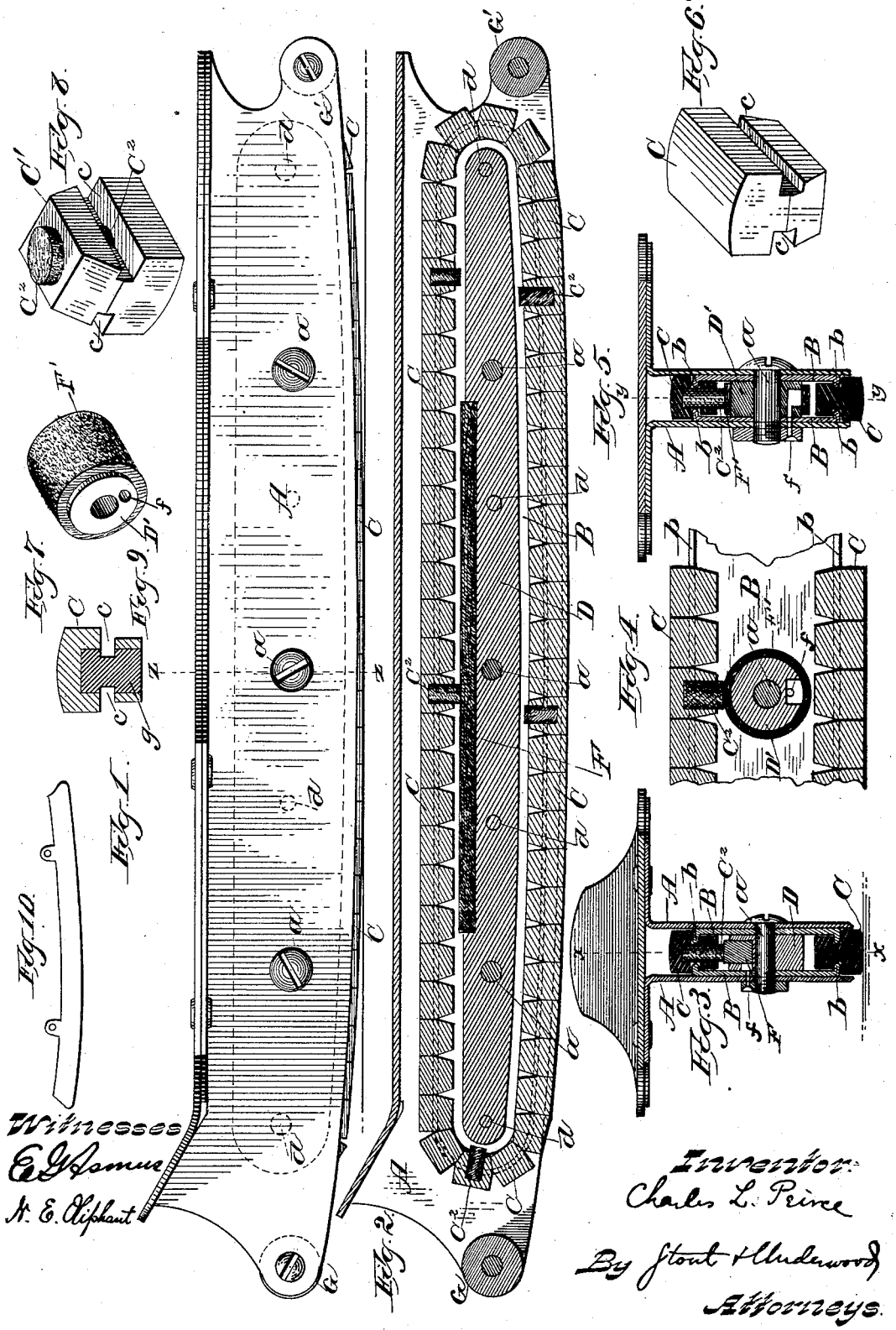
(No Model.)

C. L. PEIRCE.

SKATE.

No. 342,458. Patented May 25, 1886.



UNITED STATES PATENT OFFICE.

CHARLES L. PEIRCE, OF MILWAUKEE, WISCONSIN.

SKATE.

SPECIFICATION forming part of Letters Patent No. 342,458, dated May 25, 1886.

Application filed October 5, 1885. Serial No. 178,992. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. PEIRCE, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Skates; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in skates, and will be fully described hereinafter.

In the drawings, Figure 1 is a side elevation of my improved skate; Fig. 2, a sectional view taken on line *x x*, Fig. 3; Fig. 3, a transverse section on line *z z*, Fig. 1; Fig. 4, a detail sectional view of a modification, taken on line *y y*, Fig. 5; Fig. 5, a vertical transverse section of Fig. 4, and Figs. 6, 7, 8, 9, and 10 detail views.

A is the frame of my skate, which is hollow, as shown in Figs. 3 and 5, to receive a runner-blade which is secured therein by bolts *a*, and consists of two plates, B, having flanges *b* about their edges.

C C′ are runner-blocks, or blocks which form the runner. Each of these blocks has side grooves, *c*, and the inner ends of the blocks are preferably beveled, so that they will readily round the curves of the flanges *b*. The blocks are placed between the plates B, and the flanges of the latter enter their grooves *c*, while the two plates are clamped to a central core, D, by rivets *d*. Then the runner-blade is inserted between the sides of frame A and secured therein by the bolts *a*, two or more in number. The blocks will now be clamped loosely by the plates and, will be free to revolve about the core, having for their bearings the flanges *b* of the plates B. Though the greater number of the blocks are made as shown at C, for the purpose of lubricating the parts I make some of the blocks as shown at C′—that is, with an opening that extends from its inner face through more than half of the block, having a branch that extends out into both of the grooves, and this opening is filled with an absorbent, C^2, so that both sides will be lubricated. These blocks are fed with the lubricant from an absorbent strip F, that is embedded in or secured to the core D in such a position that the absorbent C^2 will come in contact with it as the blocks revolve, and thus constantly supply the waste as the skate travels, the strip F being supplied at intervals with lubricating fluid through a port, *f*. (Shown in Fig. 3.)

Instead of a core D, such as shown in Figs. 2 and 3, I may simply use washers D′, to keep the blades or plates B apart, as shown in Figs. 4 and 5, and one or more of these may be covered with an absorbent, F′, that takes the place of the strip F in Fig. 2, but is fed, like it, through a port, *f*.

Still another device for lubricating is shown in Fig. 9, wherein I use a solid lubricant, which consists of a plug, *g*, of a lubricating compound that is inserted in the block before it is grooved, and is grooved on its sides with it, so that it will form a part of the bearing-surface of the block; or I may make the blocks of a composition of which a lubricant is a component part.

I prefer to make my blocks C C′ of what is known as "vulcanized" fiber, but may make them of any other substance that may be suitable.

G G′ are washers that are solidly riveted between the sides of the frame at the heel and toe, the washer G′ serving as a brake when the heel is depressed, and G serving as a pivot for fancy movements.

The runner proper, which consists of the blades B, inclosing the core or washers and the blocks, is, as before stated, bound together by the rivets *d*, and is an entirety, and may be removed bodily after the bolts *a* are withdrawn, leaving a frame into which an ice-runner, such as shown in Fig. 10, may be inserted, (and secured by the two end bolts *a*, only, in order to obtain flexibility in the center of the blade;) but any desired style of blade may be used. Therefore I propose to accompanying my skate with several, and thus I can furnish to the market both a summer and winter skate, the latter with a number of blades having a variety of curves for greater facility in fancy skating.

It is not desirable for the blocks in my skate to slide sidewise on the floor, but instead they should take hold of and adhere to the skating-surface while in contact, and hence I propose to slightly roughen their outer surfaces either by a coating of emery or in any other desirable manner.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a skate, a runner composed of a series of independent non-rotating sliding blocks, in combination with a way or ways for supporting the blocks and forming bearings for them, substantially as set forth.

2. In a skate, a runner-blade consisting of two flanged plates, in combination with the non-rotating sliding runner-blocks supported by and between said plates, as set forth.

3. The combination, with a skate-frame, of a runner-blade and non-rotating sliding runner-blocks adapted to travel on said runner-blade, substantially as set forth.

4. In a skate, a runner consisting of a series of independent blocks, in combination with a block or blocks forming members of the series and having capillary cores, in combination with a lubricating-reservoir, also supported by the runner-blade, as set forth.

5. As a new article of manufacture, a runner block containing a lubricating-core, substantially as set forth.

6. For use in skates, a runner-blade consisting of flanged side blades, in combination with non-rotating sliding runner-blocks clamped loosely between the blades, and bolts binding the parts together, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES L. PEIRCE.

Witnesses:

H. G. UNDERWOOD,

MAURICE F. FREAR.