

(No Model.)

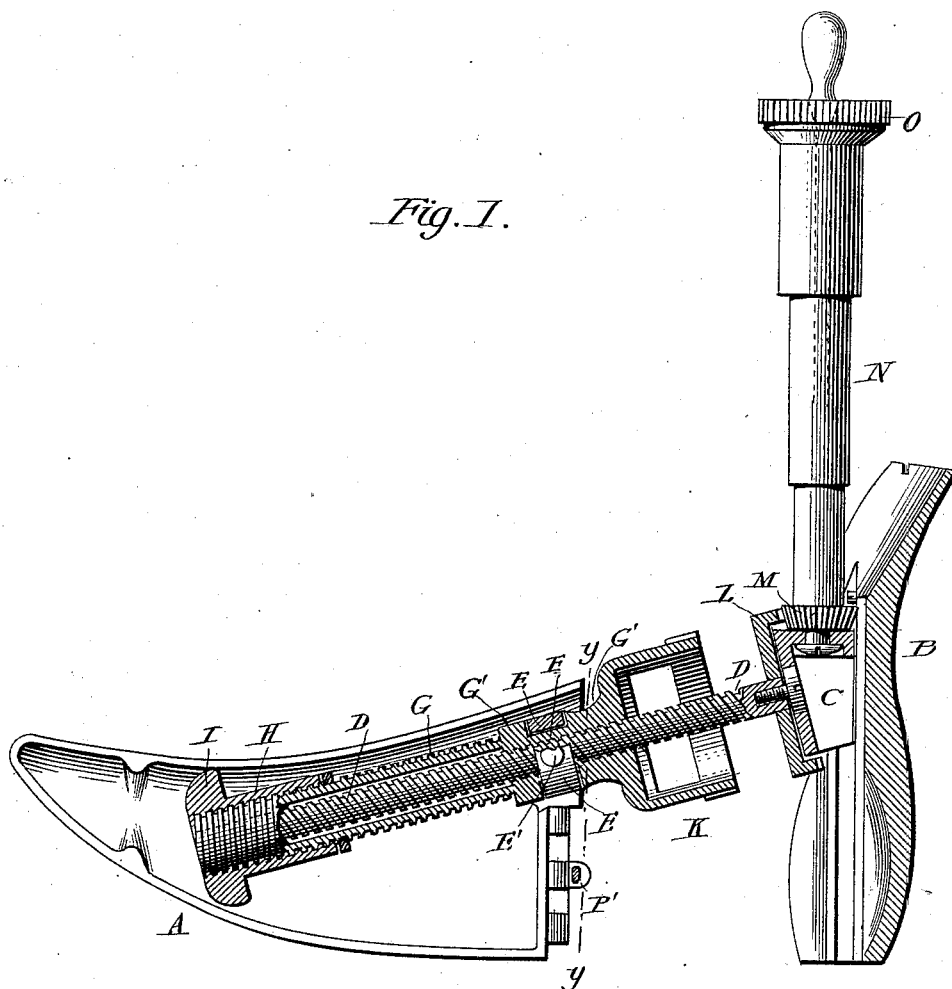
2 Sheets—Sheet 1

J. DONOVAN.  
BOOT OR SHOE STRETCHER.

No. 385,508.

Patented July 3, 1888.

*Fig. 1.*



WITNESSES:

*J. Clark.*  
*C. Sedgwick.*

INVENTOR:

*J. Donovan.*  
BY *Munn & Co.*  
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

J. DONOVAN.

BOOT OR SHOE STRETCHER.

No. 385,508.

Patented July 3, 1888.

Fig. 2.

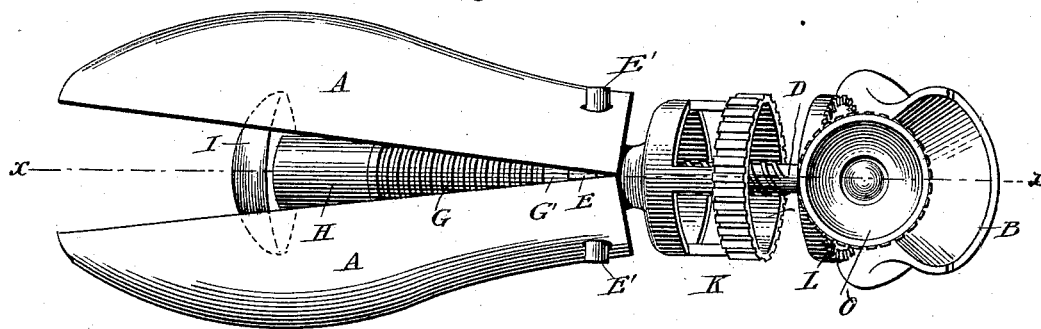
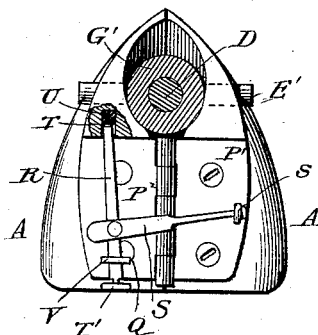


Fig. 3.



WITNESSES:

*J. S. Clark*  
*W. Sedgwick*

INVENTOR:

*J. Donovan*  
BY *Munn & Co*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN DONOVAN, OF BOSTON, MASSACHUSETTS.

## BOOT OR SHOE STRETCHER.

SPECIFICATION forming part of Letters Patent No. 385,508, dated July 3, 1888.

Application filed December 20, 1887. Serial No. 258,411. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DONOVAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Boot or Shoe Stretchers, of which the following is a full, clear, and exact description.

My invention relates in particular to an improvement on the boot or shoe stretcher for which United States Letters Patent No. 355,006 were issued to me, JOHN DONOVAN aforesaid, December 28, 1886.

The object of the present improvement is to provide for a more convenient adjustment of the toe-pieces laterally and of the heel-piece longitudinally when the stretcher is in place in the boot or shoe, and for the ready interchangeability of toe-pieces of various sizes to suit different shoes.

To this end the invention consists of a novel construction and combination of parts, substantially as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional view of a boot or shoe stretcher embodying my improvement, taken on the line *xx*, Fig. 2. Fig. 2 is a plan view of the said stretcher; and Fig. 3 is a rear sectional view on the line *yy*, Fig. 1, showing the fastening of the detachable toe-pieces.

A designates the hinged toe-pieces of the stretcher; B, the heel-piece; C, the step on which the heel-piece B is mounted to slide, and D the heel-piece-adjusting screw journaled to the step C, all arranged substantially as in my previous patent before mentioned.

The toe-pieces A are provided at their rear ends with a rocking bearing, E, arranged like the rocking nut of my former patent, in which bearing a nut, F, is mounted to turn, while held from movement lengthwise therein by collars G', loosely embracing the bearing.

The heel-piece-adjusting screw D works lengthwise in the nut F and carries with it the heel-piece, as in my former patent.

The revoluble nut F is formed on the inner end of a hollow screw, G, in which the free end

of the screw D works, and on which works a nut, H, having a transverse oval-shaped head, I.

The toe-pieces A are chambered on their adjacent sides to receive the ends of the head I, and thus prevent the nut H from turning with the hollow screw G, and the outer walls of said chambers converge forward, so that when the hollow screw G is properly turned by means of the hand-burr K, which is formed on the inner end thereof, the nut H will advance and its head I act as a spreader to separate the toe-pieces A.

On the inner end of the adjusting screw D is fixed a gear, L, which is engaged with a smaller gear, M, fixed on the lower end of an upright spindle, N, which is also mounted to turn in the step C.

The upper end of the spindle N is arranged to project upward, so as to be convenient of access from outside the boot or shoe being stretched, and is provided with a hand-burr, O, by turning which the screw D is worked in its nut F, causing the heel-piece to be carried forward or backward, as the case may be.

In using this stretcher it is adjusted so that it can be readily introduced into the boot or shoe, and when introduced the burr K is first turned to properly stretch the toe laterally, and then the burr O to stretch the shoe lengthwise. In removing the stretcher the reverse order of operation is employed.

To provide for readily detaching the toe-pieces from the stretcher and substituting different toe-pieces, as for a boot or shoe of widely-different size, one leaf, P', of the hinge by which the toe-pieces are connected is permanently secured to the corresponding toe-piece A, while the other leaf, P<sup>2</sup>, has holes, in which are received removable studs Q, fixed on the other toe-piece.

A bolt, R, is pivoted on the end of a rod, S, mounted to slide lengthwise in a guide, S', fixed to the hinge-leaf P' or to the corresponding toe-piece, and one end of the bolt R is adapted to be received in a socket, T, formed in the other toe-piece at one side of the leaf P<sup>2</sup>, while its other end, which is shouldered, is received in a keeper, T', on the said toe-piece on the other side of the leaf P<sup>2</sup>, which is thus spanned by the bolt. An elastic block, U, is preferably placed in the socket T, to hold the shoulder on

the opposite end of the bolt R in engagement with the keeper, and a thumb-piece, V, is formed on the bolt, by which it may be pressed into the socket T until disengaged from the keeper T', and then withdrawn from the socket T, swung out of the way, and the hinge-leaf P<sup>2</sup> raised from the studs Q, to permit the separation of the toe-pieces and their removal from the trunnions E' of the bearing E, on which they are mounted. Different toe-pieces provided with like fastening devices may then be substituted for those removed.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a boot or shoe stretcher, the combination of separable toe-pieces, a rocking bearing mounted in the toe-pieces, an adjusting-screw swiveled in the said bearing, with its inner end projecting between the toe-pieces, and a nut on the inner end of the screw and adapted to be moved back and forth thereon by turning the said screw, substantially as described.

2. In a boot or shoe stretcher, the combination of separable toe-pieces, a rocking bearing, a hollow toe-piece-adjusting screw swiveled in said bearing and internally screw-threaded at one end, a spreader on the end of the adjusting-screw, and a heel-piece-adjusting-screw

working in and engaging the internal screw-threads of the said toe-piece-adjusting screw, substantially as described.

3. In a boot or shoe stretcher, the combination of toe-pieces, a nut held thereon, an adjusting-screw working lengthwise in said nut, a step in which the adjusting-screw is journaled, a heel-piece carried by the step, a gear on the adjusting-screw, an upright spindle having its bearing in the step, a gear on the spindle engaging that on the adjusting-screw, and a hand-burr on the spindle, substantially as described.

4. In a boot or shoe stretcher, the combination, with a pair of detachable toe-pieces, of a hinge having one leaf secured permanently to one toe-piece, and holes in its other leaf, studs on the other toe-piece adapted to said holes, and a catch for holding the studs in the holes, substantially as described.

5. In a boot or shoe stretcher, the combination of a pair of toe-pieces, a hinge having one leaf attached to one toe-piece, and a catch on the other toe-piece for securing the other leaf detachably thereto, substantially as described.

JOHN DONOVAN.

Witnesses:

FRANCIS S. HESSELTINE,  
WM. H. HART.