No. 864,333. PATENTED AUG. 27, 1907.

P. G. PILZ.

ROLLER SKATE.

APPLICATION FILED DEC. 21, 1906.

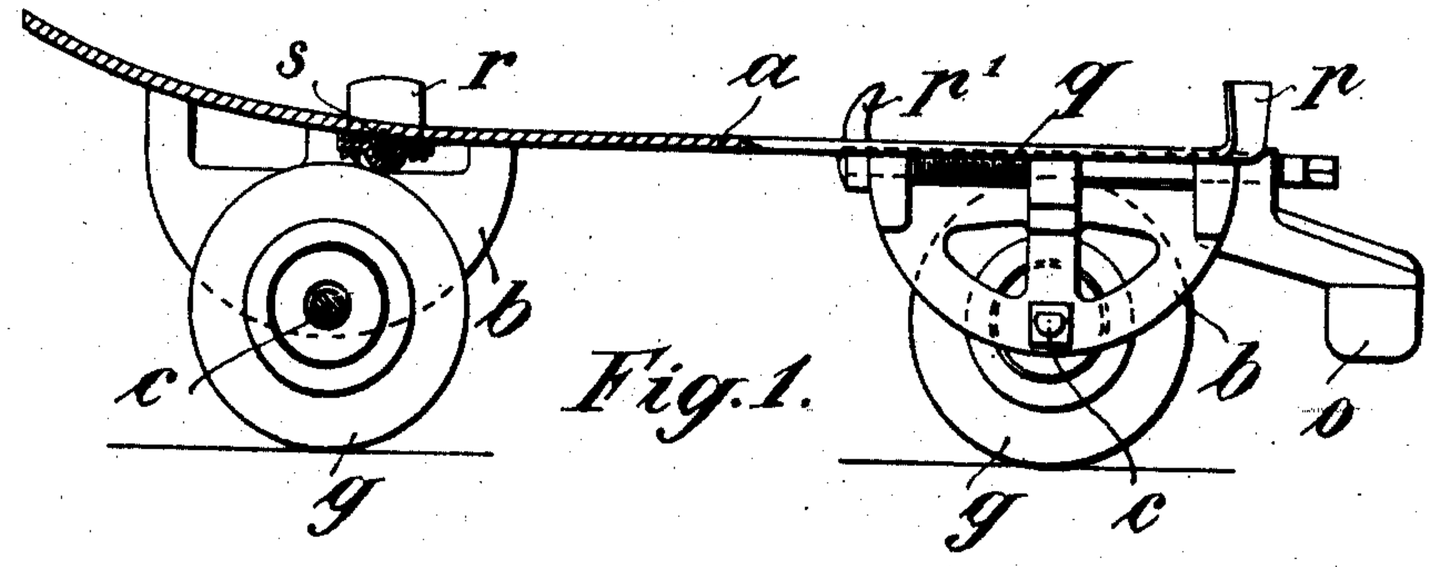

Fig. 1.

Fig. 2.

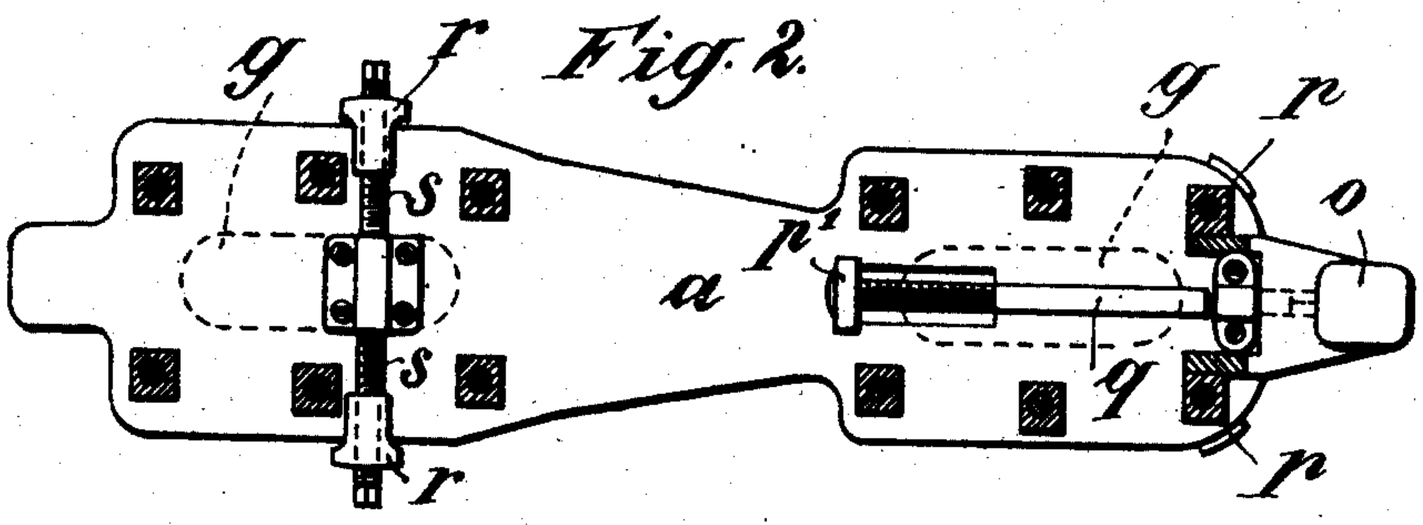

Fig. 3

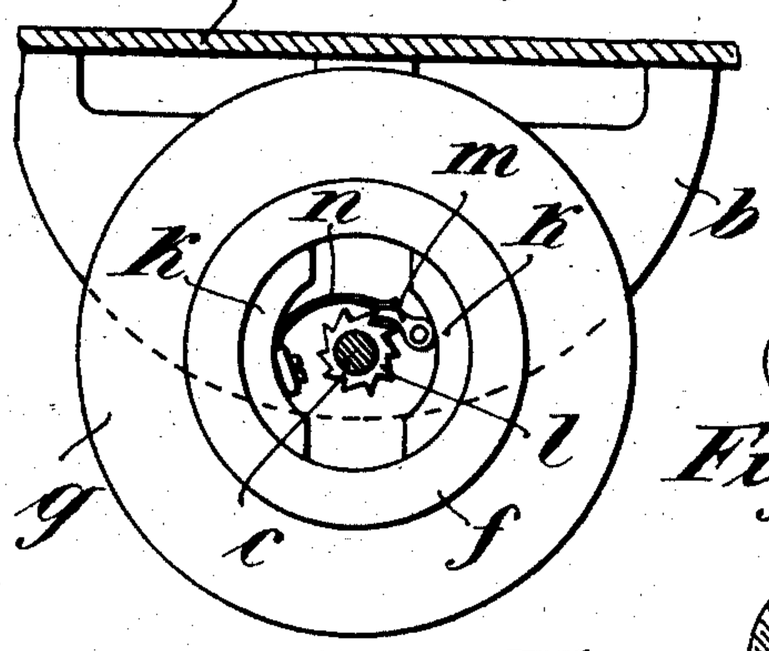

Fig. 4.

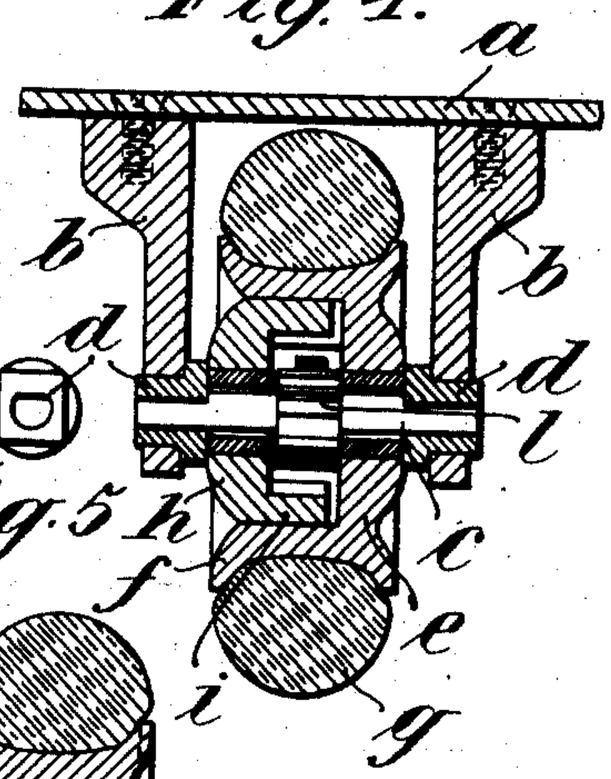

Fig. 5

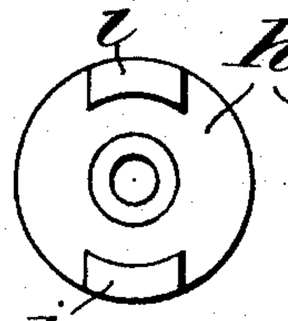

Fig. 6.

Fig 6a

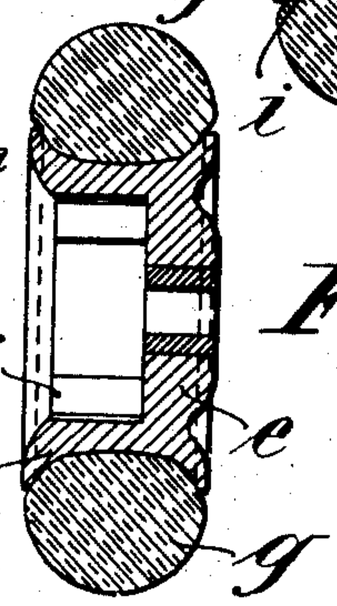

Fig. 7.

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UNITED STATES PATENT OFFICE.

PAUL GEORG PILZ, OF SCHLETTAU, ERZGEBIRGE, GERMANY.

ROLLER-SKATE.

No. 864,333. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed December 21, 1905. Serial No. 292,879.

To all whom it may concern:

Be it known that I, PAUL GEORG PILZ, a citizen of the German Empire, and a resident of Schlettau, Erzgeb., Germany, (whose post-office address is Schlettau, Erzgeb.,) have invented certain new and useful Improvements in Roller-Skates, of which the following is a specification.

The present invention relates to improvements in so-called roller or parlor skates. In prior skates of this description the rollers are always so mounted as to admit of rotation in both directions. Such free motion of the rollers, however, greatly increases the difficulties of learning to skate, and the skater, moreover, is not in a position to employ the force of the push of the one foot to limit the rotation of the rollers of the other skate.

In my improved skate the rollers can only turn in one direction. In this manner the skater is enabled to execute exactly the same movements as can be executed with ice-skates. For this purpose an arresting-device is provided in each of the rollers, which permits of free running of the rollers in the direction of propulsion, but prevents such motion in the contrary direction. The skater is thus enabled at every stage of his progress, by pushing the one foot backward to stop the rotary motion of the rollers, and at the same time to increase the speed of rotation of the rollers of the other skate.

One form of construction of the new skate is shown in the accompanying drawing, in which

Figure 1 is a longitudinal sectional view, Fig. 2 an underside sectional view, Fig. 3 a fragmental vertical section, drawn to a larger scale, showing one of the rollers in elevation with hub cover removed. Fig. 4 is a cross section through Fig. 3. Fig. 5 is a front elevation of an axle-bush. Fig. 6 is an inside view of the hub-cover of the roller. Fig. 6ª is a section through Fig. 6. Fig. 7 is a cross section of a roller with cover removed.

a is the sole-plate of the skate, below which are the hangers *b*, in which are mounted the fixed roller-axles *c*. The latter are flattened at each end (Fig. 4) and inserted in the correspondingly shaped holes of the rectangular bushes *d* (Fig. 5), which fit into the hangers *b*, so that the axles cannot turn. On the axle *c* there is rotatably mounted the actual roller *e*, which consists of a felly-ring *f* closed at one side. Over this felly-ring the tire *g* of rubber or other suitable material is fitted. The open side of the wheel-body *e* is closed by a cover *h* (Figs. 4, 6, 6ª) loosely rotatable on the axle *c* and having lugs *i*, which engage with correspondingly shaped projections *k* on the interior of the wheel-body *e*. On the axle *c*, in the space between the body *e* and cover *h*, there is rigidly mounted a ratchet-wheel *l*, with which there engages a detent *m*, controlled by a spring *n* and pivoted to the body *e*. The arrangement of this detent is such that the roller can only rotate for the forward motion of the skate, so that the latter can not travel backward.

The parts *e* and *h*, of which each roller consists are held together by the bushes *d*, located in the hangers *b*. At the heel-end of the skate is an arm or bracket *o*, which may be employed as brake-shoe.

The skate is secured to the boot-heel by means of jaws *p* and p^1, of which the latter can be adjusted by means of the screw-bolt *q*. The jaws *r*, rendered adjustable by means of the screw-bolts *s*, serve to fix the skate to the sole of the boot.

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

1. In a roller skate, in combination a roller-axle flattened at each end, a sole-plate presenting bearings to receive the axle ends; a hollow roller rotatably mounted on the axle, and open at one side; a cover loosely rotatable on the axle and closing the open side of the roller; means for connecting said cover to the said hollow roller, and means located within the roller for preventing rotation of the roller in a direction contrary to that of propulsion of the skater, substantially as described.

2. In a roller skate, in combination, roller-axle flattened at each end; a sole plate presenting bearings to receive the axle ends; a hollow roller rotatably mounted on the axle, and open at one side, and presenting internal projections; a cover loosely rotatable on the axle and closing the open side of the roller, and having lugs engaging in the said projections; and means located within the roller for preventing rotation of the roller in a direction contrary to that of propulsion of the skater, substantially as described.

3. In a roller skate, in combination, a roller-axle flattened at each end; a sole-plate presenting bearings to receive the axle ends, a hollow roller rotatably mounted on the axle, and open at one side, and presenting internal projections; a cover loosely rotatable on the axle, and closing the open side of the roller, and having lugs engaging the said projections; a ratchet-wheel rigidly mounted on the axle, inside the roller; and a spring-controlled detent pivoted to the roller and engaging the said ratchet; whereby the roller is prevented from turning in a direction contrary to that of propulsion of the skater, substantially as described.

4. In a roller skate, in combination, roller-axles flattened at each end; a sole-plate presenting hangers; bushes shaped to receive the axles and having a rectangular portion fitting into the hangers; hollow rollers rotatably mounted on the axles and open at one side, and presenting internal projections; covers loosely rotatable on the axles, and closing the open side of the rollers, and having lugs engaging the said projections; ratchet-wheels rigidly mounted on the axles, inside the rollers, spring-controlled detents pivoted to the rollers and engaging the said ratchets; and a brake projecting from the heel-end of the sole-plate; substantially as described.

The foregoing specification signed at Annaberg this 1. day of December, 1905.

PAUL GEORG PILZ.

In presence of—
OTTOMAR STARKE,
CHAS. BORNGRAEBER.