W. D. CRAWFORD.

ICE SKATE.

APPLICATION FILED JULY 17, 1914.

1,129,075. Patented Feb. 23, 1915.

FIG. 1.

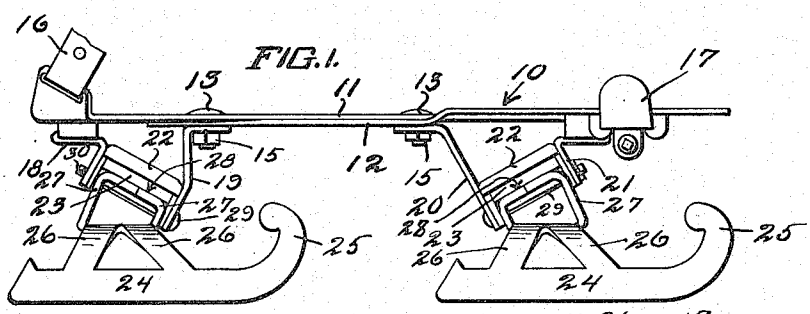



FIG. 2.

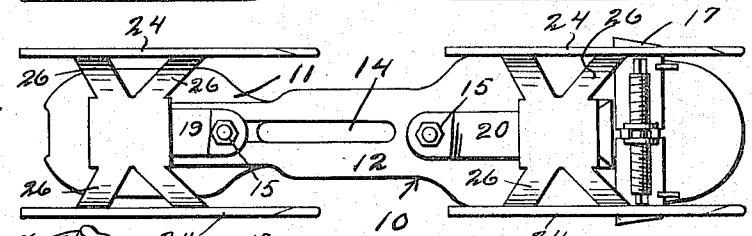



FIG. 4.

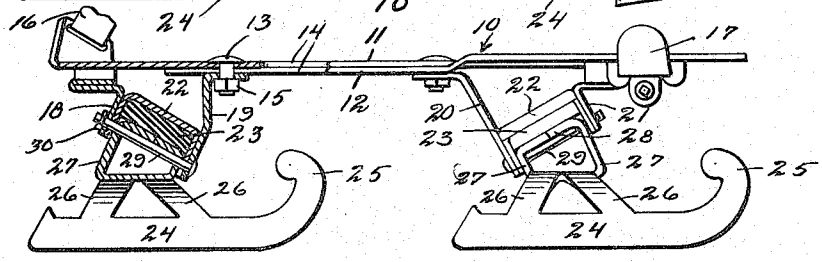



FIG. 3.

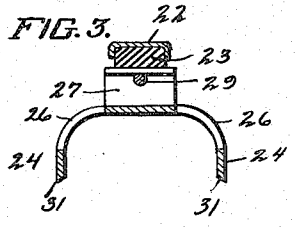



FIG. 6.

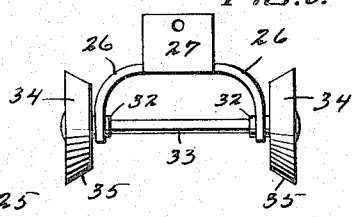
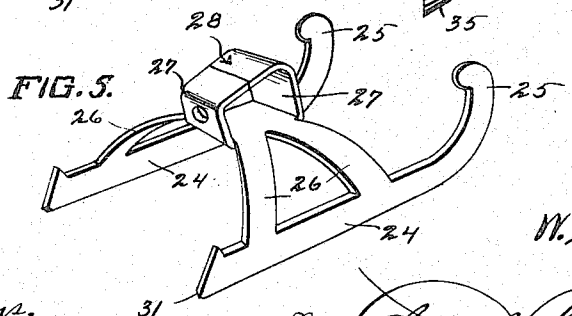



FIG. 5.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## ICE-SKATE.

1,129,075. Specification of Letters Patent. Patented Feb. 23, 1915.

Application filed July 17, 1914. Serial No. 851,661.

*To all whom it may concern:*

Be it known that I, WILBER D. CRAWFORD, a citizen of the United States, residing at Lexington, in the county of Dawson, State of Nebraska, have invented certain new and useful Improvements in Ice-Skates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to amusement devices, particularly to ice skates, and has for its object the provision of a novel ice skate so constructed that it will produce no strain upon the ankles of the user.

An important object is the provision of a skate of this character which is cushioned so that it may be to a certain extent guided in its course by a lateral pressure by the foot of the operator.

Another important object is the provision of a skate comprising runners arranged in tandem, each set of runners being formed from a single piece of material.

An additional object is the provision of a skate of this character which will be simple and inexpensive in manufacture, efficient and durable in service and a general improvement of the art.

With these and other objects and advantages in view, the invention consists in the novel construction, arrangement and formation of parts to be hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation of my novel skate, Fig. 2 is a bottom plan view thereof, Fig. 3 is a cross sectional view through the cushioning means. Fig. 4 is a vertical sectional view through the entire skate, Fig. 5 is a perspective view of one of the runners detached, and Fig. 6 is a view showing a modified form of the device.

Referring more particularly to the drawing, the numeral 10 designates the body or foot engaging portion of my skate which comprises two plates 11 and 12 slidably connected with each other by screws 13 extending through longitudinal slots 14 and engaged by nuts 15 whereby the length of the skate may be adjusted to suit the requirements of different individuals. The plate 11 carries the usual strap 16 and the plate 12 carries the shoe sole engaging clamp 17 of the usual form whereby the skate may be secured upon the wearer's shoe.

Secured upon the lower sides of the plates 11 and 12 are brackets 18 and 19, and 20 and 21, between each corresponding pair of which is disposed a U-shaped plate 22 which is concaved downwardly as shown for engagement with a rubber cushion 23.

The runners of my device are formed double and are formed integrally from a single piece of metal. Each runner comprises a pair of horizontally disposed side arms 24 which have their forward ends turned upwardly as shown at 25 so that there will be no points to dig or catch into the ice. Formed upon the arms 24 are upwardly and inwardly curved arms 26 upon the intermediate portions of which are formed upstanding ears 27 which are bent reflexly upon themselves and have their ends contacting with each other and forming an inclined portion 28. It is to be observed that the inclined portion of the forward runners is oppositely disposed to the inclined portion of the rear runners.

The runner members are attached to the skate body by placing them so that the substantially vertical portions of the ears 27 will be disposed between the arms of the U-shaped plates 22 and the inclined portions 28 will abut against the lower sides of the rubber cushions 23. The runner members are secured in this position by bolts 29 which pass through the brackets depending from the skate body, the arms of the plates 22, and then through the ears 27, after which cotter pins 30 are passed through the ends of the bolts for preventing them from being withdrawn. The lower sides of the arms 24 of the runner members are beveled inwardly as shown at 31 so that cutting edges will be formed so that the runners will bite firmly into the ice and not slip laterally when the wearer takes a stroke. The runner members may be conveniently formed from sheet steel by stamping it and bending it to the required shape, or they may be formed by casting or in any other desired manner except that they should be integral.

In Fig. 6 I have shown a somewhat modified form of the device. In this form, the arms 25 are formed shorter and are provided with sleeves 32 revolubly receiving axles 33 carrying upon their outer ends wheels 34 formed of steel and having their periph-

eries beveled as shown at 35 to provide cutting edges for biting into the ice when lateral pressure is exerted for taking a stroke.

From the foregoing description and a study of the drawing, it will be apparent that I have thus provided a simple and efficient ice skate which may be used without straining the ankles of the wearer and which may be worn by a comparative novice without danger of falling. Furthermore it will be apparent that the provision of the rubber cushions enables the wearer to guide his course by pressing upon the inner side or outer side of the skate with his foot depending upon in which direction he wishes to go.

It will be readily understood that I reserve the right to make various changes in the form, construction and arrangement of parts without departing from the spirit of the invention or limiting the scope of the subjoined claims.

Having thus described my invention, I claim:

1. An ice skate comprising a body portion, adapted to be secured upon the wearer's shoe, pairs of brackets secured on the lower side thereof adjacent the front and rear ends, a U-shaped plate disposed between each of said pairs of brackets, a rubber cushion disposed against the under side of each of said U-shaped plates, a runner member associated with each of said pairs of brackets, each runner member comprising a pair of ice engaging arms, upwardly and inwardly curved arms formed on said ice engaging arms, upstanding ears formed intermediate the ends of said curved arms, said ears being reflexly bent to form portions engaging the lower sides of said rubber cushions, said ears being disposed between the arms of said U-shaped plates, and bolts passing through said brackets, the arms of said U-shaped plates and said ears.

2. In an ice skate, the combination with the body plate provided with spaced pairs of spaced brackets depending from its lower face, of runners each comprising a pair of spaced ice engaging arms beveled upon their lower edges to form cutting edges, laterally and inwardly convergent arms formed integrally upon said ice engaging arms, ears formed on said lateral arms, said ears being disposed between a pair of said brackets, and means for securing said ears within said brackets.

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

WILBER D. CRAWFORD.

Witnesses:
N. M. York,
D. E. Lincoln.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."