Dec. 27, 1927. 1,654,008

J. W. MAY

LAST

Filed Oct. 28, 1926

Fig. 1.

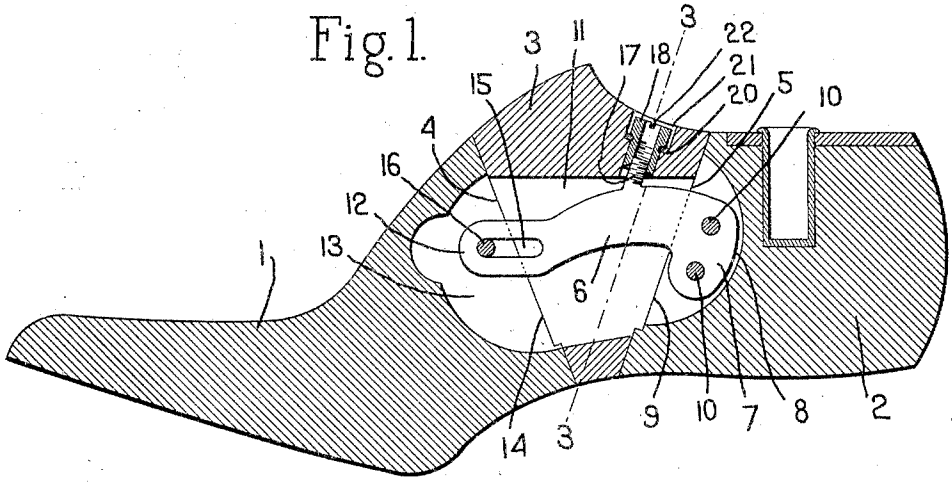

Fig. 3.

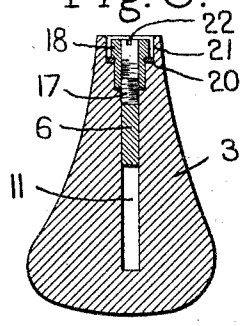

Fig. 2.

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UNITED STATES PATENT OFFICE.

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LAST.

Application filed October 28, 1926. Serial No. 144,710.

This invention relates to divided or sectional lasts of that type which are made with a fore part and heel part connected together to move toward and from each other for the purpose of shortening or expanding the last, and an intermediate wedge-shaped part situated between the fore part and heel part and movable transversely of the last, the movement of said wedge-shaped part in one direction forcing the heel part and toe part away from each other thereby to lengthen the last and movement in the other direction permitting the parts to move toward each other to shorten the last.

One feature of the present invention relates to a novel means for locking the wedge-shaped member, which functions as an expanding member, in its operative position and according to this feature of the invention means are provided for locking said wedge-shaped member to the connecting member which unites the heel part and fore part.

Another feature of the invention relates to a novel connection between the fore part and heel part which is simple in construction and inexpensive to manufacture but which is durable and serviceable.

In order to give an understanding of the invention I have illustrated in the drawings a selected embodiment thereof which will now be described after which the novel features will be pointed out in the appended claims.

Fig. 1 is a longitudinal sectional view of a last embodying my invention showing the last extended or lengthened with the intermediate wedge-shaped member locked to the connecting member;

Fig. 2 is a similar view showing the last contracted or shortened;

Fig. 3 is a section on the line 3—3, Fig. 1.

The last herein shown comprises the fore part 1, the heel part 2 and a wedge-shaped intermediate part 3 which functions as an expanding member. A last having this construction would be formed by taking a one-piece last and dividing it transversely along the lines 4 and 5.

The fore part and heel part are united by a connection which permits the two parts to move toward and from each other. In the construction herein shown this connection is in the form of a member 6 which is anchored in one of the parts and has a pin-and-slot connection with another part. The connection 6 is illustrated herein as anchored in the heel part, one end of said connection being provided with a head portion 7 which is received in a slot 8 formed in the contacting face 9 of the heel portion, said head 7 being rigidly anchored in the last by pins 10 extending transversely through the heel part.

The intermediate wedge-shaped part 3 is provided with a slot 11 through which the connecting member extends and the vertical end 12 of said connecting member extends into a slot or recess 13 formed in the contacting face 14 of the toe part 1. The end 12 of the connecting member 6 is slotted as shown at 15 and a pin 16 which extends transversely through the fore part extends through said slot thus connecting the member 6 to the fore part. This pin-and-slot connection allows the fore part to move longitudinally of the last with reference to the connecting member 6.

The parts are so constructed that when the wedge-shaped member 3 is moved downwardly into its operative position shown in Fig. 1 the fore part and heel part will be separated from each other thus lengthening the last, the amount which the last can be lengthened being determined by the engagement of the pin 16 with the end of the slot 15.

One feature of the present invention relates to a novel means for locking the intermediate member in its operative position, this being herein accomplished by locking it to the connecting member. Various ways of thus locking the intermediate member to the connecting member may be employed without departing from the invention. A simple construction is herein shown which is very effective in its operation.

The connecting member 6 is shown as having a screw-threaded finger or projection 17 rising therefrom and the wedge-shaped member 3 carries a nut 18 which is adapted to have screw-threaded engagement with the projection 17 as shown in Fig. 1 thereby to lock the intermediate member in its operative position. The nut 18 is anchored in the wedge-shaped member 3 but is permitted to

freely turn therein and is so positioned that when the wedge-shaped member is forced downwardly into its operative position shown in Fig. 2 the nut will be brought against the end of the finger 17 so that a slight turning movement of the nut will cause its screw-threads to engage those of the finger 17 thus locking the wedge-shaped member to the connecting member. The lower end of the nut 18 is shown as being slightly bevelled as indicated at 19 so that as the wedge-shaped intermediate member 3 is moved into its operative position to lengthen the last the end of the projection will be guided by the bevelled surface 19 into axial alignment with the nut.

The nut 18 may be anchored in the wedge-shaped member 3 in various ways without departing from the invention. As herein shown said nut is swivelled in a washer 20 and the washer 20 is driven into a recess 21 formed in the member 3 and is thus anchored therein. Preferably the recess 21 will have sufficient depth so that the nut 18 will be entirely below the top surface of the member 3. This nut 18 may conveniently have a screw driver slot 22 in its end so that a screw driver may be used for turning the nut.

The operation of lengthening a last having this construction is very simple. The last when in its shortened condition, as shown in Fig. 2, will be inserted in the shoe and the wedge-shaped member 3 will then be forced downwardly to lengthen the last as shown by dotted lines Fig 2, this operation bringing the nut against and into axial alignment with the threaded finger 17. A slight turning movement of the nut by a screw driver or any other implement will then screw the nut onto the finger 17 and thus lock the last in its lengthened position. As the nut 18 is tightened the wedge member 3 will be forced home thus making a rigid last structure. This method of locking the intermediate member to the connecting member has the advantage that when the last is lengthened the nut may always be tightened until the pin 16 is firmly seated against the end of the slot 15 and the last is converted into a rigid last structure.

When the last is removed from the shoe it is simply necessary to back off the nut 18 until it is free from the screw-threaded finger 17 when any strain to which the last is subjected in the direction of its length will automatically cause the last to be shortened so that it may be readily removed from the shoe.

I claim—

1. A last comprising a fore part, a heel part and a wedge-shaped intermediate part situated between the fore part and heel part, a connecting member rigidly secured to the heel part and extending through the intermediate part and loosely connected to the fore part, and means to lock the wedge-shaped intermediate part directly to said connection.

2. A last comprising a fore part, a heel part, an intermediate wedge-shaped part, a connecting member anchored rigidly at one end in the heel part, the other end being slotted and entering a recess in the fore part, a pin carried by the fore part and extending through said slot, and means to lock the intermediate part directly to the connecting member.

3. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits the last to be lengthened or shortened, and means to connect the intermediate part directly to the connecting member when the last is lengthened, said means operating to cause the intermediate part to have an expanding wedging action on the fore part and heel part.

4. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part directly which permits them to move toward and from each other, and means for locking the intermediate part to the connecting member, said locking means comprising two parts having a screw-threaded connection.

5. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits them to move toward and from each other, and means for locking the intermediate part to the connecting member, said locking means comprising two parts having a screw-threaded connection, one of the parts of said locking means being on the connecting member and the other carried by the intermediate part of the last.

6. A last comprising a fore part, a heel part, an intermediate wedge-shaped part, a connection between the fore part and heel part which permits them to move toward and from each other, said connection having a screw-threaded finger and a nut carried by the intermediate part for engaging said finger thereby to lock the last in aligned position.

7. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits the last to be lengthened or shortened, and means securing the intermediate part to the connection and operating with a wedging action to force the intermediate part home when the last is lengthened and to maintain it wedged between the fore part and heel part.

8. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits the last to be lengthened

or shortened, and means for connecting the wedge-shaped intermediate part to said connection and for causing said intermediate part to be wedged firmly between the fore part and heel part when the last is lengthened.

9. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits the last to be lengthened or shortened, means securing the intermediate part to the connection and operating with a screw action for securing said intermediate part to said connection and causing the intermediate part to have a wedging action between the fore part and heel part when the last is lengthened.

10. A last comprising a fore part, a heel part, a wedge-shaped intermediate part, a connection between the fore part and heel part which permits the last to be lengthened or shortened, and means operative when the last is lengthened for connecting the intermediate part to said connection and holding the intermediate part in wedging engagement with the fore part and heel part.

11. A last comprising a fore part, a heel part and a wedge-shaped intermediate part movable transversely of the last from operative to inoperative position, a connection between the fore part and heel part which permits them to move toward and from each other to shorten or lengthen the last and also limits the transverse movement of the wedge-shaped intermediate part when moved into its inoperative position, and means to connect said intermediate part to said connection when the last is lengthened.

12. A last comprising a fore part, a heel part, a wedge-shaped intermediate part movable transversely of the last from operative to inoperative position, a connection between the fore part and heel part which permits the last to be lengthened or shortened, said connection limiting the transverse movement of the wedge-shaped part when moved to inoperative position, and means operating with a screw thread action when the last is lengthened for securing the intermediate part to said connection and holding said part in wedging engagement with the fore part and heel part.

In testimony whereof, I have signed my name to this specification.

JOHN WALTER MAY.

CERTIFICATE OF CORRECTION.

Patent No. 1,654,008. Granted December 27, 1927, to

JOHN WALTER MAY.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, line 91, claim 4, strike out the word "directly" and insert the same to follow after the word "part" in line 93; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 31st day of January, A. D. 1928.

M. J. Moore,
Acting Commissioner of Patents.

Seal.