

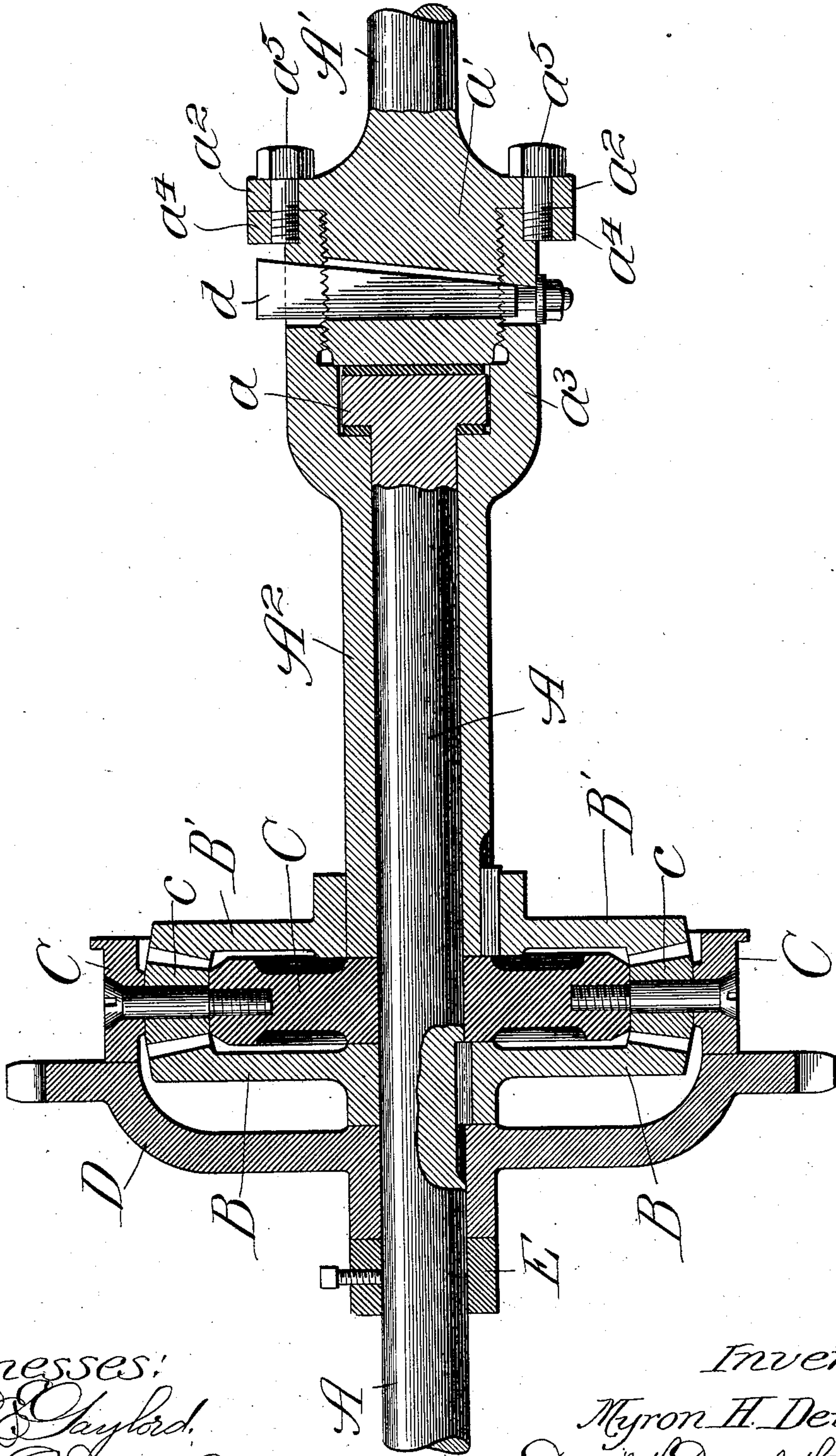
No. 755,280.

PATENTED MAR. 22, 1904.

M. H. DETRICK.
VEHICLE AXLE.

APPLICATION FILED DEC. 16, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

MYRON H. DETRICK, OF STERLING, ILLINOIS.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 755,280, dated March 22, 1904.

Application filed December 16, 1903. Serial No. 185,350. (No model.)

To all whom it may concern:

Be it known that I, MYRON H. DETRICK, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented a new and useful Improvement in Vehicle-Axles, of which the following is a specification.

My invention relates particularly to motor-vehicle axles; and my primary object is to provide a driving-axle for motor-vehicles which shall have all the strength of a continuous axle, thereby rendering trussing unnecessary, and which also shall permit of the same size axle-bearings being used at the two sides of the vehicle. Incidentally the improved construction permits of ready assembling and disconnection of the parts.

The preferred embodiment of the invention is shown in the accompanying drawing.

In the construction shown, A represents an axle-section having its inner end upset to form a head or collar a ; A', an axle-section having its inner end upset to form an enlargement a' and a flange a^2 at the base of said enlargement; A², a sleeve journaled on the inner portion of the section A and having an enlargement or bell end a^3 , receiving the head a and enlargement a' and terminating in a flange a^4 , abutting against the flange a^2 and firmly secured thereto by bolts a^5 ; B, a bevel-gear keyed to the axle-section A; B', a bevel-gear facing the gear B and keyed to the sleeve A²; C, an interposed pinion-carrying member journaled on the axle-section A and equipped with pinions c , meshing with the gears B B'; D, a sprocket-wheel fixed to the member C (which it drives) and journaled on the axle-section A, and E a collar confining the sprocket-wheel against the hub of the gear B.

The relative lengths of the axle-section A, the axle-section A' and the sleeve A² (virtually forming an extension of the section A') may be as desired, although it is essential that the sleeve be of suitable length to afford sufficient bearing to prevent objectionable wear and overcome all danger of breakage. The axle-sections may be forgings and the sleeve itself may be a bored forging, if desired, al-

though ordinarily cast-steel will be found to be of ample strength without being objectionably heavy. The enlarged end portion a' of the axle-section A' has screw connection with the bell a^3 and is additionally secured by a wedge-shaped cotter-bolt d .

While it is preferred to have such connections between the axle-section A' and sleeve A² as to prevent possibility of injury and insure readiness of disconnection, yet any particular form of connection may be dispensed with, if desired.

It will of course be understood that the outer end portions (not shown) of the axle-sections A and A' pass through suitable antifriction-bearings of uniform size and into wheel-hubs of uniform size.

Changes in minor details of construction within the spirit of my invention may be made. Hence no undue limitation should be understood from the foregoing detailed description.

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

1. In a device of the character described, the combination of an axle-section, an axle-section in alinement therewith and equipped with a sleeve extension journaled on the first-named section, means being provided for confining the sleeve against longitudinal movement with relation to said first-named axle-section, and differential gear mechanism having a gear connected with said first-named axle-section and a gear connected with said sleeve extension, for the purpose set forth.

2. In a device of the character described, the combination of an axle-section provided at its inner end with a head, an axle-section having its inner end provided with a head adjacent to said first-named head, a sleeve extension secured to said second-named axle-section and recessed to receive said heads, and differential gear mechanism having a gear connected with said first-named axle-section and a gear connected with said sleeve extension, for the purpose set forth.

3. In a device of the character described, the combination of an axle-section provided at its inner end with a flanged head, an axle-

section having an enlarged end abutting
against said head and provided at the base of
its enlargement with a flange, a sleeve having
a bell equipped with a flange abutting against
5 the flange of said second-named axle-section,
means detachably securing the sleeve to the
second-named axle-section, and differential

gear mechanism having a gear fixed to the free
end of said sleeve and a gear fixed to said first-
named axle-section, for the purpose set forth.

MYRON H. DETRICK.

In presence of—

F. M. WIRTZ,

WALTER N. WINBERG.