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MAGNETIC HOLDER

Filed July 2, 1962

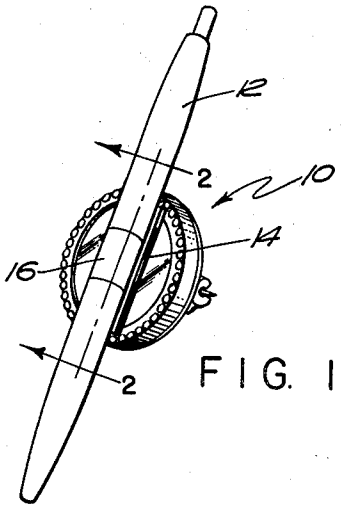


FIG. 1

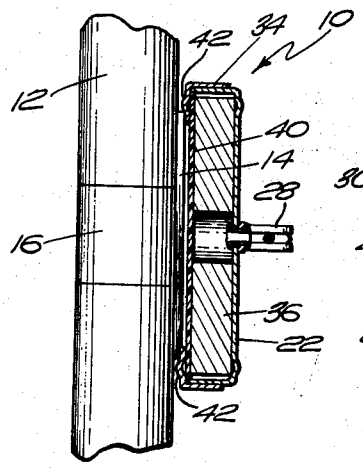


FIG. 2

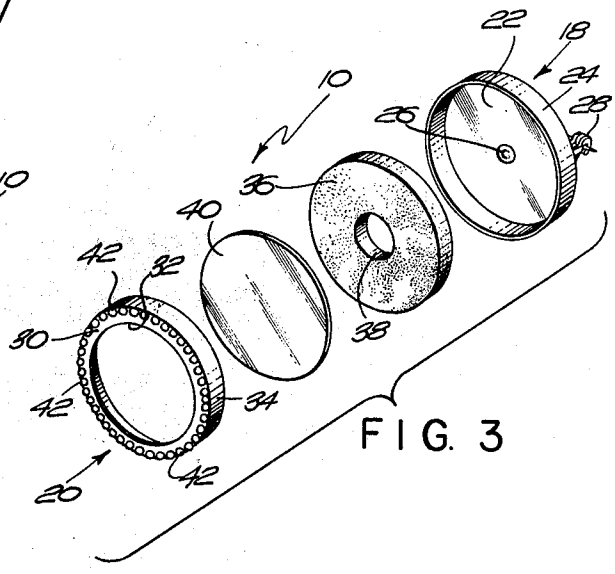


FIG. 3

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MAGNETIC HOLDER

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The present invention relates to a magnetic holder. More particularly, the present invention relates to a magnetic holder for retaining an article thereon.

The magnetic holder embodied in the present invention has particular application as a means for conveniently retaining an article in an accessible place on an article of clothing of the user. As a practical application of the invention, the magnetic holder is shown and described herein retaining an article such as a ballpoint pen thereon. The holder is provided with a fastening element, such as a pin with safety catch, that is adapted to be secured to an article of clothing of the user. Thus the magnetic holder is secured to the user's lapel, blouse or other article of clothing and securely receives in magnetic attraction thereon the ballpoint pen. The ballpoint pen is thereby effectively retained in a convenient location so as to be readily available to the user when desired. It is understood that other articles may be retained by the magnetic holder embodied herein and that the ball point pen illustrated in the drawings is only one example of such an article.

It is therefore an object of the present invention to provide a magnetic holder for retaining an article thereon in magnetic attraction.

Another object of the invention is to provide a magnetic holder that incorporates a magnet therein that is shaped and constructed to concentrate the magnetic flux in an area on the holder that provides for effectively attracting an article to be retained thereon.

Still another object is to provide a magnetic holder that is formed with a shell and locking member between which a magnet is positioned, the magnet being adapted to magnetize the marginal and peripheral portions of the shell and locking member so that an article may be effectively retained in magnetic attraction thereon.

Still another object is to provide a magnetic holder that includes a shell and locking member, the locking member being formed with means for properly locating an article thereon when the article is placed in magnetic attraction thereagainst.

Other objects, features and advantages of the invention will become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings.

In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

FIG. 1 is a perspective view of the magnetic holder embodied herein showing a ballpoint pen located in magnetic attraction thereon;

FIG. 2 is a sectional view taken along lines 2—2 in FIG. 1; and

FIG. 3 is an exploded perspective view of the magnetic holder embodied herein showing the component parts thereof.

Referring now to the drawing and particularly to FIG. 1, the magnetic holder embodied herein is generally indicated at **10** and is shown for use as a holder for a ballpoint pen **12**. As will be described hereinafter, an adaptor **14** secured to a ring **16** of the ballpoint pen **12** is held in magnetic attraction by the magnetic holder, and as such the pen **12** is secured in place on the magnetic holder for convenient access to the user. It is understood that other articles may be retained on the magnetic holder **10** without departing from the spirit of

the invention, and it would only require that the adaptor **14** be mounted on the other article in some convenient manner. In the present invention the adaptor **14** is secured to the ring **16** as an integral part thereof or may be soldered or welded in place, depending upon the materials utilized. In all cases, the adaptor **14** is formed of a metallic material that is magnetically attractable and in the present instance has a rectangular configuration, the longitudinal dimension of which is proportioned for being received on the base of the magnetic holder **10** as will be described hereinafter.

Referring now to FIGS. 2 and 3, the magnetic holder **10** is shown in detail and includes a housing defined by a metallic shell generally indicated at **18** and a metallic locking member generally indicated at **20**. The shell **18**, which may be formed of any suitable magnetically attractable material, includes a bottom wall **22** and a peripheral side wall **24** that is integrally joined to the bottom wall **22**. Secured to the outer face or surface of the bottom wall **22** by a rivet **26** is a fastening element **28**. The fastening element **28** is defined by a pivoted pin and safety lock construction that is conventional in the art and is of that type that provides for securing of the magnetic holder on an article of clothing of the user.

The locking member **20** includes a marginal outer wall **30** that defines a central opening **32**. An annular depending flange **34** is joined to the marginal wall **30** and is proportioned for enveloping the annular side wall **24** of the metallic shell **18** in frictional engagement therewith.

In order to provide for the magnetic characteristics of the magnetic holder **10**, a circular magnet **36** is provided and is adapted to snugly fit within the shell **18** so as to occupy substantially the entire space therein. The magnet **36** is formed with a central opening **38** therein, the central opening not only providing for receiving the inner portion of the rivet **26**, but also providing for the concentration of the magnetic flux in the magnet at the outer marginal and peripheral portions thereof. Thus, when the magnet **36** is located within the shell **18** and the locking member **20** is disposed in enveloping relation around the shell **18**, the magnetic flux concentrated at the marginal and peripheral portions of the magnet will act to magnetize the corresponding marginal and peripheral portions of the shell **18** and locking member **20**. As will be described hereinafter, since the marginal and peripheral portions of the magnetic holder have the greatest magnetic attraction, the adaptor **14** will be effectively retained in position at these portions.

Since the outer surface of the magnet **36** does not provide a very attractive appearance, an overlay disc **40** is provided and is shaped and proportioned to fit within the locking member **20** when the locking member is disposed in enveloping relation on the shell **18**. Although the disc **40** as illustrated has a plain unmarked outer surface, it is contemplated to form this surface with an ornamental appearance. Thus, the outer surface of the disc **40** may be utilized as an advertising device or may have some descriptive material imprinted thereon. It is also contemplated to form the disc **40** of a plastic material which is electrically nonconductive. By providing the nonconductive plastic disc **40** in direct overlaying relation with respect to the magnet **36**, more effective magnetic attraction is provided for the marginal and peripheral portions of the magnetic holder **10**.

In order to properly locate the adaptor **14** on the magnetic holder **10**, marginal wall **30** of the locking member **20** is provided with a plurality of raised projections or areas **42** that in effect define an annular raised ring. The raised ring defined by the projections **42** has a diametrical dimension that is adapted to receive in snug fitting rela-

tion therebetween the adaptor **14**. The outermost edges of the adaptor **14** thus fit along the inner surfaces of the raised projections **42** that define the annular ring, and the adaptor **14** is thus properly located in position. Since the magnetic flux of the magnet is concentrated in the marginal and peripheral portions thereof, the adjacent portions of the shell **18** and locking member **20** are more magnetized than the other portions thereof. As a result, the engaging surfaces of the adaptor **14** that are in contact with the marginal wall **30** of the locking member **20** are effectively retained in position by the magnetic force of the magnet **36**. The pen **12** when secured to the adaptor **14** may then be effectively retained in position on the magnetic holder **10** by simply placing the adaptor **14** in contact with the marginal wall **30**, the outermost edges of the adaptor **14** being located by the annular ring defined by the projections **42**.

In use, the magnetic holder may be secured to an article of clothing of the user by simply inserting the pin of the fastening element **28** in the user's clothing and locking the pin in place by the safety catch of the fastening element. The article to be retained in position on the holder such as the pen **12** may be securely mounted thereon by simply placing the adaptor **14** in position on the locking element **20**. The pen **12** may be removed from the holder **10** by grasping it and exerting an outward force that is sufficient to remove the adaptor **14** from the locking member **20**. After the pen **12** has been utilized for its desired purpose, it can then be reinserted in place on the holder **10** by placing the adaptor **14** within the annular ring defined by the projections **42** on the locking member **20**.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not limited to the particular forms herein shown and described except insofar as indicated by the scope of the appended claims.

What is claimed is:

1. In a magnetic holder for retaining an article thereon, a shell formed of a magnetically attractable material and having a bottom wall and a peripheral side wall joined to said bottom wall, a fastening element secured to the outer surface of said bottom wall and including means for mounting said holder to an article of clothing of the user of said holder, a magnet located within said shell and occupying substantially the entire space therein, a disc of nonmagnetically attractable material overlying said magnet and forming an ornamental cover therefor, a locking member of magnetically attractable material mounted on said shell and including a depending peripheral flange that frictionally engages the side wall of said shell in enveloping relation, and a marginal portion that overlies a marginal area of said disc, thereby locking said disc in place on said magnet, said locking member including a central opening for exposing a major portion of the outer surface of said disc, and means formed on said marginal portion that is raised with respect to the surface thereof for properly locating a magnetically attractable element associated with the article to be retained on said holder.

2. In a magnetic holder for retaining an article thereon, a shell formed of a magnetically attractable material and having a bottom wall and a peripheral side wall, a magnet locted in said shell and occupying substantially the entire space therein, a disc formed of a nonmagnetically attractable material and having an ornamental outer face overlying said magnet, and a locking member formed of magnetically attractable material and frictionally engaging said shell for enclosing said magnet and locking said disc therein, said locking member having a central opening formed therein for exposing a major portion of the outer surface of said disc, said locking member further including means formed on a marginal portion thereof that is adapted to properly locate a magnetically attractable element associated with the article to be retained on said holder.

3. In a magnetic holder for retaining a magnetically attractable element thereon, a housing including a metallic shell and a metallic locking member frictionally engaging said shell, at least said locking member being formed of a magnetically attractable material, a magnet disposed in said shell and occupying substantially the entire space therein, said magnet having a central opening formed therein thereby causing the concentration of magnetic flux to be in the marginal and peripheral portions thereof, wherein the marginal and peripheral portions of said locking member are magnetized, a disc of nonmagnetic material overlying said magnet and being locked in position by said locking member, and means formed on said marginal portion of said locking member for properly locating said magnetically attractable element thereon, said locating means being formed as an integral part of said locking member so as to be magnetized by said magnet and thereby acting to locate the magnetically attractable element that is magnetically attracted thereto.

4. In a magnetic holder as set forth in claim 3, said locating means being defined by a marginal portion of said locking element that is raised with respect to the remaining portions and that is annular in configuration, the magnetically attractable element being of a dimension to fit within the annular raised marginal portion so as to be closely confined and restricted on both ends by said raised marginal portion.

5. In a magnetic holder for retaining an article thereon, a metallic shell formed of a magnetically attractable material and having a bottom wall and a peripheral side wall joined to said bottom wall, a magnet located in said shell and occupying substantially the entire space in said shell, a disc of nonmagnetically attractable material overlying said magnet, and having an ornamental design on the outer surface thereof, and a locking member formed of a magnetically attractable material having a peripheral flange that envelops the side wall of said shell and including a marginal portion that defines a central opening in said locking member, said marginal portion overlying a marginal area of said disc for locking said disc in said shell, the central opening in said locking member exposing a major portion of the outer surface of said disc, wherein the ornamental design on said outer surface is substantially exposed for external view.

References Cited in the file of this patent

UNITED STATES PATENTS

2,297,806	Smith	Oct. 6, 1942
2,632,790	Kiler	Mar. 24, 1953
3,009,225	Budreck	Nov. 21, 1961
3,063,118	Salter et al.	Nov. 13, 1962

FOREIGN PATENTS

73,592	Norway	June 7, 1948