

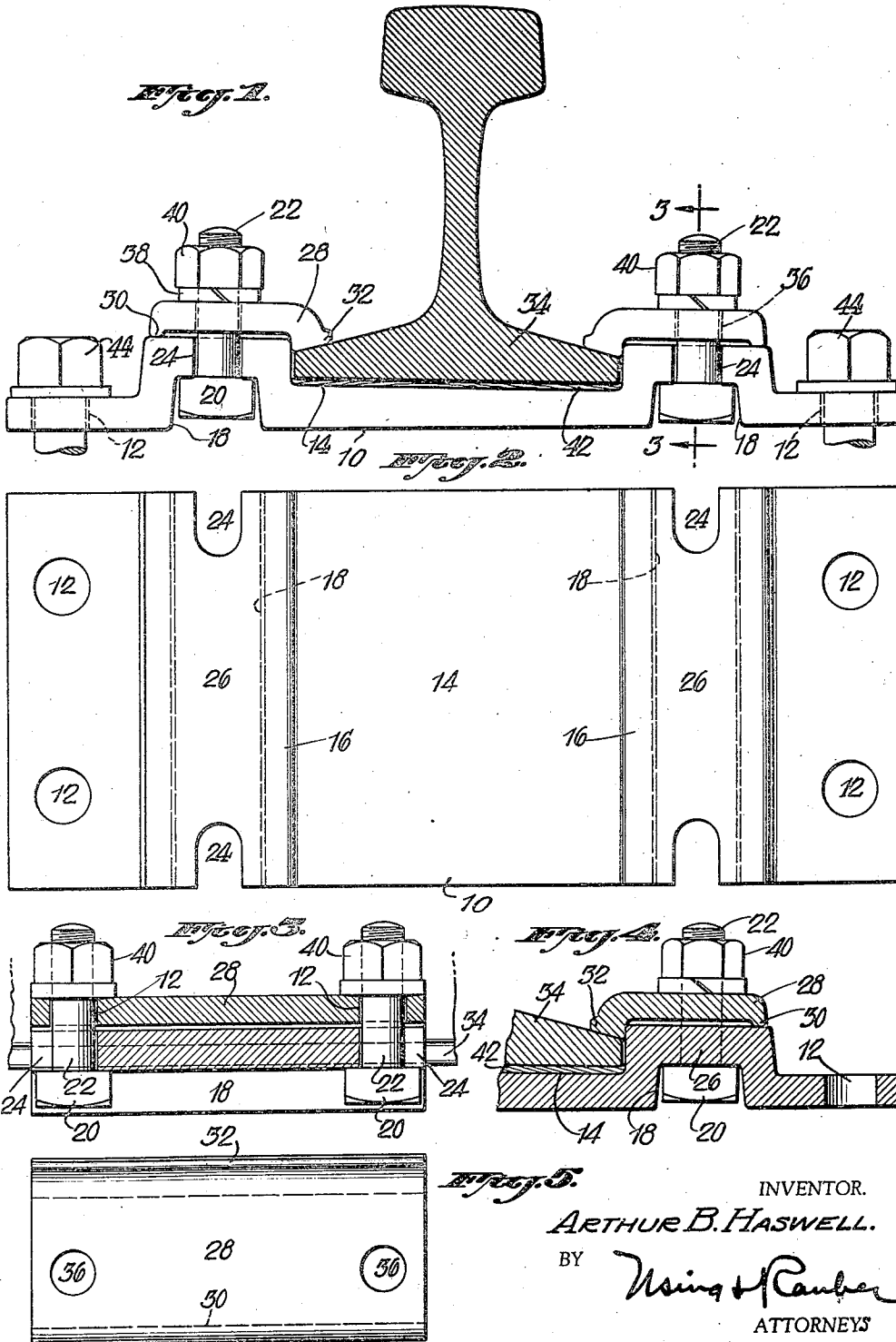
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RAIL FASTENING

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RAIL FASTENING

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3 Claims. (Cl. 238—306)

This invention relates to rail fastenings and aims to provide an improved base member, which can be readily produced by rolling operations, said member being formed to accommodate holding bolts and to coact with rail engaging clips.

Rail fastenings of various types have heretofore been previously proposed, examples of which are found in Buchholz Patent 1,640,750 and in the earlier Kendrick Patent 1,011,208. My present invention relates to detailed features of improvement over the prior patented devices and provides a construction whereby the base member can be produced by rolling out simple blanks of great length on a rolling mill and the intermediate product thus produced can be cut up into short sections adapted to have bolt holes or slots formed therein by punching operations. Or, such punching operations can be performed before the intermediate product is cut up. The above and other features of improvement will be fully apparent from the following specification, when read in connection with the accompanying drawing and will be defined with particularity, in accordance with the requirements of the statutes, in the appended claims.

In the drawing—

Fig. 1 is an end view of a rail fastening embodying my invention and showing a rail in cross section supported thereby; Fig. 2 is a detail plan view of my improved rail base; Fig. 3 is a section on line 3—3 of Fig. 1; Fig. 4 is a fragmentary cross section viewed in the same direction as Fig. 1; Fig. 5 is a detail plan view of one of the rail engaging clips.

Referring in detail to the drawing, 10 represents the improved base member as a whole. This member, as will be clear from Figs. 1 and 2 of the drawing is of substantially uniform cross sectional contour at all points in its length, that is to say, a cross section taken at any plane at right angles to the length of the rail will be of the same contour. This is apparent from a comparison of the end view of Fig. 1 and the sectional view of Fig. 4 which can be assumed as having been taken at right angles to the length of the rail, but passing through one of the holes 12 provided for the accommodation of screws or spikes which are adapted to be passed through such holes for securing the base to the usual railroad tie.

The central portion 14 of the base member forms a rail seat and a pair of parallel abutments 16—16 define the transverse boundaries thereof. Such abutments are chambered, as indicated at 18—18, for the accommodation of the heads 20

of holding bolts 22. The shanks of these bolts are adapted to pass through open ended slots 24, which are formed in the opposite extremities of the upper portions 26 of the abutments.

Rail engaging clips 28 are provided which have fulcrum portions 30 bearing on the upper surfaces of the abutments and nose portions 32, for engagement with the base flanges 34 of the rail. Each clip 28 is provided with a pair of perforations 36—36 through which the shanks of the bolts 22 extend and lock washers 38 and nuts 40 are provided for holding the clips 28 firmly and securely in engagement with the rail flanges. In some cases, I may interpose a shim 42 of wood or other suitable resilient material between the base member and the base flange of the rail.

In assembling the parts, the metal base member is secured to the usual railway tie by driven spikes or by suitable screw spikes 44. The heads of the bolts 22 are then slipped into position with an endwise motion, the heads 20 thereof being accommodated in the chambers of the abutments and the shanks passing through the slots 24. The clips 28 are then assembled with the shanks of the bolts passing through the perforations 36, whereupon the lock washers 38 and nuts 40 are applied, thus firmly clamping the rail upon its seat. Before the parts are clamped, however, it will be appreciated that the spaced perforations in the clips serve to prevent accidental displacement of the bolts.

The base plate above described being of substantially uniform cross section at all points in its length can be readily produced by rolling a suitable steel or other metal blank between the rolls of a rolling mill. Such blank can have the holes 12 and slots 24 readily formed therein by simple punching operations either before or after the elongated blank is cut up into small sections. Thus the plate can be expeditiously manufactured on a relatively low cost mass production basis. This is important for articles of this class, because the competition is keen and great quantities of a given product are required because of the necessity of providing a great number of plates per mile of track. And while the device of my invention can be readily and inexpensively produced in great quantities its strength characteristics are not sacrificed. This is important because in railway equipment of this type safety is a paramount consideration. The rolled product of great strength is to be preferred to cast metal structures, which were heretofore used when the parts were not of uniform section throughout their length.

While I have described quite precisely the specific details of the embodiment of the invention herein disclosed, it is to be understood that various modifications may be made without departure from the invention as defined in the appended claims.

What I claim is:—

1. In combination, a rail having the usual supporting flanges, a base member having a pair of parallel chambered rail abutments extending continuously from end to end of said member in the direction of the rail and defining the boundaries of a seat for said flanges, outwardly opening slots formed in the top walls of the extremities of said abutments, bolts whose heads lie in the chambers of said abutments, the upper faces of said bolt heads being in a plane substantially coincident with the lower surface of said supporting flanges, the shanks of said bolts passing through said slots, respective rail engag-

ing clips each having at one end a downwardly projecting portion fulcruming on the top wall of said rail abutment and at its other end a downwardly projecting nose engaging an upper face of the rail flange and nuts on said bolt shanks clamping the clips to the rail.

2. The combination defined in claim 1 characterized further in that each rail fastening clip has a pair of perforations therein which are pierced by a pair of the said bolts on the same side of the rail which are accommodated in slots at the respective ends of the base member.

3. The combination defined in claim 1 characterized by the fact that the base member as viewed in the direction lengthwise of the rail is symmetrical about the center line of the rail and is of substantially uniform cross section throughout so as to facilitate its quantity production on rolling mills.

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