To all whom it may concern:

Be it known that I, LUCIUS R. ROSEBROOK, a citizen of the United States of America, and resident of Oskaloosa, Mahaska county, Iowa, have invented a new and useful Approach for Track-Scales, of which the following is a specification.

The object of this invention is to provide an improved approach for track scales designed to prevent sudden shocks and jars to the scale mechanism through the advent of cars to the scale tracks.

A further object of this invention is to provide an inexpensive and efficient means for transferring the weight of railway cars from track rails to scale rails, and avoiding shock and damage to the scale mechanism.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a plan illustrating a portion of a track rail, scale rail, guard rail and approach member embodying my invention. Fig. 2 is a side elevation of the same members, partly in section. Fig. 3 is a cross-section on the line 3—3, and Figs. 4 and 5 are cross-sections on the lines 4—4 and 5—5 respectively, of Fig. 1, on an enlarged scale.

In the construction of the device as shown the numeral 19 designates a portion of a scale platform, with which are associated suitable weighing devices, not shown, for use in weighing railway rolling stock. On the platform 10 are mounted scale rails 11, one of which is shown, in alignment with but preferably slightly spaced from track rails 12, of a railway track, carried by cross ties 13 in the usual manner. A guard rail 14 is mounted on and carried by the ties 13 and spaced inwardly a short distance from the track rail 12, and said guard rail terminates short of the joint between said track rail and the scale rail 11 and between the two ties nearest the scale. A bed or foundation 15 of concrete preferably underlies the two ties 13 nearest the scale. A plate 16, formed of spring steel, has one end portion mounted beneath the guard rail 14 and extends parallel with the track rail 12 and scale rail 11, the central portion of said plate being substantially coincident with the joint between said rails so that approximately one-half of said plate overlies, loosely, the scale platform.

The outer end portion of the plate 16 is secured rigidly by means of anchor bolts 17 which pass through the second tie 13 from the scale and into the foundation 15, where they are connected by an anchor plate 18. The plate 16 overlies loosely but is not secured to the tie 13 next the scale, and overlies but is not secured to the scale platform. An approach or bridge member 19 overlies and is secured by bolts 20 to that portion of the spring plate 16 which lies beyond the guard rail 14, and is parallel with and in close contact with the inner sides of the track rail 12 and scale rail 11, crossing the joint between said rails. A portion of the approach or bridge member 19 may overlie the inner base flanges of the track and scale rails, so that the outer face of said member may be in close contact with the balls of said rails. The inner face of the approach or bridge member 19, relatively to the median line of the track, preferably is inclined, so that said member is materially wider at its base than at its top. The approach or bridge member 19 is formed with an inner lip 21, the top of which is in a straight line at a higher elevation than the top of the rails 11, 12; and with an outer lip 22, the top of which is on an arc rising at its central and highest point to approximately the center of the ball of the rail 11. It should be noted in this connection that the central point of the bridge or approach member 19 is beyond the joint between the rails 11, 12, the greater portion of said member overhanging the scale platform. Between the lips 21, 22 the approach or bridge member 19 is formed with a flangeway or groove 23 which is also on a convex arc substantially concentric with the arc formed by the top of the outer lip, as indicated by dotted lines in Fig. 2. The groove or flangeway 23 extends from end to end of the approach or bridge member and is adapted to receive the flange of a railway car wheel, such as 24. End portions of the flangeway or groove 23 are suitably low that a car wheel is carried on the rails, 11 or 12, in the usual manner, the face of the wheel resting on the ball of the rail; but the curvature and rise of such flangeway is such that in its central portion a flange of a car wheel contacts the approach member and the wheel is lifted from the adjacent rail, which is the scale rail 11; and in fact such transfer of the car wheel is effected before it reaches the joint between the rails 11, 12, so that the weight of the load is transferred...
from the track rail to the approach member and from it to the scale rail. As the car wheel moves along the approach member the spring plate 16 yields and presses downwardly upon the scale platform and gradually lowers said platform, so that by the time the flange of the wheel has passed to the downwardly inclined portion of the flange-way and the wheel comes into contact with the scale rail, said platform, and the weighing devices have been depressed to their full extent and are in weighing position, relative to the load thereon. This prevents sudden shocks and jars to the weighing apparatus, injury to the knife edges and springs, and also crawling of the scale rails which often results from sudden impact of a load upon the scale. In other words, the approach device holds the scale platform firmly until the car trucks are on the scale, and then it releases the scale so that it is free for the weighing operation.

A brace bar 25 is provided and is fixed by the bolts 20 at the outer end of each approach or bridge member, forming a bracing connection between the two bridge members at opposite sides of each end of the scale platform. This preserves the proper alignment and spacing of the approach members and also divides the shock between the two members so connected.

I claim as my invention—
1. An approach for railway track scales, comprising a spring plate anchored adjustable to and having one end portion loosely overlapping the scale platform, and a bridge member mounted on and secured to the overlapping portion of said plate, said bridge member being adjacent to the inner side of a scale rail on said platform and extending beyond the end of said rail, said bridge member being formed with a grooved flange-way parallel with the scale rail adapted to receive flanges of car wheels.

2. An approach for railway track scales, comprising a spring plate anchored adjustable to and having one end portion loosely overlapping the scale platform, and a bridge member mounted on and secured to the overlapping portion of said plate, said bridge member being in contact with the inner side of a scale rail on said platform and extending beyond the end of said rail, said bridge member being formed with a grooved flange-way parallel with the scale rail adapted to receive flanges of car wheels, said flange-way being convexly arcuate and of a height opposite the end of said scale rail to raise the face of a car wheel clear of said rail.

3. An approach for railway track scales, comprising a spring plate anchored at one end a short distance from the scale platform, extending loosely over a rigid member adjacent said platform, and having its other end portion overlapping loosely the end portion of said platform, and a bridge member mounted on and secured to said plate and extending from a point adjacent said rigid member substantially throughout the length of the overlapping portion of said plate, said bridge member being adapted to receive the flange of a car wheel and raise said wheel so that it does not contact the end of a scale rail on said platform but first contacts said rail at a distance from the end thereof.

4. An approach for track scales, comprising, in combination with track rails and scale rails ailing therewith and carried by a scale platform, bridge members mounted adjacent the inner faces of said track and scale rails and crossing the joints therebetween, said bridge members being mounted on spring plates anchored adjacent the track rails at points spaced from said joints, and loosely overlapping end portions of said platform adjacent the scale rails, said bridge members being formed with convex flange-ways adapted to receive the flange of a car wheel, said flange-ways being so arranged that car wheels are elevated from the track rails and carried by said bridge members across the joints between said track rails and the scale rails and are lowered gradually into contact with said scale rails at points spaced from said joints, said spring plates permitting a downward yielding of said bridge members and a downward movement of the scale platform under a load.

5. An approach for track scales, comprising, in combination with track rails and scale rails ailing therewith and carried by a scale platform, bridge members mounted adjacent the inner faces of said track and scale rails and crossing the joints therebetween, said bridge members being anchored at the ends adjacent the track rails and overlapping the scale platform adjacent the scale rails, said bridge members being formed with convex flange-ways adapted to receive the flange of car wheels, said flange-ways being so arranged that car wheels are elevated from the track rails and carried by said bridge members across the joints between said track and scale rails and are lowered into contact with said scale rails at points spaced from said joints, and a tie member rigidly securing said bridge members together at points adjacent said joints.

6. An approach for track scales, comprising, in combination with track rails supported by spaced cross ties and scale rails ailing with said track rails and supported by a scale platform, spring plates mounted adjacent said track and scale rails and crossing the joint therebetween, said plates being anchored to the second cross tie from said platform and crossing loosely the cross tie next said platform and loosely overlapping said platform.
said platform, and bridge members mounted on and fixed to said plates, said bridge members being adapted to receive flanges of car wheels and elevate the same so that said wheels clear the terminal end portions of said track rails and initial end portions of said scale rails and permit said wheels to contact said scale rails at points spaced from said joints.

7. In an approach for track scales, a bridge member suitably mounted adjacent the initial end of a scale rail and extending beyond the end thereof, said bridge member being formed with a straight side in contact with said scale rail and with its opposite side inclined, said bridge member being formed with a convex flangeway extending from end to end thereof parallel with said scale rail.

Signed at Oskaloosa, in the county of Mahaska and State of Iowa, this 26th day of July, 1920.

LUCIUS R. ROSEBROOK.