

No. 679,810.

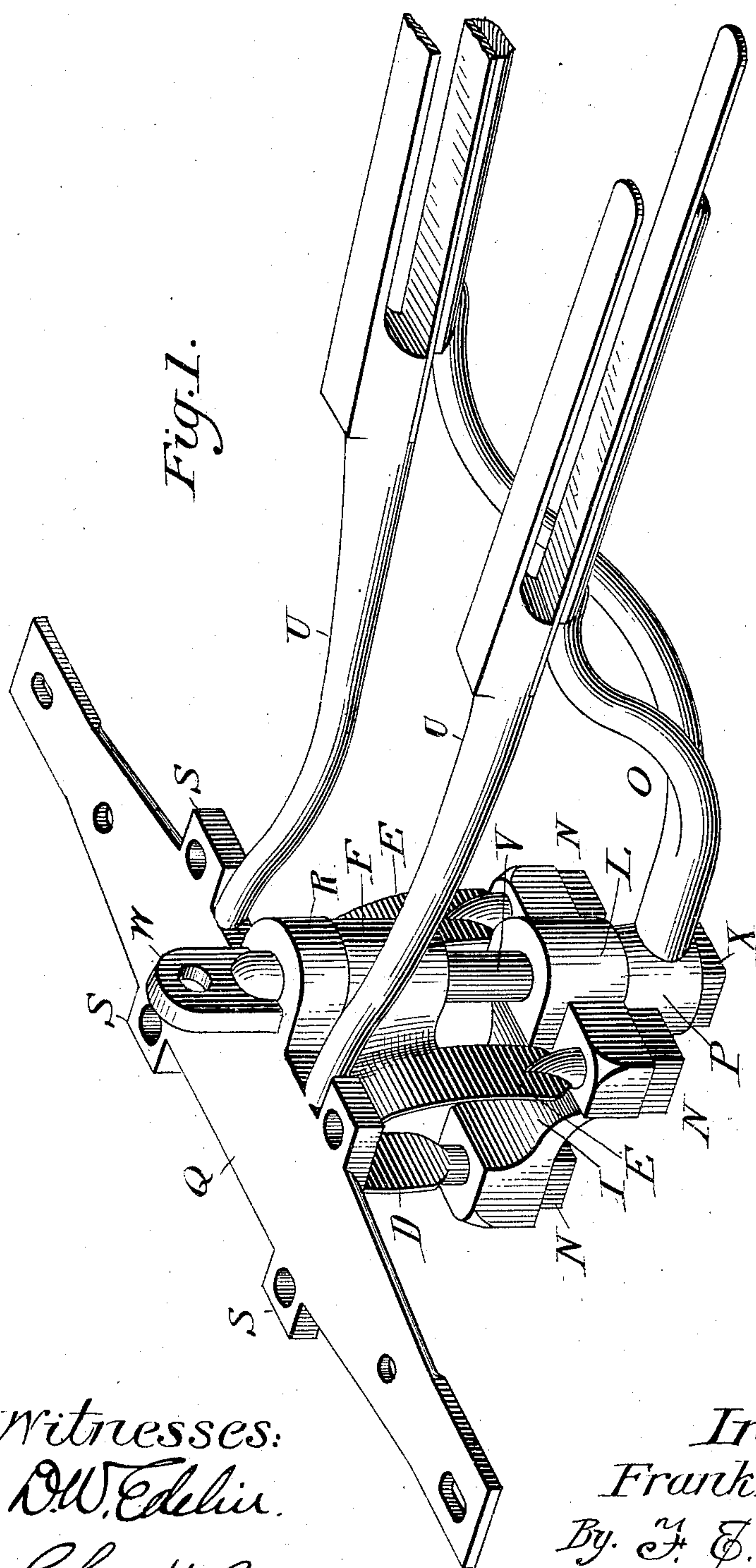
Patented Aug. 6, 1901.

F. E. WILCOX.  
VEHICLE GEAR.

(Application filed Apr. 26, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:  
D. W. Edlin.  
Chas. H. Baker.

Inventor:  
Frank E. Wilcox.  
By J. F. Stebbins.  
Atty.

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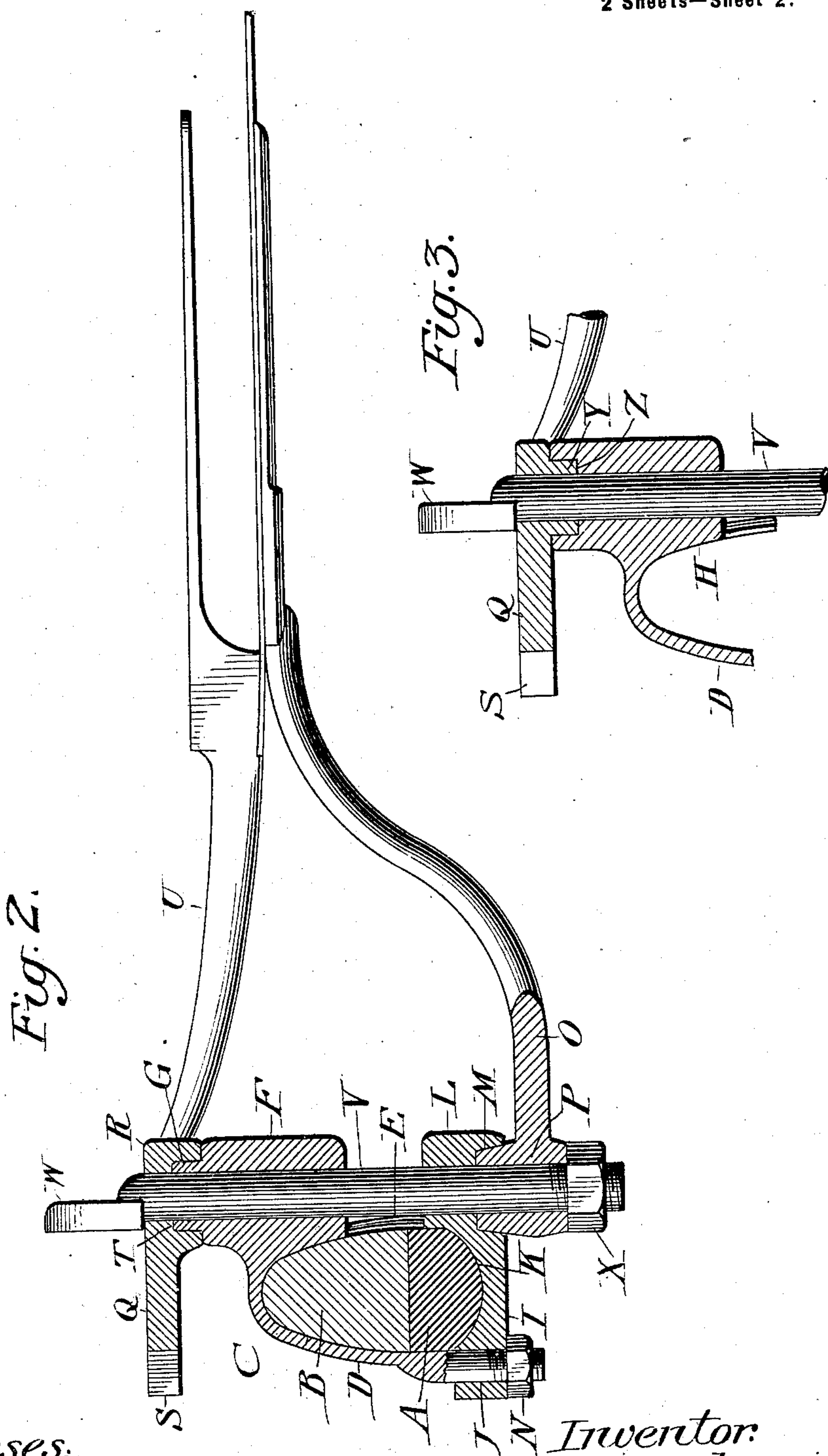
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# UNITED STATES PATENT OFFICE.

FRANK E. WILCOX, OF MECHANICSBURG, PENNSYLVANIA, ASSIGNOR OF  
ONE-HALF TO LESTER E. HICKOK, OF SAME PLACE.

## VEHICLE-GEAR.

SPECIFICATION forming part of Letters Patent No. 679,810, dated August 6, 1901.

Application filed April 26, 1901. Serial No. 57,550. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK E. WILCOX, a citizen of the United States, residing at Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented new and useful Improvements in Vehicle-Gear, of which the following is a specification.

The object of my invention is to improve the vehicle-gear illustrated and described in Patent No. 544,710, issued to D. Wilcox August 25, 1896, by generally simplifying the construction of the same and especially by re-forming the clip which engages the axle and bed, adapting the several parts one to another, so that they can better perform their requisite functions and so that the king-bolt will be relieved of excessive strains and wear, and withal strengthening the entire gear and rendering it more substantial and durable, so it will not become deranged by severe service, and at the same time perfecting its general appearance.

With this end in view my invention consists in certain novelties of construction and combinations of parts hereinafter set forth and claimed.

The accompanying drawings illustrate the physical embodiment of the improvements by the best modes I have so far devised.

Figure 1 shows in perspective the clip, the yoke, the head-block plate, the king-bolt, the brace, and the reach-irons assembled. Fig. 2 is a section of Fig. 1 on the line of the king-bolt. Fig. 3 illustrates a modification.

Referring to the several figures, the letter A designates the axle, which may be of any desired construction; B, the axle-bed; C, the three-legged clip, one of the legs extending over the axle-bed and axle in front and two of the legs being located in the rear of the axle-bed and axle.

D is the front leg, made round in cross-section at the end and threaded.

E E are the rear legs, also threaded at the ends.

F is a perforated lug integral with the clip, which is forged in one piece; G, the projecting bearing of the lug; H, the curved inner surface of the rear legs and lug which engages the axle-bed; I, the axle-yoke; J, holes

in the yoke through which pass the legs of the clip; K, a seat for the axle; L, a perforated lug for the king-bolt; M, a recessed seat for the tapered end of the brace-head. 55

N designates nuts which clamp the axle-bed and axle between the clip and yoke.

O is a double brace; P, a perforated and tapered brace-head; Q, the head-block plate, of the general shape shown; R, a perforated lug for the king-bolt, integral with the plate and in the rear thereof. 60

S designates perforated lugs which receive the ends of clips.

T is a recessed seat in the under surface of the lug, which receives the bearing G of the clip-lug. 65

U designates the reach-irons, made integral with the head-block plate; V, the king-bolt; W, the perforated head of the king-bolt, which receives a bolt that engages the head-block, and X is a nut which fits the threaded end of the king-bolt and bears against the brace-head. 70

In Fig. 3 is shown a modified construction of the interlocking parts of the clip-lug and the lug at the rear of the head-block plate. 75

Y is a downwardly-projecting bearing of the lug R, and Z is a recessed seat to receive the same, formed in the top end of the clip-lug. 80

The relative locations of the several parts as assembled are clearly shown by the drawings.

From the foregoing specific description it becomes obvious that I have introduced numerous characteristic and desirable improvements in construction. The three-legged clip with the king-bolt lug and bearing are formed integral, and the curved surface at H adapts the clip to frictionally engage the curved surface of the common axle-bed and rigidly clamp the same to the axle and yoke, and the length of the lug F presents a large bearing-surface for the king-bolt. The interlocking of the clip-lug and the lug at the rear of the head-block plate and the analogous interlocking of the brace-head and the lug L of the axle-yoke relieve the king-bolt from severe strains and wear. The formation of the reach-irons integral with the head-block plate also simplifies the construction by re- 85 90 95 100



ducing the number of parts and at the same time secures great rigidity. When the reaches are in position and the parts united as in use, the head-block plate, the brace, and the king-bolt are held stationary and rigid. The axle, axle-bed, three-legged clip, and the axle-yoke, which are all rigidly united, can rotate around the king-bolt, the projection G and the seat M in the yoke I constituting the bearings, which take the strains and present large bearing areas within which dirt and dust will not lodge.

Other improved features of construction will be readily recognized by those familiar with the art.

While I have shown only one specific embodiment of my improvements, I do not thereby intend to limit the scope of the invention to the exact construction, inasmuch as modifications can be introduced at will. For instance, I may substitute for the double brace a single brace and for the two reach-irons a single reach-iron when a single reach only is used. Numerous other immaterial alterations may obviously be made which will not constitute a substantial departure.

What I claim is—

1. The combination in a vehicle-gear, of an integral clip having three legs, D and E E,

adapted to embrace opposite sides of an axle and axle-bed, and a lug, F, said lug having a hole for a king-bolt, and the said legs and lugs having curved surfaces on the inside at H; an axle-yoke having a perforated lug; a head-block plate having a perforated lug; a brace-head; a reach or reaches; and a king-bolt; the said king-bolt passing through the lugs of the head-block plate, the clip, the axle-yoke, and the brace-head; in substance as set forth.

2. The combination in a vehicle-gear, of the integral clip having three legs D and E E and a perforated lug, F; the axle-yoke having the lug, L; the brace-head, P; the head-block plate having the integral lug, R; and the king-bolt passing through lugs, R F and L; the brace-head, P, interlocking with the axle-yoke, and the lug, F, interlocking with the lug, R, of the head-block plate; whereby the king-bolt is relieved of shearing strains and the bearings remotely separated.

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

FRANK E. WILCOX.

Witnesses:

L. E. HICKOK,  
H. H. MERCER.