No. 749,342. PATENTED JAN. 12, 1904.

J. E. TOSCAN & C. J. CADY.

ICE CREEPER.

APPLICATION FILED FEB. 21, 1903.

NO MODEL.

Fig. 1.

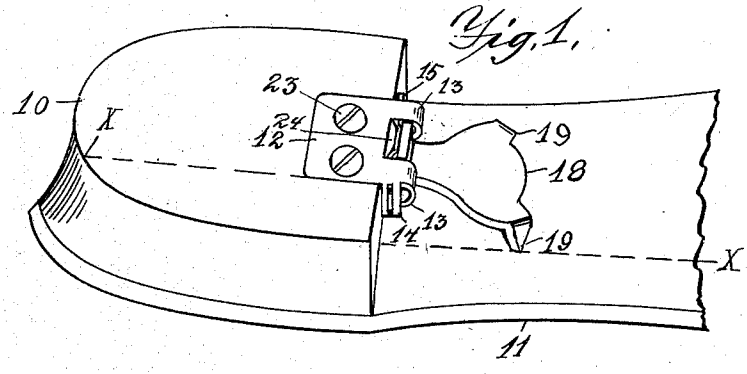


Fig. 3.

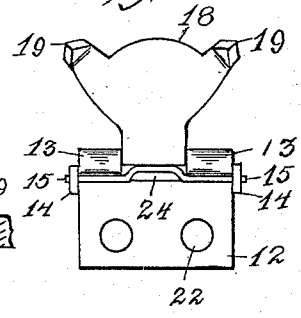


Fig. 2.

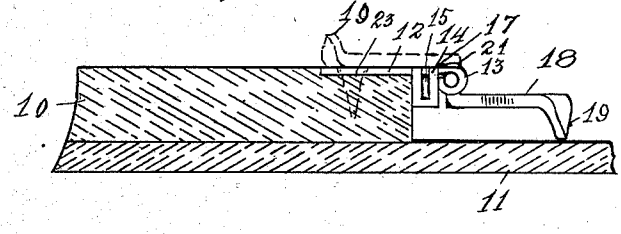


Fig. 5.

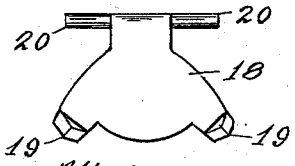


Fig. 4.

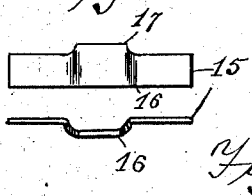


Fig. 6.

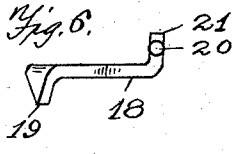
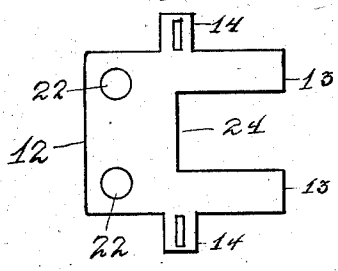


Fig. 7.



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No. 749,342. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

JAMES E. TOSCAN AND CARSON J. CADY, OF JAMESTOWN, NEW YORK.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 749,342, dated January 12, 1904.

Application filed February 21, 1903. Serial No. 144,439. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. TOSCAN and CARSON J. CADY, citizens of the United States, and residents of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Ice-Creeper, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to ice-creepers which are permanently attached to the boot or shoe; and the object of our improvement is to provide a simply-constructed ice-creeper which may be attached to any height of heel or to shoes having rubber heels and also the adaptation and arrangement of the same whereby the parts may be cut from sheet-steel by means of suitable dies.

In the drawings, Figure 1 is a perspective view of a shoe-heel with our creeper attached. Fig. 2 is a side elevation of creeper with heel and sole of shoe in section at line X X in Fig. 1. Fig. 3 is a plan view of the under side of the creeper. Fig. 4 shows side and edge elevations of the spring. Fig. 5 is a plan view of the under side of the spur-plate, and Fig. 6 is a side elevation of same. Fig. 7 is a blank of the heel-plate as cut by the die.

Similar numerals refer to corresponding parts in the several views.

The numeral 10 is the heel, and 11 is the sole, of a boot or shoe.

Our ice-creeper consists of the heel-plate 12, the spring 15, and the spur-plate 18. Heel-plate 12 has the journal-lugs 13 13 at one end with the open space between them to receive the journal-head 21 of the spur-plate, the journals 20 20 on the spur-plate working in the journal-lugs 13. Plate 12 has also the slotted lugs 14 a little to the rear and at the side of the journal-lugs 13. Slotted lugs 14 are for the retention of the ends of a leaf-spring 15. Spring 15 has near its central portion a sidewise bend 16. The bent portion is projected, as at 17, that it may extend upward in the opening 24 between journal-lugs 13 and hold the spring from sliding out endwise. Plate 12 has also holes 22 for attaching the plate to heel 10 by means of screws 23. Spur-plate 18 is made of suitable form to widely separate spurs 19. Spurs 19 are usually turned from the plate. The other end of the plate is turned at a right angle, forming the square journal-head 21. A little below the square journal-head 21 are the journals 20, which work in journal-lugs 13, as above stated. In forming these parts heel-plate 12 is cut out in the blank form, as shown in Fig. 7, and spur-plate 18 is struck out flat, and then a second die bends up spurs 19 and bends journal-head 21 in the opposite direction. Journals 20 are then placed on the flat lugs 13, and the lugs are bent around the journals, leaving an open space 24 behind journal-head 21. One of the slotted lugs 14 is bent downward, and the other is bent down part way to its correct position. Spring 15 is then inserted in the slots in lugs 14, with bend 16 against journal-head 21, the partial bending of one lug 14 allowing such admission. Said lug is then bent to its correct position, locking spring 15 fast, the boss or bent portion of spring 15 extending up in opening 24, as above stated. It is now apparent that spur-plate 18 can be turned back onto heel-plate 12 and find a solid bearing and be held firmly thereon or under the instep of sole 11 and that the boss 16 of spring 15 will retain a constant tension upon journal-head 21, thus holding the spur-plate in whatever position it may be placed, preventing all rattling. The two flat sides of the journal-head give a broad bearing for the spring whether the spur-plate is turned back onto the heel or down under the instep, thus attaining one of the main offices of a successful ice-creeper. It is also obvious that plate 12 may be attached to any height of heel, high or low, whether of rubber or leather, and that slotted lugs 14 allow the free action of spring 15. Our simple arrangement gives a free positive-acting spring with a broad bearing on the head of the spur-plate. Plate 12 is inset into the bottom of the heel, as shown in Fig. 2, and is not in the way of the wearer.

We claim as new—

In an ice-creeper, a heel-plate 12 inset into the bottom of the heel and means for attaching the same, the journal-lugs 13 extending out from the edge of plate 12, the slotted

lugs 14 on plate 12 beside lugs 13, the spur-plate 18 having journal-head 21 and journals 20 pivotally mounted in lugs 13, a spring 15 bearing against head 21, and a locking projection 17 on spring 15 to hold the spring in lugs 13.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES E. TOSCAN.
CARSON J. CADY.

Witnesses:
A. W. KETTLE,
S. A. BALDWIN.