(No Model.) 2 Sheets—Sheet 1.

C. R. WILSON.

GEAR IRON FOR VEHICLES.

No. 311,094. Patented Jan. 20, 1885.

Fig. 1.

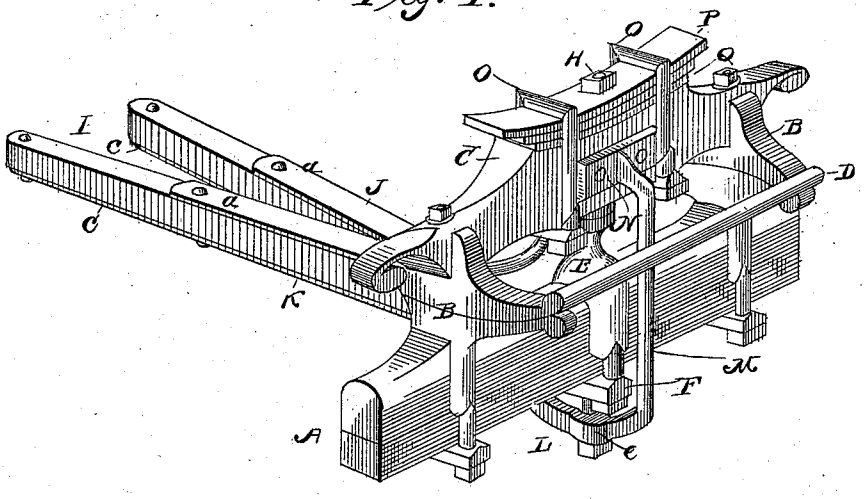
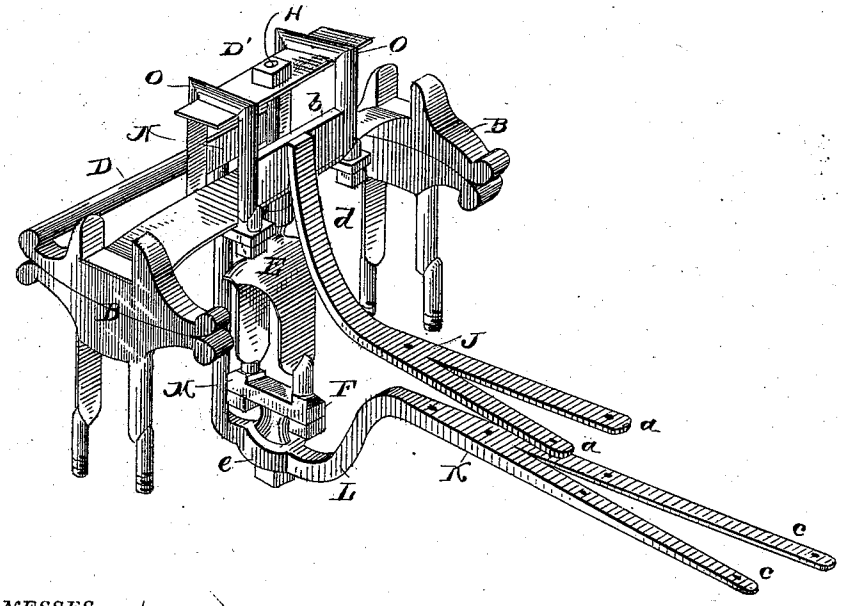


Fig. 3.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

C. R. WILSON.

GEAR IRON FOR VEHICLES.

No. 311,094. Patented Jan. 20, 1885.

Fig. 2.

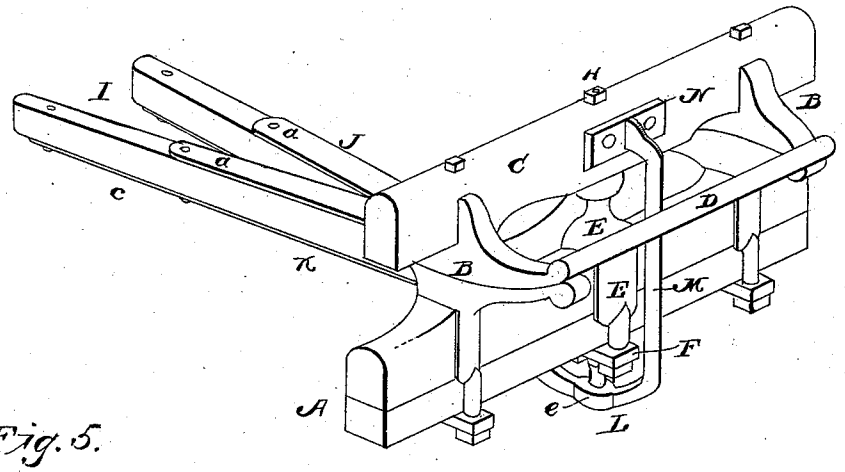


Fig. 5.

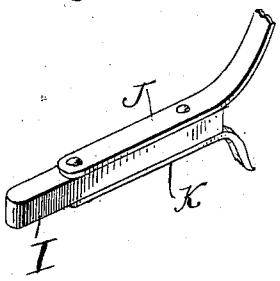
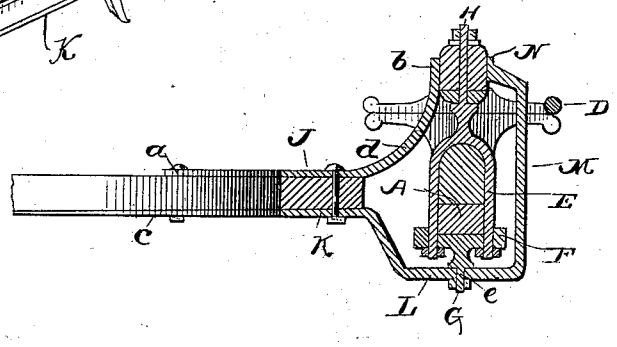


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES R. WILSON, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO JOSEPH C. WILSON, OF SAME PLACE.

GEAR-IRON FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 311,094, dated January 20, 1885.

Application filed September 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. WILSON, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Gear-Irons, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to gear-irons for coupling the forward end of a single or double perch to the head-block and axle; and it has for its object to provide means for this purpose which shall possess superior advantages in point of simplicity and durability in construction, convenience in application, and efficiency in use.

A further object of the invention is to provide an improved set of irons which may be applied with ease and with very little change to the different styles of buggies known to the trade as the "Brewster," "Elliptic," "Timkin," and similar styles, and thus avoid the necessity and expense of keeping in stock a class of irons to be used only for a particular style of buggy.

With these and other objects in view the said invention consists in certain details of construction and combination of parts, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view illustrating the application of my invention when used with the Brewster or Elliptic gear. Fig. 2 is a similar view showing the irons applied to the Timkin gear, or that style where no end springs are used. Fig. 3 is a perspective view of the irons connected together, the axle, head-block, and perch being detached. Fig. 4 is a longitudinal section of Fig. 2 on the line of the perch. Fig. 5 is a detail view of the single-perch coupling.

Like letters are used to indicate corresponding parts in the several figures.

Referring to the drawings, A designates the axle, and B the fifth-wheel, attached thereto by clips, as shown, a rod, D, connecting the upper plate of the fifth-wheel at the forward ends.

C designates the head-block, having a plate, D', attached to the upper side thereof by means of screws or other fastening means, the ends of said plate being seated in and the head-block being mounted on the fifth-wheel and held thereto by suitable bolts and nuts.

E designates a clip encircling the axle at the center, and having its lower threaded ends or shanks connected by a clip-bar, F, which fits against the under side of the axle, and is held thereto by suitable nuts. The king-bolt H projects from the clip E and passes through the plate D' and head-block C, its upper end having a securing-nut. A threaded stud, G, projects downward from the clip-bar F, for the purpose hereinafter explained.

I designates the double reach or perch, which converges toward its forward ends, and is connected to the axle and head-block by the top and bottom braces, J K. The top brace, J, is provided with divergent shanks *a a*, which are in the same horizontal plane, and rest on the upper face of the forward ends of the double reach, a curved neck or arm, *d*, rising from the junction of the shanks and terminating in a head or cross-arm, *b*, the latter being substantially T-shaped in form. The bottom brace, K, is also provided with the divergent shanks *c c*, which are in the same horizontal plane, and are attached by suitable bolts and nuts to the under side of the double perch or reach, the shanks *a* of the top brace being secured to the upper side thereof. An extension or neck, L, projects from the forward ends of the shanks *c c*, and is curved in form to pass under the axle, an eye, *e*, being formed in said neck to receive the stud G of the clip E, a nut on the end of the stud serving to hold the neck or extension in place. From the eye *e* the neck L extends out from the axle and up parallel with and in front of the axle and head-block, as shown at M, the upper end of this extension M being turned inward, and having a T-shaped head, N, suitable bolts passing through the head-blocks and connecting the heads *c* and N together. In this manner a perfect attachment of the perch or reach is effected, while the axle and head-block will be braced securely from displacement.

The gear-iron above described is used in

connection with the Timkin or Wilson gear, the attachment being shown in Fig. 2. As will be seen, there are no end springs employed in this gear, so that the saddle-clips and plates are dispensed with.

In Fig. 1 I have shown our improved gear-irons as applied to the Brewster and Elliptic gears. In this connection I employ the saddle-clips O O and the plate *p*, the king-bolt H passing through the head-block and the end spring, Q, into the plate *p*, a nut being screwed on its upper end to hold the parts in position. As seen, the saddle-clips O O encircle the head-block and hold the end spring down to the same. By means of this construction it is only necessary to apply the saddle clips and plates in changing from the Timkin or Wilson gear to the Brewster or Elliptic, so that one set of gear-irons may be bought by the dealer and used on different styles of buggies.

Heretofore the builders were obliged to carry in their stock large quantities of gear-irons, comprising about six different styles. By my improved iron this useless expense is avoided, since the dealer can change or place the iron on any of the different styles without taking the iron apart, all the change necessary being to attach the saddle clips and plates when applying to a Brewster or Elliptic gear.

The device is simple in construction and efficient in use. By means of the same the expense is lessened and the labor of applying the irons is reduced. The parts are efficiently braced and held from separation, and will not get out of order.

I do not limit myself to the construction of the braces J K with divergent arms, since when used in coupling a single perch the arms are dispensed with and only one arm employed. This construction is shown in Fig. 5.

Having described my invention, I claim—

In a vehicle, the combination, with the front axle and head-block, connected together substantially as described, of the perch or reach, the top brace, J, secured to the upper face of the same, and having a neck which extends upward and terminates in a cross-head, *b*, and the bottom brace, K, secured to the under side of the perch, and having a neck, L, passing under and secured to the axle, and an extension, M, of the neck extending upward parallel with and in front of the axle, its upper end being turned inward, and having a cross-head, N, formed thereon, and bolts passing through the head-block and connecting the cross-heads *b* N thereto, as and for the purpose set forth.

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

CHARLES R. WILSON.

Witnesses:
J. F. GOTCHEN,
JAS. F. STAMM.