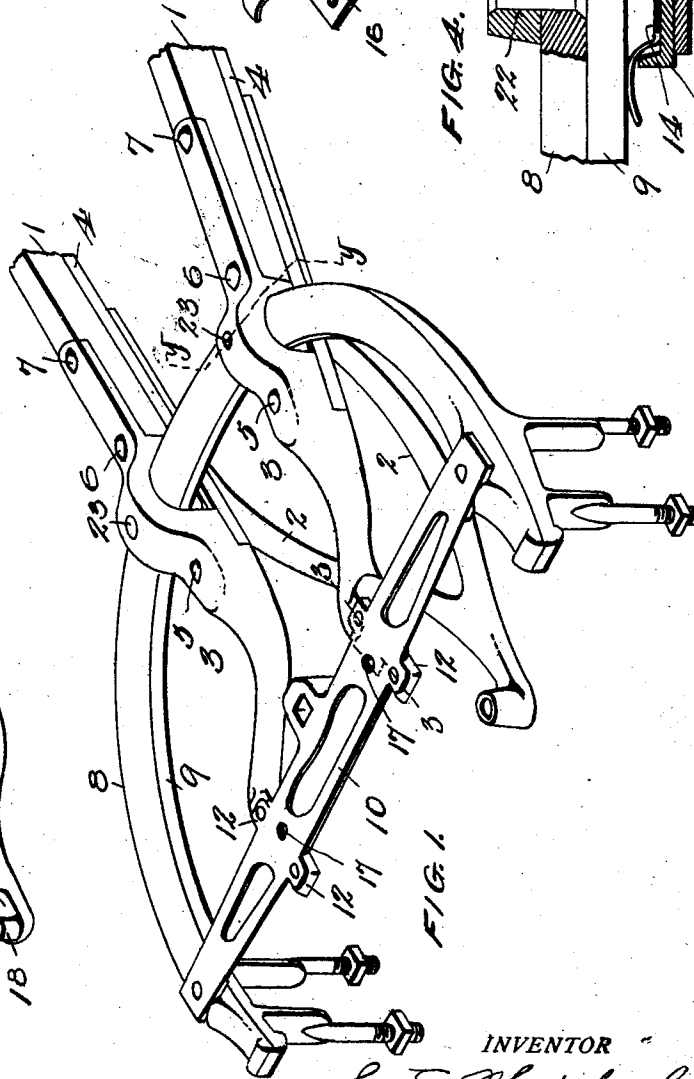
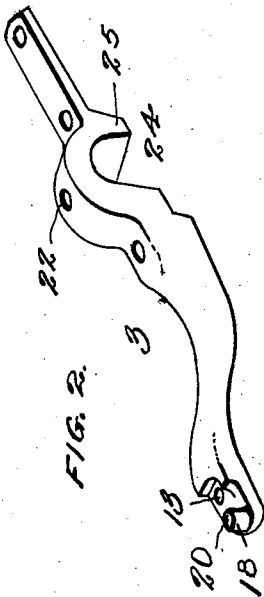
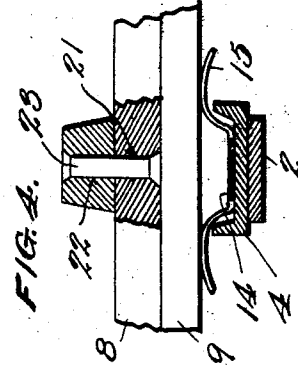
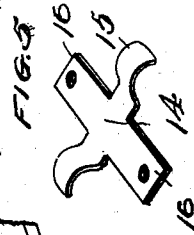
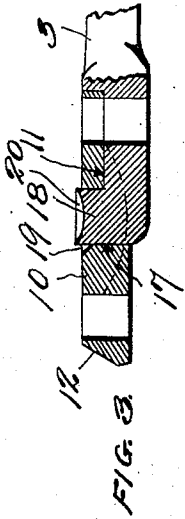


L. E. HICKOK.
 VEHICLE GEAR.
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974,141.

Patented Nov. 1, 1910.



WITNESSES

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VEHICLE-GEAR.

974,141.

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To all whom it may concern:

Be it known that I, LESTER E. HICKOK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Vehicle-Gears, of which the following is a specification.

Heretofore vehicle gear irons or parts, adapted for use in connection with an axle, head block, and two reaches or perches have been forged separately and attached to the reaches head block and axle when the constituent parts of the vehicle running gear were assembled at the shop or manufactory. In practice much time has been consumed and difficulty experienced in correctly assembling and fitting the numerous parts of the gear, due in a measure to the fact that each part must occupy a proper and determine position relative to every other part, and such relative dispositions of them is generally effected only by successive adjustments and readjustments. By reason of the irregular shapes and the necessary relative locations of parts they cannot be forged integral except by an excessive expenditure of time and at a cost prohibitive of their sale. Now, I have devised a way of obviating the difficulties attending the assembling and fitting of the parts at the shop, and the forming of certain parts and elements integrally.

My invention consists in forging the reach irons, head block plate and upper member of the fifth wheel separately and then rigidly uniting them in their proper relative positions by rivets, or by projecting lugs formed on some parts which enter holes in other parts and are upset.

The accompanying drawing illustrates one example of the physical embodiment of my invention constructed in accordance with the best mode I have so far devised for the practical application of the principle.

Figure 1 is a view in perspective of parts of a vehicle gear some of which are united according to my invention. Fig. 2 is a view in perspective of one reach iron detached. Fig. 3 is an enlarged section on line 3—3 of Fig. 1. Fig. 4 is a section of Fig. 1 on line y—y. Fig. 5 shows an anti-rattler detached.

Referring to the several figures, the numeral 1 designates the perforated reaches; 2, the double forked brace with perforated ends; 3, the reach iron having holes through

which and also the reaches, reach straps 4, and ends of the double brace are passed bolts 5, 6, and 7, and to the threaded ends of which nuts are applied when the gear is being assembled; 8, the upper fifth wheel member; 9, the lower fifth wheel member of usual construction; 10, the head block plate with seats 11—11 formed in its under surface to receive the ends of the reach irons; 12, inner and outer lugs with holes to receive the threaded ends of clips; 13, holes at the ends of the reach irons registering with the holes in the inner lugs of the head block plate through which also pass the threaded ends of clips; and 14 is an anti-rattler with spring arms 15 and perforated lugs or extensions 16 through which pass the bolts 6 and 5, the spring arms bearing against the lower surface of the lower fifth wheel member as clearly shown by Fig. 4 of the drawing.

At the time of forging or prior to assembling the parts of the vehicle in the shop, I rigidly unite the head block plate, top fifth wheel member, and reach irons, or at least the reach irons and top fifth wheel member, in their proper relative positions in the following way: Through the head block plate are made holes 17, and through them are passed the studs or lugs 18 at the ends of the reach irons. The holes 17 at the top surface of the head block plate are reamed out or enlarged at 19 to form open spaces and the lugs or studs 18 preferably are made long enough to project above the top surface of the head block plate. The metal of the projecting ends of the studs are upset into the spaces 19 and the ends of the reach irons and head block plate rigidly and permanently united so each occupies a fixed position relative to the other. The studs may be formed with concavities 20, if desired, so that when the metal is displaced it will fill the spaces 19 and the riveted heads be flush with the top surface of the head block plate. To unite the top fifth wheel member and the reach irons holes 21, reamed out or enlarged, as shown, are made through the upper fifth wheel member. Similar holes 22 in line with the holes 21 are made through the reach irons and then rivets 23 are inserted in the holes and the ends upset preferably so the heads will be countersunk, as illustrated in Fig. 4. In the present example, I have shown each

reach iron with the metal offset to form a seat or recess 24 to receive the upper member of the fifth wheel and also with a downwardly projecting part 25 to confine and guide the lower fifth wheel member when the reach straps have been attached. The reach irons may be otherwise fashioned to form seats for the upper fifth wheel member and the lug or projection 25 be omitted if desired. I prefer to form the seats 24 as illustrated so the fifth wheel members will be located at the under surfaces or sides of the reach irons, but other dispositions of the parts may be adopted.

While I have shown lugs or studs at the ends of the reach irons which are upset within the holes in the head block plate, other means as rivets may be passed through both elements and upset, as the reach irons are attached to the upper fifth wheel member. Likewise the reach irons may be attached to the upper fifth wheel member by means similar to those used to attach the head block plate to the ends of the reach irons. Equivalent means in both instances may be substituted which will perform the requisite function or functions and not constitute substantial departures.

From the foregoing description and the drawing, it becomes obvious that I have devised a way to unite separately forged gear irons—the head block plate to the ends of the reach irons, and the upper fifth wheel member to the reach irons—so they will maintain their fixed relative positions under all conditions, whereby they can be handled as a unit and applied to the reaches and head block plate without the manifold adjustments and re-adjustments necessary when the several parts are separately manipulated in assembling the gear.

What I claim is:

1. The combination with a head block plate and an upper fifth wheel member, of two reach irons; said parts being separately forged; and metallic means with the metal upset rigidly uniting the reach irons to the head block plate and the upper fifth wheel member.

2. The combination with a head block plate and an upper fifth wheel member, of two reach irons; said parts being separately forged; metallic means with the metal upset rigidly uniting the ends of the reach irons to the head block plate; and rivets rigidly uniting the reach irons to the upper fifth wheel member.

3. The combination with an upper fifth wheel member, of two reach irons, said parts being separately forged and each reach iron

at its opposite ends being adapted for attachment to a head block plate and to a reach, and metallic means with the metal upset rigidly uniting the two reach irons to the upper fifth wheel member.

4. The combination with an upper fifth wheel member, of two reach irons, said parts being separately forged and each reach iron at its opposite ends being adapted for attachment to a head block plate and to a reach, and rivets rigidly uniting the two reach irons to the upper fifth wheel member.

5. The combination with an upper fifth wheel member, of two reach irons, each provided with a seat at its under surface to receive the upper fifth wheel member, and means adjacent the seats rigidly uniting the two reach irons to the upper fifth wheel member.

6. The combination with a head block plate having seats at its under surface, of two reach irons having their ends located within and fitting the seats, and metallic means with the metal upset rigidly uniting the said ends to the head block plate.

7. The combination with a head block plate having holes and seats at its under surface, of two reach irons having lugs and their ends located within and fitting the seats, the said lugs being upset within the holes and rigidly uniting the said ends to the head block plate.

8. A reach iron having perforated ends for attaching the same at one end to a head block plate and to a head block, and at the other end to a reach, and the metal intermediate of the ends of the reach iron offset to form a seat for an upper fifth wheel member.

9. A reach iron having perforated ends for attaching the same at one end to a head block plate and to a head block, and at the other end to a reach, and the metal intermediate of the ends of the reach iron offset and fashioned into a downwardly projecting part, as 25, to form a seat for an upper fifth wheel member.

10. The combination in a vehicle gear, of two reach irons each having the metal intermediate its ends offset or fashioned to form a seat at its under surface, reaches; reach straps; and a fifth wheel member located within the openings formed by the offset portions of the reach irons and the reach straps.

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

LESTER E. HICKOK.

Witnesses:

WILLIAM LAVINGNA,
DISRAELI ALSTON.