

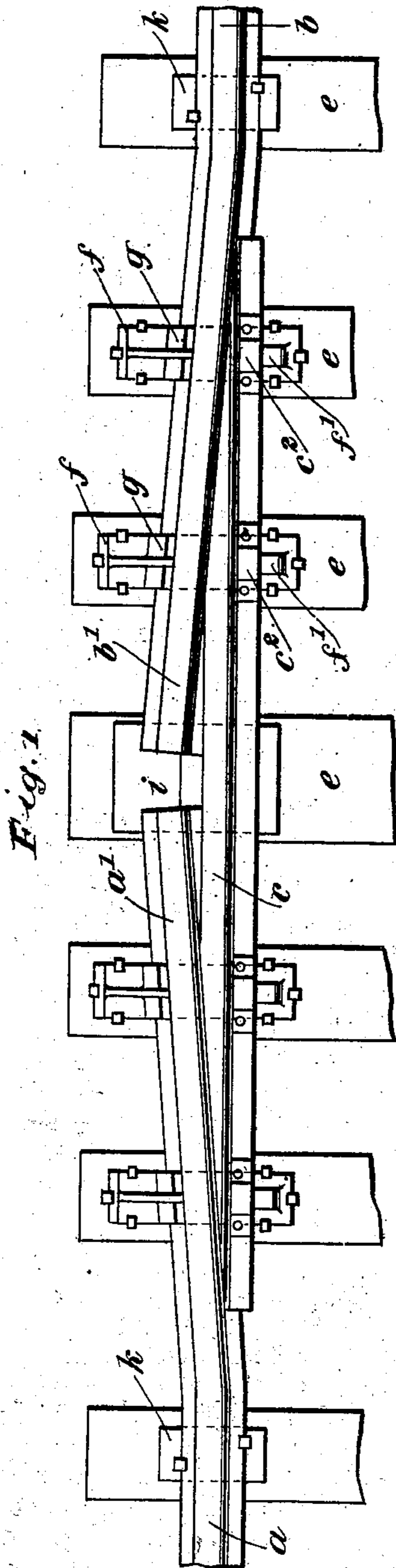
No. 726,057.

PATENTED APR. 21, 1903.

A. HAUPTMANN.  
RAIL JOINT.

APPLICATION FILED OCT. 27, 1902.

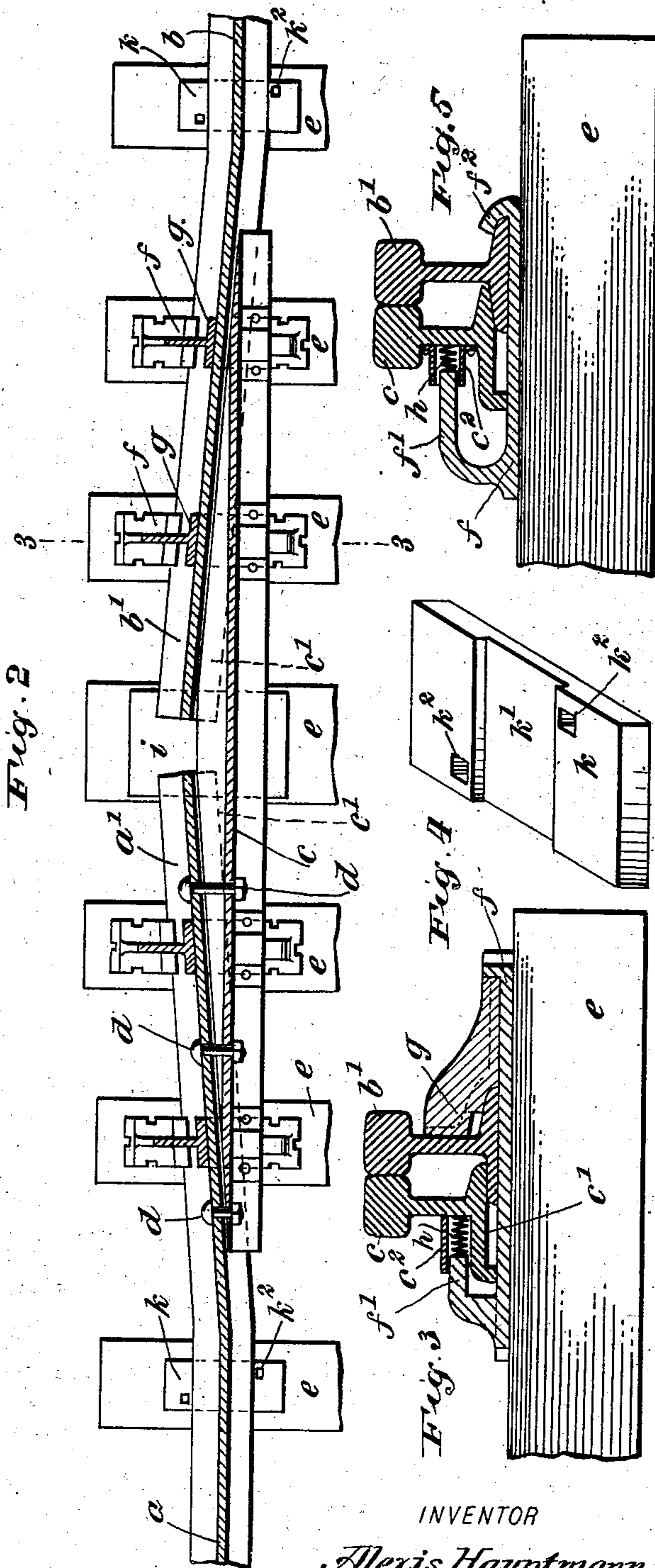
NO MODEL.



WITNESSES

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BY

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# UNITED STATES PATENT OFFICE.

ALEXIS HAUPTMANN, OF BEAUMONT, TEXAS, ASSIGNOR OF ONE-HALF TO  
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## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 726,057, dated April 21, 1903.

Application filed October 27, 1902. Serial No. 128,847. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXIS HAUPTMANN, a citizen of the United States, and a resident of Beaumont, in the county of Jefferson and State of Texas, have invented a new and Improved Rail-Joint, of which the following is a full, clear, and exact description.

This invention has for its object to provide an absolutely secure and durable connection between the meeting ends of railway-rails, as well as a connection which will freely admit of the common expansion and contraction of the rails. This end is attained by combining with the meeting rails, which have their end portions turned sidewise outward from the track diagonally to the true line of the same, a double-tapered connecting rail-section, one end of which is fastened rigidly to the end of one main rail-section and the other end of which is provided with a peculiar yielding connection with the other main rail-section. This provides a secure and extremely durable construction, as will be more fully set forth hereinafter.

This specification is an exact description of two examples of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the invention. Fig. 2 is a horizontal section thereof. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 represents one of the bed-plates which are applied to the main portions of the rails, directly adjacent to the laterally-bent ends thereof; and Fig. 5 is a sectional view corresponding to Fig. 3 and illustrating a modification of the invention.

*a* and *b* indicate the main portions of the rails. These are spiked or otherwise fastened to the ties, as may be desired, and their meeting ends *a'* and *b'* are turned diagonally outward, as shown in Figs. 1 and 2.

*c* indicates the double-tapered connecting-section, which is in the form of a standard rail, the outer sides of which are tapered off to form two points and the ball of the section *c* lying directly in the line of the main parts *a* and *b* of the rails. As indicated by the dot-

ted lines in Fig. 2 and by the full lines in Fig. 3, the joint-section *c* has its base cut away or recessed, as shown at *c'*, so as to receive the base-flanges of the rails *a* and *b*, thus effecting the necessary snug connection between the parts.

One of the rails—for example, the rail *a*—is fastened rigidly to the joint-section *c* by means of the bolts *d*, as shown, and suitable chairs are provided, which bear on the ties *e* and furnish a means for fastening the rail end *a'* and the joint-section *c* to the ties. These chairs may be of any desired construction. For example, they may be that herein-after described in connection with the other rail-section *b*.

In order to provide for the necessary expansion and contraction of the rails, it is necessary, since the parts *a* and *c* are rigidly connected, to allow a slight movement of the parts *b* and *c*. This is effected by the device which will now be described.

*f* indicates a bed-plate which lies on the ties below the end *b'* of the rail *b* and which has a chair *g* formed thereon or rigidly secured thereto, as may be desired, this chair projecting upward and inward and engaging the web of the end *b'* of the rail *b* at the outer side thereof. The joint-sections *c*, at points directly over the bed-plates *f*, are formed with transversely-disposed casings *c'*, in which are located expansive springs *h*. Into these casings *c'* project studs *f'*, which are fastened to or formed integral with the bed-plates *f* at the ends opposite the chairs *g* and which project upward and thence inward into the casings *c'*. The springs *h* serve to press the joint-section *c* and rail end *b'* firmly yet yieldingly together, and while the parts are normally held with all necessary rigidity this construction nevertheless allows a slight longitudinal movement of the parts the one relative to the other. The chair devices shown at the end *a'* of the rail *a* are illustrated to be the same as those above described. These, however, may or may not be used, as desired.

Fig. 5 illustrates a slight modification in the construction above described, this modification consisting in dispensing with the chair *g*.

In the modified form of the invention the

bed-plate  $f$  has a lip  $f^2$  turned up thereon to engage the base-flange of the rail-section  $b'$ , as shown. Otherwise the construction is essentially the same as that before described.

5 As shown in Figs. 1 and 2, a bed-plate  $i$  is provided for the tie directly at the meeting ends of the rails, this bed-plate serving to support the parts  $a'$ ,  $b'$ , and  $c$  in the same elevation along the entire length of the joint.  
 10  $k$  indicates bed-plates in which the main parts of the rails are placed, these bed-plates being recessed, as indicated at  $k'$  in Fig. 4, to receive the flanges of the rails and having orifices  $k^2$ , through which the spikes may be  
 15 passed, these orifices being slightly removed from the side edges of the base-flanges of the rails, so as to prevent the spikes from engaging said edges and interfering with the sliding movement of the rails due to expansion  
 20 and contraction. By the arrangement shown the heads of the spikes engage with the top faces of the base-flanges only, and while said spikes thus serve to hold the rails against lateral displacement they do not prevent the  
 25 free sliding of the rails for the purpose above explained.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the  
 30 spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters  
 35 Patent—

1. The combination of meeting rails having laterally-offset ends, and a joint-section lying against said offset ends and tapered at each end so as to lie in the line of the main  
 40 portions of the rails, said joint-section being rigidly fastened to one rail and slidably engaged with the other.

2. The combination of meeting rails having laterally-offset ends, a joint-section lying  
 45 against said offset ends and tapered at each end so as to lie in the line of the main portions of the rail, means for rigidly fastening the joint-section to one rail, and means for

yieldingly pressing the joint-section against the other rail. 50

3. The combination of meeting rails having laterally-offset ends, a joint-section lying against said offset ends and tapered at each end so as to lie in the line of the main portions of the rails, means for rigidly fastening  
 55 the joint-section to one of the rails, and chairs engaged with the other rail and the joint-section at points adjacent thereto, said chairs comprising springs for yieldingly pressing the joint-section and the second-named rail to- 60  
 gether.

4. The combination with two rail-sections lying side by side, of a bed-plate extending transversely under the rail-sections, an upwardly-projecting chair attached to one end  
 65 of the bed-plate and engaging one of the rail-sections, and means including a spring, said means bearing between the other rail-section and the second end of the bed-plate, yieldingly to hold the rail-sections engaged. 70

5. The combination with two rail-sections, of a bed-plate extending below them, a chair member connected with one end of the bed-plate and engaging one of the rail-sections, a stud carried on the other end of the bed-plate,  
 75 a casing carried on the other rail-section, into which casing the stud is projected, and a spring located in said casing and engaging the stud.

6. The combination of the meeting rails  
 80 having laterally-offset ends, a joint-section lying against the said laterally-offset ends, the joint-section being fastened to one end and slidably engaged with the other end, for the purpose specified, and bed-plates engaged 85  
 by the main portions of the rails, said bed-plates allowing sliding movement of the rails in the longitudinal line thereof.

In testimony whereof I have signed my name to this specification in the presence of  
 90 two subscribing witnesses.

ALEXIS HAUPTMANN.

Witnesses:

ADOLPH SCHOENINGER,  
 FRANK SIEVERT.