

A. KURT.  
AXLE GAGE.

APPLICATION FILED AUG. 3, 1905.

Fig. 1.

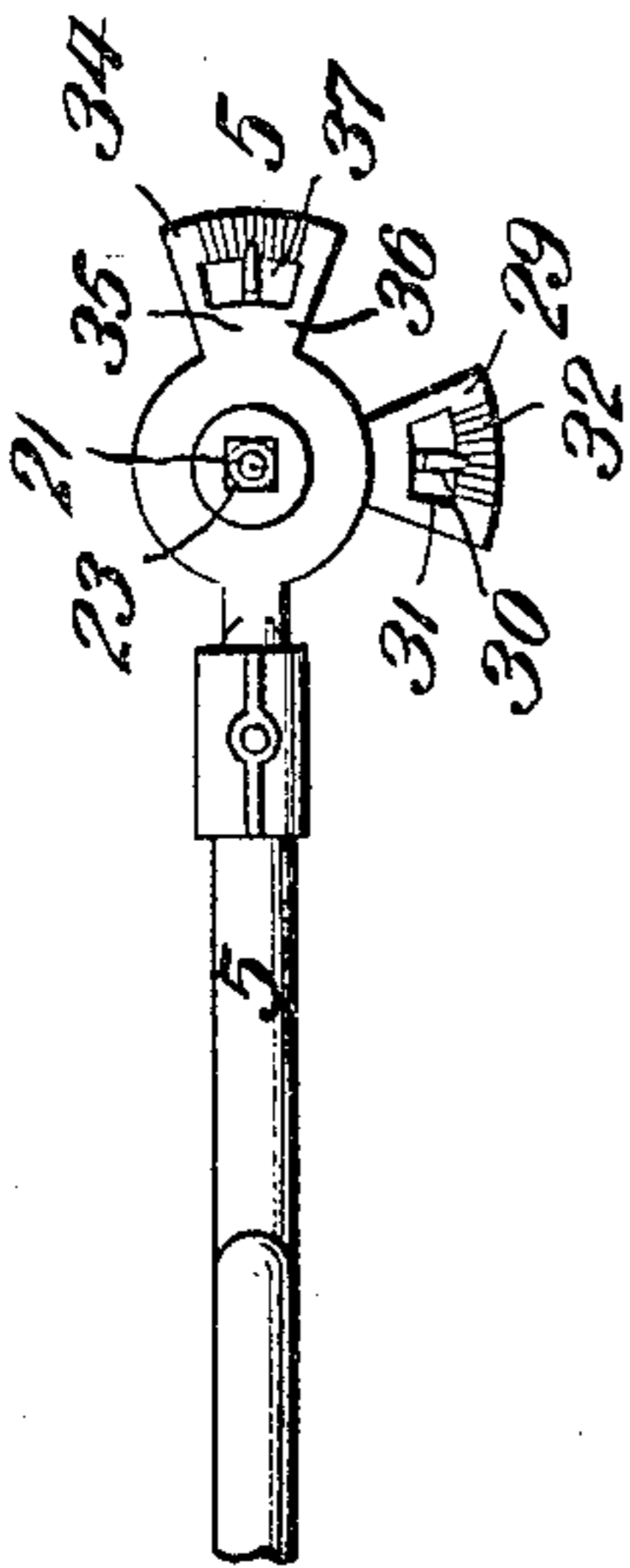


Fig. 2.

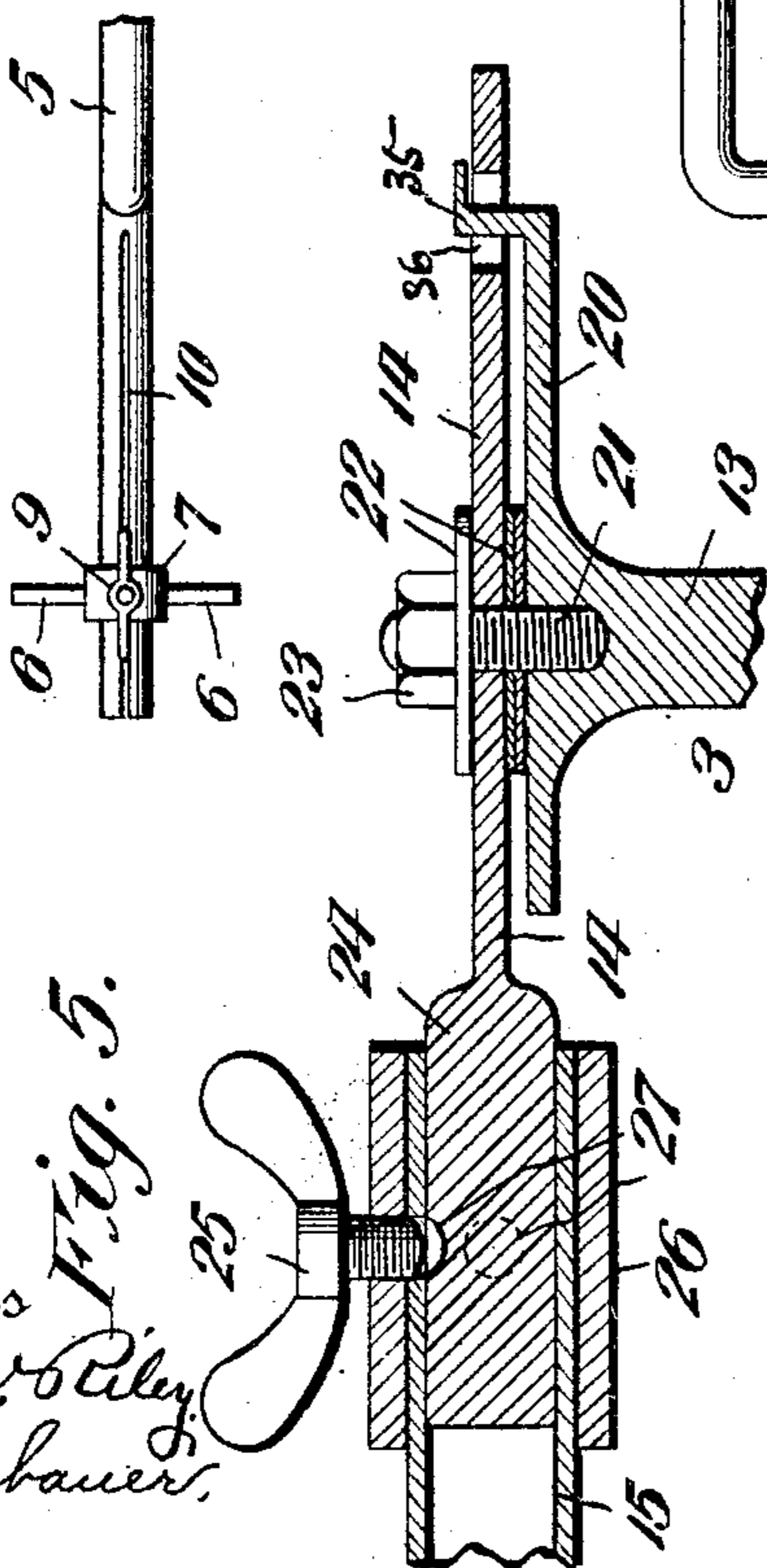


Fig. 3.

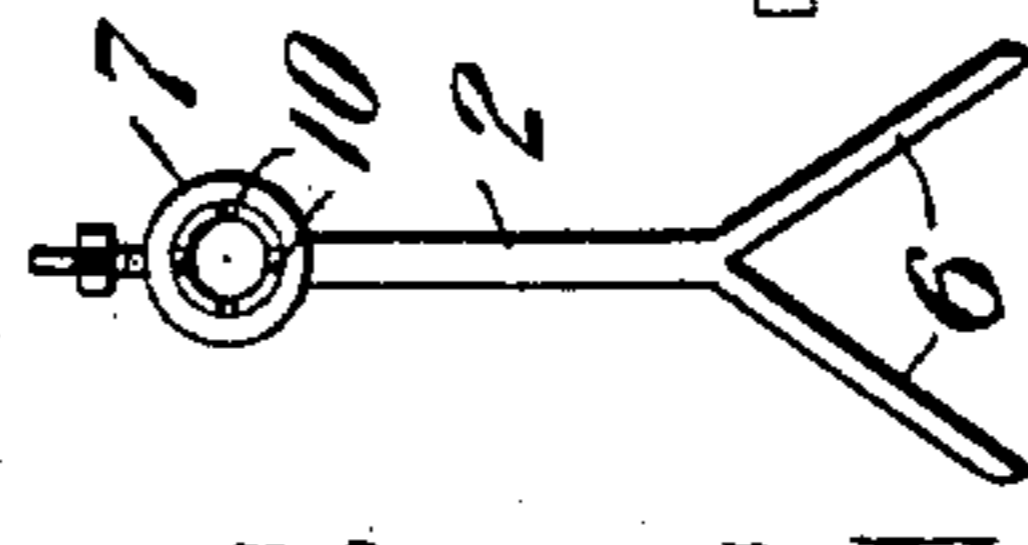
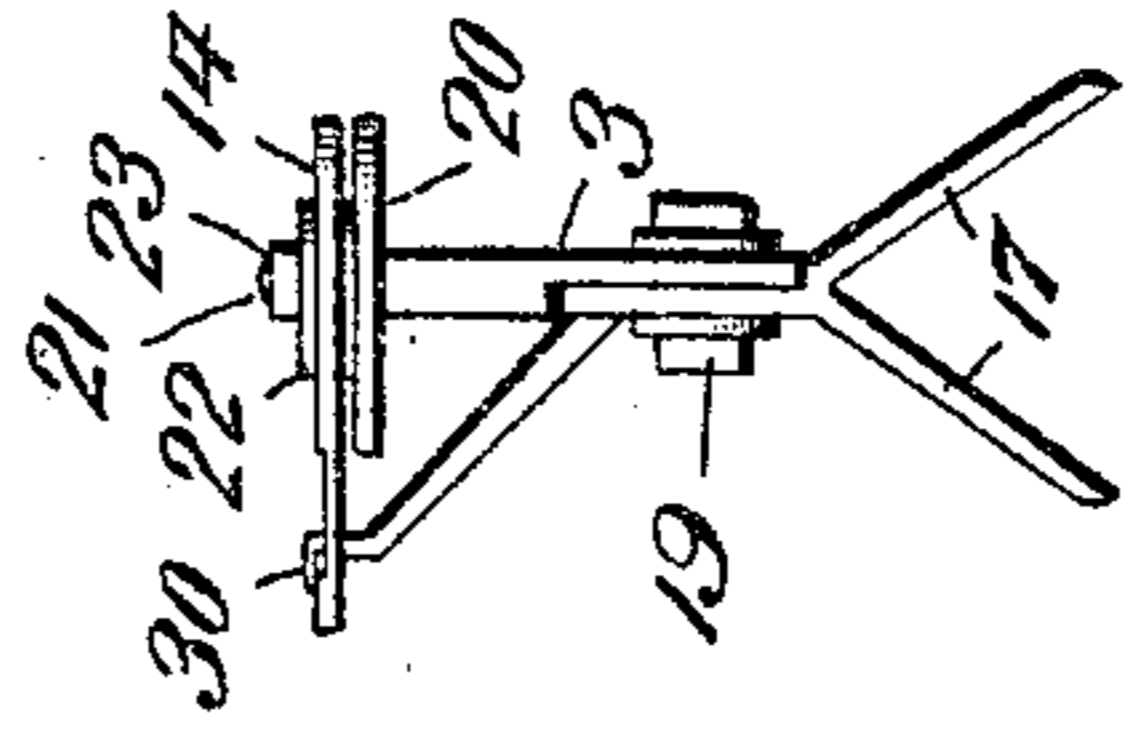


Fig. 4.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ALFRED KURT, OF ST. GEORGE, UTAH.

## AXLE-GAGE.

No. 806,682.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed August 3, 1905. Serial No. 272,587.

*To all whom it may concern:*

Be it known that I, ALFRED KURT, a citizen of the United States, residing at St. George, in the county of Washington and State of Utah, have invented certain new and useful Improvements in Axle-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.

My invention relates to improvements in axle-gages; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a simple and efficient device of this character by means of which the axle of a vehicle may be adjusted so as to get the plumb-spoke and gather of the wheel.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the gage. Fig. 2 is a side view of the same, showing it applied to an axle, the latter being shown in dotted lines. Fig. 3 is an elevation, with parts in section, of one end of the device. Fig. 4 is a similar view of the opposite end of the device, and Fig. 5 is a detail longitudinal sectional view taken on the plane indicated by the line 5 5 in Fig. 1.

Referring to the drawings by numeral, 1 denotes my improved gage, which comprises two axle-engaging arms or standards 2 3, adjustably mounted adjacent to the ends of a connecting-rod 4. The latter, as shown, is of tubular form and has intermediate its ends an offset portion 5 of substantially rectangular form, which is adapted to clear the springs or other parts which are connected to the axle. By reason of this offset portion 5 of the rod 4 the gage may be applied on top of the axle instead of on the front or bottom, as is necessary with other gages when the springs are on the axle.

The arm or standard 2 has its outer end forked or formed with diverging fingers 6, which are adapted to engage one of the axle-spindles adjacent to its collar, as shown in Fig. 2 of the drawings, and the inner end of the arm 2 is formed with an apertured head or enlargement 7, through which the end 8 of the rod 4 projects. The enlargement or head 7 slides freely upon said end 8 and is adapted

to be secured in an adjusted position by means of a set-screw 9, which passes through a threaded opening in said enlargement and has a rounded inner end which is adapted to seat in any one of four parallel longitudinally-extending grooves or slots 10 formed in the end 8 of the rod and arranged at points at angles of ninety degrees to each other, as clearly shown in Fig. 3 of the drawings. The angle-engaging arm or standard 3, which is arranged at the opposite end of the rod 4, is formed of sections which are pivotally connected in planes at right angles to each other. As shown, said arms consist of a lower member or section 12 and an upper member or section 13, which latter is pivotally mounted upon a bearing-plate 14, adjustably connected to the end 15 of the rod 4. The lower or outer section 12 comprises a longitudinally-extending body portion 16, having at its ends pairs of diverging fingers 17, which are adapted to engage the spindle upon one end of the axle, as shown in Fig. 2 of the drawings. Upon the center of the body portion 16 of the section 12 is formed an apertured lug 18, which is pivoted, by means of a bolt 19, to one end of the upper or inner section 13. The latter has its opposite end formed with an enlargement or head 20 and is pivotally connected to the bearing-plate 14 by means of a screw-stud 21, as clearly shown in Fig. 5 of the drawings. Said screw-stud projects from the enlargement 20 and through apertures in the plate 14 and washers 22 and has upon its threaded end a clamping-nut 23. The plate 14 has upon its inner end a plug or enlargement 24, which is adapted to engage the tubular end 15 of the rod 4, which is adjustably mounted therein by a set-screw 25. The latter passes through a threaded opening formed in a collar 26, loosely mounted upon the end 15, and into openings 27, arranged in said end 15 and in said plug 24 at angles of ninety degrees to each other.

In order to determine whether or not the spindle is out of plumb-spoke—that is, bent angularly in a vertical plane—I provide upon one side of the plate 14 a projecting dial 29 and upon the member or section 12 of the arm 3 a pointer or indicator 30. The latter is in the form of an arm projecting upwardly and outwardly from the lug 18 and through an opening 30, arranged in the dial 29. The point of this indicator-arm 30 coacts with a graduated scale 32, arranged upon the convex upper surface 33, as clearly shown in the

drawings. This convex surface 33 permits the end of the pointer or indicator to maintain its proper relation with respect to the scale when the member of section 12 is tilted, as will be readily understood.

In order to determine the gather of the wheels, the plate 14 is formed at its outer end with a dial 34, with which coacts a pointer or indicator 35, formed upon the enlargement 20 of the section 13 of the arm 3. This pointer or indicator 35 projects through a slot 36, formed in the dial 34, and coacts with a scale 37, arranged upon the latter, as clearly shown in Fig. 1.

The construction, use, and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that by means of this device the plumb-spoke and gather may be read at one and the same time without having to make any adjustment or calculations and also that by reason of the offset portion 5 of the rod the device may be used upon axles without removing their springs.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. An axle-gage comprising a rod, a forked arm adjustably mounted upon one of its ends, a bearing-plate adjustably mounted upon the other end of said rod, an arm composed of inner and outer pivotally-connected sections, said inner sections being pivotally connected to said bearing-plate, forked portions upon said outer section, dials upon said bearing-plate, and pointers carried by said arm-sections and coacting with said dials, substantially as described.

2. An axle-gage comprising a rod, an axle-engaging arm upon one of its ends, a bearing-plate adjustably connected to the other end of said rod and formed with right-angularly-projecting dials having slotted portions and graduations adjacent to said slotted portions, an axle-engaging arm pivotally connected to said bearing-plate and consisting of two sections pivotally connected in a plane at right angles to the pivot of the last-mentioned arm, the outer section of the last-mentioned arm being provided with forked portions to engage an axle-spindle, and pointers carried by the sections of said arm and projecting through the slots in said dial, substantially as described.

3. An axle-gage comprising a rod offset intermediate its ends and having at one end longitudinally-extending grooves and at its opposite end an annular series of apertures, an arm slidably mounted upon the grooved end of said rod and formed with a forked outer end, a set-screw in said arm adapted to engage the grooves in said end of the rod, a sleeve upon the opposite end of said rod, a bearing-plate having a portion projecting into the apertured end of said rod, a set-screw in said sleeve for adjustably clamping said bearing-plate upon said rod, an arm pivotally connected to said bearing-plate and formed of inner and outer sections pivotally connected together, forked portions upon the end of the outer section of said arm, slotted dials upon said bearing-plate, and pointers projecting from the sections of said arm and through the slot in said dials, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALFRED KURT.

Witnesses:

ALEXANDER B. ANDRUS,  
DANIEL J. SMITH.