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MAGNETIC HOLDER FOR PENCILS OR THE LIKE

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Fig. 1.

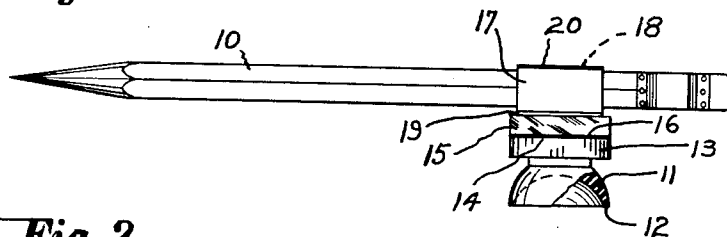


Fig. 2.

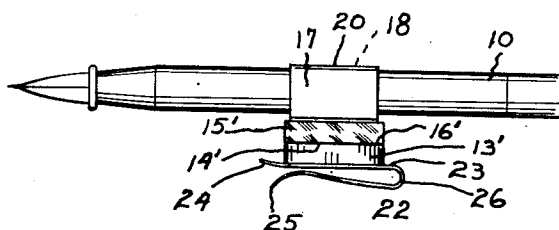


Fig. 4.

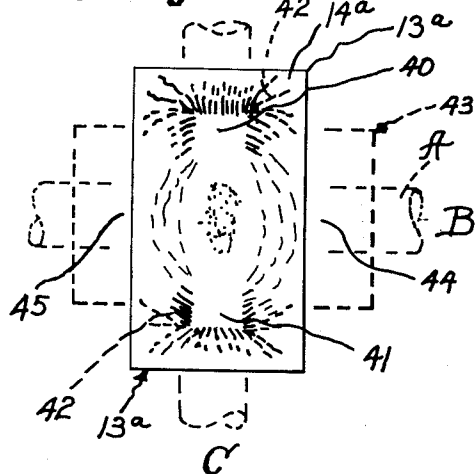
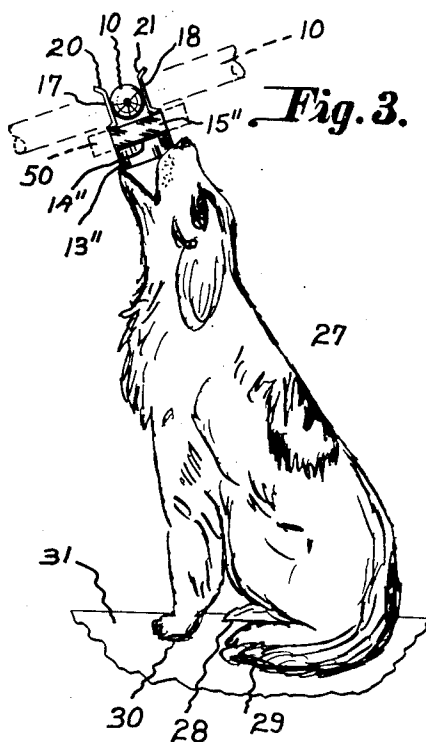


Fig. 3.



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MAGNETIC HOLDER FOR PENCILS OR THE LIKE

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9 Claims. (Cl. 120—108)

This invention relates to holders for utilitarian instrumentalities such as pencils, pens and the like and has for an object to provide means for attaching a pencil to and supporting the pencil from various articles in a manner whereby said pencil is readily disposed to the hand of a user and readily detachable from said article for use.

Another object of the invention is to provide a construction for the above stated purpose which will also swing a pencil, pen or a like elongated instrument to a preselected position with respect to a fixed position of a support therefore.

Other and further objects and advantages of the invention will be understood from the following detailed description thereof.

In the drawing:

Figure 1 is a side elevation of the new device, a portion of a supporting article shown in broken away section and a pencil supported thereby.

Figure 2 is a similar view showing a modified form of said supporting article and a pen supported thereby.

Figure 3 is an end elevation of the new device and showing a further modification of said supporting article.

Figure 4 is a full line top plan view of a bar-magnet employed, illustrating, by means of broken lines, the magnetic curves or lines of magnetic force of said magnet about the poles thereof.

Heretofore in instances where a person has employed a lead pencil, pen or the like about a desk and at times when the surface of said desk is cluttered with papers, it has often happened that the pencil upon being disposed on the surface of the desk becomes buried under said papers and not readily at hand and the new device provides means for supporting a pencil above the surface of said desk and from an ornamental mass, the weight of which is useful also for a paper weight.

Also as heretofore practiced lead pencils, pens and the like have been attached to the edge of a vest of a user by means of a spring clip, the latter often being comparatively weak permitting accidental detachment from said edge and the present invention aims to also provide a spring clip which is not readily or accidentally removable from a vest edge, said spring clip of the present invention being provided with means for readily attaching a pencil thereto in a removable manner, said means being such that the pencil automatically becomes moved to a preselected position of alignment which, if accidentally disturbed, permits the pencil to swing out of alignment until said disturbing factor is removed; whereupon the pencil swings back to said initial, selected position. Also as heretofore practiced pencils have been attached to telephone stands and the like by means of strings whereby said

pencils can be found for writing memorandums of telephone conversations and the like, said strings being unsightly and often becoming entangled with the cords of telephone wires and the like and the present invention aims to provide means for obviating the undesirable factors of the prior practice.

Referring now to the drawing for a more particular description 10 indicates an elongated useful instrument which is supported by means of the present invention, said instrument being such as or similar to the pencil shown in Figure 1 or the pen shown in Figure 2.

Referring to Figure 1 the new device, as to the supporting article part thereof, consists of a vacuum-cup 11 formed of resilient material such as rubber or the like, said cup being provided with a perimetrical annular edge 12 which if and when manually pressed against a comparatively smooth surface and then released causes said cup to adhere to said surface in a well known manner. A bar-magnet 13 is secured to the cup 11 by any suitable means such as a brass rivet, liquid adhesive solder or the like, not shown, said magnet being provided with a flat smooth surface 14 disposed away from the cup 11 for purposes later described.

A second bar 15 having a similar flat surface 16 is employed, said bar being formed of metal susceptible to magnetic attraction and for certain later described purposes said bar 15 constitutes a second bar-magnet in lieu of a plain metallic bar. The material employed for said magnet or magnets being preferably "Alnico" permanent magnet material which provides a bar-magnet with a comparatively large magnetic field and magnetic force in proportion to the bulk thereof.

To the bar 15 or bar-magnet 15 a means for gripping or securing the pen or pencil 10 to the bar 15 is provided. As specifically shown in the drawing, said gripping means includes two oppositely disposed resilient fingers 17 and 18 formed preferably of non-magnetic material such as spring brass. The fingers have ends secured to the bar 15 by any suitable means such as solder indicated at 19, the outer free ends of said fingers being normally urged towards each other by the inherent resiliency thereof, whereby at times when the article 10 is disposed between said springs the latter grip said article and permit a manual removal thereof from in between said springs, the latter preferably, as best shown in Figure 3, having outwardly disposed end portions 20 and 21 for facilitating a guiding of the elongated article 10 between said fingers. The said gripping means or holder may be also formed, if desired, of certain of the ornamental modern plastic materials.

As thus described it will be noted that the vac-

uum-cup 11 may be caused to adhere to the side wall of the housing of a telephone receiver instrument; to an electric light fixture about a desk, to the side wall of the housing of a dictating machine and to any approximately smooth, flat surface as may be desired by a user and in operation said cup 11 and bar-magnet 13 being secured to said surface, an operator moves the bar 15 within the magnetic field of the magnet 13, said bar being attached to said fingers and the instrument 10 being secured to the bar 15 as above described, said operator then releases the instrument 10 from his fingers; whereupon the bar clings to the magnet 13 until removed for use, it being understood that the gripping fingers are sufficiently strong to retain the instrument 10 attached to the bar 15 during removal of the latter from the influence of the magnet 13.

In instances where the bar 15 is formed of said magnetic material and, therefore, constitutes a permanent magnet the instrument 10 may be automatically aligned in a certain position with respect to the surface to which the vacuum-cup 11 is attached and for this purpose said magnets are elongated for disposing the poles thereof spaced apart an appreciable distance for purposes later described.

Referring to the modification shown in Figure 2 the parts thereof are as heretofore described with the exception that the supporting article or vacuum-cup 11 is omitted and in lieu thereof a different supporting article employed, said different article consisting of a spring clip generally indicated at 22. The clip is substantially U-shape in side elevation having an arm 23 which is secured to the bar-magnet 13' by any suitable means such as solder or the like. The clip 22 is formed preferably of non-magnetic material such as spring brass. The free ends 24 and 25 of the clip flare outwardly and divergently with respect to each other for facilitating attaching said clip to the edge of a vest or other like flexible object, said edge in use being disposed within the loop defined by the clip in side elevation, the edge of said vest pocket in use being disposed against the portion of the clip indicated at 26.

With respect to the modification shown in Figure 2, the bar-magnet 13' thereof is provided with a flat surface indicated at 14' which is disposed away from the clip 22 and the bar 15' thereof is provided with a similar flat surface 16' for purposes later described and it will be understood that the bar 15' for certain purposes may consist of a bar-magnet. The operation of the device shown in Figure 2 is similar in all respects to the operation of the modification shown in Figure 1.

With respect to the modification shown in Figure 3, the device is similar to the modifications shown in Figures 1 and 2, with the exception that in lieu of the employment of either the vacuum-cup 11 or spring clip 22 the supporting article consists of an ornamental mass, which as specifically shown in Figure 3 is in the form of a statue of a dog generally indicated at 27.

The permanent bar-magnet 13'' is attached to the jaw of said dog by any suitable means such as solder or the like, being provided with a flat surface 14'' disposed away from said dog for purposes later described.

The supporting article 27 at the base thereof is provided with flat aligned surfaces 28, 29 and 30, respectively, indicated at the bottom of one of said dog's rear feet, his tail and forefoot whereby at times when the dog is positioned

upon the flat surface 31 of a desk or the like, said dog's head and the other portions of the new device are disposed above the surface 31 of said desk. The ornament 27 is preferably formed of brass or other suitable non-magnetic material and in operation the modification shown in Figure 3 is as heretofore described.

Referring to the semi-diagrammatic illustration in Figure 4, the permanent bar-magnet 13^a has north and south pole portions, respectively, indicated at 40 and 41. Around said poles magnetic curves or lines of magnetic force extend, said curves or lines being represented by magnetic figures formed by means of the irregular dotted lines 42 in a well known manner of illustration. At the time the bars 15, 15' or 15'' become disposed within the field of their respective permanent magnets 13, 13' and 13'', said bars cling to their respective magnets in a well known manner.

For a special purpose and at times when the bars 15, 15' and 15'' in lieu of being plain bars of metal consist of permanent bar-magnets, the latter together with the magnets 13, 13' and 13'' are cooperatively elongated whereby any of the modifications shown in Figures 1 to 3 inclusive include as to each modification a first and second elongated bar-magnet.

In Figure 4 said second bar-magnet is represented by the dotted lines 43. The second magnet 43 has a north pole 44 and south pole 45, being provided with a smooth surface such as indicated at 16 in Figure 1, said surface being disposed at times during use, against the smooth surface 14^a of the magnet 13^a, said smooth surfaces permitting swinging movements of the magnet 43 upon the magnet 13^a, while in contact, said swinging being caused by the north pole 40 of the magnet 13^a attracting the south pole 45 of the magnet 43 and the south pole 41 of the magnet 13^a attracting the north pole 44 of the magnet 43, whereby the poles of said magnets become disposed in approximate alignment or parallelism.

The pen, pencil or elongated instrument indicated at A in Figure 4, which is attached to the dotted line magnet 43 by suitable means such as the above described gripping device, is correspondingly swung from the position thereof indicated at B to the position indicated at C whereby at the time said swinging movement is consummated the instrument A is thereby disposed in a fixed position with respect to both of said magnets.

In operation and assuming that the member 15'' shown in Figure 3 is a permanent bar-magnet and has been placed upon the magnet 13'' by the operator transversely with respect to the magnet 13'', as indicated by the dotted lines at 50, the instrument 10 is then longitudinally disposed across the oppositely disposed jaws of the dog 27, the operator releasing the instrument 10 from his fingers at said time, the bar magnet 15'' together with the instrument 10 thereupon automatically swings to a position substantially at a right angle from its initial position as placed by the operator and to a preselected position with respect to the dog 27 and in this manner the operator may govern the final and selected position of the instrument 10 by correspondingly positioning the dog 27 upon the surface 31 of said desk.

Similarly with respect to the modification shown in Figure 2 and assuming that the member 15' thereof consists of a permanent bar-

magnet and that the spring clip 22 is attached to the edge of a vest pocket, a flexible cloth drapery or the like the instrument 10 may be caused to be disposed in a preselected position with respect to said drapery or vest pocket edge for facilitating a subsequent grasp by the operator of the instrument 10. Also similarly, with respect to the modification shown in Figure 1, and assuming that the operator has affixed the vacuum-cup 11 to the side of a telephone receiver housing so that the magnet 13 is in a selected position with respect to said housing, the instrument 10 is caused to be disposed in a corresponding position with respect to said housing and complementary to the fixed position of the vacuum-cup 11 and with respect to said housing for not only supporting the instrument 10 but also causing it to swing out of the way upon its support when released by the operator and into a position whereby it may be readily grasped for use.

In detaching the bar or bar-magnet 15 from the bar magnet 13 the same is facilitated by moving the member 15 in a direction parallel with respect to the surface 14 of the magnet 13, whereby said smooth surfaces 16 and 14 slide one upon another until the member 15 is removed exteriorly of the magnet field of the member 13.

From the foregoing description it is thought to be obvious that a magnetic holder for pencils or the like constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish it to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as claimed.

I claim:

1. A holding device for an instrument comprising an elongated magnet, means carried by said magnet to clasp the instrument, a support, and means carried by said support for removably holding said magnet and instrument in a predetermined position, said means comprising a second elongated magnet adapted to attract said first named magnet and swing it to said predetermined position.

2. A holding device for an instrument comprising an elongated magnet, means carried by said magnet to clasp the instrument, a support, and means carried by said support for removably holding said magnet and instrument in a predetermined position, said means comprising a second elongated magnet adapted to attract said first named magnet and swing it to said predetermined position, said support comprising a manually operated gripping member for detachably engaging a selected supporting surface.

3. A holding device for an instrument comprising an elongated magnet, means carried by said magnet to clasp the instrument, a support, and means carried by said support for removably holding said magnet and instrument in a predetermined position, said means comprising a second elongated magnet adapted to attract said first named magnet and swing it to said predetermined position, said support comprising a spring clip for removably attaching the second magnet to a selected supporting surface.

4. A holding device for an instrument comprising an elongated magnet, means carried by said magnet to clasp the instrument, a support, and means carried by said support for removably holding said magnet and instrument in a predetermined position, said means comprising a second elongated magnet adapted to attract said first named magnet and swing it to said predetermined position, said support comprising a resilient vacuum cup, the perimetrical edge of said cup being adapted to be compacted against a smooth surface and released for removably attaching said cup and second named magnet to said surface.

5. A holding device for a pencil or the like comprising an elongated bar magnet, a pair of oppositely disposed spaced springs having ends secured to the magnet, the other ends of said springs being normally urged toward each other for gripping the pencil therebetween, a support, and a second elongated bar-magnet carried by said support and adapted to attract said first named magnet and swing it into alignment with the second magnet for disposing the pencil in a predetermined position.

6. A holding device for a pencil or the like comprising an elongated bar-magnet, means carried by said magnet to grip said pencil, the bar-magnet having a smooth surface, a support, a second bar-magnet carried by said support and having a smooth surface, said smooth surfaces of the magnets being of substantially equal area and adapted to be manually brought into proximity with each other, whereby unlike poles of said magnets will attract each other to cause the first named magnet to swing into alignment with the second named magnet to dispose the pencil in substantially parallel relation to the longitudinal axis of the second named magnet and in a predetermined position with respect to said surface.

7. In a device for supporting a pencil or the like in a predetermined position with respect to a support, an elongated bar-magnet, pencil engaging means carried by said magnet and a second bar-magnet carried by the support and adapted to engage said first named magnet and hold it in a predetermined position with respect to the support.

8. A holding device for a writing instrument comprising a metal element susceptible to magnetic attraction, means carried by said metal element for engaging the writing instrument, a magnet adapted to attract and support said metal element and the instrument carried thereby, and a resilient gripping member carried by said magnet and adapted to detachably engage a supporting surface.

9. A holding device for a writing instrument comprising a metal element susceptible to magnetic attraction, means carried by said metal element for engaging the writing instrument, a magnet adapted to attract and support said metal element and the instrument carried thereby, and a resilient gripping member carried by said magnet and adapted to detachably engage a supporting surface, said gripping member comprising a resilient vacuum cup adapted to be pressed against a plane supporting surface to removably attach the magnet to the supporting surface.

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