

No. 619,327.

Patented Feb. 14, 1899.

J. MINER.
SKATE RUNNER.

(Application filed Nov. 11, 1897.)

(No Model.)

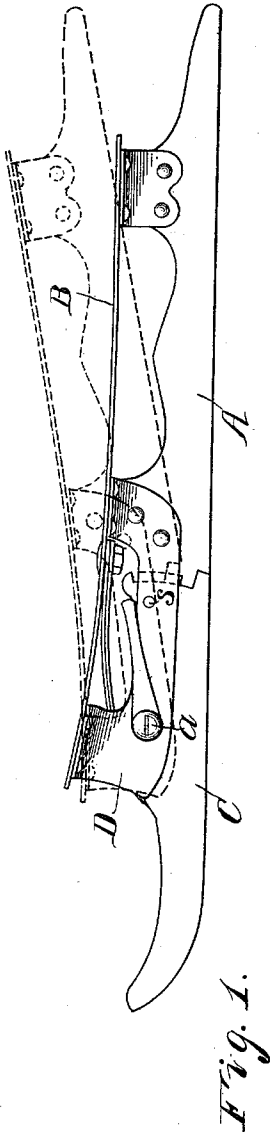


Fig. 1.

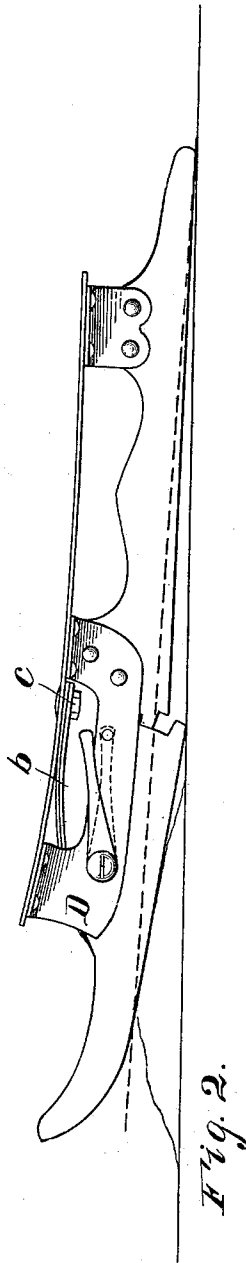


Fig. 2.

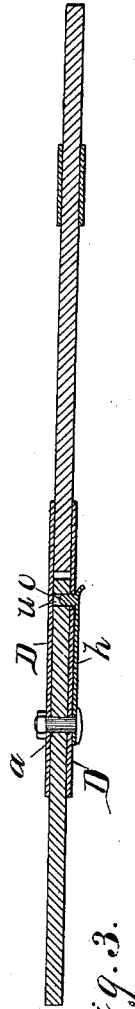


Fig. 3.

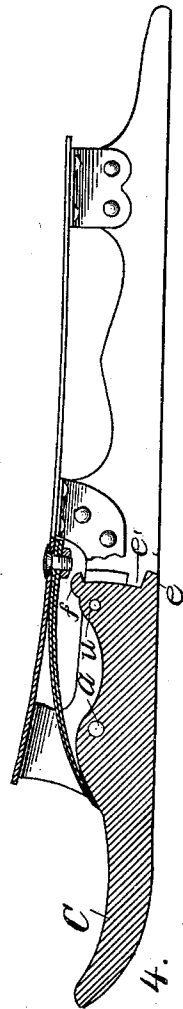


Fig. 4.

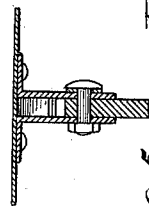


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

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SKATE-RUNNER.

SPECIFICATION forming part of Letters Patent No. 619,327, dated February 14, 1899.

Application filed November 11, 1897. Serial No. 658,117. (No model.)

To all whom it may concern:

Be it known that I, JOHN MINER, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have
5 invented certain new and useful Improvements in Skate-Runners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful
15 improvements in skates or runners; and it consists in the construction and arrangement of parts hereinafter fully set forth and claimed.

The object of the invention is to produce a
20 racing skate or runner in which the arrangement is such as to provide for a broad bearing upon the ice at the termination of a stroke when the point or forward end of the skate is in contact therewith, and to provide for
25 lessening the jar and vibration incident to skating over rough ice with the skates as commonly made, at the same time reducing the power necessary to carry over an obstruction and the resultant retardation of the skater,
30 which object is attained by constructing a skate-blade as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved skate, showing by dotted lines the position
35 of parts at the termination of a stroke. Fig. 2 is a like view showing the position of parts when the skate is passing over an obstruction. Fig. 3 is a horizontal section through the skate-blade. Fig. 4 is a side elevation,
40 partly in section; and Fig. 5 is a transverse vertical section through the fulcrum of the pivoted section of the runner.

Referring to the letters of reference, A designates the skate blade or runner, upon
45 which is mounted in any suitable manner the sole-plate B. The blade or runner proper is provided with a straight edge and is of such length as to extend well beyond the sole-plate at the front and rear, said runner being
50 formed in two sections, the rear section of which is rigidly secured to the plate B, but the forward section C thereof is pivoted be-

tween the adjacent parallel side pieces D, which depend from the plate B, the screw-bolt *a*, passing through said plates and the
55 forward section of said runner, serving as said pivot, as clearly shown in Fig. 3, by which arrangement the rear or fixed section of the skate-blade may be raised from the surface
60 of the ice, leaving the forward pivoted section thereof bearing its full length upon the ice, as shown by dotted lines in Fig. 1. This construction enables the skater at the termination of a stroke to raise his heel and employ the spring of the ankle to assist him in
65 striding forward upon the other foot, at the same time presenting as a bearing upon the ice the surface of the entire length of the forward section of the skate-blade, which prevents the skate from cutting in and retarding the momentum of the skater.

In the employment of the ordinary skate-blade when skating over a rough surface the jar and vibration incident to the passage of
75 the runner over the obstructions is very annoying and also serves to retard the speed of the skater, as in passing over which obstructions encountered by the blade the weight of the skater must be raised equal to the height
80 of said obstruction above the level surface. By the employment of this improved construction of skate-runner these objections are greatly overcome, for by pivoting the projecting forward section of the runner in the manner shown, whose straight edge extends well
85 beyond the sole-plate, a leverage force is exerted to raise the runner over an obstruction equal to the distance between the point of fulcrum of said section and the respective
90 ends thereof. For instance, should the point of fulcrum *a* be located twice the distance from the forward end of said pivoted section as it is from the rear end thereof a bearing force or resistance of fifty pounds against the
95 forward end of said runner would raise the weight of one hundred pounds resting upon the forward end of the sole-plate B. At the same time the skate would not rise so high in passing over the obstruction, as the rear
100 portion of the skate, acting upon the fulcrum *a*, would drop below a right line, touching the top of said obstruction and meeting the surface of the ice at the point of the rear end of the skate, as shown by stipple line in Fig.

2, resulting in the twofold advantage of reducing the height to which the skate must rise in passing over the obstruction and obtaining an increased leverage force in raising the skate the required height.

To provide for returning the pivoted section of the skate-blade into proper alinement with the fixed section thereof, a suitable leaf-spring *b* is secured at *c* to the sole-plate and extending forward between the sides *D* bears upon the upper edge of the section *C* of the runner forward of its point or pivot, whereby the force of said spring returns the pivoted section when the skate is raised from the ice after each stroke or after passing over an obstruction and yieldingly retains it in alinement with the rear section of the blade. To prevent said spring from carrying the pivoted section of the runner too far, and thereby depressing the forward end of said section below the plane of the fixed portion of the blade or runner, the rear end of said pivoted section is provided with an extending shoulder *e*, which is adapted to engage the corresponding shoulder or lug *e'* on the forward end of the fixed section of the blade, whereby said pivoted section is raised in its return movement when it has attained its proper relative position to the fixed section, as clearly shown in Fig. 4. There is also employed upon the upper edge at the rear end of said pivoted section a projecting shoulder *f*, which is also adapted to engage the lug *e'* on the fixed section to regulate the throw of the inner end of said pivoted section when the rear end of the skate is raised, as shown by dotted lines in Fig. 1, or when passing over an obstruction, as shown in Fig. 2.

It is sometimes desirable for ordinary skating, or when wishing to skate backward, to lock the pivoted section *C* of the blade in alinement with the fixed section thereof, so as to render said blade entirely rigid. To accomplish this, a spring-arm *h* is pivoted upon the screw-bolt *a*, the outer or free end of which is provided with a pin *o*, which is adapted to pass through an aperture *s* in the side piece *D* and enter a corresponding aperture *u* in said pivoted section, whereby said

section is securely locked from movement upon its fulcrum *a* and is held rigidly in alinement with the rear section of the skate-blade. When said locking-pin is not in use, it is swung upward and engaged over the upper edge of the side piece *D*, as shown in Figs. 1 and 2, where it remains secure and entirely out of the way until again required.

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

1. A racing-skate having a divided runner consisting of a fixed rear section provided with a straight edge, a pivoted forward section also having a straight edge coinciding with the edge of the fixed section, the side pieces attached to the sole-plate and between which the forward section of the runner is pivoted, the spring firmly attached at its rear end passing between said side pieces and bearing upon said pivoted section forward of its point of pivot, and engaging projections upon the meeting ends of the runner-sections for limiting the pivoted section in its movement in both directions.

2. A racing-skate having a divided runner consisting of a fixed section and a pivoted section, having straight alining edges and whose ends project well beyond the sole-plate at the front and rear, engaging projections upon the meeting ends of the runner for limiting the pivoted section in its movement in both directions, and means for locking said pivoted section upon its pivot in alinement with said fixed section.

3. In a racing-skate the combination of a rigid sole-plate, a straight-edge runner consisting of a fixed and a pivoted section in horizontal alinement with said fixed section, means for locking said pivoted section and the spring bearing upon said pivoted section forward of its point of pivot.

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

JOHN MINER.

Witnesses:

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