

(No Model.)

H. COTTRELL.

ICE CREEPER.

No. 291,880.

Patented Jan. 15, 1884.

Fig1.

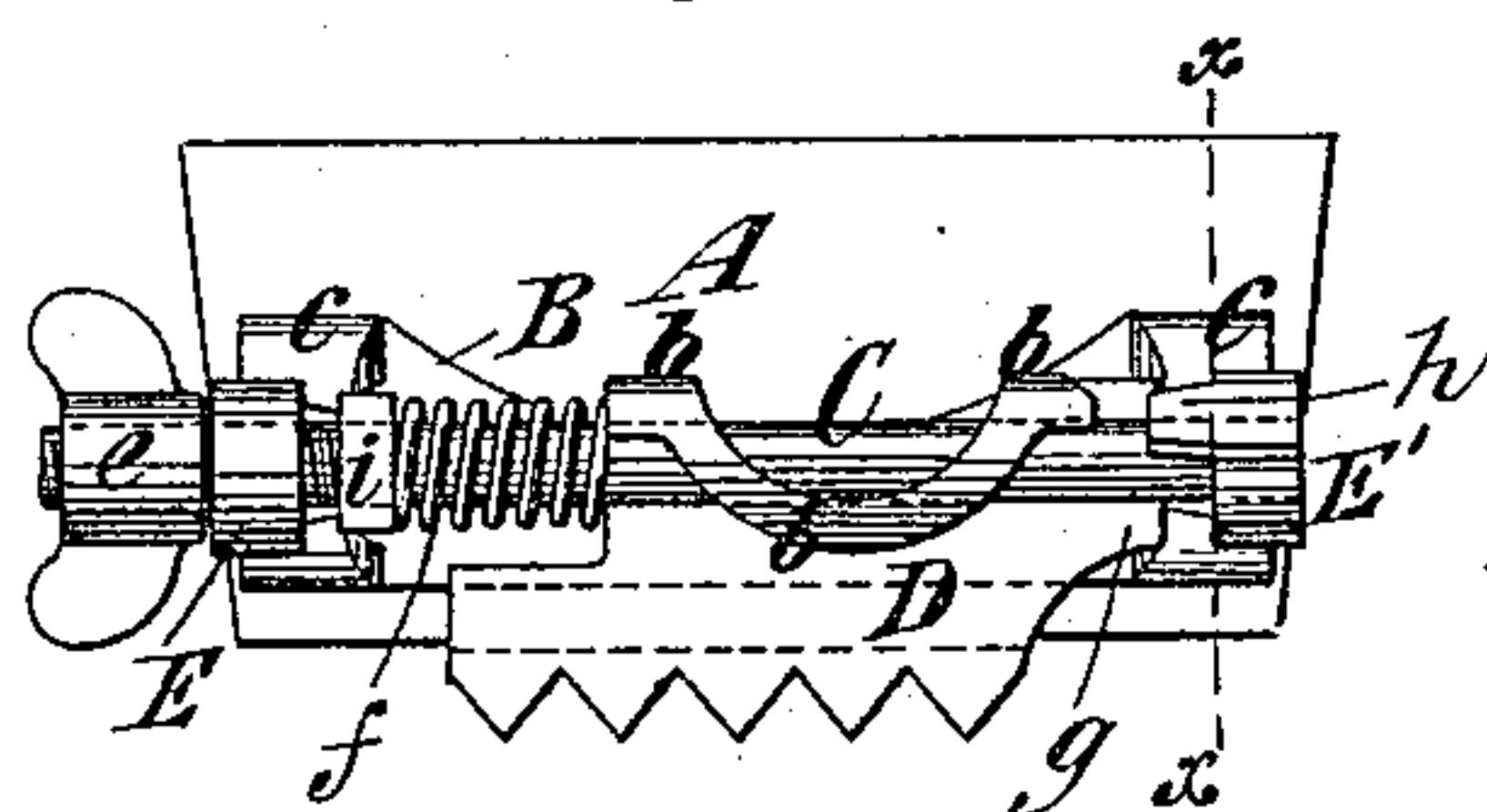


Fig2.

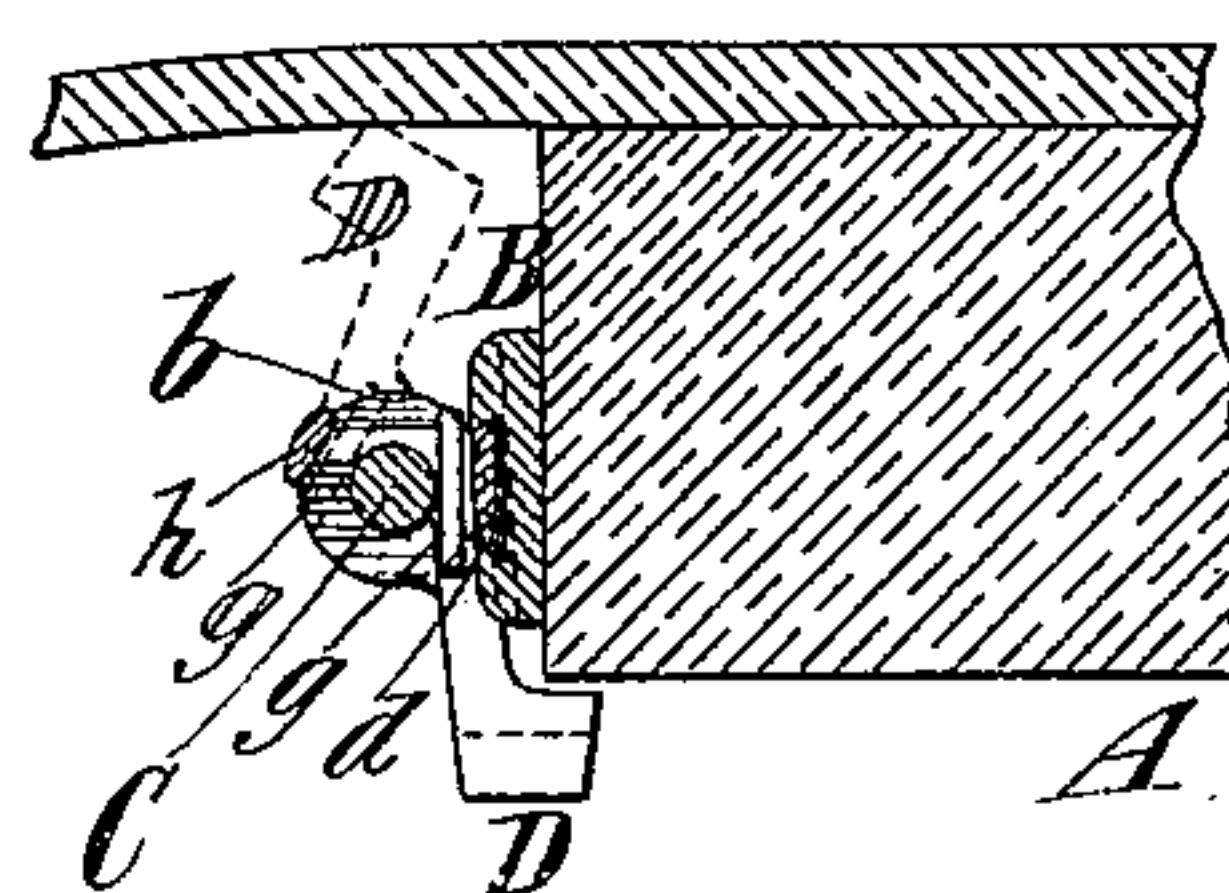


Fig3.

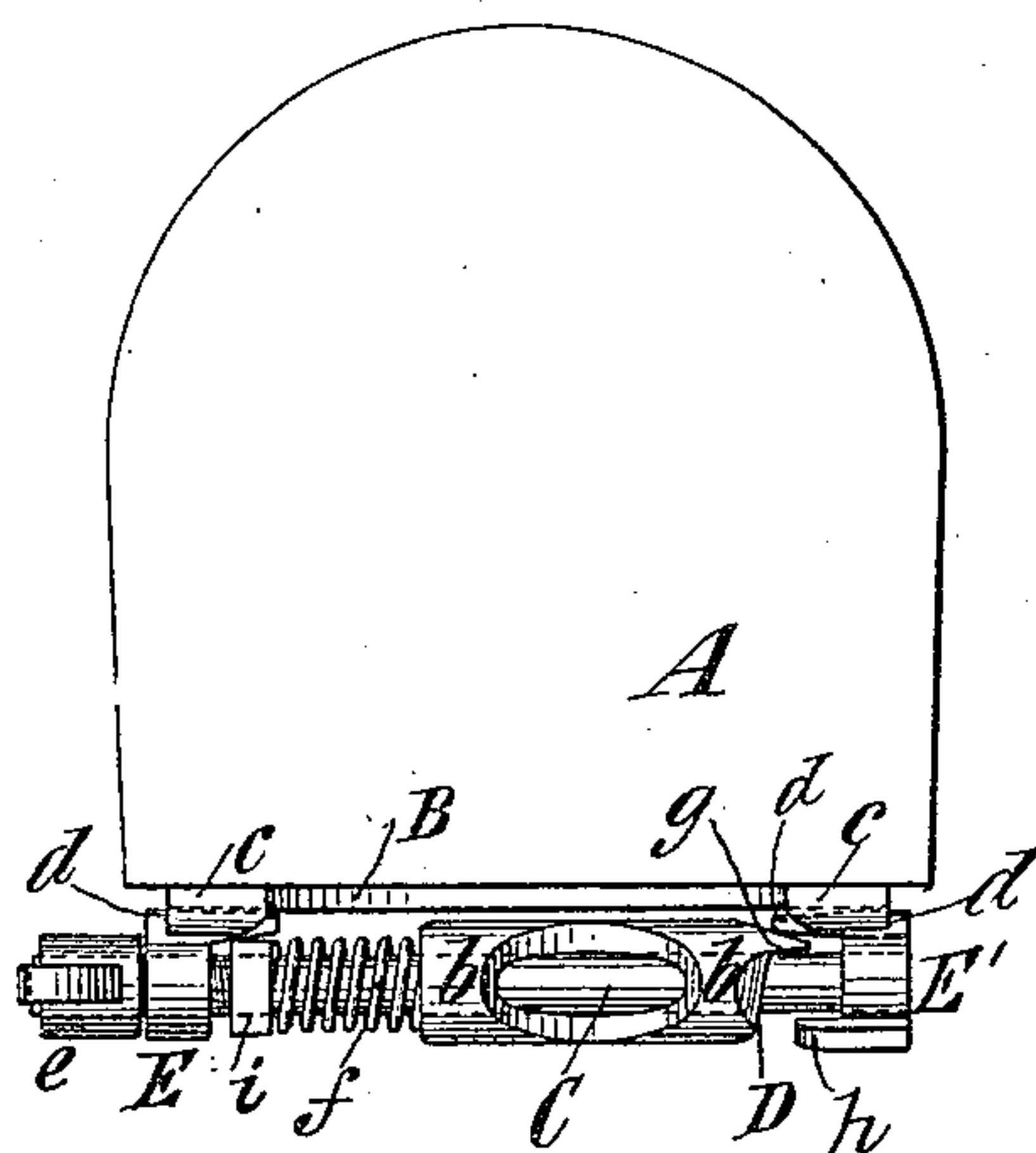
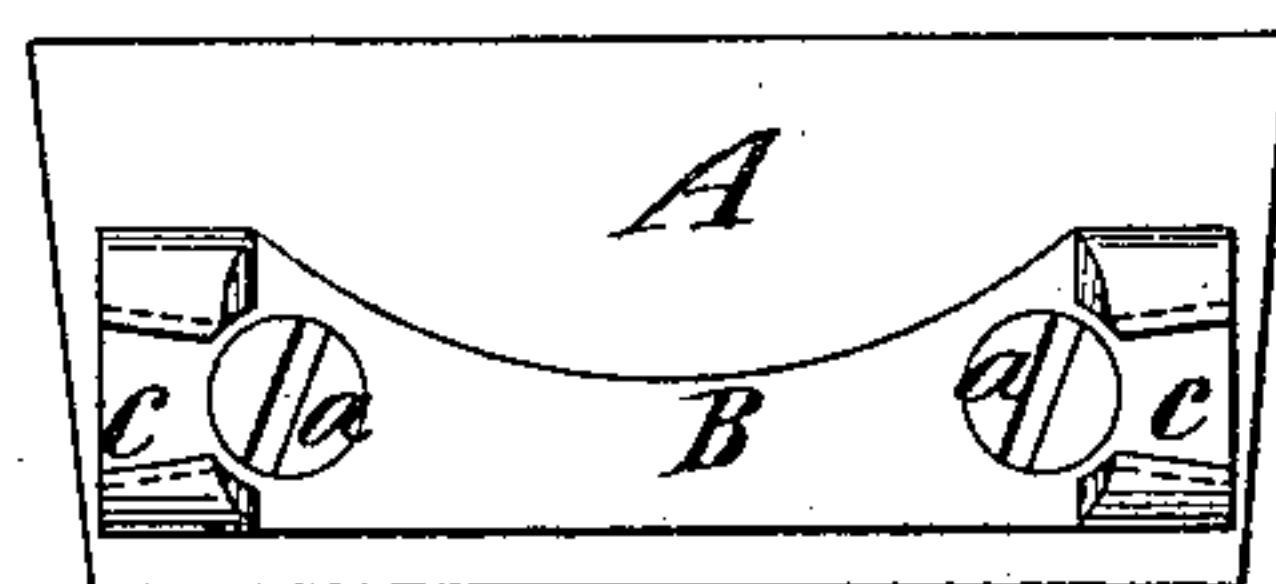


Fig5.



Fig4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HERBERT COTTRELL, OF NEWARK, NEW JERSEY.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 291,880, dated January 15, 1884.

Application filed October 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, HERBERT COTTRELL, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Ice-Creepers, of which the following is a specification.

My invention relates more particularly to ice-creepers in which the rod or spindle for the ice dog or calk is supported in bearings projecting from a base-plate which is adapted to be permanently secured to the front of a boot or shoe heel.

The invention consists in the combination, with a base-plate adapted to be permanently secured to the front of a boot or shoe heel, and constructed with dovetailed slideways, of heads or stocks dovetailed to fit said slideways, a rod or spindle supported by said heads or stocks, and serving to tighten them in said slideways, and an ice-dog upon said rod or spindle.

The invention also consists in other combinations of parts hereinafter described, and referred to in the claims.

In the accompanying drawings, Figure 1 is a front view of a boot-heel having my improved ice-creeper attached thereto, the ice dog or calk being in the operative position. Fig. 2 is a section of the heel and creeper on the dotted line *xx*, Fig. 1. Fig. 3 is a plan of the heel and creeper, the ice dog or calk being in the same position as in Fig. 1. Fig. 4 is a front view of the heel and base-plate, and Fig. 5 is a detail view of the dog and calk detached from other parts.

Similar letters of reference designate corresponding parts in all the figures.

A designates the heel, and B designates the base-plate permanently secured across the front of the heel by means of screws *a*, or in any other suitable manner.

C designates the rod or spindle on which is the ice dog or calk D. In the present example of my invention the dog or calk is constructed with an eye, *b*, which fits upon the rod or spindle and enables the said dog or calk to be turned on the rod or spindle, so as to be held in operation or out of operation. The rod or spindle C is supported at the ends by two heads or stocks, E E', which are detach-

bly secured to the base-plate B, at opposite ends thereof.

As here shown, the base-plate B is constructed with dovetailed slideways or sockets *c*, which taper inward, as best shown in Fig. 4, and the heads or stocks have correspondingly tapered and dovetailed tongues or projections *d*, which are fitted to said slideways or sockets. The rod or spindle C is secured at one end in the head or stock E', so that it cannot turn, and it passes loosely through the other head or stock, E, and is provided outside the same with a nut, *e*, fitting a screw-thread on the rod or spindle. The heads or stocks E E' being entered into the slideways or sockets *c*, from the outer sides or ends thereof, the nut *e* is tightened, and the tapered tongues *d* of the heads or stocks are thereby drawn into and held tightly in the said slideways or sockets, and afforded a rigid support on the base-plate B. By loosening the nut *e* the heads or stocks, and with them all the parts supported by them, can be removed from the base-plate, leaving the latter permanently attached to the heel. The base-plate is so small and projects so little from the heel that it will not be noticed when the creeper is removed, and hence is not unsightly.

The dog or calk D here shown is capable of both sliding and turning on the rod or spindle C, and is locked in either position to which it is turned by engagement with the head or stock E', it being pressed against said head or stock by a spring, *f*, upon the rod or spindle. The dog or calk D has at the end a projecting lip, *g*, and when it is turned so as to project downward for use the lip bears against the tongue *d* of the head or stock, as best shown in Figs. 2 and 3, and so prevents the dog or calk from turning. When it is desired to turn the dog or calk into the inoperative position, (shown dotted in Fig. 2,) the said dog or calk is moved endwise against the pressure of the spring *f*, to free the lip *g* from engagement with the tongue *d* of the head or stock E'. When released the spring will move it, so as to carry the lip *g* into engagement with the projection *h* on the head or stock E', and by said projection the dog or calk will be held in the position shown in dotted lines. Articles of this

kind are not made and fitted with great precision, and in different creepers the heads or stocks E E', when drawn together, will stand at different distances apart, and the springs 5 will not be of the same tension, some springs being liable to be too weak. The springs which are commonly used in ice-creepers are themselves liable to be of different strength, some being stronger than others. To obviate these 10 difficulties, and to provide for securing the most desirable tension for the springs, I screw a nut, *i*, upon the rod or spindle C inside the head or stock E, and one end of the spring *f* bears upon this nut and the other end on the 15 dog or calk D.

The tension of the spring may be varied by adjusting the nut *i*.

What I claim as my invention, and desire to secure by Letters Patent, is—

20 1. The combination, with a base-plate adapted to be permanently secured to the front of a boot or shoe heel, and constructed with dovetailed slideways, of heads or stocks dovetailed to fit said slideways, a rod or spindle supported by said heads or stocks and serving to 25 tighten them in said slideways, and an ice dog or calk upon said rod or spindle, substantially as and for the purpose described.

30 2. The combination of the base-plate B, constructed with slideways *c*, and adapted to be permanently secured to the front of a heel, the

heads or stocks E E', fitted to the slideways *c*, the rod or spindle C, screw-threaded and provided with the nut *e*, the dog or calk D, adapted to lock into the head or stock E', and the spring 35 *f*, all substantially as described.

3. The combination, in an ice-creeper, of a spindle on which is fitted a reversible dog, two heads for supporting the said spindle, locking 40 devices on one of said heads and upon the said dog for locking the said dog in either its operative or reversed position, a spring on said spindle for forcing the dog into engagement with the locking devices on the head, and a 45 nut and screw-thread on said spindle for varying the tension of said spring independently of the spindle-head, substantially as herein described.

4. The combination of the base-plate B with 50 slideways *c*, the heads or stocks E E', the rod or spindle C, serving to tighten said heads or stocks and supported by them, the dog or calk D, locking into the head or stock E', the nut *i*, screwed on said rod or spindle inside the head 55 or stock E, and the spring *f*, arranged between the dog or calk and said nut *i*, all substantially as described.

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Witnesses:

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