

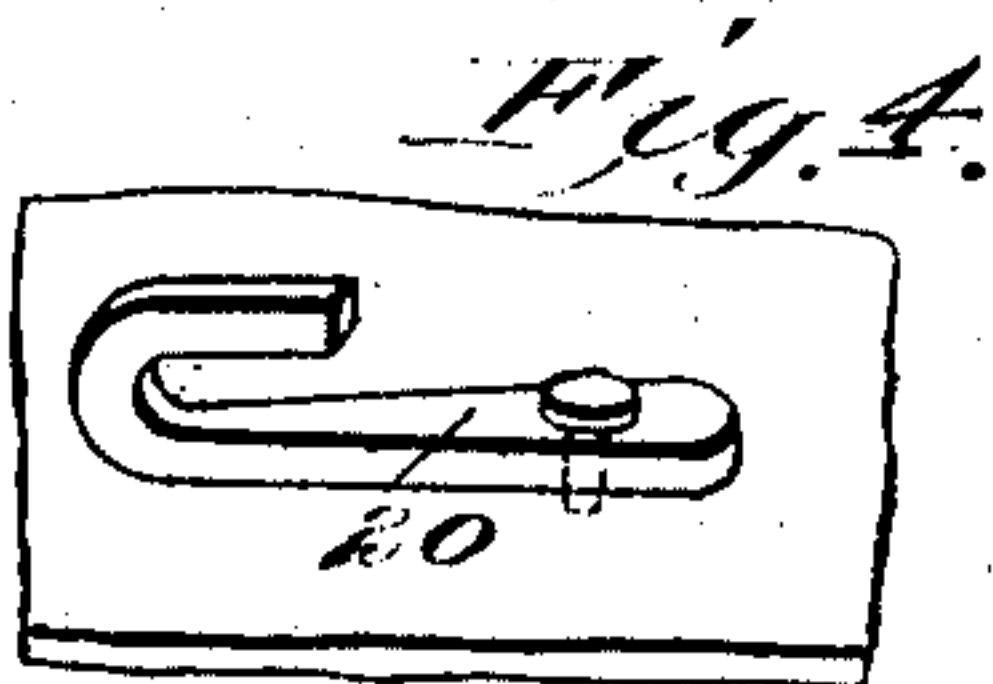
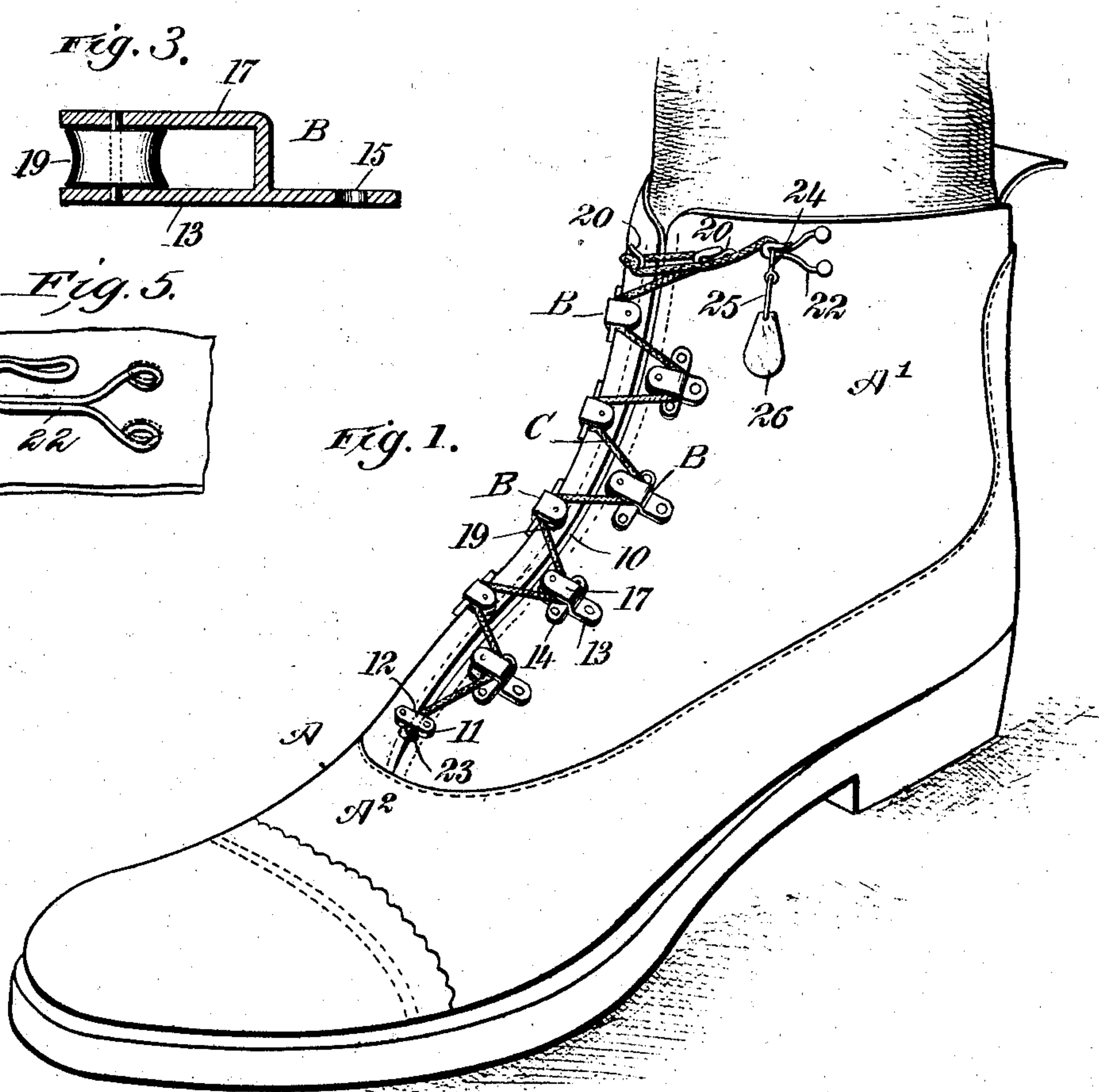
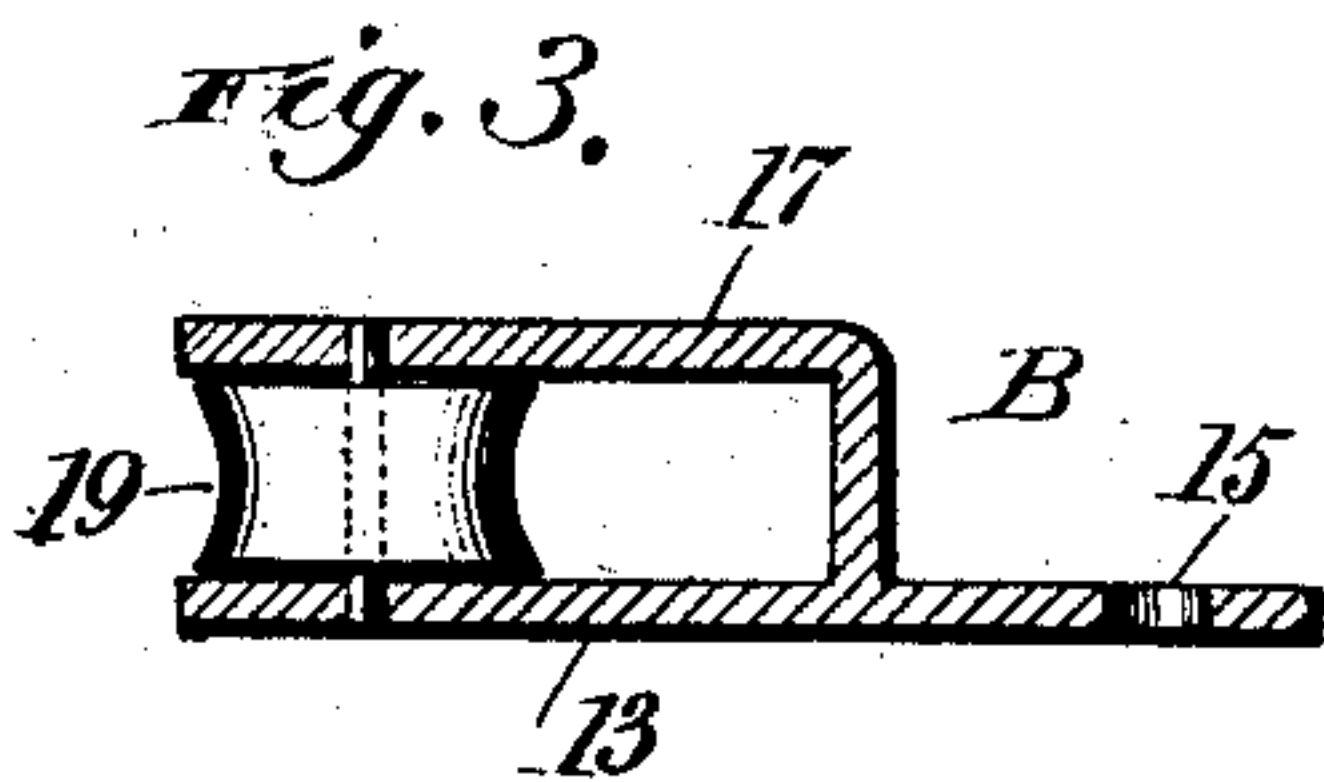
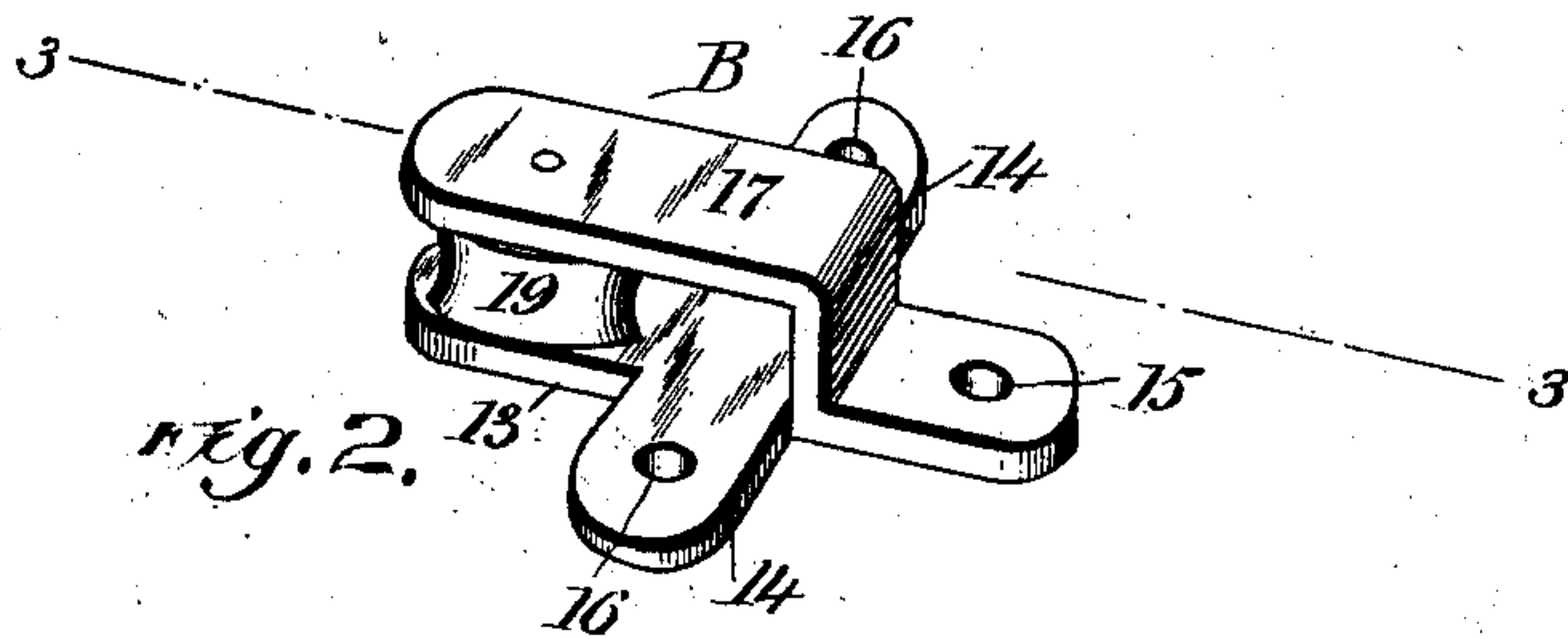
No. 746,563.

PATENTED DEC. 8, 1903.

J. McMAHON.
SHOE LACING.

APPLICATION FILED MAR. 6, 1903.

NO MODEL.



WITNESSES:

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JAMES McMAHON, OF BEMIDJI, MINNESOTA.

SHOE-LACING.

SPECIFICATION forming part of Letters Patent No. 746,563, dated December 8, 1903.

Application filed March 6, 1903. Serial No. 146,495. (No model.)

To all whom it may concern:

Be it known that I, JAMES McMAHON, a citizen of the United States, and a resident of Bemidji, in the county of Beltrami and State of Minnesota, have invented a new and Improved Shoe-Lacing, of which the following is a full, clear, and exact description.

My invention relates to devices for lacing shoes with but a single lace, and the purpose of the invention is to provide an anchorage device or keeper for one end of the lace secured at the lower portion of the front opening for the upper of the shoe adjacent to the vamp and a series of pulley devices which are secured to the upper quarters at opposite sides of the said front opening, which pulley devices are guides for the lace and are in staggered or alternate arrangement, and to provide the upper quarters of the shoe at opposite sides of the upper front portion of its front opening with guide-hooks.

Another purpose of the invention is to secure retaining and fastening hooks at the side portions of the upper quarters of the shoe near the top adapted to finally receive the upper end portion of the lace and hold the same locked until purposely released.

A further object of the invention is to provide the upper terminal end of the lace with metal links adapted for engagement with either of the retaining or locking hooks which may be best available.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a perspective view of a shoe having the improved lacing device applied, the shoe being shown as laced. Fig. 2 is an enlarged perspective view of the detached pulley-guide for the lace. Fig. 3 is a longitudinal section through the pulley-guide, taken practically on the line 3-3 of Fig. 2. Fig. 4 is a detail perspective view of one of the guide-hooks and support to which it is applied. Fig. 5 is a detail perspective view of a retaining or clamping hook and support to which it is applied.

A represents a shoe having the improvement applied, the upper quarters A' of which shoe are provided with the usual front opening 10, whereby to enable the foot of the wearer to enter the shoe. At the lower end of the said front opening 10 an anchor or keeper-bar 11 extends transversely over the said opening adjacent to the vamp A², and the said keeper-bar 11 is secured to the upper quarters of the shoe by means of rivets or equivalent devices. The said keeper-bar is further provided with a transverse opening 12, extending through from side to side centrally of the bar and parallel with the front opening 10 at the upper portion of the shoe. In addition to the said anchor or keeper-bar 11 a series of pulley-guides B is employed, located at each side of the said front opening 10, and the said pulley-guides are in staggered or alternate arrangement, as is also shown in Fig. 1. These pulley-guides are preferably constructed as is shown in detail in Figs. 2 and 3, each consisting of a base-plate 13, having ears 14 extending from the sides thereof, and at the outer end portion of the base 13 an aperture 15 is made. Each ear 14 is provided with an aperture 16, whereby the pulley-guides are secured to the upper quarters of the shoe by means of rivets or like devices passed through the apertures 15 and 16.

In addition to the base 13 and the ears 14 each pulley-guide consists of a bracket 17, which extends upward from the base near its rear or outer end and is then carried parallel with the forward or inner portion of the base, and between the said bracket 17 of each pulley-guide and the base 13 at the inner ends of said parts a pulley 19, preferably grooved, is mounted to turn in any approved manner.

At the upper front portion of the upper quarters A' of the shoe hooks 20 are located, one at each side of the front opening 10, which hooks are guide-hooks for the lace C, and these guide-hooks 20 are made to face one another, as is shown in Fig. 1.

In addition to the guide-hooks 20 just mentioned clamping or retaining hooks 22 are employed, preferably made of a spring material, and these hooks are secured by rivets or otherwise to the upper portion of the upper quarters A' of the shoe, one at each side

of the front opening 10 and to the rear of the said guide-hooks 20, the clamping or retaining hooks 22 being made to face in direction of each other and being secured to the upper
5 quarters A' at a point between the front and the rear.

A single lace C is employed of any desired character. This lace is threaded through the
10 aperture 12 in the keeper-bar 11, and at its lower end is provided with a knot 23 or an enlargement of any suitable character, which will prevent the lace from being drawn entirely through the keeper-bar 11. The lace is then threaded through the pulley-guides
15 to an engagement with the friction-pulleys 19, whereby the lace C is given a zigzag course over the front opening 10 of the shoe. After the lace C has passed beyond the upper pulley-guide B it is passed first to an engage-
20 ment with one guide-hook 20 and then to the other guide-hook, and finally the upper end of the lace is passed to a clamping engagement with either one or the other of the clamp-
25 ing or retaining hooks 22. Preferably at the upper end of the lace C two pivotally-connected links 24 and 25 are attached, and to the outer link a tab 26 is secured in any suitable or approved manner. The lace is of such
30 length that when it has been threaded through the pulley-guides B and passed to an engagement with the guide-hooks 20 either the link 24 or the link 25 will be brought in engagement with the clamping or retaining hook 22; but these links while preferably used in con-
35 nection with the lace are not absolutely necessary and may be omitted if desired. They are preferably retained, however, as the links being of metal may be more forcibly passed
40 between the members of the clamping or retaining hook with which they are adapted to

engage, and the liability of the lace slipping is reduced to a minimum.

The lace C may be of any desired length and may be passed any desired number of
45 times around the hooks 20.

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

1. The combination with a boot or shoe, an anchor at the lower end of the front opening
50 of the boot or shoe, pulley-guides at opposite sides of the said front opening, which pulley-guides are in staggered arrangement, a plain guide-hook at the upper end of each row of
55 pulley-guides, and a spring clamp or retaining hook above each plain guide-hook, of a single lace attached to the said anchor, which lace is adapted to pass over the pulley-guides and over the upper hook-guides, and connect-
60 ed metallic links at the upper end of the lace, adapted to be held by a spring clamp and retaining hook, as described.

2. The combination with a boot or shoe, guides at opposite sides of the front opening
65 therein, and a spring clamp or retaining hook at the upper portion of the boot or shoe and at one side of the front opening therein, of a single lace, an anchor in the lower end of the
70 lace, which lace is adapted to pass over said guides, and pivotally-connected metallic links at the upper end of the lace, adapted to be held by the spring clamping or retaining hook, as set forth.

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

JAMES McMAHON.

Witnesses:

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M. A. SPOONER.