

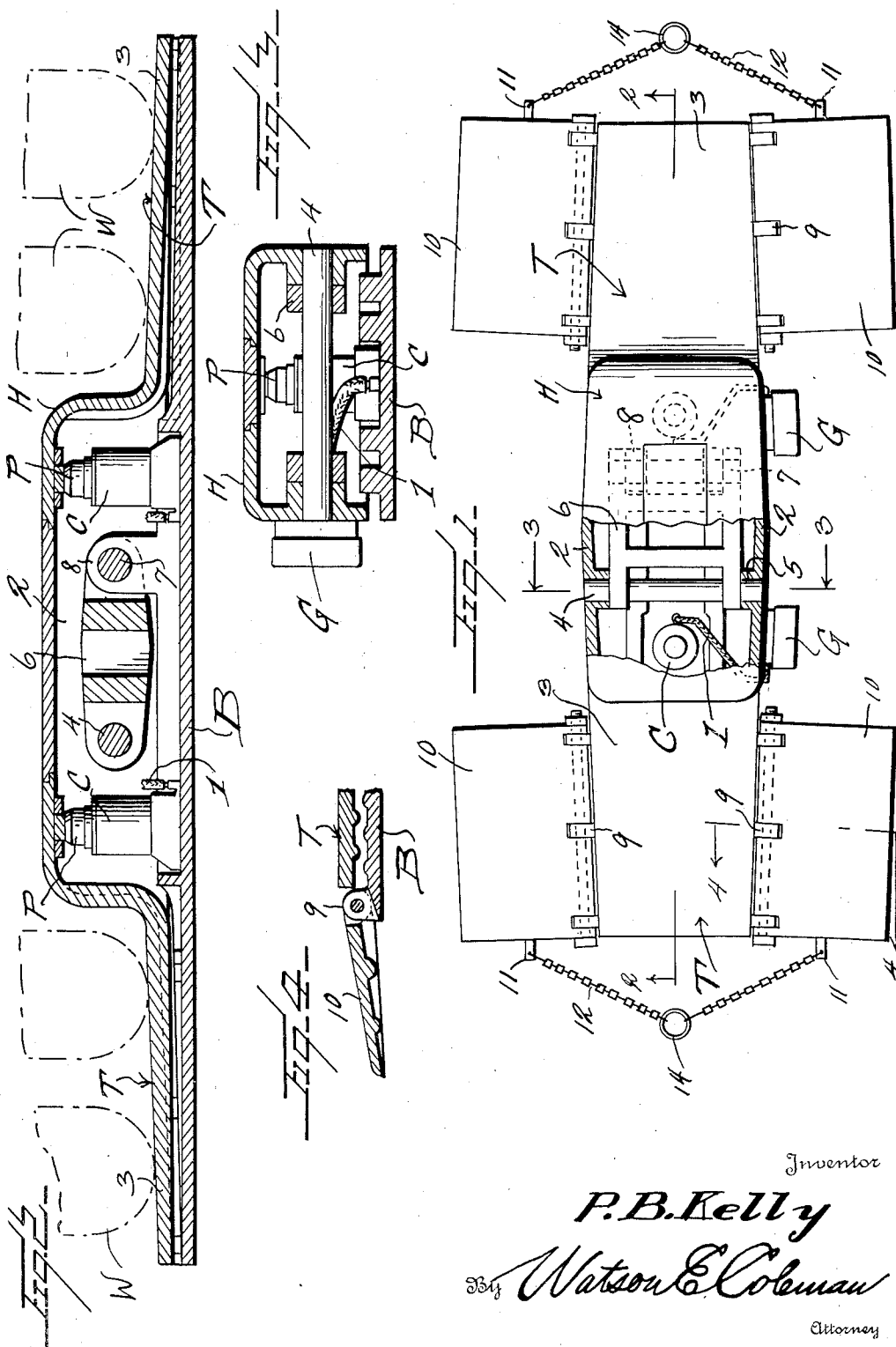
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HYDRAULIC WEIGHING UNITS

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HYDRAULIC WEIGHING UNIT

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3 Claims. (Cl. 265—47)

This invention relates to a hydraulic weighing unit, and it is a particular object of the invention to provide a unit of this kind for use in connection with vehicles and to provide means whereby the weight may be readily checked at any time during a loading operation.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved hydraulic weighing unit whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:

Figure 1 is a view in top plan with portions broken away of a weighing unit constructed in accordance with an embodiment of my invention;

Figure 2 is a longitudinal sectional view taken substantially on the line 2—2 of Figure 1 with certain of the parts in elevation;

Figure 3 is a transverse sectional view taken substantially on the line 3—3 of Figure 1;

Figure 4 is a detailed sectional view taken substantially on the line 4—4 of Figure 1.

As disclosed in the accompanying drawing, B denotes an elongated bottom or base plate of desired width and which has suitably mounted upon its central portion the longitudinally spaced upstanding cylinders C in which extend for up and down movement the plungers or rams P. In communication with and leading from the lower portions of the cylinders C are the flexible pipe lines I which lead to and coact in a conventional manner with the hydraulic gauges G carried by and extending through a side wall 2 of a central upstanding housing H provided at the central portion of a top plate T. This plate T is of a length substantially coextensive with the length of the bottom or base plate B and the opposite end portions of this plate T serve to provide platforms 3 upon which are adapted to be positioned the wheels, diagrammatically indicated at W in Figure 1, of the vehicle of which the load is to be measured.

The platforms 3 are normally spaced above the adjacent end portions of the bottom or base plate B and the hydraulic pressure created by the forcing of the plungers or rams P into the

cylinders C under the action of the weight upon the platforms 3 will result in such weight being registered by the gauges G and in determining such weight the register of both of the gauges G is added.

To one side of the longitudinal center of the top plate T the housing H is intersected by the transversely disposed rod 4 operatively engaged with and supported, as at 5, by the side walls 2. Pivotaly engaged with this rod 4 are extremities of a substantially H-shaped link 6, the opposite extremities of which are pivotaly engaged with a rod 7 bridging the space between and supported by the transversely spaced upstanding lugs 8 carried by the bottom or base plate B. The rods 4 and 7 are positioned at opposite sides of the longitudinal center between the cylinders C and are equi-distantly spaced from said longitudinal center.

The connection of the top plate T with the bottom or base plate B is such as to compensate for variations in weight upon the platforms 3 of the plate T.

The side marginal portions of each of the platforms 3 have pivotaly connected therewith, as at 9, the inner end portions of the approach plates 10. These plates 10 provide means to facilitate the travel of the vehicle up upon the platform 3. Operatively engaged, as at 11, with the outer end portions of the plates at each end of the top plate T are the chains or flexible members 12 which have their outer extremities suitably coupled, as at 14. These coupled chains 12 provide means to facilitate the handling of the unit and which unit is readily portable.

It is believed to be obvious from the foregoing that the unit herein disclosed, is of a type whereby the weight of the load can be readily checked during the loading operation.

From the foregoing description it is thought to be obvious that a hydraulic weighing unit constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. A weighing unit of the class described com-

prising a base plate, a superimposed top plate, the central portion of the top plate constituting an upstanding housing, and the end portions of the top plate constituting platforms, longitudinally spaced hydraulic cylinders carried by the base plate, gauges carried by the housing of the top plate and in communication with the cylinders, rams working in the cylinders and operatively engaged with the top plate, a connecting link interposed between the cylinders, and means for pivotally connecting one end portion of the link to the top plate and the opposite end portion of the link to the bottom plate.

2. A weighing unit of the class described comprising a base plate, a superimposed top plate, the central portion of the top plate constituting an upstanding housing, and the end portions of the top plate constituting platforms, longitudinally spaced hydraulic cylinders carried by the base plate, gauges carried by the housing of the top plate and in communication with the cylinders, rams working in the cylinders and operatively engaged with the top plate, a connecting

link interposed between the cylinders, and means for pivotally connecting one end portion of the link to the top plate and the opposite end portion of the link to the bottom plate, said pivotal means being substantially equi-distantly spaced from and at opposite sides of the longitudinal center between the spaced cylinders.

3. A weighing unit for vehicles comprising an elongated base plate, a top plate superimposed thereon and of a length substantially co-extensive in length with the base plate, the central portion of the top plate constituting an upwardly disposed housing, the extremities of the top plate constituting platforms upon which the wheels of a vehicle are to be positioned, gauges carried by the opposite end portions of the housing and readable from without the housing, and hydraulic means within the housing at each end portion thereof and in operative connection with one of the gauges, each of said hydraulic means functioning upon depression of the top plate for operating the gauge associated therewith.

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