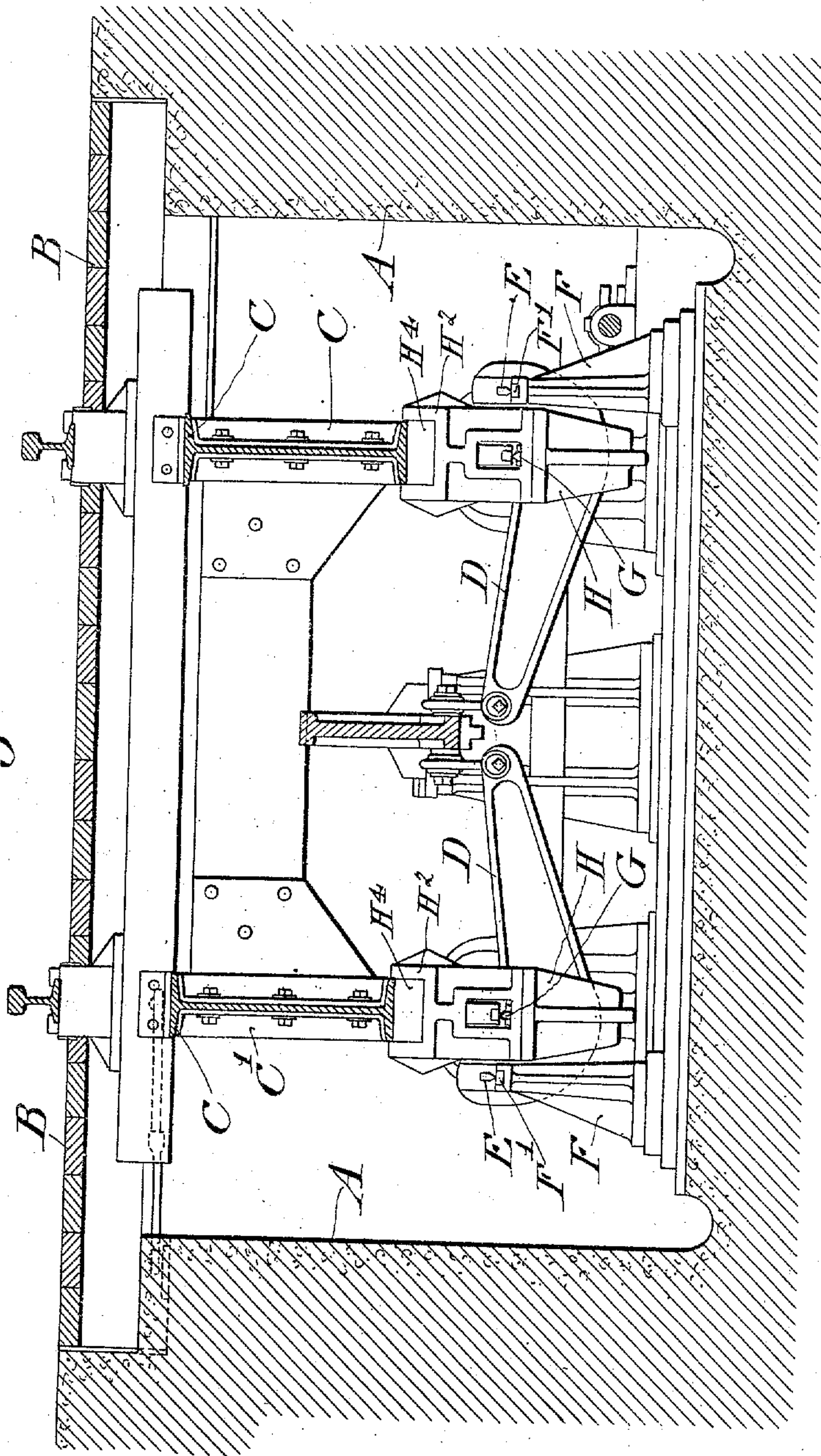


956,322.

A. W. EPRIGHT.
WEIGHING SCALE.
APPLICATION FILED JUNE 12, 1909.

Patented Apr. 26, 1910.
2 SHEETS—SHEET 1.

Fig. 1.



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WEIGHING-SCALE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALONZO W. EPRIGHT, a citizen of the United States of America, residing in Altoona, in the county of Blair, State of Pennsylvania, have invented a certain new and useful Improvement in Weighing-Scales, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

The present invention relates to platform weighing scales and particularly to the means employed for connecting the platform to its primary supporting levers.

The object of the invention is the provision of connecting means for the purpose mentioned which are simple and effective and well adapted to withstand the severe operating conditions met with in the use of railway scales in which the invention is primarily designed for use.

The various features of novelty which characterize my invention are pointed out with particularity in the claims annexed to and forming a part of this specification. For a better understanding of my invention, however, and the advantages possessed by it, reference should be had to the accompanying drawings and descriptive matter in which I have illustrated and described one form in which the invention may be embodied.

Of the drawings, Figure 1 is a sectional elevation of a sufficient portion of a railway scale to illustrate the manner in which the invention is used. Fig. 2 is an elevation taken similarly to, but on a larger scale than, Fig. 1 and showing a portion only of the structure shown in Fig. 1. Fig. 3 is a section on the line 3-3 of Fig. 2. Fig. 4 is a perspective view of a portion of the platform support.

In the drawings, A represents the wall of the scale pit, B the platform as a whole, C the main longitudinal platform beams. The platform is directly supported by a number of pairs of similar transverse primary levers D, of which, one pair is shown in Fig. 1. Each lever D is provided with a fulcrum knife edge pivot E which engages a suitable pivot bearing block F' mounted in the fulcrum stand F. Each lever D is also provided with a knife edge pivot G which extends transversely to the lever at the upper side thereof.

To transmit the proper portion of the weight of the platform B to each lever D, a bracket H for each lever engages the beam C above the lever. The beam C may be stiffened adjacent the bracket as by braces C'. This bracket is provided with spaced apart alined ears or pivot projections I which engage the lower ends of the links J at opposite sides of the lever D. The upper ends of the links J pass over the ends of a saddle bracket K which extends across the top of the corresponding lever D and is formed with a cavity in its under side in which it receives a hardened steel pivot bearing block L which engages the knife edge pivot G.

In the preferred construction shown, each bracket H is divided into two U shaped parts, the ends of the legs of which are connected together by bolts H' for convenience in assembling, adjusting and repairing the scale. The ears I are formed on the vertical legs of the lower half of the bracket. The upper half of the bracket is provided with flanges H² which, with the top wall H³ of the body of the upper half of the bracket, form a channel to receive the beam. As is clearly shown in Fig. 3 the wall H³ is inclined to the under surface of the beam C and a wedge shaped block H⁴ is placed between the wall H³ and the corresponding beam C. By adjusting this wedge lengthwise the distance between the beam C and ears I may be adjusted. This adjustment makes it easy to properly distribute the weight of the platform and load among the various levers D. Holes H⁵ and H⁶ are formed in the flanges H² and wedge H⁴ respectively, different ones of which register in different adjustments. A pin H' passing through a registering set of holes H⁵ and H⁶ secures the parts together in the desired adjustment.

Bolts M passing through the upper portion of the brackets H, wedges H⁴ and the bottom flanges of the beams C and braces C' serve to lock the parts together in any desired adjustment. To permit the adjustment of the wedges H⁴ it will be understood that they are longitudinally slotted to receive the bolts M.

The links J and ears I have their contacting surfaces J' and I' so curved that the links may have a pendulum motion with respect to the ears in a plane parallel to the

length of the lever D, and also in a plane transverse to that lever. The links J have their portions J² engaging the top of the saddle block in the form of straight bars with their under sides cylindrical. The link portions J² engage shallow depressions K³ formed in the upper side of the saddle block and extending transversely to its length. In consequence the links J may have a pendulum motion relative to the saddle block in a plane transverse to the length of the lever D but not in a plane parallel to the length of the beam.

Each saddle block K and corresponding links J together are free, of course, to have a pendulum motion about the edge of pivot G. The bottom K² of the cavity K' and the engaging side of the block L are curved about an axis below the saddle block and extending parallel to the length of the lever D and transversely to the length of the beams C. In consequence of this the block L may adjust itself in the saddle block K to thereby equalize the strain on the two links J and to insure a uniformity of pressure along the length of the knife edge pivot G, and this is an important feature since the varying deflection of the beam C with varying loads on the platform is thereby prevented from causing any disturbance in the operation of the scale or any injurious lack of uniformity of the pressure on different portions of the pivots.

With the platform scale support described the vibration of the platform both lateral and longitudinal incident to the movement of the load on and off the platform can take place without throwing the bearings out of adjustment or causing the knife edge pivots to move along the faces of their bearing blocks, and consequently without liability of injuring the bearings. At the same time the connection employed is simple in construction, easy to assemble, adjust and repair, durable and efficient, and well calculated to withstand the severe service conditions to which railway scales are subjected.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. A platform support for a weighing scale comprising in combination a bracket provided with a pair of alined and spaced apart projections, a saddle block, a pair of links connecting the ends of the block and the projections, said block being formed with a cavity in its face having its bottom curved about an axis extending transversely to the length of the saddle, and a bearing block for a knife edge pivot loosely fitted in said cavity, and having its back face

curved to conform to the bottom of said cavity.

2. In a weighing scale the combination with the platform and a supporting lever therefor, having a transverse knife edge pivot at its upper edge, of a bracket on which the platform rests provided with pivot ears at opposite sides of, and projecting toward the lever, a saddle block extending parallel to said knife edge pivot and provided with a bearing resting on the said pivot, and a pair of links one at each side of the lever, and each encircling the adjacent end of the saddle block and the corresponding bracket pivot ear.

3. In a weighing scale the combination with the platform and a supporting lever therefor, having a transverse knife edge pivot at its upper edge, of a bracket on which the platform rests provided with pivots at opposite sides of the lever, a saddle block extending parallel to said knife edge pivot and provided with a bearing resting on the said pivot, and a pair of links one at each side of the lever, and each encircling the adjacent end of the saddle block and the corresponding bracket pivot, said links, saddle block and bracket pivots having their engaging surfaces so formed as to permit the links to have pendulum movements relative to the saddle block in a direction transverse to the scale lever only and relative to the bracket pivots, both transversely and longitudinal of the lever.

4. A platform support for a weighing scale, comprising a bracket having provisions for its pivotal connection to a scale lever and being formed with a channel to receive a platform beam with the bottom of said channel inclined in the direction of its length to the bottom of said beam, a wedge resting in the bottom of said channel and adjustable in the direction of the length of the channel, and means for securing the bracket and wedge together in different adjustments.

5. A platform support for a weighing scale comprising a bracket having an opening through which a scale lever may pass and formed of a pair of U shaped members, the legs of which are secured together end to end and one of which is provided with a platform beam supporting surfaces, and the other of which is provided with a pair of alined ears on the inner sides of its legs whereby said bracket may be pivotally connected to a scale lever passing through it.

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Witnesses:

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