(No Model.)

E. J. F. COLEMAN.

Roller Skate.

No. 240,812. **Patented May 3, 1881.**

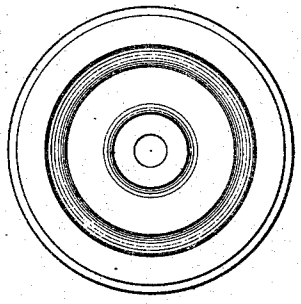


Fig. 1.

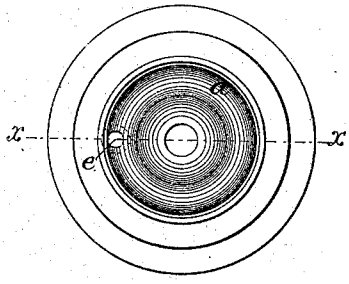


Fig. 2.

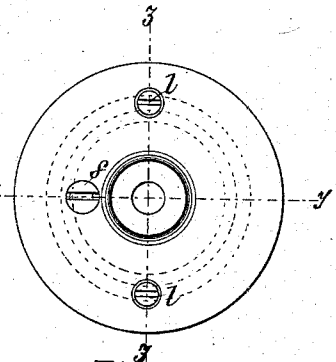


Fig. 7.

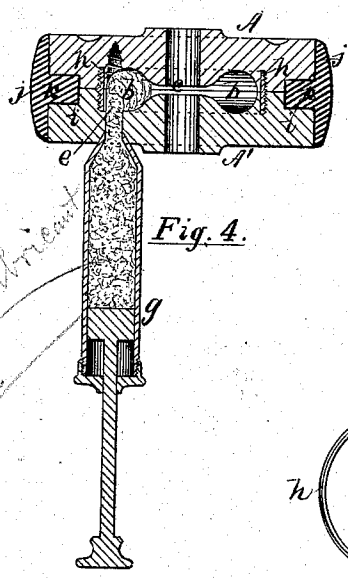


Fig. 4.

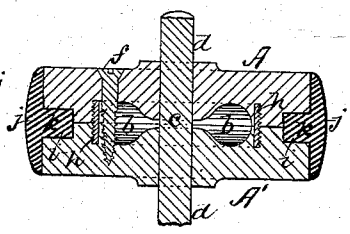


Fig. 3.

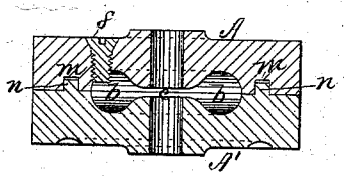


Fig. 8.

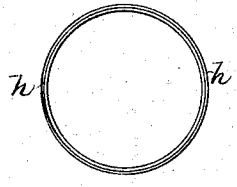


Fig. 5.



Fig. 6.

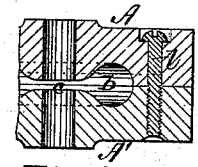


Fig. 9.

Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD J. F. COLEMAN, OF PROVIDENCE, RHODE ISLAND.

ROLLER-SKATE.

SPECIFICATION forming part of Letters Patent No. 240,812, dated May 3, 1881.

Application filed March 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. F. COLEMAN, of Providence, Rhode Island, have invented certain new and useful Improvements in Rollers for Skates and other Purposes, of which the following is a specification.

My invention is directed primarily to skate-rollers. It is, however, applicable to rollers for other purposes.

I have devised a sectional roller composed of disk-like sections, which are put together side by side and bound tightly together by means of suitable fastening devices. By thus forming the roller I am enabled economically, and with ease and expedition, to provide the roller with a lubricating-chamber, which is contained within the body of the roller, and communicates through passages with the interior face of the hub which runs upon the axle on which the roller is mounted. I am also enabled, by reason of said mode of construction, to provide the roller, if need be, with a tire of rubber or other equivalent material, which can be held tightly and securely in place by forming it with an inwardly-projecting annular flange designed to enter between and to be clamped by the roller-sections.

The nature of my improvement and the manner in which same is or may be carried into effect will be understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a roll embodying my invention. Fig. 2 is a side elevation of the inner face of one of the sections of the roller. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is a like section, representing the manner of charging or filling the lubricating-chamber. Fig. 5 is a plan, and Fig. 6 is an elevation, of the metallic screw-threaded ring used to unite the roller-sections. Fig. 7 is an elevation of a modified kind of roller. Fig. 8 is a section on line *y y*, Fig. 7. Fig. 9 is a section on line *z z*, Fig. 7.

It will be understood that the body of the roller can be made of any proper material. The roller shown in the drawings is a skate-roller, and is intended to be made of box-wood. It is composed of two disk-like sections, A A′. The contiguous surfaces of these sections fit one another, so that when the two are put together and fastened together they will constitute, in effect, a solid roller. By thus constructing the roller I am enabled to provide it with an internal lubricating-chamber, or with a firmly-secured tire, of rubber or other proper material, or with both of these things. The roller shown in Figs. 1 to 4 embodies both features.

To make the lubricating-chamber I recess the contiguous faces of the disk-sections—as shown for one section in Fig. 2—at *a* the recess being of annular shape, so that when the disk-sections are put together they will form an annular chamber, *b*. Toward the center of the disks the recesses grow shallow, so that they form in the roller an annular narrow slot or passage, *c*, extending from the lubricating-chamber *b* to the interior surface of the hub, which fits the axle *d*, on which the roller is mounted. Through this annular passage the grease or other lubricant with which the chamber should be filled finds its way to the axle, so as to lubricate the necessary surfaces. Access is had to the chamber through a hole, *e*, in the side of the roller, which is closed by a screw, *f*. The chamber can be readily filled by means of a syringe, *g*, (shown in Fig. 4,) which forces the lubricant with which it is charged into the chamber through the screw-hole *e*, after which the hole is closed by the screw *f*.

Various means may be employed to fasten the roller-sections tightly together. The means for this purpose shown in Figs. 3 and 4 consists of an externally screw-threaded metallic ferrule, *h*, which is firmly seated in one of the sections—say A—concentrically with the axis of the roller, with a portion—say one-half—of its length projecting from the inner face of the same. In the contiguous face of the other section, A′, is cut an annular kerf or narrow slit of proper depth and diameter, so that when the two sections are put together it can be entered by the projecting portion of the screw-ferrule *h*. In this way the section A′ may be screwed upon the ferrule *h*, so as to be drawn closely against the section A, making a tight joint therewith, which may be sealed, if need be, by glue or other suitable adhesive substance applied to the contiguous faces of the sections. Under this arrangement it will be noted that it will be practically impossible for the lubricant to ooze through the joint to the periphery of the roller. The screw *f*, when inserted in place, serves not only as a plug or

stopper, but also (inasmuch as it passes through one section into the other) acts as a check or binding nut, to prevent the unscrewing of one section from the other.

In case a tire is to be applied to the roller, I cut in the adjoining faces of the sections annular recesses *i*, which extend a suitable depth inwardly from the periphery; and I provide a tire, *j*, of rubber, rawhide, or other proper material, provided centrally of its inner face with an annular inwardly-projecting flange, *k*, of such thickness that when in the space made by recesses *i* it will be firmly clamped between the two sections when they are drawn together. The tire is first sprung onto one section, with its flange extending into the recess *i* of that section, before the other section is screwed up into place. The tire, if desired, may be further secured in place by glue or by screws passing laterally through the roller-sections and the intermediate flange, *k*.

I have shown the roller provided with both tire and lubricating-chamber; but, if desired, the tire may be used without the lubricating-chamber, or vice versa.

I prefer to use the screw-ferrule as the means of binding the sections together; but other means may be employed, if desired. For instance, in Figs. 7 to 9 the roller-sections are held together by screws *l*. In this arrangement, in order to center the sections and to prevent strain due to any tendency to slip motion between the sections from coming on the screws *l*, I form on the inner face of one section an annular mortise or groove, *m*, and on the adjacent face of the other section an annular tenon or tongue, *n*, which enters and fits snugly in the mortise when the sections are put together.

It is essential to the solidity and durability of the roller that there should be a male and female interlocking joint between the sections to prevent longitudinal slip motion, as well as means for clamping the two sections together.

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

1. A roller composed of disk-sections which are provided on contiguous faces with interlocking portions to prevent slip motion, and are clamped tightly together by fastening devices, substantially as hereinbefore set forth.

2. The roller disk-sections, in combination with the annular screw-ferrule, substantially as hereinbefore set forth.

3. The roller-sections recessed on their contiguous faces, substantially as described, so that when put together said recessed parts shall form a lubricant-chamber and passage leading therefrom to the interior of the roller-hub, in combination with clamping or fastening devices which bind said sections together, substantially as set forth.

4. In combination with the roller-sections and the clamp or fastener for uniting the same, the tire, of T form in cross-section, having its flange contained in a peripheral recess in the roller and clamped between said sections, substantially as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 25th day of March, A. D. 1881.

EDWARD J. F. COLEMAN.

Witnesses:
E. A. DICK,
N. C. LANE.