C. C. HUNSAKER.

RAILWAY RAIL JOINT.

APPLICATION FILED JUNE 16, 1919.

1,365,105. Patented Jan. 11, 1921.

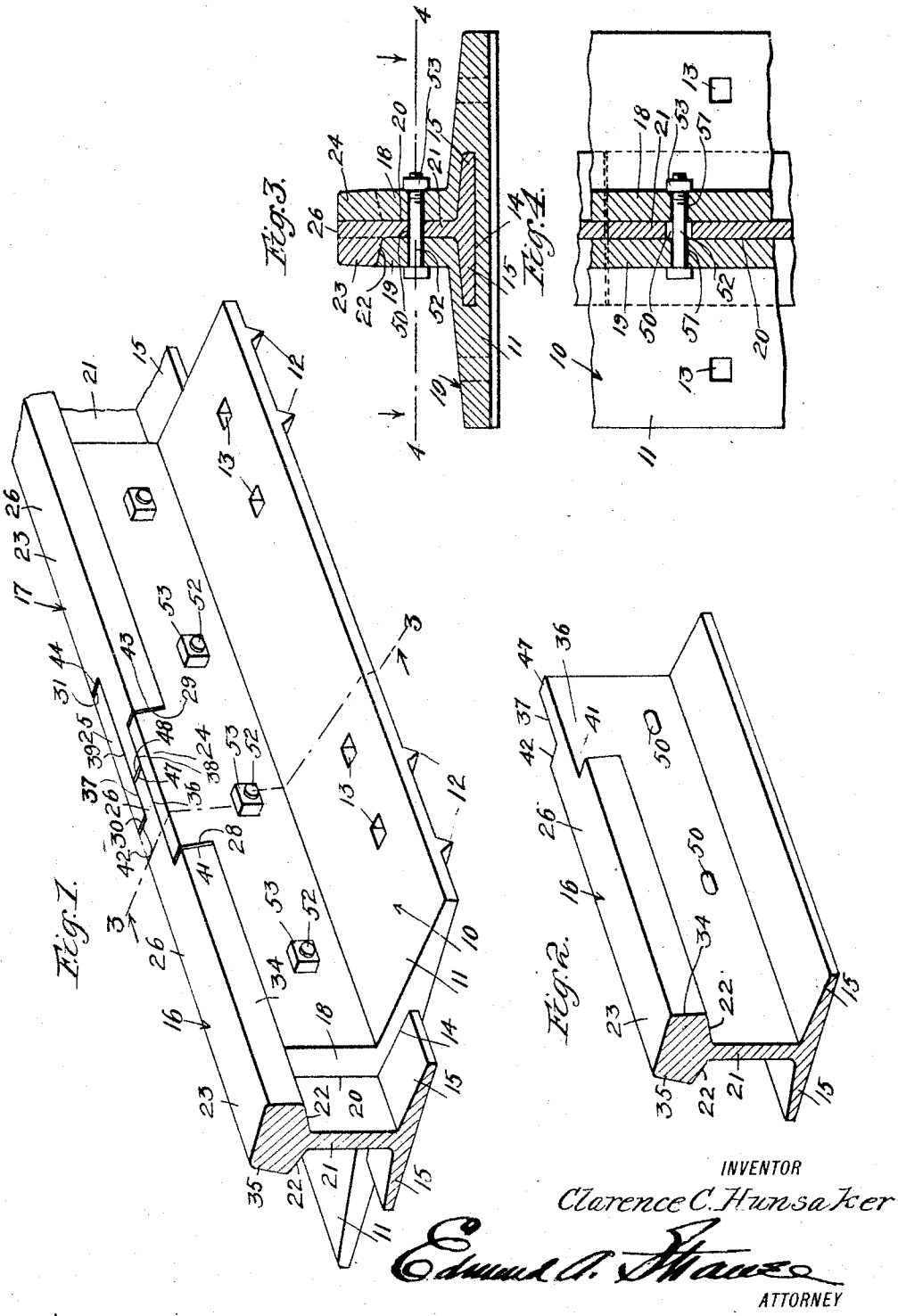


Fig. 1.

Fig. 3.

Fig. 4.

Fig. 2.

INVENTOR

Clarence C. Hunsaker

Edmund A. Hauss

ATTORNEY

UNITED STATES PATENT OFFICE.

CLARENCE C. HUNSAKER, OF SAN LUIS OBISPO, CALIFORNIA.

RAILWAY-RAIL JOINT.

1,365,105. Specification of Letters Patent. Patented Jan. 11, 1921.

Application filed June 16, 1919. Serial No. 304,396.

To all whom it may concern:

Be it known that I, CLARENCE C. HUNSAKER, a citizen of the United States, residing at San Luis Obispo, in the county of San Luis Obispo, State of California, have invented new and useful Improvements in Railway-Rail Joints, of which the following is a specification.

This invention relates to railway rail joints, and is particularly designed to overcome many of the defects found in rail joints now in common use.

In many of the rail joints now in common use, the ends of abutting rails are squared and held in abutting relation by various means such as a fish plate. After a short period of service of these rails, the abutting ends become battered, causing a sag at the joints thereby producing a jolting movement and a disagreeable cracking sound when the wheels of the cars pass over them.

The main object of my present invention is to produce a joint which will overcome the above recited difficulties, by forming what may be termed a staggered joint, whereby the car wheel will pass over a series of small joints formed between the rail ends and the joining member, thus attaining the effect and all of the advantages of a continuous solid rail without subjecting the rail ends to constant wear in any one spot.

Other objects will appear in the following description, will be pointed out in the appended claim, and embodied in the accompanying drawings, in which:

Figure 1 is a perspective view illustrating the ends of a pair of rails secured together by my improved joint.

Fig. 2 is a perspective view of a fragment of a rail showing the method of forming the rail at its ends.

Fig. 3 is a transverse section taken through the rail joint on the line 3—3 of Fig. 1, viewed in the direction indicated by the arrows.

Fig. 4 is a section taken on the line 4—4 of Fig. 3, viewed in the direction indicated by the arrows.

In carrying out my invention I employ a joining member 10 provided with the base plate 11 adapted to rest upon the usual rail ties (not shown). The base plate 11 is provided with a plurality of downwardly projecting knife edged projections 12, adapted to be embedded into the rail ties when said plate is secured thereto by the usual spikes which pass through the perforations 13. By this arrangement the member 10 is held firmly to the rail ties, which in turn are embedded in the road bed.

The member 10 at its lower portion, is provided with a centrally disposed cored channel 14 adapted to receive the flanges 15 of the ends of rails 16 and 17. The channel 14 is properly finished in order that the flanges 15 will fit snugly therein for sliding longitudinal movement. The member 10 is provided with the upwardly extending standards 18 and 19 forming therebetween the channel 20, which is adapted to receive in close fitting relation the webs 21 of the rails 16 and 17. At each end of the member 10, the standards 18 and 19 are of such height that their top edges fit snugly against the lower shoulders 22 of the rail heads 23, and at the center of the member 10 the standards 18 and 19 are extended upwardly as at 24 and 25 to a height equal to the tops 26 of the rails 16 and 17. The extensions 24 and 25 are staggered with respect to each other and have formed thereon the shoulders 28, 29, 30 and 31, as clearly shown in Fig. 1 of the drawings.

At the ends of each of the rails 16 and 17, the projecting flanges 34 and 35 of the heads are cut away as at 36, 37, 38 and 39 back to the webs 21 of the rails, thus leaving the shoulders 41 and 42 on the rail 16 which are staggered with respect to each other, and the shoulders 43 and 44 on the rail 17 which are also staggered with respect to each other, as clearly shown in Figs. 1 and 2 of the drawings.

In assembling the rails 16 and 17 and the joining member 10, the shoulders 41 and 42 of the rail 16 are adapted to rest adjacent the shoulders 28 and 30 on the standards 18 and 19, and the shoulders 43 and 44 of the rail 17 rest adjacent the shoulders 29 and 31 on the standards 18 and 19, and the ends 47 and 48 of the rail webs also rest adjacent each other at a point between the standard extensions 24 and 25.

The webs of the rails 16 and 17 are provided with the longitudinal slots 50, and the standards 18 and 19 are provided with circular apertures 51 adapted to register with the slots 50, through which the bolts 52 pass and are secured in place by the nuts 53.

By the above recited arrangement it will be clearly seen that the rails will be permitted to slide longitudinally in the member

10 when expanding or contracting, but will be held securely together to preserve an even and smooth surface on the head.

By my improved rail joint construction it will be obvious that the gaps between the rails and joining member are of considerably smaller area than those of the common type of rail joint, and are staggered in such a manner that the load is never directly over more than one gap at a time, thereby reducing to a minimum the wear at these joints, thus avoiding the sag common to the rail joint of the ordinary type.

What I claim is:

A rail joint comprising a joining member provided with a base plate having a channel adapted to receive the flanges of the ends of oppositely disposed rails, and having a pair of oppositely disposed upwardly extending standards forming therebetween a space adapted to receive the webs of said rails, the top edges of said standards at their outer extremities being adapted to rest adjacent the lower surface of the rail heads the edges of said standards being provided with upstanding integral lugs staggered with respect to each other, said lugs adapted to extend upwardly into corresponding recesses formed by cutaway portions of oppositely disposed abutting ends of said pair of rails, the top edges of the lugs of said standard being flush with the top of said rail heads, said standards and said rail being provided with registering elongated apertures to receive locking bolts, and means for securing said joining member to the rail ties.

In witness that I claim the foregoing I have hereunto subscribed my name this 31st day of May, 1919.

CLARENCE C. HUNSAKER.

Witnesses:

ALBERT NELSON,

ERIC WICKENDEN.