

No. 736,866.

PATENTED AUG. 18, 1903.

J. MUNDEN.
MOTOR PROPELLED VEHICLE.
APPLICATION FILED APR. 4, 1903.

NO MODEL.

FIG. 1.

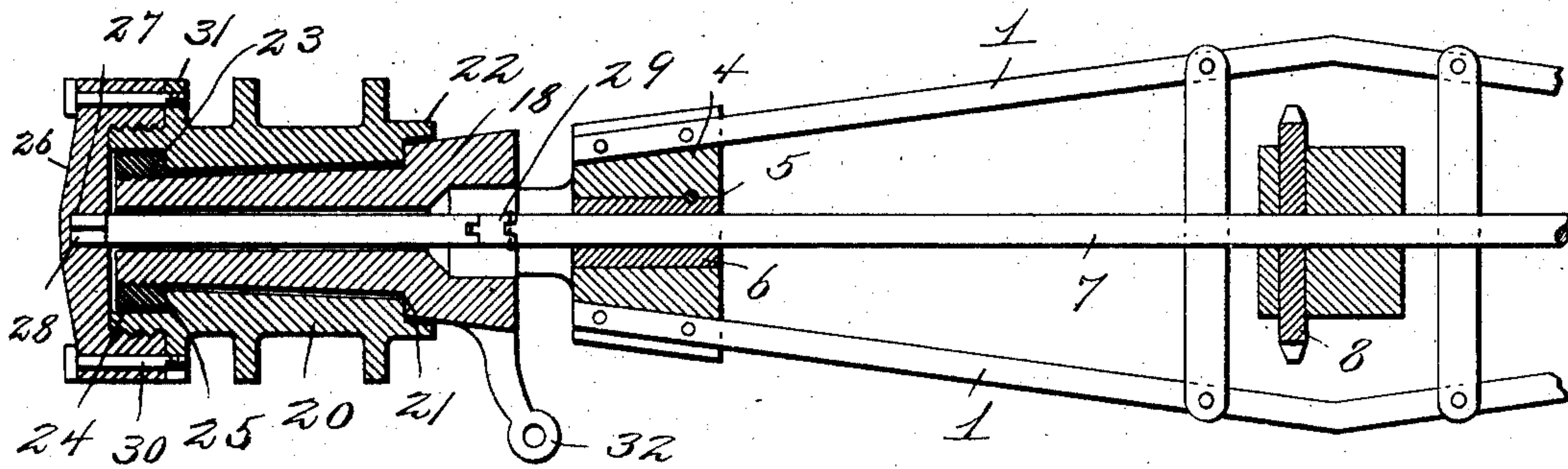


FIG. 2.

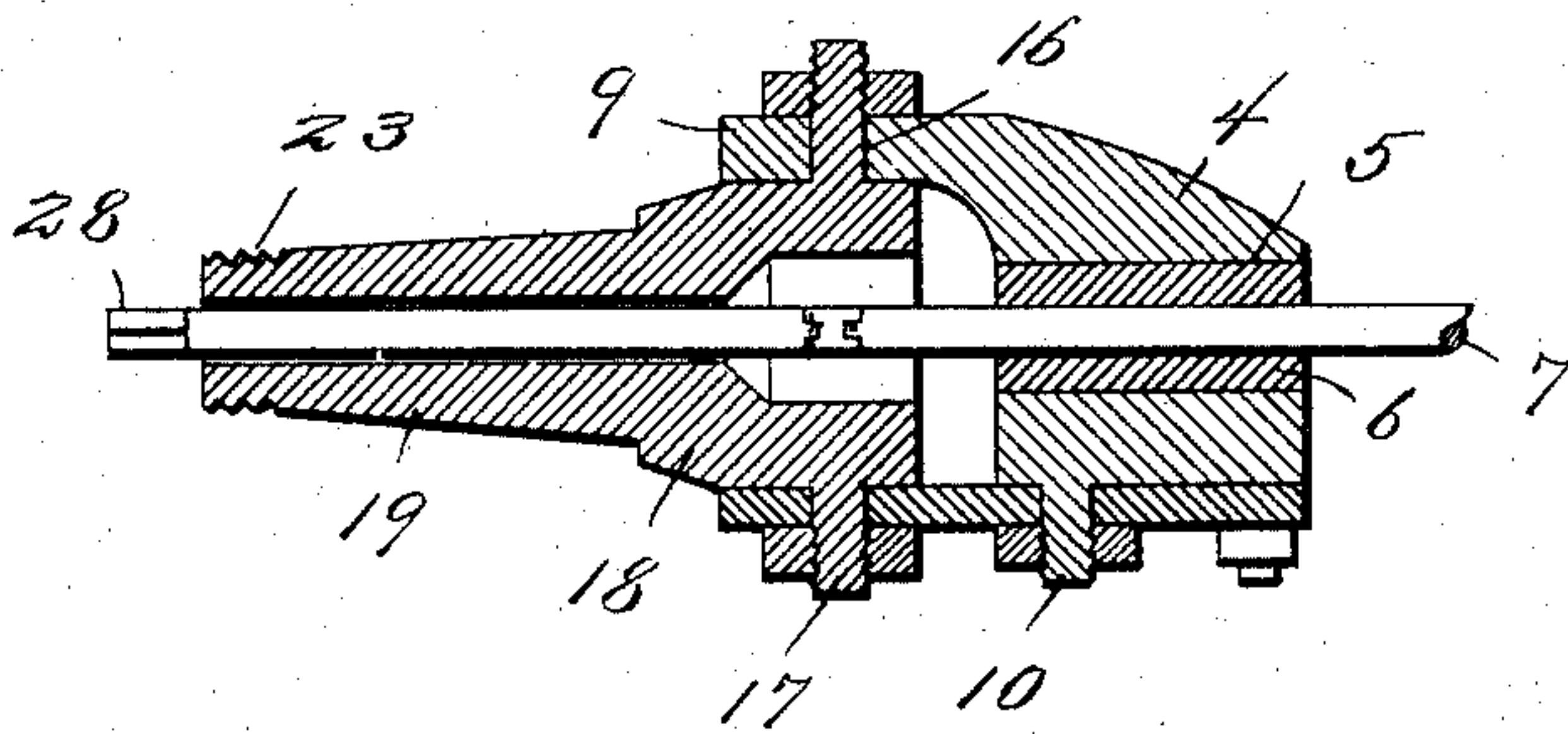


FIG. 3.

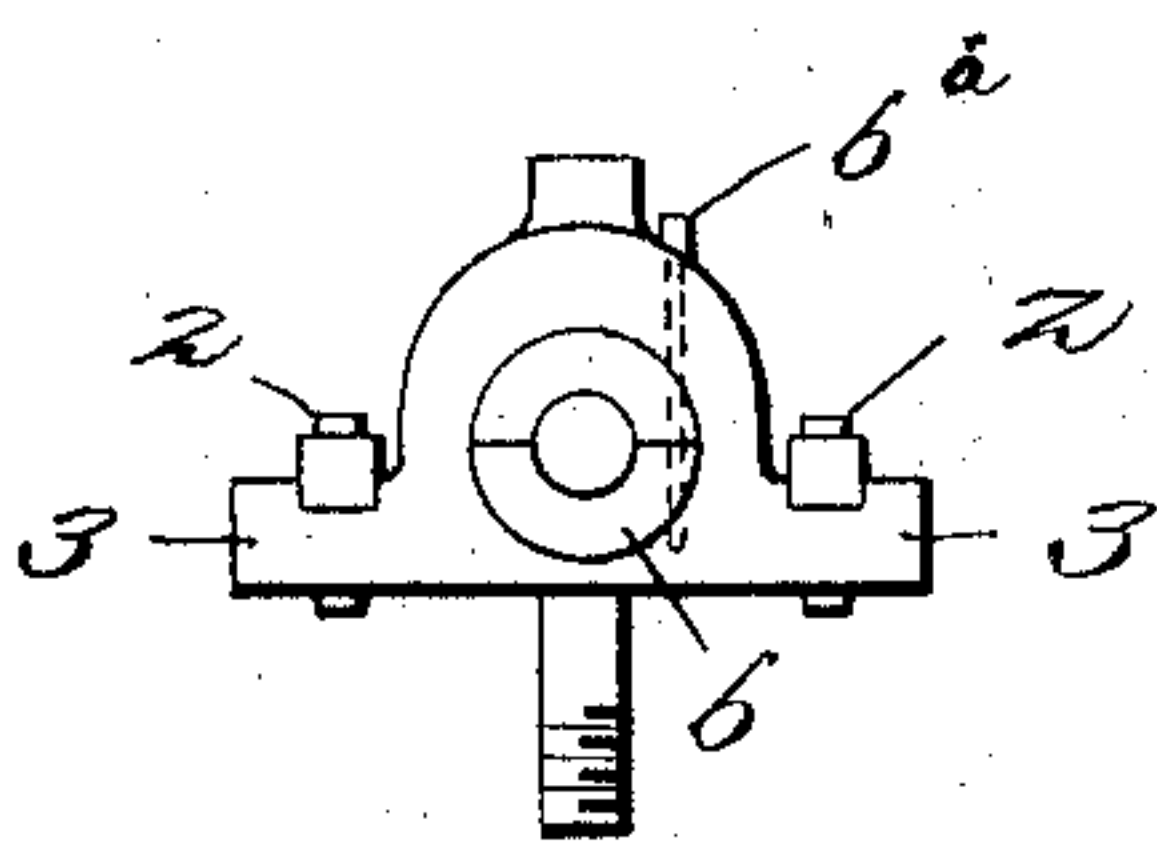
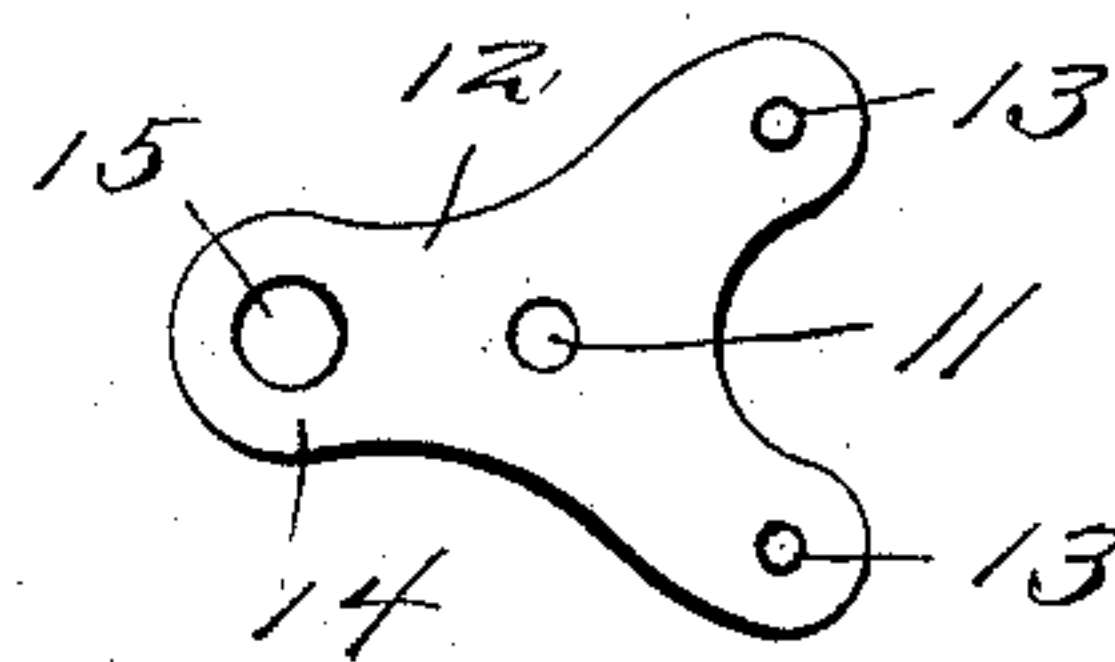


FIG. 4.



Witnesses

Harry L. Amer.
Herbert D. Lawson

Inventor

Joseph Munden.

By

Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JOSEPH MUNDEN, OF WESTMORELAND COUNTY, PENNSYLVANIA.

MOTOR-PROPELLED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 736,866, dated August 18, 1903.

Application filed April 4, 1903. Serial No. 151,156. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MUNDEN, a citizen of the United States, residing in the county of Westmoreland, State of Pennsylvania, have invented new and useful Improvements in Motor-Propelled Vehicles, of which the following is a specification.

My invention relates to new and useful improvements in motor-propelled vehicles, and it relates more particularly to means for transmitting motion from the motor to the hubs of the traction-wheels.

The object of the invention is to provide means of simple construction whereby drive-shafts may be connected directly to the hubs and rotate the same when at the various angles to the shaft.

A further object is to provide a hub of novel construction mounted upon pivot-bearings. With the above and other objects in view the invention consists in providing a power-shaft which is journaled within the block secured at one end of the axle of the vehicle, and an ear extends laterally from this block and, together with a base-plate secured under the block, serves as a bearing for trunnions extending vertically from a hollow spindle. The hub of the wheel is mounted upon the spindle and has a cap detachably secured to one end thereof and mounted upon and adapted to rotate with the power-shaft. A universal joint is arranged within the power-shaft at a point in alinement with the trunnions of the hollow spindle, and an arm extends from the spindle and is adapted to be connected to suitable steering mechanism.

The invention also consists in the novel construction and arrangements of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a horizontal section through the hub of a wheel constructed in accordance with my invention and through the parts connected thereto. Fig. 2 is a central vertical section through the spindle of the hub and its bearing-block. Fig. 3 is an end elevation of said block with the base-plate and spindle removed, and Fig. 4 is a detail view of the base-plate.

Referring to the figures by numerals of ref-

erence, 1 1 are the bars comprising the axle of a motor-vehicle, and the ends of these bars are tapered toward each other and are secured by means of bolts 2 upon flanges 3, extending from opposite sides of a bearing-block 4. This block has a longitudinally-extending passage 5 therein, within which is arranged a split sleeve 6, which is adapted to be held in position by a pin 6^a, and this sleeve forms a bearing for a drive-shaft 7, extending longitudinally of the axle and having a sprocket 8 or other suitable power-transmitting device thereon. An ear 9 extends from the top of the outer end of the block 4, and a threaded stem 10 projects downward from the bottom of said block and is adapted to extend through an aperture 11, formed in the center of a base-plate 12, preferably such as illustrated in Fig. 4. Apertures 13 are also formed in this plate for the reception of bolts 2, hereinbefore referred to, and it will be understood that by means of these bolts and threaded stem 10 base-plate 12 may be securely fastened to the bottom of the bearing-block. The base-plate has an extension 14 at the outer end thereof provided with an aperture 15 in vertical alinement with a similar aperture 16 within the ear 9. These apertures receive trunnions 17, extending from the top and bottom of the enlarged end 18 of a tapered hollow spindle 19. This spindle extends into a hub 20 and is provided with a shoulder 21, which abuts against one end of said hub and is overlapped by a flange 22, extending inwardly from the hub. The end of the spindle 19 is screw-threaded, as shown at 23, and engaged by an internally-threaded nut or washer 24, which bears upon a shoulder 25, formed within hub 20, near the outer end thereof.

A dust-cap 26 is threaded upon the outer end of the hub and has a rectangular recess 27 therein, which receives the angular end 28 of the shaft 7. A universal joint 29 of any suitable construction is arranged within the power-shaft at a point in alinement with the trunnions 17. The dust-cap 26 is prevented from unscrewing from the hub 20 by means of bolts 30, which extend therethrough and into engagement with a flange 31, inclosing the hub near its outer end.

It will be seen that when the shaft 7 is rotated the square end 27 thereof will cause

the dust-cap 26 to revolve, and as this cap is securely fastened to the hub it is obvious that the said hub will be caused to rotate upon the spindle 19. The universal joint 29 permits the extremity of the power-shaft to rotate at an angle to the central portion of said shaft, and therefore by providing an arm 32 upon the inner end of the spindle 19 the same can be connected to suitable steering mechanism and readily turned to a desired angle.

By using this device the power can be applied directly to the hubs of the wheels, and the driving mechanism is rendered both simple and durable in construction.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes and alterations as may fairly fall within the scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device of the character described, comprising bars, a bearing-block provided with flanges to receive the bars, means adapted to engage the bars and flanges to secure the bearing-block in applied position, a spindle journaled on the bearing-block, a hub revolvably mounted on the spindle, a drive-shaft journaled within the bearing-block and extending through the spindle, said shaft engaging and being adapted to revolve the hub, and a universal joint in said shaft.

2. A device of the character described, comprising bars, a bearing-block provided with a perforated ear and having flanges to receive the bars, means adapted to engage the bars and flanges to secure the bearing-block in applied position, a base-plate remov-

ably secured to the bearing-block and having a perforation adapted to aline with the ear, a spindle provided with trunnions adapted to be received by the perforations, a hub revolvably mounted on the spindle, a drive-shaft journaled within the bearing-block and extending through the spindle, said shaft engaging and being adapted to revolve the hub, and a universal joint in said shaft.

3. A device of the character described, comprising a spindle, a hub journaled on the spindle, a dust-cap engaging the hub and provided with a rectangular recess, and a drive-shaft extending through the spindle and provided with an angular end to be received by the recess to cause the hub to revolve with the shaft.

4. A device of the character described, comprising bars, a bearing-block provided with flanges to receive the bars, means adapted to engage the bars and flanges to secure the bearing-block in applied position, a spindle journaled on the bearing-block, a hub revolvably mounted on the spindle, a dust-cap engaging the hub and provided with a rectangular recess, and a drive-shaft journaled within the bearing-block and extending through the spindle, said shaft being provided with an angular end to be received by the recess to cause the hub to revolve with the shaft.

5. A device of the character described, comprising a bearing-block having a perforated ear, a base-plate removably secured to the bearing-block and provided with a perforation to aline with the ear, and a spindle having trunnions to be received by the perforations.

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

JOSEPH MUNDEN.

Witnesses:

A. H. YOUNG,
HARRY DE LONG.