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(54) FLEXIBLE MAGNETIC TOOL HOLDER AND METHOD OF MAKING SAME

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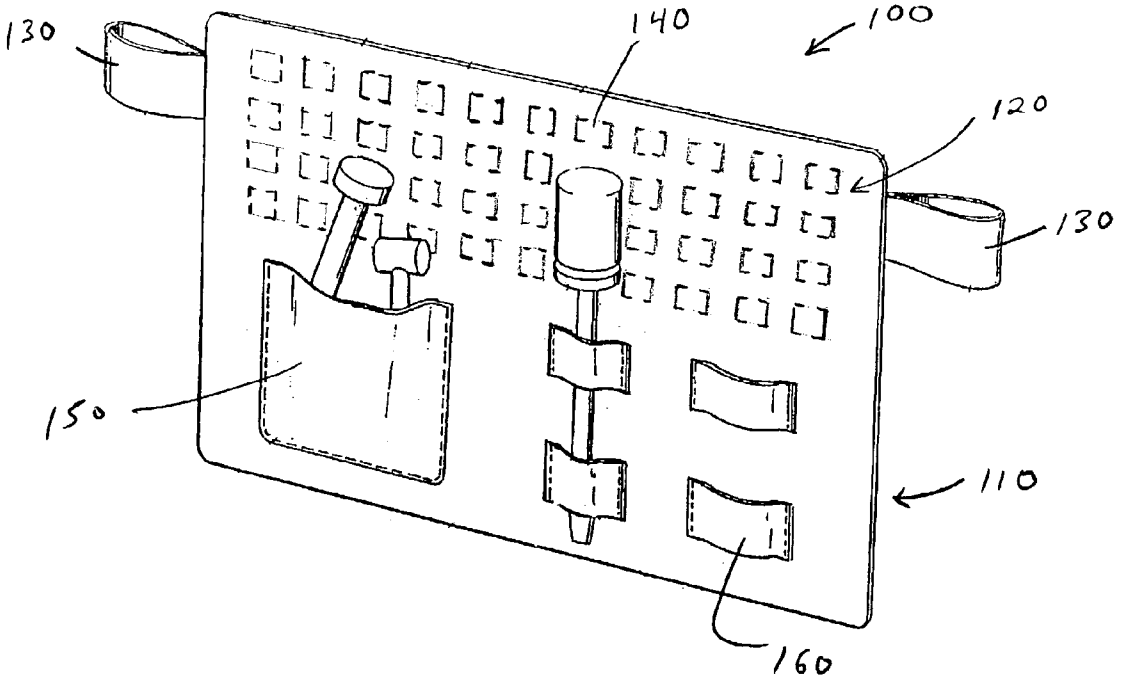
(57) **ABSTRACT**

A flexible magnetic tool holder comprising a first flexible layer having an inner surface and an outer surface; a second flexible layer having an inner surface and an outer surface; a plurality of magnets disposed between said inner surfaces of said first and second layers where the plurality of magnets are arranged in a predetermined array such that adjacent magnets are spaced a predetermined distance apart from each other in a first direction and a second direction perpendicular to the first direction; and means for coupling the first flexible layer to the second flexible layer. The tool holder is flexible along the first and second directions thereby permitting the tool holder to conform to surfaces having various contours.



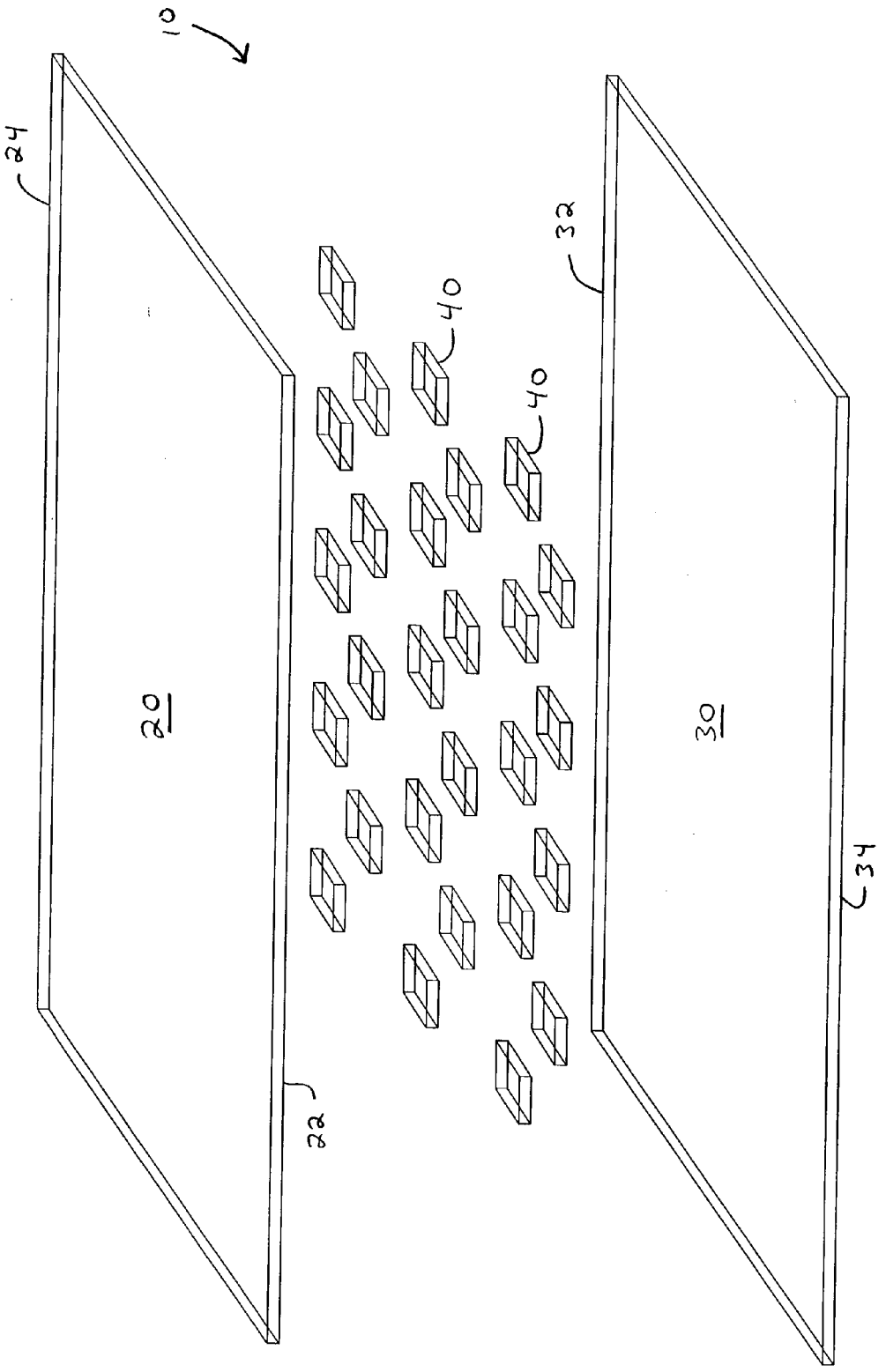


FIG. 1

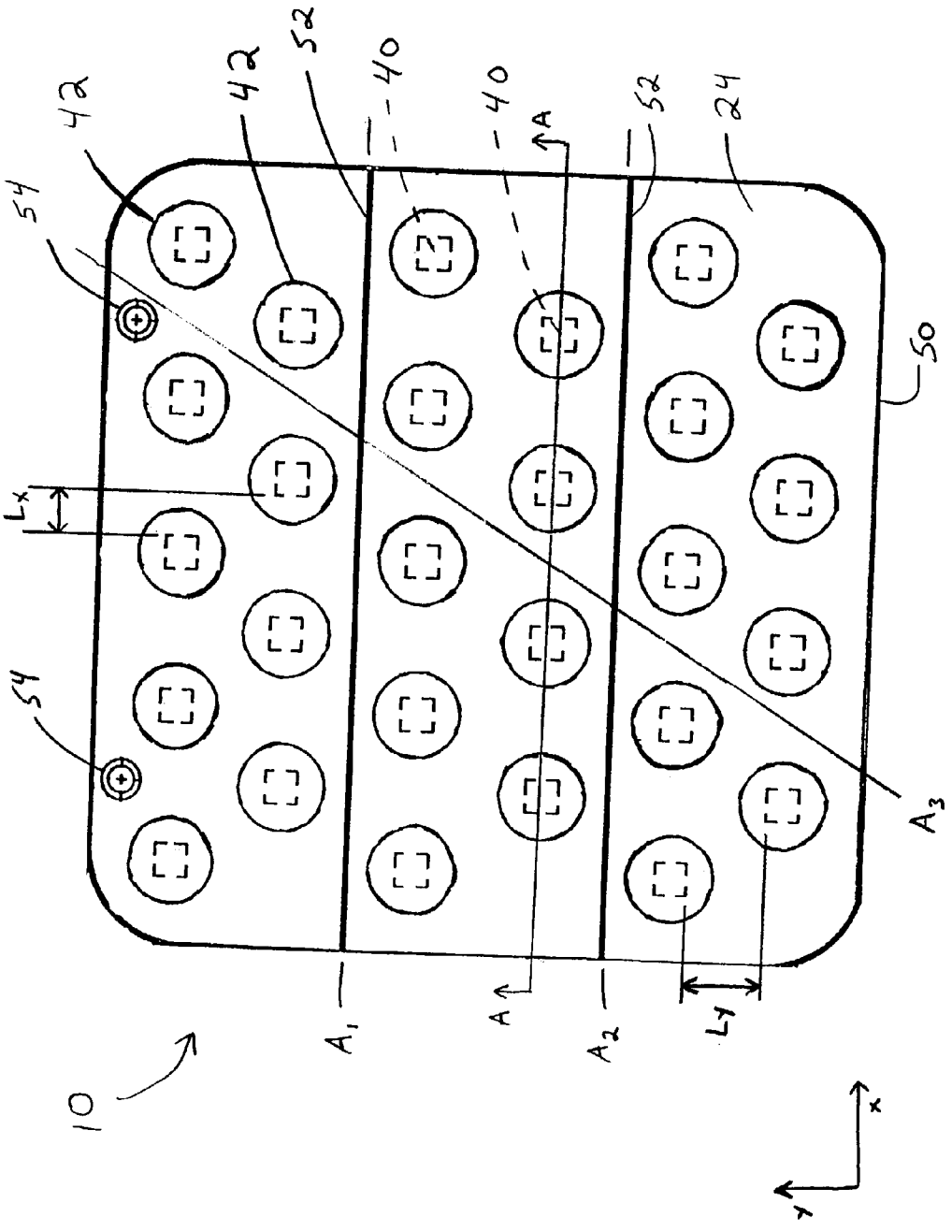


FIG. 2A

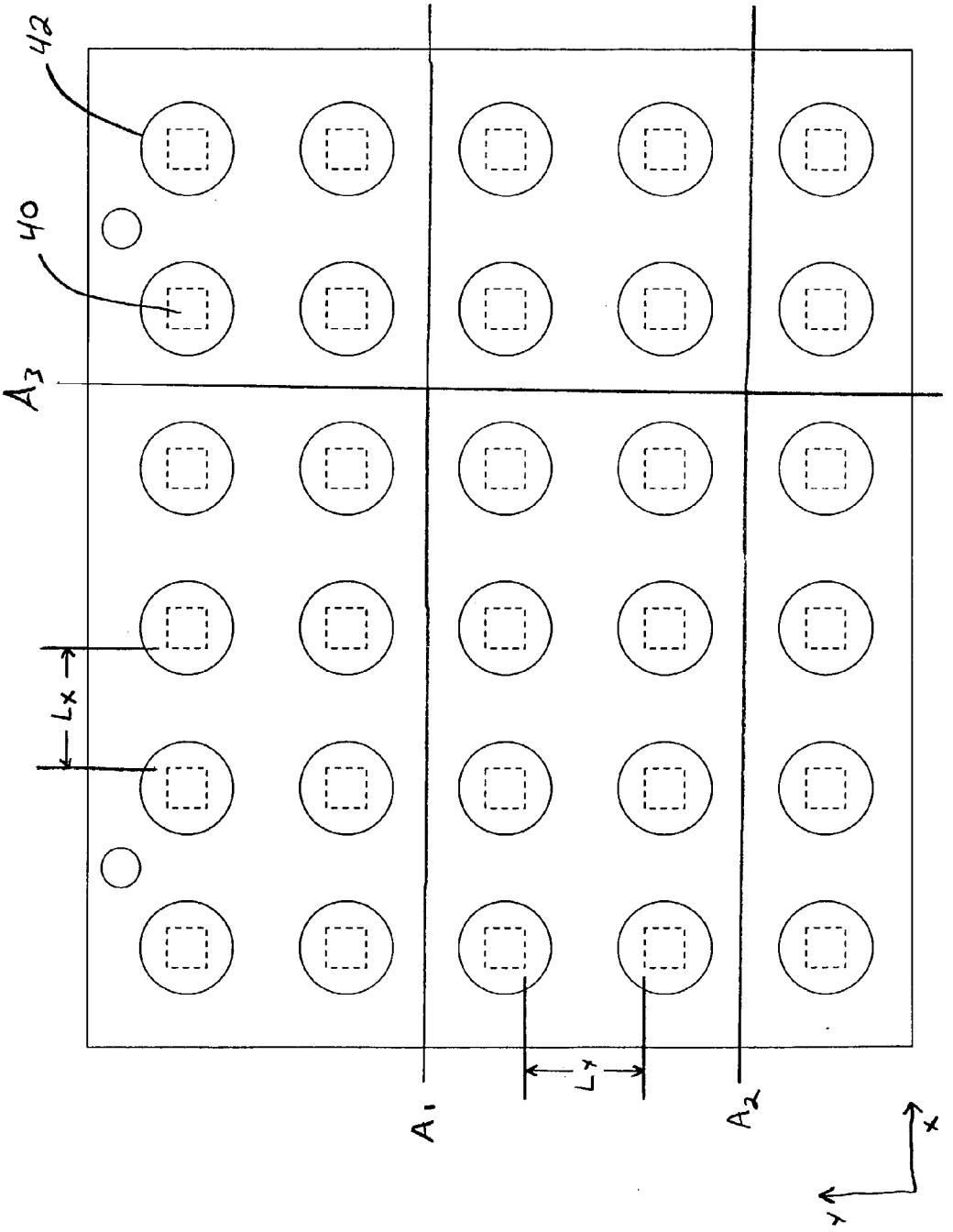


FIG. 2B

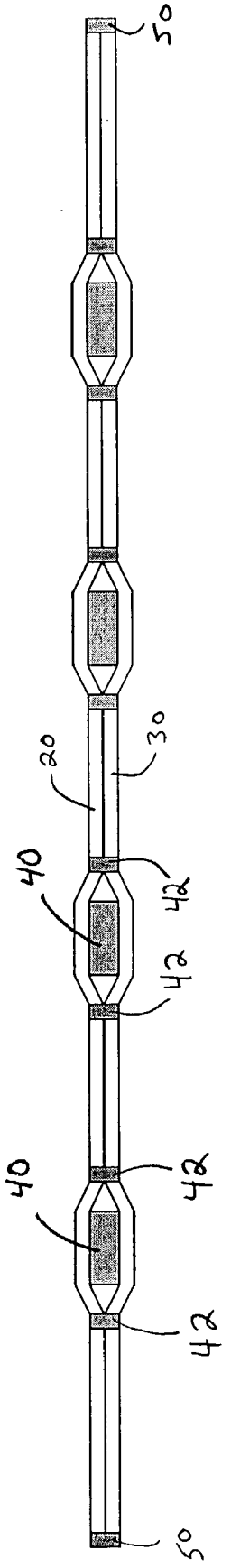


FIG. 3

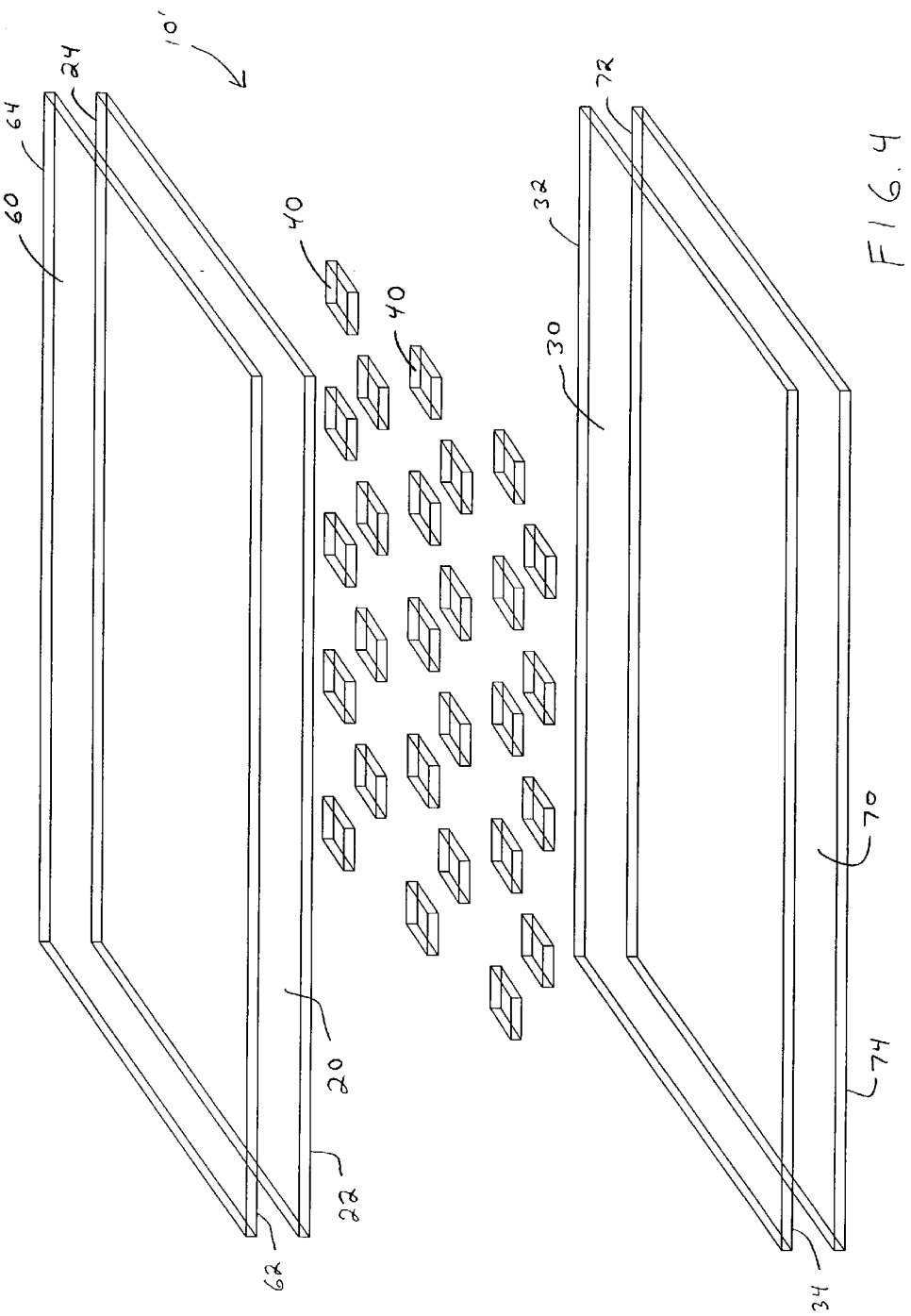


FIG. 4

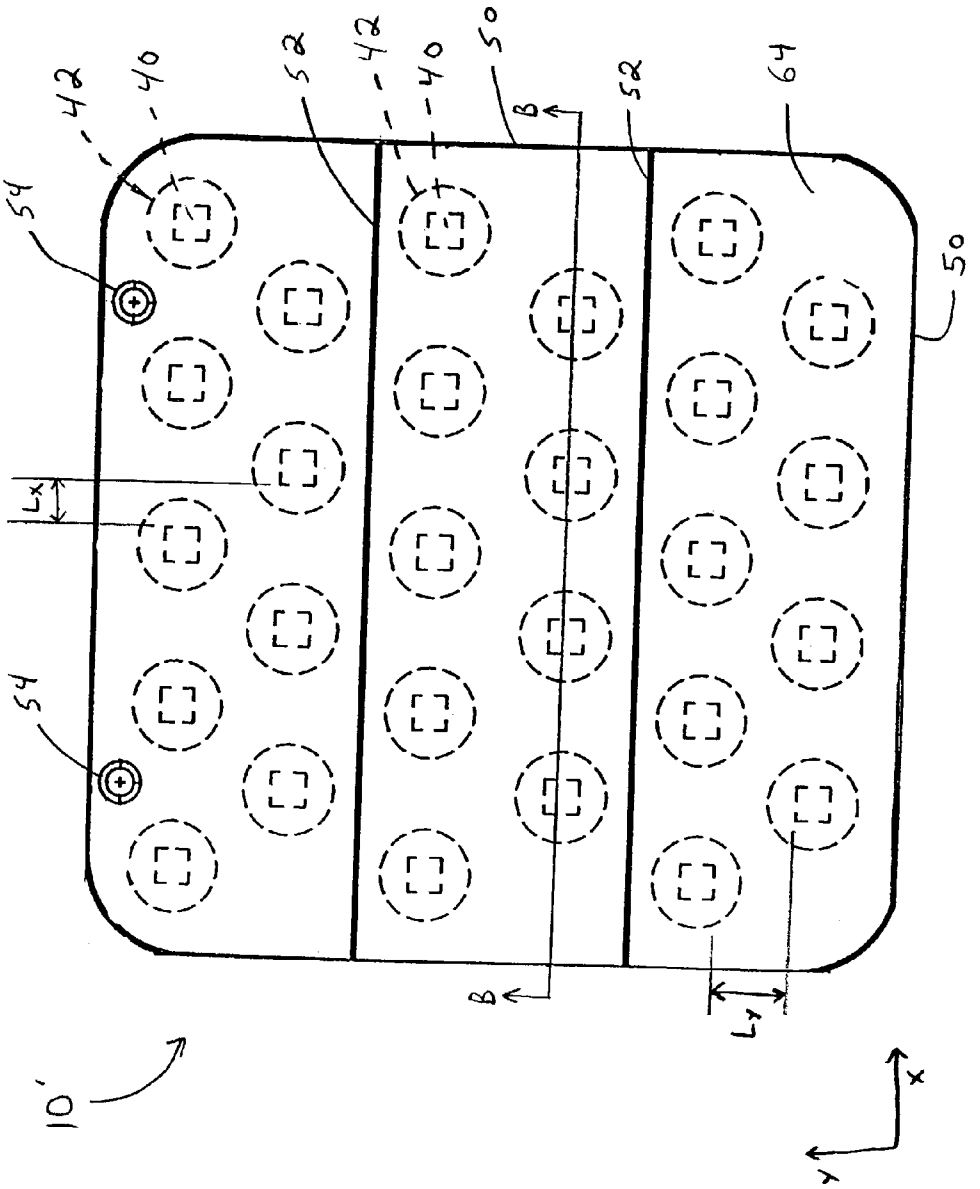


FIG. 5

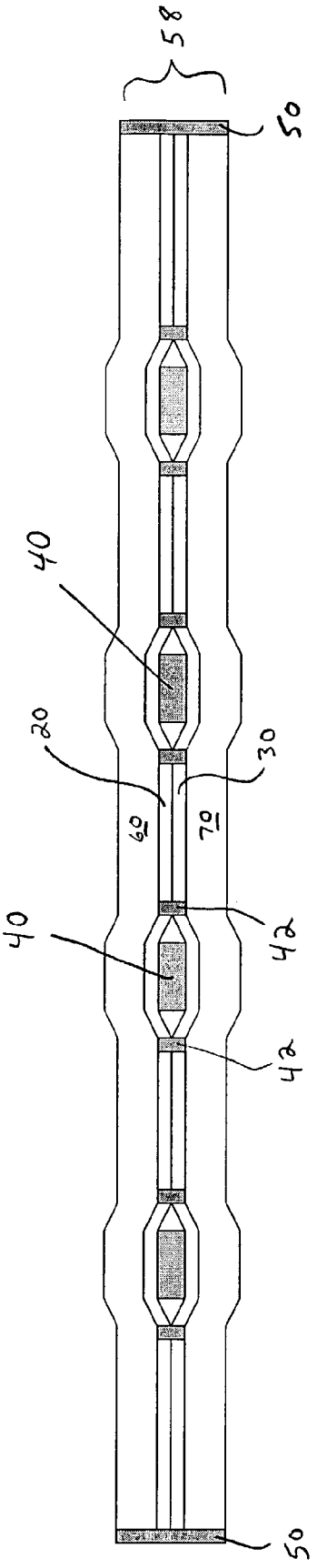


FIG. 6

FIG. 7

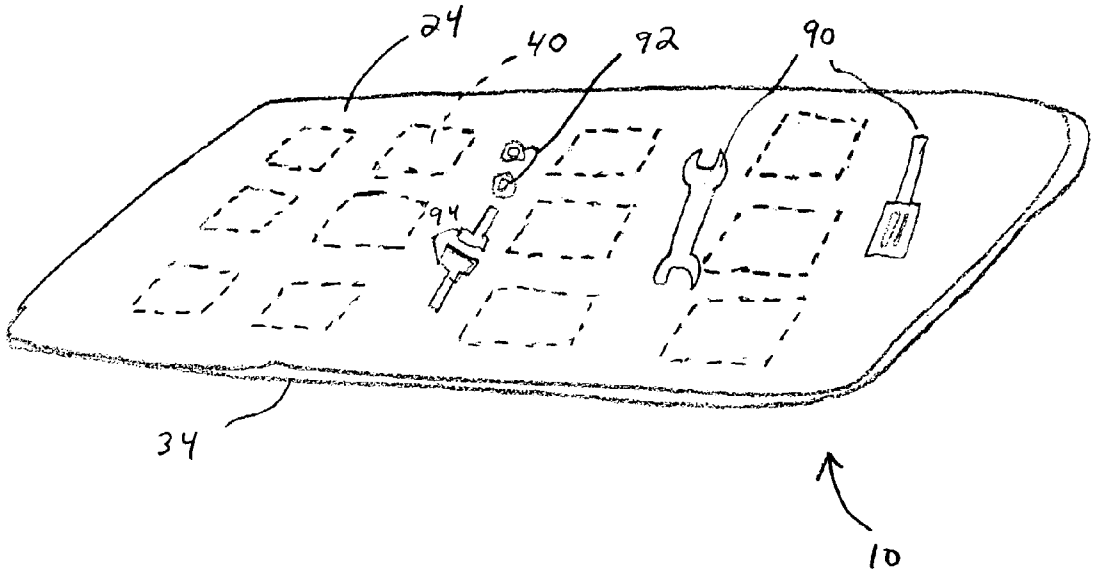
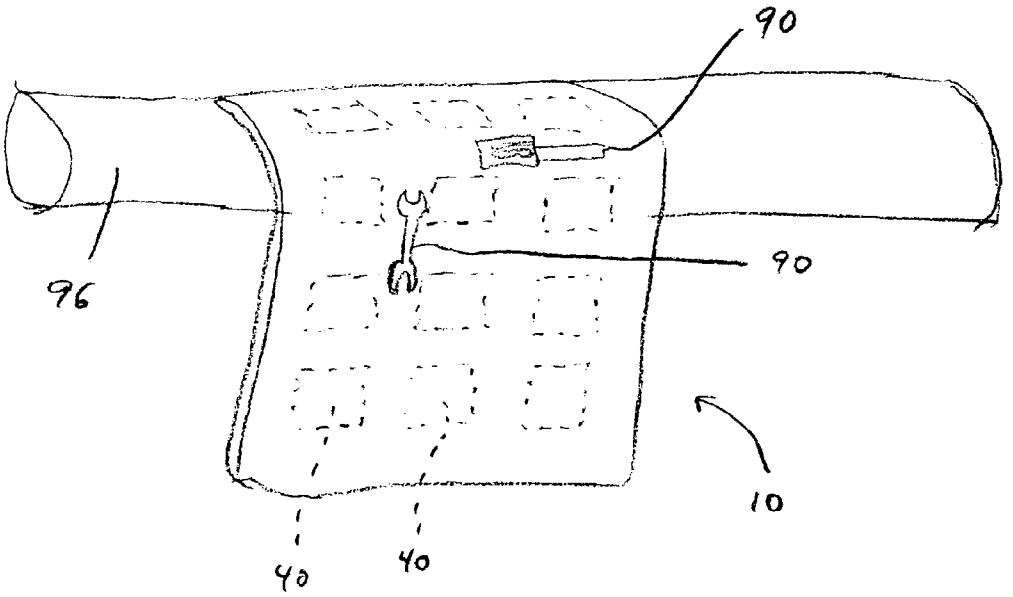


Fig. 8



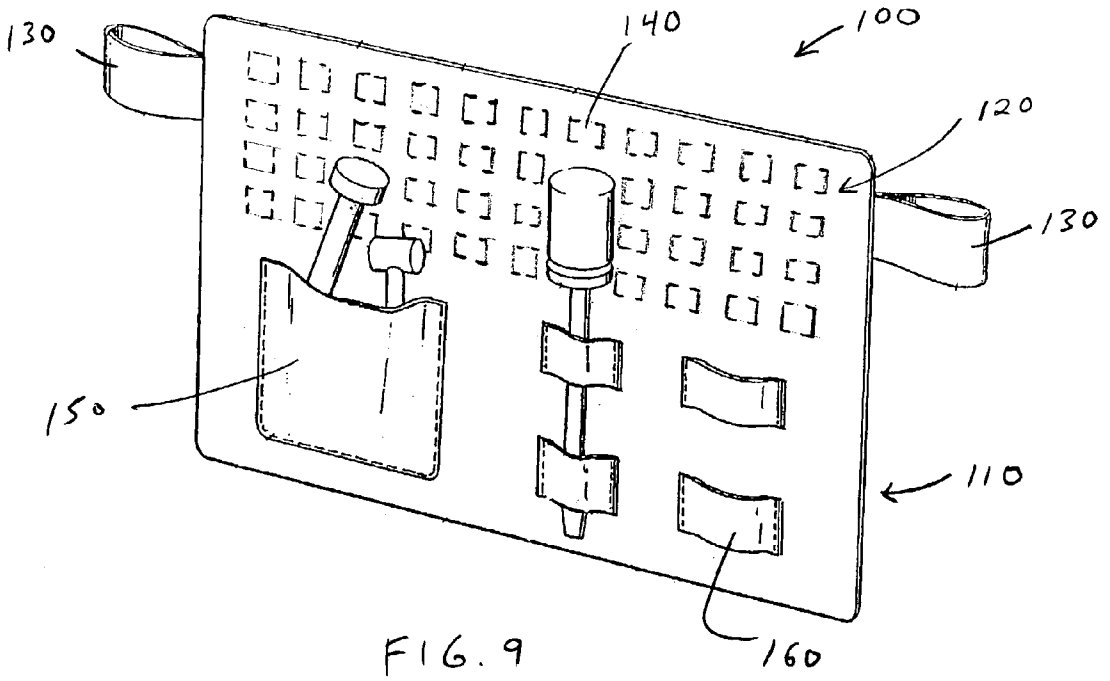


FIG. 9

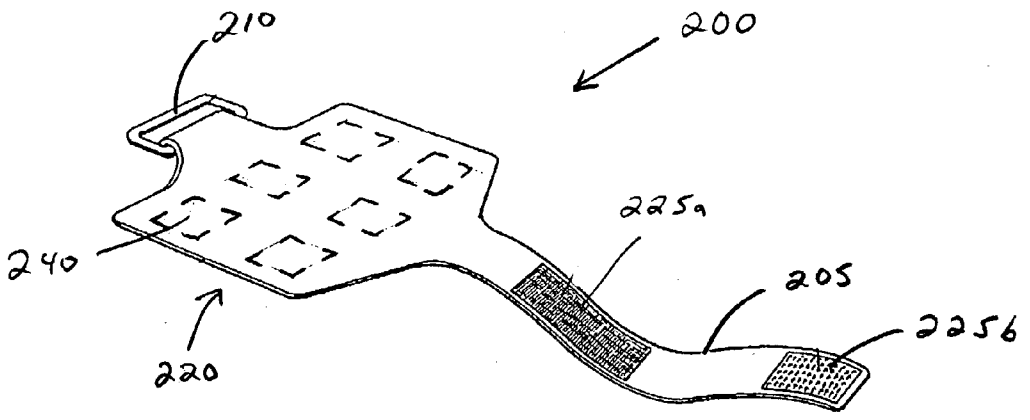


FIG. 10

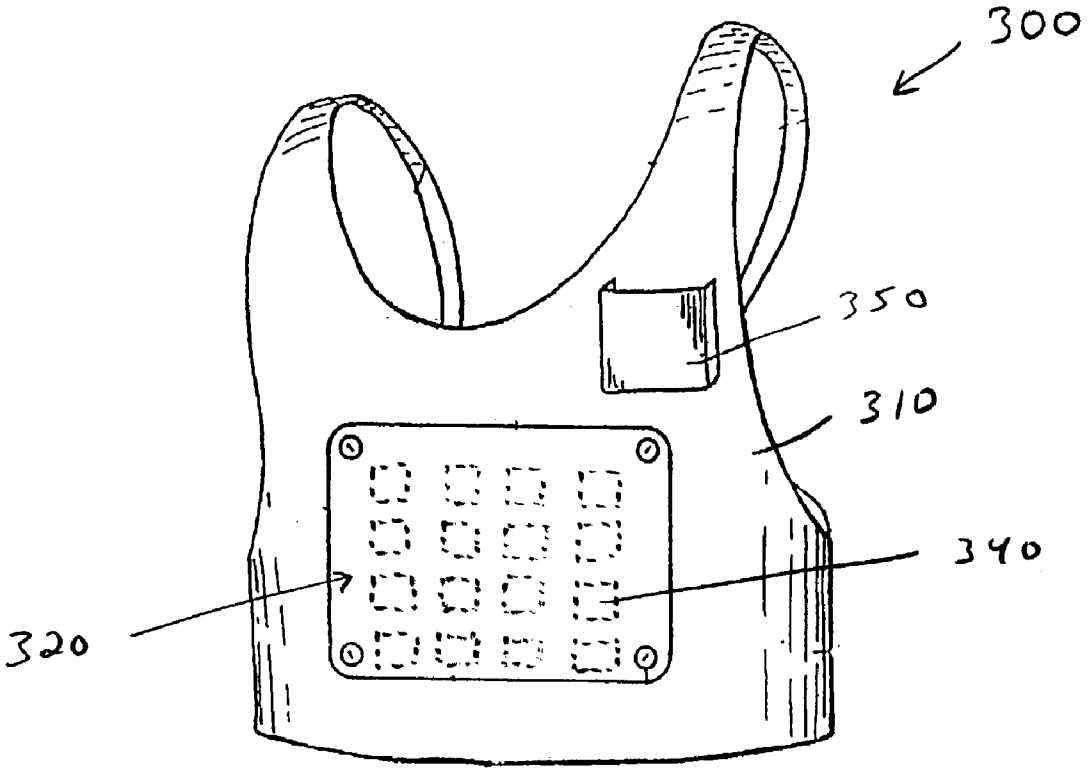


FIG. 11

FLEXIBLE MAGNETIC TOOL HOLDER AND METHOD OF MAKING SAME

BACKGROUND OF THE INVENTION

[0001] Users of tools in assembly or repair work, or even home and office work, often encounter a need to have easy access to and portability of tools, parts, and hardware. The flexible magnetic tool holder of the present invention is portable and can conform to various contoured mounting surfaces, including the human body.

[0002] There are several devices in the prior art which are used to hold metallic items or tools. U.S. Pat. No. 361,248, entitled HOLDER FOR METAL ARTICLES, to Winton; U.S. Pat. No. 2,580,099, entitled DOUBLE MAGNETIC HOLDING DEVICE, to Jaeger; U.S. Pat. No. 3,204,776, entitled MAGNETIC TOOL BOARD, to Brown et al.; U.S. Pat. No. 3,229,820, entitled MAGNETIC HOLDER, to Hentzi et al.; and U.S. Pat. No. 4,451,810, entitled MAGNETIC TOOL HOLDER, to Miller; all disclose the use of rigid, inflexible magnetic holders which will not conform to various contoured mounting surfaces Each device requires a permanent mounting base and each must be nailed or otherwise affixed in place. The magnets of these devices are used solely to hold the tools and are not used to mount the holder in position.

[0003] U.S. Pat. No. 3,886,508, entitled MAGNETIC TOOL HOLDER, to Lavrard, discloses several garment supports for magnetic tool holders. However, the garment supports are extremely bulky, making the tool holder uncomfortable to wear. Because of these bulky supports, the tool holder cannot be easily positioned on surfaces other than a human body.

[0004] Several prior art patents disclose the use of magnets incorporated into a flexible material to protect automobile fenders. French Patent No. 1,359,867, entitled PROTEGE-AILE MAGNETIQUE, to Mounier, discloses a curtain that is placed over a fender to protect the fender paint while the automobile is being serviced. The curtain is held in place by a series of single magnetic bars placed within one edge of the curtain. This patent does not disclose or imply using the magnetic bars to hold tools.

[0005] U.S. Pat. No. 3,924,212, entitled FENDER PROTECTOR CLOTH WITH FLEXIBLE MAGNETIC STRIPS, to Brown, discloses the use of magnetic rubber strips in a fender protector. The strips are spaced at predetermined intervals on the exterior of both sides of the protector to hold the protector in place. The strips run across the entire width of the protector so that the protector can be rolled up or contoured to the shape of the automobile fender. However, this protector cannot be easily flexed across its width due to the long magnetic strips and thus the protector cannot be folded widthwise for storage or ease in portability. Another disadvantage is that this protector must be used on relatively large span, fairly flat surfaces due to its unbendable long magnetic strips. The fender protector is not capable of supporting somewhat flexible but heavier tools because its two inch spaced narrow magnetic strips are not capable of providing sufficient magnetic field strength for heavy items.

[0006] U.S. Pat. No. 4,826,059, entitled MAGNETIC TOOL HOLDER, to Bosch et al. ("the Bosch tool holder"), discloses a magnetic tool holder comprising a main body, having a front face and a rear face, and an interior magnet holding portion for holding at least one set of magnets. Each set of magnets comprises a plurality of juxtaposed (side-by-side) magnetic bars which are positioned in the interior portion of the main body such that the faces of the magnetic bars will attract metal on both the front face and the rear face of the main body. With this positioning of the magnetic bar, the tool holder can be attached to and pulled away from a mounting surface and repositioned on another mounting surface. One face of the main body is mounted on a metallic surface to position the tool holder so that a user can access tools. The other face of the main body is used to hold tools. The main body is made of a flexible material such that the tool holder can be positioned on mounting surfaces having varying contours, such as an uneven or a curved surface, due to the flexible main body and the side by side positioning of the plurality of magnetic bars.

[0007] However, the flexibility of the Bosch tool holder is limited due to the side-by-side positioning of the plurality of magnetic bars. Because the plurality of magnetic bars in the Bosch tool holder are positioned side-by-side, the tool holder can only flex a predetermined amount (in terms of radius of curvature) depending on the width of the magnetic bars and whether the edges of the magnetic bars are sharp or rounded. Not only is the flexibility of the Bosch tool holder limited in terms of the radius of curvature, the flexibility of the Bosch tool holder is also limited in that it is only flexible in one direction (i.e., along the edges of the side-by-side positioned magnets). For example, the tool holder may be flexed around a pipe only when the side-by-side positioned magnets are oriented parallel to the longitudinal axis of the pipe. However, if the side-by-side positioned magnets are oriented perpendicular to the longitudinal axis of the pipe, the tool holder will not flex around the pipe. This limitation prevents the Bosch tool holder from being able to conform to surfaces that are spherical, or curved or uneven in more than one direction. Additionally, the foldability of the Bosch holder is limited, in that it can only be folded at the space provided between the sets of magnets. The options available to the end user are restricted. Another shortcoming of the Bosch holder is requirement of the sets of magnets to be installed with opposing polarity, increasing the manufacturing costs. Additionally, the set of magnets is fairly large, resulting in a substantially heavy holder, thereby reducing it's ease of portability.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings where:

[0009] **FIG. 1** is an exploded perspective view of the layers of flexible magnetic tool holder **10** according to one embodiment of the present invention;

[0010] **FIG. 2A** is a top view of flexible magnetic tool holder **10** illustrated in **FIG. 1**;

[0011] **FIG. 2B** is a top view of flexible magnetic tool holder **10** according to another embodiment of the present invention;

[0012] **FIG. 3** is a cross-sectional view of flexible magnetic tool holder **10** taken across Section A-A of **FIG. 2**;

[0013] **FIG. 4** is an exploded perspective view of the layers of flexible magnetic tool holder **10'** according to another embodiment of the present invention;

[0014] **FIG. 5** is a top view of flexible magnetic tool holder **10'** illustrated in **FIG. 4**;

[0015] **FIG. 6** is a cross-sectional view of flexible magnetic tool holder **10'** taken across Section B-B of **FIG. 5**;

[0016] **FIG. 7** is an assembled view of flexible magnetic tool holder **10** holding tools **90**, nuts **92** and bolts **94**;

[0017] **FIG. 8** is an assembled view of the flexible magnetic tool holder **10** attached to a nonplanar surface;

[0018] **FIG. 9** is a perspective view of an apron **100** having a magnetic attractive portion **120** according to another embodiment of the present invention;

[0019] **FIG. 10** is a perspective view of a wristband **200** having a magnetic attractive portion **220** according to another embodiment of the present invention; and

[0020] **FIG. 11** is a perspective view of a vest **300** having a magnetic attractive portion **320** according to another embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0021] In the description that follows, like parts are indicated throughout the specification and drawings with the same reference numerals, respectively. The figures are not drawn to scale and the proportions of certain parts have been exaggerated for convenience of illustration.

[0022] One embodiment of the present invention provides a flexible magnetic tool holder for use as a tool and parts holder which can be positioned on magnetically attractable mounting surfaces having varying contours. The flexible magnetic tool holder can be used by mechanics, plumbers, oil drillers, or the like, to hold tools, such as screwdrivers, pliers, or wrenches; by office workers for office tools such as scissors and letter openers; by dentists and doctors for holding the tools of their trade; restaurant or household workers for tools, i.e. kitchen or garden; and by sports enthusiasts, including underwater activities such as holding scuba diving tools. The use of the word "tool" throughout the specification and claims includes any metallic object. Such objects can include hand-held tools, industrial tools, parts, and hardware (nails, nuts, bolts, paperclips, and the like). The use of the term "metal" or "metallic" throughout the specification and claims means any material, metal or alloy which is attracted to a magnet.

[0023] Referring to FIGS. **1-3**, a flexible magnetic tool holder **10** according to one embodiment of the present invention is illustrated. Tool holder **10** is substantially flat and includes a first layer **20** having a inner surface **22** and an outer surface **24** and a second layer **30** having an inner surface **32** and an outer surface **34**. Alternatively, one skilled in the art would recognize that a single sheet of material may be used and folded in half to create two layers. In the case where a single sheet of material is used, the single sheet of material exhibits a hypothetical longitudinal line that divides the sheet of material into a first layer and a second layer when the sheet of material is folded along the longitudinal hypothetical line. Once the sheet of material is folded, the inner surface of the first layer is facing the inner surface of the second layer.

[0024] Both first and second layers **20, 30** are made from a flexible material such as PVC sheet material that is 0.1 mm thick. Although it is preferable to use PVC sheet tool material as the flexible material for first and second layers **20, 30**, other materials may be used such as leather, neoprene, cloth, or other flexible plastic materials. Also, although it is preferable that the PVC sheet material is 0.1 mm thick, other thicknesses may be used depending on the application.

[0025] Disposed between the inner surfaces **22, 32** of first and second layers **20, 30** are a plurality of thin, square magnets **40** such that the faces of magnets **40** will attract metal on both the outer surfaces **24, 34** of first and second layers **20, 30**. Magnets **40** are arranged in a staggered array as shown in **FIG. 2A** such that no magnet **40** is contiguous with another magnet **40** leaving a predetermined space L_y between adjacent magnets **40** in the y-direction and a predetermined space L_x between adjacent magnets **40** in the x-direction (i.e., perpendicular to the y-direction). Alternatively, magnets **40** may be arranged in a linear array as shown in **FIG. 2B** such that no magnet is contiguous with another magnet leaving a predetermined space Ly between adjacent magnets **40** in the y-direction and a predetermined space L_x between adjacent magnets **40** in the x-direction. Furthermore, the arrangement of magnets **40** is not limited to the arrays illustrated in **FIGS. 2A and 2B**; thus, magnets **40** may be arranged in any pattern so long as magnets **40** are not contiguous with each other.

[0026] Arranging magnets **40** in an array such that a predetermined space is present between adjacent magnets **40** in the x and y directions permits tool holder **10** to be flexible any combination of directions, including curvilinear, thereby allowing tool holder **10** to conform to surfaces having various contours such as flat surfaces, curved surfaces (e.g., convex or concave), spherical surfaces (e.g., convex or concave), and uneven surfaces (e.g., dimpled, wavy, or stepped). Also, the spacing between magnets **40** allows tool holder **10** to be flexed at a tighter radius of curvature than the prior art magnetic tool holders. Further, the spacing between adjacent magnets **40** permits tool holder **10** to be foldable along multiple axes wherein each axis is located between adjacent magnets **40** as shown in **FIGS. 2A and 2B** (see axes A_1, A_2, and A_3). Another advantage created by the spacing between adjacent magnets is that the weight of tool holder **10** is reduced compared to prior art tool holder having magnets positioned side-by-side one another.

[0027] Preferably, magnets **40** are of the hard, permanent type such as Neodymium Iron Boron (NdFeB) magnets, but other types of hard magnets may be used alone or in combination with NdFeB magnets such as Samarium Cobalt (SmCo), Aluminum Nickel Cobalt (AlNiCo), Ferrite, or Ferrite/Ceramic magnets. Also, it is possible to use flexible magnets to replace the hard magnets. Furthermore, although magnets **40** are square, magnets **40** may be round, rectangular, or any other shape.

[0028] Preferably, magnets **40** have a single pole on each pole surface, but it is possible to utilize magnets **40** having multiple poles on each pole surface alone or in combination with magnets **40** having a single pole on each pole surface.

Optionally, magnets **40** may be randomly oriented between first and second layers **20**, **30** with respect to polarity. For example, assuming that magnets **40** having a single pole on each pole surface are utilized, the "north" face of some magnets **40** may face first layer **20**, while the "south" face of other magnets may also face first layer **20**.

[**0029**] The ability to flex tool holder **10** along multiple axes permits tool holder **10** to be bent and shaped as desired by a user. For example, tool holder **10** can be mounted on surfaces having varying contours, such as an uneven or a curved surface (e.g., convex or concave), due to the flexibility of first and second layers **20**, **30** and the spaces between magnets **40**.

[**0030**] Because magnets **40** are arranged such that the faces of magnets **40** will attract metal on both the outer surfaces **24**, **34** of first and second layers **20**, **30**, tool holder **10** can be attached to and easily pulled away from a mounting surface and repositioned on another mounting surface. Outer surface **24** of tool holder **10** may be mounted on a metallic surface to position tool holder **10** so that a user can access tools. Consequently, outer surface **34** of tool holder **10** is then used to hold tools. For example, if the outer surface **24** of tool holder **10** is attached to an automobile hood, then the outer surface **34** of tool holder **10** can be used to hold tools.

[**0031**] To prevent magnets **40** from moving around between first and second layers **20**, **30** thereby maintaining magnets **40** in its particular array, first and second layers **20**, **30** are heat sealed around each magnet **40** forming a heat seal ring **42** (or other shape) around each magnet **40** as shown in **FIG. 2A**. Other possible methods to keep magnets **40** in place is to stitch around each magnet **24** forming a stitching ring (or other shape) or glue each magnet **40** to either or both inner surfaces **22**, **32** using an epoxy or other adhesive.

[**0032**] The peripheral edges of first and second layers **20**, **30** may be heat sealed or sonic welded together thereby forming edge seams **50** to prevent first and second layers **20**, **30** from separating apart. Optionally, first and second layers **20**, **30** may be stitched together along peripheral edges to form edge seams **50**. Alternatively, first and second layers **20**, **30** may be glued together along the peripheral edges of tool holder **10** using an epoxy or other adhesive. Further, first and second layers **20**, **30** may be heat sealed together across the length of tool holder **10** to form seams **52** as shown in **FIG. 2A**. Seams **52** may serve as a guide for folding tool holder **10** in a similar fashion as folding a letter. Of course, those skilled in the art will recognize that seams **52** can be spaced apart at any distance desirable for serving as guides for folding tool holder **10**.

[**0033**] Tool holder **10** further includes two hollow grommets **54** to permit the user to hang tool holder **10** on hooks, pegs, or the like. Optionally, tool holder **10** may be provided with two openings that extend through both first and second layers **20**, **30** to permit the user to hang tool holder **10** on hooks, pegs, or the like. Although tool holder **10** includes two hollow grommets **54** to permit the user to hang tool holder **10**, one skilled in the art would recognize that less than two or more than two hollow grommets **54** may be provided.

[**0034**] Referring to FIGS. **4-6**, a magnetic tool holder **10** according to another embodiment of the present invention is illustrated. Tool holder **10'** is similar to tool holder **10**, yet further comprises a flexible jacket **58** that includes a third layer **60** having an inner surface **62** and an outer surface **64** and a fourth layer **70** having an inner surface **72** and an outer surface **74** to protect the outer surfaces **24**, **34** of first and second layers **20**, **30**. Alternatively, one skilled in the art would recognize that a single sheet of material may be used and folded in half to create two layers. In the case where a single sheet of material is used, the single sheet of material exhibits a hypothetical longitudinal line that divides the sheet of material into a first layer and a second layer when the sheet of material is folded along the longitudinal hypothetical line. Once the sheet of material is folded, the inner surface of the first layer is facing the inner surface of the second layer.

[**0035**] In this embodiment, first and second layers **20**, **30** with magnets **40** disposed therebetween are provided between third and fourth layers **60**, **70**. Both third and fourth layers **60**, **70** are made from a flexible tool material such as PVC sheet tool material that is **0.8** mm thick. The increased thickness of third and fourth layers provides extra protection against magnet damage to magnets **40**. Although it is preferable to use PVC sheet tool material as the flexible tool material for third and fourth layers **30**, **36**, other tool materials may be used such as leather, neoprene, cloth, or other flexible plastic tool materials. Also, although it is preferable that the PVC sheet tool material is 0.8 mm thick, other thicknesses may be used depending on the application.

[**0036**] To couple third layer **60** to fourth layer **70**, third layer **60** and fourth layer **70** are heat sealed together (either alone or in combination with first and second layers **20**, **30**) along the peripheral edges of third and fourth layers **60**, **70** to form edge seams **50** and across the length of flexible jacket **58** to form seams **52** as shown in **FIG. 5**. The edge seams **50** formed along the peripheral edges prevent third and fourth layers **60**, **70** from separating apart at the edges. The coupling of third and fourth layers **60**, **70** to first and second layers **20**, **30** through seams **52** serve to strengthen tool holder **10'** and prevent first and second layers **20**, **30** from bunching up between third and fourth layers **60**, **70**. Optionally, third and fourth layers **30**, **36** and first and second layers **20**, **30** may be stitched together along peripheral edges of flexible jacket **58** to form edge seams **50** and across the length of flexible jacket **55** to form seams **52**. Another possible method is to glue third and fourth layers **60**, **70** together the peripheral edges of tool holder **10** using an epoxy or other adhesive.

[**0037**] Tool holder **10'** further includes two hollow grommets **54** to permit the user to hang tool holder **10'** on hooks, pegs, or the like. Optionally, tool holder **10'** may be provided with two openings that extend through first, second, third, and fourth layers **20**, **30**, **60**, **70** to permit the user to hang tool holder **10'** on hooks, pegs, or the like. Although tool holder **10'** includes two hollow grommets **54** to permit the user to hang tool holder **10'**, one skilled in the art would recognize that less than two or more than two hollow grommets **54** may be provided.

[**0038**] Although the figures depict tool holders **10** and **10'** as rectangular in shape, it is possible to form tool holders **10** and **10'** in any geometric shape such as circular, triangular, pentagonal, hexagonal, octagonal, or any other shape. Optionally, the tool holder may be formed in the shape of a company's logo or trademark.

[0039] With respect to **FIG. 7**, an assembled view of magnetic tool holder **10** is illustrated. Tools **90** may be placed on tool holder **10** so that tools **90** are not easily disturbed from the location. Tools **90** are held to the tool holder **10** by magnetic attracting forces emanating from outer surface **24** of first layer **20**. If tool holder **10** is placed on a magnetic surface, then tool holder **10** is held to the magnetic surface by magnetic attracting forces emanating from outer surface **34** of second layer **30**. Tool holder **10** is also useful in keeping nuts **92** and bolts **94** from rolling away from the work area defined by tool holder **10**. In some instances, tool holder **10** is placed on a flat, horizontal surface. In contrast, tool holder **10** may be placed on a vertical, magnetic surface such as a cabinet or the like. Tools **90** may be attracted to tool holder **10** on a vertical surface similar to the attraction between tools **90** and tool holder **10** on a horizontal surface.

[0040] With respect to **FIG. 8, a** view of magnetic tool holder **10** attached to a nonplanar surface **96** (e.g., curved surface) is shown. Because tool holder **10** is flexible and includes spaces between each magnet **40**, the surface on which tool holder **10** rests does not need to be planar. Tool holder **10** is magnetically attracted to the nonplanar surface **96** and further attracts magnetizable tools **90** to tool holder **10**. Tool holder **10** may be used, for example, when a mechanic is working under a hood and needs a plurality of tools **90** at his disposal. The mechanic may attach the tools **90** to tool holder **10** so that he does not have to travel to and from a tool bench whenever a different tool is needed.

[0041] In another embodiment, tool holder **10** may include a lip or ledge at the bottom of tool holder **10** to catch or hold anything that may accidentally slide off tool holder **10**. Alternatively, a pouch or pocket may be provided on tool holder **10** to serve as a safety feature in case tools accidentally slide off of tool holder **10**. The pouches may be made of a netting material or translucent plastic material so that the user can see the tools that fell into the pouches or pockets.

[0042] In yet another embodiment, a removable, washable cover or lining may be provided for tool holder **10** to maintain the cleanliness of tool holder **10** including the removal of metal shavings from tool holder **10**. If provided, a user may remove the cover and wash or shake the cover to remove dirt, metal shavings, and/or debris.

[0043] Although the embodiments discussed above refer to only tool holder **10**, it is obvious that tool holder **10'** may be used and modified in similar fashions as tool holder **10**.

[0044] In accordance with another embodiment of the present invention, **FIG. 9** illustrates an apron **100** having an apron portion **110**, a magnetic attractive portion **120**, and straps **130** to be tied around a user's waist. The magnetic attractive portion **120** is defined by a plurality of magnets **140** disposed in apron **100** (between the two layers of tool material that comprise apron **100**) in an array such that no magnet **140** is contiguous with another magnet **140**. Alternatively, magnets **140** may be provided in a flexible tool holder, similar to the ones described above (tool holder **10**, **10'** shown in FIGS. **1-6**) that is disposed on apron **100** (front or rear outer surface) or between the layers comprising apron **100**. The magnetic attractive portion **120** of apron **100** functions in a similar manner as the flexible magnetic tool holder **10**, **10'** as described above. The apron portion **110** may include a pocket **150** and/or loop(s) **160** which are attached to the front outer surface of the apron portion **110** to hold various objects such as plastic or non-metallic parts, rubber washers, wooden objects such as pencils, or measuring devices such as rulers. Pocket **150** could also be used to hold bulky items such as tape measurers, rolls of adhesive tape or a work cloth. The apron portion **110** could also include a slit (not shown) for holding such objects.

[0045] In accordance with another embodiment of the present invention, **FIG. 10** illustrates a wristband **200** comprising a strap **205**, a ring **210**, a magnetic attractive portion **220**, and a hook **225***a* and loop **225***b* arrangement for attachment to a user's wrist. The magnetic attractive portion **220** is defined by a plurality of magnets **240** disposed in wristband **200** (between the two layers of tool material that comprise wristband **200**) in an array such that no magnet **240** is contiguous with another magnet **240**. Alternatively, magnets **240** may be provided in a flexible tool holder, similar to the ones described above (i.e., tool holders **10**, **10'** shown in FIGS. **1-6**) that is disposed on wristband **200** (front or rear outer surface) or between the layers comprising wristband **200**. The magnetic attractive portion **220** of wristband **200** functions in a similar manner as the flexible magnetic tool holder **10**, **10'** as described above.

[0046] In accordance with another embodiment of the present invention, **FIG. 11** illustrates a vest **300** having vest portion **310** and a magnetic attractive portion **320** defined by a plurality of magnets **340** disposed in vest **300** (between the two layers of tool material that comprise vest **300**) in an array such that no magnet **340** is contiguous with another magnet **340**. Alternatively, magnets **340** may be provided in a flexible tool holder, similar to the ones described above (tool holder **10**,**10'** shown in FIGS. **1-6**) that is disposed on vest **300** (front or rear outer surface) or between the layers comprising vest **300**. The magnetic attractive portion **320** of vest **300** functions in a similar manner as the flexible magnetic tool holder **10**, **10'** as described above. The vest portion **310** may include a pocket **350** that is attached to the front outer surface of the vest portion **310** to hold various objects such as plastic or non-metallic parts, rubber washers, wooden objects such as pencils, or measuring devices such as rulers. Pocket **350** could also be used to hold bulky items such as tape measurers, rolls of adhesive tape or a work cloth.

[0047] Although the invention has been described with reference to the preferred embodiments, it will be apparent to one skilled in the art that variations and modifications are contemplated within the spirit and scope of the invention. The drawings and description of the preferred embodiments are made by way of example rather than to limit the scope of the invention, and it is intended to cover within the spirit and scope of the invention all such changes and modifications.

What is claimed is:

1. A flexible magnetic tool holder comprising:

a first flexible layer having an inner surface and an outer surface;

a second flexible layer having an inner surface and an outer surface;

a plurality of magnets disposed between said inner surfaces of said first and second layers, said plurality of

magnets being arranged in a predetermined array such that adjacent magnets are spaced a predetermined distance apart from each other in a first direction and a second direction perpendicular to said first direction; and

means for coupling said first flexible layer to said second flexible layer thereby defining a flexible main body,

said tool holder being foldable along multiple axes wherein each axis is located between adjacent magnets.

2. The tool holder of claim 1, wherein said first and second flexible layers comprise PVC sheet material.

3. The tool holder of claim 1, wherein each magnet is maintained in said predetermined array by a heat seal that couples said first layer to said second layer around each magnet.

4. The tool holder of claim 1, wherein said plurality of magnets comprise Neodymium Iron Boron magnets.

5. The tool holder of claim 1, wherein adjacent magnets are spaced a predetermined distance apart such that said tool holder may be folded along an axis located between said adjacent magnets.

6. The tool holder of claim 1, wherein said coupling means comprise a heat seal disposed about the perimeter of said magnetic tool holder.

7. The tool holder of claim 1, further comprising a pair of straps connected to said main body to permit said tool holder to be worn as an apron.

8. The tool holder of claim 1, further comprising a strap and ring connected to opposite sides of said main body to permit said tool holder to be worn as a wristband.

9. The tool holder of claim 1, further comprising a flexible jacket that is disposed about said first and second flexible layers to protect said outer surfaces of said first and second layers.

10. The tool holder of claim 9, wherein said flexible jacket comprises:

a third flexible layer having an inner surface and an outer surface, and a fourth flexible layer having an inner surface and an outer surface wherein said inner surface of said third layer faces the outer surface of said first layer and said inner surface of said fourth layer faces the outer surface of said second layer.

11. The tool holder of claim 10, wherein said third and fourth flexible layers comprise PVC sheet material.

12. The tool holder of claim 10, wherein said flexible jacket further comprises a heat seal disposed about the perimeter of said magnetic tool holder.

13. The tool holder of claim 10, wherein said flexible jacket further comprises at least one heat seal disposed along an axis parallel to an edge of said jacket thereby coupling said first, second, third, and fourth flexible layers together.

14. A flexible magnetic tool holder comprising:

a flexible body having inner and outer surfaces, said flexible body exhibiting a hypothetical longitudinal line that divides said flexible body into a first layer and a second layer when said flexible body is folded along said longitudinal hypothetical line such that said inner surface of said first layer is facing said inner surface of said second layer; and

a plurality of magnets disposed between said first and second layer, said plurality of magnets being arranged in a predetermined array wherein adjacent magnets are spaced a predetermined distance apart from each other;

said tool holder being foldable along multiple axes wherein each axis is located between adjacent magnets.

15. The tool holder of claim 14, wherein said flexible body comprises PVC sheet material.

16. The tool holder of claim 14, wherein each magnet is maintained in said predetermined array by a heat seal that couples said first layer to said second layer around each magnet.

17. The tool holder of claim 14, wherein said first layer includes a first edge oriented substantially perpendicular to said longitudinal hypothetical line, a second edge oriented substantially parallel to and spaced a distance away from said longitudinal hypothetical line and contiguous with said first edge, and a third edge oriented substantially perpendicular to said longitudinal hypothetical line and contiguous with said second edge,

wherein said second layer includes a fourth edge oriented substantially perpendicular to said longitudinal hypothetical line, a fifth edge oriented substantially parallel to and spaced a distance away from said longitudinal hypothetical line and contiguous with said fourth edge, and a sixth edge oriented substantially perpendicular to said longitudinal hypothetical line and contiguous with said edge,

such that when said flexible body is folded along said longitudinal hypothetical line, said first edge meets with said fourth edge, said second edge meets with said fifth edge, and said third edge meets with said sixth edge.

18. The tool holder of claim 17, wherein said first edge and fourth edge, said second edge and said fifth edge, and said third edge and said sixth edge are heat sealed together to form edge seams thereby preventing said first layer from separating from said second layer.

19. The tool holder of claim 14, further comprising a flexible jacket that is disposed about said flexible body to protect said outer surface of said flexible body.

20. A flexible magnetic tool holder comprising:

a first flexible layer having an inner surface and an outer surface;

a second flexible layer having an inner surface and an outer surface;

a plurality of magnets disposed between said inner surfaces of said first and second layers, said plurality of magnets being arranged in a predetermined array such that adjacent magnets are spaced a predetermined distance apart from each other in a first direction and a second direction perpendicular to said first direction; and

means for coupling said first flexible layer to said second flexible layer, said tool holder being flexible along any combinations of directions, including curvilinear, thereby permitting tool holder to conform to surfaces having various contours.

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