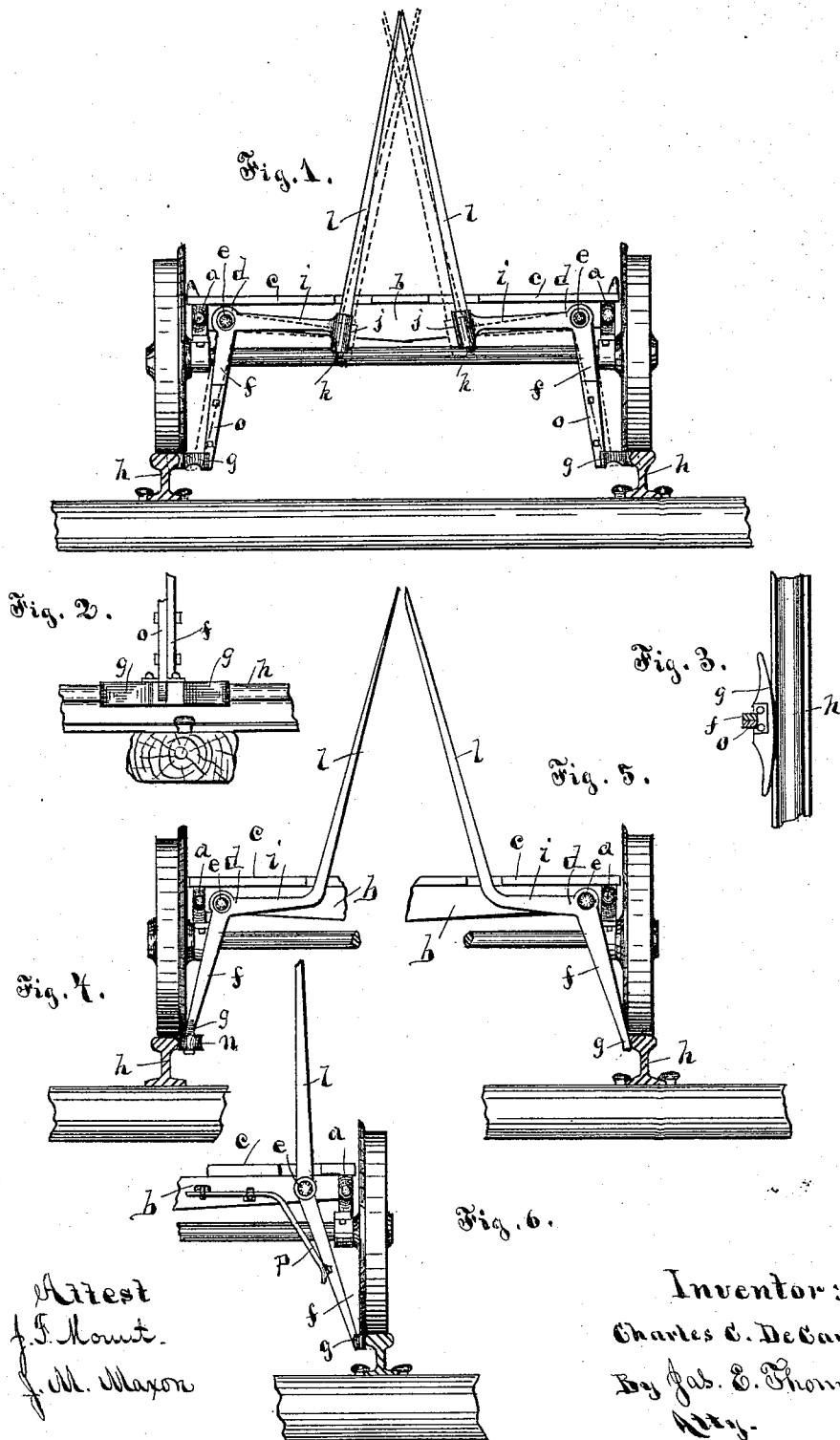


(No Model.)

C. C. DE CAMP.
TRACK GAGE.

No. 460,467.

Patented Sept. 29, 1891.



Attest
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UNITED STATES PATENT OFFICE.

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TRACK-GAGE.

SPECIFICATION forming part of Letters Patent No. 460,467, dated September 29, 1891.

Application filed January 9, 1891. Serial No. 377,274. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. DE CAMP, a citizen of the United States, residing at Durand, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Automatic Track-Gages; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in track-gages, and pertains especially to a form of track-gage which is capable of indicating irregularities of width between the rails of a railway; and the object of the invention is to provide a means of automatically indicating to the eye any irregularity of space between the rails as a hand-car carrying a gang of repair-men is passed over the road.

Another object is to provide a cheap and effective device which may be attached to an ordinary hand-car at a trifling cost, and which, when the car is passed over the road in the ordinary manner, will automatically indicate the points in the road where the rails are spread and in need of attention and repairs.

Another object of the invention is to arrange and construct a simple and inexpensive device for automatically indicating the irregularities of space between the rails of a railroad in such a manner that the operator can easily and quickly determine the points of the road in need of repairs as the repairing-gang is carried over the road.

The invention consists, first, of two levers pivotally secured to the frame of a hand-car by their middle portions, and with the lower short arms of the levers adapted to contact with the inner sides of the rails and with the upwardly-extending free ends of the levers arranged to indicate the movement or oscillation of the levers; and the invention consists in a pair of angle or bell-crank levers pivotally secured by their angles to the opposite

sides of a hand-car and with the lower ends of their downwardly-extending arms in contact with the inner sides of the rails and with their opposite horizontal arms extending toward the center of the car and provided with upwardly-extending indicator-arms; and the invention still further consists in the combination and arrangement, and also in the peculiar construction and operation of the levers and devices I use, as I shall hereinafter specifically explain, and which I will expressly indicate in the claims of this specification.

My invention is illustrated in the accompanying drawings, and for the proper and definite explanation of which the same letters of reference are placed on the several views to indicate similar parts.

Figure 1 in the drawings represents a view in elevation of a hand-car with my improvement attached thereto. Fig. 2 is a side view of the foot or contact piece of the lever. Fig. 3 is a plan view of the same. Fig. 4 is a modified form of the rail contact-piece. Fig. 5 shows the lever in a modified form. Fig. 6 shows the levers actuated by an equivalent device for retaining the contact-pieces against the rails.

a represents the sills of a common hand-car, and *b* is one of the end cross-sills, and *c* is the floor or deck, resting on the sills and projecting over the sills in the ordinary and common way.

d are two levers of the common bell-crank type, and are pivoted at the angle or elbow thereof by a bolt or pin *e* to the side of the end portions of the cross-sill *b*, so that the vertical arms *f* of the levers will extend downwardly and with their end portions *g* bearing on the inner sides of the rails *h* of the track. The horizontal arms *i* of the levers extend from their pivotal point or angle toward each other and are provided at their ends with vertical sockets *j*, into which are passed the shank ends *k* of the upwardly-projecting indicator-arms *l*, the sockets being arranged to lie at a slight angle beyond perpendicular, so that the upper ends of the indicator-arms will lean toward each other, and these arms are

so arranged, preferably, that when the rails of the track are located at the proper distance from each other the indicator-arms will meet at their ends *m*. The car with the devices in this position is run over the track in the ordinary way, and as the car moves the portions *g* are held in contact with the inner sides of the rails by the gravity of the inner ends of the arms *i*, and also of the indicator-arms, so that any variations of the width of space between the rails will oscillate the levers, the contact ends *g* moving outward with the widening of the space, and thereby moving the upper end portions of the indicator-arms across each other, as shown by the dotted lines in Fig. 1, and should the variation of the space be in the opposite direction the oscillation of the levers will be in the opposite direction and the indicator ends will move away from each other, and as the length of the indicator-arms and horizontal portions of the levers are several times greater than the length of the downwardly-projecting arm in contact with the rails, it will be seen that a slight variation in the track will cause the indicators to move to a considerable distance, so that any variations of width of space between the tracks will be readily and easily seen by the operators or occupants of the car, whereby in passing the car over the road the condition of the track as to the space between the rails is visible to the superintendent or the track-repairers, and by this means, when a portion of the track is reached where the indicators show a spreading or irregularity of the rails, the car can be stopped and the track repaired and put in proper condition, and thereby save a large outlay of time and expense in trying a gage in the ordinary way.

When not wanted for use, the indicator-arms can be withdrawn from the sockets *j* and packed upon the car till needed, and the arms *i* can then be raised and secured in some convenient manner, and the portions *g* will then be free from contact with the rails to provide against wearing away of the contact portions when the device is not needed.

The portion *g* may be made in the form of a runner or shoe, with its outer side, which comes in contact with the rails, curved to ride over any offset in the rails or switch connections, &c., as shown in Figs. 2 and 3, and these contact-pieces are preferably removably attached to the arm *f* by an arm *o*, extending inwardly from the contact-piece and overlapping the arm *f* and secured in position by the bolts *p*, so that when the contact-piece becomes worn it may be easily removed, and rollers *n* may be pivoted to the lever of the arm, as shown in Fig. 4, and these, perhaps, might be preferable, as thereby all friction and wear of the parts in contact with the rails will be avoided.

Of course it will be seen that by providing the levers *d* with the overhanging horizontal arms *i* the weight of the arms retain the por-

tions *g* in contact with the rails, and it is also evident that a vertical type of lever, as shown in Fig. 5 and held in contact with the rails by a spring *P*, would effect the same action and result; and therefore I wish it understood that I do not confine my invention entirely to the construction and form of the levers herein shown and described, as the special form is not altogether material to the operation of the device.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a track-gage, the combination, with a car provided with wheels for moving over the track, of the levers pivoted by their middle portions to opposite side portions of the car and with their opposite arms projecting above the car-floor to form indicators and having the outer sides of the free ends of their lower arms in contact with the inner edges of the rails, and means for actuating the ends of the lower arms outwardly, substantially as set forth.

2. The combination, in a track-gage, with a car-frame mounted on wheels for moving over the track, of the bell-crank levers pivoted at their angles to the opposite side portions of the car-frame and having the free ends of their downwardly-projecting arms in contact with the inner sides of the rails and having their horizontal-arm portions extending toward each other and provided with upwardly-turned portions projecting above the car-floor, for the purpose set forth, substantially as described.

3. In a track-gage, the combination, with a car-frame provided with wheels for moving over the track, of the bell-crank levers pivoted at their angles to one end of the frame above each rail, each lever being provided with a downwardly-extending arm provided with a shoe having a curved outer side in contact with the inner face of the rail, and also provided with an inwardly-extending arm having its free end upturned and reaching above the car-floor to form indicators, substantially as set forth.

4. In a track-gage, the combination of the car, the bell-crank levers pivoted at their angles to the opposite end portions of the end car-sill and provided with downwardly-extending arms having their ends in contact with the inner sides of the rails and having their horizontal arms extending toward the middle of the car and provided with vertical sockets, and the upwardly-extending indicator-arms provided on their lower ends with shank portions fitted into the said sockets, substantially as set forth.

5. The combination of the car, the bell-crank levers pivoted at their angles to the end sill of the car above the rails and provided with horizontal-arm portions projecting toward the center of the car, and with the ends of these arms upturned to form indicator-arms, and provided with arms projecting

downwardly toward the tracks, and the contact-pieces provided with curved outer faces in contact with the inner sides of the rails and provided with upwardly-extending arm
5 portions overlapping and secured to the said downwardly-projecting arms, substantially as set forth.

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

CHARLES C. DE CAMP.

Witnesses:

E. CRANE,

WM. H. PUTNAM.