(No Model.)

A. J. MAUERMANN.

SKATE WHEEL.

No. 516,502. Patented Mar. 13, 1894.

Fig 1

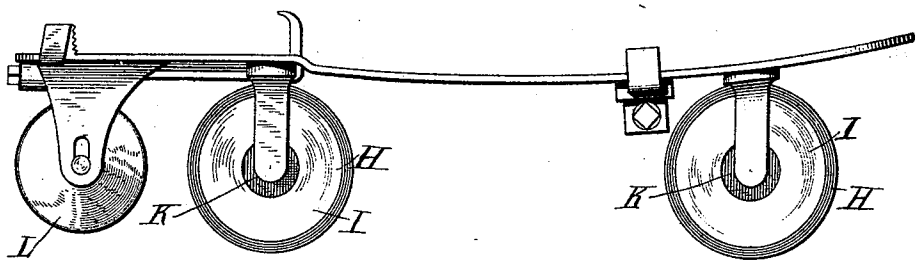


Fig 2

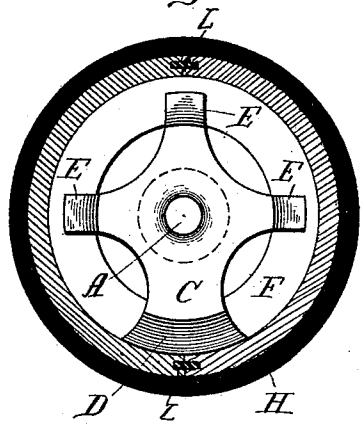


Fig 3

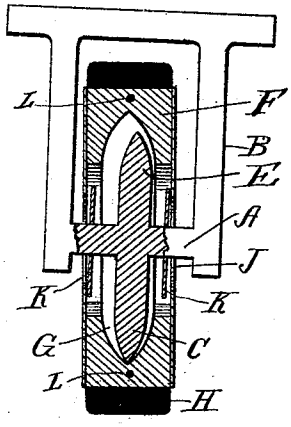
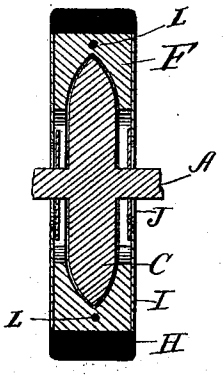


Fig 4



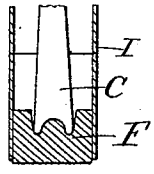


Fig 5

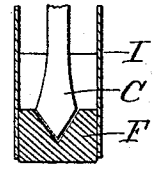


Fig 6

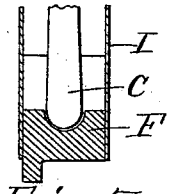


Fig 7

Attest
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UNITED STATES PATENT OFFICE.

ALBERT J. MAUERMANN, OF DEL RIO, TEXAS.

SKATE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 516,502, dated March 13, 1894.

Application filed July 31, 1893. Serial No. 482,012. (No model.)

To all whom it may concern:

Be it known that I, ALBERT J. MAUERMANN, a citizen of the United States, residing at Del Rio, in the county of Val Verde and State of Texas, have invented certain new and useful Improvements in Skate-Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to that class of wheels which are used in connection with roller skates although it is applicable to various other uses as will appear hereinafter and it contemplates the production of a skate roller or wheel which will give to the skate a sliding or gliding movement, as distinguished from the rough irregular rolling movement, thereby imitating as nearly as possible the action of the ice skate.

To this end my invention consists essentially of a stationary runner or slide rigid to the skate and arranged in a circular rim or tire, so that there will be as little friction as possible between the two parts, the runner being adapted when in operation, to slide along its bearing in the rim or tire and by this means the tire is made to turn as in the ordinary wheel. This occasions the desired progressive motion.

Referring to the drawings herewith for a detailed description of my invention Figure 1 represents a side elevation of a roller skate equipped with my invention; Fig. 2 a section of the wheel taken in a line at right angles to the axis; Fig. 3 a section taken in a line extending longitudinally through the axle; Fig. 4 a similar section of a varied form, and Figs. 5, 6 and 7 views of various modifications.

Referring to Figs. 2 and 3 the reference letter A indicates the axle of the wheel, which axle is rigidly secured to the body of the skate by means of the downwardly projecting hanger B, which is by preference integral with the axle. Formed integral with the axle and extending downwardly therefrom and at right angles thereto, is the slide or runner, C, which is broadened or extended longitudinally at its base and its bearing surface D, is formed with a gradual blunt or rounded point, (see Fig. 3.) The axle A, has formed integral therewith at the same point along its length where the runner C, is formed the arms or guides E, which are by preference three in number and radiate from the axle at right angles to each other and to the runner C, for a distance not quite equal to that of the runner. The ends of these arms are tapered or pointed in a manner similar to the base of the runner C, as may be seen by reference to Fig. 3.

Arranged around the runner C, and arms E, is the rim F, which is provided with a substantially V-shaped internal groove G, of a size slightly greater than the size of the points of the runner and arms. In this groove, G, the runner and arms are adapted to fit; the runner having its point bearing in the bottom of the groove while the arms E, are adapted to bear upon one side or the other of the groove as the position of the skater or skate may require, for example, if the skater should lean, as in Fig. 3, to the right the arm E would be thrown against the right side of the groove, or if to the left, against the left side. The functions of the arms are simply to guide and steady the rim F, and prevent it from tilting too far to either side when prompted by the positions of the skater, they do not, however, assist in any way in supporting the skate or in the sliding movement of the runner. The rim F, is constructed of metal preferably steel and the surface of the groove, together with the arms E, and runner C, should be made as hard as possible; while the periphery of the rim is provided with a rubber or wooden tire H, which prevents slipping and tends to reduce the noise attending the operation of the wheel.

In order to facilitate easily mounting the rim F, and tire H, in the arms E and C, they are formed of two sections, duplicates of each other, and arranged side by side as shown in the drawings. These sections may be secured to each other by any practical means; it is preferred, however, to use the dowel pins L, and pass them through the two sections. When the sections of the rim have been assembled in the arms, the sections of the tire H are then arranged on the periphery of the rim and secured in place by cementing their contiguous ends. This completes the wheel.

To guard against the entrance of dirt and grit into the interior of the rim F, two circular plates I, are secured to each side of the rim and provided with a centrally located opening J, through which the axle passes and these openings are closed by a second pair of plates K, which are firmly secured to the axle just on the inside of the plates I, where a comparatively tight joint is formed and the rim F, still allowed its wabbling motion.

The operation of my invention will be obvious, it is thought from the foregoing description; as the body of the skate progresses the rims are caused to revolve on the runners.

The form of wheel shown in Fig. 4 varies from that of Figs. 2 and 3 inasmuch as the arms and runner are made of the same length and with their points of a size equal to that of the groove in the rim. This will not permit the wabbling motion of the rim and it may be better adapted for some styles of skating. My wheel may also be used in connection with vehicles, and Figs. 5, 6 and 7 illustrate the various forms of modifications which will adapt it to such uses. These modifications consist principally in the form of the runner and groove and no detailed description of them will be necessary because they are obvious from the drawings.

When a skate is equipped with my improvement it may be advisable to provide an adjunctive or brake wheel, L, Fig. 1, the function of which is to arrest the progress of the skate when desired by the operator. This is done by tilting the skate backward and thereby bringing it into engagement with the ground.

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

In a wheel, the combination of a rigid axle, a runner depending therefrom and secured rigidly thereto, a rim having in its inner surface a groove in which the runner is adapted to slide, a radial arm projecting from the axle and fitting loosely in the groove whereby the rim is steadied in the runner, a rigid plate on the axle on each side of the runner and arm, and a second rigid plate on each side of the rim and provided with a central opening for the reception of the axle, substantially as described.

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

ALBERT J. MAUERMANN.

Witnesses:

G. B. ABERCROMBIE,

G. ST. C. HUSSEY, Jr.