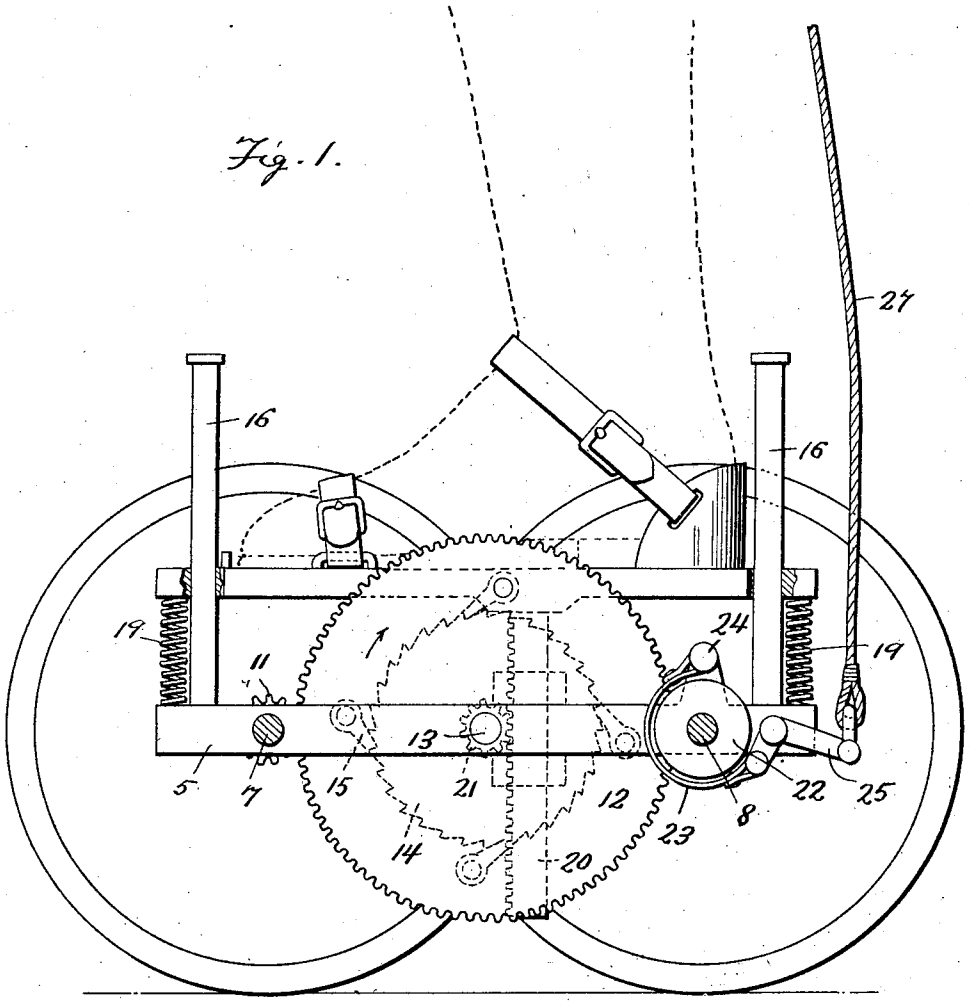
May 10, 1927. 1,628,004

J. STETSON

SKATING DEVICE

Filed June 29, 1926 2 Sheets-Sheet 1

Fig. 1.



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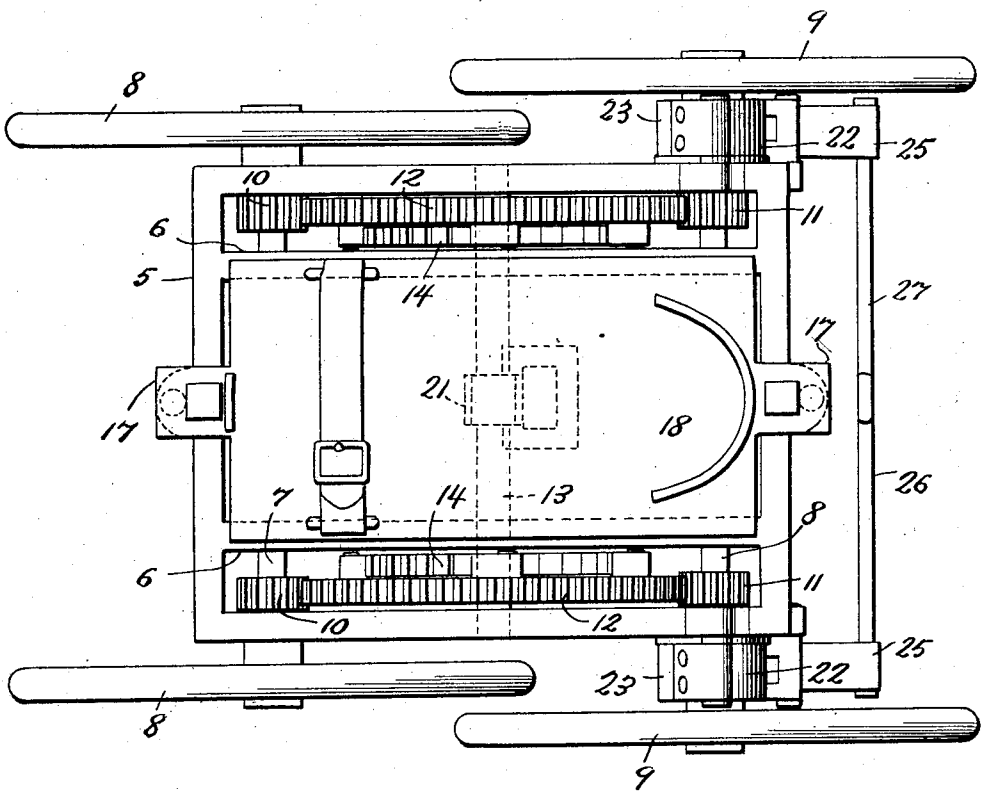
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Fig. 2.



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Patented May 10, 1927. 1,628,004

UNITED STATES PATENT OFFICE.

JOHN STETSON, OF SAN FRANCISCO, CALIFORNIA.

SKATING DEVICE.

Application filed June 29, 1926. Serial No. 119,368.

This invention relates generally to the art of roller skates, and has for its primary object to produce a device of this character, wherein when a pair of the same are applied to the feet in a manner similar to the conventional roller skates, the supporting rollers or wheels thereof will be forcibly propelled by the weight of the person thereon, for thus facilitating the propulsion of the person without requiring the pushing action necessary in the use of said conventional roller skates.

The invention further aims to provide a skating device of the before mentioned character that is relatively simple of construction, efficient in operation, and otherwise well adapted for the purposes intended.

In the drawings, wherein like reference characters indicate corresponding parts throughout both of the views.

Figure 1 is a side elevation of a skating device constructed in accordance with the present invention, and

Figure 2 is a top plan view thereof.

Now having particular reference to the drawings, my novel skating device constitutes the provision of a substantially rectangular shaped horizontal frame 5 of open formation, as clearly disclosed in Figure 2 for purpose of lightness, said frame being constructed inwardly of its opposite sides with horizontal bars 6—6. Journaled transversely of this frame, at opposite ends thereof, are axle shafts 7 and 8, respectively, and upon the outer ends of which are mounted front and rear supporting and propulsion wheels 8—8 and 9—9, respectively. As clearly disclosed in Figure 2, the rear axle shaft is of greater length than the forward axle shaft in order that the front and rear wheels may function without interference with each other.

Keyed to the axle shafts 7 and 8, directly within the side bars of the frame 5 are relatively small spur gears 10—10 and 11—11 respectively. These spur gears are in mesh with relatively large gears 12—12 that are loosely mounted upon a transverse shaft 13, outwardly of the frame bars 6—6, said shaft being obviously journaled at its opposite ends through registering openings in said bars 6—6 as well as the outer side bars of the frame 5.

Keyed to shaft 13 at the inner sides of said large gears 12—12 are ratchet wheels 14—14, adapted for engagement with the teeth of which are pivoted dogs 15, of suitable number, which dogs are pivoted to the inner faces of said gears 12—12, and serve to connect the gears 12—12 to the shaft 13 when the same is forcibly rotated in a clockwise direction, which rotation will obviously effect the rotation of the wheel carrying shafts 7 and 8 in a counter clockwise direction for propelling the device over the road surface.

Projecting vertically from the center of the end bars of the frame 5 are posts 16—16 that are arranged through similar shaped openings in extension lugs 17—17 of a horizontal foot resting plate 18 that is provided upon its top side with means for attaching the foot of the skater thereto, which means is preferably, though not necessarily, as disclosed in the drawings.

Said foot resting plate 18 is normally maintained in elevated position with respect to the frame 5 through the medium of strong expansible helical springs 19—19, arranged between lugs at the opposite ends of the frame 5 and said lugs 17—17 of the foot resting plate 18, Figure 1.

Depending from the under side of the foot resting plate directly in back of the transverse shaft 13 journaled in the frame 5 is a rack bar 20, the teeth of which are constantly in mesh with the teeth of a pinion gear 21 keyed to the transverse shaft 13 at the center thereof.

It will be obvious that when a pair of these skating devices are attached to the feet of the skater, the wheels, when initially brought into engagement with the road surface will be forcibly caused to rotate in a forward direction for propelling the skater over the road surface without requiring the usual pushing upward, and this by reason of the fact that as each device is disposed upon the road, the weight of the skater will cause the foot resting plate 18 to be forcibly moved downwardly against the action of the springs 19—19 for causing a clockwise rotation of the shaft 13 and the consequent counter clockwise rotation of the wheels by reason of the operating mechanism between said shaft and the wheel axles. As soon as each skating device is raised from the road surface, the frame 5 and resting plate 18 will be caused to separate under the action of the springs 19—19, but by reason of the mechanism between the shaft 13 and the wheel carrying axles, the counter clockwise

rotation of the wheels will not be effective.

It is preferable that a braking mechanism be provided for the skating device, and as disclosed in the drawings, said braking mechanism consists of a pair of brake drums 22—22, mounted upon the rear wheel axle 8 directly inwardly of the wheels 9—9. Partially surrounding these drums are brake bands 23—23 that are anchored at certain ends as at 24 above the drums. The opposite ends of these bands are attached to the inner arms of bell cranks 25—25, pivoted to the outer sides of the frame 5 rearwardly of the axle 8. The outer arms of the bell crank are interconnected by a cross bar 26, to which is attached a pull cable 27, of a length sufficient to enable the skater to grasp the same without inconvenience. Obviously, a pull upon this cable will contract the bands upon the drums for breaking the rotation of the rear axle to the desired degree.

It will thus be seen that I have provided a highly novel, simple and efficient form of skating device well adapted for all of the purposes hereinbefore designated, and even though I have herein shown and described the same as consisting of certain detail structural elements, it is nevertheless to be understood that some modifications may be had without affecting the spirit and scope of the appended claim.

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

In a skating device of the class described, a frame, front and rear axles journaled transversely thereon, ground engaging propelling wheels supported on the axles, a shaft journaled transversely on the intermediate portions of the frames, pairs of aligned spur gears keyed on the axles, a pair of driving gears loosely mounted on the intermediate shaft and adapted for engagement with the respective pairs of aligned spur gears, posts extending upwardly from the forward and rear end portions of the frame, a foot resting plate arranged above the frame and adapted for vertical sliding movement, apertured lugs at the forward and rear ends of the plate through which said posts extends, expansible coil springs interposed between the frame and the foot resting plate for normally maintaining the latter in a raised position but to permit the same to be forced downwardly when the weight of the skater is placed thereon, a pinion keyed on the intermediate shaft, a vertical rack bar secured at its upper end to the bottom of the foot resting plate and adapted for engagement with the pinion for rotating the intermediate shaft, ratchet wheels keyed on the intermediate shaft adjacent the respective driving gears, and cooperating pawls pivotally mounted on the driving gears and engaging the respective ratchet wheels for effecting the actuation of the driving gears and a simultaneous operation of the ground engaging propelling wheels in one direction.

In testimony whereof I affix my signature.

JOHN STETSON.