No. 889,946. PATENTED JUNE 9, 1908.

J. C. MILLER.

SKATE.

APPLICATION FILED JUNE 17, 1907.

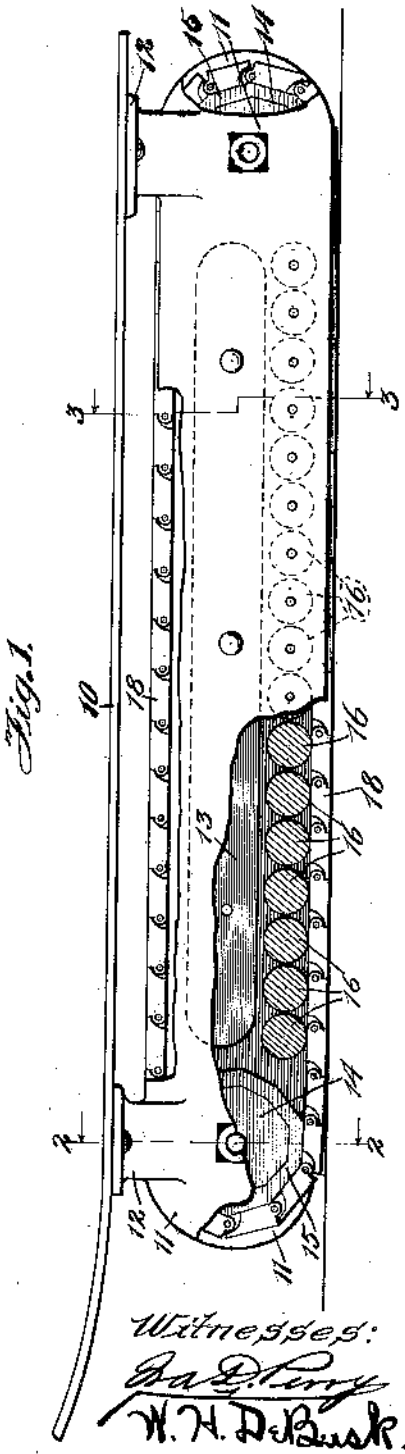

Fig. 1.

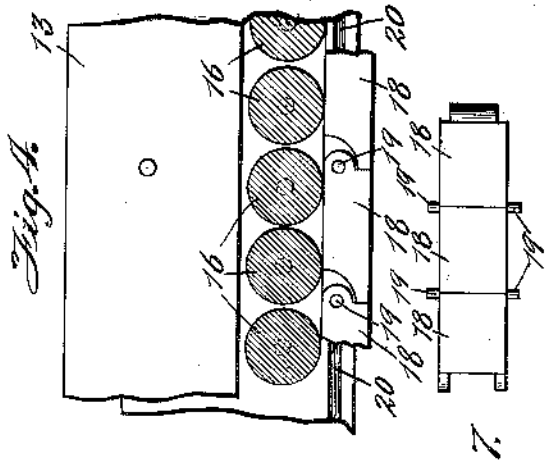

Fig. 4.

Fig. 7.

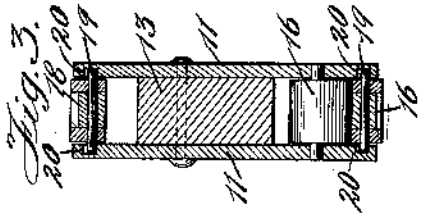

Fig. 3.

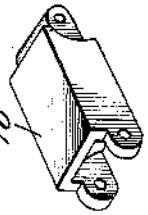

Fig. 5.

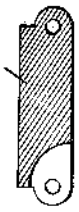

Fig. 6.

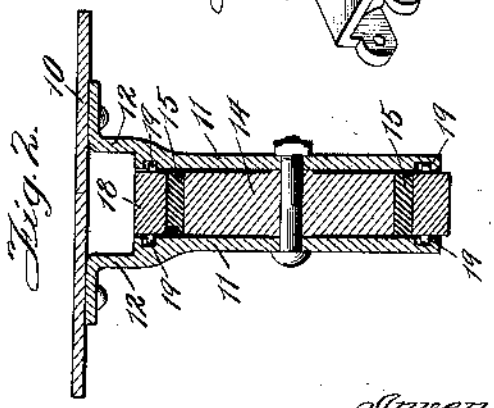

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

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SKATE.

No. 889,946. Specification of Letters Patent. Patented June 9, 1908.

Application filed June 17, 1907. Serial No. 379,423.

To all whom it may concern:

Be it known that I, JOHN C. MILLER, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Skates, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in skates, and has for its objects to provide a new and improved form of skate which may be used on any even level surface and which will insure the freedom of movement attainable on ice skates at the same time retaining the easy forward movement characteristic of the ordinary roller skate; to provide a skate of this character which shall not wear unduly; and to provide a new and improved form of chain by the use of which I am able to best attain the above results. I accomplish these objects by the means illustrated in the accompanying drawings and hereinafter specifically described.

That which I believe to be new is set forth in the claims.

In the accompanying drawings:—Figure 1 is a side elevation of my improved skate, part of one of the side plates being broken away. Fig. 2 is an enlarged cross-section on line 2 2 of Fig. 1. Fig. 3 is an enlarged cross-section on line 3 3 of Fig. 1. Fig. 4 is an enlarged detail, being a side view of a part of the runner of the skate with one of the side plates removed. Fig. 5 is an enlarged detail, being a perspective view of one of the links of the chain. Fig. 6 is an enlarged detail, being a longitudinal central section through one of the links of the chain. Fig. 7 is an enlarged detail, showing the face of a section of the chain.

Referring to the several figures of the drawings, in which corresponding parts are indicated by the same reference characters, 10 indicates the foot-plate of the skate, which may be of any desired form and adapted to be secured to the foot in any suitable manner.

11 indicates two side plates each provided, in the construction shown, with an ear 12 rising from its upper edge at each end, said ears 12 being turned and riveted to the foot-plate 10. The two plates 11 are held a distance apart by a suitable block 13, the three parts being firmly secured together in any suitable manner and constituting the frame of the skate runner.

Referring to Fig. 1, 14 indicates a roller journaled between the side plates 11, one being provided at each end of the plates. In the construction shown, the rollers 14 are polygonal and each is provided on its outer surface with a covering 15 of felt or other sound-deadening material. 16 indicates a series of cylindrical rollers journaled between the two plates 11 near their lower edges.

Around the rollers 14 and bearing on its inner surface against the rollers 16, is a chain composed of a plurality of similar links 18 pivotally connected together by pivot pins 19. The polygonal rollers 14 of the construction shown are of such size and shape and are so mounted that as the chain is revolved the flat inner faces of the several links that are in contact with the rollers 14 are brought to bear squarely upon the flat faces of such rollers.

Each plate 11 on its inner face is provided with a groove 20 along its top and bottom and across each end, said grooves being adapted to receive the projecting ends of the pivot pins 19 of the chain. It will be understood that the grooves 20 are of such shape and size as to avoid friction, the object of the grooves being merely to prevent the chain from sagging.

Each link of the chain which I have shown and which I prefer to employ comprises a straight solid body provided at one end with two longitudinally-extending ears, and at the other end with a longitudinally-extending rounded portion adapted to fit between the longitudinally-extending ears of the adjacent link. One face of each link is not cut away, with the result that the chain when straightened out as illustrated in Fig. 7 presents a solid even surface.

It will be readily understood from Figs. 1 and 7 that when the skate therein illustrated is secured to one's foot, the chain presents to the floor or other skating surface a solid even bearing, such as that presented by an ice skate. This bearing surface is comparatively narrow, and therefore even when the skate is turned so that only one edge of the chain is presented to the floor the bearing edge is still practically central. It is of course obvious that the chain can revolve as well in one direction as in the other to provide for skating backward as well as forward.

While I have shown the bearing surface as being straight, except at the ends where it rises from the alinement of the rollers 16 to

go around the rollers 14, it will be understood that the rollers 16 may be so positioned as to give the bearing surface any desired shape.

The chain is to be made preferably of steel, although it may be made of any other suitable material. Inasmuch as the chain does not move along the surface except by revolution, and since it presents a flat solid surface, it may be used for a very long time without becoming materially worn. However, while I have shown my skate equipped with the form of chain described, and prefer that such a chain be employed, yet I do not wish to restrict myself to the use of this particular chain but desire it to be understood that any suitable form of endless belt may be employed without departing from my invention.

By my invention I have provided a skate which may be used on ice or any other suitable surface,—which has practically no frictional engagement with the skating surface, as is the case with ordinary ice skates,—which is provided with a narrow flat centrally-located runner enabling one to enjoy a freedom of movement not enjoyed on the ordinary roller skate,—and which is not subject to excessive wear.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a skate, the combination with a foot-plate, of two polygonal rollers journaled beneath said foot-plate and an endless chain mounted on said rollers, the length of the links of the chain conforming to the length of the flat faces of the rollers.

2. In a skate, the combination with a foot-plate, of two rollers journaled beneath said foot-plate, and an endless chain mounted on said rollers, each of the links of said chain being provided at one end with two longitudinally-extending ears and at the other end with a longitudinally-extending rounded portion adapted to fit between the longitudinally-extending ears of an adjacent similar link, the exterior face of each link being solid so that the chain presents to the floor a solid even face.

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Witnesses:
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