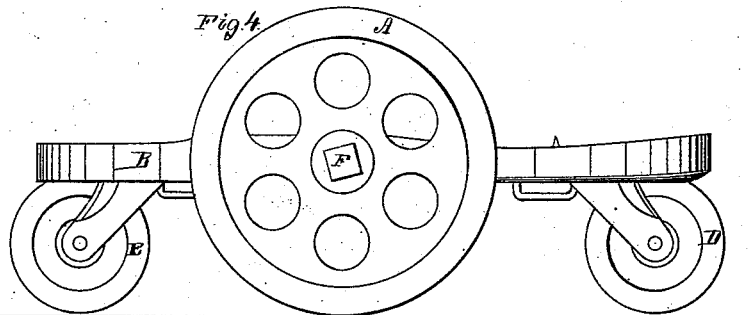
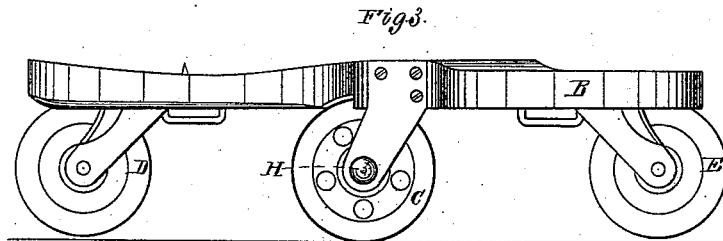
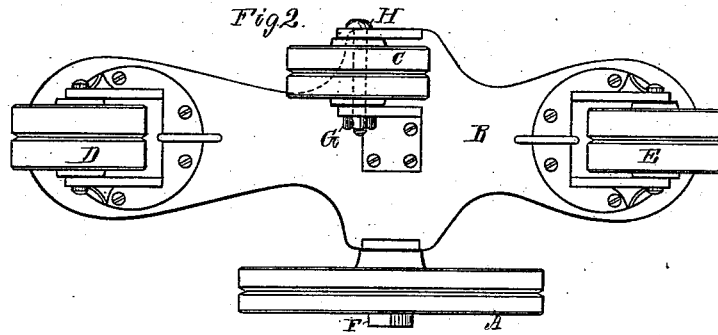
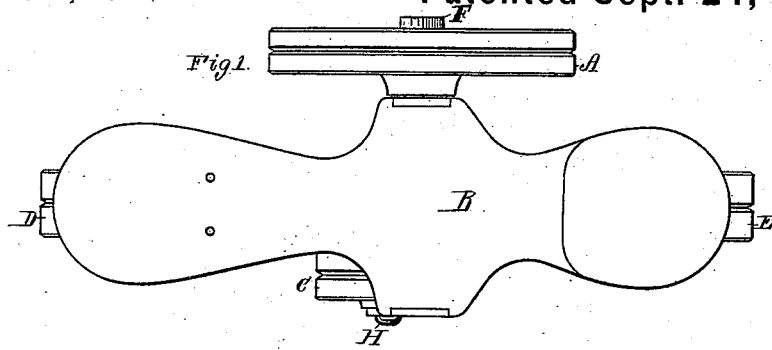


W. P. GREGG.
Roller-Skates.

No. 208,235.

Patented Sept. 24, 1878.



Witnesses.

L. W. Miller
John Robnow

Inventor.

Washington Parker Gregg

UNITED STATES PATENT OFFICE.

WASHINGTON P. GREGG, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ROLLER-SKATES.

Specification forming part of Letters Patent No. **208,235**, dated September 4, 1878; application filed February 20, 1878.

To all whom it may concern:

Be it known that I, WASHINGTON PARKER GREGG, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Roller-Skates; and I do hereby declare the nature of my said invention and the manner in which it is to be performed to be fully described in the following specification, reference being had to the accompanying drawings, which make a part thereof.

The introduction of my roller-skates, patented July 25, 1865, with one large middle driving-wheel on each side of the stock, notwithstanding their merits, being retarded by objections against the size of the wheels, and liability of the inner side wheel of one skate to interfere with that of the other skate while in use, I have made the improvements herein described.

My present invention consists in a novel construction, arrangement, or combination of the wheels, rollers, and stock of the skate, as herein set forth.

The accompanying drawings exhibit a skate embodying my improvements.

Figure 1 is a top view of the skate with a large middle wheel on the outer side of the stock, and a smaller middle wheel under the inner side of the stock. Fig. 2 is a bottom view of the skate with a large middle wheel on the outer side of the stock, and the smaller middle wheel, its axle, and nut under the inner side of the stock. Fig. 3 is a side view of the skate with its toe and heel rollers and small middle wheel. Fig. 4 is a side view of the skate with its toe and heel rollers and large middle wheel and axle-head.

In carrying out my invention, as shown in Figs. 1 and 2, I arrange one comparatively large middle wheel, A, for side support, driving, and turning, on the outer side of the stock B, near the ankle, and one smaller middle wheel, C, for side support, driving, and turning, under the inner side of the stock, opposite, or nearly opposite, to the larger middle wheel, A, and so that the lower part of the rim of one middle wheel may be as low down as the lower part of the rim of the other middle wheel.

By making the inner middle wheel much less in diameter than the outer one, and arranging it under the inner side of the stock, the skate becomes easier of application to or removal from, the foot, and interference of the inner wheels with each other when the skates may be in use is obviated.

With the middle wheels constructed and arranged as set forth I combine one small roller, D, under the toe, and one small roller, E, under the heel of the stock, to support the heel and toe.

Each middle wheel should extend down from the stock at least as low as the end rollers, and preferably a little lower than the end rollers, to facilitate driving and turning. There may be two rollers instead of one under the heel or toe of the stock, when desired.

The skate is capable and designed to be used either with its stock, toe and heel rollers, and small middle wheel, as shown in Fig. 3, for the left foot, or with its stock, toe and heel rollers, and large middle wheel, as shown in Fig. 4, for the right foot, each middle wheel being made detachable, for the purpose of being dispensed with at pleasure, by turning back and removing the axle F or nut G and axle H, suitably arranged for the purpose. Each middle wheel having its separate axle may have its lower bearing a little nearer than the other middle wheel toward the toe or heel of the stock.

The stocks, wheels, rollers, fixtures, and fastenings may be of any suitable materials and of any desirable patterns.

The rims may be flat or rounded, and also covered with hardened leather, rubber, or other suitable substances.

As there are various ways of fastening axles to the stocks or foot-rests, I do not confine myself to any particular one. Some axles I fasten to the upper, some to the lower, surface of the stock, and some to the sides, or to brackets below or above the stock, according to the diameter or position of the wheels or rollers.

These skates are intended for all suitable surfaces, indoors and out. Thus it will be seen that the diameter of one middle wheel is reduced on the inner side of each skate, that the

liability to interfere is avoided or lessened, and that I can still employ on the outside of the skate a middle wheel large in diameter.

Having described my invention, I claim as follows:

1. In roller-skates, a large middle wheel arranged on the outer side of the stock, in combination with a smaller middle wheel arranged under the inner side of the stock, substantially as set forth.

2. A middle wheel arranged under the outer side of the skate, having wheels or rollers at each end, substantially as and for the purposes described.

3. A large middle wheel arranged on the outer side of the skate, in combination with smaller wheels or rollers at each end, substantially as and for the purposes described.

4. Detachable middle wheels and their fixtures arranged with the stock, substantially as and for the purposes set forth.

WASHINGTON PARKER GREGG.

Witnesses:

L. N. MÖLLER,
JOHN R. SNOW.