

No. 748,172.

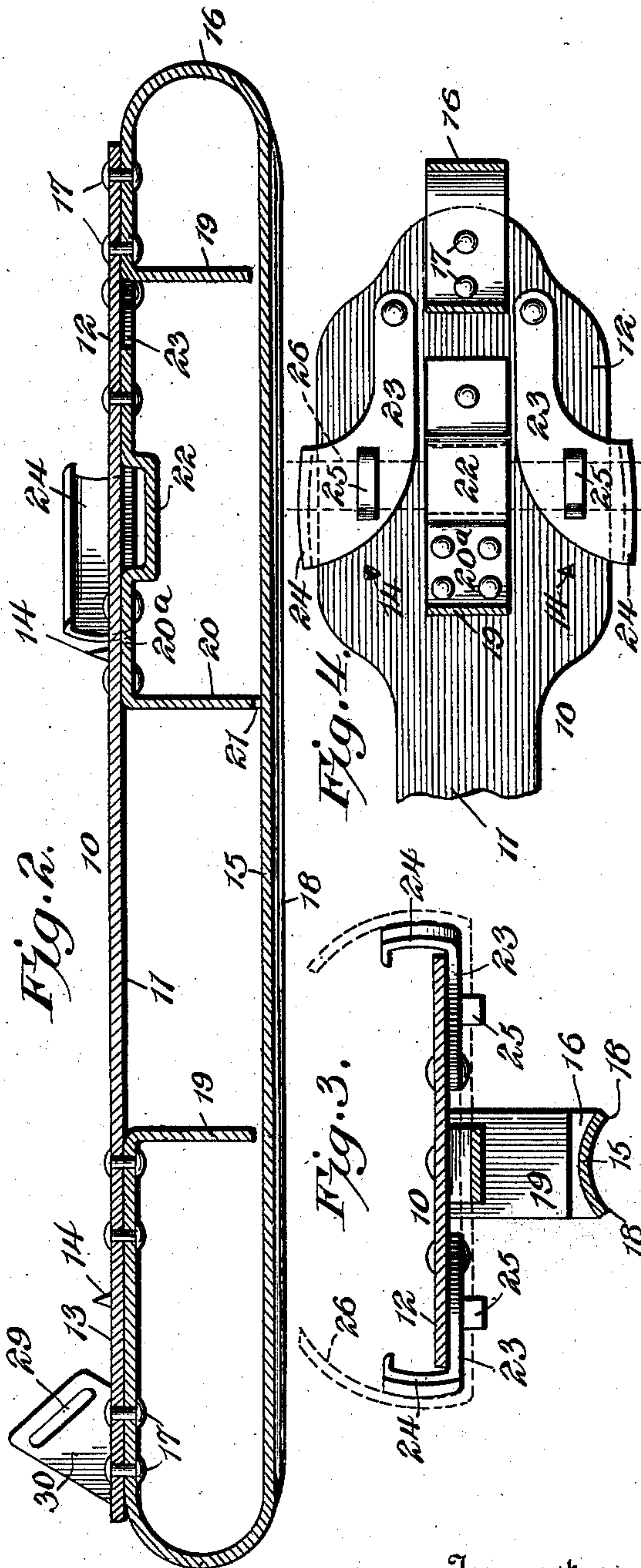
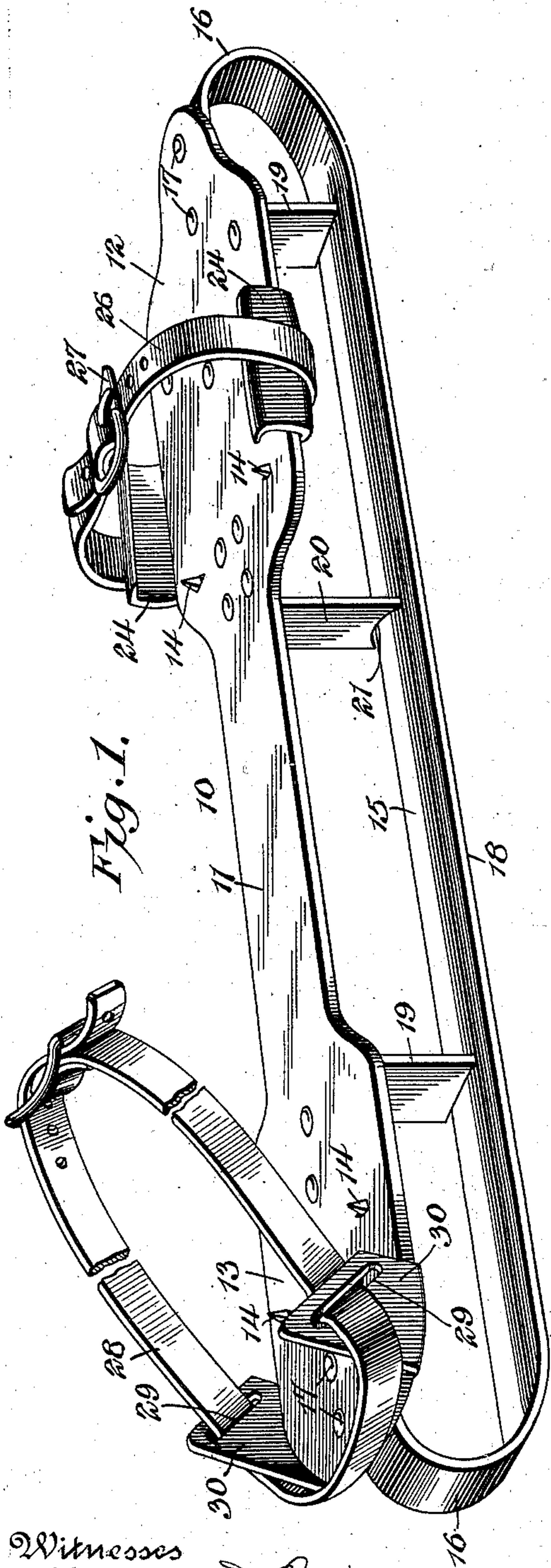
PATENTED DEC. 29, 1903.

A. P. DRAPER.

SKATE.

APPLICATION FILED AUG. 16, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR PHILANDER DRAPER, OF ST. LOUIS, MISSOURI.

SKATE.

SPECIFICATION forming part of Letters Patent No. 748,172, dated December 29, 1903.

Application filed August 16, 1902. Serial No. 119,950. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR PHILANDER DRAPER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have
5 invented a new and useful Skate, of which the following is a specification.

The present invention relates to skates, and while it was primarily designed for use upon packed snow, crust, and the like it has proved
10 to be entirely satisfactory on ice.

One of the objects of the invention is to provide a very light structure which can be cheaply manufactured and has a broad running-surface as well as cutting edges, which
15 will prevent lateral slipping.

Another object is to provide a skate which will yield both to the inequalities of the surface over which it is running and to the movements put forth by the skater, thus absorbing
20 the resultant shock and jars, this yielding movement, however, being obtained without sacrificing the necessary stiffness of the runner proper.

Another feature which can be employed upon other skates now in general use is improved mechanism for fastening the skate to a person's foot, said means having the combined advantages of the sole-lock and the well-known strap and being very inexpensive.
30 sive.

The preferred embodiment of the invention is shown in the accompanying drawings and is described in the following specification.

In said drawings, Figure 1 is a perspective
35 view of the improved skate. Fig. 2 is a longitudinal sectional view through the same. Fig. 3 is a vertical transverse section, and Fig. 4 is a bottom plan view of the front portion of the foot-piece.

40 Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

In the construction of the invention as shown a foot-piece 10 is employed comprising
45 a shank portion 11, having at its front end an enlarged sole-plate 12 and at its rear end an enlarged heel-plate 13. The sole and heel plates are preferably provided with upstanding spurs 14, struck from the material forming the foot-piece and being sharpened, as
50 shown. A runner 15 is connected to the un-

der side of the foot-piece and is formed from a sheet-metal strip, the end portions of which are upwardly and outwardly bowed, as shown at 16, being secured by suitable rivets 17 to
55 the front and rear ends of the foot-piece. The runner 15 is concavo-convex in cross-section, and said concavo-convexity terminates short of the bowed portions 16. As a result cutting edges 18 are formed along the
60 opposite edges of the runner, while the bows 16 constitute spring connections between the runner and the foot-piece. This runner is also made comparatively stiff and rigid by being concaved, so that it will not readily
65 bend out of shape.

In order to limit the yielding movement between the foot-piece and the runner, the terminals 19 of the runner-strip are bent downwardly and end a short distance above the
70 runner 15, with which they engage when the foot-piece is suddenly pressed in a downward direction. Another depending stop-finger 20 is secured to the under side of the foot-piece substantially midway of the stops 19, the
75 lower end of this finger being preferably cut out, as shown at 21, to conform to the cross-sectional contour of the runner. The upper end 20^a of this finger is bent at right angles to the depending portion and extends longi-
80 tudinally beneath the sole-plate, to which it is suitably riveted. It is furthermore provided with an offset portion 22, constituting a strap-receiving loop that is located centrally of said sole-plate.
85

The means for fastening the skate to a skater's foot is as follows: A pair of separate sole-engaging locks 23 are separately pivoted to the under side of the foot-plate and are provided at their free ends with upstanding
90 hooked portions 24, that project above the opposite side edges of the sole-plate and are arranged to engage the sole of a shoe in a manner well understood. The lock-plates are provided upon their under faces with loops
95 25, which aline with the central loop 22, above described. Through these several loops is passed a strap 26, having the usual buckle 27 on one end, said strap being arranged to move the locks toward each other and main-
100 tain them in operative positions. The rear portion of the skate is fastened by means of

a strap 28, passing through openings 29, formed in upstanding ears 30, that are located at the rear ends of the heel-plate 13.

The advantages for this construction may be summed up as follows: In the first place the entire skate is constructed of sheet metal and is not only inexpensive, but is very light in weight. The construction of the runner provides a bearing-surface which will slide freely over the snow and crust without breaking or cutting through, and at the same time the cutting edges formed by the concavo convexity prevents lateral sliding. It will also be apparent that the structure can be used as readily upon ice. The concavo convex contour of the runner, furthermore, stiffens the same, and yet by terminating it at the ends sufficient elasticity is obtained to absorb the various shocks and jars imparted to the skate. A very important feature also resides in the construction of the means for fastening the front portion of the skate to a shoe. In the first place this fastening means is doubly secure, as it engages the sole and surrounds the foot, the strap also constituting a holding means for the sole-engaging lock, and as this is a single strap freely passing about the entire skate it may be readily removed and replaced by a new one should it become broken. Thus it will be observed that there is a distinct advantage for having it detachably engaging the locks.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a skate, the combination with a foot-

piece, of a runner formed from a sheet-metal strip having its widest faces constituting the top and bottom of the runner, said strip having its end portions upwardly bowed and attached to the foot-piece, thereby forming spring connections with said foot-piece, and a stop carried by the foot-piece and depending below the same, said stop having its lower end spaced a slight distance above the runner with which it engages upon the downward-springing movement of the foot-piece.

2. In a skate, the combination with a foot-piece, of a runner comprising a sheet-metal strip having its widest faces constituting the top and bottom of the runner, said strip having its end portions upwardly bowed and attached to the foot-piece, thereby forming spring connections with said foot-piece, the terminals of the runner-strip being downturned, and ending a slight distance above the runner, thereby constituting stops which engage the runner upon the downward-springing movement of the foot-piece.

3. In a skate, the combination with a foot-piece, of a runner, spring connections between the runner and the foot-piece, and a stop-finger secured to the foot-piece and terminating short of the runner, the portion of said finger attached to the foot-piece being offset to form a strap-receiving loop.

4. In a skate, the combination with a foot-piece, of separate sole-engaging locks separately pivoted to the under side of the foot-piece and having guide-loops, another guide-loop attached to the foot-piece between the locks, and a holding-strap passed through all the said loops and engaging the free ends of both locks to move them toward each other.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ARTHUR PHILANDER DRAPER.

Witnesses:

S. F. SUMM,
C. W. RUBEY.