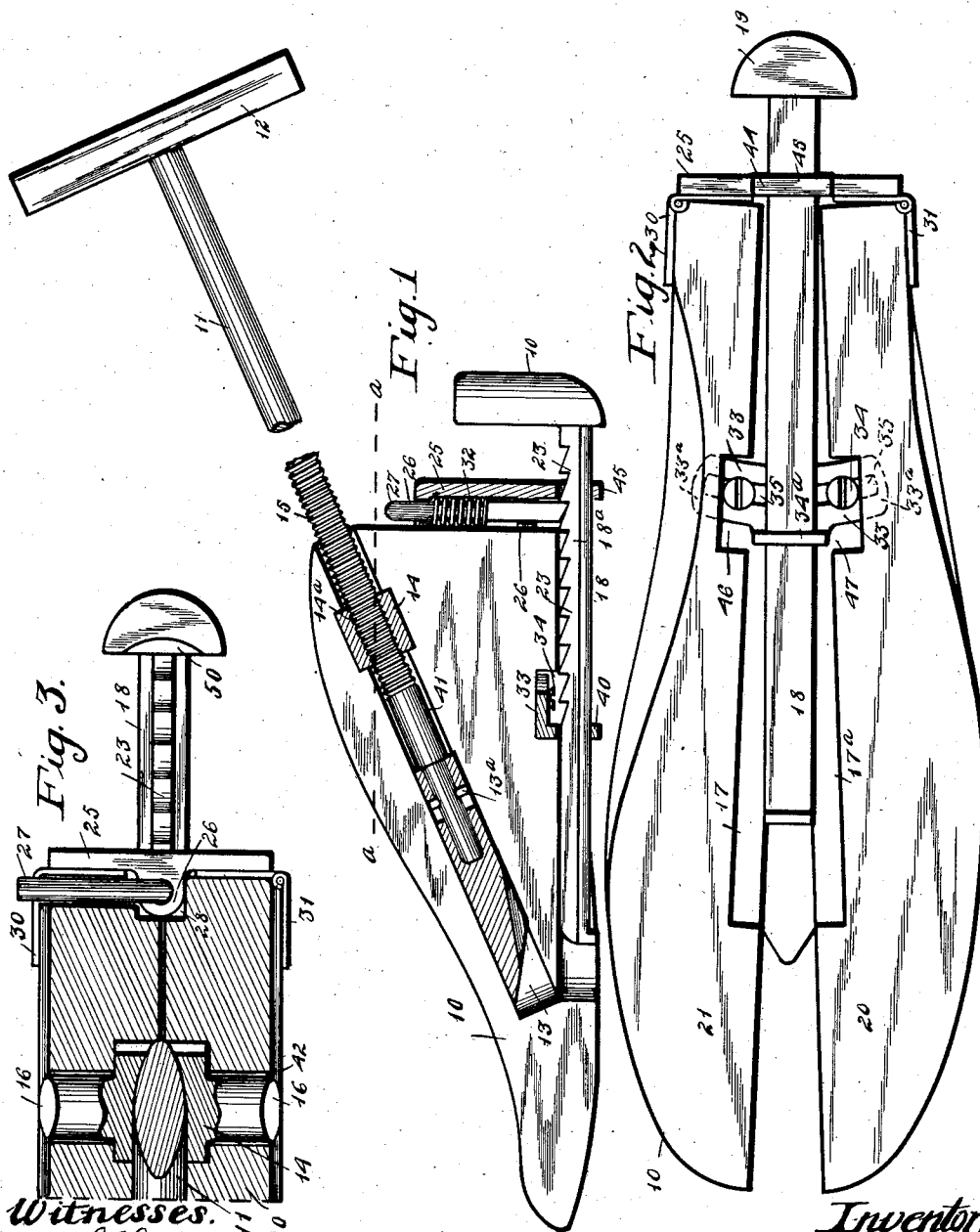


E. PETERSON.
SHOE STRETCHER.
APPLICATION FILED NOV. 19, 1910.

1,010,685.

Patented Dec. 5, 1911.



Witnesses.
W. S. H. H. H.
A. J. H. H.

Inventor.
Erland Peterson.
by J. Ralph Drwigatt.

UNITED STATES PATENT OFFICE.

ERLAND PETERSON, OF DES MOINES, IOWA.

SHOE-STRETCHER.

1,010,685.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed November 19, 1910. Serial No. 593,261.

To all whom it may concern:

Be it known that I, ERLAND PETERSON, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Shoe-Stretcher, of which the following is a specification.

The object of my invention is to provide an improved and useful shoe stretcher of simple construction, comprising an ordinary shoe last with the heel portion cut away, composed of two members, ordinary means for spreading the same apart laterally, a heel portion of said stretcher designed to engage the counter of the shoe and to prevent any backward motion of the last members while the shoe is being stretched laterally.

A further object is to provide simple, durable and inexpensive means for adjusting said heel portion of the stretcher in any desired position of its rearward or forward movement with relation to the last portion thereof, and means for holding it firmly in said adjusted position.

A further object is to provide simple, inexpensive and efficient means for limiting the lateral movement of the members of the last.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of a stretcher embodying my invention and having one last member removed, the spreading block being shown in section. Fig. 2 shows an inverted, plain view of my improved shoe stretcher, and Fig. 3 shows a top, sectional view drawn on the line *a-a* of Fig. 1.

Referring to the accompanying drawings, I have used the reference numeral 11 to indicate a metal rod, the lower length of which is threaded and which has at the other end a cross bar or handle 12. At the lower end of said rod is a spreading block 13 substantially triangular in shape and rotatably mounted on the rod 13 at the center of one of its sides at 13^a. The other sides of the spreading block 13 are slightly rounded. Above the block 13, on the rod 11, is a cross block 14 having an opening 14^a which

is threaded. The rod 11 passes through the opening 14^a of the cross block 14, the threads on the rod being in engagement with the threads on the inner surface of the cross block which is designed to work freely on the rod 11. Extending laterally from each side of the cross block 14 are arms 16. The stretching device just described is of the ordinary construction used by shoe dealers.

The numeral 18 indicates a bar preferably made with a central flange on its upper surface, the said flange having teeth or notches 23 on its upper side. At one end of the bar 18 is an upwardly extending block 19 which is rounded upon its rear surface and is designed to engage and fit the counter of a shoe, and which has the upper portion of its inner or front surface 50 slightly cut away and is designed at that point to permit the finger of the operator to engage the said block when it is placed in position against the plate 25, for the purpose of sliding the block and the bar 18 rearwardly. Upon the bar 18, substantially midway of its length, is a cross plate 33 having wings 33^a and a downwardly extending flange 34^a constructed with an opening 40 through which is passed the bar 18 and which is designed to work freely on said bar and serves as a guide for same. The wings 33^a are constructed with openings 35 substantially rectangular in shape and designed to work freely upon pins or screws 34 which are driven or screwed firmly into the last members 20 and 21 hereinafter described, the said wings thus permitting a limited lateral movement of the said last members.

The numeral 10 indicates the body of an ordinary shoemaker's last, the heel portion of which is lacking, that is divided longitudinally into members 20 and 21. Grooves 41 are cut in the adjacent surfaces of the members 20 and 21 extending from the lower part of the last near the toe upwardly and rearwardly through the last members. The rod 11 is placed in the said grooves, the sides of the grooves being parallel to and spaced slightly apart from the surface of the rod 11 and designed to permit said rod to work freely in the grooves. Said grooves are cut wider at a point near the upper and rearward end thereof, the sides of the grooves at this point being parallel to the surfaces of the cross block 14 and engaging the said block frictionally when the stretcher is in a normal position. The last members

20 and 21 are constructed with openings 42 of the same shape as the arms 16 of the cross block 14 and corresponding thereto, in which openings the arms 16 work freely.

- 5 The rod 11 and the spreading bar 13, as well as the parts of the last in which they are received are of the ordinary construction used in shoe stretchers.

- At the rear of the last members is a plate 25 which is hinged at its sides to the last members 20 and 21 by the hinges 31 and 30 respectively. The said plate and the hinges 31 and 30 permit the members 20 and 21 to spread apart at the toe end while preventing any separation at the rear end. Extending downwardly from said plate 25 is a tongue 44 through which is cut an opening 45 in which the bar 18 is slidingly mounted. On the inner surface of the plate 20 45 are lugs 26 in which the pin 27 herein-after described is slidingly mounted in upright position.

- In the under surfaces of the members 20 and 21 are grooves 17 and 17^a, the grooves 25 in the member 21 corresponding to the grooves in the member 20 when the adjacent faces of said members are placed together, the said grooves being cut with their sides adjacent to and spaced slightly away from the bar 18 which is placed therein. On 30 the lower surfaces of the members 20 and 21 the grooves 46 and 47 extend laterally from the grooves 17 and 17^a and are designed to receive the wings 33^a of the plate 33. The members 20 and 21 have on their 35 rear surfaces corresponding vertical grooves 28 designed to receive the lugs 26 and the pin 27. The pin 27 is slidingly mounted in the lugs 26. The pin 27 is preferably cylindrical in form for part of its length between the lugs 26 while it is larger and preferably rectangular in cross section in its lower length between said lugs. The form 40 of the pin 27 may be varied, the form shown being simply one possible construction. Between the lugs 26, upon the smaller portion of the pin 27, is mounted a spiral spring 32. The lower end of the pin 27 is formed to fit 45 closely in the teeth or notches 23 and is normally held in engagement therewith by the spring 32. As will be seen from the drawings, the notches 23 and the lower end of the pin 27 are so constructed that the bar 18 may be moved rearwardly without any 50 necessity for the operator's lifting the pin while it is necessary to raise the pin to move the bar 18 forwardly, the notches 23 being cut with a perpendicular face toward the toe portion and with a slanting surface extending from the bottom of the notch upwardly and forwardly, the end of the pin 55 27 being made to conform to the shape of such notches. This form of the notches is preferable but may be varied to suit the convenience of the maker providing that in any

case the notches should be so made as to engage the pin 27 in such a manner that forward motion of the bar 18 cannot be had except by the operator's raising the pin 27. The upper end of the said pin may be bent 70 at right angles to its main shank or may be constructed with a head or block to furnish convenient means whereby the operator of the stretcher may raise it and disengage its lower end from the notches 23.

In the operation of my stretcher the last is placed in a shoe; the block 19 at the end of the bar 18 is placed in position against the counter of the shoe and is adjusted and held firmly in any desired position by means 80 of the pin 26 which is normally held in engagement with the teeth 23 by the spring 32; the rod 11 is turned in the block 14 and the threads of said block act upon the threads of the rod 11 and force the spreading block 13 downwardly between the last 85 members 20 and 21. The spreading block 13 engages the said members and spreads them laterally apart at their forward ends as the greater width of the spreading block is forced downwardly into the tapering end 90 of the groove 41. In this way the shoe is stretched laterally while the last 10 cannot move backwardly.

As above described the bar 18 may be 95 easily adjusted in any desired position of its movement by the operator who can push on the block 19 and slide the said block and the bar 18 rearwardly. A forward movement of the bar 18 is prevented by the pin 100 27 which may however be readily raised by the operator and the bar 18 moved forwardly with relation to the last members.

By means of the plate 33 and the pins or screws 34 the lateral movement of the members 20 and 21 is limited and the inconvenience of a wide spreading apart of the said 105 members is avoided. The flange 34^a of the plate 33 and the tongue 44, of the plate 25 in which the bar 18 is slidingly mounted, serve as guides for said bar. 110

My improved shoe stretchers are preferably constructed in pairs designed to fit right and left shoes. By using a last made to fit a right or left shoe respectively the 115 shoe is stretched to fit the foot, whereas if the same last is used for both right and left shoes either one or both shoes will be stretched out of the proper shape. Plugs with short shanks may be set in holes in the 120 sides of the last as in any ordinary shoe stretcher for the purpose of stretching the leather of any small area.

I claim as my invention:

1. In a device of the class described, an 125 ordinary shoe maker's last with the heel portion cut away, divided longitudinally into two members, said last members being constructed with longitudinal grooves on their lower surfaces which are adjacent to 130

each other when the surfaces of the last members are placed together; a plate hinged to the outer sides of the respective members at their rear ends, a downwardly extending
5 lug on said plate constructed with an opening therein, a bar slidably received in said grooves and slidably mounted in the opening in said lug constructed with notches or teeth on its upper surface, a vertical pin
10 slidably mounted on said plate and designed to engage such teeth or notches, and to prevent the forward movement of said bar, means for holding said pin in normal engagement with said bar, a block at the rear
15 end of said bar designed to engage the counter of a shoe, and means for spreading the said last members apart laterally.

2. A shoe stretcher comprising an ordinary shoe maker's last, with the heel portion cut away, divided longitudinally into
20 two members, a plate extending across the

rear surface of said last members and hinged to the outer sides thereof, constructed with a central downward extension and with lugs extending at right angles from its
25 surface, a longitudinal bar slidably mounted in said downward extension, constructed with notches on its upper surface, said notches being cut with vertical surfaces toward the toe of the stretcher, an upwardly
30 extending block secured to the rear end of said bar and designed to engage the counter of the shoe, a vertical pin slidably mounted in the lugs on said plate designed to engage the notches of said bar, and means for ex-
35 erting yielding pressure on said pin to hold it in normal engagement with said notches.

Des Moines, Iowa, Nov. 16, 1910.

ERLAND PETERSON.

Witnesses:

A. G. HAGUE,
W. A. LOFTUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."