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3 SHEETS—SHEET 1.

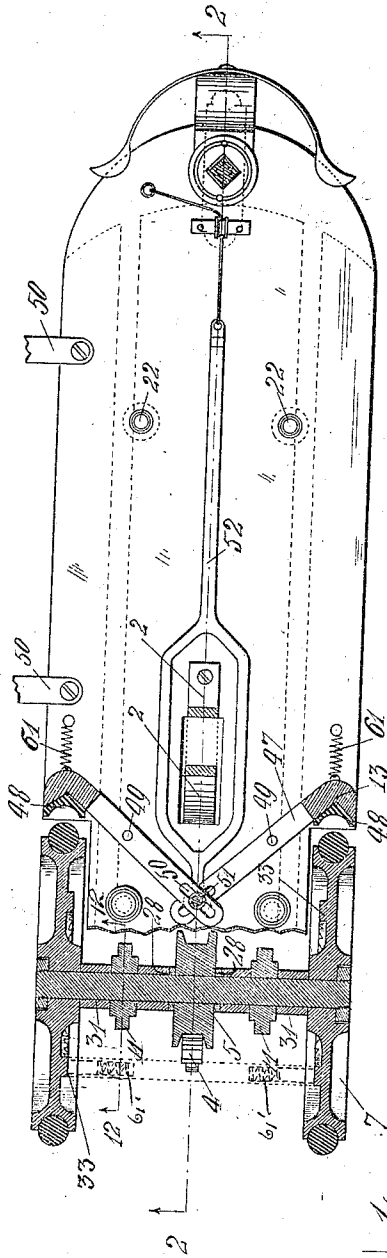


Fig. 1.

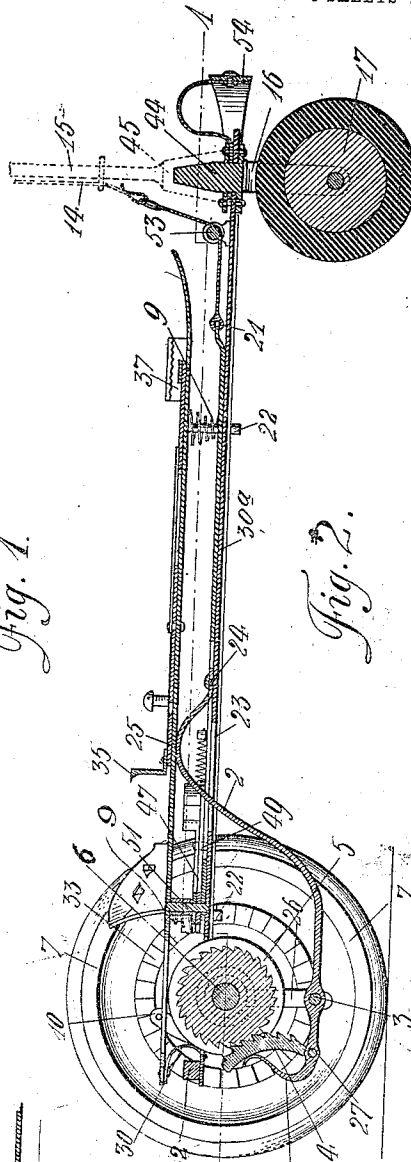


Fig. 2.

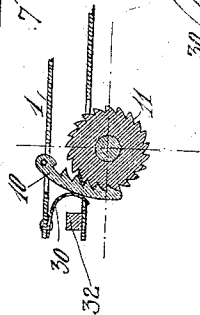


Fig. 12

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F. KRATKY,
ROLLER SKATE.
APPLICATION FILED OCT. 3, 1913.

Patented Feb. 9, 1915.
3 SHEETS—SHEET 2.

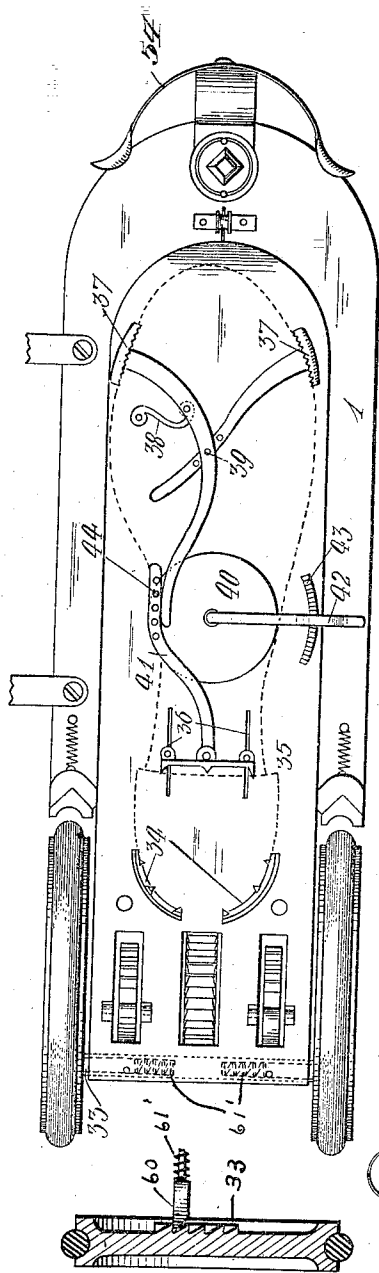


Fig. 3.

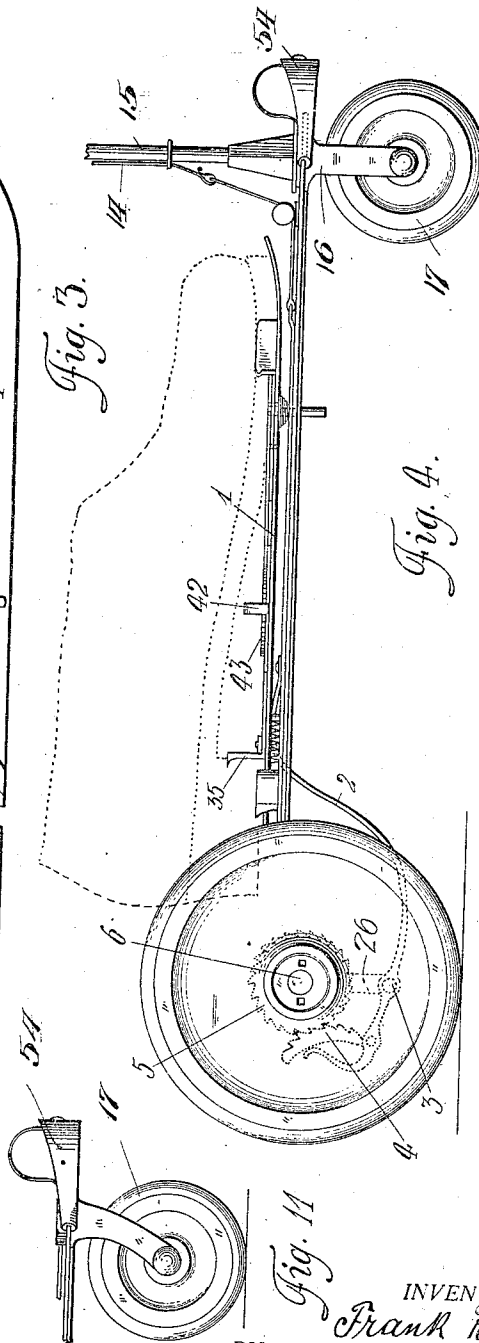


Fig. 4.

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Fig. 13.

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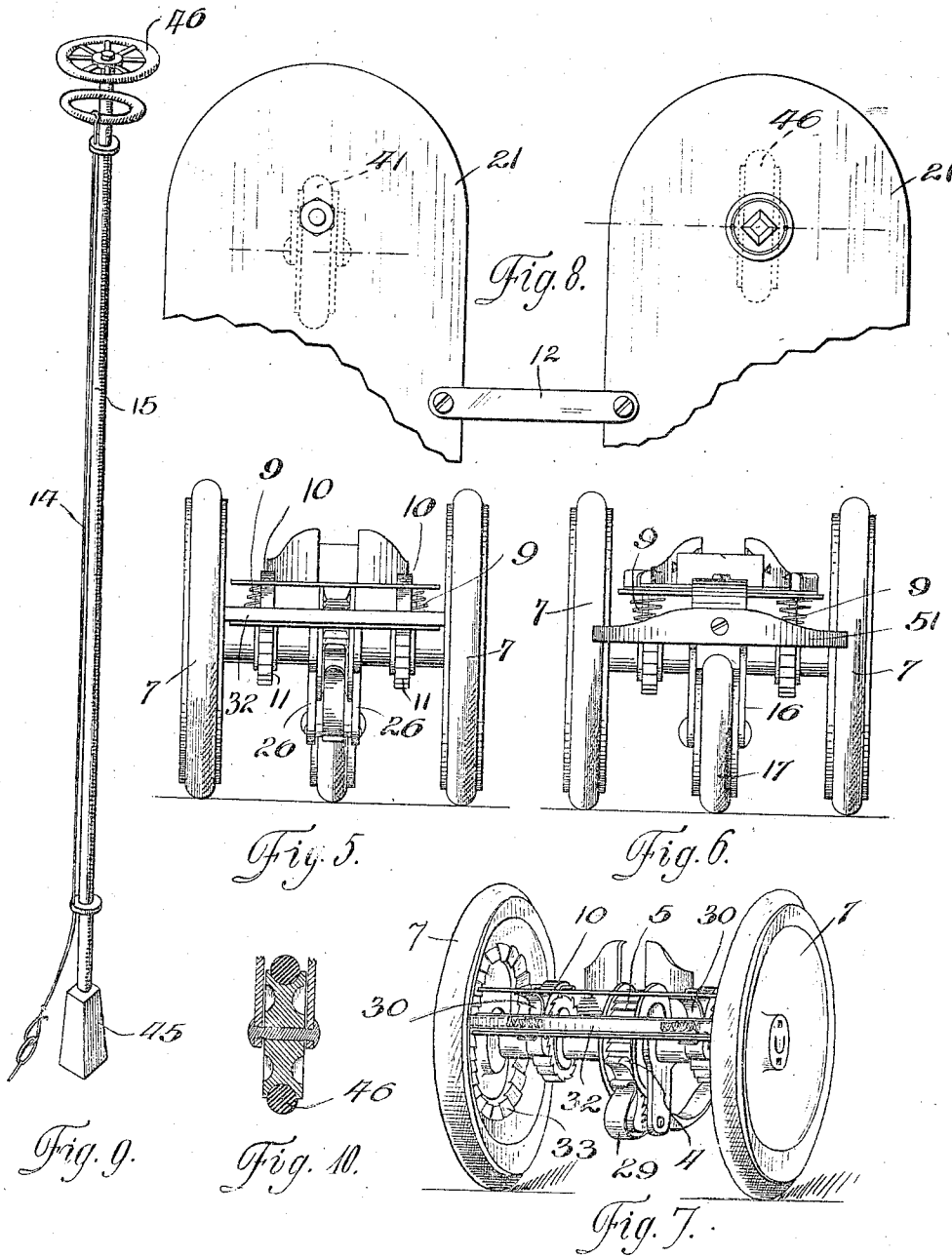
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3 SHEETS—SHEET 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK KRATKY, OF NEW YORK, N. Y.

ROLLER-SKATE.

1,127,900.

Specification of Letters Patent.

Patented Feb. 9, 1915.

Application filed October 3, 1913. Serial No. 793,185.

To all whom it may concern:

Be it known that I, FRANK KRATKY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Roller-Skates, of which the following is a specification.

My invention relates to a roller skate and has as its principal object the provision of a device of the character mentioned which shall be adapted to give greater speed over the ground in proportion to the energy expended by the user.

A further object of my invention resides in the particular arrangement and combination of parts hereinafter described.

In the accompanying drawings: Figure 1 is a plan view of a skate made according to my invention, certain parts being removed and certain parts also being broken away for purposes of clearer illustration. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a top plan view of the device shown in Fig. 1. Fig. 4 is a side elevational view of the device shown in Fig. 3. Fig. 5 is a rear elevational view of the device shown in Fig. 3. Fig. 6 is a front elevational view of the device shown in Fig. 3. Fig. 7 is a detail view in perspective showing the rear axle of a skate made according to my invention. Fig. 8 is a detail plan view illustrating how a pair of skates can be used when connected together. Fig. 9 is a detail view in perspective of the means for steering a skate made according to my invention. Fig. 10 is a detail sectional view taken through the front axle of the skate made according to my invention. Fig. 11 is a detail view showing a modified form of front axle. Fig. 12 is a detail sectional view on the line 12—12 of Fig. 1. Fig. 13 is a detail view of the spring pressed dog to prevent backward movement of the wheel.

Throughout the separate views the same part is designated by the same reference character.

Referring more particularly to the drawing, 1 is a plate on which the foot of the skater is intended to rest, part of said plate 1 being resiliently supported above a plate 21 by means of springs 9—9 which are coiled about pins 22—22, said pins passing through suitable apertures in the plate 21. The plate 21 is apertured as shown at 23, and I provide a curved metal member 2, the upper end of which is fastened to the plate 21 at

the point 24, and which then curves upwardly until it contacts with the under surface of the plate 1 at the point 25. The member 2 then curves downwardly from the point 25 and is bent horizontally to a pivotal connection at the point 3 with a pair of arms 26 which are suspended from and journaled on the rear axle of the skate 6. It will be seen that the member 2 is continued rearwardly from the point 3, and at the point 27 is pivoted to a pawl 4, which pawl is normally in engagement with and is adapted to rotate the toothed wheel 5 which is pinned on the axle 6. The lever 2 also continues rearwardly from the point 27 and is bent upwardly into a spring-like tip which normally engages one face of the pawl 4 so as to hold the same in engagement with the wheel 5. The points at which the arms or links 26 are journaled on the axle 6 are indicated by reference characters 28 and 28 in Fig. 1. The axle 6 also has keyed thereon two additional ratchet wheels indicated at 11—11 in Fig. 1. Coöperating with the wheels 11 are pawls 10 shown in Fig. 12, which are pivoted directly to the plate 1. Springs such as 30 are provided to hold the pawls 10 normally in engagement with the wheels 11.

The plate 21 is reinforced on its under surface by a frame 30^a which is extended rearwardly and journaled to the axle 6 at the points 31—31. It will be seen, moreover, that both of the plates 1 and 21 are cut away immediately adjacent the axle 6 and both plates extend to the rear of said axle. The plate 21 carrying a bar 32 shown in Fig. 2 which extends transversely of the skate between the wheels 7—7 and which has at its ends a pivot for a dog 60 which acts in coöperation with the teeth 33—33 to prevent the backward rotation of the wheels 7, being held in place by a spring 61 shown in dotted lines.

Carried by the plate 1 is a mechanism for attaching the skate to the shoe of the user which comprises two segmental plates such as 34—34 which are fixed to the plate 1 and which are adapted to grip the rear of the heel of the shoe. A movable plate 35 is also provided which is adapted to be guided by blocks 36 and which is adapted to engage and hold the front face of the heel of the user's shoe. I also provide two clamps such as 37—37, one of which is connected to the plate 1 by means of a pivotal link 38, the

arms of the clamps 37 being pivoted together at the point 39.

In order to operate the plate 35 and the clamps 37 I provide a central disk 40 which is directly but pivotally connected to the arm of one of the clamps 37 and which operates the plate 35 by means of a pivotal connection with a link 41 which is pivoted in turn to the plate 35. Fixed to the disk 40 is an arm 42 by which the disk may be clamped and I provide a series of teeth 43 with which the arm 42 is adapted to engage and which holds said arm in adjusted position. Members 35 and 37 may be adjusted to different sized shoes by adjusting the point 39 where the arms of the sole clamp are pivoted together; and also the point 44 where the link 41 connects with the disk 40.

In order to provide for steering the skate I use only one wheel such as 17 which is pivoted in a yoke 16, said yoke being provided with an upwardly extending short shaft 44 which is journaled in the plate 21, and which is squared at its upper end to receive the squared end of a socket 45 which is extended upwardly in a shaft 15 which carries at its upper end a steering wheel 46. See Fig. 9.

In order to provide for braking of the skates on hills, or in cases of emergency, I provide two brake arms such as 47—47 which are pivotally connected to the plate 21 and which carry shoes 48 adapted to engage with the rims of the wheels 7. Levers 47 are pivoted at the point 49 and extend diagonally toward the center line of the plate 21, their inner ends being provided with slots such as 50 which are adapted to receive a pin 51. The pin 51 also passes through the end of the link 52, the forward end of which connects to a cord 14 which passes around a guide pin 53 and thus is carried up alongside of the shaft 15 so as to be convenient to the skater. The brake shoes 48 are normally withdrawn from contact with the wheels by means of springs such as 61 which are pivotally connected to the plate 21.

In order to provide against sudden shocks I use a bumper 54 at the forward end of the skate which is resiliently connected to the frame of the same.

It will be obvious that in using my improved skate that when the skater throws his weight upon the plate 1, the member 2 will be compressed between the plates 1 and 21 and that the point 3 will be carried rearwardly around the center of the axle as an

axis at the same time that the point 27 is carried upward. The result of these motions will be that the pawl 4 will be lifted and the wheel 5 with the axle 6 will be rotated. When the skater shifts his weight to the other skate the springs 9 will raise the plate 1 to its normal position whereupon the axle of the skate will receive an additional impetus through the pawls 10 and the wheels 11. Backward movement of the skate which might injure the member 2 is prevented by the teeth 33 and dogs carried by the bar 32. In case it is desired to turn, the braking and steering apparatus are operated in an obvious manner.

If desired, I can connect the skates of a pair by means of links such as 50—50, but the skates may also be operated without being interconnected.

It will be understood that while I have shown and described the preferred form of my invention, various modifications thereof may be made without departing from the spirit of my invention, and that I contemplate all such modifications as are mechanically equivalent to the device shown and described herein.

Having thus described my invention, what I claim is:—

1. A skate comprising in combination, a frame, a pair of wheels journaled to said frame, a plate carried by said frame and movable relatively thereto, a resilient member having one end fixed to said frame and being bent into contact with said movable plate, arms pivotally connected to the axle of said wheels and also to said member, a toothed wheel carried by the axle of said wheels, and a pawl adapted to engage said toothed wheel, said pawl being pivoted to said member near the end thereof opposite to its place of attachment to the frame.

2. A skate comprising in combination, a frame, a pair of rear wheels rotatably connected to said frame, a plate carried by said frame and adapted to move relatively thereto, springs intermediate said plate and said frame, toothed wheels fixed to the axle of said wheels, and pawls pivotally connected to said movable plate and arranged to operate said toothed wheels from energy derived from said springs.

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

FRANK KRATKY.

Witnesses:

RUDOLPH LIFKA,
RUDOLPH HANAN.