Oct. 9, 1962 R. N. RIGSBY 3,057,085

EXPANSIBLE SHOE

Filed Oct. 17, 1961

Fig. 3

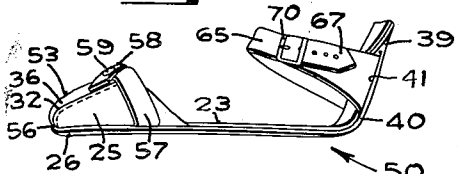


Fig. 4

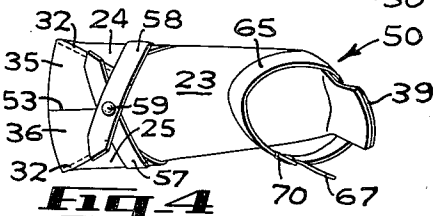


Fig. 5

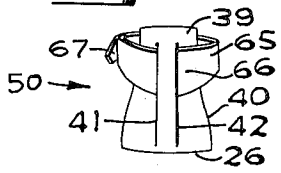


Fig. 2

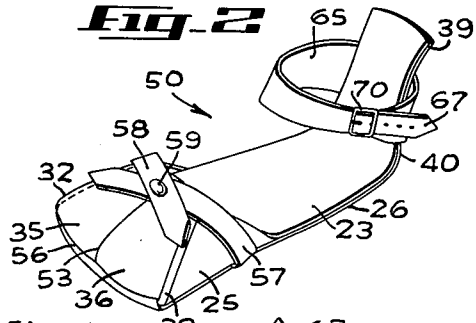


Fig. 1

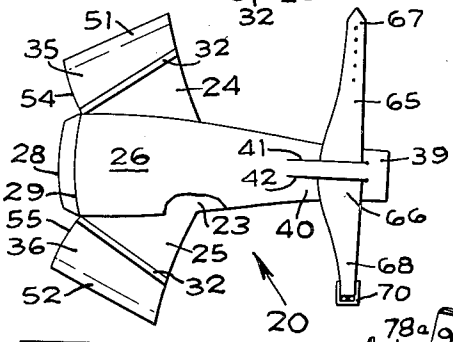


Fig. 8

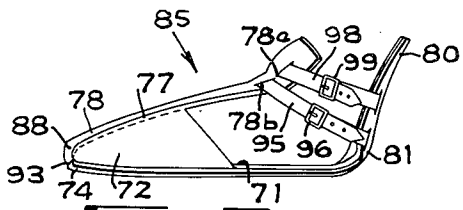


Fig. 7

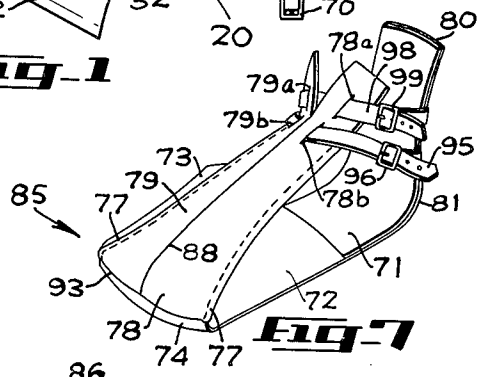


Fig. 9

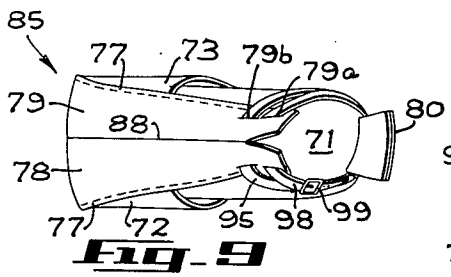


Fig. 6

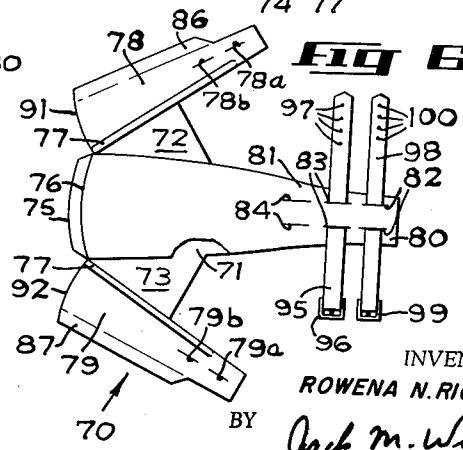
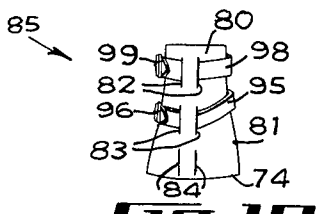


Fig. 10



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3,057,085
EXPANSIBLE SHOE

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7 Claims. (Cl. 36—2.5)

The present invention relates in general to footwear, and more particularly to a baby shoe that is adapted to be enlarged to compensate for the growth of an infant's foot.

This application is a copending application of applicant's application, Serial No. 145,651, filed October 17, 1961, for an Expansible Shoe and of applicant's application, Serial No. 158,692, filed December 12, 1961, for an Expansible Shoe.

Since the feet of children grow rapidly during the early years of their lives, shoes that are properly fitted at the time of the purchase are soon outgrown. Accordingly, in order that the child's feet are always enclosed in well-fitting, comfortable shoes, it is necessary to purchase new shoes at frequent intervals.

An object of the present invention is the provision of a shoe that may be enlarged to compensate for the increase in size of a child's foot so that the same shoe may be worn by the child over a protracted period of time.

Another object of the present invention is to provide a new sandal that is simple in design and economical to manufacture.

Another object of the present invention is to provide a shoe wherein the wear sole thereof is adjustable to accommodate the size of the wearer's foot without employing a lace or drawstring.

Another object of the present invention is to provide a shoe wherein the wear sole thereof is adjustable to accommodate the size of the wearer's foot without removing and rethreading any part thereof.

Other and further objects and advantages of the present invention will be apparent to one skilled in the art from the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a plan view of a partially fabricated blank from which one embodiment of the shoe of the present invention is made.

FIG. 2 is a perspective view of a shoe made from the blank of FIG. 1.

FIG. 3 is a side elevation of the shoe shown in FIG. 2.

FIG. 4 is a plan view of the shoe shown in FIG. 2.

FIG. 5 is an end elevational view of the shoe shown in FIG. 2.

FIG. 6 is a plan view of a partially fabricated blank from which another embodiment of the shoe of the present invention is made.

FIG. 7 is a perspective view of a shoe made from the blank illustrated in FIG. 6.

FIG. 8 is a side elevational view of the shoe shown in FIG. 7.

FIG. 9 is a plan view of the shoe shown in FIG. 7.

FIG. 10 is an end elevational view of the shoe shown in FIG. 7.

In FIG. 1, the reference numeral **20** indicates a blank made from soft leather, fabric, or a pliable plastic material and having a central portion **23** and two wings **24** and **25**. A wear sole **26**, which may be made from soft leather or other suitable materials, has substantially the same configuration as the central portion **23**, and is secured thereto by stitching along the edges thereof. The central portion **23** of the blank **20** at the forward end thereof projects beyond the wear sole **26** and has an arcuate edge **28** spaced from an arcuate edge **29** of the wear sole **26**.

As shown in FIG. 1, the bottom or wear surface of

the sole **26** is facing upwardly. Also, the finished surfaces of the blank **20**, which form the exterior, upper portions of the shoe, are facing upwardly.

A ridge (FIG. 2) has been formed in each of the wings **24** and **25** by folding the material and securing the folded material by stitching. The wings **24** and **25** are provided with extensions **35** and **36**, respectively. The wear sole **26** and the underlying portion of the blank **20** are relatively wide at their forward end which is connected to a narrow rear portion **39** by a tapering transition section **40**. A pair of elongated parallel slits **41** and **42** are formed in the rear portion **40** of the sole **26**, but not in the blank **20**, and extend in the general direction of the rear portion **39** so as to be substantially parallel with the side edges thereof.

To form shoe **50** of FIGS. 2–5, when the blank **20** and the wear sole **26** are in the position shown in FIG. 1, the wings **24** and **25** with the extensions **35** and **36** are folded upwardly to a position overlying the wear sole **26**. Marginal edges **51** and **52** of the extensions **35** and **36**, respectively, are disposed face to face and are secured together by stitching to form a seam **53**. The portion of each marginal edge lying outwardly of the seam **53** is folded back and glued to the inner surface of the wing extensions so that a relatively smooth inturned flange is formed along the seam **53**.

After the seam **53** has been formed, arcuate forward edges **54** and **55** of the wing extensions **35** and **36**, respectively, are brought into contact with the forward end of the wear sole **26**, and the wings, the sole and the central portion **23** of the blank **20** are secured together by stitching along a seam **56**. The shoe is then turned inside out so that the wear sole **26** and the finished surfaces of the wings are on the outside of the shoe.

A strap **57** is secured to the wing **25** by stitching contiguous with the edge of the wear sole **26** and the free end thereof extends substantially transversely of the shoe **50** in overlying relation to the wings and wing extensions. Similarly, a strap **58** is secured to the wing **24** by stitching contiguous with the edge of the wear sole **26** and the free end thereof extends substantially transversely of the shoe in overlying relation to the wings and wing extensions. Suitable fastening means **59** are provided at the free ends of the straps **57** and **58** to fasten the free ends together, whereby the forward portion of the shoe **50** may be securely retained on the foot of the wearer.

A strap **65** is inserted into the slits **41** and **42** formed in the rear portion **39** of the wear sole **26** and is disposed so that a central portion **66** thereof engages the exterior surface of the wear sole disposed outwardly of the slits **41** and **42**, the interior surface of the wear sole **26** intermediate the slits **41** and **42**, and the surface of the blank **23** facing the portion of the wear sole **26** intermediate the slits **41** and **42**. As shown in FIG. 1, the strap **65** has a relatively wide central portion **66**, which gradually decreases in width as the strap **65** approaches the free ends **67** and **68** thereof. The width of the central portion **66** of the strap **65** is substantially less than the length of the slits **41** and **42**.

At the free end **68** of the strap **65** is attached by stitching a suitable buckle **70**, and at the free end **67** of the strap **65** are formed suitable apertures, whereby the free end **67** cooperates with the buckle **70** to fasten together the free ends of the strap **65**.

It is to be observed from FIGS. 1 and 5 that the central portion **66** of the strap **65** can be moved within the slits **41** and **42** in a direction generally parallel with the rear portion **39** of the wear sole **26**. In FIG. 5, the central portion **66** is in its uppermost position. The central portion **66** can be moved vertically downward from the uppermost position to occupy a lowermost position.

When the central portion **66** of the strap **65** is dis-

posed in its lowermost position, the bendable portion 39 of the wear sole 26 extends a considerable distance upwardly along the rear of the wearer's foot and the portion of the wear sole 26 underlying the wearer's foot is relatively short. When the central portion 66 of the strap 65 is disposed in its uppermost position, the bendable portion 39 of the wear sole 26 is lowered along the rear of the wearer's foot and the portion of the wear sole underlying the wearer's foot is thereby increased.

It will be recognized that when the strap 65 is tightened and fastened, the strap 65 provides means whereby the effective length of the wear sole may be varied. The strap 65, when tightened, draws the yieldable rear portion 39 to bend at a pivot point close to the heel of the wearer's foot, thus adjusting the proper length of the wear sole for the wearer's foot.

In FIG. 6, the reference numeral 70 indicates a blank made from soft leather, fabric, or a pliable plastic material and having a central portion 71 and two wings 72 and 73. A wear sole 74, which may be made from soft leather or other suitable materials, has substantially the same configuration as the central portion 71, and is secured thereto by stitching along the edges thereof. The central portion 71 of the blank 70 at the forward end thereof projects beyond the wear sole 74 and has an arcuate edge 75 spaced from an arcuate edge 76 of the wear sole 74.

In FIG. 6, the bottom or wear surface of the sole 74 is facing upwardly. Also, the finished surfaces of the blank 70, which form the exterior, upper portions of the shoe, are facing upwardly.

A ridge 77 (FIG. 7) is formed in each of the wings 72 and 73 by folding the material and securing the folded material by stitching. The wings 72 and 73 are provided with extensions 78 and 79, respectively. Formed in the wing extension 78 at the rearward portion thereof are aligned slits 78*a* and 78*b* and formed in the wing extension 79 at the rearward portion thereof are aligned slits 79*a* and 79*b*.

The wear sole 74 and the underlying portion of the blank 70 are relatively wide at their forward end which is connected to a narrow rear portion 80 by a tapering transition section 81. Three pairs of slits 82—84 are formed in the rear portion 80 of the wear sole 74, but are not formed in the blank 70. The pairs of slits 82—84 are spaced from one another in the general direction of the rear portion 80 of the wear sole 74.

To form shoe 85 (FIGS. 7–10), when the blank 70 and the wear sole 74 are in the position shown in FIG. 6, the wings 72 and 73 with the extensions 78 and 79 are folded upwardly to a position overlying the wear sole 74. Marginal edges 86 and 87 of the extensions 78 and 79, respectively, are disposed face to face and are secured together by stitching to form a seam 88. The portion of each marginal edge lying outwardly of the seam 88 is folded back and glued to the inner surface of the associated wing extension so that a relatively smooth inturned flange is formed along the seam 88.

After the seam 88 has been formed, arcuate forward edges 91 and 92 of the wing extensions 78 and 79, respectively, are brought into contact with the forward end of the wear sole 74, and the wings, the sole and the central portion 71 of the blank 70 are secured together by stitching along a seam 93. The shoe is then turned inside out so that the wear sole 74 and the finished surfaces of the wings are on the outside of the shoe.

A strap 95 is provided which comprises at one end thereof a suitable buckle 96 and at the other end thereof suitable apertures 97. The apertures 97 cooperate with the buckle 96 so that the free ends of the strap 95 may be fastened together. A second strap 98 is also provided, which includes at one end thereof a suitable buckle 99 and at the other end thereof suitable apertures 100. The apertures 100 of the strap 98 cooperate with the buckle 99 for fastening together the free ends of the strap 98.

As shown in FIGS. 7–9, the wing extensions 78 and 79 overlie the instep of the wearer's foot and the slits 78*a*, 78*b*, 79*a* and 79*b* are located in the rearward portions of the extensions 78 and 79. The strap 95 is always disposed within the pair of slits 78*b* and 79*b* and may be referred to as the lower strap. The strap 98 is always disposed within the pair of slits 78*a* and 79*a*, and may be referred to as the upper strap.

In addition to being disposed within the slits 78*b* and 79*b* of the wing extensions 78 and 79, respectively, the strap 95 may be selectively disposed within either the pair of slits 84 or the pair of slits 83 of the wear sole 74. The strap 98, in addition to being disposed within the slits 78*a* and 79*a* of the wing extensions 78 and 79, may be selectively disposed within either the pair of slits 83 or the pair of slits 82 of the wear sole 74. The straps will always occupy successive pairs of slits in the rear portion 80 of the wear sole 74. Thus, the pair of slits 83 will always be occupied by a strap and either the pair of slits 82 will be occupied or the pair of slits 84 will be occupied dependent upon whether the portion of the wear sole 74 to underlie the wearer's foot shall be of the longer length or of the shorter length.

It will be observed that when the strap 95 is disposed within the pair of slits 84 of the wear sole 74 and within the slits 78*b* and 79*b* of the wing extensions and tightened around the wearer's foot and when the strap 98 is disposed within the pair of slits 83 of the wear sole 74 and within the slits 78*a* and 79*a* of the wing extensions and tightened around the wearer's foot, the bendable portion 80 of the wear sole 74 extends a considerable distance upwardly along the rear of the wearer's foot and the portion of the wear sole 74 underlying the wearer's foot is relatively short.

When the strap 95 is disposed within the pair of slits 83 of the wear sloe 74 and within the slits 78*b* and 79*b* of the wing extensions and tightened around the wearer's foot and when the strap 98 is disposed within the slits 82 of the wear sole 74 and within the slits 78*a* and 79*a* of the wing extensions and tightened around the wearer's foot, the bendable portion 80 of the wear sole 74 is lowered along the rear of the wearer's foot and the portion of the wear sole underlying the wearer's foot is thereby increased.

Thus, the straps 95 and 98 in conjunction with the slits 82—84, when tightened, provide means whereby the effective length of the wear sole 74 may be varied. The straps 95 and 98, when tightened, draw the yieldable rear portion 80 of the wear sole 74 to bend at a pivot point close to the heel of the wearer's foot, thereby adjusting the proper length of the wear sole for the wearer's foot.

It is to be understood that modifications and variations of the embodiment of the invention disclosed herein may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A shoe comprising a sole having a forward section and a flexible rear section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the wearer's foot, said second portion of said sole being formed with a plurality of slits disposed in the general direction in which said second portion projects, and a strap received by said slits and adapted to encircle the foot of the wearer, said strap having the portion thereof disposed within said slits of a width less than the length of said slits so as to be selectively movable within said slits between a lower and an upper position, whereby when said strap is disposed in the lower position and tightened around the foot of the wearer, the sole will be shorter than when said strap is disposed in the upper position and tightened.

2. A shoe comprising a sole having a forward section and a flexible rear section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the wearer's foot, means defining openings in said second portion extending in the general direction of said second portion, and a strap received by said openings and movable between a lower and upper position, said strap being adapted to encircle the foot of the wearer and to be tightened around the foot of the wearer, whereby when said strap is disposed in the lower position and tightened around the foot of the wearer, the sole will be shorter than when said strap is disposed in the upper position and tightened.

3. A shoe comprising a sole having a forward section and a rear flexible section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the foot of the wearer, said second portion being formed with a plurality of pairs of slits spaced apart in the general direction in which said second portion projects, a vamp secured to the forward section of said sole and adapted to overlie the instep of the foot of the wearer, said vamp being formed with a plurality of pairs of slits spaced apart in the general direction in which said vamp extends, and a plurality of straps adapted to encircle the foot of the wearer, each of said straps being received by one of said pairs of slits formed in said vamp and being selectively disposed in either an upper or lower pair of slits formed in said second portion of said sole, whereby when said straps are disposed in upper pairs of slits of said second portion of said sole and tightened around the foot of the wearer, the sole will be shorter than when said straps are disposed in lower pairs of slits of said second portion of said sole and tightened.

4. A shoe comprising a sole having a forward section and a rear flexible section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the foot of the wearer, said second portion being formed with an upper, a lower and an intermediate pair of slits, a vamp secured to the forward section of said sole and adapted to overlie the instep of the foot of the wearer, said vamp being formed with an upper and a lower pair of slits, a first strap received by said upper pair of slits formed in said vamp and selectively disposed within either said upper or said intermediate pair of slits formed in said second portion of said sole, and a second strap received by said lower pair of slits formed in said vamp and selectively disposed within either said intermediate or said lower pair of slits formed in said second section of said sole, said straps being adapted to encircle the foot of the wearer, whereby when said first and second straps are respectively disposed in said upper and said intermediate slits of said second portion of said sole and tightened around the foot, the sole will be shorter than when said straps are respectively disposed in said intermediate and said lower slits of said second portion of said sole and tightened.

5. A shoe comprising a sole having a forward section and a rear flexible section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the foot of the wearer, said second portion being formed with an upper and a lower pair of slits, a vamp secured to the forward section of said sole and adapted to overlie the instep of the foot of the wearer, said vamp being formed with a pair of slits, and a strap adapted to encircle the foot of a wearer and received by said slits of said vamp and selectively disposed in either said upper pair of slits or said lower pair of slits formed in said second portion of said sole, whereby when said strap is disposed in said upper pair of slits and tightened around the foot, the sole will be shorter than when said strap is disposed in said lower pair of slits of said second portion of said sole and tightened.

6. A shoe comprising a sole having a forward section and a flexible rear section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the wearer's foot, a strap adapted to encircle the foot of the wearer and to be tightened around the foot of the wearer, and means connecting said strap to said second portion of said sole for positioning said strap between a lower position and an upper position, whereby when said strap is disposed in the lower position and tightened around the foot of the wearer, the sole will be shorter than when said strap is disposed in the upper position and tightened.

7. A shoe comprising a sole having a forward section and a rear flexible section including a first portion underlying the heel of the foot of the wearer and a second portion projecting rearwardly and upwardly from said underlying portion along the rear of the heel of the foot of the wearer, said second portion being formed with an upper and a lower pair of slits, and a strap adapted to encircle the foot of the wearer and to be tightened, said strap being selectively disposed in either the upper or the lower pair of slits formed in said second portion of said sole, whereby when said strap is disposed in said upper pair of slits of said second portion of said sole and tightened around the foot of the wearer, the sole will be shorter than when said strap is disposed in said lower pair of slits of said second portion of said sole and tightened.

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