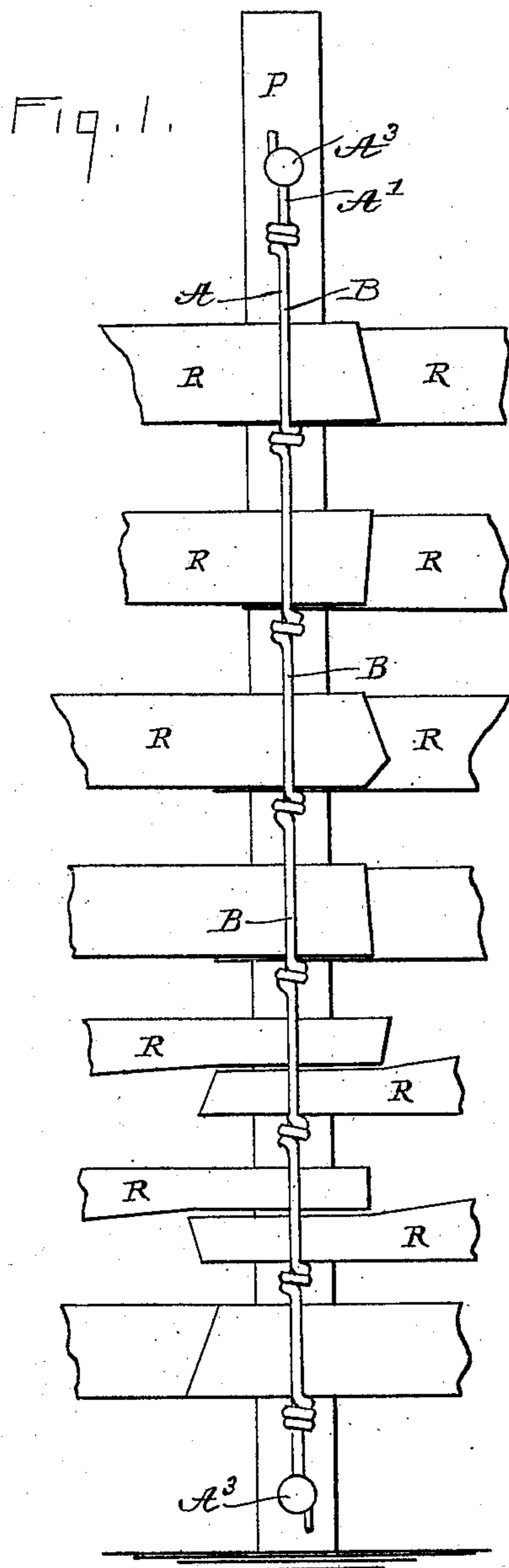
No. 746,503.

PATENTED DEC. 8, 1903.

C. T. HAMMACK.  
FENCE.

APPLICATION FILED NOV. 25, 1902.

NO MODEL.



WITNESSES—  
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# UNITED STATES PATENT OFFICE.

CICERO T. HAMMACK, OF KNOXVILLE, TENNESSEE.

## FENCE.

SPECIFICATION forming part of Letters Patent No. 746,503, dated December 8, 1903.

Application filed November 25, 1902. Serial No. 132,807. (No model.)

*To all whom it may concern:*

Be it known that I, CICERO T. HAMMACK, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Improvement in Fences, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to rail fences, and particularly to fences comprising upright posts and horizontal rails sustained by wires extending vertically along the posts, whereby the driving of nails through the rails into the posts may be omitted. Such a fence may be called a "suspended" rail fence, for the wires or wire structure supporting the rails constitute a suspension member. Said member has preferably only two points of attachment to the post, one at the upper end and one at the lower end. Somewhat similar suspension rail fences have heretofore been made; but my improved fence embodies features which I believe have never before been embodied in a fence.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a fence embodying my improvement. Fig. 2 is a vertical transverse section taken adjacent to a post. Figs. 3 and 4 show modifications.

P is a post set into the ground in vertical position. R R are rails. These may be ordinary wooden rails formed by splitting logs, or they may be the stems of small trees, or they may be sawed boards or planks of any desired form with or without tapering ends. A is the suspension member, by means of which said rails are held to the posts. Said member has suitable pockets or stirrups B, into which the ends of the rails are inserted. Said rails are preferably made to overlap each other in such stirrups either by having their ends lying side by side or one upon the other. Both of these arrangements are shown in the drawings.

One of the peculiarities of my invention is an organization of the suspension member in such manner as to prevent its stretching or extending even though a portion of the rails may be removed and a load placed upon the rails remaining in engagement with the same member. This characteristic is provided by putting into said member a straight vertical

chord which is always under substantially direct vertical tension, so that a load placed upon any rail will place strain upon said chord only in the vertical direction and will not strain or tend to lengthen the stirrups above said rail.

Another peculiarity of my invention is that the adjacent stirrups meet or abut and are increased in height from the bottom of the suspension member toward the top, whereby the upper rails are separated farther from each other than the lower rails are, and yet the stirrups abut or meet each other along the upper portion of said member just as they do along the lower portion. By making the adjacent stirrups meet or abut (bringing the coils of adjacent stirrups against each other or making the coils between adjacent stirrups common to said stirrups) each stirrup gives support to the stirrup next above and below it, and all the stirrups may, if so desired, be readily made of one continuous piece of wire, and if so made the number of coils formed around the chord for one stirrup-arm will serve also for the adjacent arm.

A' is such chord. This may consist of a single continuous wire of suitable strength, or it may consist of a plurality of continuous wires joined to each other by twisting or otherwise, or said chord may consist of a plurality of sections suitably joined end to end. It will be observed that any of these forms is adapted to take direct vertical strain without tendency to move any part of the member A laterally or diagonally, so as to increase length.

A<sup>2</sup> A<sup>2</sup> are eyes formed by coiling the upper and lower ends of the chord A'. A nail A<sup>3</sup> may be driven through each of said eyes into the post P. Practice has shown that such fastening for the suspension member A is ample for a six or seven rail fence. Said suspension member may, however, be fastened in any other suitable manner.

B B are the stirrups. These extend laterally all from the same side of the chord, so that the chord may lie close against a post, and are of suitable size to receive the ends of the rails. Said stirrups are preferably made of wire, and the horizontal arms A<sup>5</sup> of said stirrups may be secured to the chord in any suitable manner. A convenient and eco-

nomical manner is to make the several stirrups on the same member from a single piece of wire, as shown in Figs. 1 and 2. In said form the upper end of the wire is first wrapped  
5 around the chord and then taken laterally and downward far enough to make a stirrup and then taken laterally again and coiled around the chord and then outward on the same side of the chord and downward again  
10 and back around the chord again, and so on. Practice has shown that by merely tightly coiling the stirrup-wire around the chord slipping can be prevented. This engagement can be made more positive by slightly  
15 crimping the chord just below each stirrup-coil or by galvanizing the entire member, whereby the alloy makes a union between said coils and said chord.

In Fig. 3 the chord is composed of inter-  
20 linked sections A<sup>6</sup>.

In Fig. 4 the horizontal arms of the stirrups are twisted around each other.

The operation of my improvement will be readily understood. It will be observed that  
25 if a load be placed upon the lowermost rail the strain will be in the line of the chord and will not affect the shape of the stirrups above said rail whether said stirrups be empty or whether each supports its rails. If the sus-  
30 pension member were formed by twisting two wires and at intervals extending them laterally from a common plane to form pockets for rails, the strain due to the weight of the rails and to loads placed thereon would  
35 always tend to lengthen and narrow said pockets, whereby there would be a constant tendency for the rails to settle lower and lower. In my construction the position of the rails is always fixed, and my construction  
40 adapts the chord to lie close to a vertical post and to be secured to the latter by nails or staples placed at any desired points along the chord.

I claim as my invention—

45 1. As an article of manufacture, a suspension member for rail fences, said member consisting of a vertical, substantially straight wire chord and abutting wire stirrups all located on one side of said chord.

50 2. As an article of manufacture, a suspension member for rail fences, said member consisting of a vertical, substantially straight chord of continuous wire and abutting wire stirrups all located on one side of said chord.

55 3. As an article of manufacture, a suspension member for rail fences, said member consisting of a vertical, substantially straight wire chord and abutting wire stirrups all located on one side of said chord, said chord  
60 having eyes at its ends.

4. As an article of manufacture, a suspen-

sion member for rail fences, said member consisting of a vertical, substantially straight wire chord and abutting wire stirrups formed of continuous wire and differing from each  
65 other in their vertical dimensions.

5. As an article of manufacture, a suspension member for rail fences, said member consisting of a vertical, substantially straight wire chord and lateral stirrups, the adjacent  
70 horizontal arms of adjacent stirrups being twisted about each other.

6. A rail fence comprising vertical posts and suspension members consisting of a straight chord and abutting wire stirrups all  
75 located on the same side of said chord, said chords being secured to said posts, and rails resting in said stirrups.

7. A rail fence comprising vertical posts and suspension members consisting of a con-  
80 tinuous wire chord and abutting wire stirrups all located on one side of said chord, said chord being attached to said posts, and rails resting in said stirrups.

8. A rail fence comprising vertical posts  
85 and suspension members consisting of a vertical, substantially straight chord of continuous wire and abutting wire stirrups formed of continuous wire and all located on one side of said chord, said chord being secured to  
90 said posts, and rails resting in said stirrups.

9. A rail fence comprising vertical posts and suspension members secured to said posts, said members consisting of a vertical, sub-  
95 stantially straight wire chord and abutting wire stirrups all located on one side of said chord, said chord having eyes at its ends, nails extending through said eyes into said posts, and rails resting in said stirrups.

10. A suspension rail fence comprising  
100 posts and suspension members secured to said posts and consisting of a vertical, substantially straight wire chord and lateral stirrups, the adjacent horizontal arms of adjacent stirrups being twisted about each other, and rails  
105 resting in said stirrups.

11. A rail fence comprising vertical posts and suspension members consisting of a ver-  
110 tical, substantially straight wire chord and abutting wire stirrups all located on one side of said chord and formed of a continuous wire and differing from each other in their vertical dimension, and rails resting in said stirrups.

In testimony whereof I have signed my  
115 name, in presence of two witnesses, this 17th day of November, in the year 1902.

CICERO T. HAMMACK.

Witnesses:

CYRUS KEHR,  
CARRIE R. IVY.