(No Model.)

L. LAMBORN.

ICE CREEPER.

No. 456,515. Patented July 21, 1891.

Fig. 1.

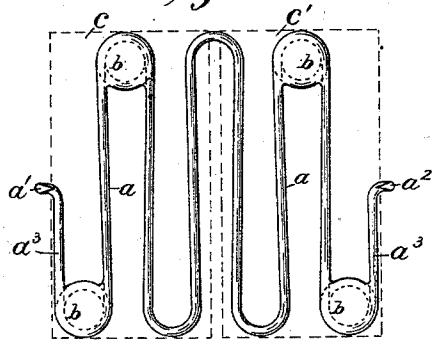


Fig. 3.

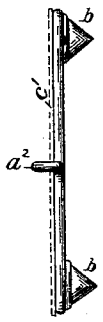


Fig. 4.

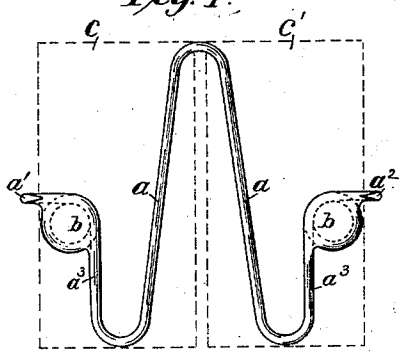


Fig. 2.

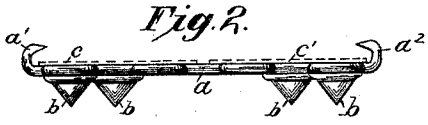


Fig. 8.

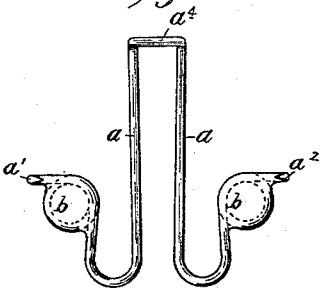


Fig. 5.

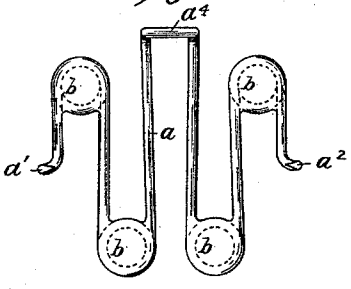


Fig. 7.

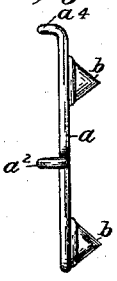


Fig. 9.

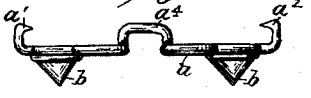


Fig. 10.

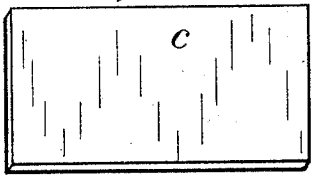
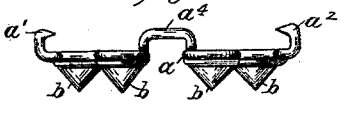


Fig. 6.



Witnesses.

J. F. Shaw.

J. B. A. Haines

Inventor.

Lewis Lamborn

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEWIS LAMBORN, OF PHILADELPHIA, ASSIGNOR OF ONE-HALF TO NELSON H. STRONG AND WILMER W. LAMBORN, BOTH OF MEDIA, PENNSYLVANIA.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 456,515, dated July 21, 1891.

Application filed January 17, 1891. Serial No. 378,152. (No model.)

To all whom it may concern:

Be it known that I, LEWIS LAMBORN, a citizen of the United States, residing in the city of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Ice-Creepers, of which invention the following is a specification.

This invention consists of a spring formed by bending or folding an elastic metallic rod on itself, the folds occupying substantially one and the same plane, said spring being provided in all cases with spurs located within the bends thereof to engage the ice, also with hooks, and in the case of the heel-creeper with a shoulder, by means of which several devices said spring, through its resiliency, firmly fastens the creeper on the sole or the heel of the boot or shoe to which it is applied.

In the annexed drawings, Figure 1 is a plan of the upper face of one form of the creeper as applied to the sole of a boot or shoe, showing two bearing-plates in dotted lines. Fig. 2 is an end elevation, and Fig. 3 a side elevation, of the same. Fig. 4 is a plan of a modified form of the creeper as applied to the sole, with bearing-plates shown in dotted lines. Fig. 5 is a plan, Fig. 6 an end elevation, and Fig. 7 a side elevation, of the creeper as applied to the heel of a boot or shoe. Fig. 8 is a plan, and Fig. 9 an end elevation, of a modified heel-creeper. Fig. 10 is a perspective plan of one of the aforesaid bearing-plates.

Similar letters refer to similar parts throughout the several views.

a represents a spring formed by folding a rod of elastic metal, preferably brass wire, on itself, as shown, the ends of said wire being bent upwardly and inwardly to form the hooks a' and a^2.

b represents spurs attached by soldering or brazing them to spring *a* within the bends thereof.

c and c' represent plates separately attached to the outside folds a^3 of the spring *a*, or otherwise, so as not to interfere with the elastic action of the spring.

a^4, Figs. 5 to 9, represents a shoulder formed by looping said wire and turning up the loop at an angle with the body of spring *a*, as shown.

This creeper may be applied to the broadest part of the sole or to the heel of any boot or shoe, and is put and adjusted in place by slightly stretching spring *a* with the hands and at the same time applying hooks a' and a^2 in the case of the sole-creeper to the edges of the sole and in the case of the heel-creeper to the sides of the heel, and in the latter case causing the shoulder a^4 to bear against the breast of the heel. The spring *a* acts to hold the creeper firmly in its place. The plates *c* and c' are not essential, but may be used as a guard when the creeper is to be worn with thin-soled boots or shoes.

I claim—

An ice-creeper consisting of a spring-wire *a*, having a series of bends formed thereon and its ends turned up and pointed to constitute hooks a', with spurs *b* secured within the bends of the wire, substantially as described.

LEWIS LAMBORN.

Witnesses:
J. E. SHAW,
JOS. A. HAINES.