

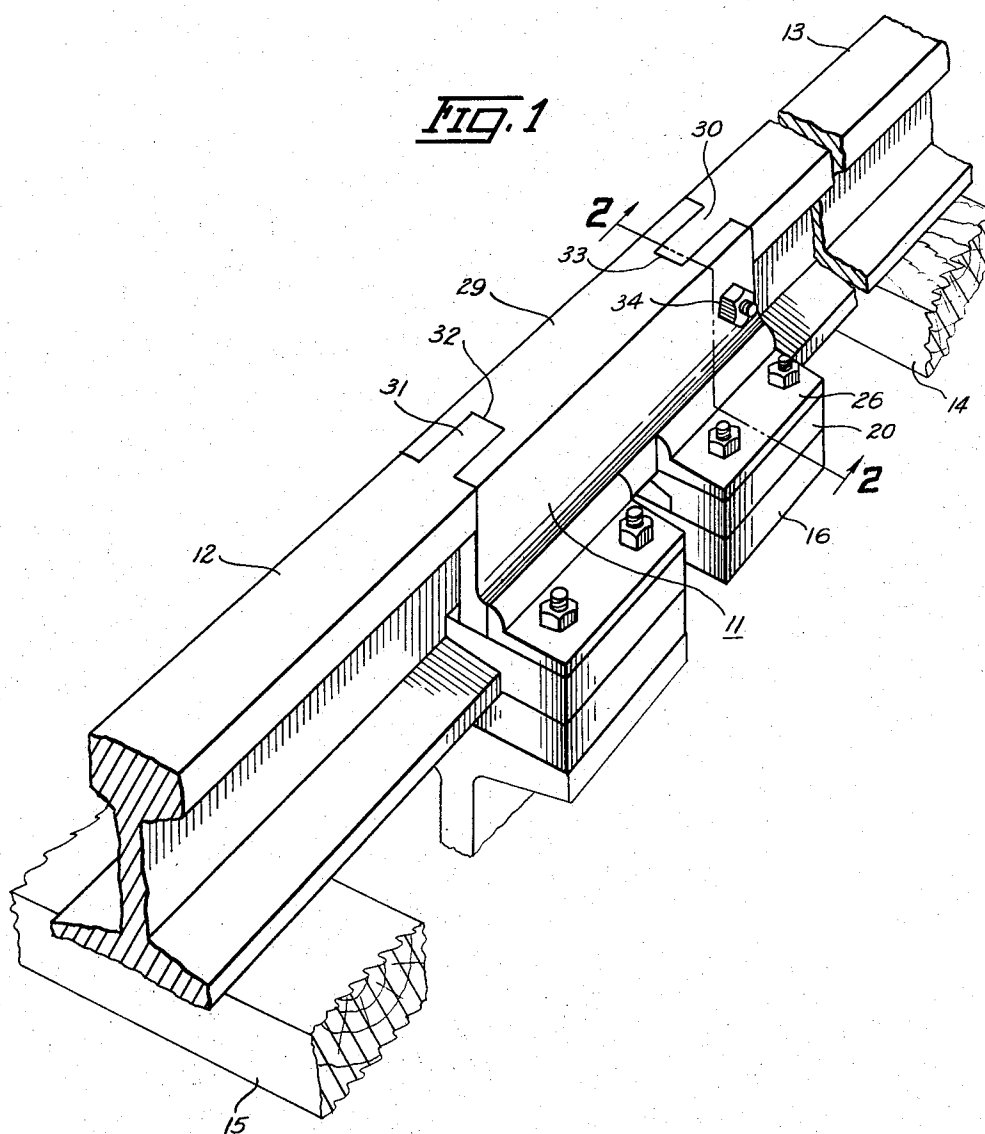
Feb. 17, 1959

H. H. ROSEBROOK
TRACK APPROACH BRIDGE

2,873,918

Filed Aug. 23, 1954

2 Sheets-Sheet 1



INVENTOR.
HARRY H. ROSEBROOK
BY *Flournoy Corey*
ATTORNEY.

Feb. 17, 1959

H. H. ROSEBROOK
TRACK APPROACH BRIDGE

2,873,918

Filed Aug. 23, 1954

2 Sheets-Sheet 2

FIG. 2

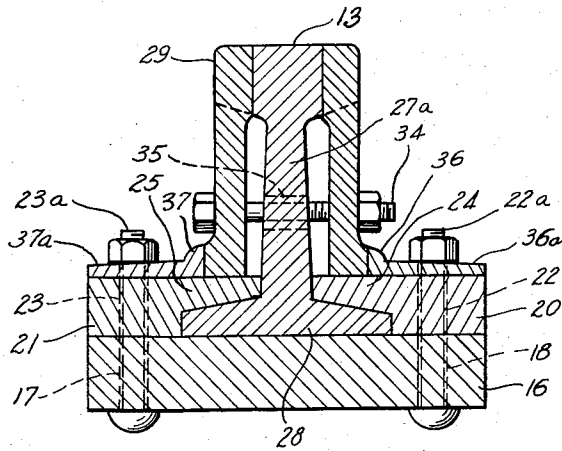


FIG. 3

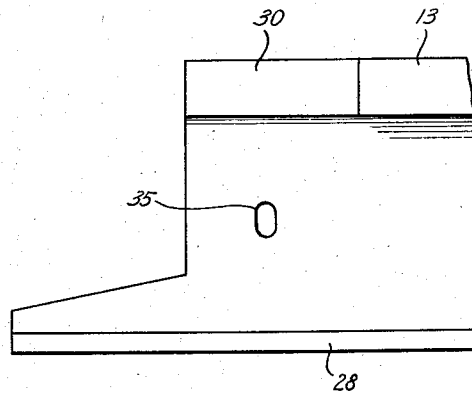
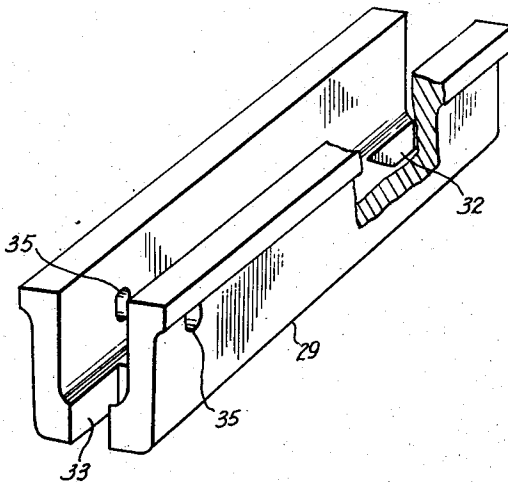


FIG. 4



INVENTOR.
HARRY. H. ROSEBROOK
BY *Flournoy Corey*
ATTORNEY.

1

2,873,918

TRACK APPROACH BRIDGE

Harry H. Rosebrook, Oak Park, Ill.

Application August 23, 1954, Serial No. 451,472

2 Claims. (Cl. 238—174)

This invention relates to a track approach bridge and has particular reference to one which will carry the wheels of a railroad car from the roadbed onto a weighing scale or the like.

Various types of bridges are used to carry the wheels of a railroad car across track joints such as will be found in intersections, at drawbridges, or at weighing stations. The most common practice is to provide a special shoulder, adjacent to the unconnected rail ends, which will carry the rim of the wheel, raising the wheel far enough up above the track joints, momentarily, to allow it to pass without actually contacting the rail ends.

A crossing of this type, while satisfactory under some circumstances, has some inherent disadvantages when used with weighing scales, particularly inasmuch as scale development has reached the point where the scale can be extremely sensitive and, in many instances, can weigh cars as they pass over the scales.

Where such speed and sensitivity is involved, the act of lifting the car up each time a wheel rim climbs such a bridge and then allowing it to return to the track, sets up highly undesirable vibrations and high shock loads which disturb the functions of the scale.

It is therefore an object of my invention to provide a track approach bridge for rail joints which will permit the wheel of the car to pass over the joints smoothly with a minimum of shock load.

It is still another object of my invention to provide a bridge which does not require the plane of the travel of the rail wheel to be drastically altered as the car goes over the joints.

It is a further object of my invention to provide a bridge in which the weight of the car will be borne by vertical structures only and the tendency to splay the joint will be avoided.

Other and further features and objects of the invention will be more apparent to those skilled in the art upon a consideration of the accompanying drawings and following specifications, wherein is disclosed a single exemplary embodiment of the invention, with the understanding, however, that such changes may be made therein as fall within the scope of the appended claims, without departing from the spirit of the invention.

In said drawings:

Figure 1 is a view in perspective of a track approach bridge constructed according to my invention.

Figure 2 is a view in cross section taken at line 2—2 of Figure 1 showing the structure of the joint between the fixed rail and the track approach bridge.

Figure 3 is a side view of the end of the rail as used at either end of the track approach bridge, and

Figure 4 is a bottom view of the bridge casting to show the nature of its structure.

Referring now to the drawings and more particularly to Figure 1, the bridge approach 11 is disposed between two rail ends, 12 being the fixed rail leading up to the weighing stand, and 13 being the rail on the weighing stand. These rails, of course, are held in position along their en-

2

tire length by standard railroad ties such as 14 and 15. The track bridge approach is fixed to the same roadbed at either end as the rails 12 and 13. The manner in which this track approach bridge is mounted is as follows:

5 The end of the rail 13 rests on a tie or scale stand 16 which has a plurality of bolt holes 17 and 18 therein. Mounted on this scale stand are two opposed chair castings 20 and 21. These chair castings have a plurality of registering bolt holes such as 22 and 23 and also inwardly extending lips 24 and 25 which are adapted to overlap and to engage the top face of the flange of the base portion of the rail.

10 Mounted on each of these chair castings 20 and engaged by the bolts 22a is a shoulder casting 37. Mounted on chair casting 21 and engaged by the bolts 23a is a shoulder casting 37. This structure is shown in detail in Fig. 2. The shoulder casting 36 is positioned on the upper face of the chair casting 21 and held in position by the bolt 23a. The opposite shoulder casting 37 is positioned on the upper face of the chair casting 20 and is held in position by the bolt 22a. These shoulder castings 36 and 37 are substantially flat plates with inner upwardly extending shoulder flanges such as shoulder 37a on casting 37 and shoulder 36a on casting 36. These shoulder castings 25 are spaced at a distance from the web 27a of the rail, the chair castings and shoulder castings being adapted to support the main bridge casting 29 and prevent it from being displaced laterally, while allowing it to move vertically and pivotally to accommodate to vertical movements of the chair castings as the scale platform moves up and down.

30 The bridge casting 29 is notched at both ends, the upper face thereof being of substantially the same width as the upper portion of the railroad track itself but permitting relative movement. The bridge casting 29 is U-shaped in section and mounted in an inverted position, the lower ends of the casting being broadened and flattened to rest firmly on the chair castings 20 and 21 and between the vertical flanges of the shoulder castings 37 and 36. The two rails 12 and 13 are formed with a projecting insert 30 and 31. These rail head inserts are adapted to engage the notches 32 and 33 of the bridge casting.

40 On the scale side of the track approach bridge, a bolt 34 is positioned in the end of the bridge casting and projects through a vertical slotted opening 35 in the web of the rail. This slot is provided so that there can be some vertical movement between the bridge casting and the rail itself.

45 The opposite end of the bridge casting or the fixed rail end is constructed in the same manner as the scale portion except that no bolt is used between the bridge casting and the rail itself. The chair casting is bolted to a railroad tie or such other structure as may be commonly used.

50 It can be seen from the foregoing description that, in operation, the full face of the wheel of the railroad car is in contact with the rail, then the bridge casting, and then the rail on the scale stand. It is carried smoothly across this bridge by the interlacing structure at each end of the bridge casting. Under these circumstances, there is a minimum of jarring, or bouncing, present as the wheel rolls over the joint, yet there is sufficient flexibility in the joints to permit compensation between the elevation of the approach track and the scale track.

55 It should also be noted that the fact that the bridge casting is of substantially the same size and structure as the railroad track, and the fact that it rests firmly on the chair casting, will result in all forces being directly downward. No outward strain on the shoulder castings should be present in a device constructed according to this invention.

70 It is also to be noted that, while the bridge casting is

3

held firmly in place by the presence of a cross bolt through the web, still the two tracks may draw apart to some extent without disturbing the carrying quality of the approach bridge.

Although I have described a specific embodiment of my invention, it is apparent that modifications thereof may be made by those skilled in the art. Such modifications may be made without departing from the spirit and scope of my invention as set forth in the appended claims.

I claim as my invention:

1. A track approach bridge connecting the adjacent ends of approximately aligned elongated rail sections, each said section resting adjacent said ends on different supporting structure, one of said sections and its supporting structure being free to move vertically with respect to the other of said sections, said adjacent ends being spaced apart, each said rail section being generally I-shaped in transverse cross section and having a vertical web, a flange extending from each side of said web at the bottom thereof and an enlarged car wheel engaging head at the top of said web, said enlarged head of the adjacent ends of each section having a projecting insert portion extending in the elongated direction of said rail sections in opposed directions, each said supporting structure comprising a stand upon which the rail flanges of the respective rail ends rest and opposed chairs, one on each side of said respective rail ends, each said chair being rigidly fixed to said stand and abutting the rail web and the top of the proximate rail flange to hold said rail rigidly to said stand, and an elongated bridge casting connecting said adjacent ends of the rail sections, said bridge casting being of inverted U-shape in transverse cross section with its top surface and at least the uppermost portion of a car wheel

4

flange engaging side surface having the transverse shape of the tops and corresponding side surfaces of the heads of said rail sections, the ends of said tops of the bridge casting having recesses therein to receive said projecting inserts on said adjacent rail sections, the side portions of said bridge casting extending downwardly with their bottom edges resting respectively on the respective chairs at each end of said bridge casting, said bridge casting being pivotally attached to one of said rail sections by a pivot bolt loosely received in aligned apertures extending transversely through an end of the chair casting end and the adjacent rail section end permitting limited vertical movement of the bridge casting with respect to said rail sections.

2. A track approach bridge according to claim 1 including shoulder castings positioned in overlying relation to said chair castings and each having an inner upwardly extending flange adjacent the base portion of said bridge casting.

References Cited in the file of this patent

UNITED STATES PATENTS

283,632	Merrill	Aug. 21, 1883
877,279	Adams	Jan. 21, 1908
892,328	Stover	June 3, 1908
1,009,250	Kristofferson	Nov. 21, 1911
1,090,949	Smith	Mar. 24, 1914
1,124,554	Swartz	Jan. 12, 1915
1,365,105	Hunsaker	Jan. 11, 1921
1,854,361	Zintek	Apr. 19, 1932
2,013,228	Anderson	Sept. 3, 1935
2,204,395	Balcar	June 11, 1940