

No. 654,701.

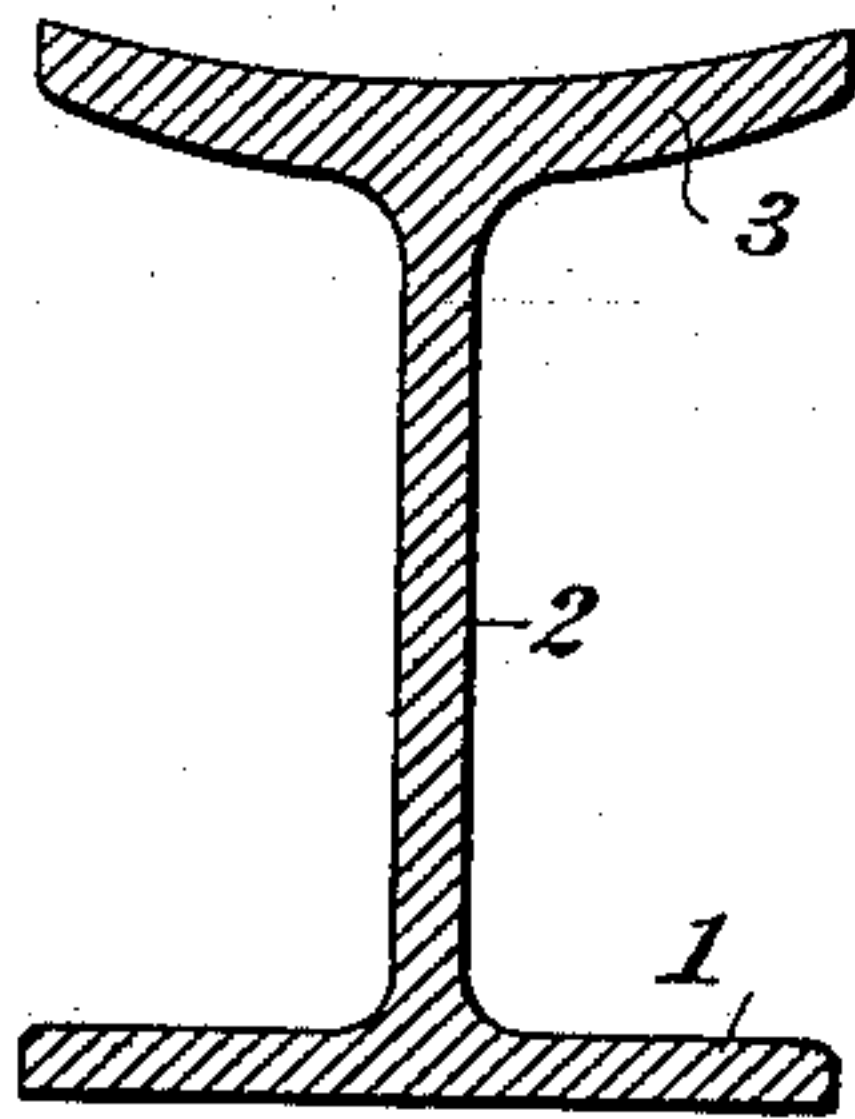
Patented July 31, 1900.

C. W. BAKER.  
WAGON ROAD CONSTRUCTION.

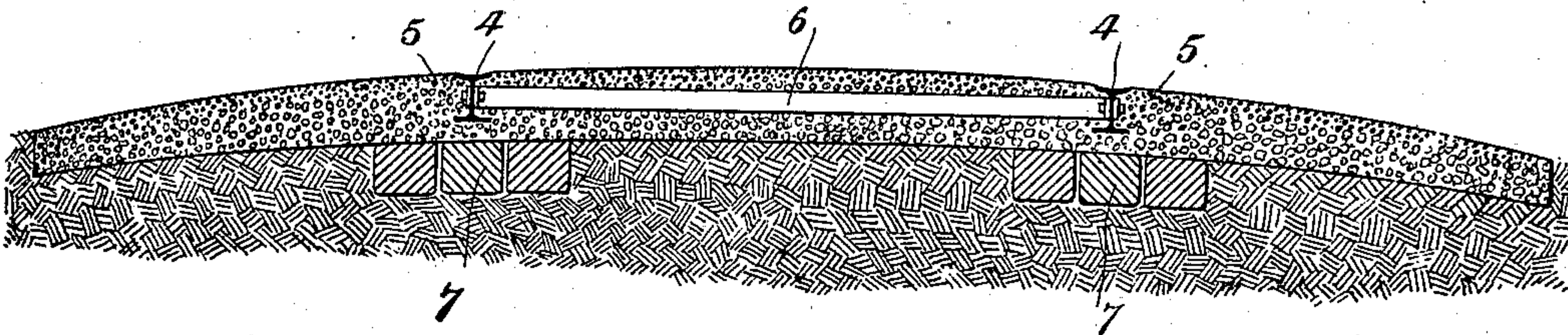
(Application filed June 12, 1897.)

(No Model.)

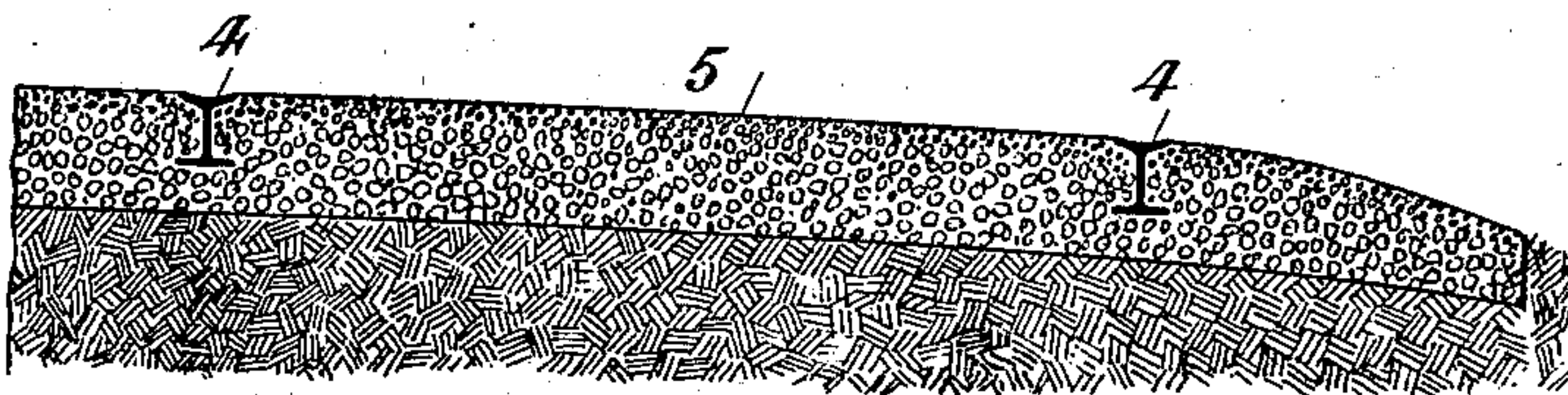
*Fig. 1,*



*Fig. 2,*



*Fig. 3,*



WITNESSES:

*William John Morley.*  
*Jacob Kernli.*

*Charles Whiting Baker*

INVENTOR:



# UNITED STATES PATENT OFFICE.

CHARLES WHITING BAKER, OF MONTCLAIR, NEW JERSEY, ASSIGNOR TO  
MENARD K. BOWEN, OF CHICAGO, ILLINOIS; ALLEN D. BOWEN EXECU-  
TRIX OF SAID MENARD K. BOWEN, DECEASED.

## WAGON-ROAD CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 654,701, dated July 31, 1900.

Application filed June 12, 1897. Serial No. 640,419. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WHITING BAKER, a citizen of the United States, residing at Montclair, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Wagon-Road Construction; and I do hereby declare that the following is a full, clear, and accurate description of the invention, which will enable others skilled in the art to which it appertains to use the same.

My invention relates to improvements in the construction of highways for ordinary wagons or vehicles, and more particularly to the construction of a girder road-rail adapted to accommodate and retain upon its upper surface the wheels of wagons or any vehicles having flangeless wheels that may be driven upon it.

In the accompanying drawings, Figure 1 illustrates a vertical cross-section of a road-rail constructed according to my invention. Fig. 2 is a cross-section of a single-track wagon-road having two of the rails in position, and Fig. 3 is a similar section of one-half of a double-track wagon-roadway with rails similar to that of Fig. 1 in place.

It is well known that ordinary streets or highways when subjected to heavy traffic, even though protected by macadam, asphalt, or paving-blocks, are liable to wear into ruts and uneven surfaces. My invention is adapted to avoid such results by making provision for a steel track on which all wagons, and particularly those carrying heavy loads, may run.

In order to carry out my invention, I prepare a girder road-rail substantially similar to that illustrated in Fig. 1, having united in an integral structure a base 1, a web 2, and a tread or upper bearing-surface 3, which is adapted to the sole purpose for which it is intended—namely, to accommodate and retain the wheels of ordinary wagons or any similar vehicles having flat or flangeless wheels. The rail may be made of steel or similar material, and it may be rolled or otherwise made of the proper shape and of any desired length. I propose to make the upper or bearing surface of such shape that it will retain the wagon-

wheels thereon and at the same time allow the wagon to be readily turned on and off the track as occasion demands. In the construction illustrated in Fig. 1 this bearing-surface or tread 3 of the integrally-formed girder-rail is made concave, and this will enable me to accomplish the desired result.

In Fig. 2 is illustrated a mode of construction of a single-track roadway in which two lines of rails, such as are illustrated in Fig. 1, are employed. The rails 4 4 are shown embedded in a layer of concrete, macadam, or similar material 5 and joined together by tie bars or braces 6. If desired, a further foundation may be made, as of Telford blocks 7. In this construction I prefer that the road-bed of concrete or macadam be extended on either side of the rails, so that wagons going in opposite directions may pass without the wheels of either wagon leaving the macadam.

In Fig. 3 is shown a cross-section of one track of a double-track roadway employing rails according to my invention. The rails 4 4 are embedded in the concrete or similar material, as in Fig. 2; but the tie-bars are omitted and the material in which the rails are embedded is relied upon to hold them in position, although these tie-bars may be employed, if desired, as in Fig. 2.

It will be observed that by the manner of constructing and employing my road-rails I secure great solidity and firmness, for when the macadam or concrete or asphaltum is closely compacted against the web 2 of the rail both the base 1 and the upper part or tread 3 have a firm support to rest upon. This will enable the rail to carry a heavier load and render it less liable to lateral motion than if the base only were resting upon a support.

I am aware that it has been proposed to make a steel wagon-road employing a rail made from a piece of flat steel or iron rolled into a groove or concave form; but it is believed that such a construction is impracticable owing, among other things, to the impossibility of joining the ends of the rails together, and I do not claim such a construction, as I believe an integrally-made girder-rail to be the only one practicable for the pur-



poses herein stated. I am also aware of girder-rails constructed for the flanged wheels of street-cars and having lateral flanges or treads on which wagon-wheels may run, and  
5 I disclaim such construction.

In using the term "wagon," or "wagon-road" herein I do not limit myself to their narrow or restricted meanings; but I include as the equivalent of wagon all vehicles,  
10 whether propelled by animal or mechanical power, such as are ordinarily adapted to run on roadways of dirt, macadam, or other pavements and such as have flat tires or flangeless wheels.

15 I claim—

1. In wagon-road construction, a metallic

girder-rail having a base, a web and a tread formed integrally with the tread substantially over the web and having means to accommodate and retain only flangeless wheels  
20 of vehicles.

2. In wagon-road construction, a metallic girder-rail having, integrally formed, a base, a web, and a tread concave on its upper surface with the tread substantially over the web  
25 and having means to accommodate and retain wheels of vehicles with flat or flangeless tires.

CHARLES WHITING BAKER.

Witnesses:

F. W. FROST,

H. R. KEITHLEY.