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Cushioned wristband with self-laminating identity tag

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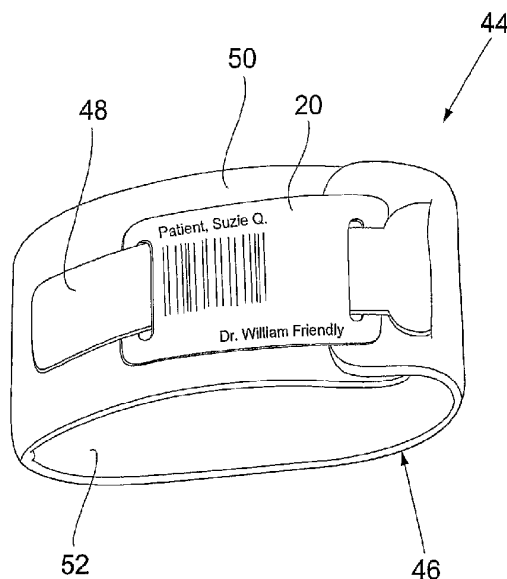
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(54) Title: CUSHIONED WRISTBAND WITH SELF-LAMINATING IDENTITY TAG



(57) Abstract: A cushioned wristband includes a carrier (44) having a multi-layered band portion and a strap (48) sewn to the back of the band portion (46) of the carrier (44). The band (46) has a surface (50) with loop material and the strap (48) has a surface of hook material, the hook and loop surfaces being intended to secure the band (46) in place as it is wrapped about a patient's appendage. The strap (48) is appropriately sized to insert through one or both of two cinch slots of a self-laminating hang tag (20) which may be printed with patient information and separated from a sheetlet or page sized business form processed through a printer for imaging of patient information thereon. The band portion (46) of the carrier (44) includes a cushioned layer (52) of soft foamy or spongy material for contacting a patient's skin to thereby substantially eliminate any possibility for abrasion, rash, or other irritation or injury to the patient through wearing of the wristband.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**CUSHIONED WRISTBAND WITH SELF-LAMINATING IDENTITY TAG****Background and Summary of the Invention**

The inventor herein has previously invented multiple designs for self-laminating wristbands principally for use with patients in a medical or hospital setting. Examples of these may be found in his previously-issued Patents Nos. 5,933,993; 6,000,160; 6,067,739; 6,438,881; 6,510,634; and 6,685,228 along with other patent applications pending for further designs, improvements, and inventive techniques and methods relating thereto, the disclosures of which are incorporated herein by reference. Included among these various inventions and designs are self-laminating wristbands intended for use with newborn babies including those delivered prematurely. As is well known, these babies and especially premature babies have extremely sensitive skin in many instances so that any wristband or other object placed around the baby's wrist or ankle must carefully allow for that sensitivity. Furthermore, babies are well known to move their arms and legs in a herky-jerky or flailing fashion, rub their eyes, and otherwise move about as they experience the new world that they have entered. In many instances, these newborn babies can become agitated and cry which can have a tendency to accentuate or intensify their arm and leg movements. Of course, as their hands, arms and legs move, they come in contact with other sensitive areas, such as, for example, their face, which could in some instances become scratched and in rare instances even injure the baby.

The inventor's previous designs include wristbands intended for these smaller babies including babies which might even be in intensive care and various features are provided to greatly minimize any possibility of discomfort, rash, or other injury to occur. Nevertheless, despite the great commercial success and widespread adoption  
5 and use of the inventor's wristband inventions, which have provided a significantly safer wristband for use with these babies, the inventor has continued his efforts to improve upon these designs even further so as to completely eliminate even the slightest possible chance of irritation or injury to the baby.

As a result of his continuing efforts, the inventor herein has succeeded in  
10 designing and developing a cushioned wristband which makes it virtually impossible for a baby who wears this wristband to experience a rash, discomfort, or even any injury as a result of the baby's boisterous conduct. In simple terms, this latest invention of a cushioned wristband includes a cushioned carrier for extending around the baby's wrist or ankle with a fastening strap preferably sewn to and extending from  
15 one side thereof. The strap preferably has one surface covered with Velcro™ hook-type fastener material while the carrier has a surface covered with Velcro™ loop material. The opposite surface of the carrier which comes into contact with the baby's skin is preferably any hypoallergenic, soft, cushioning material. The strap is preferably sized to thread through a self-laminating tag which may be processed  
20 through a laser printer and is similar in construction to many of the inventor's previous wristband designs. In essence, this self-laminating tag preferably comprises an imaging area of face stock material and an underlying self-laminating portion approximately twice the size of the imaging area with cinch slots preferably positioned in the lamination and preferably on either side of the imaging area. In use,  
25 the tag may be processed through a laser printer for printing with the patient's name,

doctor's name, a barcode identifier, date of admission, and any other information as desired. The tag may then be separated from a sheetlet sized or page sized or other conveniently sized business form, the lamination folded over to self laminate the tag, and then applied to the carrier by inserting the strap through one or both of the cinch slots. Once fully assembled, the wristband may then be wrapped around the baby's wrist and the strap affixed to the back of the carrier by joining the hook and loop material of a Velcro™ fastener to thus secure the wristband to the baby. Preferably, the wristband is sized to allow for the cushioning material to wrap entirely around the baby's wrist, ankle, etc., and preferably overlap so that just the cushioning material contacts the baby's skin.

A somewhat similar prior art device is shown in Fig. 1. It comprises a wristband 100P made of cushioning material 102P with a backing of Velcro™ loop material 104P, with a short strap 106P sewn to one side thereof and having a Velcro™ hook material 108P arranged for securing the wristband. Sewn on the back of the wristband is a panel 110P to which a patient label 112P may be adhered. This patient label 112P may be provided as part of another form and printed such as by processing through a laser printer. It is noted that the patient label is exposed and not laminated, thereby requiring it to be made of a resilient material such as a vinyl or other durable material to withstand the moisture, body fluids and other abuse it will receive. Furthermore, there is no positive or mechanical attachment of the patient label to the wristband so that as it becomes worn and abused, the patient label is likely to become illegible or even detach which could lead to failure of the wristband in its essential purpose of reliably identifying the baby. With the wristband of the present invention, the cinch slots provide a positive mechanical attachment of a laminated patient label which makes it virtually impossible for it to become illegible or detached, thereby

providing dramatically improved performance. The prior art patient label is not conveniently removed for refreshing the patient label with a new one, and instead it is thought that a new patient label would need to be adhered over the top of the existing patient label. This construction leads to attachment of a second patient label in a manner less secure than the original, unless extreme care is taken to prepare the panel for receiving the new patient label which is unlikely to happen in the hospital environment. Nurses have better things to do with their time than clean and prepare surfaces for receiving a new patient label. With the present invention, refreshment of a patient label is rarely necessary, and if necessary, can be achieved in a few steps by removing the wristband, sliding off the old patient label and sliding on the new patient label, and then replacing the wristband back on the baby. No cleaning of a surface, or peeling of the old label, is required. Furthermore, the replacement patient label is secured just as well as the original patient label. The present invention thus represents a dramatic step forward over this prior art construction.

There are many new features and advantages provided by the present invention. Some of these include the following. The self-laminating tag may be conveniently provided on a sheetlet or full-page size form for convenient processing through a laser printer at the time of admission along with other forms including other wristbands and labels as may be later used for the baby. Thus, the advantages as noted in the inventor's prior patents are carried forward with this invention in that regard. The self-laminating tag may be firmly secured either loosely or closely about the baby's wrist or ankle with only a cushioning material contacting the baby's skin to thereby provide reliable identification with a durable tag yet without any discomfort to the baby. The carrier is adjustable as it can be wrapped around itself to provide a variable length so that it may be used with babies of different size or age. In other

words, the wristband carrier is sized and arranged with its hook and loop fastener to be adjustable in length and fit either loosely or tightly to the baby's appendage. The hang tag may be attached with either one or both of the cinch slots, as desired. If attached with a single cinch slot, the tag in essence is free to move with respect to the wristband and thereby be more readily accessible and remain flat for easier bar code scanning. If attached with the strap extending through both slots, the tag may be secured more tightly against the carrier, less subject to inadvertent detachment, and less likely to be inadvertently brought into contact with the baby. The wristband is relatively inexpensive yet durable and flexible in that, should a tag be desired to be changed as a result of heavy abuse, it may be conveniently done without reprocessing in many instances as additional tags may be conveniently printed at the time of admission. By being self laminating, the tag is protected from the various bodily fluids likely for it to come in contact with as the baby is fed or administered medicine orally, the baby drools, and the baby otherwise performs its bodily functions. As the hang tag is detachable, the carrier may be reused as desired or in shortage or emergency situations thereby making the entire wristband system more flexible. Indeed, the carrier may itself be washed in that same regard. The hang tag may be provided as part of a larger assemblage of wristband forms such that a single set of forms may be preprinted and available for usage as the baby's stay progresses and even to accommodate those relatively few occasions when the baby is kept for an extended stay.

While the principal advantages and features of the invention have been briefly described above, a more thorough understanding and appreciation for the invention and its advantages may be obtained by referring to the drawings and description of the preferred embodiment which follow.



Brief Description of the Drawings

Figure 1 is a plan view of a prior art wristband and label having a cushioning material carrier;

Figure 2 is a top view of a sheetlet sized business form having a pair a self-laminating wristbands and a pair of self-laminating hang tags for use with the cushioned carrier as shown in Figure 4;

Figure 3 is a top view of a full-page sized "combo" form having an upper portion containing a pair of self-laminating wristbands as well as a pair of self-laminating hang tags and a bottom portion having a matrix of printable self-adhesive labels;

Figure 4 is a top view of the cushioned carrier depicting the Velcro™ strap sewn to one side thereof for attachment of the self-laminating hang tags depicted in Figures 2 and 3;

Figure 5 is a perspective view of an assembled wristband with the strap threaded through both of two cinch slots;

Figure 6 is a perspective view of an assembled wristband with the strap threaded through one of the cinch slots; and

Figure 7 is a perspective view of an assembled wristband applied to a patient's wrist.

Detailed Description of the Preferred Embodiment

As shown in Figures 2 and 3, the self-laminating hang tag 20 is provided as part of a multi-web business form shown as a sheetlet 22 in Figure 2 or a page sized combination form 24 as shown in Figure 3. The sheetlet 22 is approximately envelope sized for convenient processing through a laser printer, as is known in the art and as explained in the inventor's prior patents mentioned above. The sheetlet 22

is generally comprised of two plies, an upper face ply 26 joined to an underlying laminate ply 28, the self-laminating portions of which are shown in outline 30 on the sheetlet 22. A pair of hang tags 20 as well as a pair of self-laminating wristbands 32 are conveniently sized to fit within the confines of the sheetlet 22. Of particular interest for purposes of the present invention are the hang tags 20. Each of these include an imaging area 34 defined by a die cut 36 in the face stock layer 26 and an underlying laminating portion 38 defined by a die cut 40 in the laminate layer 28. A pair of cinch slots 43 are preferably provided in the laminating portion 34 and straddling the imaging area 34. These cinch slots are used to attach the hang tag 20 to the carrier 44, as is explained below in greater detail. As shown in Figures 2 and 3, the cinch slots 43 may be approximately 7/16 inches long by approximately 1/16 inches wide and spaced approximately 1-3/4 inches apart, or otherwise appropriately sized to allow for the hang tag 20 to be slidably attached, as explained below. More particularly, the inventor contemplates that the cinch slots 43 should be preferably sized so as to minimize the possibility for the hang tag 20 to shift once the wristband has been applied to the baby. The self-laminating hang tag 20 is conveniently separated from the sheetlet 22 and the lamination portion 38 is folded about a score line 42 to completely encapsulate the imaging area 34. Of course, the imaging area 34 may be processed through a laser printer and printed with patient information upon admittance of the patient or, as with the case of a baby, birth of the baby. In addition to being provided in sheetlet 22 form, the wristbands 32 and hang tags 20 may also be provided as part of a page sized combo form 24 as shown in Figure 3. The construction of the combo form 24 is explained in greater detail in one or more of the inventor's prior patents as mentioned above.

The carrier 44 is shown in Figure 4. It includes a band portion 46 and a strap portion 48. The band portion 46 is of multi-layer construction with a top layer 50 of the "loop half" of a Velcro™ fastener material and a bottom layer 52 of a cushioned material which is preferably any soft foam or sponge-like material which may also be of surgical grade. The Velcro™ strap 48 has a lower surface 54 comprised of the "hook half" of a Velcro™ fastener such that as the carrier 44 is wrapped around a baby's wrist, the Velcro™ hook surface 54 may be brought to overlie the Velcro™ loop surface and attach the two ends of the carrier 44 and complete the wristband.

As shown in the preferred embodiment, the strap portion may be preferably sewn on to the end of the carrier or band portion 46 and be approximately 3 inches long by 3/8 inches wide. The hang tag cinch slots 43 are sized appropriately to receive and pass the strap portion 48 therethrough and allow an end of the strap portion 48 to extend beyond the second cinch slot 43 for exposure to the loop portion 50.

In use, the hang tags in the form of a sheetlet or page sized form are conveniently processed through a laser printer or the like at which time the patient's name or other identifying information is applied to the imaging area. A hang tag may then be separated from the sheetlet or page sized form, and the carrier strap inserted through one or both of the cinch slots. As shown in Fig. 5, the hang tag may be positioned on the strap so that the extra length of the strap extends beyond the outboard cinch slot so that the maximum size "tongue" extends beyond for attachment to the loop material on the back of the carrier. Also, in Fig. 5 the carrier is shown as overlapping so that only the cushion material forming the carrier contacts the patient's skin. This arrangement is similarly shown in Fig. 7. With this arrangement, it is thought that maximum comfort is provided to the patient as the carrier may be

“snugged” about the wrist, or ankle, so as not to be tight but to be firmly secured and yet just the cushion material is softly compressed against the skin. A second configuration is shown in Fig. 6, as the strap is threaded through only one of the two cinch slots. Although Fig. 6 shows the strap inserted through the inboard cinch slot, 5 the strap may be similarly inserted through the outboard slot, depending on the choice of the nurse. One or the other of the slots might be chosen to facilitate access to a bar code on one side or the other of the hang tag, for example, or for any other reason including merely personal preference. Again, in Fig. 6 as in Fig. 5, the carrier is shown as overlapping, for maximum comfort. However, the carrier could be arranged 10 to not overlap, for example should a longer length wristband be needed, although that application is not contemplated by the inventor as preferable as it possibly exposes rough edges and surfaces to the patient’s skin.

As shown in Fig. 7, the wristband is conveniently arranged to encircle the patient’s wrist, and may be “snugged” against the wrist to hold it in place, with the 15 information on the hang tag exposed for ready viewing and access for example to read a bar code imprinted thereon. With this arrangement, the wristband will resist unintentional migration or movement which would obscure the patient information. However, as noted above, the length of the wristband compared to the size of the patient’s appendage will in some cases limit the choice for applying the wristband in 20 this overlapping configuration or not. While a short gap between the two ends of the carrier might well be acceptable due to the relative thickness of the carrier, too long a gap would potentially expose the “hook” surface of the strap to the patient’s skin as well as shorten the amount of strap hook surface contacting the loop surface which might compromise the integrity of the attachment. Therefore, while the design of the

wristband does provide some adjustability, some care must be used in choosing the right size wristband for the particular patient.

The invention has been described in terms of a preferred embodiment as shown in the drawings and described above. However, the invention should not be  
5 considered as limited to the specifics of this preferred embodiment as various changes and alternatives to the specific disclosure would be apparent to those of skill in the art and are included within the teaching of the invention. For example, various kinds of materials may be used for the band portion of the carrier, various dimensions and lengths can be chosen as convenient for the various portions of the carrier such as the  
10 band and the strap, the strap may be secured to the band portion by any convenient attachment means including a hook-and-loop fastener, snap, etc., the hang tag could be preprinted with information desired to be included, such as special precaution conditions or other warnings or indications relating to the medical condition or treatment of the patient, a cinch slot could be provided on only one side of the hang  
15 tag instead of both sides or moved to different areas on the hang tag, a wristband could function as a hang tag by cutting off the strap portion, and other similar changes. Furthermore, although explained as intended for principal use for baby patients, the wristband of the present invention may also be used for any patient for increased comfort and reduced risk of abrasion, rash, or unintentional injury for those  
20 patients with skin integrity issues such as burn victims, elderly patients, etc. As such, the present invention should only be considered as limited by the scope of the claims appended hereto and their legal equivalents.

**THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:**

1. A cushioned wristband with printable self-laminating label, said wristband comprising a layer of cushion material for contacting the wearer's wrist, a strap extending to one side of said cushion material, a self-laminating label for separable, mechanical attachment to the wristband, said self-laminating label having a width smaller than the wristband and at least one slot through which said strap may be inserted, and an attachment for securing the strap so that it remains inserted through the slot.
2. The wristband of claim 1 wherein the self-laminating label has a pair of slots with each at an opposite end through which said strap may be inserted to thereby secure and display one side of said label in a substantially planar orientation substantially adjacent the wearer's wrist as the wristband is worn.
3. The wristband of claim 2 wherein the attachment comprises a layer of one of either hook or loop material backing covering at least a portion of the cushion material, and wherein the strap has a surface of the other of the hook or loop material, and wherein the slots are oriented so that when the label is attached by the strap extending through both of said slots the label is spaced inwardly from each side of the wristband to minimize the opportunity for the label's edges to come in contact with the wearer's wrist.
4. The wristband of claim 3 wherein the label comprises a printable face stock portion and a laminating portion, said laminating portion being approximately twice the size of said printable face stock portion so that the laminating portion may be folded over to substantially encapsulate the face stock portion, and wherein the backing layer is loop material and the strap is hook material.
5. The wristband of claim 4 wherein the strap is attached to the loop material and arranged so that after insertion through at least one of the label slots the strap may be wrapped around the user's wrist and past the opposite edge of the wristband for attachment to the backing so that the

user's wrist is completely encircled by the cushion material and the label is located outside the wristband.

6. A cushioned wristband arranged to receive a label, the wristband having a carrier comprised of an inside layer of cushion material and an outside layer of either hook or loop material, and a strap affixed near an edge of the carrier, the strap having a layer of the other of either the hook or loop material, the strap being sized to insert through at least one slot formed in a label and the wristband then wrap around the user's wrist for attachment of the strap to the outside layer as the wristband is applied to a user's wrist.

7. A label for attachment to the wristband of claim 6, said label comprising a self laminating label formed from two plies of material and having a pair of said slots, said label having a width smaller than that of the strap, the slots being arranged so that upon the strap passing through the slots the label is substantially adjacent the wearer's wrist and spaced inwardly from the edges of the strap so as to minimize the opportunity to contact the wearer's wrist when worn.

8. The cushioned wristband of claim 7 wherein said label has a slot near each of two opposing sides of said label and sized so that the strap may be inserted through both of said slots.

9. The cushioned wristband of claim 8 comprising a cushioned material and a strap wherein said cushioned material is sized for said intended user so that the cushioned material completely encircles the user's wrist as the wristband is applied, thereby positioning the label outside the wristband and not in contact with the user's skin.

10. The cushioned wristband of claim 9 wherein said label comprises a layer of face stock and a layer of lamination, the label being arranged in a business form for imaging by a printer before separation therefrom and self lamination into a label for attachment to the wristband.

11. A cushioned wristband comprising a wristband carrier, said wristband carrier having a cushion material surface and a loop material surface, a hook strap affixed to the carrier and

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extending to one side thereof, and a self laminating label having at least one slot, said slot adapted to receive the hook strap therethrough for attaching the label to the hook strap and thus to the wristband.

12. The cushioned wristband of claim 11 wherein said self laminating label has a face ply area for receiving a printed image and a laminating ply for laminating the face ply area, and two of said slots located at opposite ends of said label.

13. The cushioned wristband of claim 12 wherein said label is formed in a business form, the business form having at least two plies, and wherein each of said face ply area and said laminating ply are formed by die cuts in said two plies.

14. A printer processible business form comprising a page having at least one self laminating wristband and at least one self laminating hang tag die cut therein, said self laminating hang tag having at least one cinch slot located near a side thereof for attachment thereof to a wristband.

15. The printer processible business form of claim 14 wherein a plurality of self laminating wristbands and a plurality of self laminating hang tags are die cut therein.

16. The printer processible business form of claim 15 wherein the area of said business form wherein said self laminating wristbands and said self laminating hang tags are formed comprises only two layers of material.

17. The printer processible business form of claim 16 wherein the entirety of said business form comprises only two layers of material.

18. The printer processible business form of claim 17 further comprising a plurality of self adhering labels.



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19. The printer processible business form of claim 18 wherein the area of said business form wherein the self adhering labels are formed comprises two layers of material, said two layers of material including a face ply layer for receiving a printed image and a liner layer underlying said face ply layer

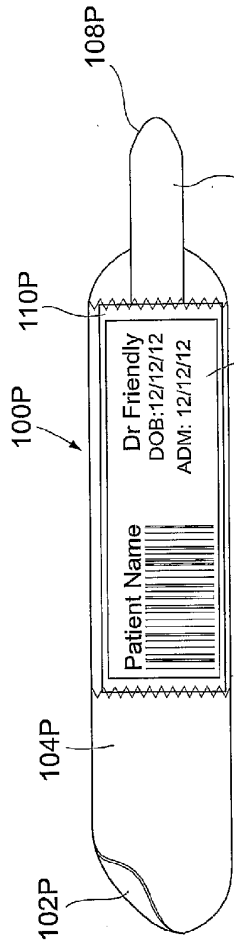


Figure 1  
PRIOR ART

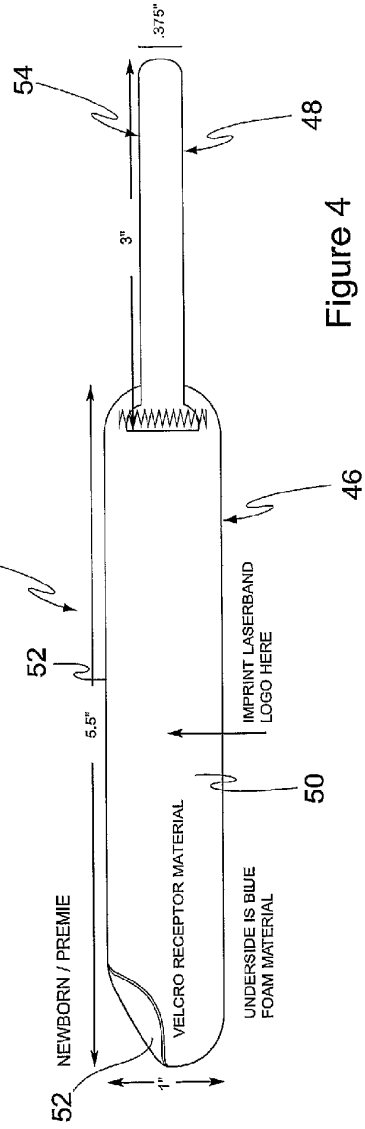
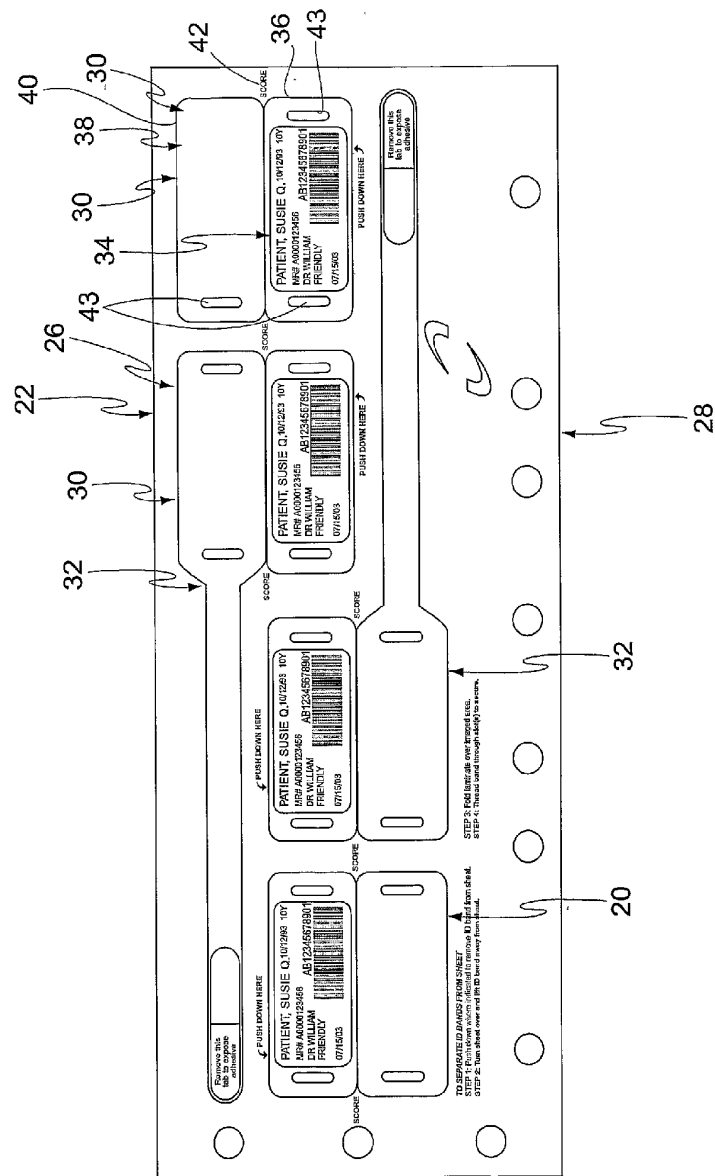


Figure 4



## Figure 2

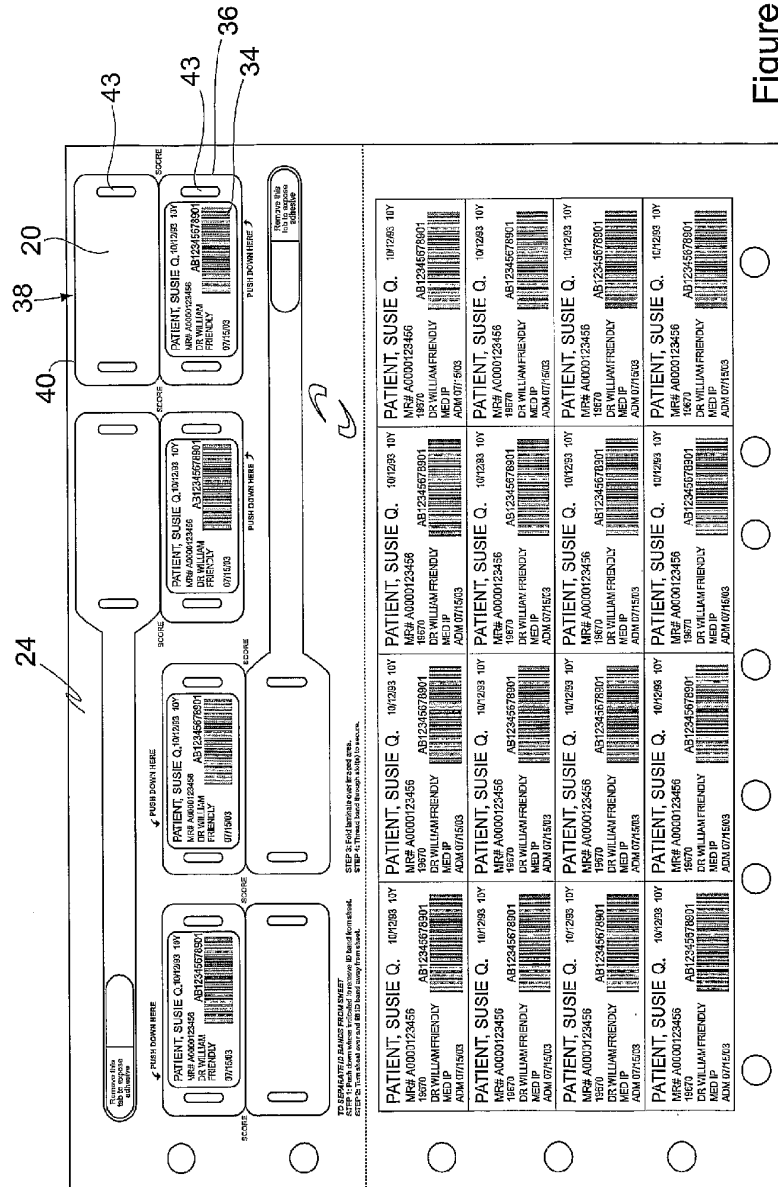
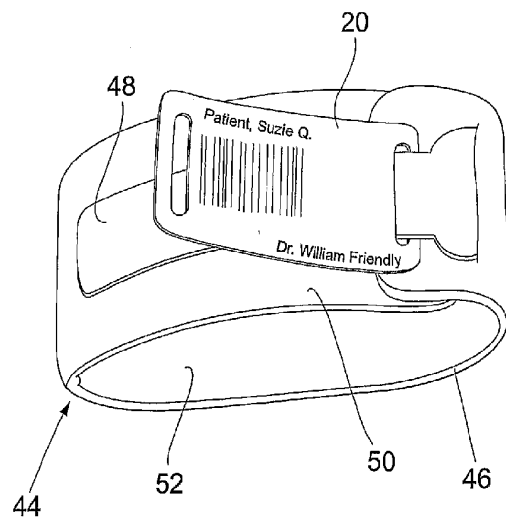
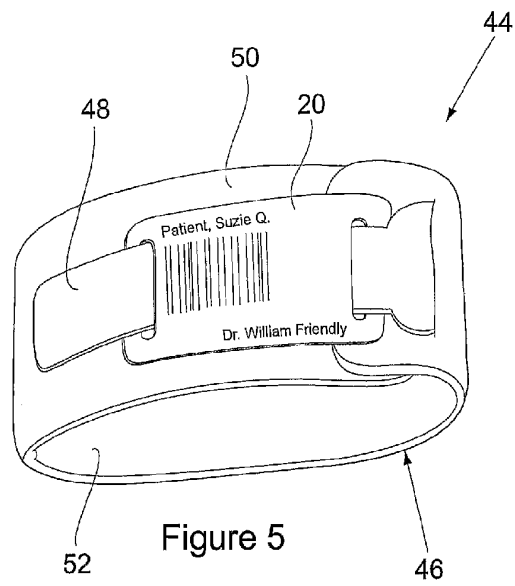


Figure 3

4/5



5/5

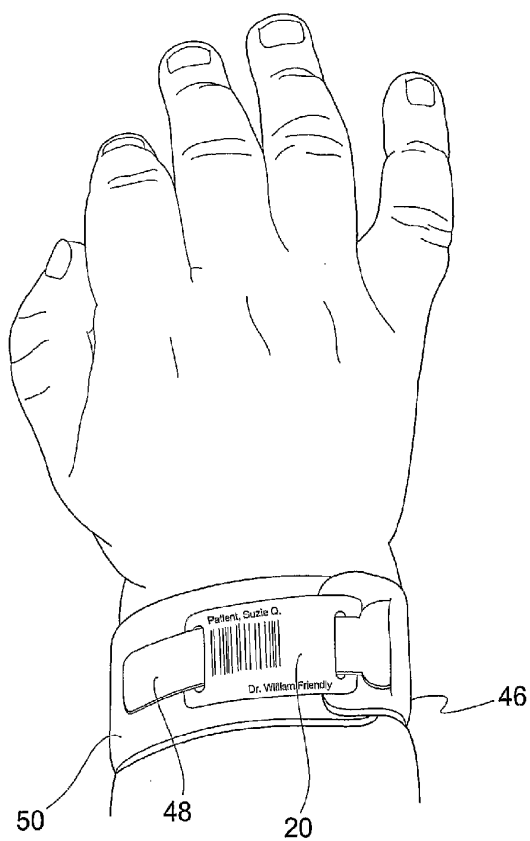


Figure 7