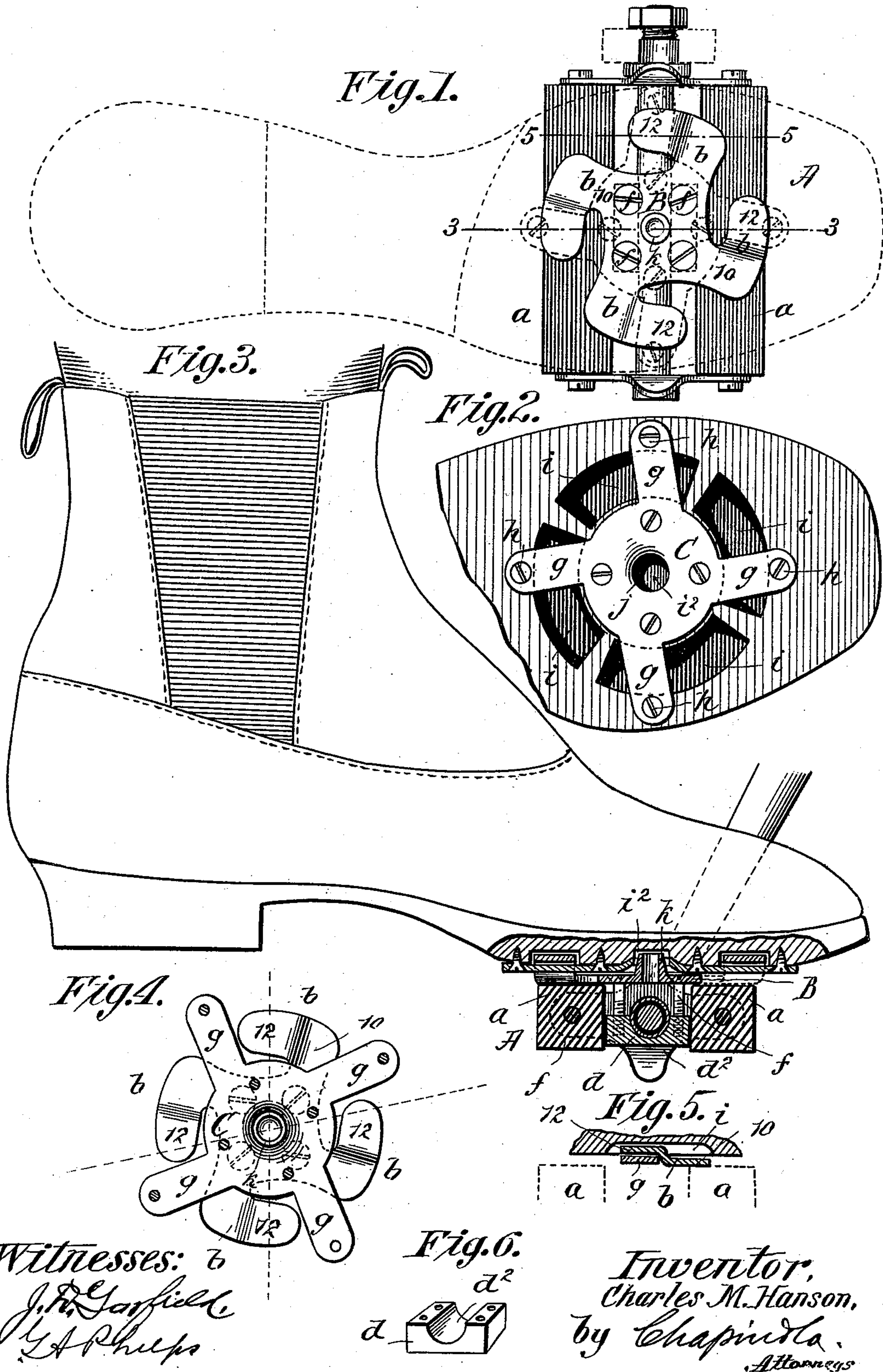


(No Model.)

C. M. HANSON.
ATTACHMENT FOR BICYCLE PEDALS.

No. 550,409.

Patented Nov. 26, 1895.



UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR BICYCLE-PEDALS.

SPECIFICATION forming part of Letters Patent No. 550,409, dated November 26, 1895.

Application filed April 18, 1895. Serial No. 546,213. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. HANSON, a citizen of the United States of America, residing at Peace Dale, in the county of Washington and State of Rhode Island, have invented new and useful Improvements in Attachments for Bicycle-Pedals, of which the following is a specification.

This invention relates to means for insuring a perfect foot-grip upon a bicycle-pedal, such grip being very advantageous in enabling the rider to draw upon one pedal as it moves upwardly while he is pushing downwardly with the other foot upon the opposite pedal. This capability is exceedingly advantageous in hill-climbing, and also by the exercise of the invention there will be no liability of slipping the pedal.

The invention consists in the combination, with the pedal having at its foot-bearing part and between the pedal ends several members arranged substantially in different locations around on an imaginary circle, of a part to be attached to the bottom of the shoe, which comprises several arms or prongs that, by a peculiar turning movement of the foot, may be brought into engagement with the said members on the pedal, whereby the foot may not be lifted away from the pedal.

The invention is hereinafter fully described in conjunction with the accompanying drawings, and set forth in the claims.

In said drawings, Figure 1 shows in plan view and positively the pedal with the improved attachment and by dotted lines the relative position of the shoe and the attachment therefor. Fig. 2 is a plan view of the pedal-bearing portion of the shoe and the attachment which is provided thereupon for co-acting with the attachment of the pedal. Fig. 3 is a view illustrating the pedal and the shoe with their attachments in engagement, the engaging parts being illustrated in section, as taken on line 3 3, Fig. 1. Fig. 4 is a view in plan showing the pedal attachment and the shoe attachment, the latter overlying the former and as preparatory to being swung or rotated into its interlocking engagement. Fig. 5 is a sectional view in detail of parts as taken on the line 5 5, Fig. 1. Fig. 6 is a perspective view of a block to be hereinafter particularly referred to.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents a pedal, of which *aa* are the foot-bearing members. The pedal has supported upon its top the plate B, comprising a central portion, which has the angular arms *b b*, each comprising the radial inner section 10 and the transversely-extended outer section 12, which is upset in a higher plane from that of the central portion of the plate and the inner portions of said arms. This plate is secured to the pedal as a fixture thereof in any suitable way, a practicable and efficient one being to provide the block *d*, (seen in Figs. 3 and 6,) which has the semicylindrical groove *d*² therein, whereby it conforms closely to the under peripheral portion of the sleeve, which surrounds the pedal-shaft, together with the screws *f*, which pass through the plate B and penetrate with a screw engagement the said block *d*.

In order to further carry out the invention a special attachment is provided upon the bottom of the shoe, the sole of which is apertured thereunder. This attachment for the shoe consists of a central circular plate C, having the approximately radial arms *g g*, which are fastened by the screws *h* upon the sole. The sole is apertured, substantially as seen in Fig. 2, at *i*, whereby the said arms *g* span openings which have greater areas laterally of the arms than the widths of the latter. The plate C is centrally perforated, as seen at *j*, and the sole is apertured, as at *i*², beneath said perforated central part of the plate.

It will be furthermore observed that the pedal attachment B has the central upstanding boss or stud *k*, which may fit within said central perforation at *i*² *j*. The upstanding stud entering the central perforation of foot-plate C centers the devices, whereby their engagements upon the lateral swinging movement of the foot may be facilitated.

The operations of the improved devices are as follows: The rider preparatory to placing his feet upon the pedal gives it a slight turn or ankle-twist, whereby the longitudinal line of the foot is slightly angular to the usual line of the foot while riding. This brings the arms *g* of the foot-plate adjacent the ends of the upset members 12 of the attachment B of the pedal, as seen in Fig. 4, whereupon the

rider may then, by bringing his foot around straight to the usual and natural position, effect the interlocking of the said arms *g*, under said members 12, and thus the foot may not be
5 lifted away from the pedal until the reverse of the last-mentioned movements have taken place for the disengagement.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—
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1. The combination with a pedal having, at its foot-bearing part between the pedal-ends, several members arranged substantially in different locations around on an imaginary
15 circle, of a part to be attached to the bottom of a shoe which comprises several arms or prongs that by a turning movement of the foot may be brought into engagement with the said members of the pedal, whereby the
20 foot may not be lifted away from the pedal.

2. A pedal having, at its foot-bearing part between the pedal-ends, the plate, B, having the several members, *b*, each comprising the radial portion, 10, and the transversely extended member, 12, which is upset and
25 adapted to receive the engagement therewith of radially arranged prongs provided upon

the bottom of the rider's shoe, substantially as and for the purpose set forth.

3. The combination with a pedal having 30 at its foot-bearing part the plate, B, having centrally the upstanding stud, *k*, and provided with the several members, *b*, each comprising the radial portion, 10, and the transversely extended upset member, 12, of a shoe 35 having its sole recessed and having secured thereon the sole-plate, C, which is centrally perforated and which has the outwardly extending arms or prongs, *g*, *g*, substantially as and for the purposes set forth. 40

4. A pedal having, at its foot-bearing part, the plate, B, provided with the several members, *b*, each comprising the radial portion, 10, and the transversely extended member, 12, which is upset, the block, *d*, having the 45 recess, *d*², whereby it conforms to the pedal-shaft or its surrounding tube, and the screws, *f*, *f*, passed through the said plate and penetrating said block, substantially as described.

CHARLES M. HANSON.

Witnesses:

K. I. CLEMONS,
H. A. CHAPIN.