No. 785,179. PATENTED MAR. 21, 1905.

B. R. McINTYRE.

SHOE LACING DEVICE.

APPLICATION FILED JAN. 2, 1904.

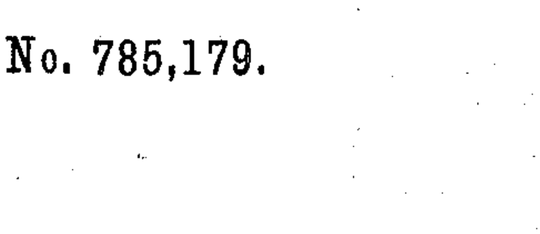

Fig. 2.

Fig. 3.

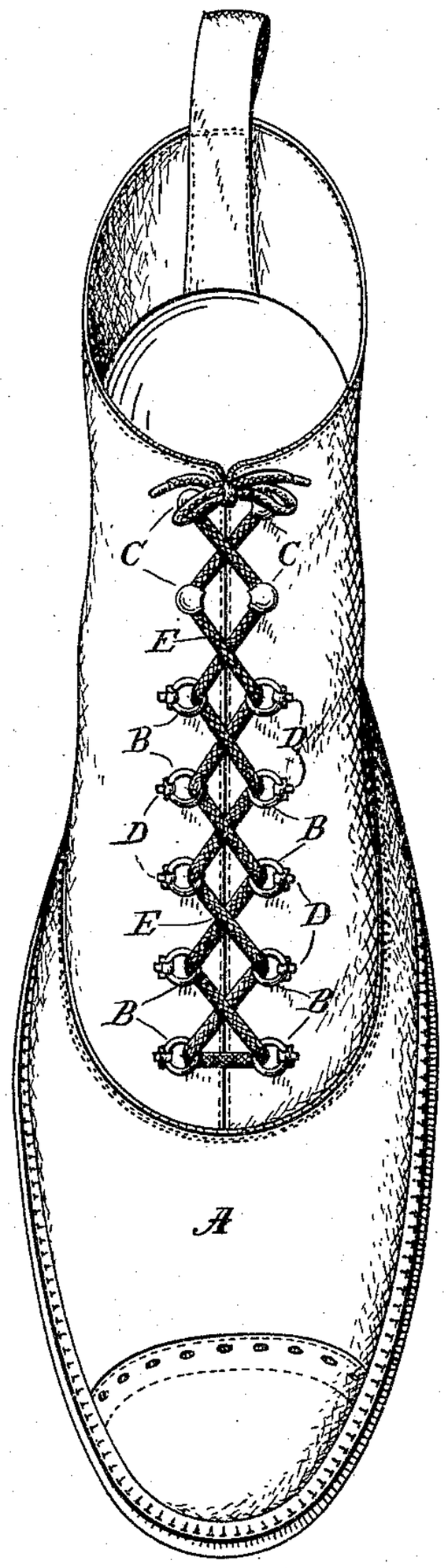

Fig. 1.

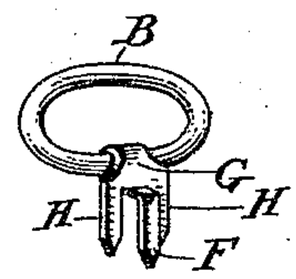

Fig. 4.

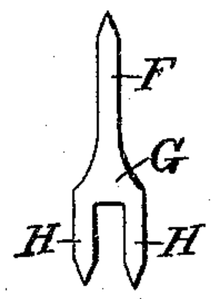

Fig. 5.

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No. 785,179. Patented March 21, 1905.

UNITED STATES PATENT OFFICE.

BYRON R. McINTYRE, OF GRAND RAPIDS, MICHIGAN.

SHOE-LACING DEVICE.

SPECIFICATION forming part of Letters Patent No. 785,179, dated March 21, 1905.

Application filed January 2, 1904. Serial No. 187,462.

To all whom it may concern:

Be it known that I, BYRON R. McINTYRE, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Shoe-Lacing Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in shoe-lacing devices; and its object is to provide the same with various new and useful features hereinafter more fully described, and particularly pointed out in the claims.

My invention consists, essentially, of two series of rings attached to the outside of the shoe by means of novel fastenings, hereinafter described, and laces extending through said rings and crossed over the shoe-opening between each pair of rings, hooks attached to the shoe and engaging the laces, novel fasteners for attaching the rings to the shoe, and in the combination and arrangement of the various parts, as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of a shoe having my device attached; Fig. 2, a plan of a ring and a fastener; Fig. 3, a section of the same on the line 3 3 of Fig. 2; Fig. 4, a perspective of a ring and a fastener attached thereto, and Fig. 5 a detail of the fastener-blank, Figs. 2, 3, 4, and 5 being on an enlarged scale.

Like letters refer to like parts in all of the figures.

A represents the shoe; B, a series of small rings spaced apart at regular intervals and arranged in opposing pairs at the respective sides of the lower part of the shoe-opening and secured to the shoe by suitable fasteners D. These fasteners each consist of a sheet-metal blank, as shown in Fig. 5, having a single long prong F at one end and two shorter prongs H H at the other end of a substantially triangular middle portion G, the prongs H being spaced apart a sufficient distance to permit the long prong F to pass between the same. This fastener is first attached to the ring, as shown in Fig. 4, by bending a part of the middle portion G and the adjacent part of the prong F around the ring and passing the prong F between the prongs H and at right angles thereto and then bending the end of the prong F downward at right angles, whereby the three prongs are arranged with their flat sides in parallel planes and in substantially triangular relation. The rings are secured to the shoe by thrusting the prongs of the fastener through the shoe and clenching the same on the inside of the shoe, as shown in Fig. 2, turning the prongs in the direction of the pull on the rings. Each ring is thus secured by three prongs arranged in triangular position, and the edge of the triangular middle portion G between the prongs H H is drawn down securely upon the rearwardly-projecting horizontal portion of the prong F, the whole forming a very substantial and strong fastening for the ring, within which the ring is freely movable.

By arranging the lace in the rings with its middle portion extending across the opening of the shoe and its respective ends crossing the said opening between each pair of rings and thence through the succeeding pair of rings, as shown in the drawings, the lace will run freely through the rings and will draw the opening of the shoe closely together and the shoe will be arranged smoothly over the instep without any unevenness and without any opening in the same, such as is the case when the lace extends through the eyelets in the shoe, as usually arranged.

If rings were used throughout, the lacing would be withdrawn from the upper rings when released or else would have to be inconveniently long. To avoid this difficulty, rings are used only on the lower part of the shoe, and hooks C are provided at the upper part thereof. The upper portion of the lacing is engaged with the hooks C, and then tied in the usual manner. When the lacing is untied and released from the hooks, it will run through the rings freely, and thus the shoe can be either drawn together closely or released and

opened without the necessity of pulling at the lacing at intervals, as is usual with the ordinary eyelet arrangement.

It is obvious that the described fastener is adapted to engage the ring-shaped eye of a button, and thus secure a button in place. I therefore do not limit myself to its use in conjunction with a ring proper, as shown.

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

1. In combination with a shoe and a ring, a fastening comprising three prongs arranged in triangular relation, one of said prongs extending around the ring and thence between the other two prongs, said prongs being inserted in the shoe and clenched on the inner side of the same.

2. In combination with a shoe and a ring, a fastening comprising three prongs arranged in triangular relation, one of said prongs being bent around the ring and extended between the other two prongs, all of said prongs being inserted in the shoe and bent toward the opening thereof.

3. In combination with a shoe and a ring, a fastener of sheet metal comprising a middle portion, two short prongs and one long prong, the long prong being bent around the ring and extending between the short prongs, and thence parallel therewith, the broad surfaces of all of the prongs being inserted in the shoe and bent in the same direction on the inside thereof.

4. In combination with a shoe and a ring, a fastening consisting of a triangular middle portion, a single long prong at one angle of said middle portion and two shorter prongs spaced apart at the opposite side of the same, said middle portion and long prong being bent around the ring, and the long prong extended between the shorter prongs and engaged by the edge of the triangular middle portion, and thence bent downward parallel with the other two prongs, all of said prongs being arranged in triangular relation and inserted in the shoe and clenched on the inner side of the same.

5. In combination with a ring, a fastener consisting of a triangular middle portion, a long prong extending from one angle of the same, two shorter prongs extending from the opposite side and spaced apart, the long prong and a portion of the middle portion being bent into an eye or loop around the ring, and the long prong extended between the shorter prongs and at right angles thereto, and thence bent in a parallel plane with the shorter prongs.

6. As an article of manufacture, a ring having a fastener attached thereto, said fastener comprising a longer prong, and two shorter prongs spaced apart, the long prong being bent around the ring and extended between the short prongs and at right angles thereto, and thence bent downward parallel therewith.

7. The herein-described fastener comprising a middle portion, a long prong and two short prongs; the long prong being bent in an eye or loop and extended between the shorter prongs, and at substantially right angles thereto, and thence bent downward parallel therewith.

8. The herein-described fastener made of sheet metal and comprising a substantially triangular middle portion, a long prong projecting from one angle thereof, two shorter prongs projecting from the opposite side thereof and spaced apart, said middle portion and a part of the long prong being formed into an eye or loop; and the long prong extended between the short prongs and at right angles thereto, the flat sides of the prongs being arranged in parallel planes and in triangular relation.

9. The herein-described fastener made of sheet metal and comprising a substantially triangular middle portion, a long prong projecting from one angle thereof, two short prongs projecting from the opposite side thereof and spaced apart; the long prong being bent between the short prongs and at substantially right angles thereto and engaged by the edge of the middle portion and thence bent parallel with the short prongs and the flat sides of all the prongs being in parallel planes.

In testimony whereof I affix my signature in presence of two witnesses.

BYRON R. McINTYRE.

Witnesses:
LUTHER V. MOULTON,
GEORGIANA CHACE.