

No. 691,999.

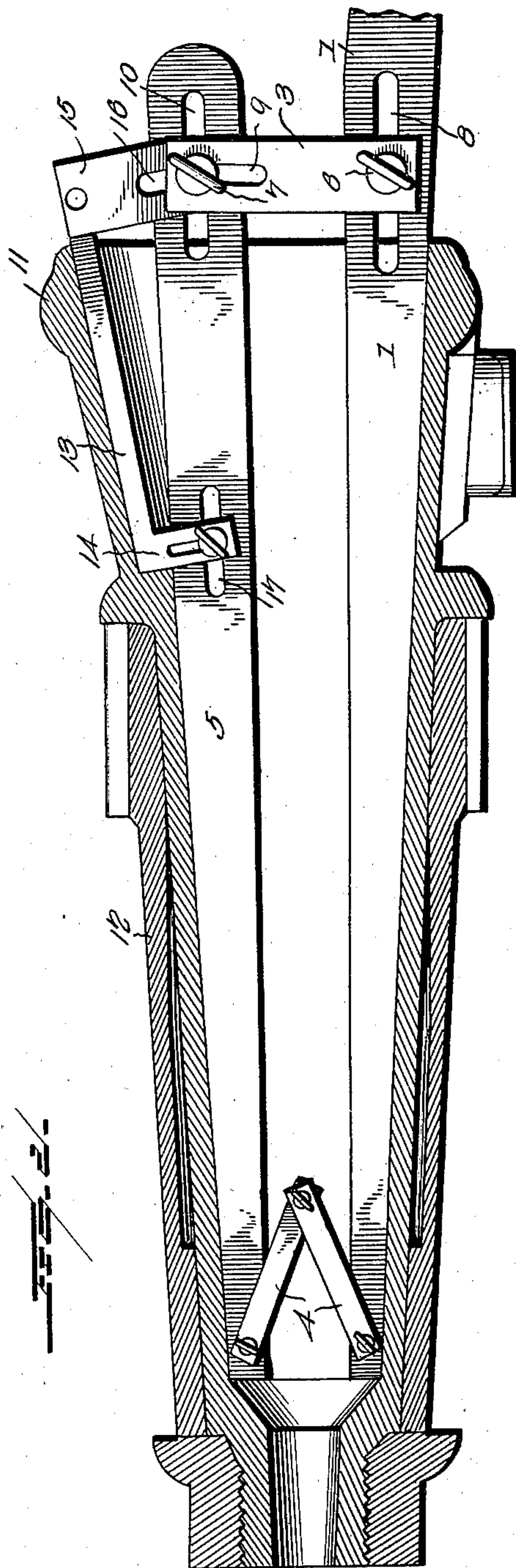
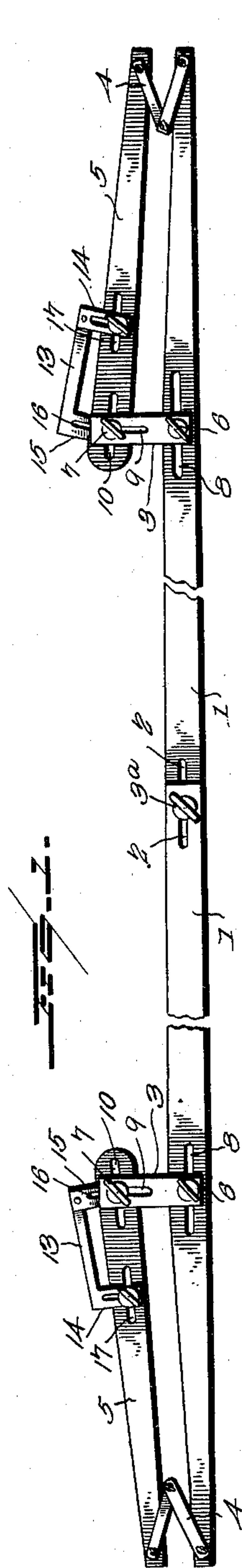
Patented Jan. 28, 1902.

W. ANGLE.

AXLE GAGE.

(Application filed July 17, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM ANGLE, OF MILFORD, PENNSYLVANIA.

AXLE-GAGE.

SPECIFICATION forming part of Letters Patent No. 691,999, dated January 28, 1902.

Application filed July 17, 1901. Serial No. 68,647. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANGLE, a citizen of the United States, residing at Milford, in the county of Pike and State of Pennsylvania, have invented a new and useful Axle-Gage, of which the following is a specification.

The invention relates to improvements in axle-gages.

10 The object of the present invention is to improve the construction of axle-gages and to provide a simple and comparatively inexpensive one designed for use in connection with that class of axles which are provided with axle-skeins and adapted to form
15 an axle-guide for constructing the axles to fit the skeins and for causing the wagon-wheels to properly track.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is an elevation of an axle-gage constructed in accordance with this invention. Fig. 2 is an enlarged elevation of one end of the gage, showing the same applied to an axle-skein, the latter being in section.

30 Like numerals of reference designate corresponding parts in all the figures of the drawings.

35 1 1 designate long gage-bars designed to extend the entire length of a wooden axle and to fit against the metal axle-skeins at the bottoms thereof and adjustably connected at their inner ends by means of slots 2 and a set-screw 3^a, which is adapted to clamp the bars 1 at the desired adjustment and which
40 is also adapted to permit the said bars to be detached for a purpose hereinafter described. The long gage-bars are connected by an inner link 3 and by outer links 4 with short gage-bars 5, adapted to fit against the interior of the axle-skeins at points diametrically
45 opposite the bars 1. The short gage-bars 5 fit against the skeins at the tops thereof, and the inner links 3, which are disposed approximately vertical, are connected with the gage-bars by set-screws 6 and 7. The set-screw 6,
50 which is arranged at the lower end of the link 3, operates in a longitudinal slot 8 of the

gage-bar 1 and is adapted to be moved inward and outward on the same. The upper portion of the link 3 is provided with a longitudinal slot 9, and the set-screw 7 passes
55 through the same and through a slot 10 of the inner end of the gage-bar 5. The links 4 are arranged at an angle to each other and diverge outwardly, being connected at their inner ends by a set-screw and secured at
60 their outer ends by set-screws to the outer ends of the gage-bars 1 and 5. This construction permits the gage-bars 1 and 5 to be arranged at the proper angle to each other to
65 fit the interior contour of an axle-skein. The enlarged portion or extension 11 of the inner end of an axle-skein 12 is gaged by a supplemental top gage-bar 13, arranged at the inner portion of the short gage-bar 5 and provided
70 with depending arms 14 and 15. The arm 14 is connected with the gage-bar 5 by means of a set-screw 16, which operates in a longitudinal slot 17, located at a point between the ends of the gage-bar 5, as clearly
75 shown in Fig. 2. The other arm 15, which is arranged at the inner end of the axle-skein, is provided with a slot 16, through which passes the upper set-screw 7 of the inner link 3. The top gage-bar 13 is adapted to be arranged at the desired angle to fit the enlarged
80 portion 11 of the inner end of the skein.

The gage is adapted to adjust itself automatically when it is introduced into an axle-skein, and this is effected by loosening the set-screws slightly, so that when the gage is forced
85 into an axle-skein the joints will yield, and after the contour or shape of the axle-skein has been obtained the set-screws are tightened to clamp the parts in their adjusted position. After the parts of the gage have been
90 set to fit the axle-skeins the wheels are placed in proper position to secure the desired length of axle and to cause them to track. The skeins are then placed on the gages and are introduced into the axle-boxes of the wheels,
95 and the inner ends of the long gage-bars are then secured together. The wheels and the axle-skeins are then removed from the axle-gage, which will indicate the correct shape of
100 the axle.

It has been found by experience that the shape of the interior of axle-skeins of the same make frequently varies, and difficulty is

sometimes experienced in fitting such skeins on the ends of a wooden axle; but by employing the axle-gage such irregularities may be readily detected, and the axle may be accurately shaped to fit the skeins.

It will be seen that the axle-gage is simple and comparatively inexpensive in construction, that the long gage-bars are separable to permit the two parts of the axle-gage to be used independently of each other to obtain the correct shape of the interior of a pair of axle-skeins, and that after such shape has been obtained the two parts of the axle-gage may be connected to obtain the proper length of the axle. Also it will be clear that the parts are adapted to adjust themselves automatically to an axle-skein when inserted into the same.

What I claim is—

1. An axle-gage comprising the long gage-bars detachably connected at their inner ends, and the short gage-bars located at the outer portions of the long gage-bars and adjustably connected with the same and adapted to be moved bodily to and from the long gage-bars, the long and short gage-bars being adapted to be introduced into an axle-skein, substantially as and for the purpose described.

2. An axle-gage comprising the long gage-bars adjustably and detachably connected at their inner ends, the short gage-bars located at the outer portions of the long gage-bars, and the inner and outer links arranged at the ends of the short gage-bars and adjustably

connecting the same with the long gage-bars, substantially as described.

3. An axle-gage comprising a pair of gage-bars adjustably connected with each other and adapted to be introduced into an axle-skein and to fit against the opposite sides thereof, and a supplemental gage-bar mounted on one of the said gage-bars and adapted to fit in the enlarged portion of an axle-skein, substantially as described.

4. An axle-gage comprising a pair of gage-bars adjustably connected together and adapted to be introduced into an axle-skein, and a supplemental gage-bar provided with arms adjustably secured to one of the said gage-bars, substantially as described.

5. An axle-gage comprising the long gage-bars adjustably connected at their inner ends, the short gage-bars, the inner links adjustably connecting the inner ends of the short gage-bars with the long gage-bars, the outer links arranged at an angle to each other and connecting the outer ends of the short gage-bars with the long gage-bars, and the supplemental gage-bars mounted on the short gage-bars and provided at their ends with arms, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM ANGLE.

Witnesses:

HARRY S. ANGLE,
THOMAS R. CROSBY.