N. TRIANTAFILU.

CREEPER.

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985,954.

Patented Mar. 7, 1911.

Fig. 1.

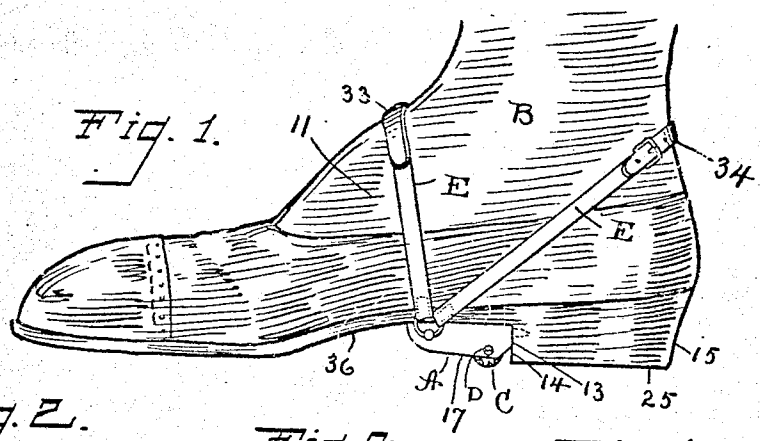


Fig. 2.

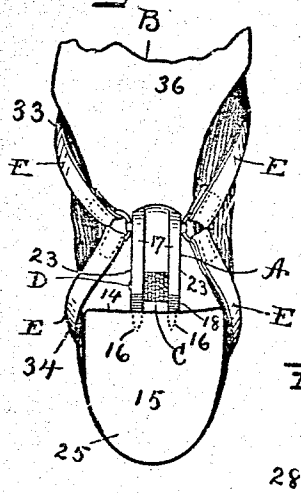


Fig. 3.

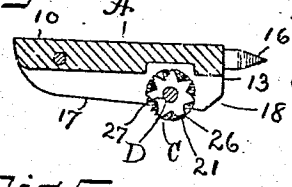


Fig. 4.

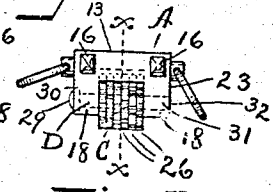


Fig. 5.

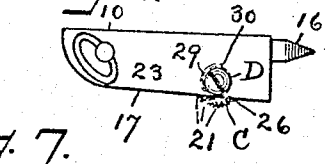


Fig. 6.

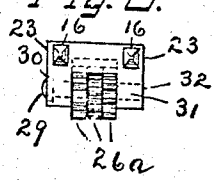


Fig. 7.

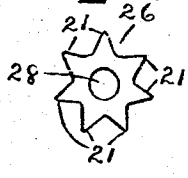


Fig. 8.

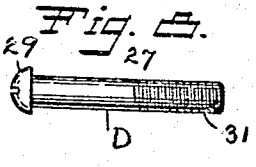
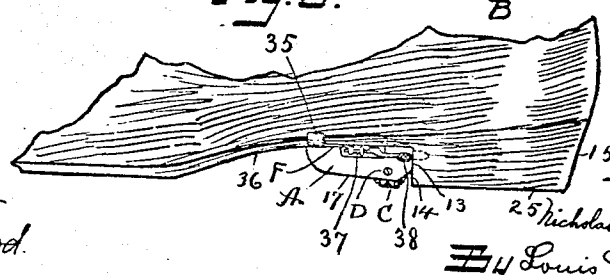


Fig. 9.



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CREEPER.

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To all whom it may concern:

Be it known that I, NICHOLAS TRIANTAFILU, a citizen of Greece, residing in New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Creepers, of which the following is a specification.

My invention relates to improvements in creepers, and the objects of my improvements are simplicity and economy in construction and convenience and efficiency in use.

In the accompanying drawing: Figure 1 is a side elevation of a shoe with one of my creepers. Fig. 2 is a bottom view of the same. Fig. 3 is a longitudinal section on the line x x of Fig. 4, of the same on an enlarged scale. Fig. 4 is a rear elevation of the same. Fig. 5 is a side elevation of the same, with a modification of the body. Fig. 6 is an end elevation of the same, showing a modified form of the friction member. Fig. 7 is a side elevation of the friction member on an enlarged scale. Fig. 8 is a side elevation of the shaft for the friction member. Fig. 9 is a side elevation of part of a shoe and a modification of the means for holding my creeper in place, and is on the same scale as Fig. 1.

A is the body of my creeper and is adapted to fit underneath the instep 11 of a shoe B, directly in front of the heel 15 and be held in place either by straps E or a clamp F and is provided with a friction member C pivotally mounted on a transverse shaft D. The said friction member C consists of a multiple of flat wheels 26 preferably of sheet material, and provided with teeth 21 on their outer edges. The said body A is made preferably of metal and has a generally flat top surface adapted to fit and bear against the instep 11 of a shoe B and a vertical back surface 13 adapted to fit against the front wall 14 of the heel 15 and is provided with rearwardly projecting prongs 16 adapted to penetrate the said heel 15. The lower side may extend forward and generally horizontal from the lower edge of the said back surface 13 or the lower rear corner 18 may be cut away as shown in Fig. 3, and the forward end of said lower surface 17 in front of the said shaft D may incline upward to meet the said top surface 10. The interior of the said body A is cut away for housing generally the said friction wheels C when mounted on the said shaft D, and the location of the said shaft D is such as to permit the free rotation of the said friction wheels C and to expose the bottom teeth 21 below the said lower surface 17 and the said teeth may project below the general level of the lower surface 25 of the heel 15. The said friction member C may be removably mounted as shown, the shaft D comprising a headed screw, the body 27 being a fit for the holes 28 in the wheels 26, the head 29 fitting the countersunk hole 30 in one side wall 23 and the threaded end 31 screwing into a threaded hole 32 in the opposite side wall 23. The said friction member C may be composed of a relatively large number of wheels 26 of thin material or a lesser number of wheels 26^a of thicker material, as shown in Fig. 6, or a mixture of both and the said wheels may be hardened if desired. Each wheel 26 or 26^a is free and independent and as described they are removably mounted so that they may be removed for sharpening or replacing. The said straps E comprise a forwardly extending instep strap 33 and a rearwardly extending heel strap 34, or any other convenient arrangement of straps may be used. Likewise, any ordinary form of clamp F may be employed. The clamp F shown comprises jaws 35, adapted to engage with the sole 36 of the shoe B, an adjusting screw 37 and an operating lever 38, being essentially a form of clamp in common use on skates.

In use, the teeth on the lower side of the friction member engage with the ice, snow, or other slippery surface and thereby tend to hold the foot against slipping out or to one side. By having the teeth rotatively mounted the holding action is more positive than with stationary teeth, and there is a constant change in the engaging teeth tending to long life of the individual disk members.

I claim as my invention:—

1. A creeper comprising a body fitting underneath a shoe and a friction member, the said friction member comprising a barrel like structure of cylindrical formation and composed of a multiple of disk like members of sheet metal having radial teeth and the said disk-like members rotatively mounted on a common axis and each free to turn on the said axis under normal conditions of use.

2. In a creeper comprising a body and a

friction member composed of a multiple of disk-like members, the said members mounted rotatively on a common shaft and free to rotate thereon, the said shaft being removable and permitting the removal and changing of the said disks.

3. In a creeper having a friction member and located beneath the instep of a shoe and adjacent the heel, a housing for said friction member comprising a body having means for retaining the said friction member and means for retaining the said housing in position comprising holding prongs backwardly directed and penetrating the heel and means for holding the said body against the instep and holding said prongs in such engagement with the heel.

4. In combination in a creeper, a body having means to hold it in position under the instep of a shoe adjacent the heel and provided with prongs penetrating the heel and a friction member comprising a multiple of thin disk-like members having radial teeth and mounted on a common axis so as to be individually free to rotate.

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