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H. M. PERR

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FABRIC TYPE FASTENING MEANS

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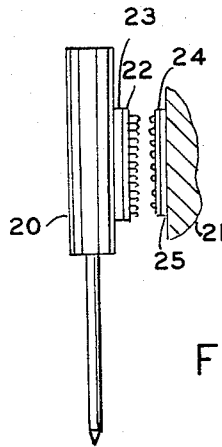


FIG 1

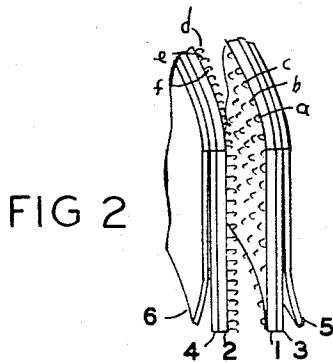


FIG 2

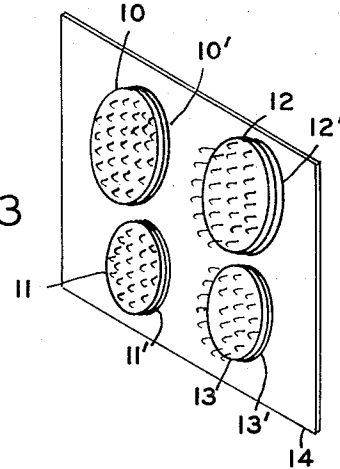


FIG 3

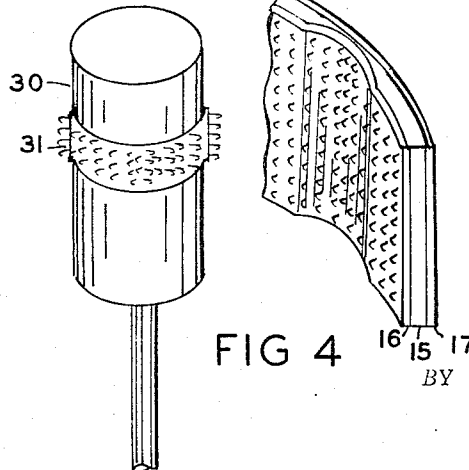


FIG 4

INVENTOR.

HERBERT M. PERR

James P. Malone

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3,370,818

FABRIC TYPE FASTENING MEANS

Herbert M. Perr, 444 N. Long Beach Road,

Rockville Centre, N.Y. 11570

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ABSTRACT OF THE DISCLOSURE

Article fastening means comprising a hooked fabric element with an adhesive backing, a loop fabric element with an adhesive backing, at least one of the elements having a resilient layer of foam rubber between the fabric and adhesive layers.

This invention relates to fabric type fastening means and more particularly to such means having an adhesive backing.

There are innumerable situations where a non-slipping contact is desired between two objects, which can be voluntarily separated and then be repositioned with ease and immediacy. At present this can be done with ferrous substances and its bond to a magnet.

I am proposing a technique by which almost any object, depending upon its size, can be caused to adhere tenaciously to any other, can be separated at will and repositioned repeatedly.

The invention may use a pre-existing material such as Velcro, a plastic fabric which has been used as a substitute for buttons, hooks and zippers in soft goods. Velcro has two opposing surfaces, one of minute plastic hooks which entangle the other of a loose felt like surface. These surfaces can be pressed to each other and will adhere until they are pulled apart and they can be used repeatedly.

This type material may be as shown in U.S. Patent Nos. 3,009,235; 3,083,737; 3,136,026; 3,114,951; and 3,147,528.

It is my idea that one fabric tape be glued to an object and the other to the support to which adhesion is desired. The fabric elements, as presently available can be glued, or as I suggest, it can be given a backing of a contact adhesive of the self sticking variety for permanent or peel off applications. With these adhesive backed tapes in assorted shapes, widths, and colors, it can have literally thousands of industrial, home, civilian and military uses.

Some uses can be hanging objects on vertical surfaces; tools, utensils, gardening implements, pictures, etc. Any wall can immediately be used to organize a tool holder with each one immediately visible, detachable and replaceable, in cars to hold seat belts to the door frame or seat back so that they are immediately at hand, and kept from slipping to the floor or getting twisted, to hold casters to furniture legs as the furniture is shifted or moved, in any moving vehicle or craft to form an adherent surface for objects or on horizontal or slanted surfaces to hold any object from slipping, yet allowing immediate detachment if desired. The invention can be also used on horizontal surfaces that pitch or roll so that objects on the surface can be kept in place, e.g. binoculars, charts, etc. aboard boats and ships, ashtrays, various holders for instruments and on automobile dash boards.

The invention has both the loop surfaced tape and the hook surfaced tape backed with a permanent pressure sensitive adhesive protected by a peel off film. The tapes could be marketed in rolls of varying lengths and widths, the proper amount cut for each specific application.

In addition, the adhesive backed tapes could be manufactured in varying sizes and shapes adherent to a releasa-

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ble surface, and then used for appropriate jobs. These could be in the forms of squares, rectangles, circles, ovals, diamonds or whatever geometric shape. I have mounted screw drivers, knives, chisels, pliers and a hammer with ¼ by ¾ inch patches.

Another modification of the invention is to incorporate a resilient layer of foam rubber or other equivalent compressible material in one of both of the fabric elements between the backing of the fabric surface and the adhesive.

This permits an indentation of the surface as the article is pressed into a place so that more hooks and loops will be engaged to secure better fastening.

The term "fabric" in this specification includes cloth, metal, glass, or plastic, woven or solid fabric or equivalent. Generally, the hooks would be of a plastic or other flexible material and the loop portion of a pile type fabric of cloth, plastic or equivalent.

A principal object of the invention is to provide new and improved fabric type fastening means.

Another object of the invention is to provide new and improved fabric hook and loop type fastening means having an adhesive backing.

Another object of the invention is to provide new and improved fabric type fastening means having an adhesive backing for fastening articles such as tools, picture frames into a holding position.

Another object of the invention is to provide new and improved fabric type fastening means with adhesive type backing supplied in roll tape form.

Another object of the invention is to provide new and improved fabric type fastening means with adhesive backing cut in miscellaneous shapes.

Another object of the invention is to provide new and improved fabric type fastening means for holding objects from slipping on horizontal, slanted or vertical surfaces and which may be easily detached if desired.

Another object of the invention is to provide new and improved fabric type fastening elements having a layer of resilient material located between the back of the fabric and the adhesive backing.

Another object of the invention is to provide new and improved fastening means for articles comprising a first fabric element having two surfaces, said first fabric element having a plurality of hooks secured on one surface and a first adhesive backing connected to the other surface of said element, a second fabric element having two surfaces, a plurality of loops secured on one of said surfaces of said second fabric element and a second adhesive backing secured to the other surface of said second element.

Another object of the invention is to provide new and improved fastening means for articles comprising, a first fabric element having a first surface adapted to engage and disengage a second fabric element having a dissimilar surface and an adhesive backing on said fabric element.

These and other objects of the invention will be apparent from the following specification and drawings of which:

FIGURE 1 is an elevation view illustrating the use of the invention.

FIGURE 2 is a perspective view illustrating the embodiment of the invention in tape form.

FIGURE 3 is a perspective view illustrating another embodiment of the invention.

FIGURE 4 is an illustration of a modification of the invention having an intermediate resilient layer.

Referring to the drawing, FIGURE 1 illustrates the use of the invention for mounting a screw driver 20 to a wall or other stationary support 21. In this case, a hook type fabric element 22 is secured to the screw driver

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with an adhesive backing 23 and a loop type element 24 is secured to the stationary support by means of the adhesive 25. The device, such as the screw driver, can be held securely by elements of $\frac{1}{4}$ " x $\frac{3}{4}$ " dimension, or an article such as a pencil can be mounted on the side of a telephone by elements approximately $\frac{1}{4}$ " x $\frac{1}{4}$ " square.

Either the hook or the loop element may be attached to the screw driver or other tool.

FIGURE 2 illustrates an embodiment of the invention comprising a first fabric element 1 which has a plurality of loops *a, b, c*, having a second fabric element 2 having a plurality of hooks *d, e, f*. The loops and hooks may be adapted to be disengaged and engaged by pulling or pressing the elements together. Secured to the element 1 is an adhesive backing 3 and secured to the element 2 is an adhesive backing 4. A protective removable cover strip 5 is mounted on the back of the adhesive strip or layer 3 and a similar removable cover strip 6 is mounted on the backing of the adhesive layer 4. It is understood that the layers 5 and 6 are removed before using the elements.

The hook and loop elements may be of the type shown in the above mentioned patents and they may be made of fabric, metal, or plastics including nylon. The loops surface may be similar to that used in pile carpet construction and the hook surface generally comprises small plastic flexible hooks or equivalent. When the two dissimilar elements are placed together the elements engage the hooks and loops causing the two elements to stick together. However the hooks are flexible so that the elements may be easily disengaged from one another, similarly to removing adhesive tape except that the present elements may be used indefinitely since they do not lose their adhesion since this is a mechanical connection. The adhesive tape holding strength should be chosen stronger than the hook-loop holding strength so that the adhesive will not peel off. Conventional pressure sensitive tape is suitable.

The adhesive backing may be of pressure sensitive tape having adhesive surfaces on both sides.

FIGURE 3 illustrates loop type elements 10 and 11 and hook type elements 12 and 13 having adhesive backings 10', 11', 12', 13' which may be mounted on a continuous backing 14 so that they may be peeled off and used as desired for mounting tools, small articles, picture frames, or other articles or anywhere it is desired to engage two surfaces in a manner that can be easily disengaged.

FIGURE 4 shows a modification of the invention having a resilient layer 15 mounted between the fabric

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layer 16 and the adhesive layer 17. This modification may be manufactured and supplied in the form of tape which may be easily cut in miscellaneous shapes either individually or mounted on a continuous backing tape. The resilient layer may be attached to the hook element, the loop element or both. The resiliency permits the article 30 and its hooked element 31 to be pressed in so as to engage more hooks.

The adhesive backing may be of plastic or preferably with a double sided adhesive of the pressure sensitive type. Alternatively, the adhesive type may be of the type having one adhesive side and the other side being secured to the fabric backing by any conventional process.

Another feature of the invention is that it is flexible and can be used in irregular surfaces.

Many modifications may be made by those who desire to practice the invention without departing from the scope thereof which is defined by the following claims.

I claim:

1. Fastening means for articles comprising, a first fabric element having two surfaces, said first fabric element having a plurality of hooks secured on one surface and a first adhesive backing connected to the other surface of said element,
- a second fabric element having two surfaces, a plurality of loops secured on one of said surfaces of said second fabric element and a second adhesive backing secured to the other surface of said second element and means to enhance the engagement of said hook and loops comprising a layer of easily compressible resilient foam material connected to at least one of said fabric elements between said one fabric element and its adhesive backing, said resilient layer being thicker than said one fabric element and being sufficiently thick to permit indentation of said one fabric element.

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BERNARD A. GELAK, *Primary Examiner*,