S. STROMER.

EXCHANGEABLE HEEL FOR SHOES.

APPLICATION FILED JUNE 1, 1910.

979,593. Patented Dec. 27, 1910.

Fig: 1,

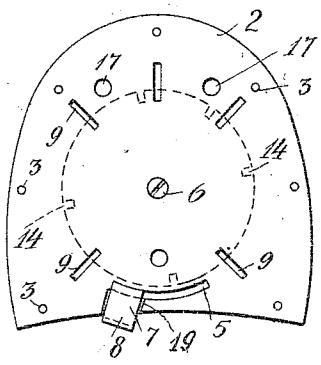


Fig: 3,

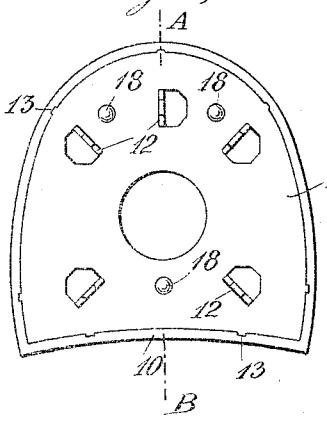


Fig: 4,

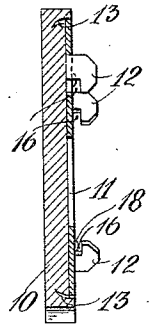


Fig: 2,

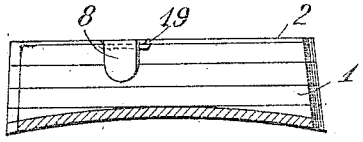


Fig: 6,

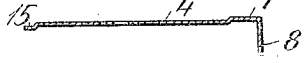


Fig: 5,

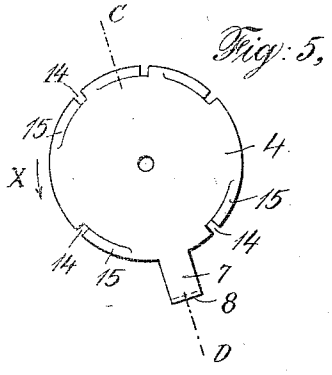
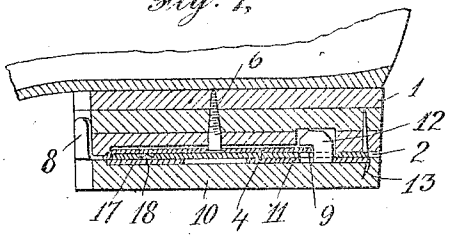


Fig: 7,



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UNITED STATES PATENT OFFICE.

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EXCHANGEABLE HEEL FOR SHOES.

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Application filed June 1, 1910. Serial No. 564,387.

To all whom it may concern:

Be it known that I, SIMON STROMER, a citizen of the Kingdom of Austria-Hungary, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Exchangeable Heels for Shoes, of which the following is a specification.

This invention has reference to improvements in heels for boots and shoes and pertains particularly to exchangeable heels. The heels of this type at present in use are generally made of rubber and secured to the shoe by means of nails, screws, and the like. These are applied for the purpose of preventing the wearing off of the heels on one side or in one place thus preserving their original shape. Furthermore the rubber heels are designed to increase the elasticity of the step. The exchangeable rubber heels are found in the market ready to be applied but have the drawback that their application requires in most instances the services of a skilled workman.

It is the purpose of the present invention to produce exchangeable heels for boots and shoes of such construction that same may be applied by anyone in a simple manner. This has been primarily attained by the use of a lower heel part which normally is in contact with the ground. This part is made of leather or rubber and of such shape that it may be applied or secured to the shoe by simply turning a specially constructed locking device forming part of the novel heel. By simplicity in construction it has been sought to reduce the cost of production to a minimum and care has been taken to produce a neat and durable article which wears off uniformly, all as will be fully described hereinafter with reference to the accompanying drawing in which:

Figure 1 represents in bottom view a holding plate on the heel of the shoe. Fig. 2 shows same in front view with the heel thereto attached. Fig. 3 illustrates in top plan view the exchangeable heel with fastening plate. Fig. 4 is a cross section on line A—B of Fig. 3. Fig. 5 is a top plan view of the locking device. Fig. 6 is a cross section on line C—D of Fig. 5 and Fig. 7 is a vertical cross section of the entire heel as applied to the shoe.

Similar characters of reference denote like parts in all the figures.

In the drawing the heel permanently attached to the shoe is designated by the numeral 1. The holding plate 2 is preferably made of metal and secured to the heel 1 by means of nails driven through the holes 3. The lower layer of the heel has centrally a round opening through which the special locking device 4 passes as will be fully described further below. Underneath the holding plate 2 there is screwed into the heel 1 the locking device 4 by means of the screw 6 on which same turns as upon a pivot. The projection 7 of the locking device 4 passes through the opening 5 of the holding plate 2 as shown in Fig. 1 and extends on the inner side of the heel at a right angle and forms at the end a catch 8. The holding plate 2 further is provided with elongated slots 9 radially arranged, see Figs. 1 and 7. The exchangeable heel 10 comprises a fastening plate 11 which is stamped out to form hook shaped ears 12. The slots 9 have the purpose of allowing the ears 12 to pass whose rectangular portions pass beyond the plate 2 while pressing the exchangeable heel 10 to the holding plate and into the heel 1.

The fixing of the fastening plate 11 to the exchangeable heel 10 may be easily accomplished by stamping from said plate nail like projections 13 which enter into the exchangeable heel 10 when both are pressed together. In case the exchangeable heel part is to be made of rubber, molten rubber is preferably poured upon the fastening plate 11 so that the latter is embedded in the rubber.

The specially constructed locking device 4, shown in detail in Figs. 5 and 6 which is devised for securing the exchangeable heel part 10 to the heel 1 consists of a metal plate which may be turned around the screw 6 by means of the projection 7 with its end hook 8. On the circumference of the locking device there are notches 14 corresponding in number and location to the ears 12. These notches correspond to the slots 9 of the holding plate 2, as may be seen by comparing Figs. 1 and 5, and when in a certain location the ears 12 may pass through both. If however the locking device 4 is turned by means of the catch 8 into the position shown in Fig. 1 the tooth like edges formed by the notches 14 enter the notches 16 of the ears 12. In this manner the fastening plate 11 as well as the exchangeable heel part 10 are locked, see Figs. 4 and 7. In order to

attach the exchangeable heel 10 securely to the heel 1 the tooth like edges of the locking device 4 are provided with indentations, see Fig. 6 preferably produced by pressing so that the teeth 15 next to the notches 14 of the locking device shall still be on the same level with the latter but progress in the direction of the arrow x, see Fig. 5 whereby the heels are gradually forced together and the level of the teeth 15 meets the level of the locking device 4 at a certain angle. In this manner these teeth 15 during the turning of the locking device 4 draw the ears 12 forcibly into the heel 1. In the holding plate there are further produced holes 17 adapted to receive the semi-circular projections or ends 18 of the fastening plate 11. When the projections 18 are located in the holes 17, their coöperation prevents the turning of the exchangeable heel on the heel 1 and thus the ears 12 and the locking device 4 are subjected to less strain. Instead of the holes 17 indentations may be produced in the holding plate 2 which have the same effect. Likewise the holes 17 may be produced in the fastening plate 11 and the projections 18 on the holding plate 2 which answers the same purpose.

The exchangeable heel 10 is applied to the heel 1 in substantially the following manner: Both the exchangeable heel 10 and the heel 1 are held so that the ears 12 may enter into the slots 9 of the holding plate 2 and pass the notches 14 of the locking device underneath same. Now the locking device is turned by means of the catch 8 forming an integral part thereof. In the turned position the projection 7 sets in the indentation 19 formed on the holding plate 2 as shown in Figs. 1 and 2 and thereby both parts are firmly attached together. The exchangeable heel 10 may be released and taken off by operations performed in reverse order.

The fastening parts of the holding plate 2, the fastening plate 11 and the locking device 4 are of uniform shape which presents the great advantage that the exchangeable heels 10 are interchangeable on the same pair of shoes whereby the heels may be worn off equally until completely used up.

I claim as my invention:

1. In combination with a boot or shoe, a holding plate secured to the heel having elongated slots radially arranged and a larger slot near its inner portion, a locking device rotatably mounted within the heel provided with marginal notches and a lateral projection extending through the large slot of the holding plate, in combination with an exchangeable heel comprising a fastening plate, hook shaped ears formed integrally with said fastening plate and adapted to pass through the radial slots of the holding plate and the notches of the locking device so that upon turning the latter the exchangeable heel is firmly attached.

2. In combination with a boot or shoe, a holding plate secured to the heel having elongated slots radially arranged and a larger slot near its inner portion, a locking device rotatably mounted within the heel provided with marginal notches forming slightly inclined teeth and a lateral projection extending through the large slot of the holding plate, in combination with an exchangeable heel comprising a fastening plate, hook shaped ears formed integrally with said fastening plate, and adapted to pass through the radial slots of the holding plate and the notches of the locking device so that upon turning the latter its teeth like edges enter the notches of the hook shaped ears under a slight angle whereby the exchangeable heel is firmly attached.

3. In combination with a boot or shoe a holding plate secured to the heel having elongated slots radially arranged, small holes and a large slot near its inner portion, a locking device rotatably secured within the heel provided with marginal notches forming teeth like portions under a slight angle and having a lateral projection extending through the large slot of the holding plate, in combination with an exchangeable heel comprising a fastening plate with hook shaped ears formed integrally therewith and having spherical projections corresponding in number and location to the holes of the holding plate of the heel, so arranged that the ears may pass through the radial slots of the holding plate and marginal notches of the locking device and upon turning the latter its teeth like portions engage the notches of the ears and the spherical projections lodge in the holes of the holding plate of the heel.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SIMON STROMER.

Witnesses:
JOHN T. CARMODY,
CORINNE MYERS.