

No. 772,015.

PATENTED OCT. 11, 1904.

W. H. WOOD.
LACING HOOK.

APPLICATION FILED JAN. 9, 1904.

NO MODEL.

Fig. 1.

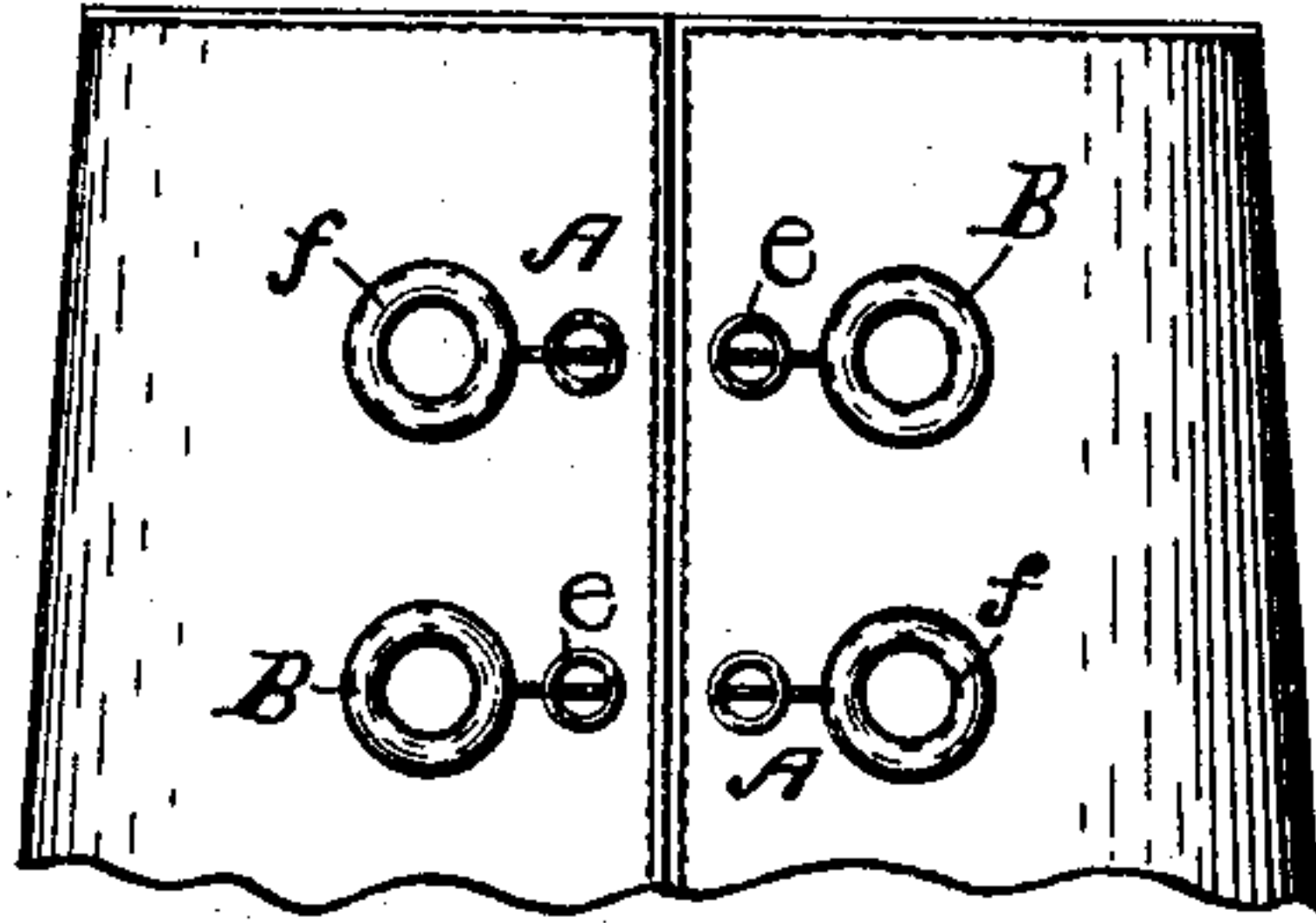


Fig. 2.

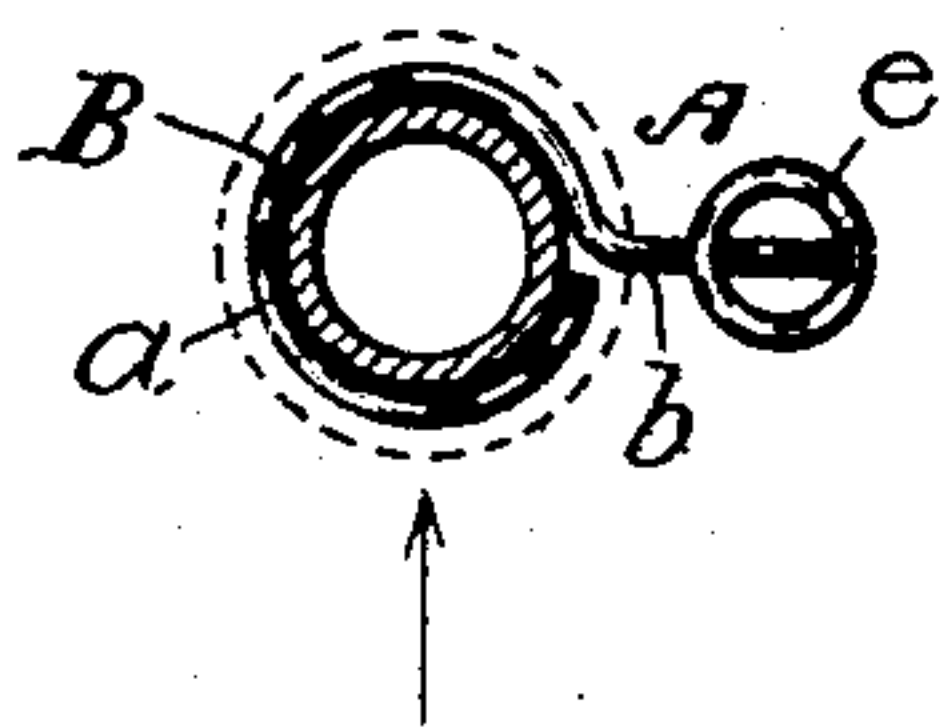


Fig. 4.

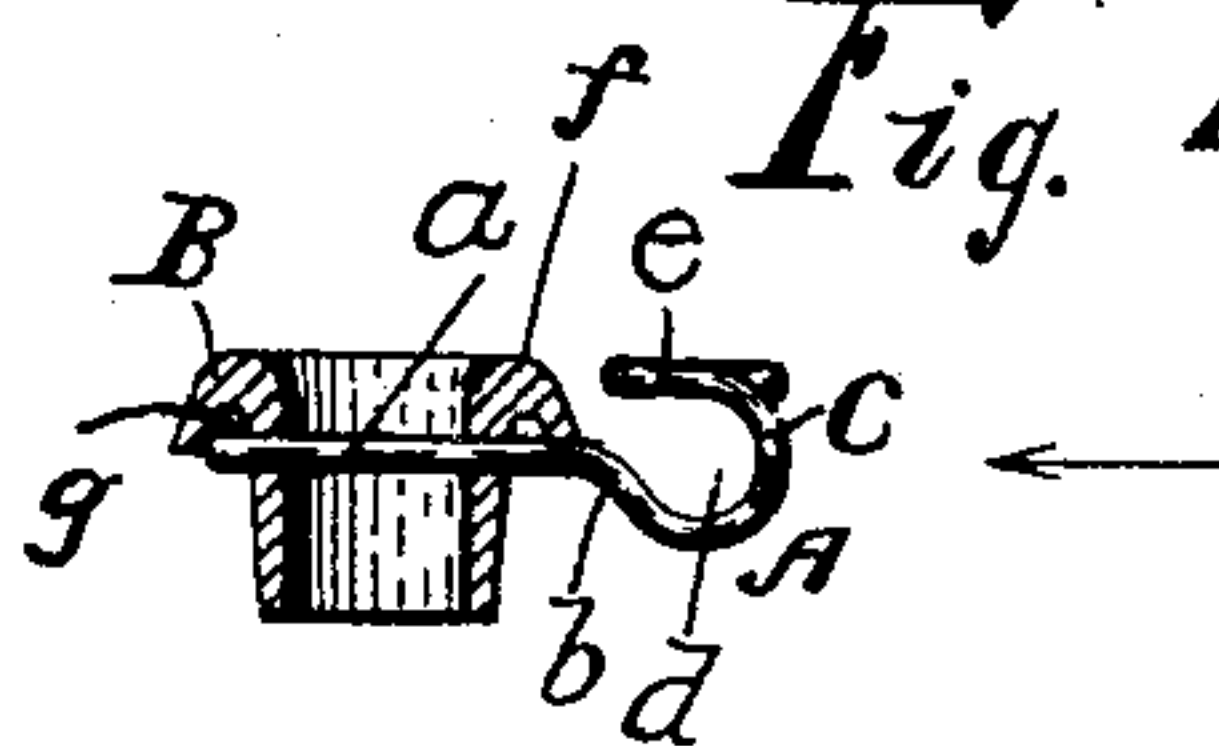


Fig. 3.

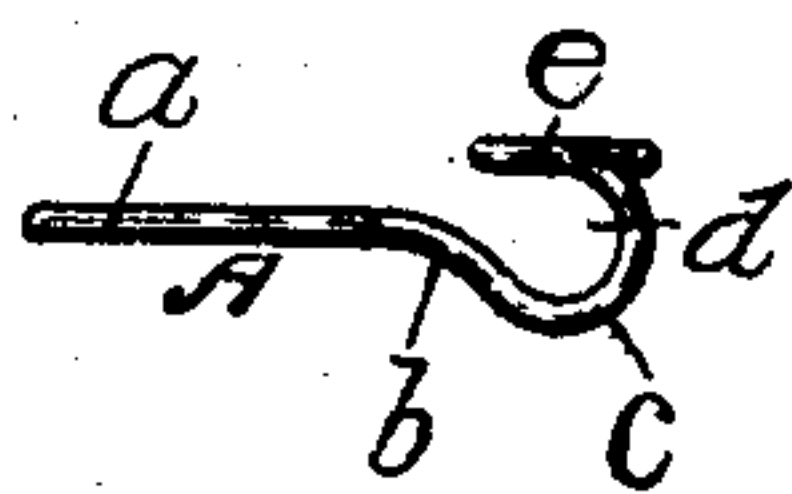


Fig. 5.

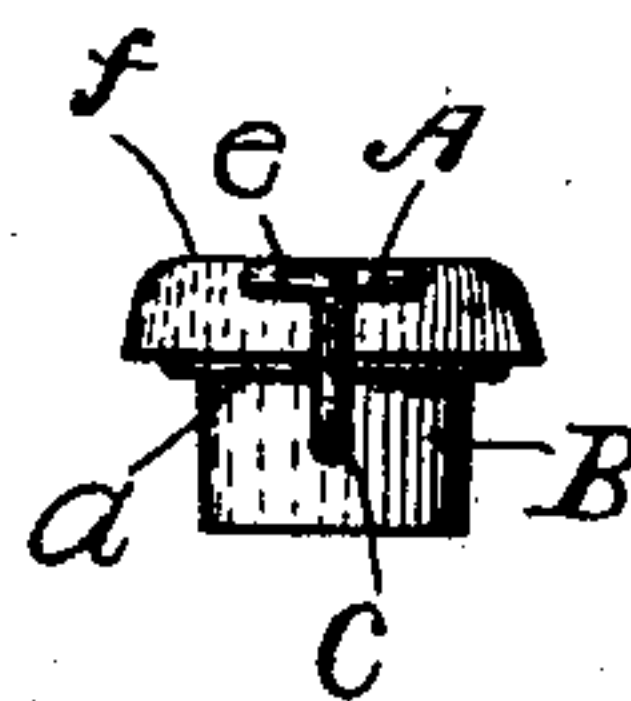


Fig. 6.

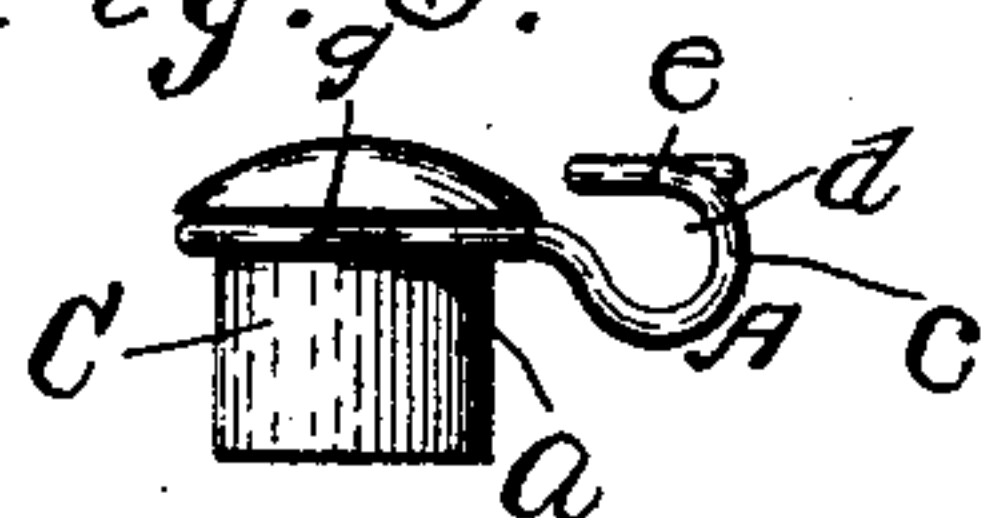
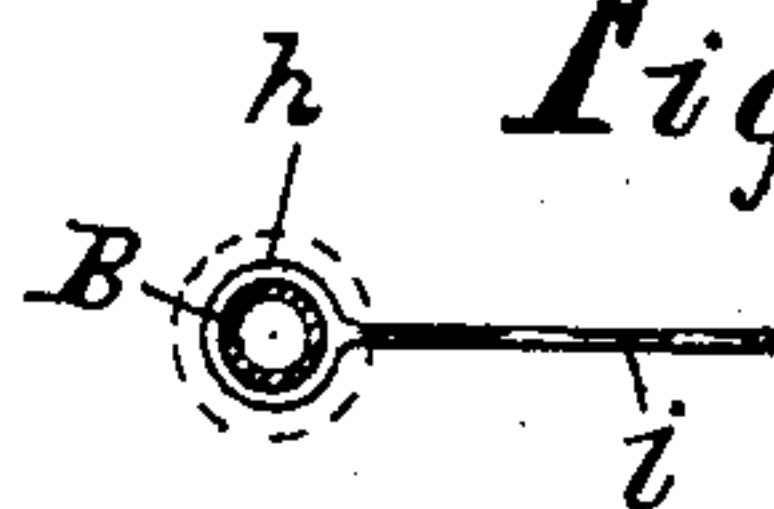


Fig. 7.



Attest:
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UNITED STATES PATENT OFFICE.

WILLIAM H. WOOD, OF ROCHESTER, NEW YORK.

LACING-HOOK.

SPECIFICATION forming part of Letters Patent No. 772,015, dated October 11, 1904.

Application filed January 9, 1904. Serial No. 188,382. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WOOD, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Lacing-Hooks, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to certain new and useful improvements in lacing-hooks for shoes; and it has for its objects, among others, to provide a simple yet effective form of hook of hard or spring wire and held to place on an eyelet by friction and by spring action and so disposed with relation to the head of the eyelet as to have its adjacent part covered by the said head when in place on the shoe. The outer or upper end of the eyelet-head is rounded over, so as to present a smooth and even surface to the touch, and the hook is formed with a raised curl at the side of the eyelet, the head of the eyelet and the upper surface of the curl being in the same plane. One advantage of this construction and shaping of the hook is that the hook is not liable to catch onto any fibrous substance or body that may be accidentally drawn across the parts whether the shoe is on the foot or not. Furthermore, the outer rounded surface of the head of the eyelet serves in a measure as a guard for the opening leading into the space under the curl or head of the hook occupied by the shoe-lace when in use.

Another advantage of the invention is that when the eyelet and the hook are in place upon the shoe the pull of the lace against them will be in a line or a plane substantially at right angles with the axis of the eyelet. On account of this the pull upon the eyelet is a "square" pull, so that the stress upon the hook exerted by the lace tends to pull the eyelet truly laterally or sidewise against the leather and not to roll the eyelet over endwise, and so cause it to tear out of the leather on the side opposite the pull, as is the case with lacing-hooks heretofore used. It is well understood by those skilled in the manufacture of shoes that the leather of the shoe will

much more successfully withstand without injury a truly lateral and central pull upon the eyelet by the lace than if the pull were high over the leather and tending primarily to roll or turn the eyelet out of its hold or seat therein.

Other objects and advantages of the invention will hereinafter be brought out and made to appear, and the novel features thereof particularly pointed out in the appended claims.

The invention in its preferred form and manner of use is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a front elevation of a portion of the upper part of a shoe, showing the application of my invention. Fig. 2, drawn to a larger scale, is a plan of the lacing-hook, the associated eyelet being transversely sectioned just beneath the head. Fig. 3 is a side view of the lacing-hook detached seen as indicated by arrow in Fig. 2. Fig. 4 is an axial section of an open-top eyelet, showing the hook in place thereon. Fig. 5 is a view at the end of the lacing-hook seen as indicated by arrow in Fig. 4, further showing the relation of the hook and the eyelet. Fig. 6 is a side elevation of a closed-top eyelet with the new lacing-hook in place thereon. Fig. 7, drawn actual size, shows in plan a blank cut from a metal plate out of which to form the lacing-hook.

Like characters of reference indicate like parts in the different views.

In the accompanying drawings I have shown by way of illustration a portion of the upper front part of a shoe with several of my improved lacing-hooks in place thereon near the meeting edges of the upper.

Referring to the drawings, A designates my improved lacing-hook, commonly formed of wire of about No. 20 gage, hard and elastic and bent to form a circular portion or ring α , which is adapted to encircle the shank of the eyelet and hold to place thereon by spring action and resulting friction. At one side of the ring or part α the lacing-hook is formed

with a downwardly-extended part or curve *b*, leading to a circular part *c*, formed in a plane at right angles with the plane of the ring *a* and inclosing a circular opening *d*, in which to receive the shoe-lace. Over the opening *d* and in a plane parallel with that of the ring *a* the wire is bent into an annular portion or curl *e*, formed above the ring *a*, for a purpose hereinafter described. This lacing-hook is used in connection with an eyelet *P*, and I desire to here state that any suitable form of eyelet may be employed to coact with the hook. In the present drawings I have shown two different forms merely by way of illustration. Whatever form of eyelet used with my improved lacing-hook the latter is so constructed and proportioned that when properly placed upon the eyelet the upper surface of the curl *e* will be even with and in a plane touching the outer rounded surface or crown of the head *f* of the eyelet, said plane being at right angles with the axis of the eyelet. This is important, and it will be clearly seen from Figs. 4, 5, and 6. The upper surface of the curl *e* is even with the upper surface of the head of the eyelet whether the latter is open, as shown in Fig. 4, or closed and solid, as appears in Fig. 6. In practice the eyelet is secured to the fabric or shoe-upper in the ordinary manner by passing the shank inward through an opening and turning the inner end down against the inner surface of the shoe. When the eyelet is thus secured to the shoe, the hook will be securely held in place, the ring *a* of the hook being close under the head of the eyelet and in the channel or circular recess *g* in case the open eyelet be used and covered from view. From Figs. 4, 5, and 6 it will be readily seen how the rounded surface of the head of the eyelet, whichever form be used, will act to cause any fabric or similar substance or body with which the eyelet may come in contact to glide or be carried smoothly away over the hook instead of into it or being caught thereby, and while this is the case the lace may be readily inserted under the curl *e* in the act of lacing the shoe by carrying the same edgewise into the opening, and so under the curl and into the space or opening *d* beneath the curl, and when once so in place in the hook the lace cannot become detached accidentally.

From the above it will be seen that I have devised a simple yet efficient form of lacing-hook, and while the structural embodiment of the invention as herein disclosed is what I at this time consider preferable it is evident that simple changes and modifications may be made in the structure without departing from the spirit of the invention or sacrificing any of its advantages. I therefore do not wish to be restricted to the exact details of construction herein disclosed, but reserve the right to, if desired, make such changes and modifi-

cations as may come properly within the scope of the protection prayed.

It may be convenient and desirable sometimes to, instead of forming these lacing-hooks out of wire, cut with dies blanks out of sheet metal, as shown in Fig. 7, and subsequently form the blanks into hooks like those made of wire. Formed in this manner the ring *h*, encircling the eyelet, will be continuous, as shown, and not open at one side, as in the case of the ring *a* made of wire. The blanks are primarily formed with slender uniform stems or portions *i* of the nature of wire, which are subsequently given bends and curls corresponding to those shown at *b*, *c*, and *e* in the wire hook already described.

What is claimed as new is—

1. A lacing-hook comprising in a single integral element, an open spring ring or loop to engage around the shank of an eyelet, a lateral portion to extend beyond the head of the eyelet and a lace-retaining portion whose upper face is on a plane with the upper surface of the head of the eyelet.

2. An eyelet having a rounded head, and a lacing-hook having a portion surrounding said eyelet at its shank portion, and retained beneath the head and having a lateral portion terminating in a curl the upper face of which is on the same plane as the upper surface of said head.

3. An eyelet having a rounded head with a rounded recess beneath the same, and a lacing-hook having an open spring portion retained in said recess beneath the head and having a lace-retaining portion whose upper face is on a plane with the upper face of the said rounded head.

4. An eyelet and a lacing-hook, the latter frictionally retained on the shank of the eyelet and having a lace-receiving portion beneath the plane of the head of the eyelet, and a lace-retaining curl whose upper face is on a plane with the outer surface of the said head.

5. An eyelet with a rounded head and a rounded recess beneath the same, combined with a lacing-hook of wire having a portion engaged in said recess and held beneath the head, said hook having a depressed portion beyond the eyelet and terminating in an upwardly-extended portion with lace-retaining curl whose upper face is on a plane with the outer surface of the head of the eyelet.

6. An eyelet having a rounded head with a rounded recess beneath the same, and a lacing-hook having a portion retained in said recess beneath the head, and a part of the lacing-hook extending laterally from the head of the eyelet and having a lace-retaining part at one side of the eyelet whose upper face is on a plane with the outer surface of the head of the eyelet.

7. An eyelet formed with a head, and a lacing-hook having a ring surrounding the eyelet

beneath the head, and a part extending later-
ally from the eyelet and having a lace-receiv-
ing inclosure at one side of the head of the
eyelet in a plane at right angles with the plane
5 of said ring and a portion having its upper
face on a plane with the outer surface of the
said head.

In witness whereof I have hereunto set my
hand, this 7th day of January, 1904, in the
presence of two subscribing witnesses.

WILLIAM H. WOOD.

Witnesses:

ENOS B. WHITMORE,
MINNIE SMITH.