No. 714,367. Patented Nov. 25, 1902.

J. DEMARTY.

WHEEL GAGE.

(Application filed June 16, 1902.)

(No Model.)

Fig. 1.

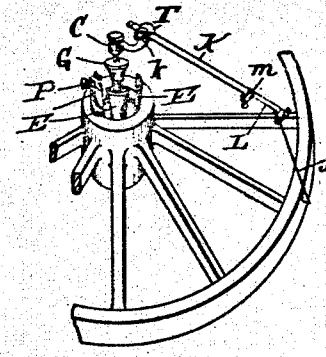


Fig. 5.

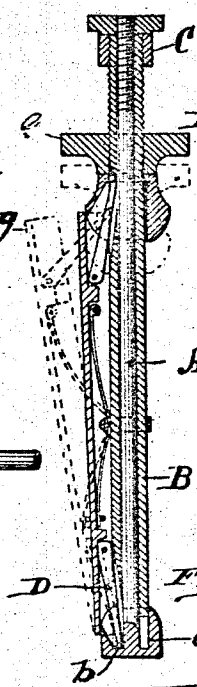


Fig. 2.

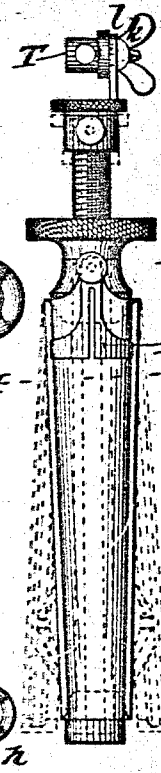


Fig. 6.

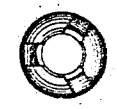


Fig. 10.

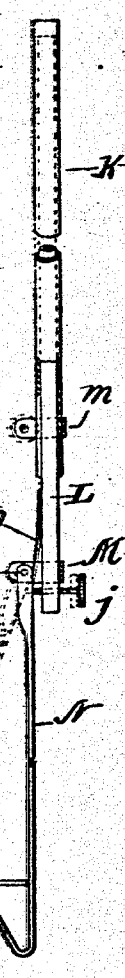


Fig. 3.

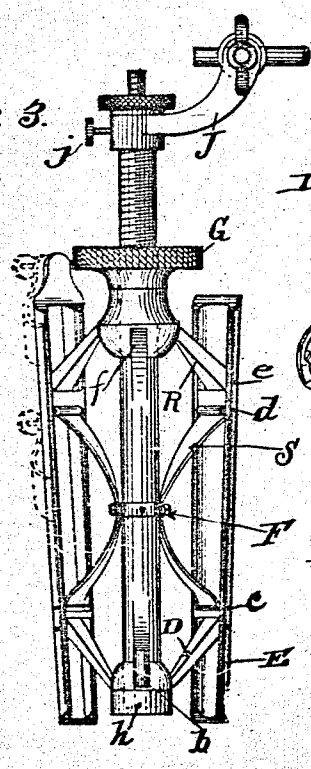


Fig. 7.



Fig. 4.

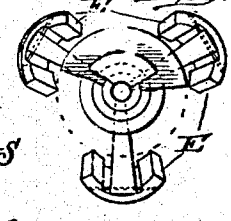


Fig. 9.



Fig. 8.



Witnesses:

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JOHN DEMARTY, OF CHICAGO, ILLINOIS.

WHEEL-GAGE.

SPECIFICATION forming part of Letters Patent No. 714,367, dated November 25, 1902.

Application filed June 16, 1902. Serial No. 111,941. (No model.)

To all whom it may concern:

Be it known that I, JOHN DEMARTY, a subject of the King of Italy, residing at No. 1923 Armour avenue, Chicago, Cook county, State of Illinois, have invented a new and useful Wheel-Gage, of which the following is a specification.

My invention relates to an improvement in wheel-gages to ascertain whether the boxes in carriages, buggies, and other vehicle-wheels are set true.

The object of my improvement is to have that part of the gage which is placed in the box adjustable, so that either end thereof can be extended in diameter without any material change of the other, so that the gage can be easily adjusted to fit in any size and taper of axle-box, and also the arm or other part of the gage which extends out over the wheel when the gage is in use to have that adjustable, so that it can be extended or shortened according to the height of the wheel, and also adjustable, so that the point end thereof can be lowered and set in any required position to bring it in contact with the tire or rim of the wheel. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the gage when in use. Fig. 2 is a vertical view of that part designed to fit in the box, the dotted lines showing the shape to which it may be extended at the lower point. Fig. 3 shows a vertical section of the same part extended at both ends, one of the three ribs with the attached spring and braces removed. Fig. 4 shows a transverse section. Fig. 5 is a vertical section showing the center rod and tube through which it passes. Figs. 6 and 7 are point views of conic washers. Fig. 8 is an end view of the central tube. Fig. 9 is a top view of guard and rib to which it is attached. Fig. 10 is a side view of the arm.

A is a rod, to which is attached or riveted on the lower end the conic washer, Fig. 7. The rod A passes through a tube B and has an annular grooved nut C, which is threaded to fit on the top end of rod A. The said conic washer also has an annular groove *a* to receive the lower end of the tube B. One end of the brace D is fitted into a groove in the conic washer, Fig. 3, *b* and Fig. 5, *b*. The other end is hinged to the rib E, Fig. 3. The lower end of the flat spring S passes under the pin C and under the band F, the said band and spring being fastened to the tube B by a screw. The upper end of the spring is hinged to the rib E with a pin *d*. The brace R is hinged to the rib E with a pin *e*. The top end thereof is fitted into a groove or socket in the conic washer Fig. 3, *f*. The nut G is threaded to fit on the tube B. By screwing it down it presses on the conic washer, the washer pressing on the braces causing them to extend from the center. (Shown by dotted lines in sectional view, Fig. 5 *g*.) The nut C being screwed downward presses against the tube B and forces the conic washer, Fig. 7, and *h* upward, which acts upon the lower braces, causing them to extend from the center. The tube B when the combination is closed does not reach the bottom in the annular groove in the conic washer *a*, enough space being left to allow the washer operating the braces being forced upward to obtain the extension required.

The description given of the combination of the rib, spring, and braces constitutes one part only, there being in the whole combination, when all the parts are together, three parts exactly alike.

Fig. 8 is an end view of tube B, showing the grooves cut therein to allow space for the braces when the combination is closed. (Also shown in Fig. 3 *f b*.)

Fig. 4 shows the shape of the ribs E E E by a transverse cut I I, Fig. 2.

J, Fig. 3, is a device threaded and screwed on tube B and set by a screw *j*.

T is a device passing through J and is fastened by nut and washer *k l*. The tube K passes through the aperture in T, Fig. 2, and is set by the washer and nut *k l*. The rod L passes inside of the tube K and is set and held in place by a band passing around tube K and a screw passing through the laps of the band, the tube K being slit to allow contraction by operating the screw in the band, Fig. 10 *m*, sectional view of band and screw.

M is a device fastened on the rod L, to which the point-rod N is hinged at *i*. The spring O is fastened to rod L and rod N. The screw *j* passes through the rod L and by operating it forces the point of rod N down to any desired position. The break *u* in tube K and

L indicates foreshortening. The guard, Fig. 9, is a top view showing the manner in which it is fastened to the rib.

P, Fig. 2, is a full vertical view of the guard. The guard can be slid up or down to any desired height by releasing and fastening the screw. (See Fig. 9 and dotted lines on rib E, Fig. 3.) The use of the guard is to prevent the gage getting too far into the box and also to give the gage a true bearing.

The operation of my wheel-gage is as follows: The gage is extended to exactly fit in the axle-box by operating the nuts C and G. The guard is moved on the rib till it bears against the end of the box. By releasing the screw in the clamp-band *m* the rod L can be extended from the tube K to the desired length. The nut *k* on the device T can be released and the arm brought down with the point in proximity to the tire or rim of the wheel, and the screw *j* can be operated to quickly adjust the point of the arm for any small variation desired, the gage being thus adjusted, and by turning it around in the axle-box the point of the gage will indicate a true plane at a right angle to the axis of the box.

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

The combination in a wheel-gage adjustable, and composed of the following devices and means so that it can be extended in diameter to fit various sizes and taper of axle-boxes in carriage and other vehicle wheels, the combination consisting of a rod on one end of which is fastened a conic washer having an annular groove, and grooves to receive the pivots of the braces hereinafter mentioned, the other end of the rod being threaded and fitted with a nut; a tube through which the said rod passes longitudinally; three braces which are fitted each one end into the said conic washer and the other end being hinged to the ribs hereinafter mentioned; three springs, one end of each passing under a pin in the said ribs, the center of the springs being fastened to the said tube, the other end being hinged to the said ribs; a conic washer through which passes the said tube, the washer being grooved to receive the pivots of the upper braces hereinafter mentioned, the said tube being threaded and fitted with a nut; three upper braces, one end of each being fitted into the grooves in the last-mentioned washer, the other end being hinged to the said ribs; three ribs, to which is fastened and hinged the springs and braces as aforementioned, all substantially as set forth in the specification.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN DEMARTY.

Witnesses:
NICKOLAS MERSCH,
JOHN M. PFEIL.