

June 8, 1971

J. W. WALKER

3,583,039

CHANGEABLE CLOTHING BUTTON STRUCTURE

Filed Jan. 21, 1969

FIG. 1

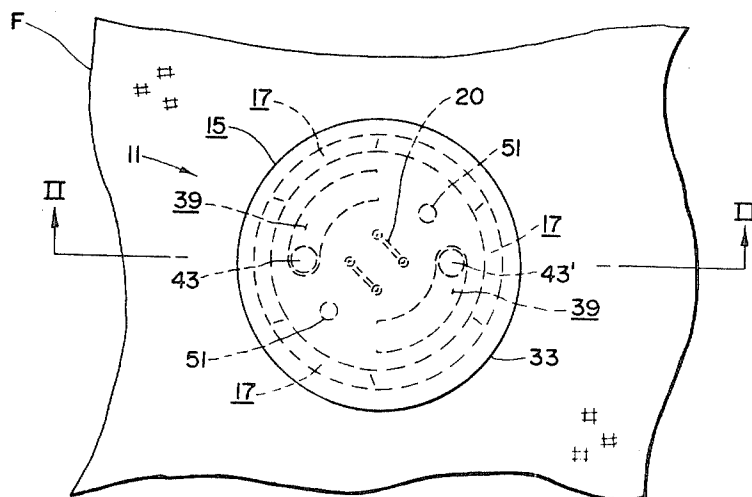


FIG. 2

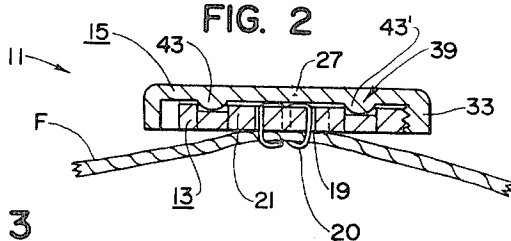


FIG. 3

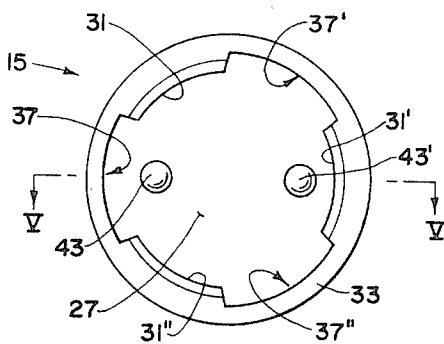


FIG. 4

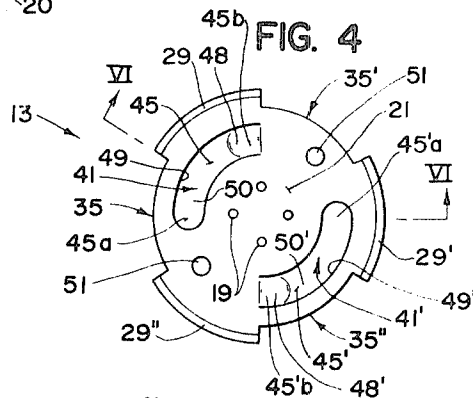


FIG. 5

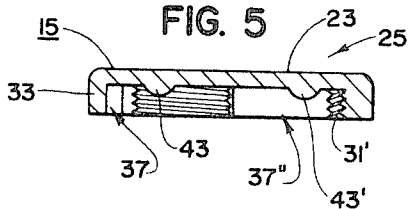
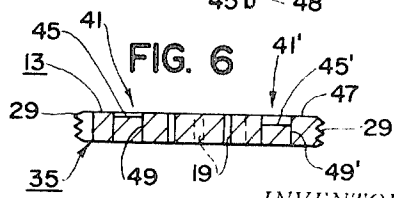


FIG. 6



INVENTOR.
JAMES W. WALKER

BY *John R. Walker, III*
Attorney

1

3,583,039
CHANGEABLE CLOTHING BUTTON STRUCTURE
James W. Walker, 930—100 N. Main Bldg.,
Memphis, Tenn. 38103
Filed Jan. 21, 1969, Ser. No. 792,481
Int. Cl. A44b 19/00
U.S. Cl. 24—105

3 Claims

ABSTRACT OF THE DISCLOSURE

Clothing button means basically comprising a two-piece button unit having a base part, a cap part and coupling means detachably coupling the base and cap parts together. Male and female interrupted screw fastening means formed respectively on the base and cap parts are adapted to be interengaged for readily changing the cap part of the button unit—the changeable button means includes a plurality of cap parts of different design and ornamentation adapted to be selectively fitted on a single button unit base part. By changing the cap parts of the button unit on an article of clothing, the color combination or appearance of the garment may be altered to suit the user.

CROSS REFERENCE TO RELATED APPLICATION

This is an application co-pending with an earlier application filed Nov. 6, 1968, Ser. No. 773,919, entitled Changeable Clothing Button Means and with both applications being filed by the same inventor.

BACKGROUND OF THE INVENTION

(1) Field of the invention

The invention relates to clothing fasteners generally and particularly relates to buttontype fasteners having means for changing the designor appearance of that part of a button which is visible.

(2) Description of the prior art

Various prior art button structures have heretofore been designed which permit changing the button or placing an insert in a base part of the button. Pat. No. 2,574,014 discloses fastening structure adapted for removably fastening a button on the clothing fabric and such fastening means adapted for changing the button. Pat. No. 2,128,095 discloses another type button arrangement wherein the button per se is altered for changing the appearance of a garment. In this patent, when the user desires to match buttons to a garment, he selects a base of the preferred color and then selects inserts of the preferred color to match the base and the garment and then assembles the two parts together. Another Pat. No. 3,414,949, discloses an ornamental button adapted to be snap-fastened to garment fabric. In this patent, substantially the entire top part or exposed part of the button is adapted to be snap-locked on a co-acting snap-lock member permanently secured on the garment fabric.

The prior art button structures above-mentioned generally are directed toward providing means for installing a visible part of the button structure on fabric for changing the appearance of an article of clothing. In the button attaching means disclosed in Pat. No. '014, the attaching structure is somewhat intricate and complex in design and may present problems in manufacture and use. The intricate and complicated structure of the button attaching means presumably would require tedious dexterity in installing or removing a button body on a fabric garment. In the button structure of Pat. No. '095 the semi-permanently fitted insert may only be separated from the base part of the button by use of considerable force. In the button structure of Pat. No. '949 the button body is

2

adapted to be snap-locked in place on the fabric. The button body of Pat. No. '949 is removed from the fabric for cleaning and laundering and is snap-locked in place after such cleaning and laundering procedure.

SUMMARY OF THE INVENTION

The present invention utilizes co-acting male and female screw threaded parts for changing the visible part of a button, thereby changing the appearance of an article of clothing. A user of a two-piece button unit of the present invention has only to convergently coaxially move the base and cap parts of the button unit together and then turn the parts slightly contradirectionally to twistlock the parts together. The cap part of a button unit may be readily removed or changed by reverse contradirectional movement and coaxial separation of the cap part from the base part of the button unit.

The button unit of the invention is of sturdy compact design and does not include intricate structure to cause problems in manufacture and use. The rather simple interrupted thread twistlock structure of the present invention provides ready means for changing a button cap and such procedure requiring only negligible dexterity. The positive acting twistlock coupling of a cap part on the base part of a button unit substantially obviates the likelihood of a cap part becoming disengaged or lost during cleaning and laundering. The interrupted thread twistlock feature of the button unit provides ready means for changing the visible cap parts of the button units when matching buttons to a garment.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a top view of the button unit of the present invention shown attached on a fabric fragment.

FIG. 2 is a vertical plane sectional view of the button unit taken as on the line II—II of FIG. 1.

FIG. 3 is a bottom view of the cap part of the button unit.

FIG. 4 is a top view of the base part of the button unit.

FIG. 5 is a sectional view of the cap part taken as on the line V—V of FIG. 3.

FIG. 6 is a broken plane sectional view of the base part taken as on the line VI—VI of FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the button means of the present invention basically includes a two-part button unit including a base part 13, a cap part 15, and screw means 17 detachably coupling the base and cap parts together. Button unit 11 is adapted to be permanently secured on an article of clothing such as illustrated by fabric fragment F. A plurality of thread holes 19 formed in base part major portion 21 receive thread loops 20 permanently securing the button unit base part on the fabric.

Base and cap 13, 15 of button unit 11 preferably are formed of plastic material. It will, of course, be understood that in certain embodiments of the invention (not shown) base and cap 13, 15 each may be formed by fabricating several elements together and perhaps elements of different material or substance. By way of example, cap 15 is shown in a simplified form having a plain, flat top surface 23. It will, of course, be understood that the upper portion of cap 15, and that portion visible, may be formed of many different designs or configurations for presenting or exhibiting a desired button appearance. For example, the visible face 25 of cap 15 may be formed of cloth, leather, plastic, or other construction material or may be of any design or color combination desired by the button manufacturer or user. The illustrated button unit 11 is generally disc-shaped and

3

includes circular base and cap parts 13, 15 with circular major portions 21, 27. The button unit is adapted to be arranged in an operative configuration with base and cap parts matingly engaged and respective major portions 21, 27 generally in closely spaced parallel arrangement (see FIG. 2).

Screw means 17 is preferably, though not necessarily, of the interrupted type and provides coupling structure for detachably coupling changeable cap part 15 on base part 13. Screw means 17 preferably includes male and female interrupted thread elements 29, 29', 29''; 31, 31', 31'' formed respectively on base and cap parts 13, 15. Interrupted male thread elements 29, 29', 29'' are equiangularly spaced circumferentially about base part 13 and integrally formed with major base part portion 21. Interrupted female thread elements 31, 31', 31'' are intermittently spaced internally along circumferentially extending flange-like rim portion 33 of button cap 15. Interrupted male thread elements 29, 29', 29'' are equiangularly spaced about base part major portion 21 and define an intermittently alternatingly arranged series of external flutes 35, 35', 35''. In like manner, interrupted female thread elements 31, 31', 31'' define an intermittently arranged series of internal flutes 37, 37', 37'' in alternating arrangement with interrupted thread elements 31, 31', 31''.

The longitudinal extension respectively of external interrupted thread elements 29, 29', 29'' and external flutes 35, 35', 35'' preferably correspond respectively with interrupted internal thread elements 31, 31', 31'' and internal flutes 37, 37', 37''. The proportions respectively of external and internal interrupted thread elements 29, 29', 29'' and 31, 31', 31'' is such that the base and cap parts may be matingly arranged with interrupted external thread elements 29, 29', 29'' of base 13 being received in internal flutes 37, 37', 37'' of cap 15, and with interrupted internal thread elements 31, 31', 31'' of cap 15 being received in external flutes 35, 35', 35'' of base 13. Button cap part 15 is adapted to be fitted over the button base part by first convergingly axially moving the two parts together and then contradirectionally moving the two parts and interengaging interrupted thread elements 29, 29', 29''; 31, 31', 31''.

Button unit 11 preferably includes retainer means 39 adapted to retain cap part 15 in detachable engagement with base part 13. Retainer means 39 is adapted for interengaging base and cap 13, 15 and is operative for preventing contradirectional displacement of the base and cap parts when male and female interrupted screw means 17 is in an engaged disposition with cap 15 fitted on base 13. Retainer means 39 preferably includes two arc-shaped recesses 41, 41' formed in the upper structure of base 13 and includes two knob-like protuberances 43, 43' formed on the underside of cap 15. Recesses 41, 41' and protuberances 43, 43' formed respectively on base and cap 13, 15 are substantially equidistantly radially spaced from the center axis of button unit 11 and co-act in securing the cap and base parts against contra-directional rotational movement. Recesses 41, 41' are defined in part by inclined bottom surfaces 45, 45' inclined upwardly respectively from the deeper portions 45a, 45'a to the shallow portions 45b, 45'b intersecting respectively upper surface 47 of base part major portion 21. Inclined bottom surfaces 45, 45' respectively of recesses 41, 41' each are inclined upwardly respectively on an angle contrary to the thread lead angle of the interrupted screw means of button unit 11.

The arrangement of recesses 41, 41' and protuberances 43, 43' respectively on base and cap parts 13, 15 is such that when the base and cap parts are convergingly axially moved together in mated relationship, and prior to the contradirectional turning movement of these parts, the protuberances 43, 43' are received in the deeper end portions 45a, 45'a respectively of base part recesses 41, 41'. After the interrupted thread means respectively of the

4

cap and base parts are matingly axially convergingly moved in mating engagement, contradirectional tightening movement of the cap and base parts causes the apex portions respectively of protuberances 43, 43' to frictionally runningly engage inclined bottom surfaces 45, 45' and frictionally secure the base and cap parts together. Preferably at the shallow portions, 45b, 45'b, there are provided shallow recesses 48, 48' into which the protuberances 43, 43' come to rest to create a locked position. Preferably the material of major portion 21 is cut through from top to bottom along the sides of recesses 41, 41' and around the periphery of deep end portions 45a, 45'a, as along the substantially U-shaped lines, 49, 49', as viewed from the top of base 13, so as to provide resilient tongue-like members 50, 50' for permitting the protuberances 43, 43' to snap into place in recesses 48, 48'. Also, it may be desirable to undercut members 50, 50' on the undersides thereof at the junctures of members 50, 50' with the main body of major portion 21 to create additional resiliency.

In addition, if desired, base part 13 may be made reversible, that is, with the same configuration and recesses on the bottom thereof as shown on the top thereof so that either side thereof may be next to the fabric with the cap part being threaded on the outer or other side. The inclined surfaces 45, 45' respectively of recesses 41, 41' being configured on helix lead angles contrary to the direction of lead angle of interrupted screw thread means 17 of the button unit causes the tip or apex portions respectively of protuberances 43, 43' to runningly frictionally engage the inclined bottom surfaces and move the tongue members 50, 50' downwardly relative to surface 47 until the protuberances 43, 43' fall into the recesses 48, 48'.

Preferably, two apertures 51 are formed in diametrically spaced apart portions of base part major portion 21 and provide socket or aperture means useful for contradirectional rotational movement of base and cap part 13, 15. Thus, a hand-held awl or other such pointed tool may be inserted in one or both of apertures 51 for holding the base part while the cap part is being turned in tightening or loosening interrupted screw means 17 and respectively engaging or disengaging interrupted thread elements 29, 29', 29'' and 31, 31', 31''.

A single base part 13 preferably is adapted to be fitted with a selected one of a multiplicity of cap parts 15 each formed of different design and ornamentation. An article of clothing is adapted to be permanently fitted with the base parts of a plurality of button units and such button units each having a multiplicity of selectable cap parts of different design and ornamentation. A user of the clothing button means of the invention may select a desired one of the cap parts for each button unit 11 and twistlock the cap part on the respective base part. The appearance of an article of clothing may quickly and easily be changed by removing the respective cap parts of the button units of the clothing article and replacing the cap parts with desired ones from a selected assortment of cap parts for each button unit.

I claim:

1. A clothing button unit comprising a generally flattened horizontal base having a major portion concentrically arranged about a vertical axis including structure defining at least one thread hole adapted to receive thread loops in attaching the button unit on the clothing fabric; a generally flattened horizontal cap part including a major portion concentrically arranged about a vertical axis and including depending rim structure extending circumferentially about said cap major portion; and coupling means detachably coupling said cap and base with the axes thereof being coincidentally arranged, said coupling means including male and female interrupted screw means formed respectively on said base and cap including a series of internal thread elements intermittently circumferentially arranged about and integrally formed with the base major portion and defining a circumferentially arranged se-

5

ries of external flutes, internal thread elements intermittently circumferentially arranged about and integrally formed with the rim structure of said cap and defining a circumferentially arranged series of internal flutes; said cap and base parts being adapted to be turnably mated with the respective internal and external thread elements thereof being matingly engaged; said base and cap coupling means additionally including retainer means interengaging said base and said cap for preventing contradirectional rotative displacement of said base part and cap part and operative for retaining said parts in coupled relation; said retainer means including structure defining at least one arc-shaped horizontally arranged upwardly opening recess in the upper portion of said base defining a bottom surface extending longitudinally of said arc-shaped recess and inclined upwardly on an angle contrary to the thread lead angle of the interrupted screw means of the button unit, and including at least one knob-like protuberance dependently formed on the underside of said cap and positioned to slidably engage said bottom surface of said arc-shaped recess in said base part to frictionally secure the cap and base parts together against contradirectional displacement.

2. The clothing button unit as defined in claim 1 wherein said bottom surface of said recess is provided with a shallow recess into which said protuberance is adapted to

6

fit when said cap part and said base part are secured together.

3. The clothing button unit as defined in claim 2 in which said base part is severed therethrough around a portion of the periphery of said arc-shaped recess to provide a resilient tongue.

References Cited

UNITED STATES PATENTS

10	338,409	3/1886	Heath	24—113
	439,139	10/1890	Gaynor	24—113
	974,059	10/1910	Haynes	85—1
	1,120,101	12/1914	Spillmann	24—105
15	1,348,629	8/1920	Cushman	24—104

FOREIGN PATENTS

	4,946	4/1885	Great Britain	24—113
	26,564	12/1898	Great Britain	24—113
20	1,155,930	5/1958	France	85—1

STANLEY N. GILREATH, Primary Examiner

W. H. SCHROEDER, Assistant Examiner

U.S. Cl. X.R.

25 24—113