(No Model.)

J. RIEDEL.

SELF ACTING BRAKE FOR ROLLER SKATES.

No. 521,181. Patented June 12, 1894.

Fig. 1

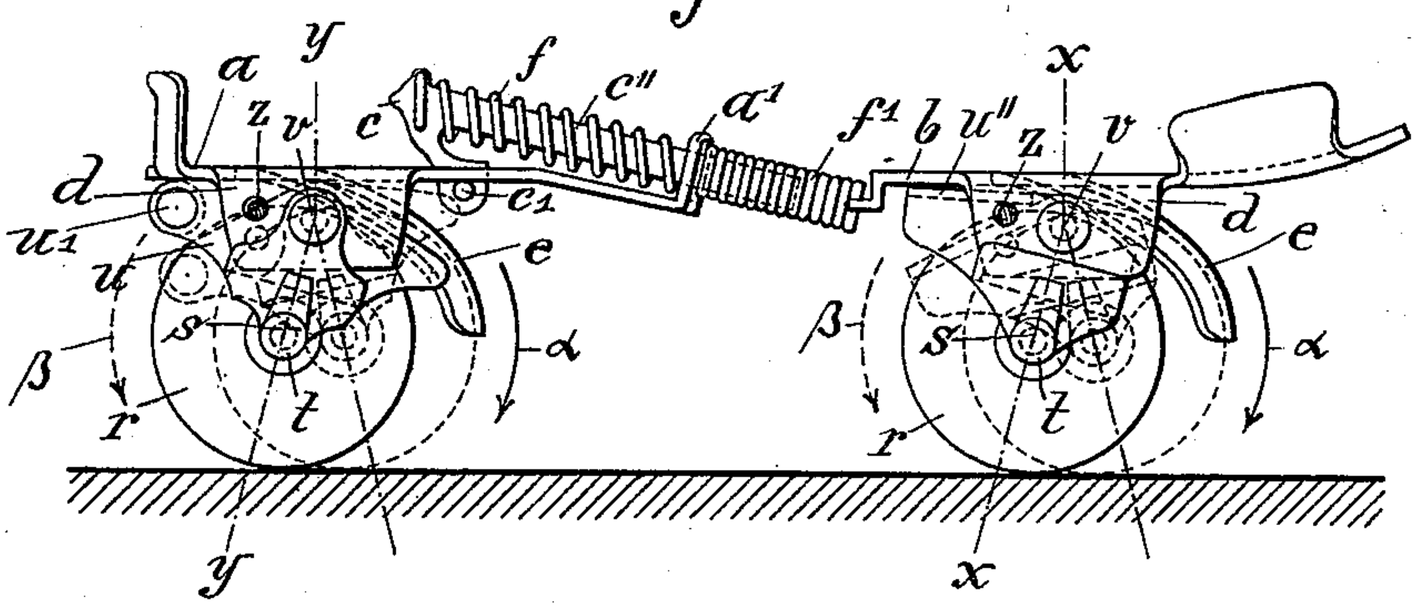


Fig. 2ª

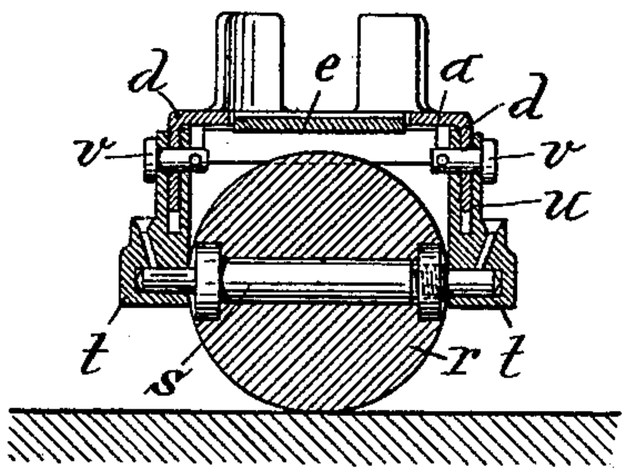


Fig. 2ᵇ

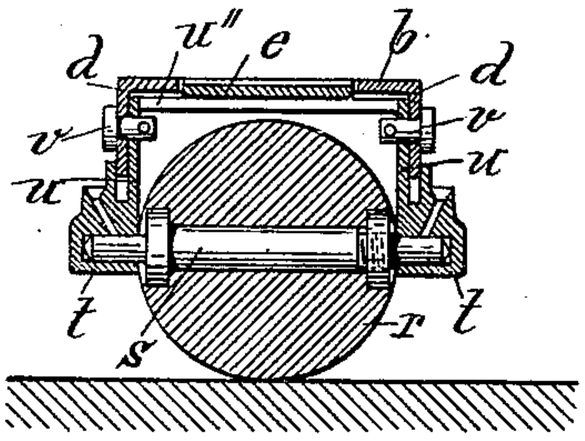


Fig. 3ª

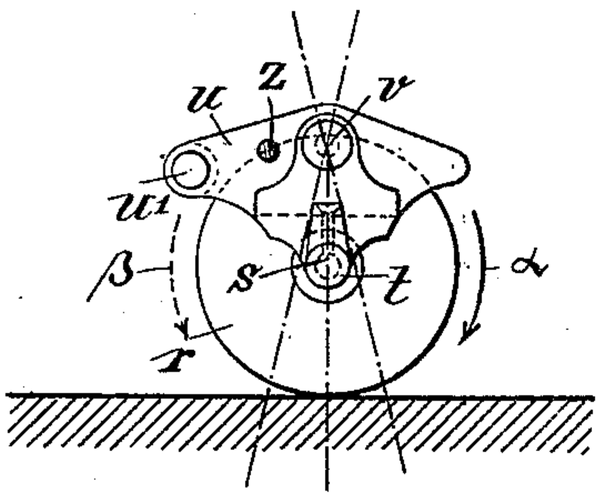
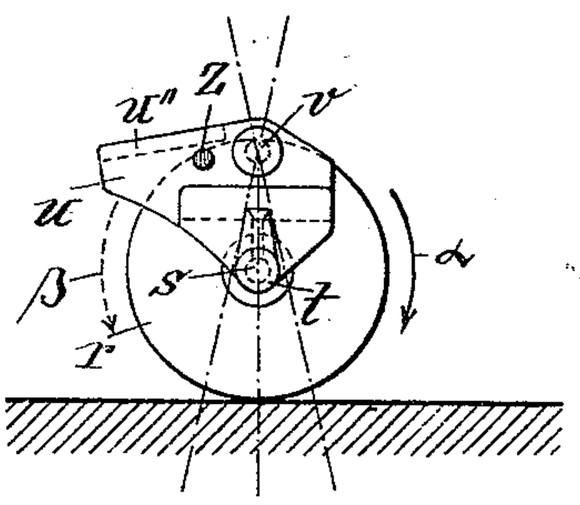


Fig. 3ᵇ



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JOSEF RIEDEL, OF VIENNA, AUSTRIA-HUNGARY.

SELF-ACTING BRAKE FOR ROLLER-SKATES.

SPECIFICATION forming part of Letters Patent No. 521,181, dated June 12, 1894.

Application filed October 10, 1893. Serial No. 487,778. (No model.)

To all whom it may concern:

Be it known that I, JOSEF RIEDEL, residing at Vienna, in the Province of Lower Austria and Empire of Austria-Hungary, have invented certain new and useful Improvements in Self-Acting Brakes for Roller-Skates, of which the following is a specification.

Braking apparatus for preventing a backward motion of the roller skates are very desirable not only for beginners in their first period of learning how to skate but also for all roller skaters it is desirable. The beginner particularly fears backward motion during the skating as well as while standing still because of the liability to fall; but even the expert, while skating will find a great advantage in braking the backward motion of the skate which rests momentarily upon the ground at the time he wishes to push himself forward or to increase his speed; and this is especially true when skating up an incline where the skate that rests upon the ground tends more particularly to roll backward so that it would be impossible to obtain any stability of the same upon the ground without braking apparatus. It is also desirable when the skater desires to stand still.

The roller skate of the present invention comprising self acting and removable braking apparatus for preventing its backward motion is illustrated in annexed drawings.

Figure 1, is a side view of the roller skate during the forward motion; the position shown by dotted lines represents the parts in the position they adopt when the roller skate is stopped by the brake, that is when the foot supported by the roller skate presses backward toward the ground or even at the moment that the skate tends to roll backward. The fore and rear roller bearings show two different arrangements. Figs. 2^a—2^b show central vertical sections of the two different constructions on the lines *x*—*x* *y*—*y* of Fig. 1. Figs. 3^a—3^b represent a side view of a roller with the whole frame in which it bears, in the two different constructions.

In this construction the rollers of the skate can be wheels as well as balls (as shown in the drawings) or they can have any desired form and there can be any desired number of the same. The sole plate that lies directly under the sole of the foot consists of two parts; *a* is the support for the heel; *b*, the support for the fore part of the shoe or sole of the boot. A pair of tension springs arranged at the side or two pairs of the same serve as fastening of the skate to the foot gear. The springs (or half springs) *f* press the clamps *c* backward against the heel piece, said clamps slide in longitudinal slots of the plate *a* and are prevented from falling out by means of pins *c'*. The springs or half springs, *f* draw the plate *b* against the plate *a* and thus the said plate *b* is fastened, as also the plate *a*, to the foot gear. The upward bent flanges *a'* of the plate *a* serve as supports for the springs, or half springs, *f* and *f'*; and the rods *c''* which project through said springs serve to guide them and these are made of one piece with the clamps *c*.

The two part sole plate *a b*, which however can be constructed of one piece without interfering with the principle of the invention is provided at the side with two pairs of flanges *d*, *d*, bent downward and also with two flanges *e e* bent downward which latter form the brake blocks for the rollers. Those flanges *d d d d e e* can also be fixed to the sole plate *a b* by any suitable means, as screws, rivets or the like.

The rollers *r*, *r*, are journaled in the bearings *t t* by means of their axles *s s* which bearings are made of one piece with the frame *u;* (see the front roller *r* and its bearing;) or the frames consist of the two side surfaces *u* connected by means of the distance bolt *u'*, see the rear roller *r* and its bearing.

Each of the frames *u* is pivotally connected with the downward bent pair of flanges *d d* of the sole plate *a b* by means of a pair of gudgeons *v v* and the weight of the person wearing the skates is transmitted through the flanges *d d d d* through the gudgeons *v v v v* through the side plates *u u u u* through the bearings *t t t t* upon the side pivots of the axles *s s* and from there through the axles *s s* and the rollers *r r* to the ground.

The pivotal motion around the gudgeon *v* is only slight, being limited on one side by the brake block *e* against which the roller *r* rests in the braking position and on the other side by the lower surface of the sole plate *b*

(or a) against which the upper surface u'' of the horizontal cross-piece u (or the upper edge of the distance bolt u') comes in contact during the forward motion, said contact pieces can be provided with cork, wood, leather or rubber layers which on one side increase the brake power and on the other side prevent noise at the moment of the coming in contact. In order to prevent the brake from working, it will simply be necessary to pass the pin z through the holes of the sides u and flanges d which holes register when the different parts are in the position indicated by the full lines in Fig. 1, whereby the frame u is held rigid and cannot turn around the pins v.

When the skate is moved forward whereby the rollers turn in the direction of the arrows $d\ d$ the parts remain in the position indicated by full lines in Fig. 1 and the rollers $r\ r$, keep at a distance from the brake blocks $e\ e$. But when the rollers $r\ r$ (or only one of them) have a tendency to turn in the opposite direction (of the arrows B B), which will occur if the skater (voluntarily or not) moves backward; each of the frames u will then swing into the second position, shown in Fig. 1 by dotted lines on account of the friction of the contact surface of the roller with the ground; the rollers $r\ r$ will press against the brake blocks $e\ e$ and backward motion is momentarily prevented.

I claim—

1. In combination in a roller skate, the main frame having the side flanges $d\ d$ bent downwardly, the rollers, the supplemental frames carrying the same and having sides overlying the flanges $d\ d$, and pivoted thereto, the cross piece or stop for limiting the movement of the said frames and the brake block comprising the flanges $e\ e$ bent down from the main frame, substantially as described.

2. In combination in a roller skate the frame having the side flanges $d\ d$ bent downwardly and also the brake blocks e, the rollers, the supplemental frames having sides overlying the flanges $d\ d$ and pivoted thereto, said flanges and sides being perforated and the pin passing through the said holes to hold the frames u to the flanges $d\ d$ against turning, substantially as described.

In witness whereof I hereunto set my hand in presence of two witnesses.

JOSEF RIEDEL.

Witnesses:

A. SCHLESSING,

VICTOR TISCHLER.