

No. 632,467.

Patented Sept. 5, 1899.

C. H. MARTIN.
CUSHION HEEL.

(Application filed Apr. 24, 1899.)

(No Model.)

Fig. 1.

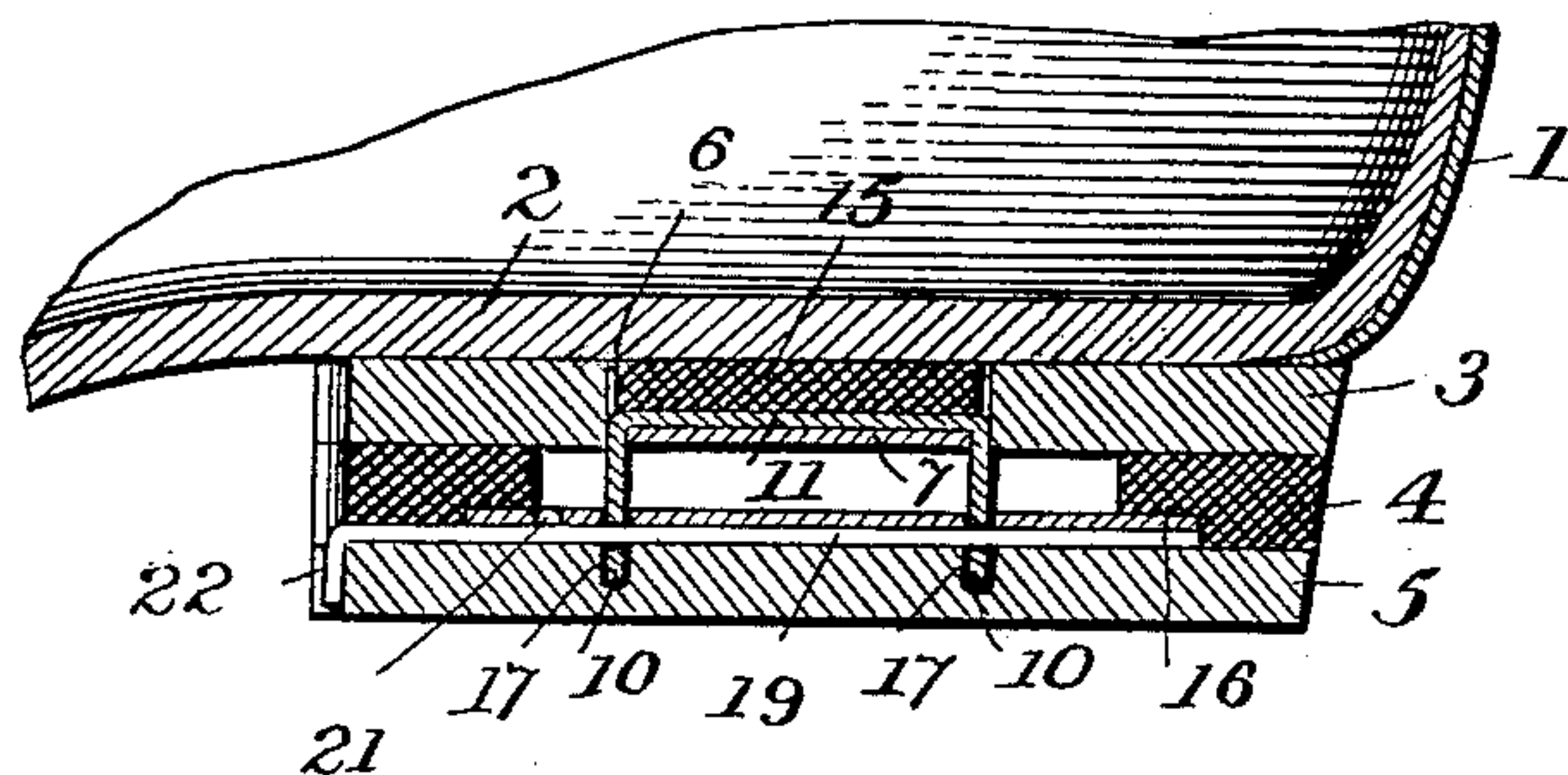


Fig. 2.

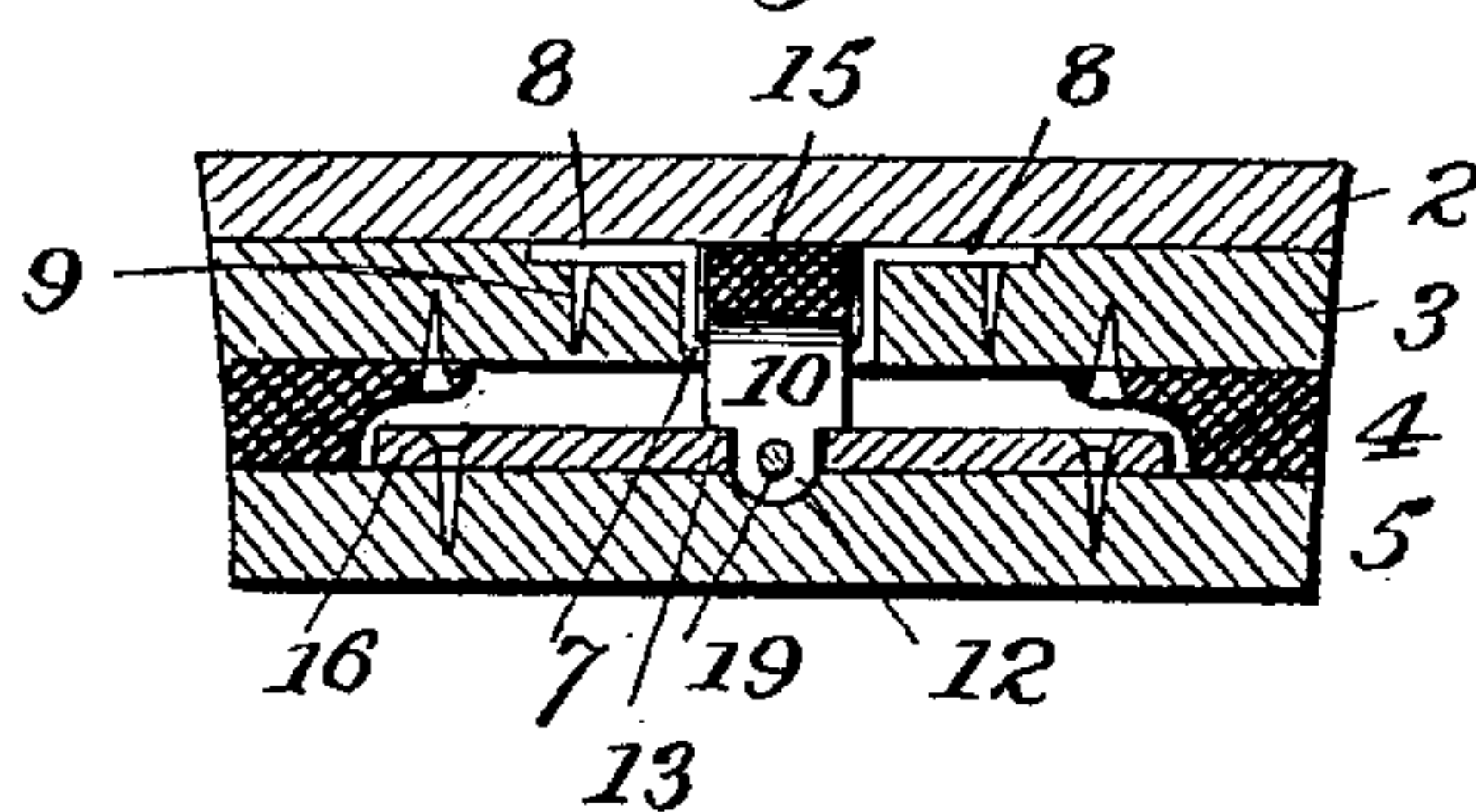


Fig. 3.

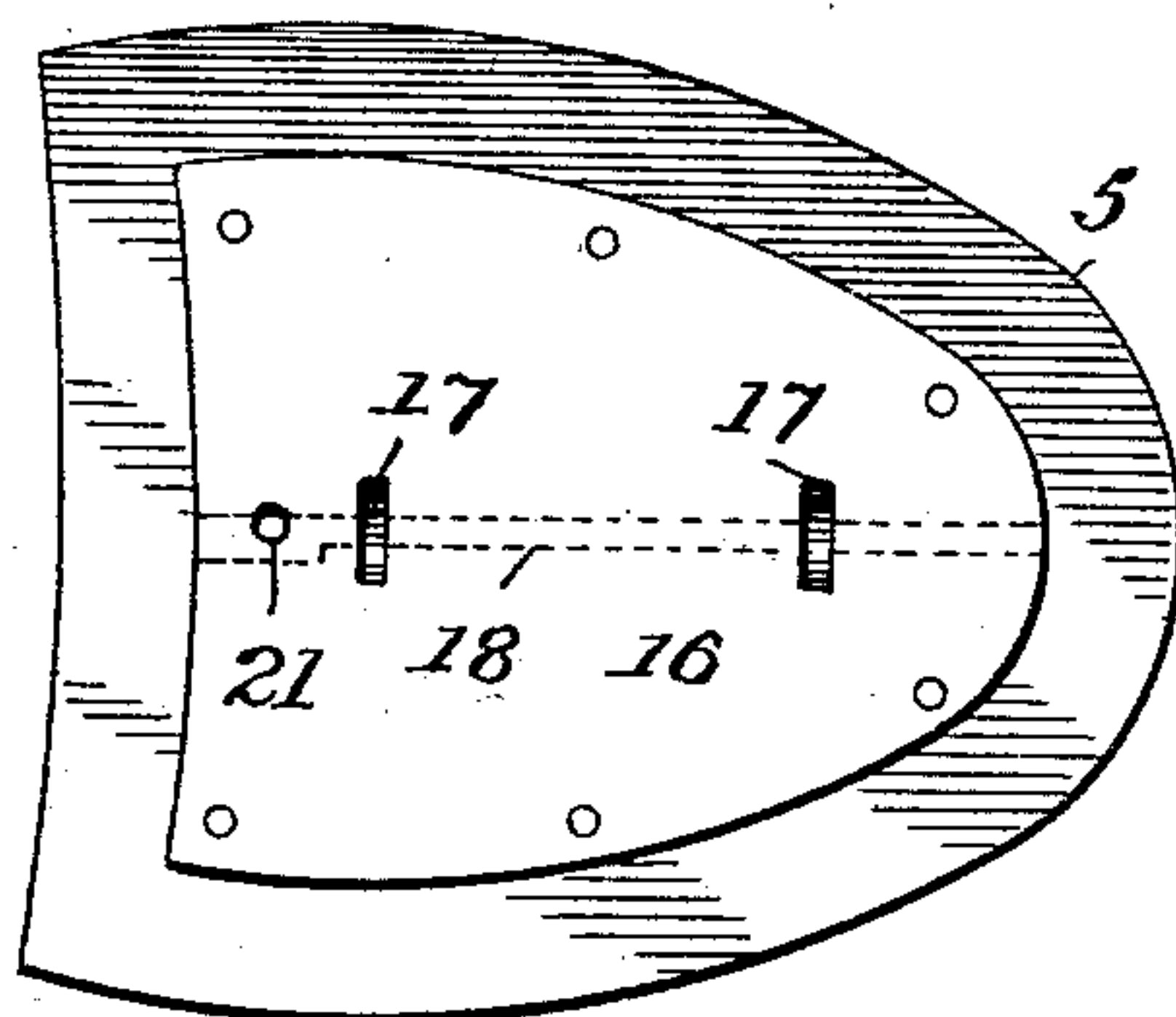


Fig. 5.

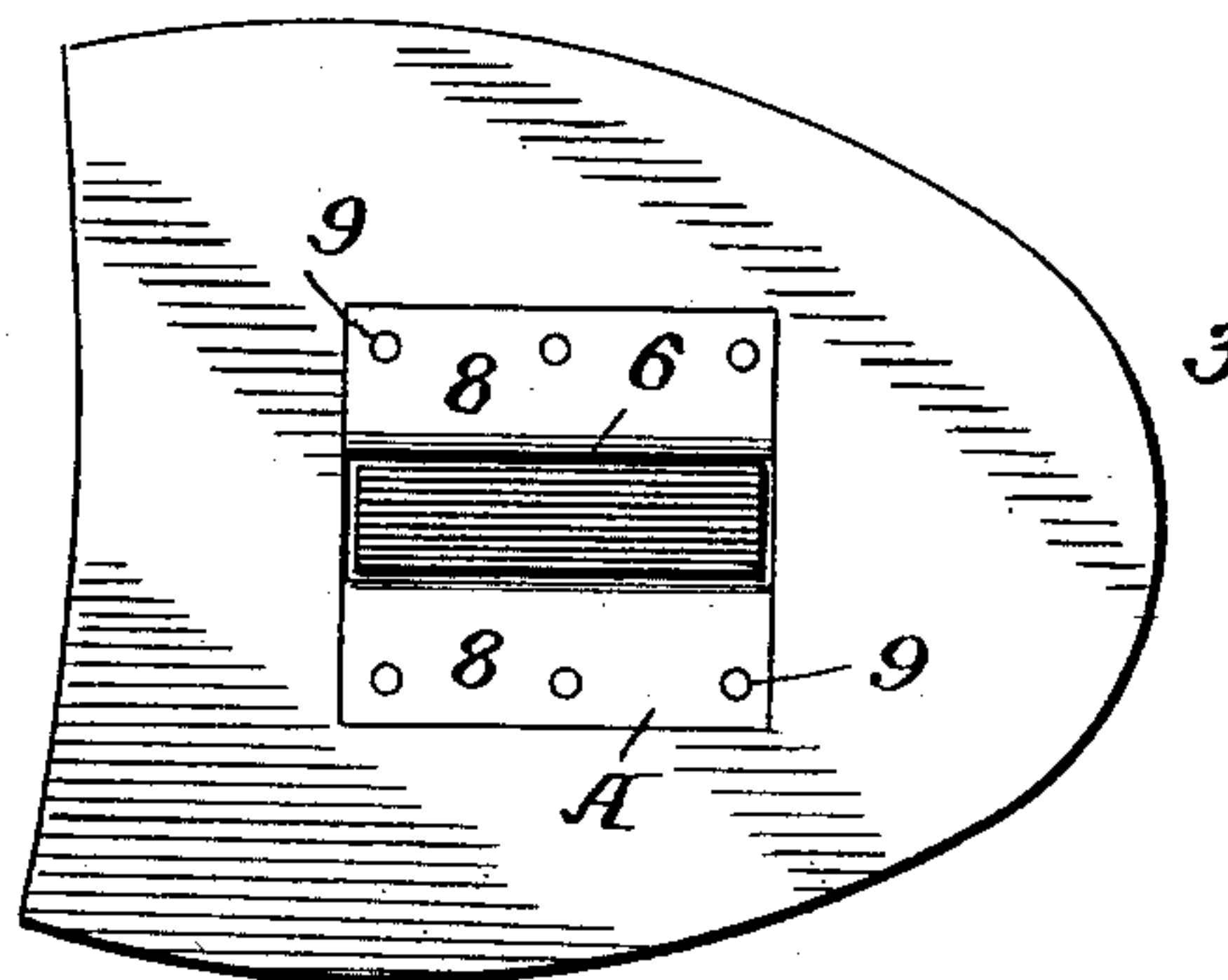
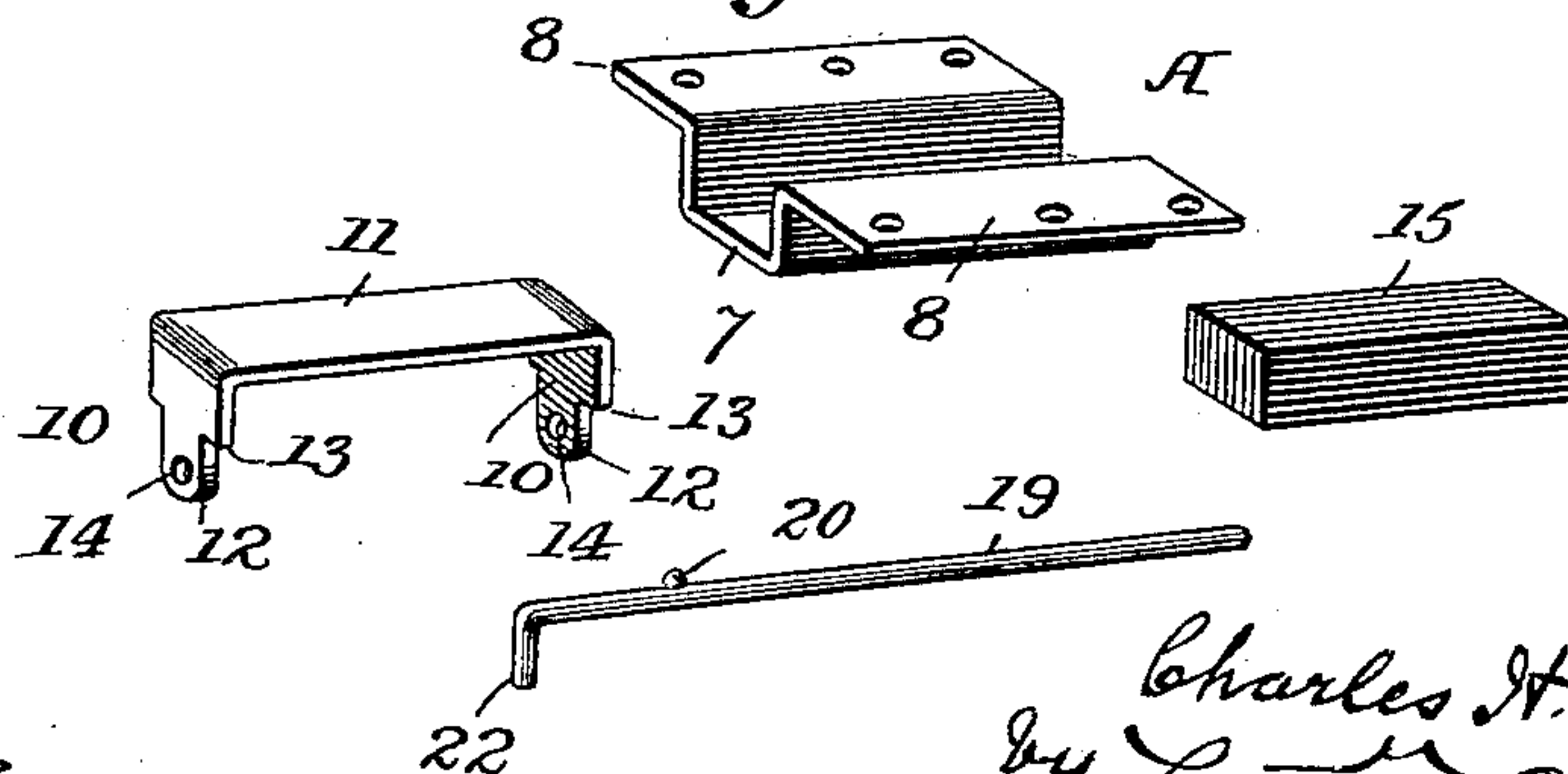


Fig. 4.



Witnesses
J. H. Hinkel
Philip Farnsworth

Inventor
Charles H. Martin
by *Lucas Lamm*
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES H. MARTIN, OF FREDONIA, NEW YORK.

CUSHION-HEEL.

SPECIFICATION forming part of Letters Patent No. 632,467, dated September 5, 1899.

Application filed April 24, 1899. Serial No. 714,247. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. MARTIN, a citizen of the United States, residing at Fredonia, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Cushion-Heels, of which the following is a specification.

This invention relates to cushion or spring heels for boots or shoes, its object being to simplify and improve the construction of devices of this character, whereby their efficiency and durability will be increased.

The invention will be fully described in the following specification and its novel features defined in the claims.

In the drawings, Figure 1 is a sectional side elevation of a cushion or spring heel made in accordance with my invention. Fig. 2 is a section on the line xx of Fig. 1. Fig. 3 is a plan view of the top lift and its locking-plate. Fig. 4 is a group of detached details in perspective. Fig. 5 is a plan view of the fixed lift, showing the trough-shaped plate secured to it and the cushion in the plate.

Similar reference-numerals indicate similar parts in the several figures.

The numeral 1 indicates part of an ordinary boot or shoe, 2 the sole thereof, and 3 a lift of the heel, which is secured to the sole.

To the under side of the lift 3, or it may be to the under side of the heel portion of the sole, or to any other lift of the heel, a cushion 4 is secured by any suitable means—such as cement, staples, nails, or other fastening devices—and such cushion may be solid, tubular, or pneumatic, and may be of any shape cross-sectionally, as preferred. In plan view it will conform on its outer edge to the exterior shape of the heel in order to give a good appearance to the latter.

5 indicates the top lift of the heel, which is detachably locked in position in a manner to be hereinafter referred to.

While I have in the drawings illustrated the cushion 4 interposed between the top lift 5 and a lift 3, secured to the sole 2, it is to be understood that said cushion may be located at any desired place in the heel between the sole and the top lift, as the number of lifts in the heel does not in any manner affect my invention.

To avoid confusion in the use of terms, I

shall in the further description of the invention refer to the fixed lift 3 and the top lift 5, but in the claims I shall use the words “supporting-base” to designate that part of the heel to which the cushion is attached, it being understood that such words include any lift of a heel or the heel portion of the sole, and also the words “detachable heel portion” to designate that part of the heel between the cushion and the tread-surface, and which may include one or more lifts.

An elongated opening 6 is formed in the fixed lift 3, into which the trough 7 of a suitably-bent metal plate A is fitted, while the wings or flanges 8 of said plate are secured to the lift 3 by nails 9 or similar fastening devices. The opening 6 is longer than the trough 7, and a space is left at each end through which the arms 10 of a locking-bar 11 project. This bar 11 lies in the bottom of the trough 7, and the arms 10 are integral therewith and bent to lie at substantially a right angle to it. Each arm 10 has a reduced end 12 and bearing-shoulders 13, and the reduced ends 12 are perforated, as indicated at 14.

In the trough 7 above the locking-bar 11 is a rubber block 15, which when the parts are assembled will bear against the sole or whatever may be immediately above it and act as a spring to normally hold the locking-bar in the bottom of the trough, but permit it to move vertically therein under pressure, as will be referred to hereinafter.

To the inner face of the top lift 5 is firmly secured a metal locking-plate 16, provided with two transversely-extending elongated openings 17, through which the reduced ends 12 of the arms 10 project, and the shoulders 13 of said arms are designed to rest squarely on the plate 16 when the parts are assembled. The plate 16 is also provided with a longitudinally-extending groove 18 in its face opposing the lift 5, which groove intersects the openings 17 and is for the passage of the locking-pin 19, which latter passes through the perforations 14 in the arms 10, and thus securely locks the top lift 5 to the fixed lift 3, but by simply removing the pin 19 the lift 5 can be easily removed. Any suitable means may be employed to lock the pin 19 against accidental displacement, and one simple way is to provide the pin 19 with a lug 20, adapt-

ed to be turned into an opening 21 in the plate. It will be necessary to enlarge the groove 18 at its front end to permit the lug to pass, and preferably the pin 19 will have its
5 outer end bent to form a handle 22 for more conveniently operating the pin.

From the foregoing it will be seen that when weight is applied to the heel the cushion 4 will yield and permit the lift 5 to approach
10 the lift 3, and in such movement the locking-bar 11 will be moved vertically in the trough 7 and compress the rubber block 15, which will thus aid the cushioning effect of the cushion 4. It will also be seen that the top
15 lift 5 will effectually protect the cushion from wear, and when the former becomes worn it can easily be detached and replaced by a new one.

The devices for connecting and locking the
20 top lift to the cushion supporting-base are very simple and yet afford a strong and rigid connection and effectually prevent the top lift from twisting out of position.

Having described my invention, I claim—
25 1. In a spring-heel for boots and shoes, a supporting-base, an elastic cushion secured to the base, a detachable heel portion fitted against the cushion, a locking-bar connected to the said base, an inclosed yielding bearing
30 for the locking-bar and means to detachably secure said bar to the detachable heel portion, substantially as set forth.

2. In a spring-heel for boots and shoes, a supporting-base, an elastic cushion secured
35 to the base, a trough-shaped metal plate secured to the supporting-base, a spring-pressed

locking-bar supported in the trough, a detachable heel portion fitted against the cushion, and means to detachably secure the locking-bar to the detachable heel portion, substantially as described. 40

3. In a spring-heel for boots and shoes, a supporting-base, an elastic cushion secured to the base, a trough-shaped metal plate secured to the supporting-base, a locking-bar
45 supported in the trough, a spring interposed between the base and the locking-bar, a detachable heel portion fitted against the elastic cushion, and means to detachably secure the detachable heel portion to the locking-bar, 50 substantially as described.

4. In a spring-heel for boots and shoes, a supporting-base, an elastic cushion secured to the base, a detachable heel portion fitted against the elastic cushion, a locking-plate
55 provided with openings secured to the detachable heel portion, a locking-bar yieldingly connected to the supporting-base and having shouldered and perforated arms to enter the openings in the locking-plate, and 60 a removable pin extending through the perforations in the said arms to lock the latter in position in the locking-plate, substantially as described.

In testimony whereof I have signed my
65 name to this specification in the presence of two subscribing witnesses.

CHARLES H. MARTIN.

Witnesses:

DANIEL O'BRIEN,
HENRY B. WHITE.