

No. 619,370.

Patented Feb. 14, 1899.

B. WAGNER.
ROLLER SKATE.

(Application filed Sept. 9, 1897.)

(No Model.)

Fig. 1

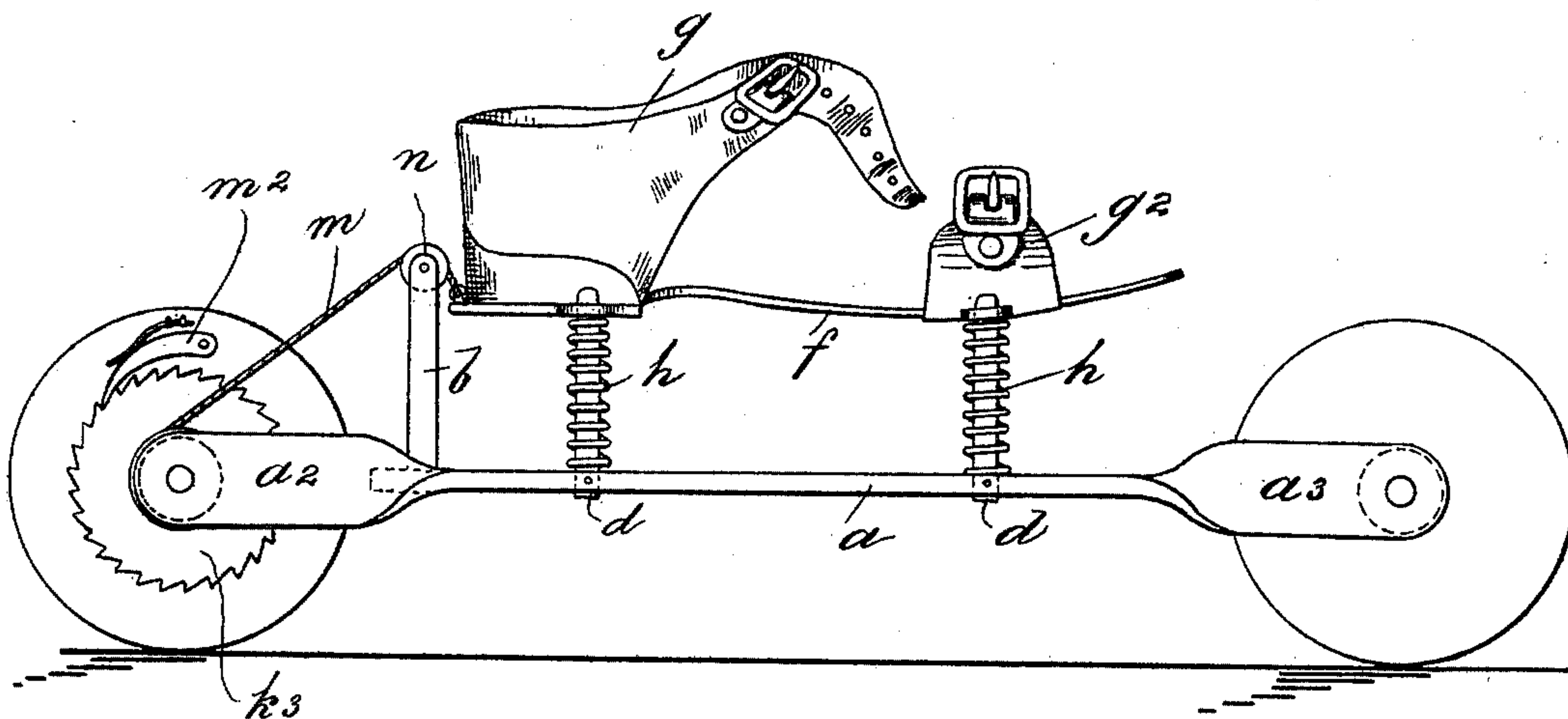
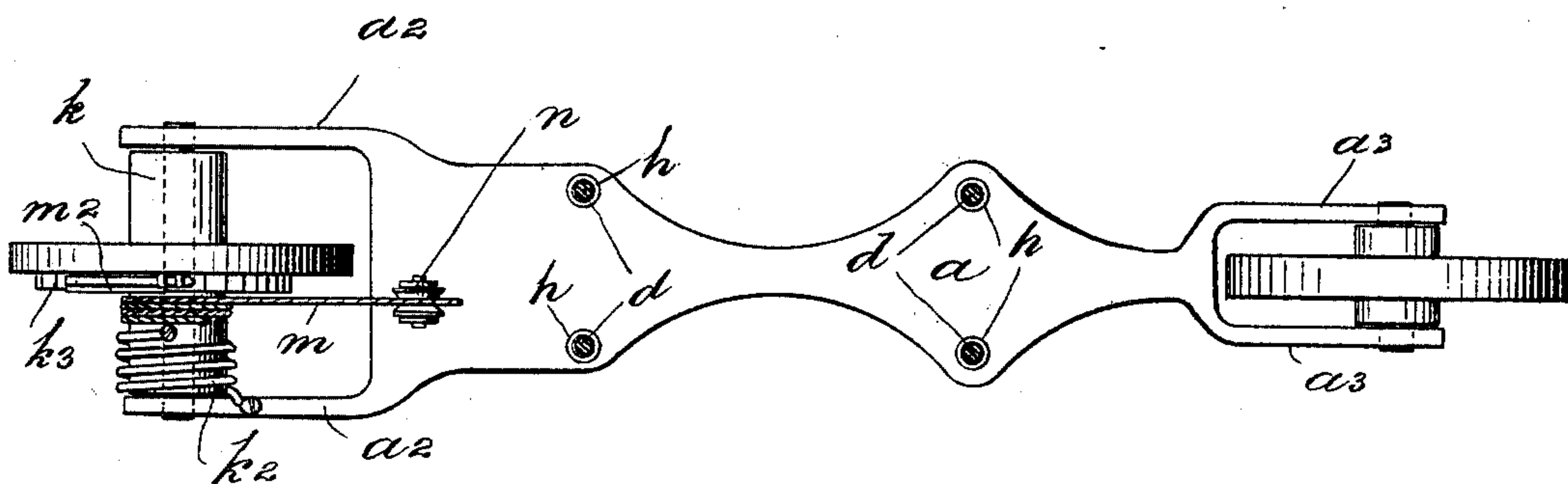


Fig. 2



WITNESSES:

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BERNHARD WAGNER, OF RAHWAY, NEW JERSEY.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 619,370, dated February 14, 1899.

Application filed September 9, 1897. Serial No. 651,113. (No model.)

To all whom it may concern:

Be it known that I, BERNHARD WAGNER, a citizen of the United States, residing at Rahway, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Roller-Skates, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to a roller-skate, and more particularly to a class thereof adapted to be propelled by an ordinary walking motion.

The object of the invention is to provide a skate of the above-described class that can be propelled by simply stepping on the foot-plate, which motion will propel the wearer at a speed which will exceed that of the ordinary roller-skate.

A further object is to provide an article of the above-described class that will be simple in construction, efficient in operation, and comparatively inexpensive to manufacture.

The invention consists in the novel features of construction hereinafter set forth and described, and more particularly pointed out in the claim hereto appended.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of my improved skate, and Fig. 2 a plan view with the foot-plate removed.

Like letters refer to like parts in both views.

In the accompanying drawings, *a* denotes a plate which is provided at each end with a fork, as *a*² *a*³, between the prongs of which may be mounted a single wheel, as shown in the drawings, or two wheels, as in the ordinary skate. Mounted upon this plate are an upright standard *b* and rods *d*, which are adapted to support a foot-plate *f* of ordinary construction, with the exception that lugs are provided thereon through which the rods *d* are adapted to pass when said plate is subjected to a vertical movement. The foot-plate is attached to the foot by any desired means, as the ordinary roller-skate straps *g* and toe-straps *g*². Coiled about the uprights *d* and bearing upon the foot-plate *f* and the plate *a* are spiral springs *h*, which are of sufficient strength to restore the various parts

to the normal position when the operating pressure has been released.

Upon the rear axle is mounted a revolving sleeve *k*, to which the ratchet-wheel *k*³ is rigidly mounted. Upon this sleeve is mounted a spiral spring *k*², the ends of which are secured to said sleeve and the plate *a*, respectively, so as to insure an unremitting torsional strain upon said sleeve, which strain will be augmented when the sleeve has been revolved in the manner hereinafter described.

The foot-plate *f* and the sleeve *k* are connected by means of a chain, rope, or other suitable connection *m*, which is so adjusted in relation to said sleeve as to revolve the same a plurality of times when the foot-plate *f* is forced downwardly by the weight of the user.

To insure a uniformity of motion between the hind wheel and the ratchet *k*³ when said ratchet travels in the direction which would propel the skate forward and also to render the rotation of said wheel in the opposite direction impossible under any circumstances, I provide a spring-actuated pawl *m*², adapted to act in conjunction with said ratchet. To render an easy motion of the various parts, I mount upon the upper portion of the standard *b* a pulley *n*, over which the rope or chain *m* is adapted to travel when the wheel is actuated.

The operation of my improved skate is as follows: The foot is placed upon the foot-plate and firmly attached thereto in the ordinary manner and the skate and wearer propelled by merely stepping upon said plate, which will result in a directly vertical movement of the same, thus unwinding the rope or chain from the sleeve *k*, which action will result in the rotation of the hind or power wheel. This action will also increase the tension on the spring *k*², which will revolve the ratchet *k*³ in the opposite direction, leaving the power-wheel free to rotate irrespective of the movement of said ratchet when the pressure on the foot-plate is released. This operation is repeated with each foot, and the arrangement of parts should be such as would result in such an increase of speed of the power-wheel as will occasion the wearer to travel an increased distance at each step.

By the means above described I have fully attained the object of my invention. I have

produced a skate that while being simple in construction is so arranged as to permit the wearer to be propelled without any exertion over and above that required in walking.

5 The device as above described is efficient in operation and comparatively inexpensive to manufacture.

It is to be observed that it is not my intention to limit the invention to the precise construction herein shown and described, as it is obvious that there may be many variations in minor details of construction without departing from the spirit and scope of my invention.

10 Having described my invention, I claim and desire to have protected by Letters Patent—

15 In a roller-skate the combination with a plate *a*, having a front and a rear fork attached thereto, vertically-extended rods and a pulley-bearing standard, of a foot-plate sliding on said rod, spiral springs encompassing
20 said rods and bearing respectively on said

plates, of means consisting substantially of a rotating sleeve, a ratchet-wheel rigidly mounted thereon, said ratchet being adapted by means of a spring-actuated pawl to rotate the rear wheel in one direction only, a spring encompassing said sleeve and so arranged as to restore the various parts to their normal position when the pressure is released from the foot-plate, and a connection passing over a pulley in said standard between said sleeve and said foot-plate, substantially as shown and described. 25 30

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 4th day of September, 1897. 35

BERNHARD WAGNER.

Witnesses:

C. GERST,

T. M. CARR.