

No. 679,527.

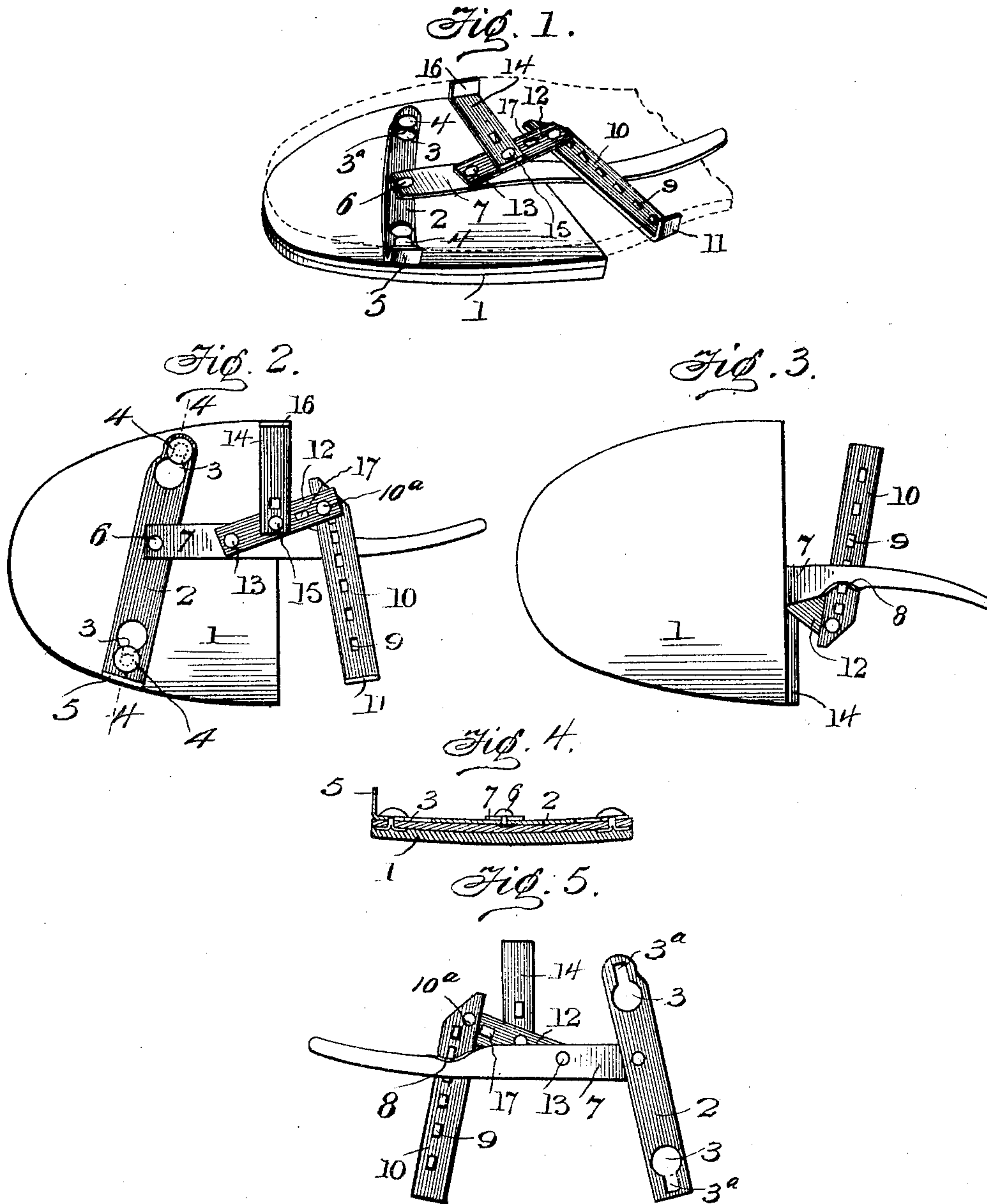
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F. F. FRISBIE.

SHOE SOLE PROTECTOR AND BRAKING DEVICE FOR BICYCLE RIDERS.

(Application filed Sept. 20, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

FLOYD F. FRISBIE, OF LEDGEDALE, PENNSYLVANIA.

SHOE-SOLE PROTECTOR AND BRAKING DEVICE FOR BICYCLE-RIDERS.

SPECIFICATION forming part of Letters Patent No. 679,527, dated July 30, 1901.

Application filed September 20, 1900. Serial No. 30,582. (No model.)

To all whom it may concern:

Be it known that I, FLOYD F. FRISBIE, a citizen of the United States, residing at Ledgerdale, in the county of Wayne and State of Pennsylvania, have invented certain new and useful Improvements in Shoe-Sole Protectors and Braking Devices for Bicycle-Riders; and I do declare the following to be a full, clear, and exact description of the invention, such as it will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an attachment for the shoes of bicycle-riders to protect the sole of the shoe from injury when rat-trap pedals are used, and also to protect the sole from wear when braking is effected by means of the foot.

It is well known that the use of rat-trap pedals is destructive to shoe-soles, as the latter become quickly torn by the spurs or teeth; also, that many bicyclists employ the foot as a brake upon the front tire to stop or slacken the speed of the bicycle, resulting in the quick wearing away of the sole.

The object of this invention is to provide a device for use by bicyclists to protect the soles of the shoes and to serve as a braking appliance, said device being simple in construction, inexpensive of manufacture, and adapted to be quickly and conveniently applied to and removed from a shoe-sole.

With this and other minor objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a sole-protecting device embodying my invention, showing the application of the same to the sole of a shoe, the latter appearing in broken lines. Fig. 2 is a top plan view of the device detached. Fig. 3 is a bottom plan view thereof. Fig. 4 is a section through the base and connecting-plate on line 4-4 of Fig. 2, and Fig. 5 is a bottom plan view of the clamping mechanism removed from the base.

Like reference characters designate corresponding parts throughout the several views.

The numeral 1 in the drawings represents the base of my improved shoe-sole-protecting

device, which is shaped to conform to the toe portion of a shoe-sole and is preferably constructed of top and bottom plies or layers of rubber or rubber and a fabric, such as canvas, united by vulcanizing or otherwise; but said base may be made of any other suitable material possessing the requisite amount of toughness and flexibility. Upon the upper surface of this base is mounted a connecting-plate 2, provided at its end with keyhole-shaped slots 3 for the passage of headed studs 4, projecting upward from the base. The straight ends 3^a of those slots project outwardly from the circular portions thereof and are adapted to receive the shanks of said studs, while said circular portions are of a size to permit of the passage of the heads of the studs. When the parts are arranged as in Figs. 2 and 4, the shanks of the studs occupy the straight contracted ends of the keyhole-slots, thus securely connecting the base to the connecting-plate. When, however, it is desired to detach the base when worn or otherwise injured and to substitute a new base therefor, it is simply necessary to press the side edges of the base upwardly and inwardly, thereby forcing the studs closer together and bringing them out of the straight ends of the keyhole-slots into the main circular portions thereof, whereupon the plate may be readily removed by lifting it up, so as to cause the heads of the studs to pass through said slots. To apply the base, the side edges of said base are pressed inward in a similar manner until the heads of the studs register with the enlarged circular portions of the keyhole-slots in the connecting-plate, when the studs may be passed upwardly therethrough, and upon releasing the base the latter by its own resiliency resumes its normal shape and draws the shanks of the studs outward into the contracted portions of the keyhole-slots, thus bringing the heads of the shanks into position to prevent said plate from becoming disconnected. The connecting-plate is provided at one end with a flange or clamping portion 5, which is adapted to bear against the edge of the sole at one side of the shoe to hold the base against movement in one direction. The studs may be secured to the base in any approved manner. In the present instance I have shown said studs passed through the up-

per ply of the base and formed with pronged lower ends clenched against the under side of said upper ply and between the same and the lower ply of the base to prevent withdrawal of the studs.

To the connecting-plate is pivoted at 6 one end of an operating-lever 7, which extends rearwardly from the base and is notched and beveled in one of its side edges to form a pawl portion 8, adapted to engage either one of a series of teeth 9, formed upon the under side of a clamping-plate 10, provided at its free end with a flange or clamping portion 11, adapted to bear against the edge of the sole of a shoe on the same side as the flange or clamping portion of the connecting-plate and at a point in rear thereof. This clamping-plate 10 is pivoted at its inner end, as at 10^a, to one end of a link 12, the opposite end of which is pivoted, as at 13, to the lever. To the central portion of this link is pivoted in turn the inner end of a clamping-plate 14, as shown at 15, and the outer end of this plate is formed with a flange or clamping portion 16 to engage the edge of the sole of a shoe at the side opposite that on which the flanges or clamping portions of the connecting-plate and toothed clamping-bar are adapted to bear. The normal position of the parts is shown clearly in Fig. 2, from which it will be seen that the link 12 normally lies in a plane above the lever 7, and the clamping-plates 10 and 14 project outward in opposite directions at right angles to said lever. This represents the position of the parts for engaging the soles of shoes of the maximum width for which the device is adapted. To adjust the clamping mechanism to engage narrower soles, the lever 7 is swung laterally toward the flange or clamping portion of the clamping-plate 10, whereupon the link 12 will be swung to a diagonal position, causing the said clamping-plates 10 and 14 to be drawn inward and decrease the distance between them, as will be readily understood. To lock the parts in adjusted position, the lever is moved to bring its pawl portion 8 into engagement with the desired tooth 9 of the clamping-plate 10, by which the link 12 and clamping-plates will be held securely in clamping position. To prevent movement of the link 12 and clamping-plate 14 beyond a predetermined point, the said link 12 is provided with a lug or shoulder 17, to abut against an edge of the clamping-plate 14, and the said plate 14 with a similar lug or shoulder to abut against an edge of the link 12.

In operation the device is applied to the sole of the shoe in the manner shown in Fig. 1, so as to cover the toe and ball of the sole. When the device is thus applied, it will be readily seen that the base 1 will serve as a shield or wear-plate to prevent injury to the

sole of the shoe by the spurs or teeth of rat-trap pedals; also, that when it is desired to stop or slacken the speed of the wheel the foot may be inserted so as to cause the base 1 to bear against the tire of the front wheel of a bicycle, the said base thus acting as a frictional braking device and serving to relieve the sole of wear.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of my improved sole-braking device will be readily understood, and it will be seen that it provides a simple and effective device for the purpose stated.

While the preferred embodiment of my invention is as herein disclosed, changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A shoe-sole protector for the purpose described, comprising a base, a connecting plate or member detachably secured to the base, and clamping mechanism carried by said connecting plate or member, substantially as set forth.

2. A braking device for bicyclists' use and adapted to be applied to the sole of a shoe, the same consisting of a base and fastening mechanism to hold the same secured to the sole of the shoe, the said base serving as a frictional braking device adapted to be brought to bear upon a bicycle-tire, substantially as set forth.

3. A shoe protecting and braking device for bicyclists' use, comprising a base adapted for application to the sole of a shoe, a connecting-plate having a slot and stud or pin connection with said base, and clamping means carried by said connecting-plate for securing the base to the sole of a shoe, substantially as set forth.

4. A shoe protecting and braking device for bicyclists' use, the same consisting of a base provided upon its upper surface with headed pins or studs, a connecting-plate having keyhole-shaped slots to receive said studs and clamping mechanism carried by said plate for connecting the base to the sole of a shoe, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

F. F. FRISBIE.

Witnesses:

ED BLOSS,

D. BINGHAM.