

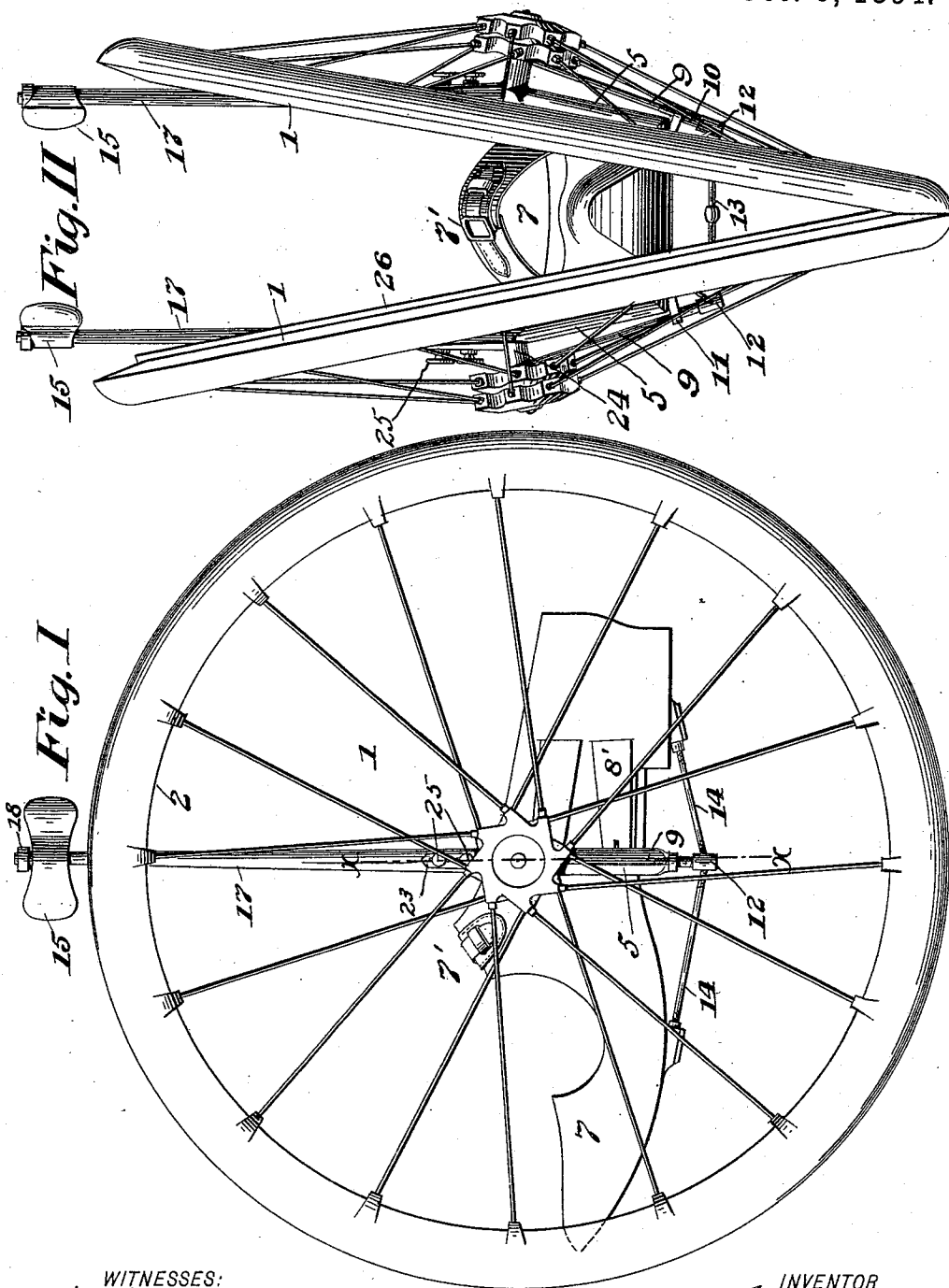
(No Model.)

2 Sheets—Sheet 1.

J. A. SEGERBERG.  
ROLLER SKATE.

No. 527,164.

Patented Oct. 9, 1894.



WITNESSES:  
*J. H. Caplin*  
*Jas. F. Lightell*

INVENTOR  
*J. Albert Segerberg*  
BY  
*D. A. McKnight*  
ATTORNEY.

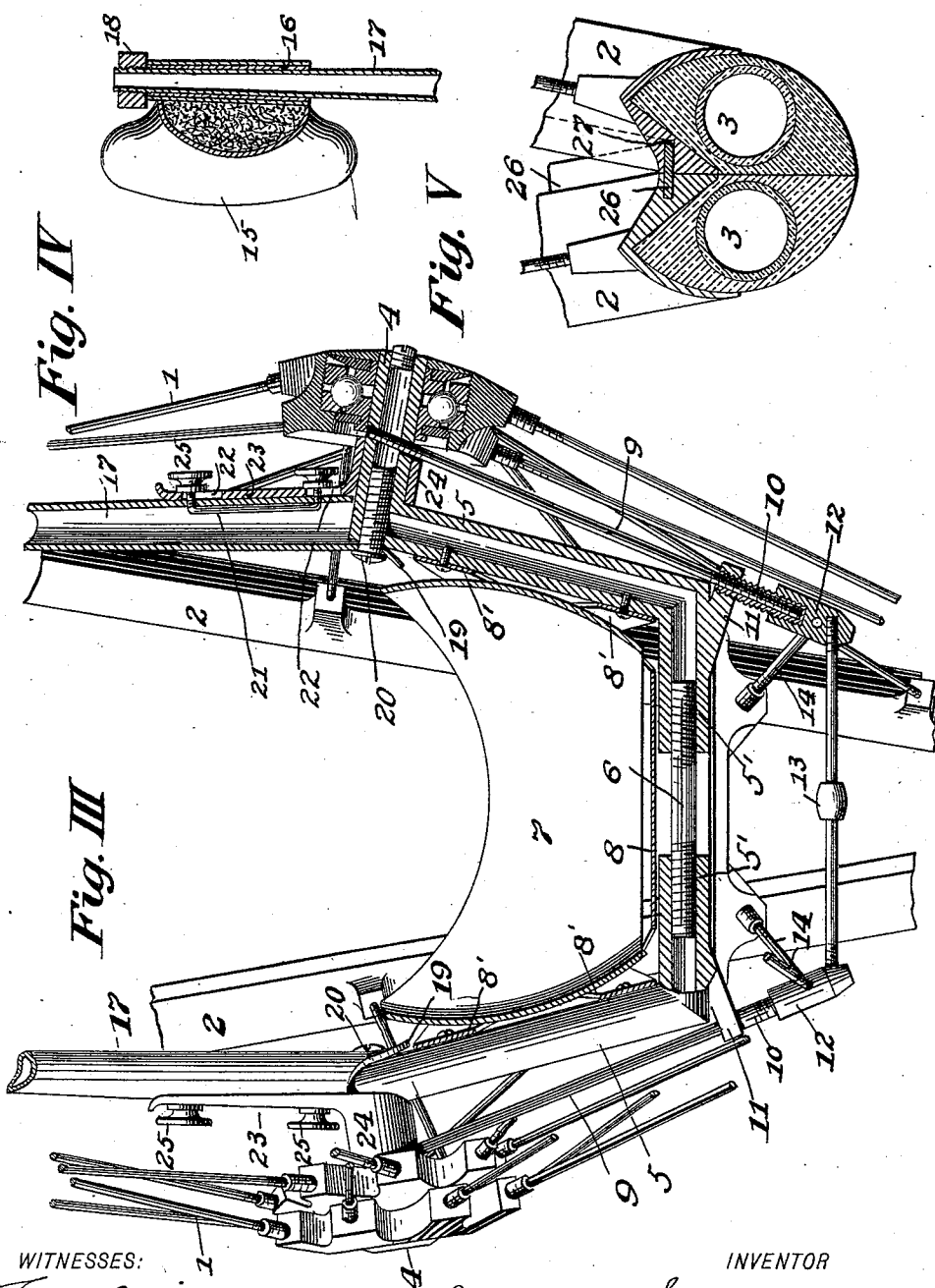
(No Model.)

2 Sheets—Sheet 2.

J. A. SEGERBERG.  
ROLLER SKATE.

No. 527,164.

Patented Oct. 9, 1894.



WITNESSES:

*J. B. Caplinger*  
*Jas. E. Lightell*

INVENTOR

*J. Albert Segerberg.*

BY

*D. A. McKnight.*

ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHAN ALBERT SEGERBERG, OF DENVER, COLORADO.

## ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 527,164, dated October 9, 1894.

Application filed July 6, 1894. Serial No. 516,781. (No model.)

*To all whom it may concern:*

Be it known that I, JOHAN ALBERT SEGERBERG, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Roller-Skates; and I do hereby 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.

My invention relates to certain improvements in roller skates, and its object is to provide a skate of a light and inexpensive construction, which will accommodate itself to the movements of the feet and by the use of which the skater will be enabled to turn without undue strain either upon the ankle or upon the skate itself.

The invention also contemplates the provision of a reversible tire, together with other details of construction, all of which will be hereinafter fully set forth.

In the accompanying drawings I have illustrated a skate embodying my improvements, in which drawings—

Figure I is a side elevation of the skate, and Fig. II is a front view of the same. Fig. III is a transverse, vertical section taken axially through the skate in the plane indicated by the line *x* in Fig. I, and Fig. IV is a similar section taken through the padded ankle brace. Fig. V is a section of the tire, showing the reversible character of the same. Figs. III, IV and V are drawn to a scale larger than that of Figs. I and II.

In the views 1, 1, represent two wheels constructed similarly to the wheels of a velocipede, and having each a metal rim 2 provided with a V-shaped groove in its outer face, wherein fits one angle of a rubber tire 3, which is, in section, of a triangular form, having one curved exterior face and two plane faces, as clearly seen in Fig. V. By constructing the tires in this manner, it is evident that after they have become worn at one angle they may be removed from the rims 2 and reversed, the tire on one wheel being substituted for that on the other.

The wheels 1, 1 are mounted on the opposite ends of a tubular axle 4, and the ends of the axle are set in different planes, being in-

clined downward at their outer extremities, so that the plane inner faces of the tires 3 contact with one another, as clearly seen in Fig. V, thereby rendering the two wheels at their point of contact with the ground substantially one wheel, as will be readily understood by inspection of Figs. II and V.

The axle 4 is formed in two sections, by preference, and in order to secure these sections together in an adjustable manner, each section is provided at its inner end with a depending, tubular L-shaped portion 5. The lower, horizontal arms 5', 5' of these L-shaped portions 5 extend toward one another, and are provided with opposite interior screw-threads to receive the oppositely screw-threaded ends of a tie-rod or bar 6 as clearly seen in Fig. III. By turning the tie-bar 6 it is evident the wheels 1 may be set nearer together or farther apart, as desired. Thus it will be seen that a wedge-shaped space is provided between the two wheels 1 and in this space, which extends below the axle of the wheels, is arranged the foot-support or shoe 7. The shoe has a metal bottom plate 8 resting on the lower arms 5' of the axle, and at its sides slotted metal straps 8', 8' are provided, the ends of which are adjustably secured to the portions 5 of the axle.

In order to still further strengthen the skate, so as to prevent undue strain on the outer ends of the axle, whereby the wheels might be spread apart, and to support the heel and toe portions of the shoe 7, I provide a brace comprising a series of tie-rods which I will now describe. At their outer ends, just inside the wheel hubs, the sections of the axle 4 are each provided with a transverse interiorly screw-threaded bore, wherein screws the upper end of a tie-rod 9, which extends down substantially parallel with the depending portion 5 of the axle, and screws at its lower end into an oppositely threaded sleeve guided in a bearing piece 11 projecting from the angle of the parts 5 and 5' of the axle, and screwing at its lower end into a screw-coupling 12, arranged below the horizontal portion 5' as clearly seen in Fig. III. The screw-couplings 12, 12, are connected to one another by a tie-bar 13, having oppositely screw-threaded ends, and by turning said tie-bar the screw-couplings 12, 12, may

be drawn nearer together or thrown farther apart so as to give greater strength to the axle at its outer ends. In order to support the heel and toe portions of the foot-support or shoe 7, braces 14, are provided, each screwing at one end into one of the screw-couplings 12 and at its other end into a socket formed on the under side of the bottom-plate 8 of the shoe 7. There are or will be, by preference, four of these braces 14, a heel and a toe-brace at each side of the shoe.

In order to secure the skate in place on the foot, shoe 7 is provided with a suitable securing device 7' passing over the instep; and to further secure the skate, as well as to brace the ankle of the skater, and to prevent contact with the upper portions of the wheels in turning, I provide ankle braces comprising pads 15, having slightly tapered or conical sockets 16 to receive the upper ends of tubular supporting rods 17. The pads may be locked fast by means of locking nuts 18 screwing on the rods 17 over the upper ends of the tubular sockets 16. When said nuts 18 are loosened, pads 15 may be turned around so as to receive the ankle; and when said pads have been turned back so as to bear on opposite sides of the ankle, the nuts 18 may be tightened to lock the pads in place. The rods 17 are each provided at the lower end with a perforated lug 19, through which passes a screw 20, serving to secure the rod to the inner end of one of the sections of the axle 4. The rods 17 swing on the screws 20 as pivots, thereby accommodating themselves to the movements of the feet. In the opposite side of each rod 17 are formed two openings through which pass the threaded ends of a bent wire or rod 21, the ends of which pass through slots 22 formed in an arm or tongue 23 projecting substantially at right angles from a sleeve 24 loosely fitting the end of the axle 4 just inside the wheel hub. Thumb nuts 25 screw on the ends of wire 21 so that when said nuts are turned, rod 17 is clamped firmly to tongue 23. Thus it is evident that when said screws 25 are loosened, rods 17 may be adjusted so as to stand at greater or less angles to one another, and while held in the desired position, may be clamped fast by tightening screws 25.

In order to equalize the strain upon the wheels 1 and axle 4 in turning, and to prevent the whole weight from being thrown upon one wheel and one end of the axle, whereby the skate might be damaged or broken, I preferably provide the rim 2 of one of the wheels with a thin annular metal strip or rib 26, projecting at right angles from the inner plane face of the rim 2, as seen in Figs. II and V, and fitting, at the point of contact between the two wheels into a corresponding annular groove 27, formed in the rim of the other wheel, as clearly seen in Fig. V.

My invention is susceptible of considerable modification without material departure from its principles and therefore I do not wish to

limit myself to the precise construction and arrangement herein shown.

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

1. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground.

2. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, in combination with means for adjusting the distance between said wheels.

3. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and of an intermediate foot-support arranged below the axle.

4. In a roller skate, the combination with the axle having its opposite ends inclined downward, and having a depressed central portion, of the wheels mounted on the inclined ends of the axle outside of the depressed portion thereof, means for adjusting said wheels toward and from one another, and a foot-support mounted on the depressed central portion of the axle.

5. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and provided with two rubber tires so constructed as to be interchangeable.

6. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and provided with two rubber tires so constructed as to be interchangeable, means for adjusting the distance between the wheels, and an intermediate foot-support arranged below the axle.

7. In a roller skate, the combination of the wheels, the axle formed in two sections each provided at its inner end with a depending portion provided with a screw-threaded bore, the tie-bar having oppositely screw-threaded ends fitting the respective screw-threaded bores, and the foot-support mounted on the depending portions of the axle.

8. In a roller skate, the combination of the axle having a depressed central portion, the wheels mounted on the ends of the axle outside the depressed central portion thereof, the foot-support mounted on the depressed portion of the axle, a tie-rod extending down from each end of the axle outside the depressed portion thereof, screw-couplings mounted on the lower ends of said tie-rods below the depressed central portion of the axle, and a tie-bar connecting the respective screw-couplings.

9. In a roller skate, the combination of the axle having a depressed central portion, the wheels mounted on the ends of the axle outside the depressed portion thereof, the foot-support mounted on the depressed portion of the axle, tie-rods secured to the ends of the

axle outside the depressed portion thereof, screw-couplings mounted on the lower ends of said tie-rods below the depressed portion of the axle, brace rods extending from said screw-couplings to the toe and heel-portions of the foot-support, and a tie-bar connecting the respective screw-couplings.

10. The combination of two wheels arranged to rotate in planes at angles to one another and tires mounted on said wheels and each provided with two plane surfaces arranged at angles to one another, the corresponding surfaces on the respective tires being arranged at corresponding angles, whereby when the tires are in position on the wheels, two of said surfaces will be in contact.

11. The combination with the axle having downwardly inclined ends, of the wheels mounted on the inclined ends of the axle, the adjacent faces of the wheel rims being in contact, one of said rims having an annular concentric groove and the other rim having an annular concentric rib engaging said groove.

12. A roller skate comprising the foot-support 7 intermediate the wheels 1, and provided with the adjustable ankle braces 17,

carrying the adjustable ankle pads 15, and pivotally supported by the ends 4 of the axle.

13. In a roller skate, the combination of the axle, the wheels mounted thereon, sleeves 30 collared on said axle between the wheels and provided with slotted tongues, the supporting rods having on their inner sides perforated lugs secured to the axle, and clamp screws for clamping said supporting rods to the slotted 35 tongues on the sleeves.

14. The combination with the wheels arranged to rotate in planes at angles to one another and having grooved rims provided with contacting surfaces one having a concentric groove and the other having a concentric rib engaging said groove, of the tires 40 mounted on the grooved rims and having in cross section a triangular form with plane inner contacting surfaces.

In testimony whereof I affix my signature in presence of two witnesses. 45

J. ALBERT SEGERBERG.

Witnesses:

EWELL A. DICK,  
D. A. MCKNIGHT.