(Model.)

W. H. HERBERTSON.

CAR WHEEL.

No. 301,592. Patented July 8, 1884.

Fig. 1.

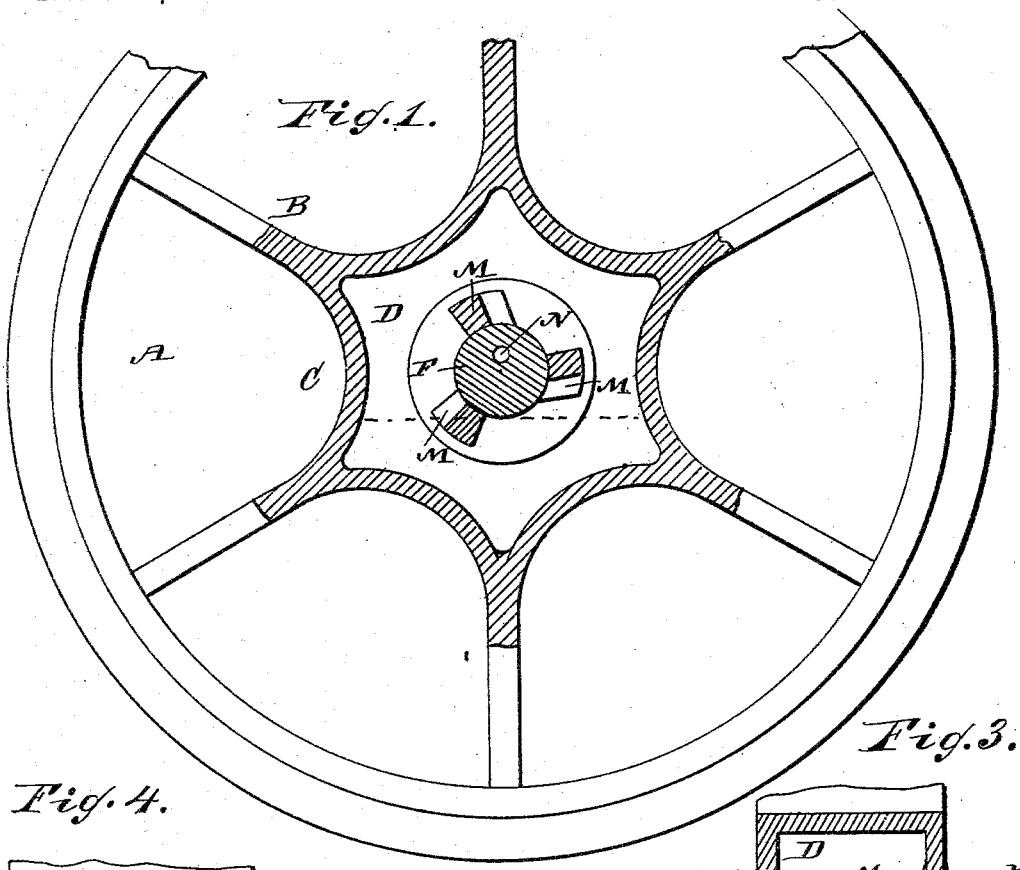

Fig. 3.

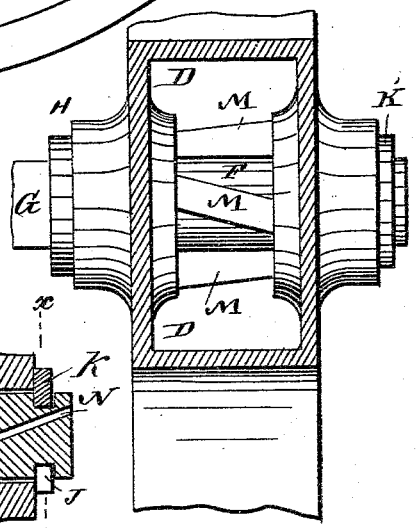

Fig. 4.

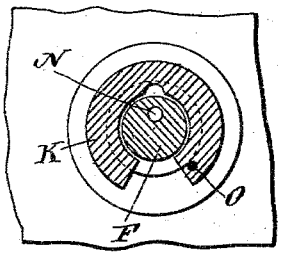

Fig. 2.

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CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 301,592, dated July 8, 1884.

Application filed April 29, 1884. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HERBERTSON, of Brownsville, in the county of Fayette and State of Pennsylvania, have invented a new and Improved Self-Oiling Car-Axle, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for oiling car-axles, which device is especially adapted for coal-cars, &c.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a face view of the improved wheel on my improved self-oiling axle. Fig. 2 is a cross-sectional view of the middle of the same, parts being broken out. Fig. 3 is a side view of the hub portion. Fig. 4 is a sectional view of the washer on the line *x x*, Fig. 2.

The wheel A has its spokes B united near their inner ends by segmental pieces C, whereby an oil-chamber or cavity, D, is formed in the middle of the wheel. The wheel is provided with a central aperture, in which the stem or spindle F of the axle G fits closely. The stem or spindle F is provided at its inner end with a collar, H, and at its outer end with an annular groove, J, for receiving a spring-washer, K, or other washer, for holding the wheel in place on the stem or spindle F. Three bars, M, more or less, are held between the inner surfaces of the front and rear sides of the hub of the wheel, the said bars M having their inner surfaces curved to fit closely against the outer surface of the stem or spindle F of the axle, and the said bars M having their longitudinal axes inclined to the longitudinal axis of the spindle F. The spindle or stem F is provided with a channel, N, extending from near the top at the outer end of the spindle to a point near the middle of the under side of the spindle, as shown in Fig. 2. The wheel is mounted on the spindle F, and then the washer K is forced into the annular groove J on the end of the spindle or stem. The said washer can be made of spring metal or of wrought-iron, and is open. It is closed after having been placed on the stem, and to facilitate opening it in case the wheel is to be removed it is provided with an aperture, O, at one end, in which an implement can be inserted for separating the ends of the washer. The oil can easily be poured into the oil-cavity D in the wheel through the channel N, and in case the said channel becomes stuffed or clogged it can easily be cleaned, without removing the wheel, by means of a wire. The oil flowing through the channel N flows on one of the bars M, and is carried around the entire stem or spindle of the axle, which is thus thoroughly lubricated. If the wheel revolves in one direction, the oil will be carried by the inclined bars M toward the outer end of the stem or spindle; and if the wheel revolves in the other direction the oil will be carried by the inclined bars M toward the inner end of the stem or spindle. As the wheel revolves, the oil is continually thrown about in the cavity D, and is thrown upon the bars M and on the spindle or stem F. There are no apertures through which the oil can run out, so there is no waste of oil, and my improved axle can be lubricated by means of a much smaller quantity of lubricating material than axles used heretofore. Time and labor are saved, as the wheel receives oil at any point, and no time is lost in looking for the oil-hole.

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

1. The combination, with a car-wheel having a central oil-cavity, of the inclined bars M, adapted to rest against the surface of the axle, substantially as herein shown and described.

2. The combination, with the axle-spindle F, having the inclined oil-channel N, of the wheel A, provided with the oil-chamber D, and the inclined bars M, having inner curved surfaces, substantially as herein shown and described.

3. A car-wheel provided with an annular oil-chamber, and with bars connecting the inner side walls of said chamber, the said bars having their inner surfaces curved, substantially as shown and described.

WILLIAM H. HERBERTSON.

Witnesses:

DANIEL DE LANEY,

GEO. S. HERBERTSON.