

No. 744,593.

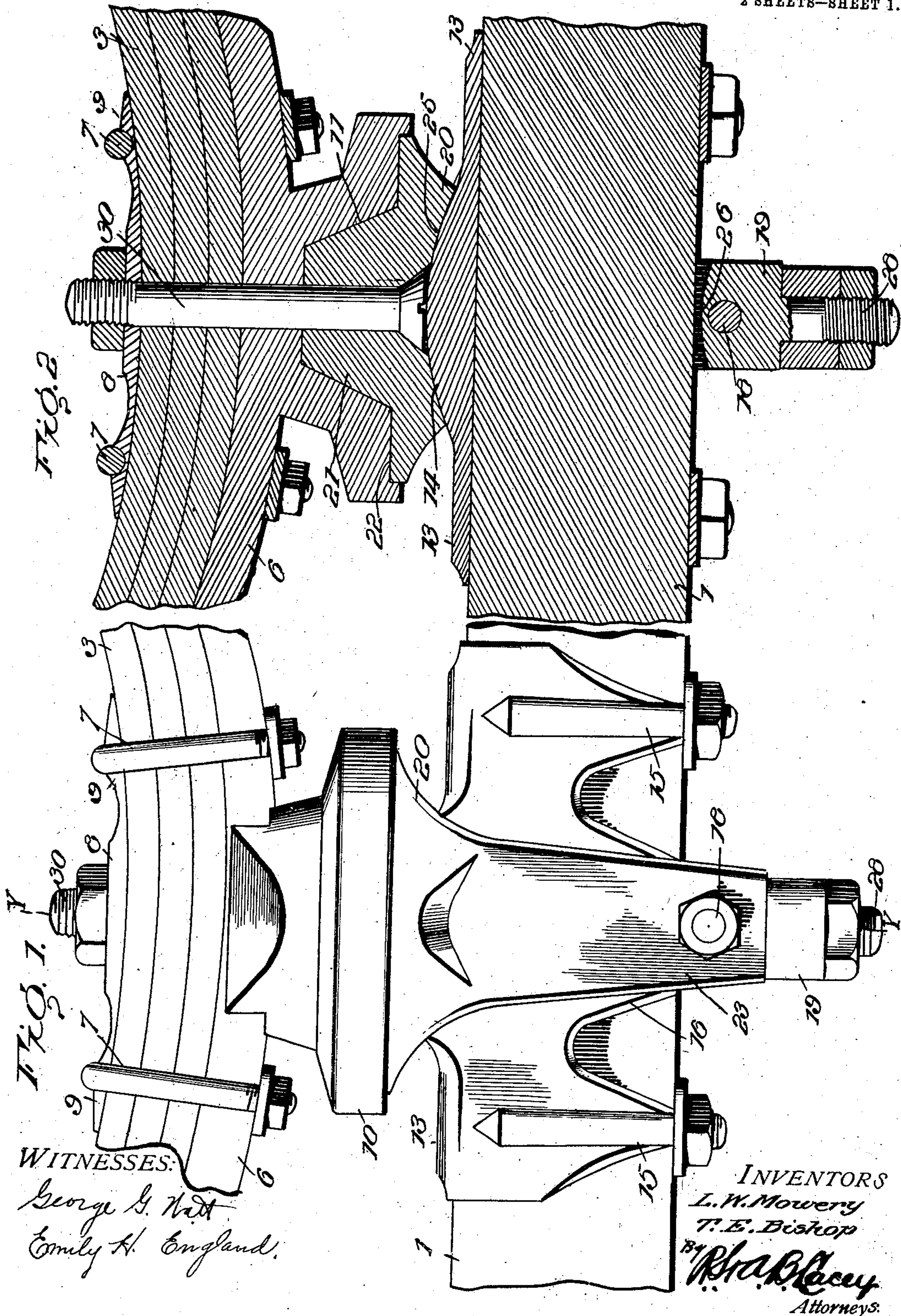
PATENTED NOV. 17, 1903.

L. W. MOWERY & T. E. BISHOP.
FIFTH WHEEL CONNECTION.

NO MODEL.

APPLICATION FILED JUNE 20, 1903.

2 SHEETS—SHEET 1.



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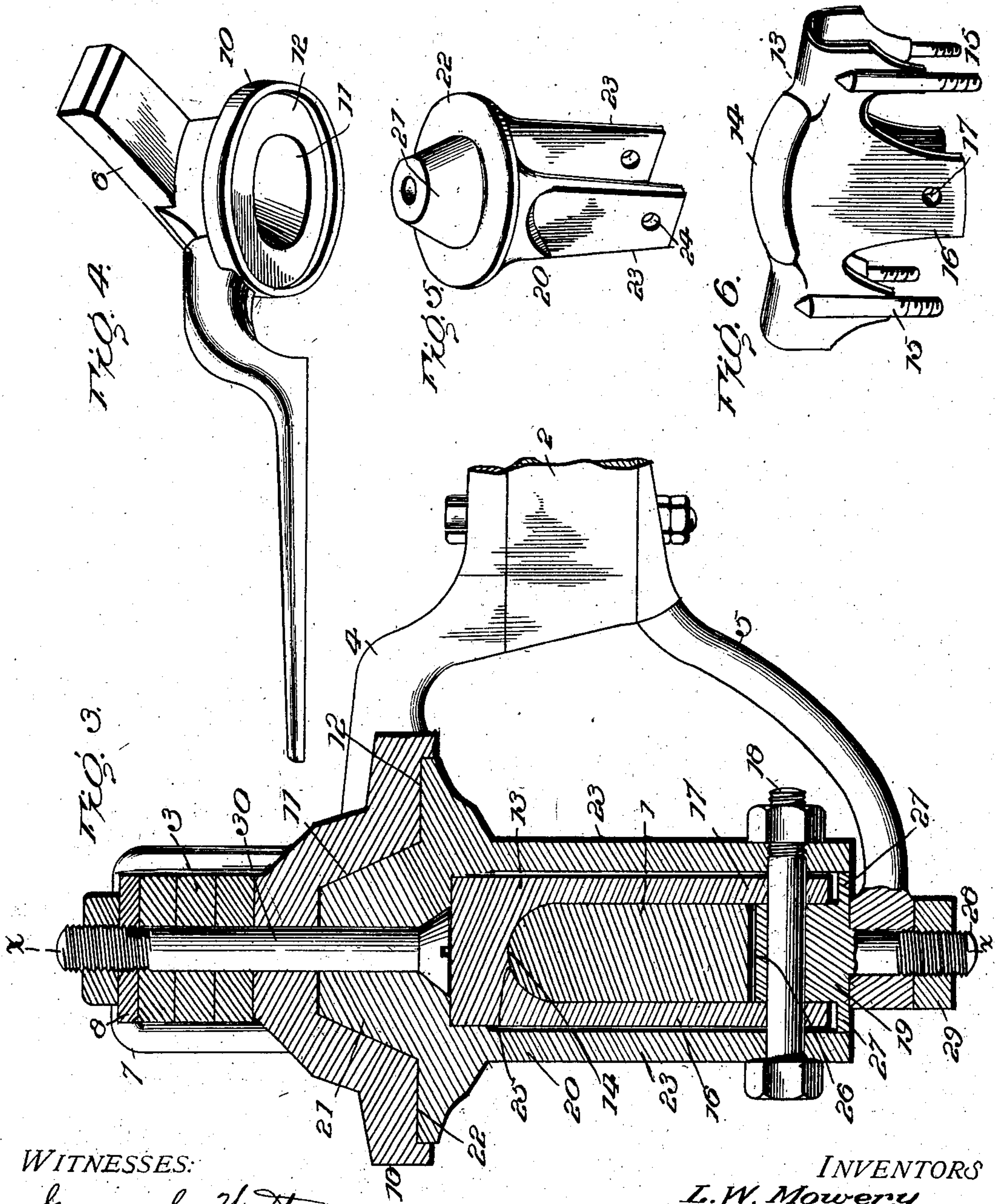
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WITNESSES:

George S. Watt
Emily H. England,

INVENTORS

L. W. Mowery
T. E. Bishop

By

R. A. Racy

Attorneys.

UNITED STATES PATENT OFFICE.

LEWIS W. MOWERY AND THEOPHILUS E. BISHOP, OF LIMA, OHIO,
ASSIGNORS TO THE ANCHOR MANUFACTURING COMPANY, OF
LIMA, OHIO.

FIFTH-WHEEL CONNECTION.

SPECIFICATION forming part of Letters Patent No. 744,593, dated November 17, 1903.

Application filed June 20, 1903. Serial No. 162,422. (No model.)

To all whom it may concern:

Be it known that we, LEWIS W. MOWERY and THEOPHILUS E. BISHOP, citizens of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Fifth-Wheel Connections, of which the following is a specification.

This invention appertains to vehicle running-gear and belongs more particularly to the fifth-wheel connection, the purpose being to provide for independent rocking movement of the front axle and vehicle-body, so as to relieve the pivotal connection of abnormal strain.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the connection between the front axle and the lower member of the front spring. Fig. 2 is a vertical central longitudinal section thereof on the line X X of Fig. 3. Fig. 3 is a transverse section on the line Y Y of Fig. 1. Fig. 4 is a detail perspective view of the chair for the front spring having formed therewith the upper perch-iron and the cup. Fig. 5 is a detail perspective view of the saddle. Fig. 6 is a detail perspective view of the axle-clip.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The front axle is indicated at 1, perch at 2, the front spring at 3, and the perch-irons at 4 and 5.

The chair for the spring 3 consists of a plate or bar curved upon its top side to conform to the lower side of the spring 3. Clips 7 secure the spring 3 to the chair, a plate 8 being placed upon the spring 3 and having its

end portions thickened and provided with transverse seats 9 to receive the closed ends of the clips 7, so as to prevent casual displacement thereof after the parts have been properly assembled and made secure by screwing home the clamp-nuts on the threaded ends of the legs or members of the clips 7. The cup 10 is formed with the chair 6 and is formed with a conical depression 11 and a circular depression 12 for the purpose presently to be explained. The upper perch-iron 4 constitutes a part of the casting comprising the seat 6 and cup 10, thereby providing an integral structure and obviating the formation of any joints.

The axle-clip 13 is provided upon its top side, intermediate of its ends, with rocker-bearing 14 and comprises a series of three clip members, the end clip members 15 having their lower portions threaded to receive the usual yokes or glands and the clamp-nuts and the intermediate clip members 16 being flat elements projecting below the axle and transversely apertured, as shown at 17, to receive the bolt 18, by means of which the perch-block 19 and side members of the saddle 20 are connected. The construction of the axle-clip is such as to obtain an extended bearing upon the axle, this being necessary to prevent slipping and to sustain the strain imposed thereon by reason of the loose connection between said clip and the saddle 20.

The saddle 20 is provided at its upper end with a cone 21 and an annular shoulder 22 at the base of the cone, the latter snugly fitting the conical depression 11 and the shoulder 22 entering the circular depression 12, the joint formed between the parts 10 and 20 constituting in effect the fifth-wheel connection. The pendent portions 23 of the saddle embrace opposite sides of the axle-clip 13 and are provided with openings 24 in horizontal alinement to register with the openings 17 of the clip members 16 to provide a passage for the connecting-bolt 18. The wall at the inner end of the space formed between the pendent portions 23 is curved longitudinally, as shown at 25 in Fig. 2, to conform to the longitudinal curvature of the rocker-bearing

14, so as to provide a snug fit between the parts 25 and 14, the joint between which is struck on the arc of a circle having the bolt 18 or axis of the saddle for its center.

5 The perch-block 19 is fitted between the lower ends of the members 16 of the axle-clip, and its top side is longitudinally curved, as shown at 26, to provide for a rocking movement of the axle or saddle relatively thereto. 10 The lower ends of the clip members 16 are likewise curved, so as not to interfere with the rocking movements of the parts 13 and 20. The perch-block is formed with lateral extensions 27, which underlap the ends of 15 the clip members 16 and bear against the inner sides of the pendent members 23 of the saddle, so as to prevent binding of the same against the sides of the axle-clip when tightening bolt 18. A threaded stem 28 is pendent 20 from the perch-block 19 and passes through an eye in the front end of the perch-iron 5 and receives the clamp-nut 29, by means of which the perch-iron 5 is clamped to the perch-block 19.

15 When the parts are properly assembled, the spring-chair 6 is connected to the saddle 20 by the king-bolt 30, which passes through vertically-alined openings of the parts 21 and 6 of said saddle and chair and through 20 openings in the spring 3 and clamp-plate 8. The head of the king-bolt is countersunk in the lower end of the cone 21, and its upper end receives the clamp-nut.

A running-gear having the front axle connected to the fore part of the vehicle-body in substantially the manner herein stated is materially relieved of the strain incident to the swaying of the vehicle-body or the rocking of the front axle when passing over rough 35 roads, it being understood that the axle is permitted to rock independent of the vehicle-body and the latter to sway from side to side independently of the axle. Hence the motion is compensated for and neutralized to a cer-

tain extent by the rocking and pivotal connection of the saddle with the axle-clip. 45

Having thus described the invention, what is claimed as new is—

1. In vehicle running-gear, the combination of the axle, the body-spring, a chair for said 50 spring, an axle-clip having portions embracing opposite sides of the axle and extended therebelow, a saddle pivotally connected to the aforesaid chair and having pendent portions embracing the axle-clip, a perch-block 55 fitted between the said pendent portions of the axle-clip and having lateral extensions to underlap the same and come between the pendent portions of the saddle, and a connecting-bolt passed through coincident openings 60 formed in the perch-block and pendent portions of the saddle and axle-clip, substantially as described.

2. In vehicle running-gear, the combination of the chair for the body-support provided 65 with a cup, a saddle having a vertical extension snugly fitted within said cup, a king-bolt connection between the saddle and chair, an axle-clip having pendent portions, and a rocker-bearing for pivotally supporting the 70 saddle, a perch-block located between the lower ends of the pendent portions of the axle-clip and having side extensions to underlap said pendent portions and to come between the pendent members of the saddle, a 75 fastening connecting the perch-block, saddle and axle-clip, a perch-iron connected to the perch-block, and an upper perch-iron projected from the aforesaid chair, substantially 80 as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

LEWIS W. MOWERY. [L. S.]
THEOPHILUS E. BISHOP. [L. S.]

Witnesses:

J. J. WEADOCK,
CARRIE M. HUTCHISON.