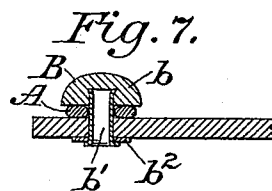
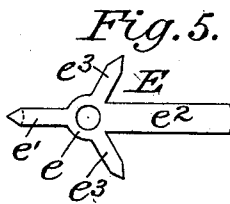
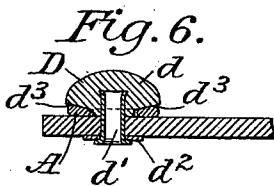
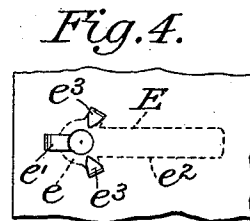
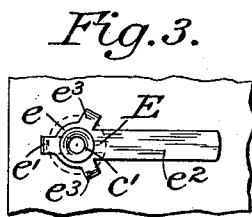
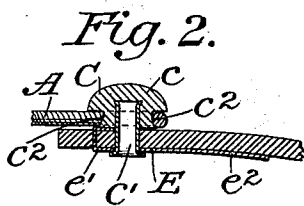
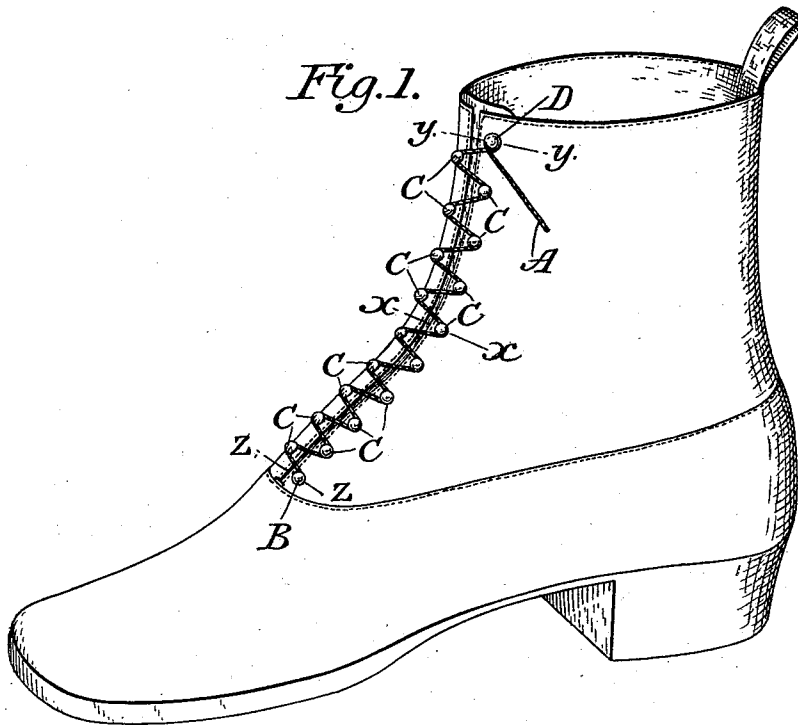


(No Model.)

J. M. BRANIG.
SHOE FASTENING.

No. 499,201.

Patented June 13, 1893.



Attest:

A. N. Jesbera
A. Thider.

Inventor:

by Julius M. Branig
by William B. Greeley
Atty.

UNITED STATES PATENT OFFICE.

JULIUS M. BRANIG, OF NEW YORK, N. Y.

SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 499,201, dated June 13, 1893.

Application filed September 21, 1892. Serial No. 446,363. (No model.)

To all whom it may concern:

Be it known that I, JULIUS M. BRANIG, of the city, county, and State of New York, have invented certain new and useful Improvements in Shoe-Fastenings; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

It is commonly admitted that of the various forms of shoe-fastening the lace is the best, both in neatness of appearance and comfort to the wearer as well as in ease of securing. The chief objection to this form of fastening is the rapidity with which the laces wear out, while the difficulty of tying, though itself an objection, is slight as compared with the objections to other forms of fastening. It is therefore the object of my invention to overcome as far as possible the disadvantages already named which are incident to the usual form of a lace fastening. It is well known that the rapid wear of a lace is due to the friction between it and the eyelets or studs with which it engages, the lace being drawn through or over them with considerable tension while the shoe is being fastened and being constantly rubbed against them by reason of the natural movements of the foot. I have provided for the prevention of this constant friction by substituting for the usual eyelet or stud an improved stud which will rotate on its axis as the lace is drawn over it and will not bind when the lace is drawn tight. I have also provided for the fastening of the lace without the necessity of tying.

In the drawings: Figure 1 is a perspective view of a shoe having my improved studs applied. Fig. 2 is a section on the line $x-x$ of Fig. 1, showing one of the intermediate studs. Fig. 3 is an under side view of a portion of the shoe-top showing the supporting device for an intermediate stud. Fig. 4 is an outside view of the same, the stud being removed. Fig. 5 is a plan view of the blank for the stud-supporting device. Fig. 6 is a section on the line $y-y$ of Fig. 1, showing the topmost stud of the series; and Fig. 7 is a section on the line $z-z$ of Fig. 1, showing the first or lowermost stud of the series.

I prefer to employ a single lace A which is

secured to the first or lowermost stud B, is then passed from side to side about the intermediate studs C, C, and is finally fastened without tying about the uppermost stud D. The first stud B has a head b and a shank b' which is passed through the material of the shoe-top and through a burr b^2 and has its end overturned upon the burr. The lace A may be secured to the stud B by tying or in any convenient manner, or the lace may, if desired, be secured to the shoe-top in any other way. The stud D has also a head d , a shank d' and a burr d^2 , but the head is beveled slightly, as shown at d^3 in Fig. 6, so that the lace, when drawn into the space between the head of the stud and the material of the shoe-top, shall be securely held without tying. Each of the intermediate studs C, C, has also a head c and a shank c' , the head c having on its under side an annular shoulder c^2 to receive the lace A. Each stud C, instead of being riveted down tightly upon the shoe-top, is held therein so that at all times and under all conditions it may turn freely on its axis as the lace A is drawn about it. To this end, instead of being secured in place by an ordinary annular burr, it is supported and held by a stud-support or washer E. The latter is formed preferably about as shown in Fig. 5 and consists essentially of a burr or washer e having a prong e' and a diametrically opposite wing or finger e^2 . It may have also other prongs e^3 , e^3 . When applied to the shoe the prong e' is passed up through the material of the shoe-top and is turned back under the head c of the stud to form a bearing therefor, as shown in Fig. 2. When first applied the point of the prong preferably overlaps the hole in the washer e and is then cut off by a punch, as shown in Fig. 4 and by the dotted lines in Fig. 5, so that its end shall form a lateral bearing for the shank of the stud. The prongs e^3 , e^3 , are also passed through the material of the shoe-top to more securely hold the support in place. The wing or finger e^2 extends rearwardly from the edge of the material and lies close against its under surface. Finally the shank c' of the stud C is passed through the material of the shoe-top and through the hole of the washer and is overturned as usual, but is not hammered down so tightly as to interfere with the free rota-

tion of the stud. In practice a thin plate of metal will be slipped between the head of the stud and the shoe-top when the shank is being riveted down, and will then be withdrawn, thereby insuring the necessary looseness.

When my improved stud is in use and the lace is drawn tightly against the stud, as shown in Fig. 2, the shank of the stud will bear against the end of the prong e' and the wing or finger e^2 , resting against the under surface of the shoe-top, will prevent the tilting of the stud to such a degree as to cause it to bind. As a result the stud is always free to turn as the lace moves about it and there will be little or no friction on the lace to wear it out. Furthermore the under side of the head c has a bearing upon the metal prong and will therefore turn more easily than if it had a bearing upon the cloth or leather shoe-top.

I have herein shown and described my improvements as applied to a shoe, but it is obvious that they are equally applicable to any other article, such as a glove or a corset, which is fastened by a lace.

I claim as my invention—

1. The combination with a stud for lace fas-

tenings having a head with a bearing for the lace and a shank to enter a washer, of a washer having a prong turned over to afford a bearing for the under surface of the head of the stud, substantially as shown and described.

2. The combination of a stud for lace fastenings having a bearing for the lace, and a shank and a washer having a prong turned over toward the shank of the stud with its end resting against the shank to afford a bearing for the same, substantially as shown and described.

3. The combination with a stud for lace fastenings freely rotatable on its axis and having a head with a bearing for the lace and a shank to enter a washer, of a washer having a rearwardly extending finger and a prong turned up in front of the shank to afford a bearing for the stud, substantially as shown and described.

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

JULIUS M. BRANIG.

Witnesses:

A. N. JESBERA,

A. WIDDER.