F. H. PRATT.

ANTISLIPPING DEVICE.

APPLICATION FILED FEB. 21, 1908.

907,172. Patented Dec. 22, 1908.

Fig. 4.

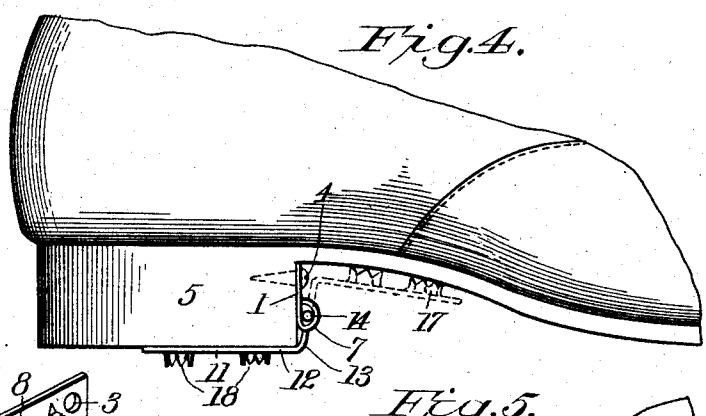


Fig. 1.

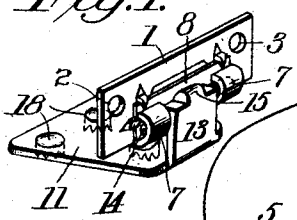


Fig. 5.

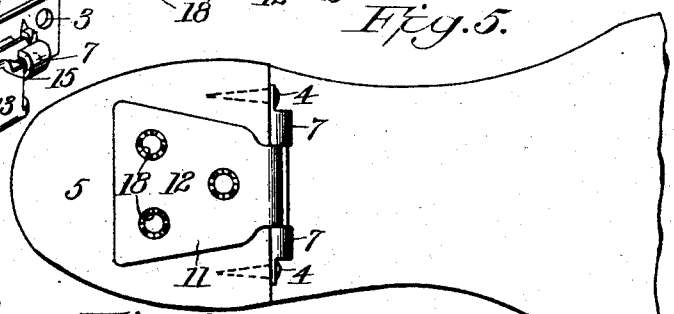


Fig. 2.

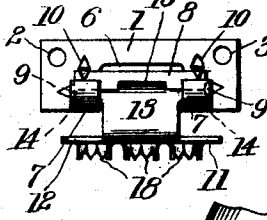


Fig. 3.

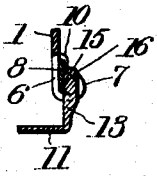


Fig. 6.

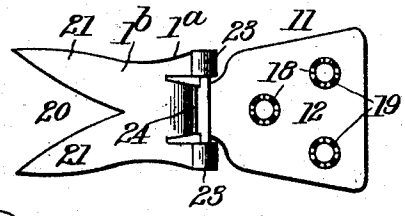
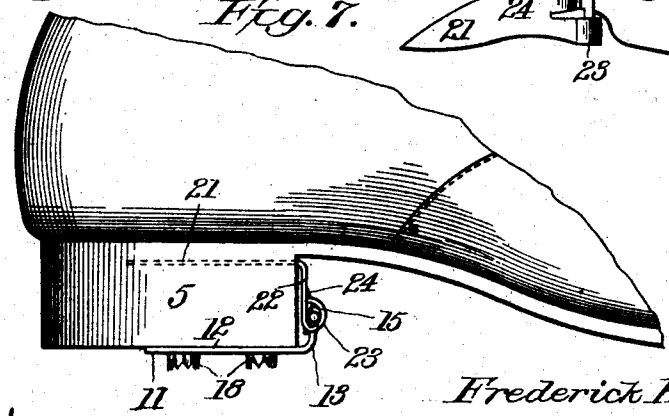


Fig. 7.



Inventor

Frederick H. Pratt.

Witnesses

C. W. Walker.

M. E. Jones Jr.

By E. E. Vrooman, his Attorney.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK H. PRATT, OF BALTIMORE, MARYLAND.

ANTISLIPPING DEVICE.

No. 907,172. Specification of Letters Patent. Patented Dec. 22, 1908.

Application filed February 21, 1908. Serial No. 417,022.

To all whom it may concern:

Be it known that I, FREDERICK H. PRATT, a citizen of the United States, residing at Baltimore, in the county of Baltimore City and State of Maryland, have invented certain new and useful Improvements in Anti-slipping Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in anti-slipping devices, and more particularly to a device, which is, preferably, permanently attached to the heel of a boot or shoe.

The object of the invention is the provision of means for preventing the wearer of the device from slipping, when said device is moved or placed in an operative position.

Another object of the invention is the construction of a device, comprising a minimum number of parts, and which is not only efficient in operation, but is also comparatively inexpensive to manufacture or construct.

With these and other objects in view, the invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1 is a perspective view of an anti-slipping device constructed in accordance with the present invention. Fig. 2 is a view in front elevation of the structure depicted in Fig. 1. Fig. 3 is a fragmentary, sectional view of the device. Fig. 4 is a view in end elevation, showing my anti-slipping device in an operative position upon a heel of a boot or shoe. Fig. 5 is an inverted, plan view of the structure depicted in Fig. 4. Fig. 6 is an inverted plan view of another embodiment of the present invention. Fig. 7 is a view, in side elevation, of the embodiment illustrated in Fig. 6, secured to the heel of a boot or shoe.

Referring to the drawings, 1 designates the fastening-plate. The fastening-plate 1 is, preferably, formed from sheet-metal, and is provided with apertures 2 and 3 near its ends, for receiving suitable fastening means, as for instance screws 4, when the plate is secured to a heel 5, Figs. 4 and 5. The fastening-plate, is bifurcated, as at 6, intermediate its ends, and, preferably, at its center, for the purpose hereinafter described. Integral with the lower edge of plate 1, and contiguous to the bifurcated portion 6, are extensions 7, which are bent or curved back upon the body of the plate 1, and constitute journals.

A flat spring 8 is positioned across the bifurcated portion 6, and has its ends engaged by lips, or lugs 9, punched out of the body of the sheet-metal plate 6. The lower edge of the spring is capable of engaging the inner faces of the extensions or journals 7, and the upper edge of the spring engages lips or lugs 10, which are also punched or partly cut from the body of the fastening-plate 1, Figs. 1 and 2. It will be seen that these integral lips or lugs 9 and 10, constitute fastening means for retaining the spring 8 in position upon the fastening-plate and the bearings 7, and it will also be obvious that these lips or lugs 9 and 10 can be quickly formed at a very small cost, for they do not require any additional material, as they are an integral part of the body of the fastening-plate 1.

The swinging section or movable heel-plate 11, is, preferably, formed of sheet-metal, and comprises a flat body portion 12, having at one edge or end, an upwardly-extending, angularly-disposed portion 13, which constitutes an extension engaging the spring, said angularly-disposed portion 13 is provided with oppositely-extending short shafts 14, which are journaled in the journals or curved extensions 7. The extension 13 terminates at its inner or upper end in a reduced bearing portion 15, which is rounded, at its edges, at 16, Fig. 3, so that it can easily ride over spring 8, and permit the swinging section or heel-plate 11 to be retained in an operative position, as shown in Figs. 1, 2, and 5, or in an inoperative position, as shown by dotted line 17, Fig. 4.

The biting or gripping surface for engaging icy pavements or ice-coated ground, comprises a plurality of portions 18, punched outward or downward, or otherwise formed upon the lower face of the body 12, and these hollow portions 18 are, preferably, substantially cylindrical-shaped, and each is provided with a series of teeth 19, Fig. 2. Therefore, it will be noted that I have provided a plurality of depending, engaging portions upon the heel-plate, each of which is provided with a toothed, lower edge. By reason of these depending hollow portions 18 having the slitted or toothed structure, the life and efficiency of the device is greatly increased; the portions 18 are slitted their entire length, providing the teeth 19, which

teeth are of the same length as the portions 18.

In the embodiment depicted in Figs. 6 and 7, the fastening-plate 1^a is provided with a body 1^b, which is bifurcated, as at 20, producing prongs 21. The fastening-plate or section 1^a can be quickly driven into the heel 5, as shown in Fig. 7, and thereby securely retain said plate or section in position. The plate 1^a is provided with angularly-disposed portions 22, which terminate in integral journals or eyelets 23. For the purpose of cheapness and facilitating the construction of the device, I, preferably, form the plate 1^a of sheet-metal having a sufficient resiliency to permit the spring-tongue 24 to perform the same function as spring 8; the spring-tongue 24 being positioned at an angle to the body 1^b, and it is adapted to engage the extension 15 of the heel-plate or swinging-section 11. As the swinging-section 11 is substantially the same structure, as shown in Figs. 1 to 5, it is not necessary for me to specifically describe this embodiment.

From practical experience, I have found that my anti-slipping device can be quickly attached to a boot or shoe, and when not in use, can be easily placed in an inoperative position, but when it is necessary, the heel-plate or hinged-section can be quickly swung in position for causing the toothed, hollow portions to engage the ice-coated pavement or ground for preventing the wearer from slipping.

What I claim is:

1. In an anti-slipping device, the combination with a fastening-plate or section, of a swinging heel-plate pivotally secured to said section, said heel-plate formed from a single piece of sheet-metal and provided with a depending, hollow portion punched or struck from the body of the heel-plate, and said hollow portion provided with a series of longitudinal slits extending the entire length thereof and producing a series of teeth of the length of said hollow portion adapted to engage or bite a surface when the device is in use.

2. In an anti-slipping device, the combination of a sheet-metal fastening-plate, provided with a bifurcated central portion, said plate provided with extensions bent and constituting journals, a spring extending across the bifurcated portion and engaging said journals for preventing the same from being displaced off of said plate in one direction, said plate provided with lips partly cut from the body thereof and bent over portions of the spring for holding the same against displacement, and a heel-plate pivotally mounted in the journals and provided with a portion engaging the spring for holding the heel-plate in different adjusted positions.

3. In an anti-slipping device, the combination of a fastening-plate, a flat spring positioned against one side of said plate, said plate provided with integral portions extending therefrom and engaging the end and opposite sides of said spring near each end and overhanging only a portion of the outer face of the spring for holding the same against displacement, a heel-plate, and means pivotally securing said heel-plate in engagement with said spring, whereby said heel-plate may be locked in different adjusted positions.

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

FREDERICK H. PRATT.

Witnesses:

HENRY BALDREY,

HAYNSWORTH BALDREY.