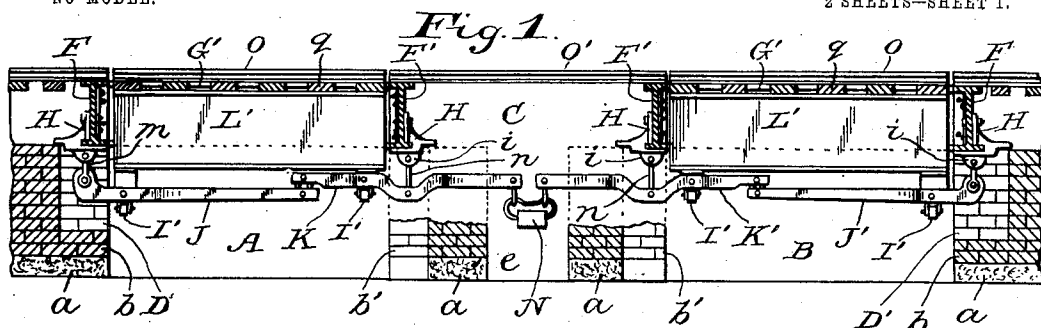
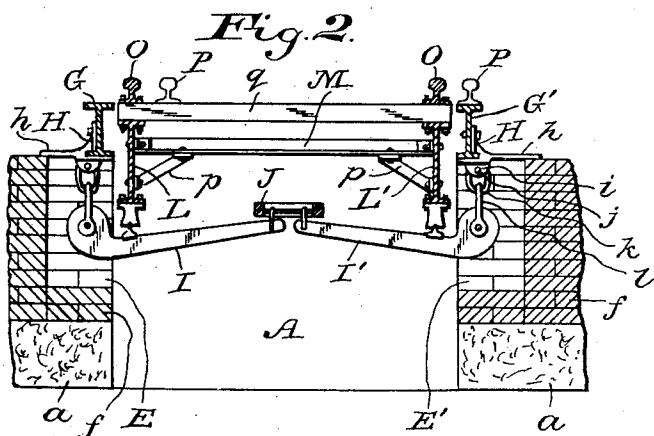
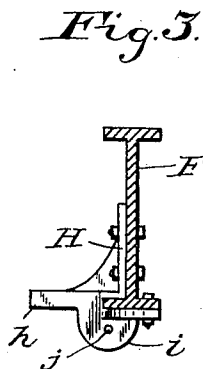
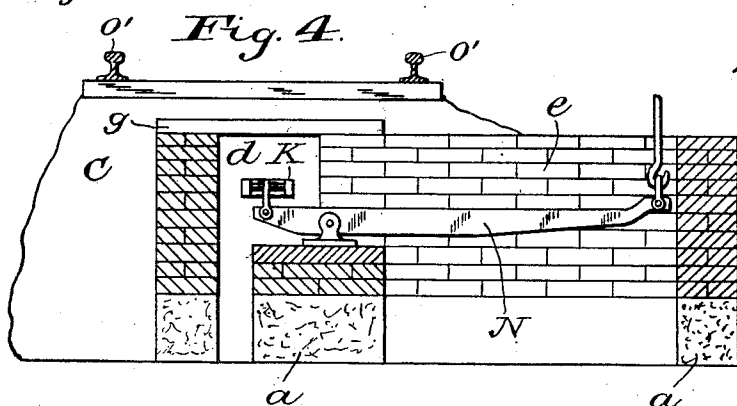
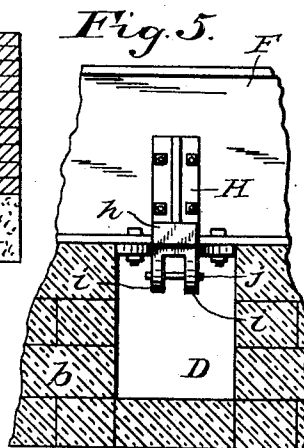
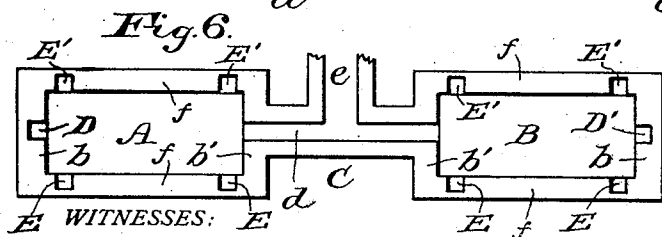


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RAILWAY TRACK SCALE.  
APPLICATION FILED JAN. 5, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



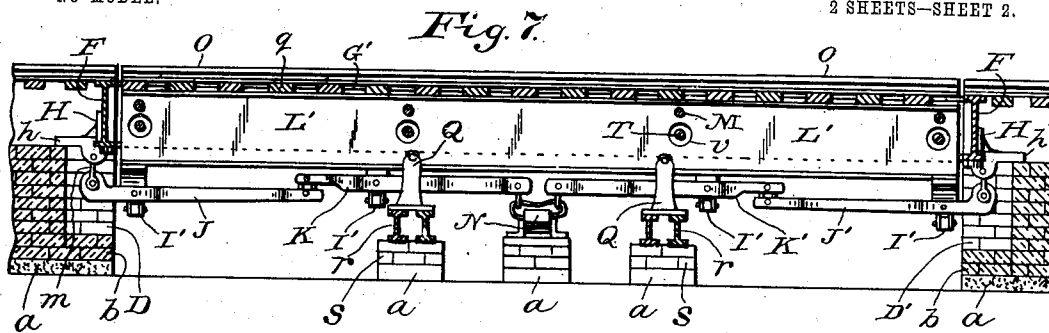
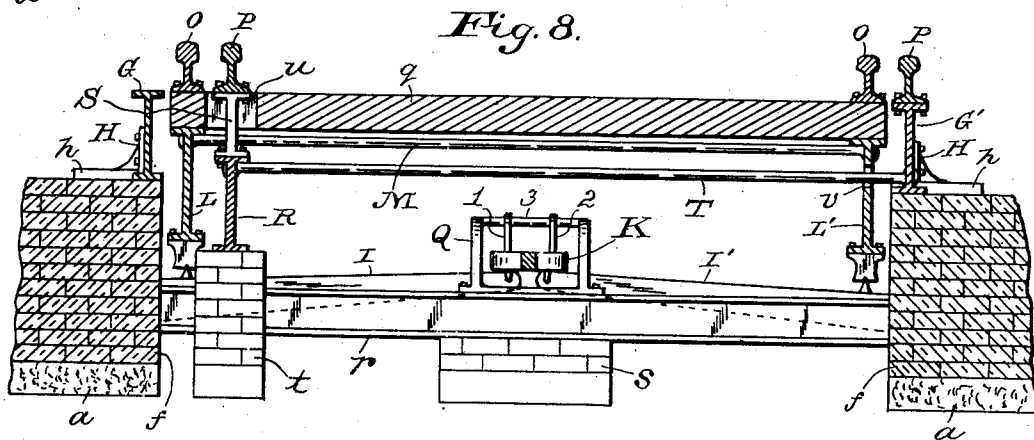
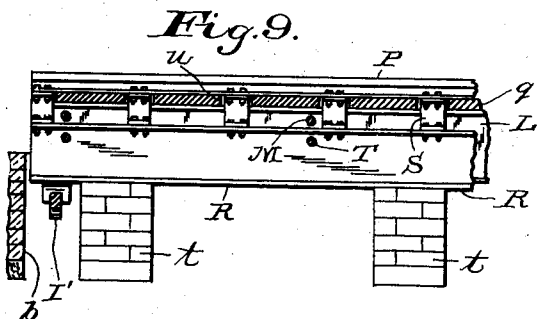
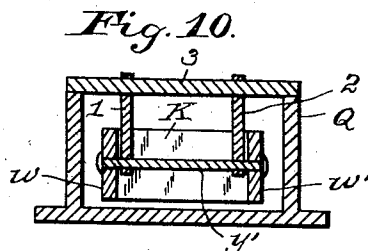
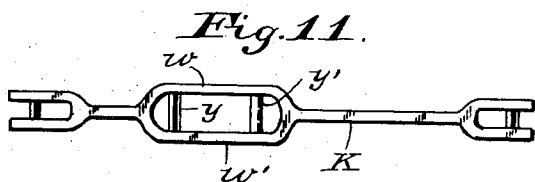
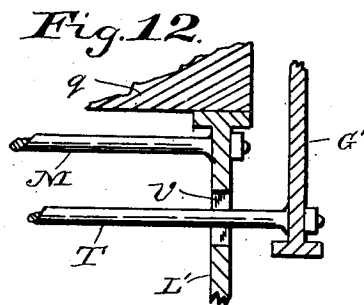
Dor W. Vorhies.  
Stella Snider.

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APPLICATION FILED JAN. 5, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

JAMES A. BARCLAY, OF INDIANAPOLIS, INDIANA.

## RAILWAY-TRACK SCALE.

SPECIFICATION forming part of Letters Patent No. 741,212, dated October 13, 1903.

Application filed January 5, 1903. Serial No. 137,759. (No model.)

### *To all whom it may concern:*

Be it known that I, JAMES A. BARCLAY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Railway-Track Scales; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to scales that are adapted for weighing loads on various large vehicles and the vehicles themselves, as well as railway-cars and their loads, and it has particular reference to the foundation-walls and framing and the supports for the levers that carry the platform in scales of this character.

The object of the invention is to provide an economic construction in weighing-scales that may permit of comparatively shallow and short and narrow foundations, so that a saving in excavations and masonry may be effected, and also in order to be able to locate scales where deep foundations may be impracticable.

My invention consists in weighing-scales having the principal levers thereof supported in a novel manner by the coping of the foundation-walls; and it consists also in the novel parts and in the combination and arrangement of parts, as hereinafter particularly described, and pointed out in the claims.

Referring to the drawings, Figure 1 represents in a fragmentary longitudinal vertical sectional view a scale construction substantially in accordance with my invention; Fig. 2, a transverse vertical sectional view of the same; Fig. 3, a transverse sectional view of the coping, showing a bracket attached thereto for supporting a lever; Fig. 4, a fragmentary transverse view showing the lever to which the scale-beam may be connected; Fig. 5, a fragmentary side elevation of a coping and sectional view of the pit-wall, showing a bracket attached to the coping in a pocket or recess in the wall; Fig. 6, a top plan view of the pit or foundation walls, showing the pockets therein for accommodating the supported ends of the principal levers; Fig. 7, a fragmentary longitudinal vertical sectional

view of the scale as constructed with a single platform and pit therefor; Fig. 8, a transverse vertical sectional view in a plane near the center of the pit, showing the supports for a dead rail; Fig. 9, a fragmentary longitudinal vertical sectional view showing supports for a dead rail; Fig. 10, a transverse vertical sectional view showing details of stand-support for a longitudinal lever; Fig. 11, a top plan view of a longitudinal lever, and Fig. 12 a fragmentary sectional detail view showing arrangement of platform-braces.

Similar reference characters in the drawings designate like parts.

In practically carrying out my invention the scales preferably have two sections separated a suitable distance, with the levers of the two sections connected together and with one beam, so that two platforms are arranged only at the proper places to accommodate the two trucks of a car, leaving a dead track between the platforms that either truck of the car must cross when the car is being placed on the scales, this plan economizing largely in structural expenses. A continuous pit and a single platform, however, may be employed if preferred.

In the drawings illustrating double-platform construction, A and B designate two main pits, and *c* the natural earth section between the pits. A foundation *a* is provided, usually of concrete, which may extend over the bottoms of the pits if desired, upon which the side and end walls are built for supporting the mechanism. Portions of the foundations and walls are omitted herein in order to avoid obscuring less obvious parts of the scales. The end walls *b b* have pockets D D' in their inner faces, which are open at the tops of the walls and they are situated midway between the side walls. The pits A and B are connected by a narrow walled pit *d*, which is connected by a narrow walled transverse pit *e*, the ends of the pit *d* in the end walls *b' b'* serving as recesses in which to hang levers, besides permitting the levers to reach to the pit *e*. The side walls *f* have pockets EE', similar to the pockets DD', which are arranged near the ends of the pits A and B, opening thereto. Upon the walls of the pits A and B metallic copings F F' G G' are set, so as to be close to the pits and extend-

ing over the pockets in the walls, the copings being preferably composed of I-section form of structural steel or iron, their ends being suitably connected together at the corners of the pits.

Brackets H are secured to the coping members above the pockets in the walls and portions of the brackets extend into the pockets. Each bracket preferably has an arm *h* extending to the top of the wall at the rear of the pocket, and ears *i* of the brackets extend below the coping into the pockets, suitable pivots *j* being mounted in the ears.

In the pockets E E' links *k* are hung on the pivots *i* and loops *l* are hung on the links and pivotally support the transverse levers I I', which extend nearly half-way across the pits to other levers. In the pockets D D' loops *m* are connected to the pivots *i* and pivotally support longitudinal levers J J', the latter preferably having bifurcated ends of the usual forms, as indicated in Fig. 2. The movable ends of the levers I I', that are situated near the end walls *b b*, are connected by loops in the usual manner with the levers J J'. Loops *n* are connected to the pivots *i*, that are supported by means of the copings F F' and pivotally support longitudinal levers K K' in the pit *d*, both levers K K' being supported intermediately of their ends. One end of each lever K and K' is connected in the usual manner by means of loops to the movable ends of the levers J J', and near these connections they are similarly connected by means of loops to the movable ends of the levers I I', that are hung near the end walls *b' b'*. The opposite ends of the levers K K' are connected by means of suitable loops to the inner end of the pivoted lever N in the pit *d*, which lever extends into the pit *e* for connection with the beam, as will be understood.

The platforms are pivotally mounted upon the levers I I' in a suitable manner, and they comprise each a pair of horizontal beams L L', extending along the inner faces of the side walls of the pits A and B above their supporting levers, the beams having suitable transverse braces M and may have angle-braces *p* secured thereto. The beams preferably have wooden ties *q* or a floor thereon, upon which are secured the track-rails O, in alinement with the rails O' on the ground section C and also with the rails leading to the scales. If desired, dead rails P P, forming a run-around track, may be provided in the usual manner, one rail being placed upon a coping G or G' and the other upon pillars rising from the pits, as will be hereinafter described.

When a single continuous platform is preferred, it may be mounted on the same system of levers as those upon which the plural platforms are mounted or upon other systems of levers, and the earth section C will be eliminated and walls *b b'* will not be required, and obviously the copings F' F' will not be employed. Usually the platform in this case will be about three times the length of one of

the plural platforms. In lieu of the copings F' F' for supporting the levers K K' the latter may be supported on stands Q, which may be suitably supported on pillars, but preferably on beams *r*, extending across the pit, and the beams may be centrally supported by pillars *s*. When the run-around rails P P are used, one of the rails is bolted to the flanges of the I-section coping at one side of the platform, and the companion rail is supported independently of the platform at the top thereof, pillars *t* in the pit being employed for the purpose, and preferably the rail is connected with the pillars by means of I-beams R, resting on the pillars and posts S, secured on the beams and extending through apertures *u* in the floor *q*. The braces M may extend between pairs of the posts S. Tie-bars T may be secured to one of the copings and also to the beam R, extending through an opening *v* in the platform-beam, as in the beam L'. In some cases the levers K K' are offset near their central portions, as in Fig. 1, and they may be straight, as in Fig. 7. The central portions thereof are usually open, as shown particularly in Fig. 11, thus having double bars *w w'*, between which the pivot-pins *y y'* extend. The pin *y'* is connected by loops 1 and 2 to a pivot-pin 3 on the top of the stand Q, which supports the beam. The plural platform-sections and the intervening dead section may each be about fourteen feet in length, thus providing compact durable construction, in which the saving in cost will be apparent.

In practical use the scales may be operated in the usual manner, and it will be found that the copings, together with the arms *h* of the brackets H resting upon the walls, will provide stable supports for the levers that are thus substantially supported by the copings.

Having thus described my invention, what I claim as new is—

1. Weighing-scales including longitudinal copings and also transverse copings, all having lateral flanges at the tops and bottoms thereof, supports under the copings, track-rails extending from the tops of the transverse copings, brackets attached to the longitudinal copings near the ends thereof, transverse levers connected with the brackets, brackets attached to the middle portions of the transverse copings, longitudinal levers connected with the last-described brackets and also with the transverse levers, a beam-lever connected with the longitudinal levers, a platform mounted on the transverse levers, and track-rails on the platform.

2. Weighing-scales including opposing longitudinal walls each having a plurality of pockets therein arranged in opposing pairs, opposing transverse walls each having a pocket therein arranged in a plane midway between the longitudinal walls, copings having flanges at the tops and bottoms thereof and mounted on the walls over the pockets, brackets attached to the copings between the

flanges thereof above the pockets, longitudinal levers connected with the brackets in the pockets of the transverse walls, transverse levers connected with the brackets in the pockets of the longitudinal walls and also with the longitudinal levers, a beam-lever connected operatively with the longitudinal levers, and a platform mounted on the transverse levers.

10 3. Weighing-scales comprising a pair of platform-pits having walls provided with pockets, a lever-pit connecting the pair of platform-pits, copings mounted on the walls and extending across the pockets and also across the lever-pit, brackets attached to the copings above the pockets, transverse levers connected with the brackets at the sides of the pits, longitudinal levers connected with the brackets at the ends of the pits opposite the lever-pit and connected with adjacent transverse levers, longitudinal levers mounted in the lever-pit and connected with adjacent transverse levers, a beam-lever connected operatively with the longitudinal levers, and a pair of platforms mounted on the transverse levers.

4. Weighing-scales comprising a pair of platform-pits having longitudinal and transverse walls provided with pockets, a lever-pit connecting the platform-pits, copings mounted on the walls and extending across the pockets and also across the lever-pit, brackets attached to the copings above the pockets and also above the lever-pit, longitudinal levers in the lever-pit connected with the brackets above the same, longitudinal levers connected with the brackets opposite the lever-pit, transverse levers connected with the brackets above the pockets in the side walls and also with the longitudinal levers, a beam-lever operatively connected with the longitudinal levers, a pair of platforms mounted on the transverse levers, track-rails mounted on the platforms, and immovable rails supported between the pair of platforms in alinement with the rails on the platforms.

5. Weighing-scales comprising a plurality of scale-platform pits having walls provided with pockets, a lever-pit connecting the platform-pits, a transverse pit connecting with the lever-pit, copings mounted on the walls and extending across the pockets, brackets attached to the copings and bearing on the walls, levers supported by means of the

brackets, a plurality of platforms mounted on the levers, track-rails mounted on the platforms, and dead or immovable rails supported between the plurality of platform-pits in alinement with the track-rails of the platforms.

6. In weighing-scales, the combination of a plurality of end walls each having a centrally-disposed pocket, a plurality of side walls each having a pocket near an end wall and also a pocket remote from the other pocket, metallic side and end copings having flanges mounted on the walls and extending across the pockets, brackets attached to the copings above the flanges thereof at the pockets, longitudinal levers connected together and also with the brackets at the pockets in the end walls, transverse levers connected with the longitudinal levers and also with the brackets in the pockets in the side walls, a platform mounted on the transverse levers, track-rails mounted on the platform, and a beam-lever connected operatively with the longitudinal levers.

7. In weighing-scales, the combination of connected metallic pit-copings having flanges at the tops and the bottoms thereof, brackets secured to the copings and each having a part extending against the body and a part extending under the lower flanges of a coping and having a lateral arm and also ears, pivots in the ears, loops connected to the pivots, levers connected together and also to the loops, a platform mounted on the levers, track-rails on the platform, and supports under the copings.

8. In weighing-scales, the combination of a pit having walls, copings on the walls and having upper and lower flanges, brackets attached to the bodies of the copings and also to the lower flanges thereof, a track-rail secured to the upper flanges of one of the copings, levers connected with the brackets, a floored platform mounted on the levers, rails on the platform, pillars in the pit, a beam mounted on the pillars, posts attached to the beam and extending through the floor of the platform, and a track-rail secured to the posts.

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

JAMES A. BARCLAY.

Witnesses:

HARRY D. PIERSON,  
E. T. SILVIUS.