

June 5, 1923.

C. A. MIDON

1,457,667

ROLLER SKATE

Original Filed Sept. 19, 1919

2 Sheets-Sheet 1

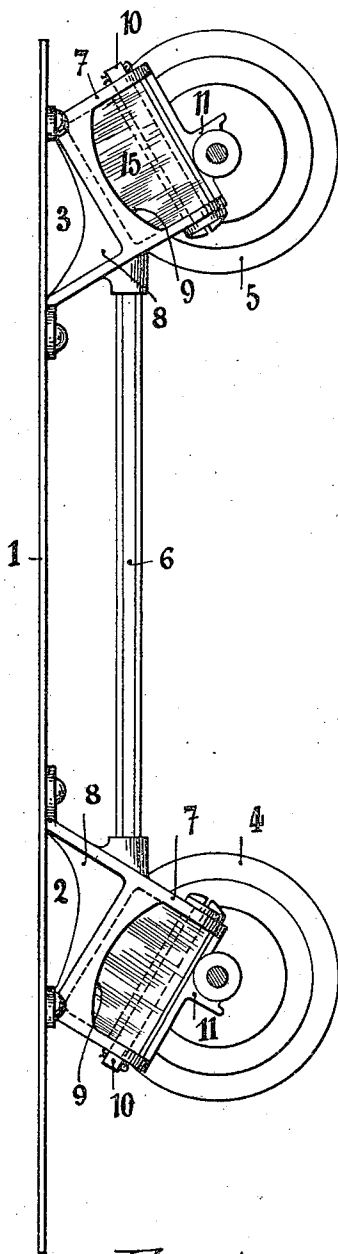


Fig. 1.

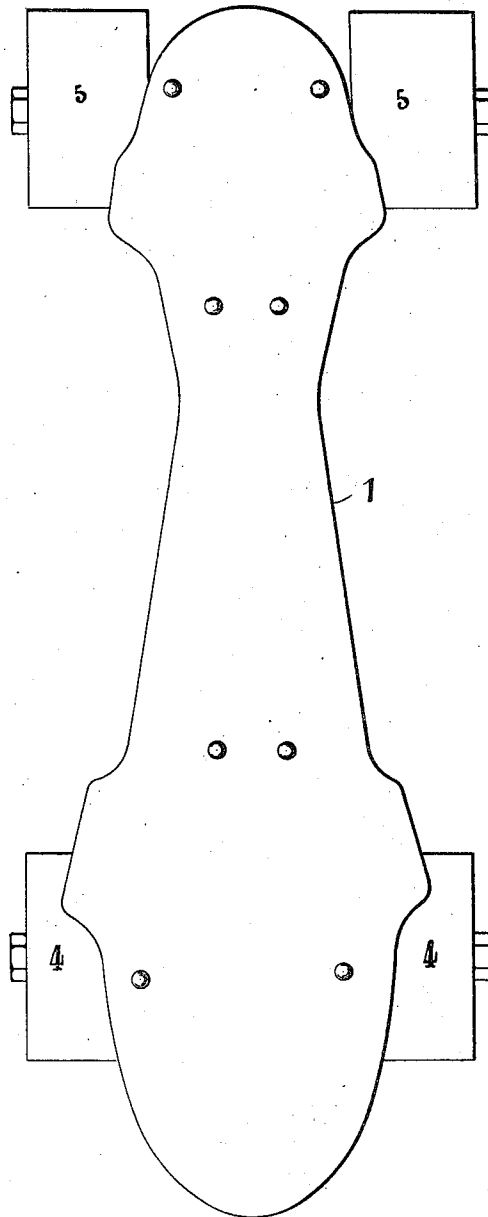


Fig. 2.

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2 Sheets-Sheet 2

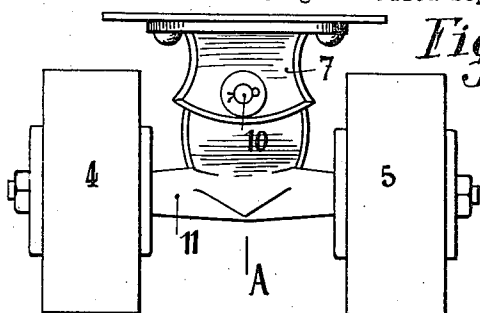


Fig. 3.

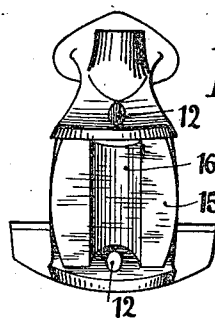


Fig. 6.

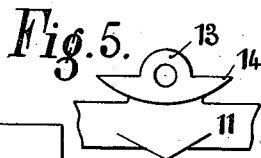


Fig. 4.

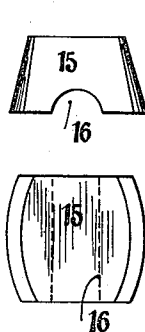
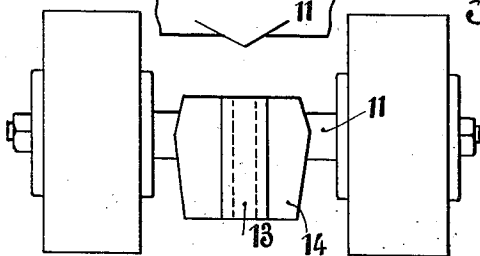


Fig. 7.

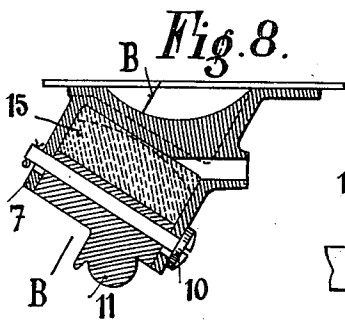


Fig. 8.

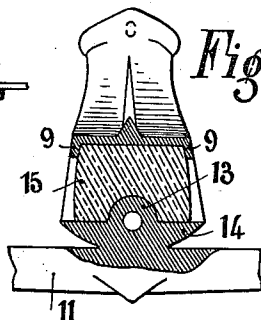


Fig. 9.

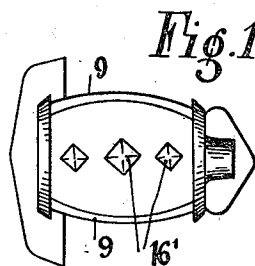


Fig. 10.

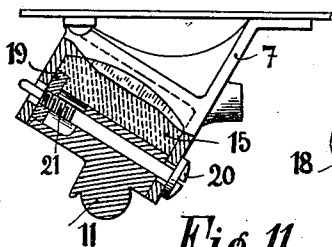


Fig. 11.

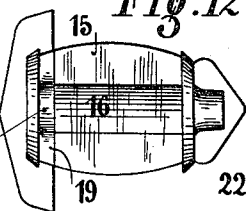


Fig. 12.

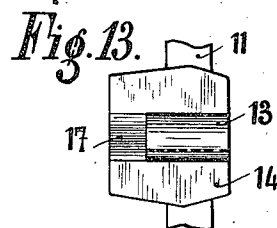


Fig. 13.

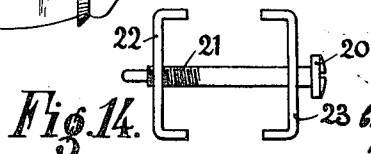


Fig. 14.

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UNITED STATES PATENT OFFICE.

CHARLES ALFRED MIDON, OF PARIS, FRANCE.

ROLLER SKATE.

Application filed September 19, 1919, Serial No. 324,862. Renewed October 21, 1922. Serial No. 596,166.

To all whom it may concern:

Be it known that I, CHARLES ALFRED MIDON, a citizen of the Republic of France, engineer, residing at Paris, 14, Rue Julien Lacroix, Paris, France, have invented certain new and useful Improvements in or Relating to Roller Skates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention refers to improvements in, or relating to roller skates, and it has for its object to make such improvements in their construction which will enable them to be more economically produced and at the same time to provide a practical mounting and also to assure to the skate that flexibility and lightness which is desirable whilst at the same time permitting of the free play and adjustment of the wearing parts.

In the accompanying drawings with reference to which the invention is described:—

Figure 1 is a sectional side elevation of a skate with rollers on the near side removed;

Fig. 2 is a plan view thereof;

Fig. 3 is an end elevation;

Figures 4 and 5 show in plan and elevation respectively the bridge or stay of a pair of rollers;

Fig. 6 is a plan of a support as seen from below;

Figure 7 shows in plan and in elevation the moulded rubber element;

Figure 8 is a longitudinal section taken on the line A—A of Figure 3;

Figure 9 is a cross-section taken on the line B—B of Figure 8.

Figure 10 is a detail top plan view of one of the supports.

Figure 11 is a similar section to that shown in Figure 8 showing means for regulating the elastic element;

Figure 12 is a plan as seen from below of the support shown in Figure 11;

Figure 13 is a plan of the bridge shown in Figure 11, and

Figure 14 relates to a constructional modification.

Referring to the drawings, it will be seen that the skate consists of a stamped plate 1 shaped as shown in Figure 2 and under which there are riveted the supports 2 and 3 each carrying a set of rollers 4 and 5

mounted on ball bearings. In order to obtain accuracy in fixing the supports and to have two sets of quite symmetrical rollers, the supports 2 and 3 are made in one mould and connected in the moulding process by a steel stay 6 of any suitable section.

Each support comprises an aluminium casting in the form of a capping 7, ribbed at 8, and carrying lateral flanges 9, the said support being assembled by the aid of a keyed pin or axis 10 with the bridge 11 carrying the rollers. The pin 10 passes into holes 12 in the capping of the support and traverses a semi-cylindrical hub 13 made in one with a plate 14 forming one piece with the bridge 11.

In the interior of the capping 7 there is placed a block of moulded rubber 15 (Figure 7) having a cavity 16 for receiving, when assembled, the boss 13 of the bridge 11. The parts assembled by the pin 10 hold between them the said block of rubber 15 which is prevented from slipping by the flanges 9 provided on the sides of the casting. In order to contribute still more efficaciously to the adhesion of the blocks of rubber 15 in their bed, it should be remarked (Figures 1 and 4) that the bridge is out of line in relation to the axis of the rollers, which enables the said axis to pass into the plane containing the centre of the block 15. It is therefore impossible for this latter to come out of its bed by slipping or sliding during use as frequently occurs with the present constructions.

The adhesion of the block 15 can also be obtained by means of any kind of projections 16' provided in the bottom of the supports, for example, diamond points as shown in Figure 10.

It is evident that the boss 13 provided on the bridge 11 and which penetrates into the block 15 may also be provided in the support, in the same way as the capping may be provided on the bridge, that is to say in a position the reverse of that shown in the drawings.

In order to secure maximum efficiency during use of the skate, it is necessary to be able to regulate at will the flexibility of the rubber block 15.

If the speed is to be rapid the rubber block requires to be much harder than in the case of ordinary speed, and at present in order to benefit by all the desiderata of skating it is necessary to have either several pairs

of skates or else to change the elastic block when required.

In order to obviate these drawbacks the arrangement shown in Figure 11 and the following figures have been devised.

In this construction the support does not undergo any modification except that the boss 13 is shortened at one end and has a small cavity 17 to hold the lug 18 and to permit of the displacements of a mobile compression plate 19 when it is actuated externally by means of a screw 20 replacing the previously described pin 10. This screw 20 is of two diameters and has a thread 21 which screws into the plate 19 whilst engaging its smooth portion the boss 13 of the bridge. By rotating the screw in the desired direction the thread 21 causes the plate 19 to advance, which compresses the block 15 held in the capping of the support. This compression may thus be more or less regulated so as to give the block a hardness in proportion to the speed for which the skate is to be used.

In order to retain the block efficiency in its bed during the compression the principle of the movable plate will preferably be applied, as shown in Figure 14. In this figure the plate 19 is replaced by a small bar 22 bent at its ends so as to retain the block 15 in conjunction with another small

bar 23. By the use of the bars 22 and 23 the compression is effected without any risk of the block springing out from its bed.

The skate such as hereinbefore described gives a minimum height of axis above the ground, a perfect grip of the ground and an appreciable degree of flexibility.

It will be obvious that the details described above are given merely by way of explanation and are not restrictive and that such details can be varied either in form or be combined with the supports or the bridges corresponding thereto without in any way destroying the principle of the invention.

What I claim is:

In a roller skate, a bridge piece having an axle for a pair of rollers, a support having a recess in the lower portion of which the bridge piece is arranged, a securing pin passing through said bridge piece and also through opposite walls of the support, a rubber block in the recess of the support and bearing on the bridge piece, the said axle being in the plane vertically below the center of the block.

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

CHARLES ALFRED MIDON.

Witnesses.

VICTOR TRÉVOST,
CHAS. P. PRESSLY.