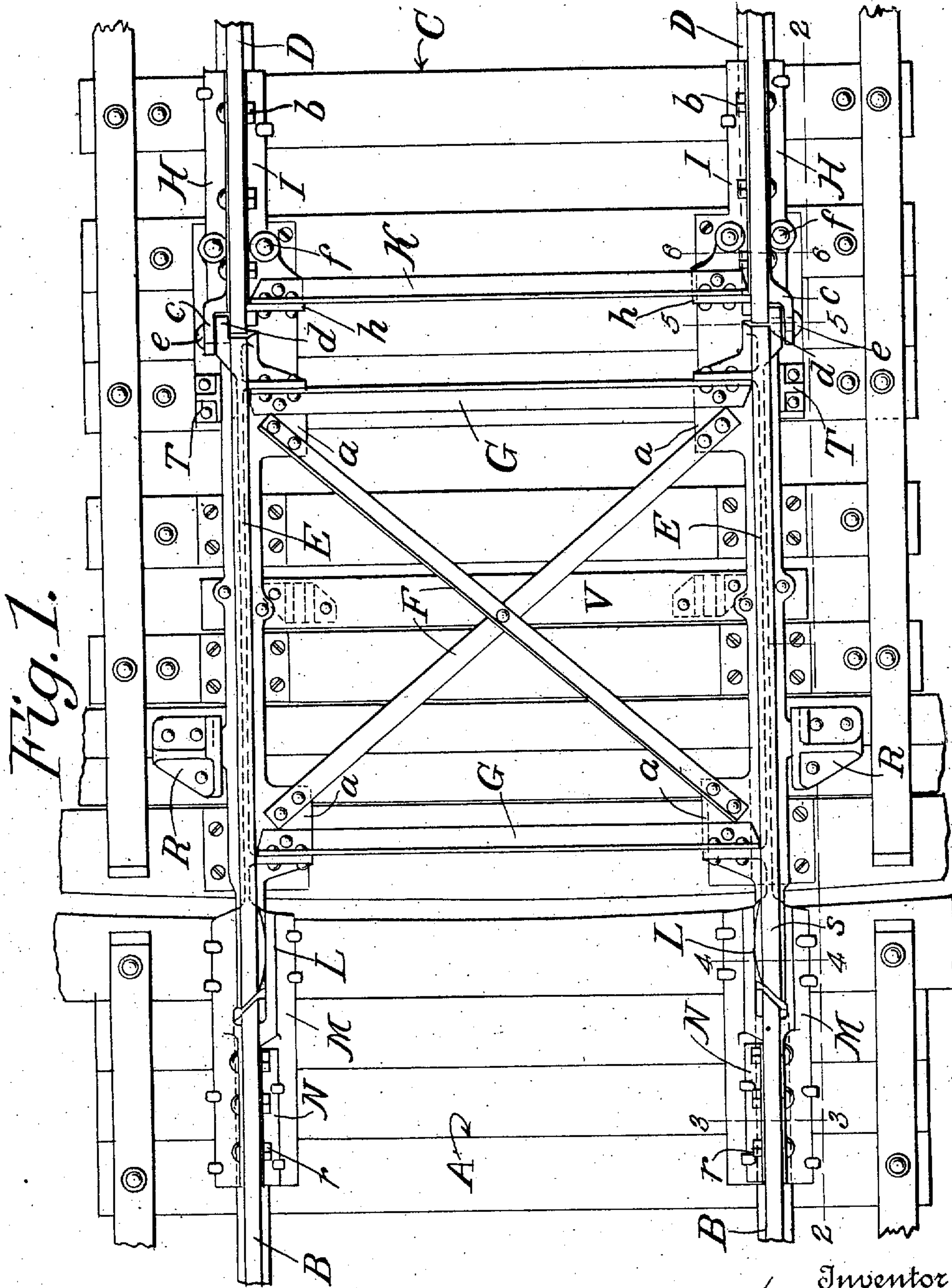


No. 850,161.

PATENTED APR. 16, 1907.

J. M. HYSAN.
RAIL LOCK FOR DRAWBRIDGES.
APPLICATION FILED FEB. 23, 1907.

2 SHEETS—SHEET 1.



Witnesses
E. Walton Brewington,
Robert B. Cromer

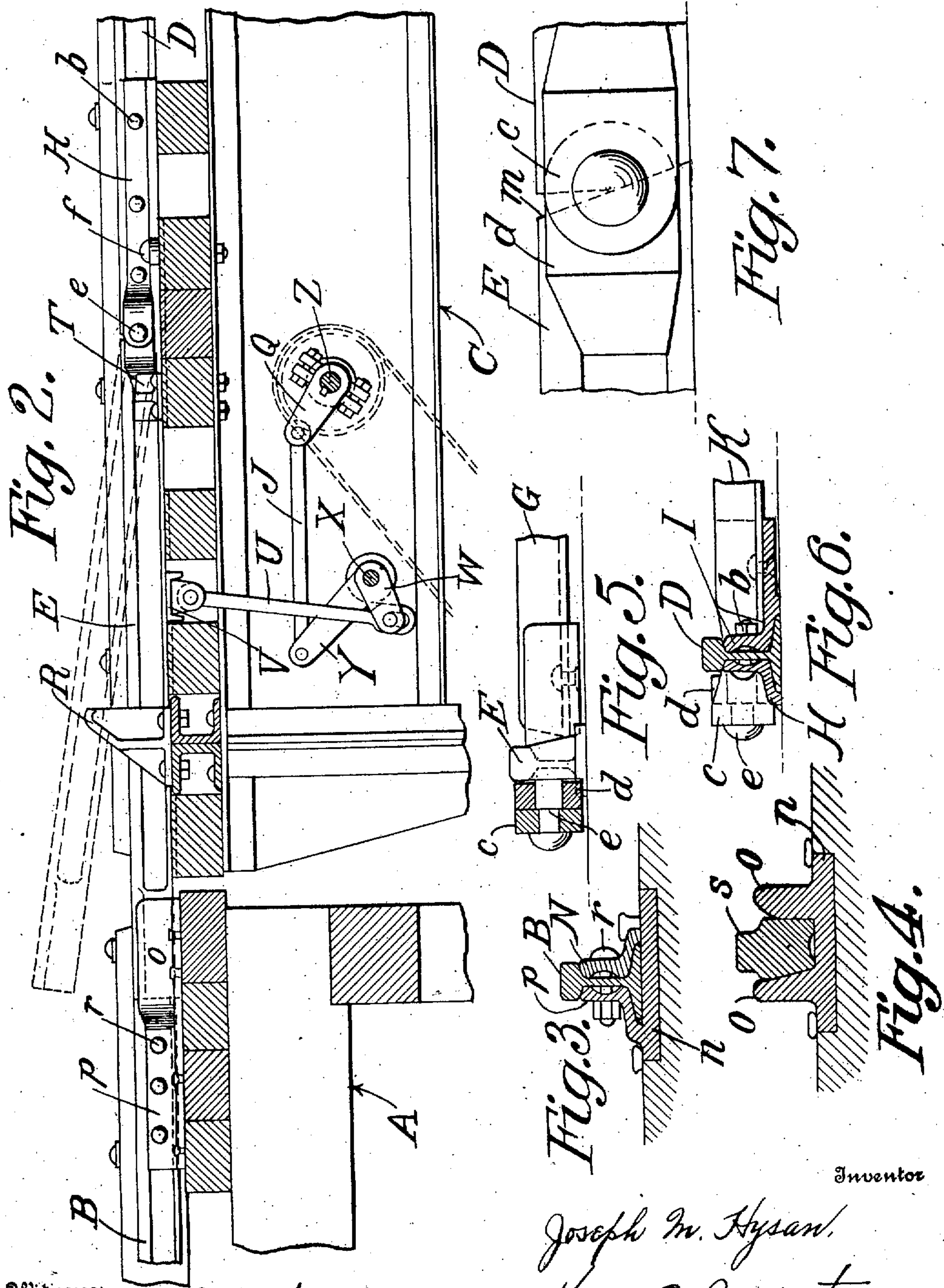
Inventor
Joseph M. Hysan,
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UNITED STATES PATENT OFFICE.

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TO M. HALE DINNEEN, OF BALTIMORE, MARYLAND.

RAIL-LOCK FOR DRAWBRIDGES.

No. 850,161.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed February 23, 1907. Serial No. 358,988.

To all whom it may concern:

Be it known that I, JOSEPH M. HYSAN, a citizen of the United States, residing at Baltimore city and State of Maryland, have invented certain new and useful Improvements in Rail-Locks for Drawbridges, of which the following is a specification.

This invention relates to rail-locks for drawbridges; and the object is to provide a secure lock between the abutment track-section and the draw-span track-section.

The invention comprises a pair of movable rail-sections interposed between the ends of these two track-sections to bridge the space between the abutment and the draw-span. These rail-sections are pivotally mounted on a transverse axis at their draw-span ends. Means is provided whereby the rail-sections are swung upward and downward, and there are sockets on the abutment which receive the ends of the rail-sections when the latter are in normal horizontal position. Preferably the tiltable rail-sections are pivoted to the ends of the rails of the draw-span track-section, and the invention contemplates the rigid connection of the two rail-sections, so that they will move as one member.

A feature of novelty is embodied in the formation of each socket referred to in one casting with a chair for the contiguous end of the rail of the abutment track-section.

A further feature of novelty resides in extending the base of each rail-section at its pivotal end longitudinally beyond the tread, the object of this construction being to prevent the free ends of the rail tilting upward as the wheels roll upon the pivotal ends.

Further features of novelty are found in guides for preventing lateral displacement of the rail-sections when elevated and in bearing-brackets disposed adjacent the pivotal ends of said rail-sections for the purpose of taking up side thrust therein.

These and other features of the invention will be more fully understood as the specification proceeds, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the preferred embodiment of my invention. Fig. 2 is a sectional elevation on line 2 2, Fig. 1. Fig. 3 is a detail section on line 3 3, Fig. 1. Fig. 4 is a detail section on line 4 4, Fig. 1. Fig. 5 is a detail section on the line 5 5, Fig. 1. Fig. 6 is a detail section on the line 6 6, Fig. 1; and

Fig. 7 is a fragmentary elevation of one of the joints.

Referring now to these drawings, A indicates the abutment having the rails B of its stationary track-section, and C the draw-span bearing the rails D of its stationary track-section. The opposed ends of these two track-sections are spaced at a considerable interval, and bridging this space and the gap between the abutment and draw-span are the movable rail-sections E. These are provided with inward-directed horizontal flanges *a*, preferably adjacent their ends, and said flanges serve as means of attachment for the connecting-irons F and G, which unite the two rail-sections to form one member. The irons F are shown as being obliquely disposed and crossing approximately at their center, while the irons G are normal to the rail-sections and are secured to the flanges *a* adjacent the ends of the irons F. The member thus formed is mounted for pivotal movement on a transverse axis in the following manner: The ends of the rails D, as shown in Fig. 6, are clasped at both sides by the castings H and I, which are clamped against the rails by means of bolts *b* passing transversely there-through and through the castings. The outer castings H are provided at their ends adjacent the ends of the rails with laterally-offset lugs *c*, which extend beyond the ends of the rails. These lugs are transversely apertured, their apertures being in register with similar apertures formed in lugs *d*, which are laterally offset from the ends of the rail-sections F and are received within the lugs *c*. Pivots *e* extend through the registering apertures and complete the pivotal connection.

Both of the castings H and I are provided with basal flanges which are spiked to the draw-span in the usual manner and are in addition bolted thereto by means of bolts *f*; thus preventing reaction at the hinge-joint forcing the ends of the stationary rails upward. The inner castings I are conveniently provided with vertical flanges *h*, to which may be secured the ends of a transverse angle-iron K, which serves to still further strengthen the end of the draw-span track-section.

In order to prevent the free ends of the rail-sections E from being tilted upward when the weight of the locomotive comes upon their pivotal ends, I elect to incline the

rear end faces of these sections, as shown in Fig. 7, where *m* indicates the manner in which the base of the rail-section is extended longitudinally beyond the tread with the result indicated.

The free ends of the rail-sections E, which rest upon the abutment A, are received within sockets L, whose function is to hold the ends of these sections securely locked against lateral movement when they are in normal horizontal position. While these sockets may be formed in a variety of ways, I consider it advantageous and distinctly novel to constitute them as parts of integral castings M, which also serve as chairs for the ends of the rails B. Said castings are shown as comprising horizontal rail-supporting bases *n*, opposed upright flanges *o*, which constitute the open top sockets L, and a continuation *p* of one of these flanges, which is formed to clasp the top of the basal flange and the web at one side of the end of rail B. A separate clamp-plate N for each casting forms a counterpart for each continuation *p*, and said plate and continuation are clamped together upon the intermediate rail end by means of the transverse bolts *r*.

It is to be noted that the free ends *s* of the rail-sections E are formed solid and with substantially straight upright side walls, as indicated in Fig. 4 in order to fit properly within the sockets L. As indicated in Figs. 3 and 4, the bases *n* of the castings M may be let into the surface of the abutment so as to be flush therewith, greater strength being thus secured.

R indicates brackets or guides which extend up from the draw-span adjacent the free ends of the rail-sections E at the outer sides thereof and constitute means for preventing lateral displacement of said rail-sections when in elevated position. Other bearing-brackets T are shown as located outside of and contiguous the rail-sections adjacent their pivotal ends, the function of these brackets being to take up side thrust which would otherwise come upon the hinge-joints.

The means for effecting elevation and depression of the rail-section member is shown in Fig. 2, being illustrated as comprising a link or links U, pivoted at their upper ends to a channel-bar V, connecting the under sides of the two rail-sections and at their lower ends to a lever or levers W, carried by a transverse rock-shaft X, this rock-shaft being actuated by a lever or levers Y, a link or links J connecting said levers Y with a lever or levers Q, carried by the shaft Z. Shaft Z is the shaft which in all drawbridges of usual construction operates the wedges.

What is claimed as new is—

1. In a rail-lock for drawbridges, the combination with the abutment track-section and the draw-span track-section spaced from each other at a considerable interval, of a

pair of rail-sections disposed to extend between and connect said track-sections, transverse pivotal mounting for the ends of said rail-sections adjacent the end of the draw-span track-section, means rigidly connecting said rail-sections to constitute one tiltable member, means whereby said member is swung upward and downward, and sockets for the reception of the free ends of said rail-sections when in normal horizontal position.

2. In a rail-lock for drawbridges, the combination of a pair of rail-sections hingedly mounted at one end on a transverse axis and having their free ends solid and formed with substantially straight upright side walls, said castings each consisting of a horizontal rail-supporting base, and a pair of opposed upright flanges on the forward portion of said base constituting an open-top socket for the reception of the free ends of said rail-sections, one of said flanges being extended rearward and formed to embrace the top of one basal flange and the side of the web of a stationary rail end, a clamp-plate for each casting formed to embrace the top of the basal flange and the web at the opposite side of such rail end, and means for clamping said flange extensions and clamp-plates together upon the intermediate rail end.

3. In a rail-lock for drawbridges, the combination with the abutment having a track-section and the draw-span also bearing a track-section, of a pair of rail-sections disposed to extend between the ends of said track-sections, transverse pivotal mounting for the draw-span ends of said rail-sections, means whereby said rail-sections are swung upward and downward, sockets on said abutment for receiving the free ends of the rail-sections when in normal horizontal position, and guides extended upward from said draw-span and constructed and arranged to prevent lateral displacement of said rail-sections when elevated.

4. In a rail-lock for drawbridges, the combination with the abutment having a track-section and the draw-span also bearing a track-section, of a pair of rail-sections disposed to extend between the ends of said track-section, transverse pivotal mounting for the draw-span ends of said rail-sections, means whereby said rail-sections are swung upward and downward, sockets on said abutment for receiving the free ends of the rail-sections, and upright bearing-brackets adjacent the pivotal ends of said rail-sections for taking up side thrust therein.

5. In a rail-lock for drawbridges, the combination with the abutment track-section and the draw-span track-section spaced from each other at a considerable interval, of a pair of rail-sections disposed to extend between and bridge the interval intermediate said track-sections, said rail-sections being provided with inward-extending horizontal

flanges, transverse pivotal mounting for the ends of said rail-sections adjacent the end of the draw-span track-sections, crossed diagonal irons secured to said flanges and connecting said rail-sections, and a pair of connecting-irons normal to said rail-sections and secured to said flanges adjacent the ends of said diagonal irons.

6. In a rail-lock for drawbridges, the combination of a pair of rails forming part of a draw-span track-section, said rails having laterally-offset lugs at one end transversely apertured, a pair of rail-sections having one end contiguous said rail ends, said ends of said rail-sections having laterally-offset lugs received within said other lugs and having transverse apertures registering with the apertures therein, and pivots passing through said registering apertures.

7. In a rail-lock for drawbridges, the combination of a pair of rails forming part of a draw-span track-section, a pair of castings clamping the opposite sides of the ends of said rails, the outer of each pair of castings having a laterally-offset pivot-lug and the inner having a securing-flange, a pair of rail-sections having one end contiguous the ends

of said rails and provided with laterally-offset pivot-lugs overlapping said other lugs, pivots connecting said lugs, and an angle-iron secured to and connecting said flanges.

8. In a rail-lock for drawbridges, the combination with the abutment having a track-section and the draw-span also bearing a track-section, of a pair of rail-sections disposed to extend between the ends of said track-sections and to bridge the space between said abutment and draw-span, transverse pivotal mounting for the draw-span ends of said rail-sections, sockets on said abutment for receiving the free ends of the rail-sections when in normal horizontal position, a transverse shaft beneath the floor of said draw-span and having an arm, a link connecting said arm and said rail-sections, and a second transverse shaft and connections for operating said other shaft.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH M. HYSAN.

Witnesses:

E. WALTON BREWINGTON,
HOWARD D. ADAMS.