United States Patent [19]

Munschy

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[54] **DISPOSABLE SHOE**

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[52] **U.S. Cl.** ..... **36/2.5 E**, 36/2.5 B, 36/48

[51] **Int. Cl.** **A43b 23/00**

[58] **Field of Search** ..... 36/2.5 B, 11, 51, 36/2.5 E, 2.5 R, 48, 49, 47; 2/DIG. 6

[56] **References Cited**

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3,142,911	8/1964	Waters	36/2.5 B
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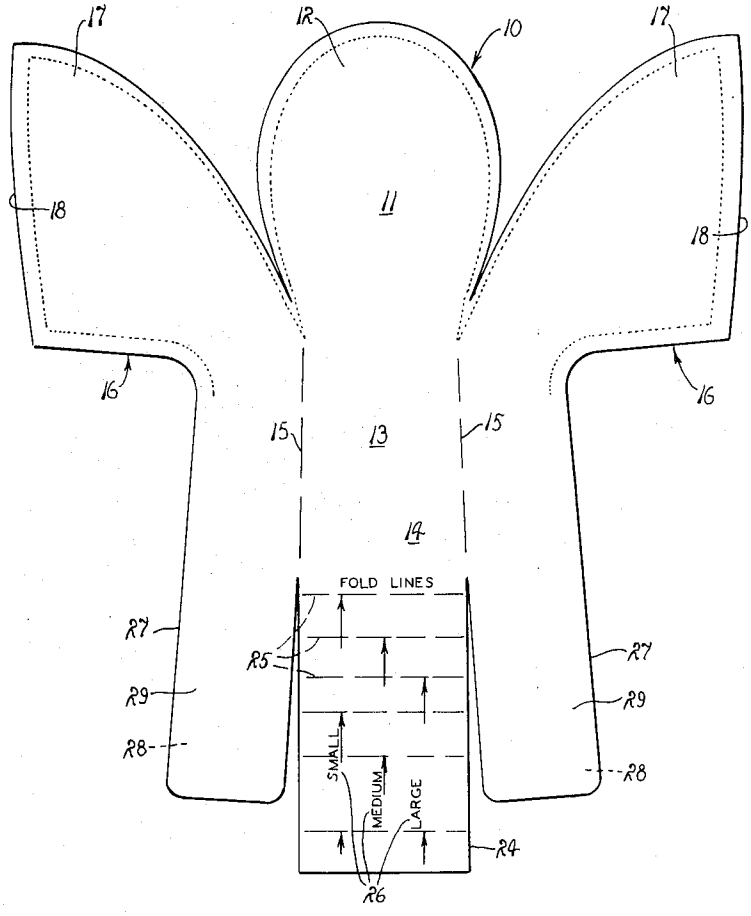
Primary Examiner—Patrick D. Lawson
Attorney—Herbert A. Huebner et al.

[57] **ABSTRACT**

A disposable shoe having a sole, an upper continuous with the sole so as to define a front portion of the shoe, a first flap extending from the sole and adapted to be folded to form a back portion for the shoe, a pair of second flaps extending rearwardly from the front portion and adapted to engage each other and outwardly to overlay the first flap to retain the first flap in position as a back portion for the shoe; and indicia provided on the first flap designating potential fold lines where the first flap can be folded to define a shoe of the length indicated.

3 Claims, 5 Drawing Figures



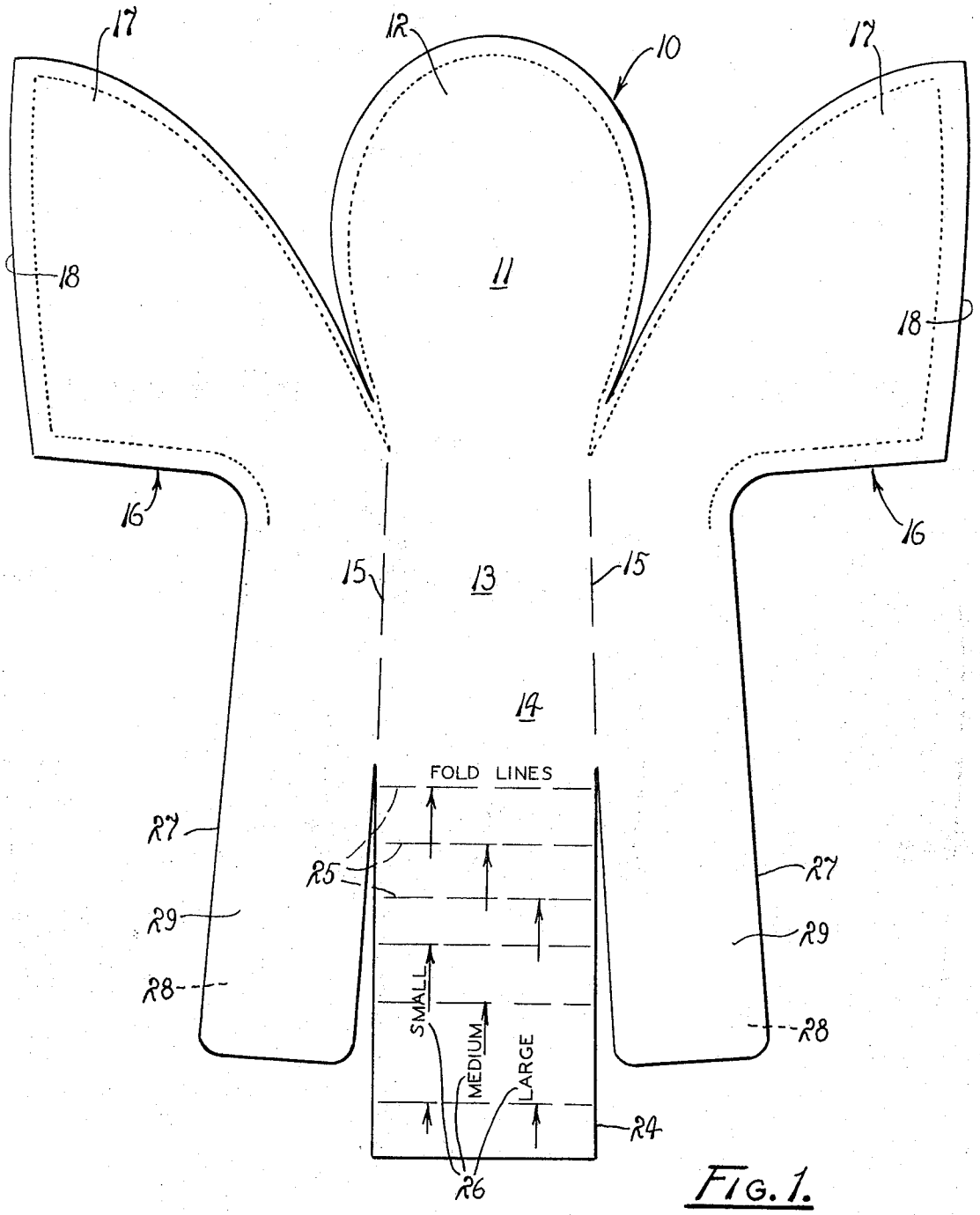

17
12
10
17
18
11
18
16
16
15
13
15
14
FOLD LINES
27
25
27
29
29
28
28
SMALL
MEDIUM
LARGE
24
26

FIG. 1.

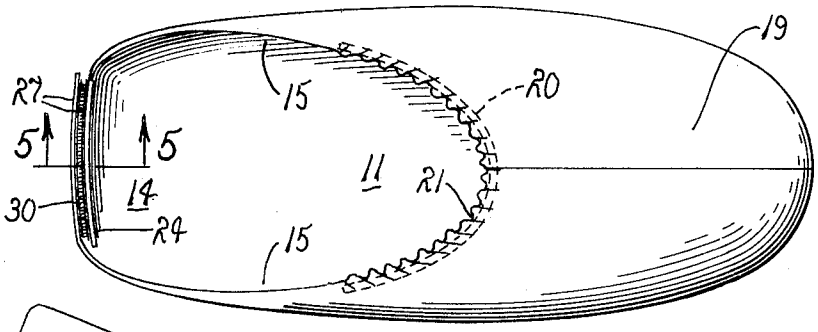


FIG. 2.

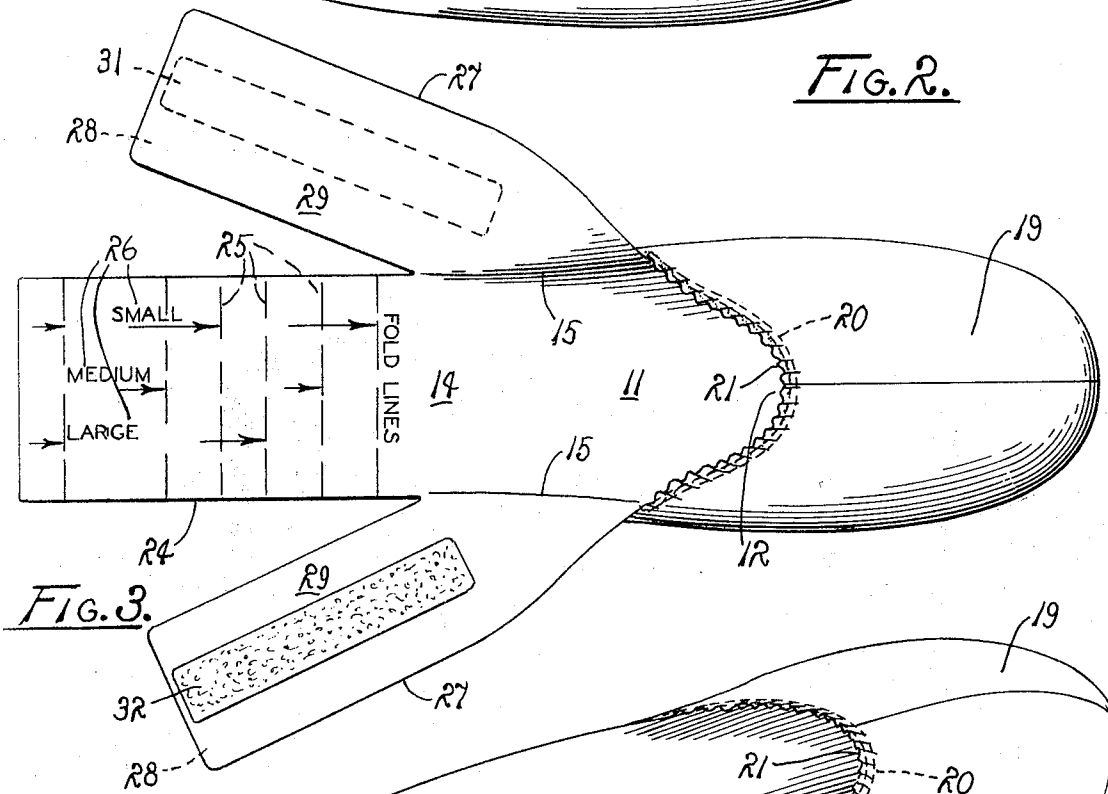


FIG. 3.

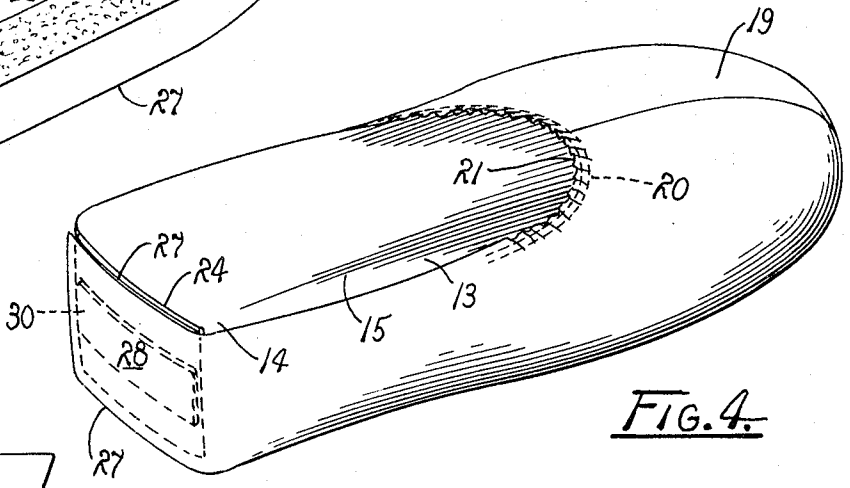


FIG. 4.

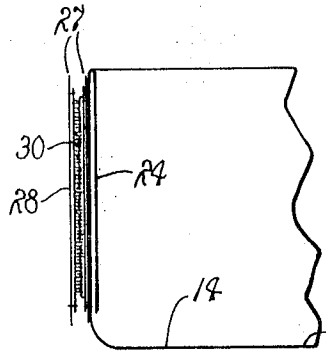


FIG. 5.

DISPOSABLE SHOE

BACKGROUND OF THE INVENTION

The present invention relates to disposable shoes and more particularly to such shoes which are of minimal expense, adjustable to fit a wide range of foot sizes, and therefore suitable for use for brief or prolonged periods in place of street shoes for purposes of convenience, sanitation, aesthetics and the like in hospitals, research facilities, gymnasiums, restaurants and other environments in which quickly available disposable shoes are desired.

The prior art patents such as U.S. Pat. No. 1,821,051 to Brown; U.S. Pat. No. 2,110,839 to Ferriot; U.S. Pat. No. 2,603,889 to Lahnstein et al.; U.S. Pat. No. 2,803,894 to Morgan; U.S. Pat. Nos. 3,027,658; 3,057,085; and 3,057,086 to Rigsby; and U.S. Pat. No. 3,142,911 to Waters disclose shoes which are adjustable in various ways. None of the aforementioned patents, however, discloses a shoe intended for disposable use which provides means for adjusting the shoe to a pre-designated size so as to fit a wide variety of users. The shoe of the present invention thus is believed to attain advantages not heretofore possible with prior art shoes.

There are a number of circumstances in which it is desirable to wear coverings for the feet other than ordinary street shoes. Patrons of restaurants and hotels are commonly required by health and safety codes or, as otherwise prescribed by the management, to wear shoes while being on the premises. Frequently, patrons of such establishments, particularly where the establishments have swimming pools or are located adjacent to public recreational facilities such as beaches, do not have their regular shoes conveniently at hand. The management of such restaurant or hotel then has the alternatives of refusing entry, supplying shoes for temporary use, or, as most commonly occurs, simply overlooking the violation of the code or house rule.

Similarly, gymnasiums, athletic clubs, and public recreational facilities often deem it desirable that patrons wear coverings for the feet in order to avoid the transmission of communicable foot germs which may be prevalent. This is a particular hazard in such establishments where dampness, warm temperatures and frequent bodily contact foster an environment conducive to the growth, multiplication, and communication of such germs. Such temporary coverings for the feet also find utility in hospitals and research facilities of all types in which a scrupulously sanitary environment is necessary in order to avoid contamination which might adversely affect patients and research projects.

Conventionally available disposable coverings for the feet for use in the above described circumstances are less than satisfactory. Perhaps the most commonly used type of covering particularly in gymnasiums and athletic clubs is the simple paper slipper consisting of a sole with an upper toe portion stitched thereon. Such slippers are of very little use in that they absorb moisture, deteriorate rapidly and only partially cover the feet, thereby allowing substantial contact with the floor and other sources of contamination. Other prior art devices which are sometimes utilized take the form of a roughly foot-shaped sack or bag normally constructed of a plastic material. Such devices are of a size so as to be receivable over nearly any size foot and are secured about the ankle of the wearer in gathered relation by a suitable cord or string. Such devices are utilzed particularly in hospital operating rooms and research facilities to preclude the undesirable contaminating contact. However, they are uncomfortable in that they do not conform to the feet of the wearer, do not stay in position without frequent readjustment, and have wrinkled or gathered areas which produce discomfort during prolonged use.

Therefore, it has long been recognized as desirable to have a disposable shoe or slipper which is inexpensive to produce and purchase, covers substantially all of the foot, is adjustable to conform to a wide range of foot sizes, and is comfortable to wear.

SUMMARY OF THE INVENTION

In view of the foregoing, it is an object of the present invention to provide a disposable shoe of minimum cost.

Another object is to provide such a shoe which is adjustable comfortably to fit a wide range of foot sizes.

Another object is to provide such a shoe which is durable so as to provide a reasonably long operational life while being inexpensive enough to permit disposal after a brief period of use.

Another object is to provide such a shoe which has indicia thereon for precise preadjustment of the shoe to the size particularly suited comfortably to conform to a wearer's foot.

Another object is to provide such a shoe which has an elastic portion for secure retention of the shoe on the foot of the wearer.

A further object is to provide such a shoe which is suitable for vending by coin-operated vending machines.

A still further object is to provide such a shoe which aids in inhibiting the communication of foot germs when properly employed.

Further objects and advantages are to provide improved elements and arrangement thereof in a device for the purposes described which is dependable, economical, durable and fully effective in accomplishing its intended purposes.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of a blank used in constructing the disposable shoe embodying the principles of the present invention.

FIG. 2 is a top plan view of the disposable shoe.

FIG. 3 is a top plan view of the disposable shoe showing flaps thereof disposed in substantially the same plane for illustrative convenience.

FIG. 4 is a rear perspective view of the shoe.

FIG. 5 is a longitudinal vertical section taken on line 4—4 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring more particularly to the drawings, the disposable shoe of the present invention is shown as constructed of a blank of suitable sheet material **10**. The particular material employed can, of course, be paper, fabric, leather or the like. However, because it is durable, impervious to moisture and of very low cost, the blank is preferably of flexible plastic. Also, in the case of plastic, the shoe can initially be molded or cast in the configuration of the shoe to be described without re-

quiring stitching, adhesively securing, vulcanizing, or bonding. It will become apparent that the shoe can also be constructed of the individual parts to be described which are sewn, stitched, glued, vulcanized, or bonded so as to form the shoe. The economic advantages derived from the use of a single blank of sheet material requiring a minimum of stitching in forming the shoe therefrom make this the preferred mode of construction.

In its preferred form, the blank **10** has a sole **11** defining a front or toe portion **12**, a central portion **13**, and a rear or heel portion **14** of the shoe. The sole has opposite sides **15** from which opposite wings **16** are individually, continuously extended. Each of the wings has a forward toe extension **17** adjacent to the front portion of the sole and an edge **18**.

During manufacture, the blank **10** is folded so that the toe extensions **17** of the wings **16** extend about the front portion **12** of the sole and the edges **18** are overlapped above the front portion as shown in FIGS. **1, 2** and **3**. Depending upon the material from which the blank is constructed, the edges are secured together by stitching, adhesively securing, vulcanizing, or bonding so as to form a vamp or upper **19** for the shoe. Similarly, the toe extensions **17** are secured to the periphery of the front portion of the sole by any of the above procedures. An elastic strip **20** is secured on the interior side of the upper so as to form a gathered portion **21**.

The sole **11** has a heel tab, or first flap **24** extending from the rear portion **14** thereof. The flap has suitable fold lines **25** as well as indicia **26** displayed thereon, such as shown in FIG. **3**, which indicates convenient lines along which folding of the flap should be performed in order to define a shoe of the indicated length. A pair of rearward extensions or second flaps **27** extend continuously from the opposite sides **15** of the sole and upper **19** of the shoe. Each second flap has an exterior surface **28** and an interior surface **29**. The second flaps are adapted to be secured in overlapping relation to each other by a hook and fabric fastener generally indicated at **30**. While other fasteneres can be employed, this form is most advantageous due to its low cost, durability, ease of use and adjustability. The fastener is composed of a matted fabric strip **31** secured adjacent to the remote end of one of the second flaps on its exterior surface and a hook strip **32** secured adjacent to the remote end of the other flap on its interior surface so that the strips are engageable when the second flaps are folded as shown in FIGS. **2, 4** and **5**.

OPERATION

The operation of the described embodiment of the subject invention is believed to be clearly apparent and is briefly summarized at this point. The disposable shoe of the present invention in one size can be adjusted to fit any normal foot as well as either a right or left foot. In order to adjust the shoe to fit a foot of a particular size, the first flap **24** is folded along the appropriate fold lines **25** as indicated by the indicia **26** so as to be approximately normal to the sole thereby defining a shoe of the desired length. As shown in FIG. **3**, the first flap is folded toward the front portion **12** of the shoe along two transverse lines in the case of medium and large adjustment and along three transverse lines in the case of small adjustment. In FIG. **5**, the first flap is folded along two lines so as to define a shoe of medium length.

After folding of the first flap **24**, as described, the second flaps **27** are extended rearwardly from the upper **19** along the opposite sides **15** of the sole **11** and roughly normal thereto. The remote portions of the second flaps are folded toward each other in engaged overlapping relation and in rearward covering relation to the folded first flap, as best shown in FIG. **2**, so as to form the back portion of the shoe. The second flaps are secured in this position by the hook and fabric fastener **30** so as to maintain the first flap in the pre-folded configuation thereby defining the shoe of the present invention. Since the shoe is formed preferably from a single blank of sheet material **10**, and since the juncture of the first flap and the second flaps is quite close to the first fold point of the first flap, as indicated by the indicia **26** and shown in FIG. **3**, the pressure of the heel of the wearer against the first flap and the snug engagement of the second flaps about the first flap as described securely retain the first flap in the described folded configuration during use without slipping from position. It will be seen that the elastic strip **20** allows the gathered portion **21** to expand and contract so as to fit snugly around the foot of the wearer. After putting the shoes on, the engagement of the second flaps can be readjusted so as to fit the shoes more comfortably to the feet of the wearer.

The disposable shoes of the present invention can be dispensed at any suitable location from vending machines and can be packaged for such dispensing so as to maintain pre-established sanitary standards prior to being used. The shoes can also be treated with a suitable disinfectant to help maintain cleanliness during use.

The shoes, once adjusted, can be worn for an indefinite period of time by the wearer or readjusted for use by other persons. Since the shoes are preferably constructed of a flexible plastic material, they are quite durable, impervious to moisture, and can afford a long period of comfortable use. However, since the shoes are of minimal expense, they can be disposed of for purposes of sanitation and convenience, as desired. Since the shoes cover substantially all of the surface area of the feet of the wearer, the maximum in sanitary protection is achieved during use.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the illustrative details disclosed.

I claim:

1. A shoe fabricated from a single blank of sheet material comprising a sole having predetermined forward, central and rearward portions disposed substantially in a common plane and shaped generally to conform to the shape of a person's foot; opposite wings integral with opposite sides of the sole throughout the central portion thereof providing toe extensions extended convergently frowardly about the forward portion of the sole, upwardly over the forward portion of the sole and having overlapped central edges disposed above the forward portion of the sole; means securing the toe extensions about the edges of the forward portion of the sole and the overlapped central edges to each other, the sole having a heel tab continuous with the rearward portion thereof folded upwardly from the plane of the sole to form a heel for the shoe, the wings each having

an integral rearwardly extended tab, the tabs being folded rearwardly about the heel tab in overlapping relation to each other; and means releasably securing the overlapped tabs in adjustably overlapped relation.

2. A disposable shoe comprising an integral blank of sheet material having an elongated sole providing successively continuous predetermined heel, central and toe portions, the heel and central portions having side edges disposed in substantially parallel planes, the heel portion being transversely folded to substantially right angular relation to the central portion to form a back to the shoe, the toe portion being semi-ovate, forwardly extended from the central portion and having an arcuate peripheral edge; and a wing continuous with each side edge of the central portion, said wings being mirror images of each other, being folded to substantially right angular relation to the central portion of the sole, along the side edges thereof, having flaps rearwardly extended from said central portion and overlapped rearwardly about the heel portion of the sole, and toe portions disposed on opposite sides of the toe portion of the sole, each toe portion having an arcuate edge extended forwardly about the peripheral edge of the toe portion and secured thereto to a point of juncture with the opposite wing and a wing securing edge continuous with the sole attaching edge of its respective wing extended rearwardly from its said sole attaching edge along the wing securing edge of the opposite wing and secured thereto; and means releasably securing the flaps of the wings in said overlapped relation rearwardly about the heel portion of the sole.

3. A blank for the formation of a disposable shoe comprising a planar sheet of disposable material substantially symmetrical about a longitudinal center line having an elongated sole providing integral predeteremined heel, central and toe portions aligned along said center line, the heel and central portions being continuous and substantially rectangular and having opposite substantially parallel side edges, the heel portion being foldable from the plane of the central portion to form a back to the shoe, the toe portion being continuous with the central portion, substantially semi-ovate, of a width wider than the central and heel portions and elongated along said longitudinal center line; and a wing extended from each of the side edges of the central portion, said wings being continuous with their respective central portions throughout the lengths thereof, and foldable from the plane of the sole along the side edges thereof to form opposite sides of the shoe, the wings being mirror images of each other and having flaps extended along the heel portion of the sole in spaced relation thereto foldable in overlapping relation outwardly about the heel portion when the latter is folded to form the back of the shoe, and toe portions disposed on opposite sides of the toe portion of the sole, each toe portion having an arcuate forwardly and outwardly extended sole attaching edge adapted to extend one half of the distance about the toe portion of the sole and to be secured thereto and a wing securing edge continuous with the sole attaching edge of its respective wing extended rearwardly longitudinally of the sheet and adapted to be secured to the wing securing edge of the opposite wing.

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