No. 746,219. PATENTED DEC. 8, 1903.

F. E. WILCOX.

VEHICLE GEAR.

APPLICATION FILED JULY 22, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1.

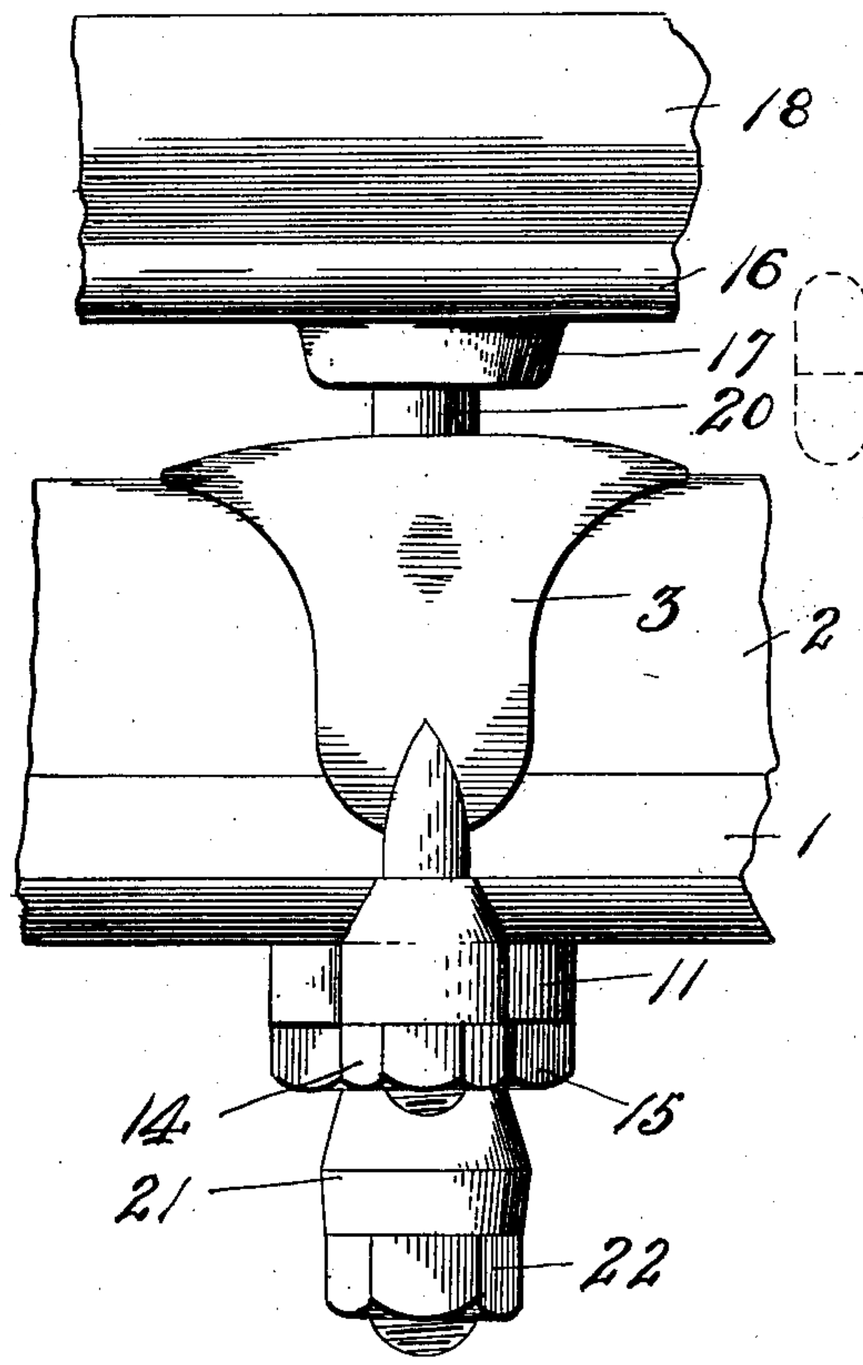


FIG. 2.

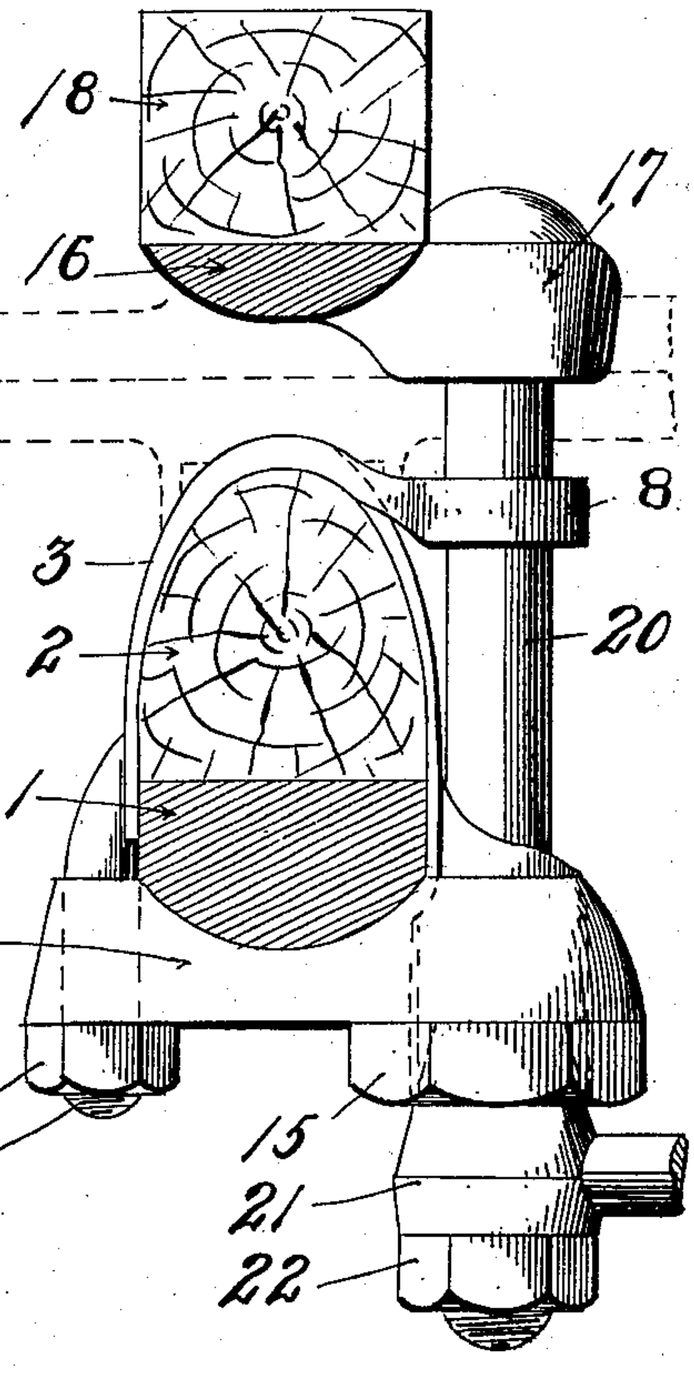
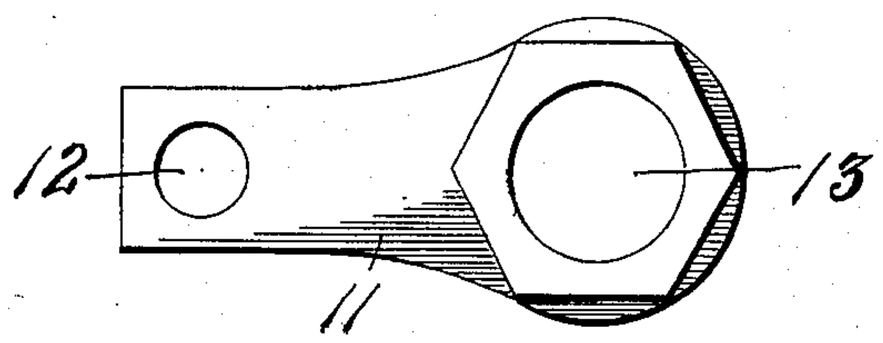


FIG. 7.



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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 4.

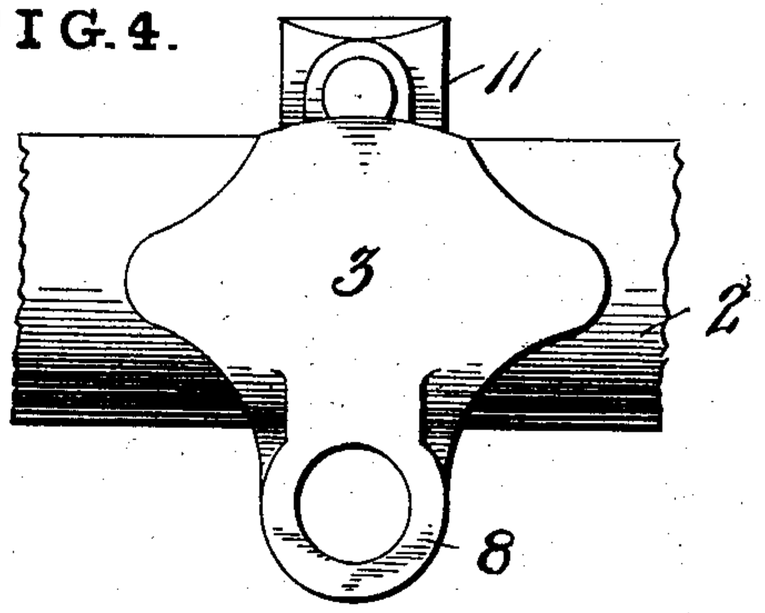


FIG. 5.

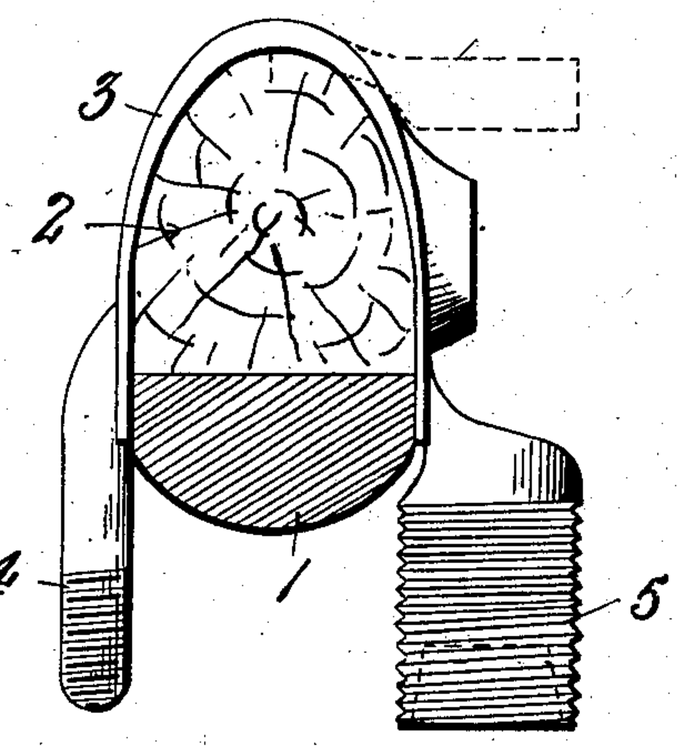


FIG. 3.

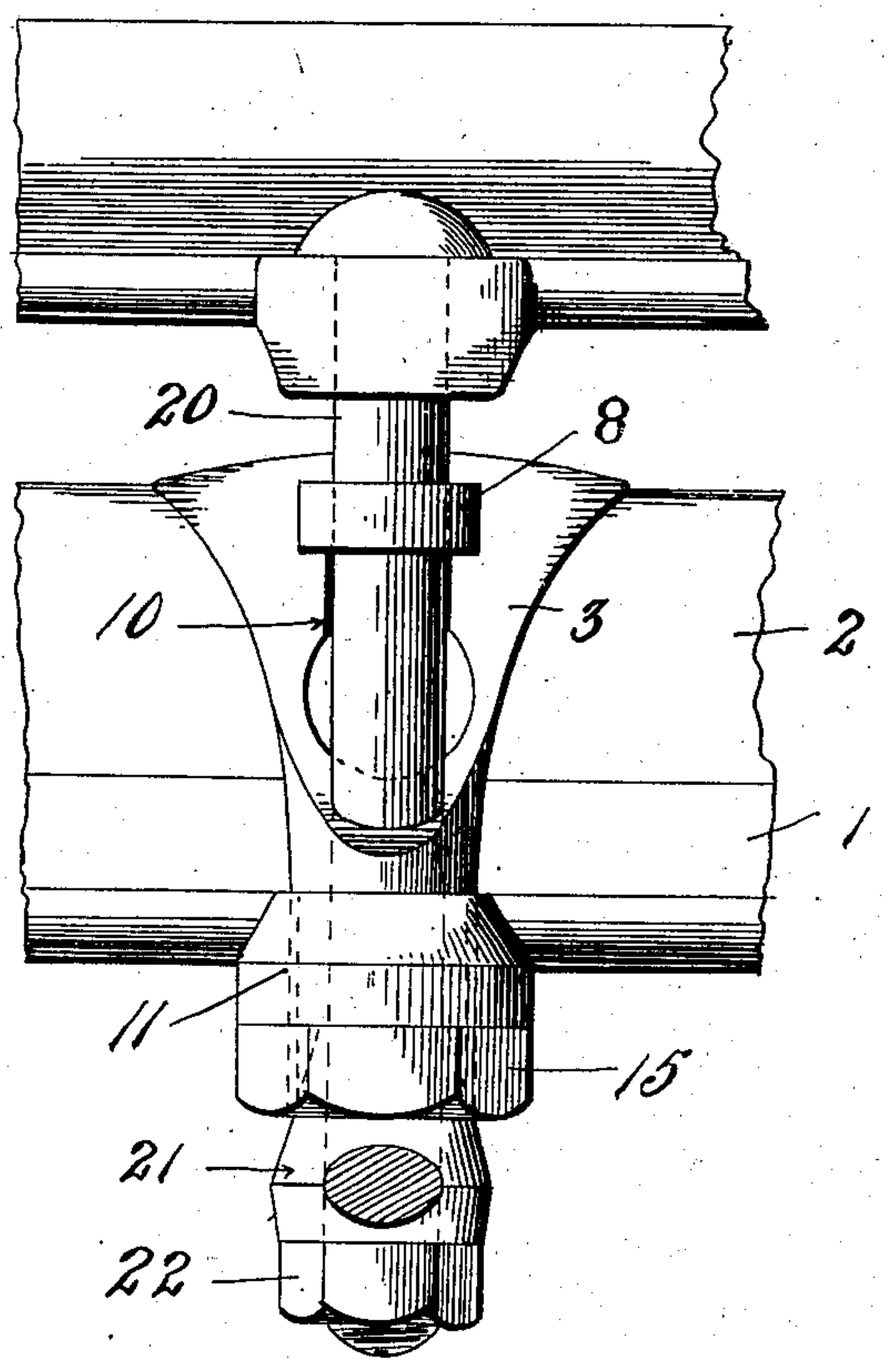
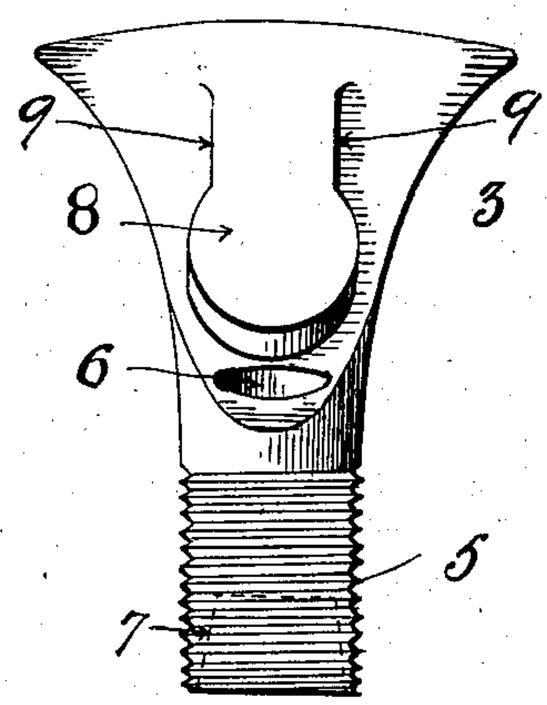


FIG. 6.



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UNITED STATES PATENT OFFICE.

FRANK E. WILCOX, OF MECHANICSBURG, PENNSYLVANIA.

VEHICLE-GEAR.

SPECIFICATION forming part of Letters Patent No. 746,219, dated December 8, 1903.

Application filed July 22, 1903. Serial No. 166,646. (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-Gears, of which the following is a specification.

The object of my invention is the production of an improved gear for vehicles which shall comprise few parts and each part be simple in shape and easily formed, which shall be strong and durable and not liable to become deranged in use, which shall be adapted for attachment to axles and axles and beds without the necessity of making any changes or alterations in the said axles or axle-beds, and which withal shall constitute a simple and improved means for performing the requisite functions.

My invention consists in certain novelties of construction and combinations of parts hereinafter set forth and claimed.

The accompanying drawings illustrate an example of the physical embodiment of the invention constructed according to the best mode I have so far devised for the practical application of the principle.

Figure 1 is a front view in elevation of an axle having my improved clip applied thereunto, the head-block plate and head-block being shown in their relative positions above the axle. Fig. 2 is a sectional view of Fig. 1 in elevation, illustrating the several parts of the gear, the ends of the upper and lower fifth-wheel members being shown in dotted lines. Fig. 3 is a rear elevation view of Fig. 1, showing the head-block plate located some distance above the top of the axle-clip. Fig. 4 is a top plan view of the clip. Fig. 5 illustrates the clip in side elevation, showing the position of the metal prior to its being severed from the body of the clip and turned upwardly and perforated to constitute a king-bolt lug. Fig. 6 is a rear elevation view of Fig. 5, showing the location of the metal which is to be severed from the body of the clip and turned upwardly to form the king-bolt lug. Fig. 7 is a bottom plan view of the axle-yoke, also showing the location of the nut which secures the yoke to the rear perforated bolt of the clip.

Referring to the several figures, the numeral 1 designates the axle; 2, the axle-bed; 3, the clip, which in this instance has a front and a rear prong. 4 is the front threaded bolt of the clip; 5, the rear threaded bolt end of the clip, formed somewhat larger in diameter than the front threaded bolt; 6, a hole in the rear threaded bolt end to receive the king-bolt; 7, a conical seat in the end of the rear threaded end of the clip for receiving a brace-head; 8, the king-bolt lug; 9, the line on which the metal is cut from the body of metal constituting the rear prong of the clip; 10, a hole in the rear prong of the clip formed by removing the metal which constitutes the king-bolt lug; 11, the axle-yoke; 12, a hole in the front end of the yoke; 13, a hole in the rear end of the yoke; 14, the front nut, which engages the front bolt end of the clip; 15, a nut which engages the rear threaded bolt end of the clip and bears against the lower surface of the axle-yoke; 16, the head-block plate; 17, the head-block lug perforated to receive the king-bolt; 18, the head-block; 19, the upper and lower members of the fifth-wheel, (shown in dotted lines;) 20, the king-bolt; 21, the brace-head, and 22 is a nut which engages the threaded end of the king-bolt and secures the brace-head within the conical recess at the lower end of the rear threaded bolt of the clip.

It will be observed that in manufacturing the clip an excess of metal is present at the rear surface of the rear prong of the clip, that the metallic part 8 is severed from the clip upon the line 9 9, and that this metal is afterward turned upwardly and perforated.

Upon reference to Figs. 1, 2, and 3 it will be seen that the head-block plate and lug are located some distance above the top surface of the clip and that there is no interlocking of the parts when the upper and lower members of the fifth-wheel are in frictional contact. This arrangement and disposition of parts enables the several elements of the gear to be applied to axles of different thicknesses without necessitating any alteration or changes in the same.

From the foregoing description, taken in connection with the drawings, it becomes obvious that I have produced a vehicle-gear which fulfils all the conditions set forth as the object and end of my invention. While

I have illustrated but one example of its physical embodiment, it is to be understood that in practice changes and alterations may be introduced. For instance, I may in some cases omit the king-bolt lug 8 altogether without impairing the efficiency of the gear, for it will be observed that in drawing the strains will be taken by the king-bolt primarily and transmitted through the brace and head-block plate and reach-irons to the reach or reaches. Other changes may be made without constituting substantial departures.

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

1. The combination in a vehicle-gear, of a clip having the front threaded bolt end 4, rear threaded and perforated bolt end 5, axle-yoke perforated at the ends, nut 14 upon bolt end 4, nut 15 upon the rear bolt end and bearing against the yoke, a perforated lug 8 separate from the bolt end 5, a brace, a head-block plate, and a king-bolt, said king-bolt being passed through a lug upon the head-block plate, the hole in the rear threaded bolt of the clip, the head of the brace, and secured in position by a nut.

2. The combination in a vehicle-gear, of a clip having the front bolt end 4, rear threaded and perforated bolt end 5, axle-yoke perforated at the ends, nut 14 upon the bolt end 4, nut 15 upon the rear bolt end and bearing against the yoke, a separate perforated lug 8 located above the bolt end 5 and in line therewith, a head-block plate, a brace-head, and a king-bolt; said rear bolt end 5 having a recess in its lower end to receive the end of the brace-head.

3. A clip 3 having a front threaded bolt end 4, a rear bolt end 5, and a perforated king-bolt lug 8 cut from the rear prong of the clip and turned upwardly to a horizontal position.

4. A clip having a front threaded bolt end 4, a rear and perforated bolt end 5, and a king-bolt lug 8; the rear prong of said clip being provided with an opening 10, in substance as set forth.

5. A vehicle-clip having a front threaded bolt end 4, a rear portion and a perforated lug 8 formed by cutting the metal from the rear portion of the clip and turning the same to a horizontal position, in substance as set forth.

6. The combination in a vehicle-gear, of a head-block plate provided with a perforated lug, a clip having a front bolt end 4, a rear threaded and perforated bolt end 5, a perforated king-bolt lug 8, an axle-yoke held in position by bolts 14 and 15, a brace-head, and a king-bolt and nut uniting the several parts; an open space being left between the lug of the head-block plate and the king-bolt lug on the clip whereby when the members of the fifth-wheel are in frictional contact the lug upon the head-block plate will not engage the clip or lug located upon the clip.

7. A clip having a front threaded bolt end 4, a rear threaded and perforated bolt end 5, and a perforated lug 8; the perforated lug 8 and the perforated bolt end 5 being adapted to receive a king-bolt, and bolt ends 4 and 5 adapted to be secured to a yoke by nuts.

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

FRANK E. WILCOX.

Witnesses:
ALBERT ROBBINS,
V. HOWLAND.