

No. 680,574.

Patented Aug. 13, 1901.

R. EBEN.
TRANSFER TABLE.

(Application filed June 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.

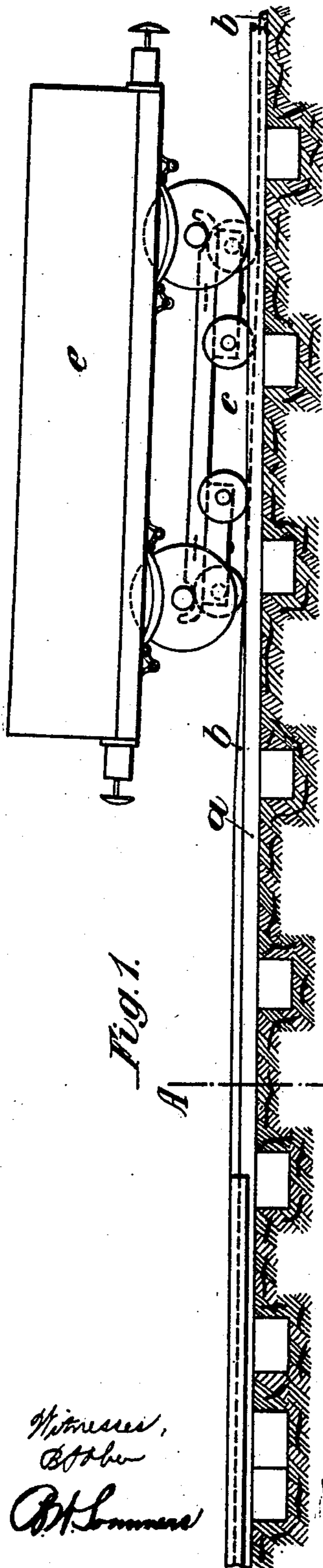


Fig. 1.

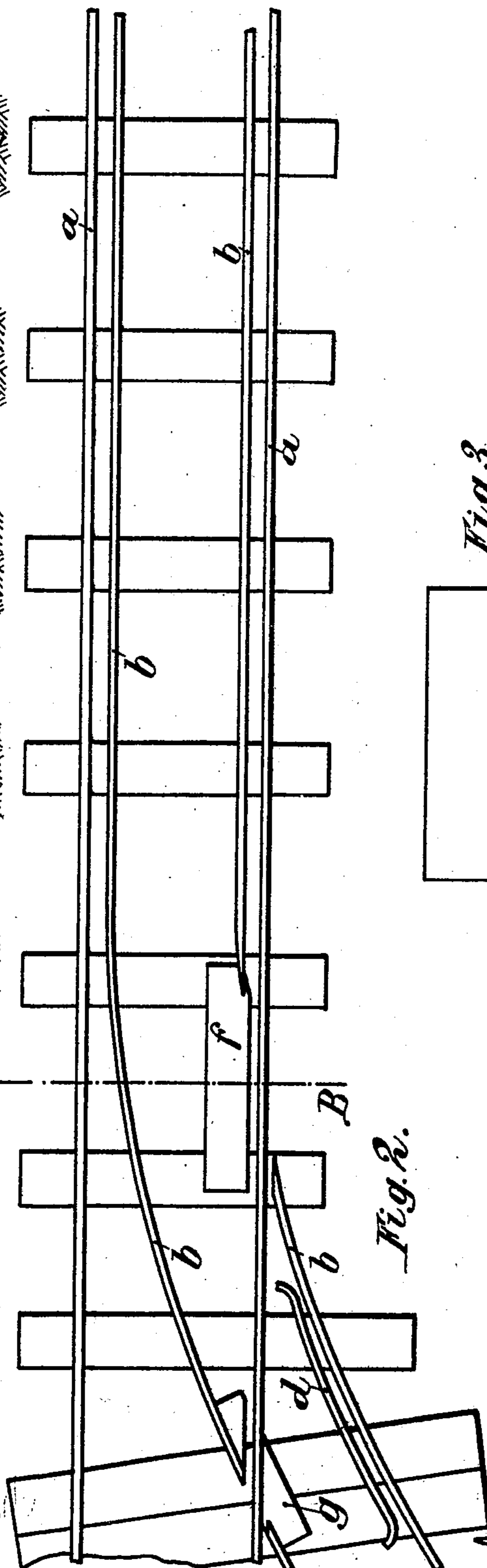


Fig. 2.

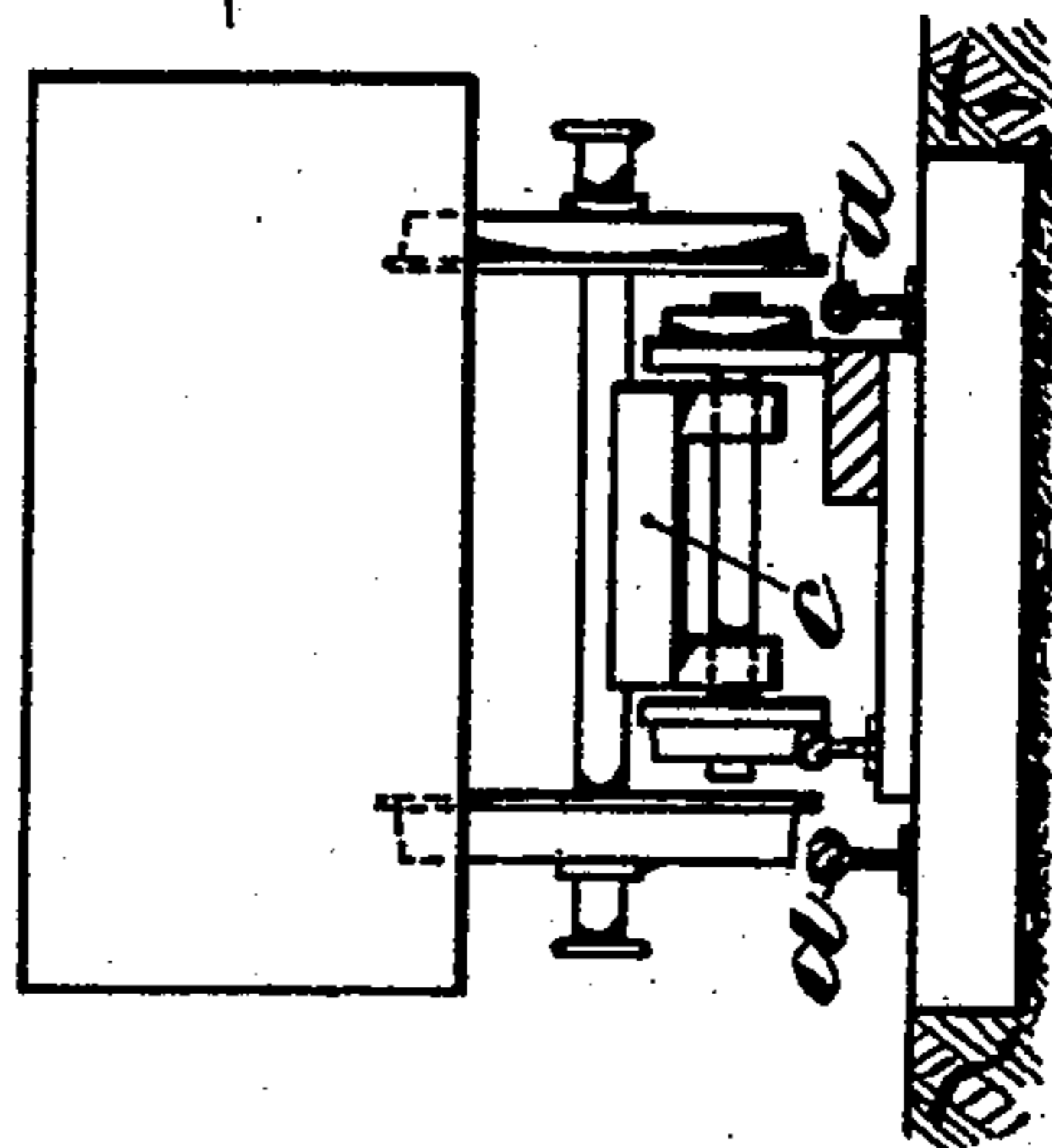


Fig. 3.

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Fig. 4.

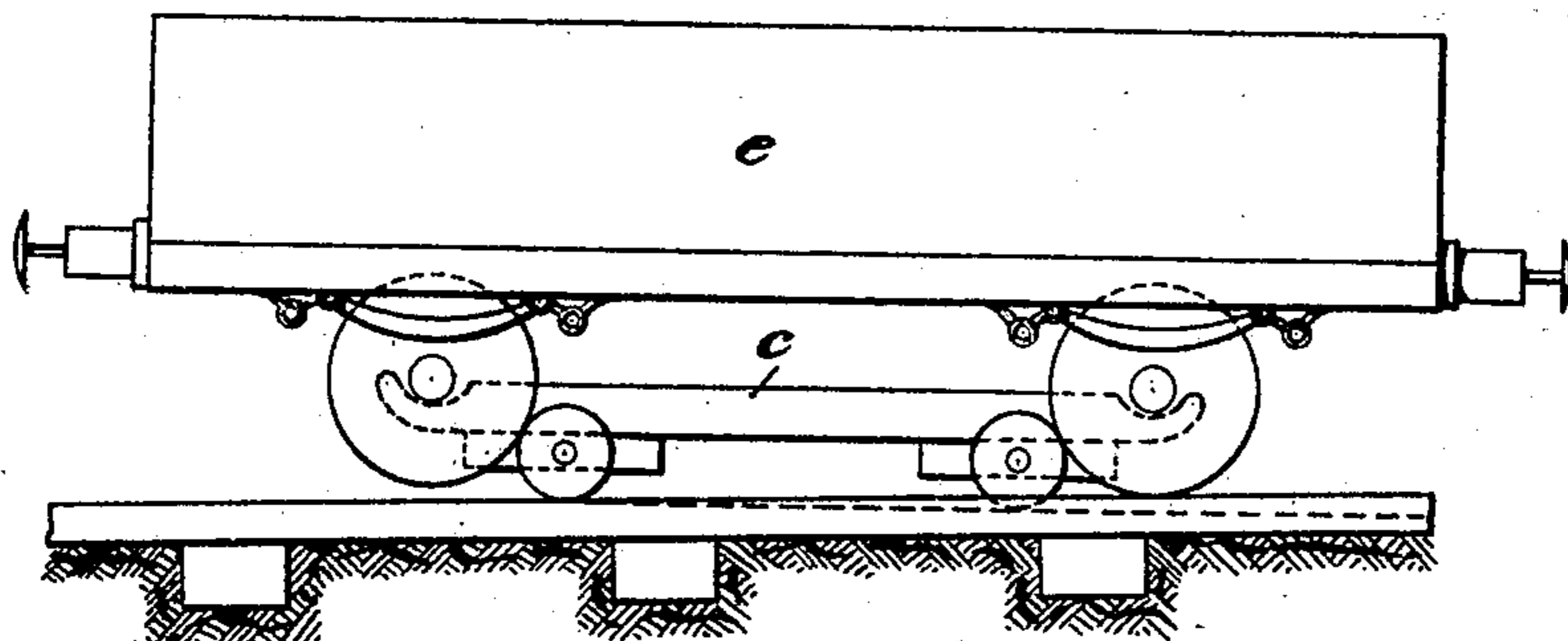


Fig. 5.

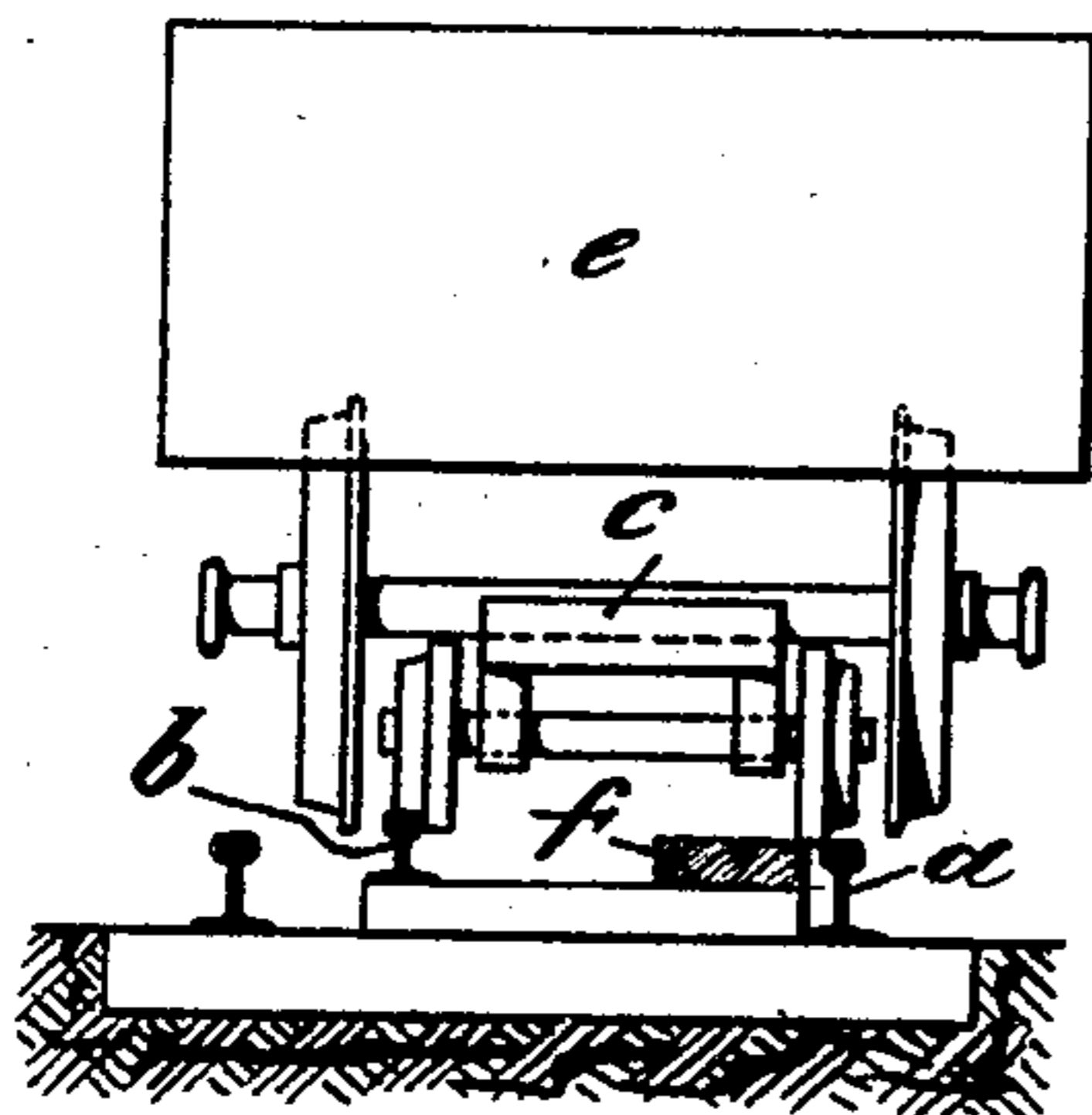
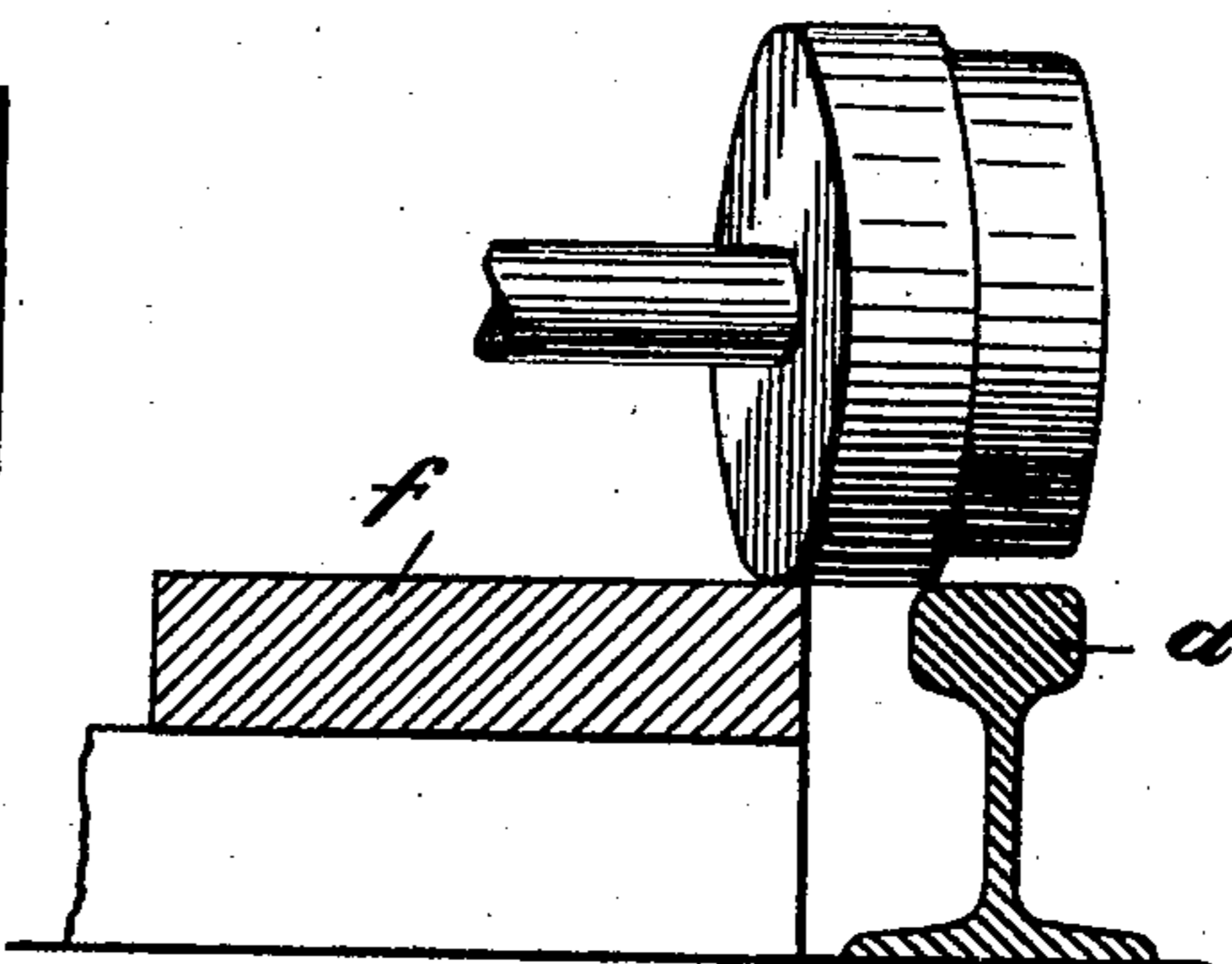


Fig. 6.



Witnesses,
Attest
W. Sommerst

Inventor,
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by *[Signature]*
Atty.

UNITED STATES PATENT OFFICE.

REINHOLD EBEN, OF PADERBORN, GERMANY.

TRANSFER-TABLE.

SPECIFICATION forming part of Letters Patent No. 680,574, dated August 13, 1901.

Application filed June 8, 1901. Serial No. 63,770. (No model.)

To all whom it may concern:

Be it known that I, REINHOLD EBEN, a subject of the King of Prussia, Emperor of Germany, and a resident of Paderborn, Prussia, (Bauditten, near Maldeuten, East Prussia,) Germany, have invented certain new and useful Improvements in Transfer-Tables; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Arrangements for crossing an uninterrupted main railway-track are already known in which the rails of the branch track are laid at the crossing-place with the rail of the main track unbroken and are at this place so elevated that the flange of the wheel of the vehicle traveling on the branch or side track can cross over the rail of the main track. This crossing-over in spite of guide-rails or tread-plates does not take place without jolts and without the main-track rail being in the end more or less damaged.

In order to enable vehicles to be transferred from a broad-gage track to a narrow-gage track, or vice versa, without breakage of continuity of the rail of the broad-gage track which is to be crossed and without jolt and damage to the broad-gage rail, in the arrangement forming the object of the present invention the flanges of the wheels of the narrow-gage vehicles or trolleys, which serve for receiving and transporting said broad-gage vehicles, are made so wide that they cannot descend into the channel or groove between the tread-plates and the rail of the broad-gage track which is to be crossed, through which channel the flanges of the wheels of the broad-gage vehicles can easily pass.

In the accompanying drawings, Figure 1 is a side view of the arrangement; Fig. 2, a plan view of same; Fig. 3, a section on the line A B of Fig. 1, showing a narrow-gage trolley with revoluble underframes. Fig. 4 is a side view, and Fig. 5 an end view, of a two-axled trolley-car with broad wheel-flanges; and Fig. 6 shows isometrically the action of the broad-flanged wheel when traveling over an existing channel or interstice. The broad-

gage track *a* is assumed to run horizontally in the section of track shown.

The narrow-gage track *b* is laid higher than the broad-gage track inside the curve in which the part lying inside the broad-gage track is projected into that lying outside the broad-gage track. The rails of the narrow-gage track are broken or interrupted in proximity to the place where they cross the rails of the broad-gage track, and tread-plates for the flanges of the narrow-gage transporting vehicles or trolleys *c* are connected with the ends of the broken rails. A guide-rail *d* is arranged in the narrow-gage track *b* opposite to the place where the rail which lies on the outside of the curve, reckoning from the center of radius of the latter, is broken at the rail of the broad-gage track *a*, which it crosses.

Opposite the guide-rail *d* and outside the broad-gage track there is a tread-plate *g* at the place where the outer rail of the curve of the narrow-gage track *b* is interrupted, and another tread-plate *f* lies beneath the broad-gage track *a* at the place where the inner rail of the narrow-gage track *b* is interrupted.

The trolley *c* is so low that it is unnecessary for the narrow-gage track inside the broad gage to lie at a lower level. The narrow-gage track rests on the same sleepers as the broad gage. When it is desired to transfer a wagon from the broad-gage to the narrow-gage track, the trolley *c* is run under the broad-gage wagon, and when this has taken place a connection between the wagon *e* and trolley *c* is established by suitable catches being lifted, so that, as shown in Fig. 1, before entering the curve the wagon *e* is already at its front end lifted off the rails of the broad-gage track and is supported by the trolley *c*. In traveling over the curve the flanges of the respective wheels of the trolley run over the tread-plate *f* and one rail of the broad-gage track *a*, and the wheels on the other side run over this rail and the tread-plate *g*, lying outside the track, without damaging the rail. For this object the flanges, as shown in Figs. 3 and 5, are made so broad that they are supported on the tread-plate *f*, while they also project over the rail of the main track *a*, Fig. 3. The flanges of the trolley thus cannot drop into the recess provided for the

flanges of the broad-gage vehicle-wheels between the tread-plate *f* and the rail of the broad-gage track *a*, which is to be crossed, and therefore the transference takes place
5 without jolt and without damaging the broad-gage track.

The wheels of the trolley by pressing against the guide-rail *d* cause the trolley to be so guided that it does not drop into the interval
10 in the outer rail of the curve of the narrow-gage track at the crossing of the rail of the broad-gage track.

The replacement of the broad-gage wagon on the broad-gage track takes place in a similar manner to its removal from the track.
15 When the respective station has been advised that the trolley *c*, with the removed broad-gage wagon, has left the main line, the trains on the same may run thereon unpededly. No points or pointsman are necessary. It is also possible by this arrangement
20 to remove broad-gage wagons from their track without at all damaging the latter by means of narrow-gage trolleys and to again
25 deposit them on another broad-gage track.

I declare that what I claim is—

1. In an arrangement for transferring vehicles from a broad-gage track to a narrow-gage track and vice versa without the necessity of breaking the rails of the broad-gage
30 track, the combination of a narrow-gage track laid between the rails of said broad-gage track at the point where the crossing is to be made, tread-plates at the points where the rails of
35 the narrow-gage track cross the broad-gage rail arranged at a sufficient distance from the latter to permit of the passage of the flanged wheels of the broad-gage vehicles, and means for carrying said broad-gage vehicles upon
40 the narrow-gage track and for transporting them on said track over the broad-gage rails, without concussion, or damage to said broad-gage rails, substantially as set forth.

2. In an arrangement for transferring vehicles from a broad-gage track to a narrow-gage track, and vice versa, without the necessity of breaking the rails of said broad-gage track, in which the narrow-gage track is
45 laid between the rails of the broad-gage track
50 and only rises above the level of said track

at the point where it crosses the track, the combination of a tread-plate within the track at the end of the narrow-gage rail which forms the inner rail of the curve, the top of which plate is on a level with the top of the rail of
55 the broad-gage track, and which is so mounted as to leave a space through which the flanged wheel of the broad-gage vehicle can pass, a guide-rail beside the inner rail of said
60 curve of the narrow-gage track outside the broad-gage track, and a tread-plate at each side of the broad-gage rail where the outer rail of the curve of the narrow-gage track crosses the broad-gage track, leaving a sufficient space for the passage of the flanged
65 wheels of the broad-gage vehicles, substantially as set forth.

3. In an arrangement for transferring vehicles from a broad-gage to a narrow-gage track and vice versa without the necessity of
70 breaking the rails of the broad-gage track, the combination of a narrow-gage track between the rails of the broad-gage track curved so as to cross said broad-gage track, and adapted to permit of the passage of a narrow-gage
75 vehicle without serious concussions to the crossed rail of the broad-gage track, and a narrow-gage trolley-car adapted to transport the broad-gage vehicle, the flanges of the wheels of said trolley-car being very
80 broad, substantially as and for the purpose set forth.

4. In an arrangement for transporting vehicles from a broad-gage track to a narrow-gage track and vice versa without the necessity of a break in the rails of said broad-gage
85 track, the combination of tread-plates at the points where said narrow-gage track crosses said broad-gage track, and of a transporting trolley-car mounted upon wheels, the flanges
90 of which have a large bearing-surface or tread substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

REINHOLD EBEN.

Witnesses:

GEORG VON HEYEDROLPF,
CURT VON WESTERNKAPEN.