(Model.)

A. H. EYSAMAN.

ROLLER SKATE WHEEL.

No. 345,422. Patented July 13, 1886.

Fig. 1.

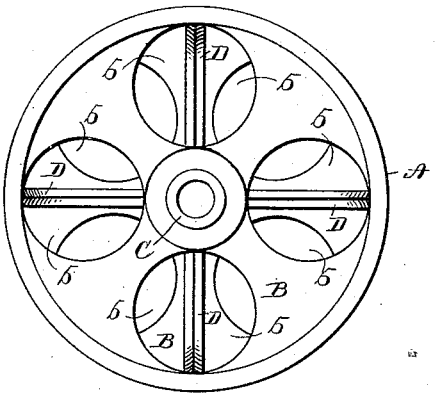


Fig. 2.

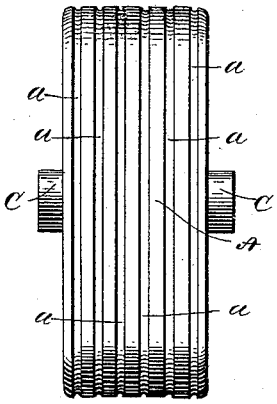


Fig. 4.

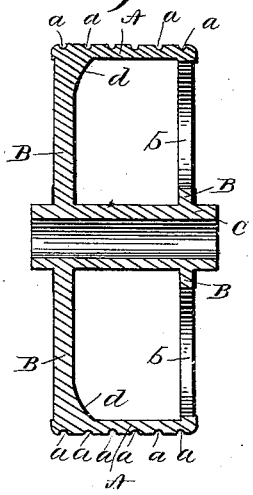
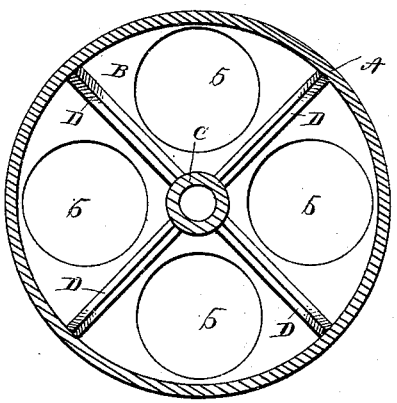


Fig. 3.



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ROLLER-SKATE WHEEL.

SPECIFICATION forming part of Letters Patent No. 345,422, dated July 13, 1886.

Application filed October 12, 1885. Serial No. 179,723. (Model.)

To all whom it may concern:

Be it known that I, ADAM H. EYSAMAN, a citizen of the United States, residing at Herkimer, in the county of Herkimer and State of New York, have invented a new and useful Improvement in Roller-Skate Wheels, of which the following is a specification.

My present invention relates to improvements in roller-skate wheels; and it consists of the peculiar and novel construction and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

Heretofore it has been proposed to provide a roller-skate wheel of wood with a metallic bearing; but the edges of the periphery of the wheel are liable to break, chip, or wear, and thus soon become so uneven as to be practically useless, and it has also been proposed to provide a wheel of this class with a metallic hub and concave side plates; but in this case, as the only support that the wheel has from the center or hub to the rim is the said plates, the edges of the rim are liable to cave or bend inwardly, as the plates are not of sufficient strength to withstand the weight and strain on the wheel.

The object of my present invention is to provide a skate-wheel which shall be made in a single piece of metal for strength and durability of construction, and shall also be very light in construction, and capable of being used upon a roller-skate of any class.

A further object of the present invention is to provide the periphery of the skate-wheel with a series of biting-edges, which shall effectually prevent slipping of the wheel on the floor or other surface with which it comes in contact, and to brace and strengthen the edges of the periphery by novel means, as will be more fully described presently.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a skate-wheel embodying my invention. Fig. 2 is an elevation taken at one end of the same. Fig. 3 is a vertical central longitudinal sectional view. Fig. 4 is a transverse central sectional view through the hub.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the rim or periphery, B the side plates arranged at and lying flush with the edges of rim, and C the hub, which are all cast in a single piece of metal to provide a roller-skate wheel embodying my invention. The rim or periphery of the wheel is made comparatively broad, and is provided with a series of circumferential grooves or recesses, *a*, which are parallel with each other and equidistant apart. The edges of the grooves *a* provide the biting-edges, which present an increased area or surface, which offers greater resistance of the wheel to the floor or other surface which it comes in contact with, and thus prevents the wheel from slipping to a greater extent than would be the case were the rim made smooth on its outer working-surface, while at the same time the biting-edges of the said working-surface of the wheel offer no material resistance to the free rotation of the wheel on its shaft or axle when the device is applied to a skate and in use. The side plates, B, are flat, as shown, and they lie flush with, or nearly so, the edges of the periphery or rim, and thus brace and strengthen the latter and prevent the edges from bending under the weight or load of the skater. These side plates are arranged parallel with and out of contact with each other to provide an interior chamber or space and a hollow wheel, which can thus be made very light without detracting from its strength, and the side plates are provided with a series of transverse openings or apertures, *b*, the openings of one plate being out of line or coincidence with the openings of the fellow plate. The hub C is made hollow or tubular in form, to permit an axle or shaft of the skate to be journaled therein. The hub preferably extends from one of the side plates to the other; but, if it is preferred, the hub may terminate a short distance on each side of each plate, so that the resistance between the hub and axle will be decreased, and the friction and wear on the parts will be correspondingly diminished. The hub is cast or formed integral with the side plates, and the extremities thereof project beyond the plates for a short distance. The side plates, B, are further provided with integral strengthening ribs or flanges D, which radiate from and connect with the hub to the periphery or rim

of the wheel, the ends of the ribs where they join or are merged into the neutral or inner surface of the rim being enlarged or expanded, as at *d*, to more effectually brace the periphery. These radial strengthening flanges or ribs are arranged out of line with each other and between two adjacent openings or apertures, *b;* and as the openings *b* of the fellow plates B are located out of coincidence with each other, it follows that the enlarged ends of the ribs or flanges touch the edges of the rim or periphery at different points, and thus the rim is further strengthened at all points around its edges.

In manufacturing my improved skate-wheel for the market, it is first cast of a suitable metal. I prefer to use brass, although any other metal can be used, and after the casting has been completed the hub is bored so that it is very smooth and true. The working-surface of the rim or periphery is turned so that it also is true, and the grooves *a* therein are formed by a suitable implement or machine, after which the wheel is finished or polished. I prefer to nickel-plate the wheel, as it is thereby given a very durable and handsome finish and appearance.

My improved skate-wheel is very strong, simple, light, and durable in construction, cheap and inexpensive of manufacture, and can be used upon a roller skate of any kind.

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

1. As a new article of manufacture, a wheel for roller-skates, comprising a rim or periphery having the biting-edges on its working-surface, the parallel side plates lying flush with the edges of the rim, and a hub, all cast in a single piece of metal, substantially as described.

2. As a new article of manufacture, a wheel for roller-skates, cast in a single piece of metal, and comprising a rim or periphery having a series of biting-edges, the parallel side plates having the openings arranged out of line with the openings on the fellow plate, and the integral ribs or flanges intermediate of the openings with the enlarged outer ends, *d*, joining the neutral surface of the rim, and a hub, substantially as described, for the purpose set forth.

3. A roller-skate wheel comprising a rim having a series of biting-edges on its working-surface, the parallel side plates joining the side edges of the rim and provided with radial integral ribs or flanges on their opposing faces, and a hub, substantially as described.

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