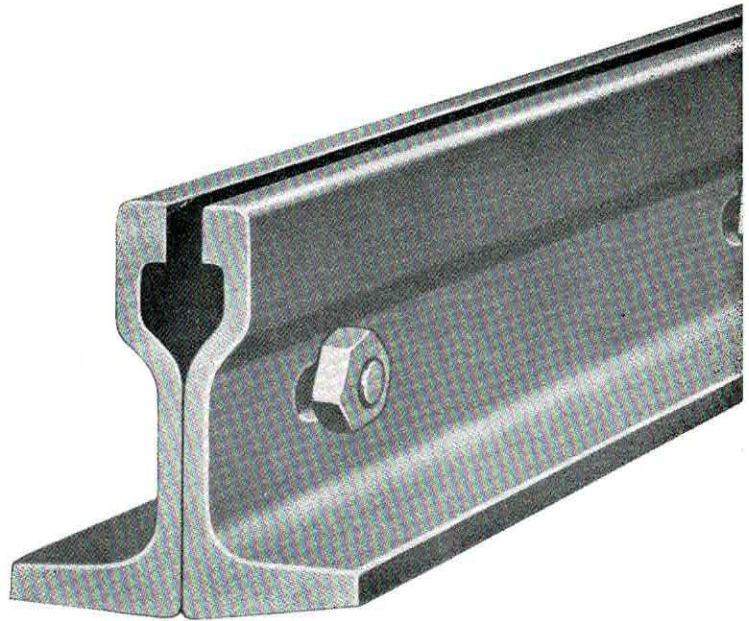


401 Twin Section MonoRail Track

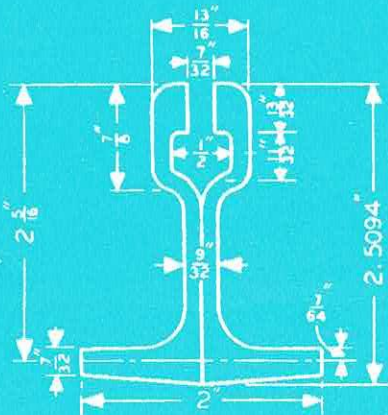
A rail in which every ounce of steel gives the greatest load-carrying capacity, the material used being high grade railroad steel re-heated and re-rolled. It is the toughest and finest material that can be obtained for a job where a combination of strength and resistance to rolling wear is required.

The assembled rail is made up of twin sections bolted together back to back to form a solid unit. The exceptional strength of the rail is due to the design and the high quality of steel used, the lap splice and the added strength provided by the Drop Forged steel hanger. The flanges are heavy and will never bend down under any load carried on the trolleys. The rail has a balanced section, the head of the rail being a mass of steel equalling the weight of the flanges, while the web has a minimum thickness of $9/32$ ".



Specification

Tensile strength, 115,000 lbs. to the square inch
Yield strength, 50,000 lbs. to the square inch
Rolled from special ingot
Carbon Range, .45 to .65
Manganese, .60 to .90
Silicon, approximately .15
Phosphorus, less than .04
Average Brinell hardness, 210
Twin sections bolted together back to back
Self locking clamping bolts, spaced 12" on centres
Clamping bolts and nuts, special steel, heat treated
Width of rail at lower flange, 2"
Height overall, $2\frac{1}{2}$ "
Minimum thickness of web, $9/32$ "
Standard lengths in stock,
6, 8, 9, 10, 12, 13, 15, 16 and 20 ft.
Finish : Zinc chromate primer
Weight : 4.7 pounds per foot.

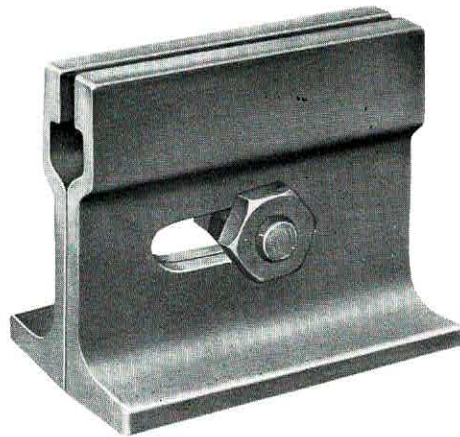


*Dimensions given on this page are for estimating purposes only.
Certified blueprints will be furnished for working drawings.*

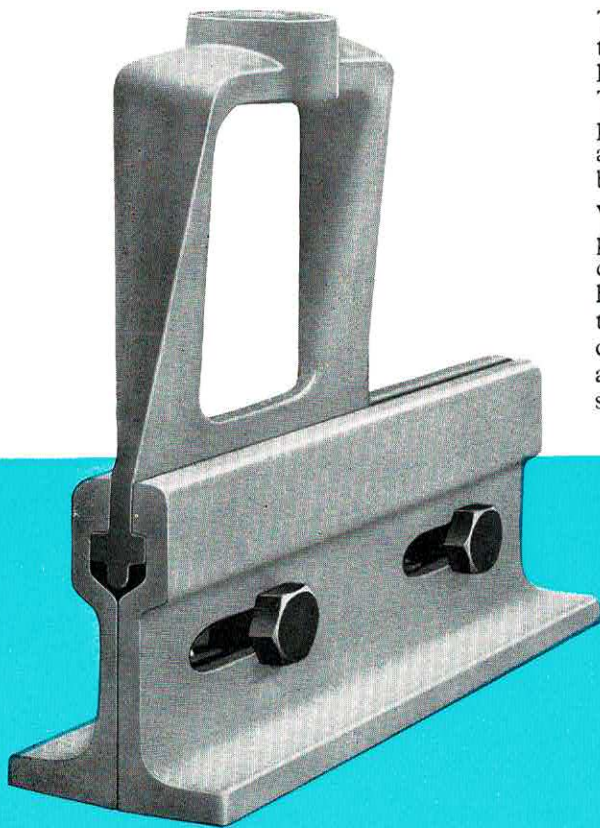
Rail Clamping Bolts

The automatic, positive, locking feature of the nuts and heads of MonoRail clamping bolts is unique. The bolt head and nut bind against the fillet or swell of the rail head. This does not prevent drawing the nuts tight with a wrench, but the binding resistance is sufficient to lock the bolt and nut securely in place. The bolts are special steel, heat-treated, having a tensile strength of 100,000 lbs. to the sq. in. The bolt heads will not break off nor will the threads strip.

The bolts are seated in slotted holes and are not subject to shear stress in service or when rail is bent. The clamping bolts are placed in the rail on 12-inch centres except at splicing points, where additional bolts are used.

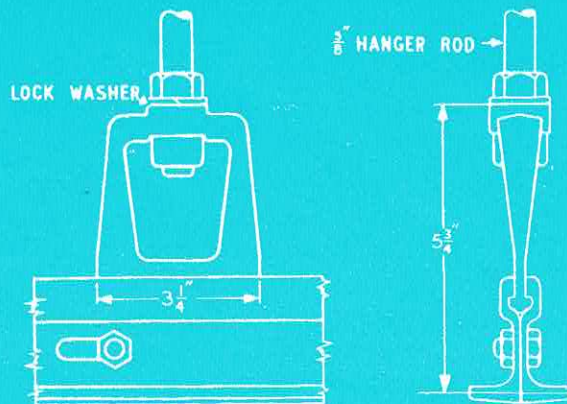


Rail Section with Forged Hanger in Place



The Drop Forged track hangers are clamped solidly inside the rail head. The rail has a tremendous grip on the hanger which prevents all tendency toward "creeping". The inside overhang of the rail head rests on the square projecting shoulders of the forged hanger. The hanger at this point is $3\frac{1}{4}$ " wide and has a carrying capacity far beyond maximum ratings.

While the forged hanger is clamped solidly in place, its position can be changed or shifted in either direction by driving it with a hammer, without danger of damage to hanger or rail. It is not necessary to loosen bolts or nuts to change the position of the hanger. Trolley wheels cannot strike against hangers clamped inside the rail head and have perfect clearance even in going around curves of shortest radius.



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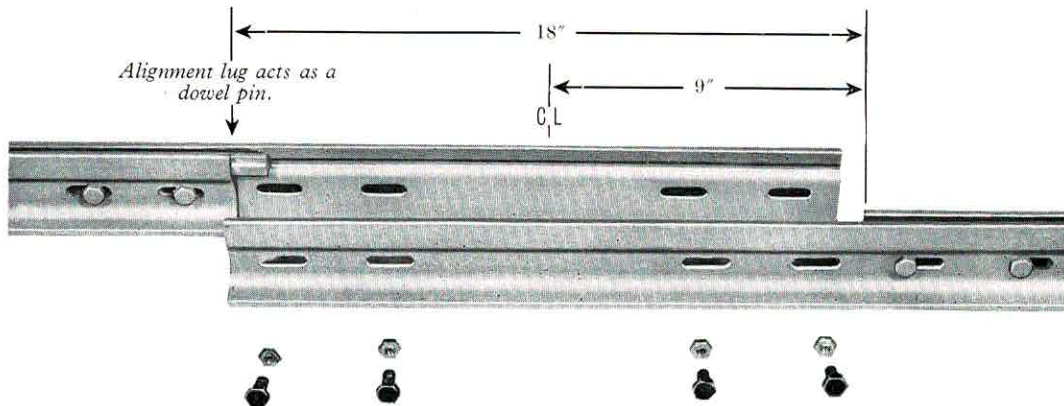
Assembled MonoRail



Track is assembled with the hangers clamped in rail at the required spacing. The illustration also shows the lap at end for splicing into the main rail. The clamping bolts used at each splicing point are so spaced that when it is necessary to bend the assembled rail on site, there are always matching holes for the

clamping bolts. The slotted holes in which bolts are seated prevent any shear stress on the bolt when rail is bent. Clamping bolts are placed in the end lap ready for the splice, and when the splice is made and the nuts tightened, they are automatically locked and will never work loose.

Splicing Method

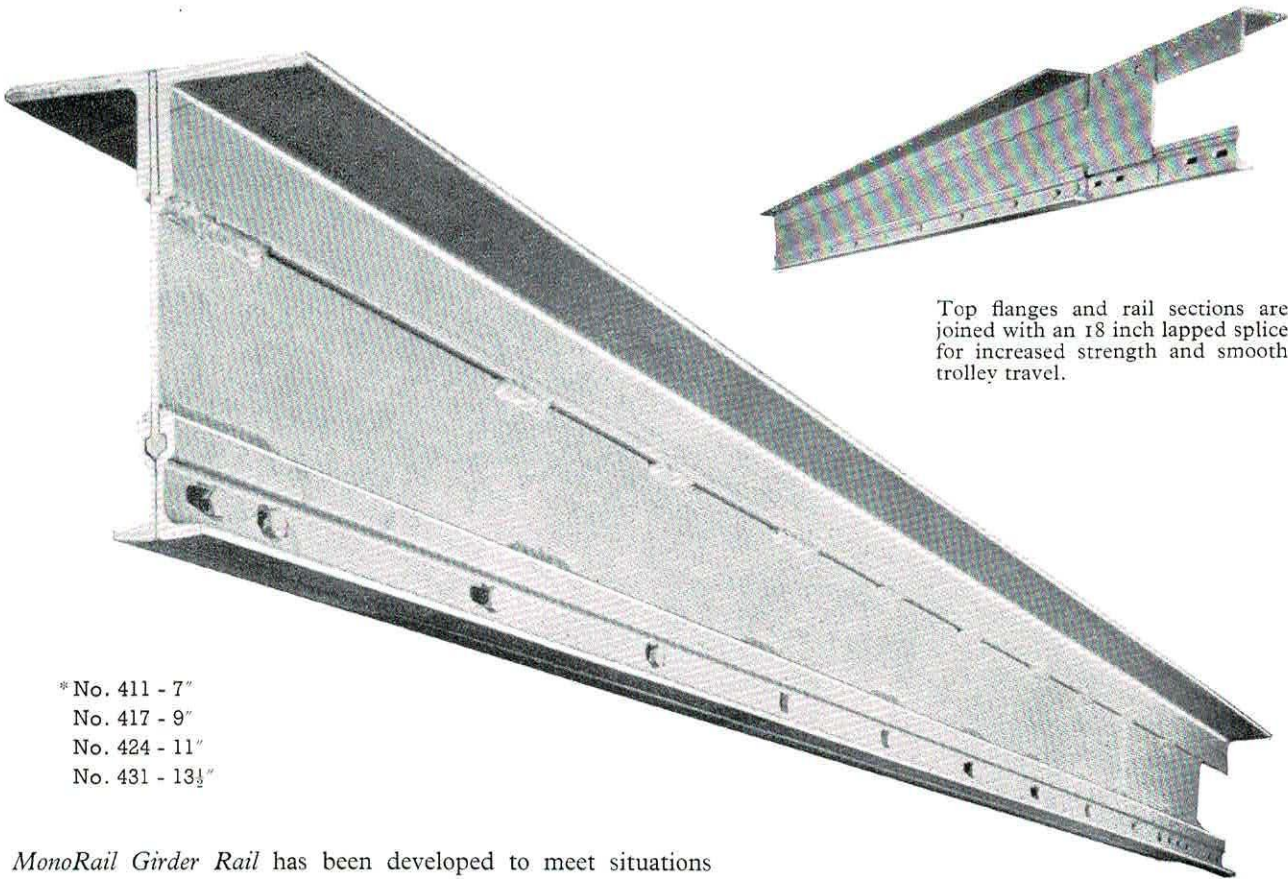


The lap splice in the MonoRail system eliminates the use of splice clamps, staggers the joints, gives the runway the strength of a continuous rail, and does away completely with the roughness of a "butt" joint. In this way MonoRail has overcome the handicap of the "butt" joint which has always been regarded as the weak point in overhead track systems. The wheels on trolleys pass over the splicing point on

one side of the rail at a time without jolt, or jar, or vibration. This illustration shows the lapping ends of two assembled rail sections being brought together to form the splice. At the joint will be seen the alignment lug which brings the treads of the rail into perfect alignment. Note that the splice break in the rail flange occurs 18 inches apart on opposite sides of the rail.

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MonoRail Girder Rail



Top flanges and rail sections are joined with an 18 inch lapped splice for increased strength and smooth trolley travel.

*No. 411 - 7"
No. 417 - 9"
No. 424 - 11"
No. 431 - 13½"

MonoRail Girder Rail has been developed to meet situations where widely spaced support points make long spans necessary. Girder Rail is also used for bridge members of MonoRail cranes of various types, track sections for lifts, scales and similar applications where maximum strength and rigidity is required.

To the inherent great load bearing capacity of MonoRail track has been added the support of a steel plate web and the stiffening of two structural angles welded together to form a homogeneous unit of superstructure and track.

Girder Rail is supplied in 7", 9", 11" and 13½" depths with two flange widths to each depth, giving a variety of compound sections and enabling longer spans to be covered and greater loads to be carried.

Specifications

Lower Chord:
Standard MonoRail.

Upper Chord:
Two structural angles, size to suit depth.

Web:
Steel plate, $\frac{3}{16}$ " solidly joined by arc welding.

Depth:
7, 9, 11 and 13½ inch depths.

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