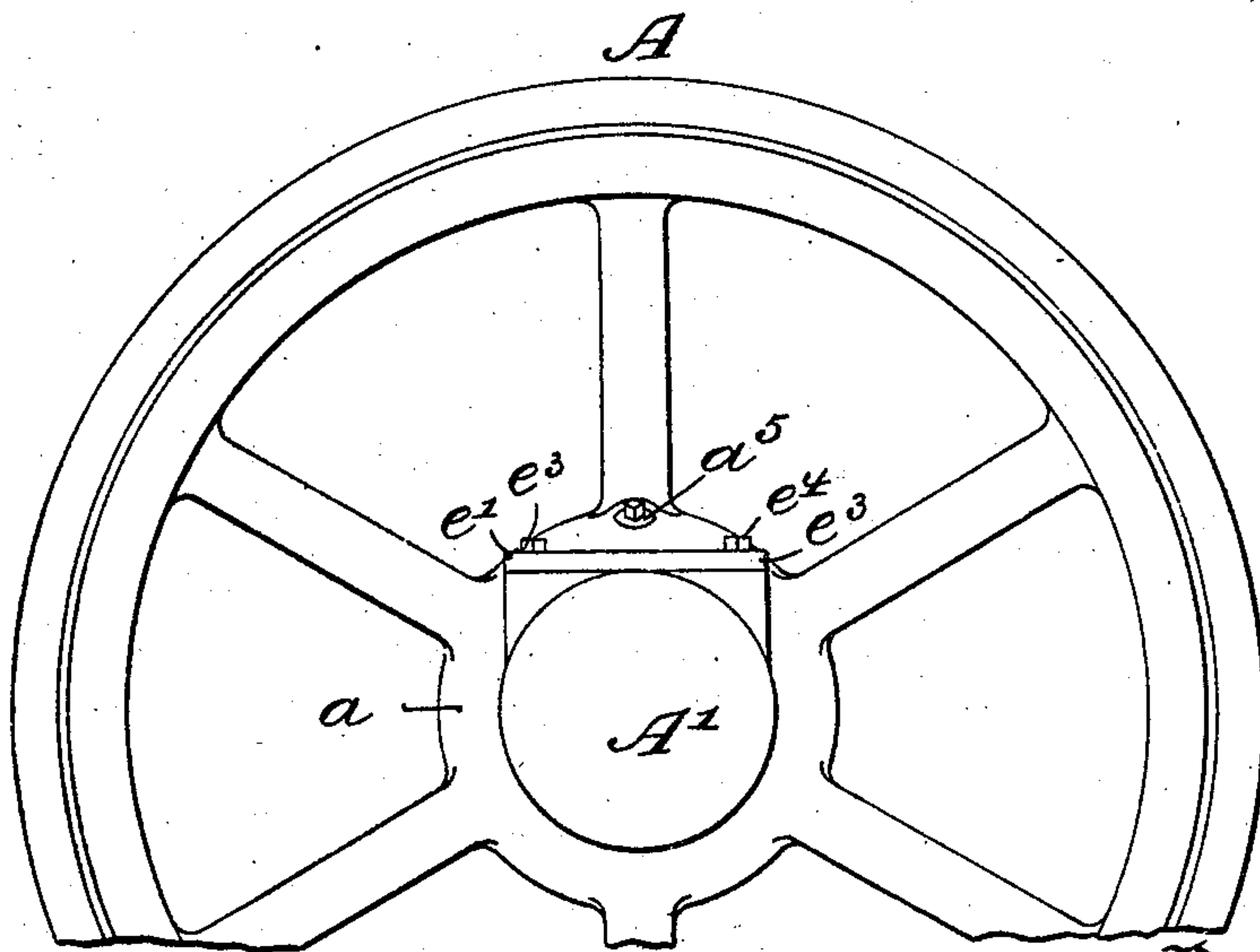
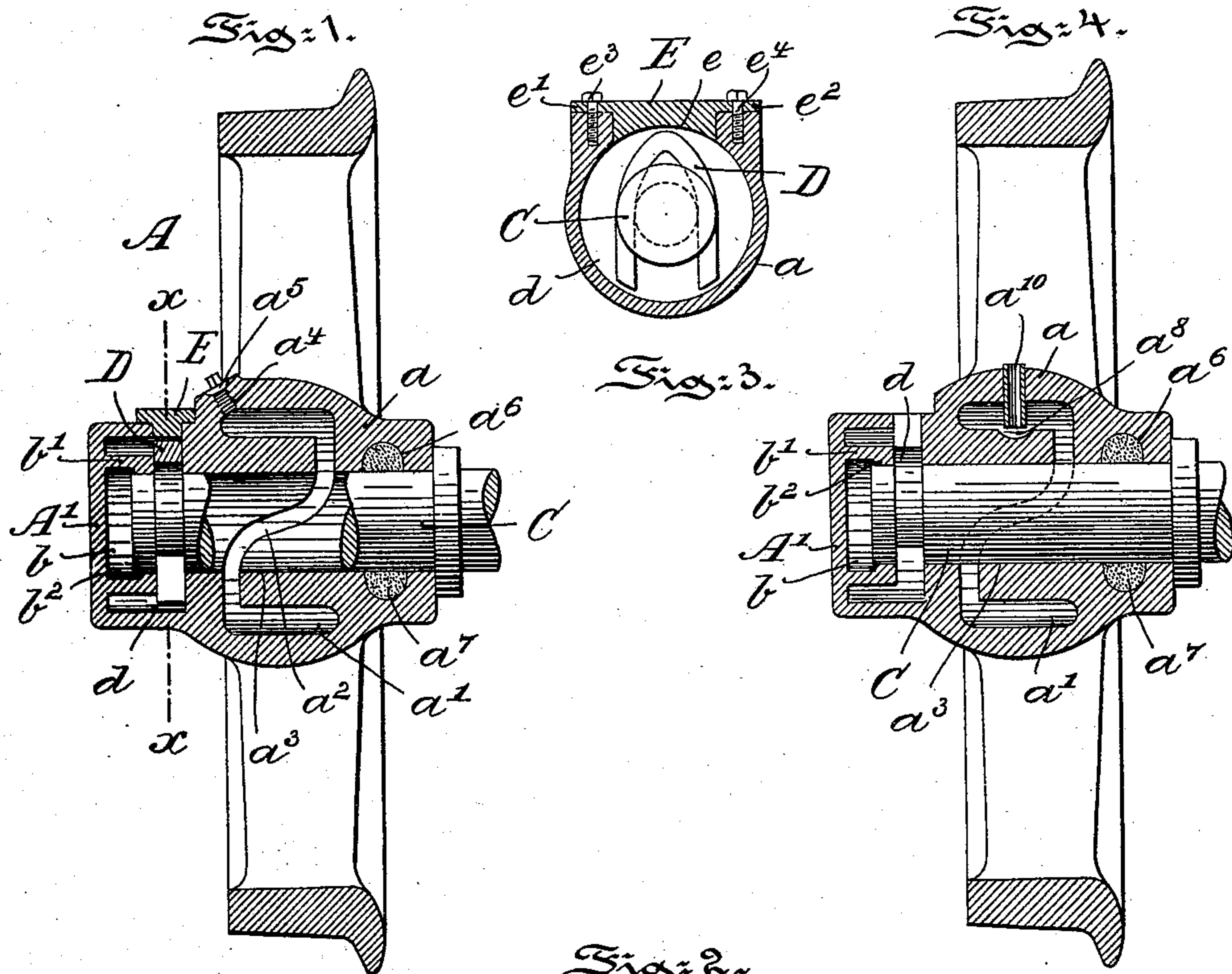


(No Model.)

W. T. SNYDER.
SELF LUBRICATING CAR WHEEL.

No. 603,292.

Patented May 3, 1898.



Witnesses:
Thomas M. Smith.
Richard C. Maxwell.

Inventor:
William T. Snyder.
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UNITED STATES PATENT OFFICE.

WILLIAM T. SNYDER, OF CATASAUQUA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO JAMES W. FULLER, OF SAME PLACE.

SELF-LUBRICATING CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 603,292, dated May 3, 1898.

Application filed November 22, 1897. Serial No. 659,372. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. SNYDER, a citizen of the United States, residing at Catasauqua, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Self-Lubricating Car-Wheels, of which the following is a specification.

My invention has relation to a car-wheel of the class designated as "self-lubricating" and in which the axle or journal of the wheel is keyed and held in one end of the same against disengagement and displacement.

My invention, stated in general terms, consists of a car-wheel when constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope or characteristic features of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part thereof, in which—

Figure 1 is a vertical sectional view of a wheel embodying the particular features of my present invention, showing the axle or journal broken away to expose to view the internal formation of the axle-bearing surface of the hub of the wheel. Fig. 2 is a front view of the wheel, partly in broken section. Fig. 3 is a vertical sectional view on the line $x x$ of Fig. 1; and Fig. 4 is a vertical sectional view of a slightly-modified form of the wheel of Fig. 1, embodying features of my present invention and adapted to be employed with an axle or journal having a keying device and cap-plate or cover, such as illustrated in Figs. 1, 2, and 3.

Referring to the drawings, A in Fig. 1 is a wheel provided with a hub a , having formed in the body of the same an annular lubricant-reservoir a' in direct communication with an irregular distributing channel or way a^2 for the axle or journal bearing surface a^3 of the hub, located on both sides of said channel or way a^2 , the reservoir and channel or way together being in form, as illustrated in the sectional view of Fig. 1, substantially Z shape.

a^4 is a duct in direct connection with the annular reservoir a' and stoppered by a threaded plug a^5 , as illustrated in Fig. 1.

a^6 is a groove or recess, in form semicircular and provided in the body of the hub a and extending to the bearing-surface a^3 of the same, into which is introduced a packing of waste or other suitable material a^7 to serve as an absorbent of oil distributed onto the bearing-surface of the hub for the axle or journal C and also to prevent oozing out of the oil from either the rear or front portions of the hub of the wheel. The front or head A' of the hub is provided with a chamber b . The wall b' in rear of the same is provided with an inner rim b^2 , adapted to engage the flanged head of the axle or journal C, for example, as illustrated in Fig. 1, and with a vertically-arranged annular opening d between the front or head A' of the hub and body portion a of the same for introducing an inverted-V-shaped key D, so as to span the recessed portion of the axle or journal C, as fully illustrated in Figs. 1 and 3. The axle or journal C is provided with a boss or projection integral with the same and abutting when the axle is in position in the hub against the rear end wall of the hub a .

The chamber b , provided in the front or head A' of the hub a , is adapted to compensate for any slight lateral play of the axle or journal C in the hub a , and the semicircular recess or groove a^6 of the hub a , provided with waste or other similar material, is adapted to absorb as well as act as a swab for the lubricant distributed onto the axle C through the irregular channel or way a^2 . At the same time the said waste or packing, located as it is in direct contact with the hub and axle, prevents oozing out from the hub, as well as the same collecting in the front portion of the hub, whereby is insured an easy-running wheel, without undue grinding away of the axle due to grit, as the supply of oil is uniform to the wheel and the waste packing maintaining the same in the best possible condition to insure reliable and long use of the wheel and with an appreciable lessening in abrasion or wearing away of the hub and axle and also lessening the tendencies to heating up of the axle or journal in high speed attained of the wheel in use.

E is a cap-plate or cover provided with a semicircular seat e and with offset ends e' and

e^2 , perforated and through which are inserted bolts or screws c^3 and c^4 for securing the same to place, as clearly illustrated in Fig. 2 of the drawings.

5 In Fig. 4 the wheel is the same as that illustrated in Fig. 1, with the exception that in the annular reservoir a' , in direct communication with the irregular channel or way a^2 , is provided a recess or hollow a^8 , and about its
10 location therein is introduced an inlet-pipe a^{10} , but so arranged that in the revolution of the wheel the oil or lubricant will not be thrown back through this pipe, and which is designated as a "quick-oiling" device for
15 such a type of wheel. When such a pipe is employed, the duct with the threaded removable plug of Fig. 1 are dispensed with.

Among the particular advantages of the wheel of the present invention are—

20 First. Grit is prevented from entering from the front of the wheel.

Second. The axle or journal is evenly or uniformly supplied with oil over the surface thereof, because any undue supply distrib-

uted rearwardly over the surface of the axle 25 or journal C will be absorbed by the waste of the semicircular groove or recess a^6 of the hub a .

Having thus described the nature and objects of my invention, what I claim as new, 30 and desire to secure by Letters Patent, is—

In a car-wheel, a hub having a transversely-chambered head A' , provided with a vertically-arranged opening d , said head adapted to receive the thrust end of the axle or journal, a 35 key adapted to be inserted in said opening d , and rigidly held therein, and a cap-plate or cover E , having a seat e , adapted to close the opening d , and to lock the key within said opening, substantially as and for the purposes 40 described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

WILLIAM T. SNYDER.

Witnesses:

A. N. ULRICH,

H. J. REINHARD.