(No Model.)

A. H. JONAS & J. J. BRAENDLY.

SHOE.

No. 494,812. Patented Apr. 4, 1893.

Fig: 1.

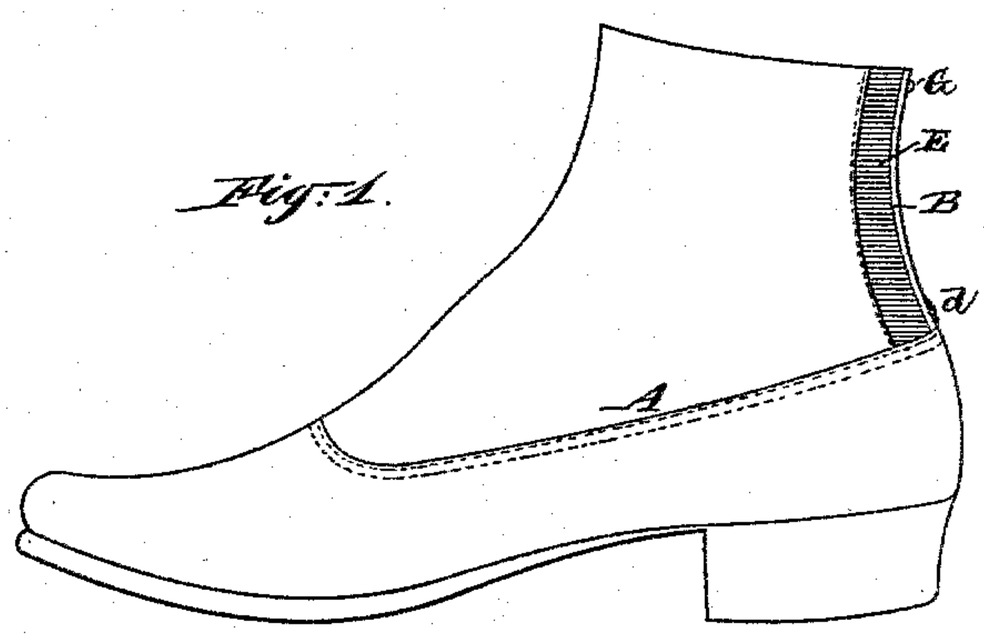


Fig: 2.

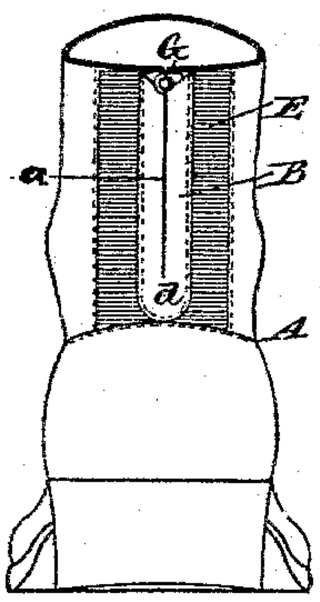


Fig: 4.

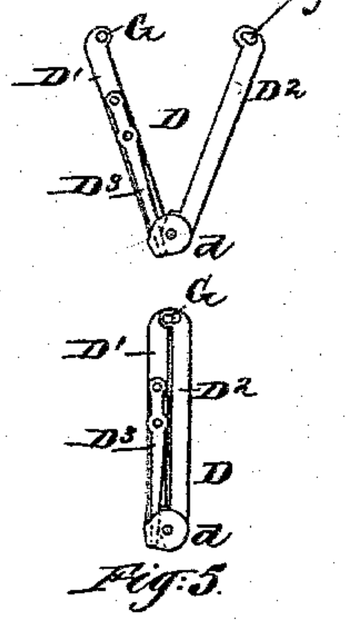


Fig: 5.

Fig: 3.

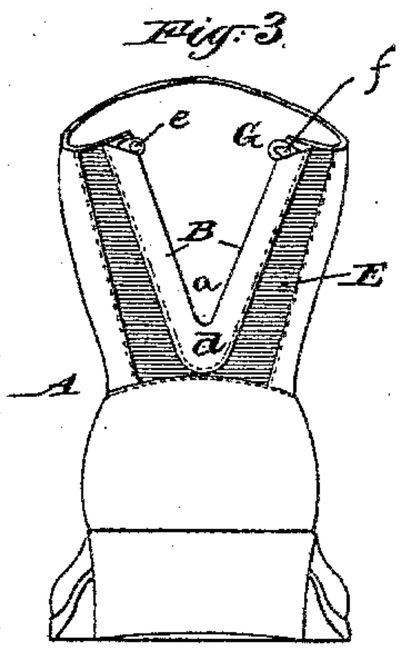
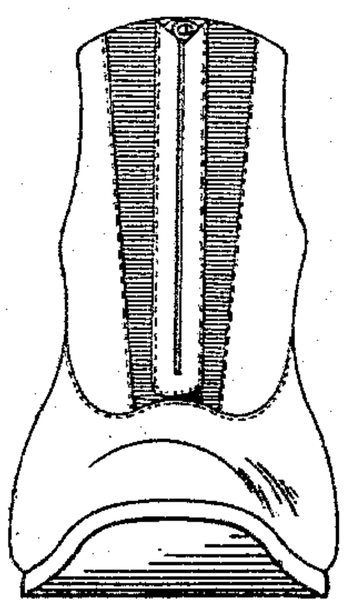


Fig: 6.



Witnesses:
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by their attorney
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UNITED STATES PATENT OFFICE.

ARTHUR H. JONAS AND JEAN JACQUES BRAENDLY, OF NEW YORK, N. Y.

SHOE.

SPECIFICATION forming part of Letters Patent No. 494,812, dated April 4, 1893.

Application filed April 23, 1889. Serial No. 308,271. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR H. JONAS and JEAN JACQUES BRAENDLY, citizens of the United States, residing in New York city, in the State of New York, have invented a certain new and useful Improvement in Shoes, of which the following is a specification.

The invention consists in the novel construction of the fastening devices for the shoe, substantially as hereinafter more fully described and particularly pointed out in the claim.

The following is a description of what we consider the best means of carrying out the invention. The accompanying drawings form a part of this specification.

Figure 1 is a side elevation of a shoe according to our invention. Fig. 2 is a rear view of the same. Fig. 3 is a view corresponding to Fig. 2 except that in Fig. 3 the spring clasp is open, and holds the shoe open to allow the foot to be removed or inserted. Figs. 4 and 5 show the spring-clasp detached. Each is a face view. Fig. 4 shows the clasp open; Fig. 5 shows it closed. Fig. 6 is a front elevation showing a modification.

Similar letters of reference indicate corresponding parts in all the figures.

A is the "vamp" or "upper" of the shoe and *a* is a slit extending down from the top.

B is the binding of kid or other fine material sewed along the edges of the slit *a* and inclosing the spring-clasp.

D is the spring clasp composed of two flat arms of metal hinged together by a broad flat knuckle *d*. The arms will when necessary be distinguished by supernumerals D′ D². The spring is marked D³. The arms may be like the corresponding parts of a spring clasp for a glove except that they are longer. The spring and its bearing in the knuckle *d* are like the corresponding parts in a glove clasp except that the spring is stiffer and is constructed and arranged to hold the clasp open at a smaller angle. Our experiments indicate that an opening to the extent of about forty or forty-five degrees is the best for an ordinary shoe. The spring clasp thus specially adapted for its work is attached to the shoe by sewing along the edges of the slit *a*. The hinge *d* should coincide with the bottom of the said slit. The arms D′ D² are so curved that they make a smooth bend at the junction of the foot with the ankle. When slit *a* is forcibly opened the spring clasp resists the opening at the commencement, then is neutral in its effect for a little distance the same as an ordinary glove clasp, and finally, when the slit is strained well open, holds it open. After the foot is inserted in the shoe and all is properly conditioned the spring clasp is strongly closed together and when fully closed it holds the slit *a* strongly closed until it is again required to be opened. We make the mid length of each arm D′ and D² thin and capable of yielding to a large extent by its elasticity. This renders the shoe easy to bend to accommodate all ordinary and extraordinary motions and positions of the foot and ankle.

We attach each arm D′ and D² to the leather or other ordinary material A through the intervention of a strip of elastic E extended and sewed along each side of the slit *a* between the leather A and the kid B. These elastic strips when used in this connection serve the double function of allowing the shoe to yield to accommodate itself to the wearer's foot, and also of permitting the clasp to be opened more easily and possibly to a greater extent than if the kid were stitched directly to the leather. In that case the stiffness of the leather would interfere with the free operation of the clasp and might cause it to close undesirably when released by the operator. Even if the strips E were not elastic but only extremely flexible, nearly the same advantage would be gained as will be seen. But when they are both flexible and elastic, they assist the clasp in opening by removing resistance which would be offered by the leather, and in closing by yielding or stretching just before the arms of the clasp come together and thus permitting the spring D³ to fully close these arms, even if the leather A fits so tightly around the wearer's ankle that these arms would otherwise be kept from closing. We therefore consider it highly advantageous to use elastic strips in conjunction with the clasp above described.

In what we esteem the most complete form of the invention we employ a fastening at the top of the slit *a* in addition to the spring clasp. G shows such a fastening and it consists of ears at the free ends of the two arms

D′ and D² which ears project inward beyond the line of the inner edges of said arms, and hence when the arms are incased in the kid B these ears each extend inward beyond such kid. One of the ears carries a stud *e* while in the other ear is formed a key-hole opening *f*, its smaller end standing toward the outer end of the ear; and the stud and opening are so placed that when the fastening G is locked these parts stand just at the upper end of the kid, thus avoiding the necessity for cutting such kid to allow either part to enter the kid and engage the other. After the spring clasp D is fully closed we secure the fastening G and the effect of the latter is to relieve the spring clasp from most of the strain when the shoe is vigorously used. On removing the shoe, the wearer first opens the fastening G and then by pulling the upper ends of the arms D′ D² apart throws the spring clasp into the open condition and the shoe is easily taken off.

We prefer when the shoes are put away to be left out of use, that the spring clasps D be closed. This is especially important if the shoes be put away in a thoroughly wet condition and are to be allowed to dry. It is important that they dry in the right shape. This will be insured if the spring clasps D are properly closed each time after the shoes are removed.

Modifications may be made. The slit equipped with the spring may be in other situations than at the back but we esteem it an advantage to have it at the back because when it is opened and held open by the spring clasp the foot can be inserted or removed by a more direct movement than when it is in any other position.

We have been so long accustomed to opening a shoe at the front that there are some advantages in locating the slit corresponding to the slit *a* at the front and placing the spring clasp (corresponding to the spring clasp D except in that it is longer and differently bent) also at the front. Fig. 6 shows such a shoe. We esteem it a proper use of our invention.

We claim as our invention—

The combination with a shoe having a vertical slit in its upper, a kid binding, and flexible elastic strips connecting the binding with the edges of said slit, of a spring clasp comprising two arms pivotally connected at one end and incased in said binding except at their free ends, ears at such free ends extending inward beyond the binding, one ear having a key-hole opening whose smaller end stands toward the other ear, and a stud on said other ear, all substantially as and for the purpose hereinbefore set forth.

In testimony whereof we have hereunto set our hands, at New York city, this 13th day of April, 1889, in the presence of two subscribing witnesses.

ARTHUR H. JONAS.
JEAN JACQUES BRAENDLY.

Witnesses:
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