

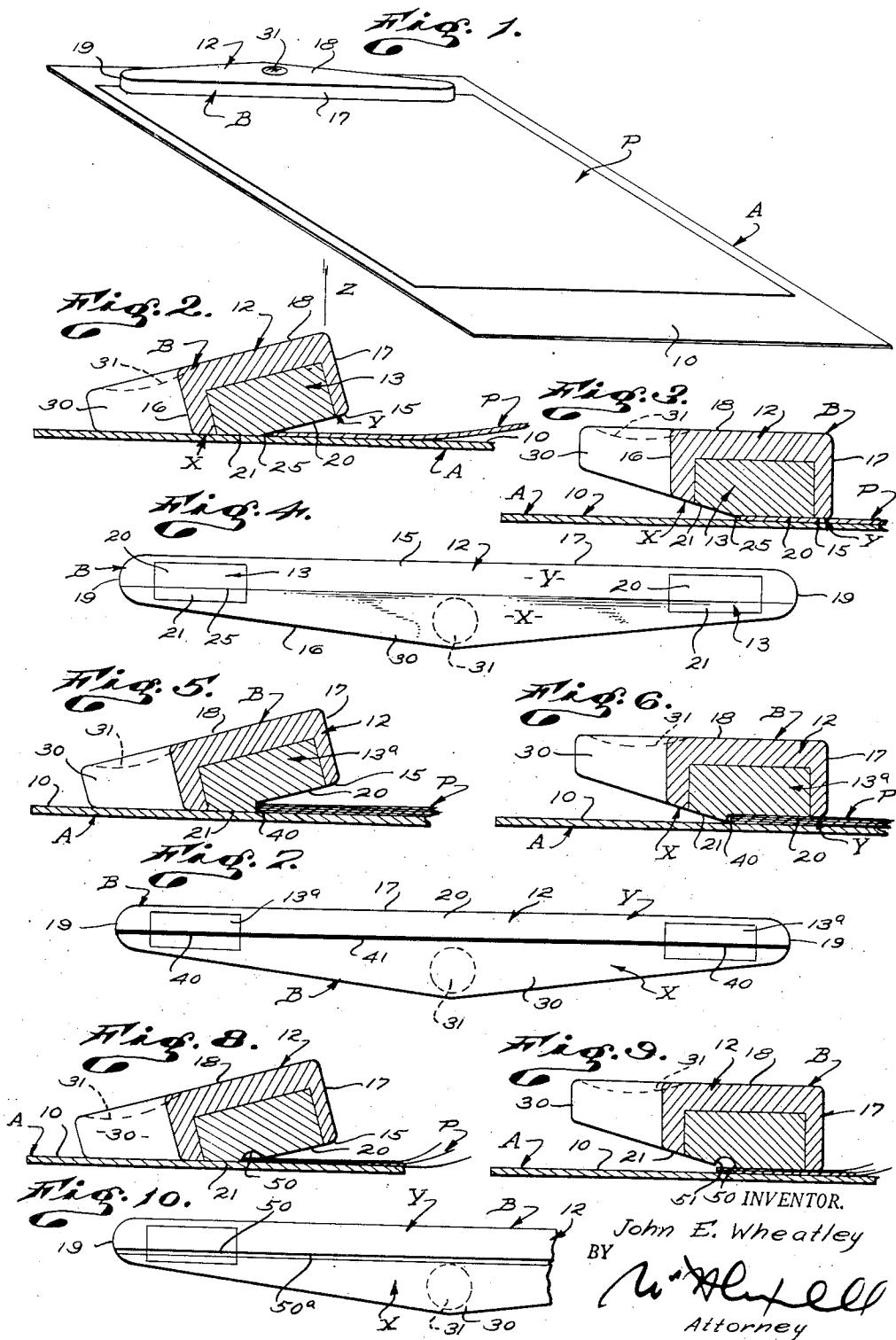
Nov. 2, 1954

J. E. WHEATLEY

2,693,370

HOLDER FOR PAPER OR THE LIKE

Filed Oct. 1, 1951



United States Patent Office

2,693,370

Patented Nov. 2, 1954

1

2,693,370

HOLDER FOR PAPER OR THE LIKE

John E. Wheatley, Cincinnati, Ohio

Application October 1, 1951, Serial No. 249,058

6 Claims. (Cl. 281—44)

This invention relates to a holder for paper, or the like, and it is a general object of the invention to provide a device or structure adapted to hold paper, or the like, and which is of simple, practical dependable construction and such that it can be used to advantage in many situations or under many and various conditions.

There are innumerable situations where a sheet of paper, or the like, or a group of such sheets, requires holding or anchoring, as for use during writing, or to be suspended on a wall, or the like. Various paper holders have been proposed and used and, in general, if such mechanisms are dependable and secure they are very complicated in construction, expensive of manufacture and somewhat difficult to operate. For example, where handicapped persons are required to handle paper, or the like, ordinary effective paper holders are troublesome, and sometimes exceedingly difficult to operate, and in many instances they are such as to require two hands for proper manipulation or operation.

It is a general object of this invention to provide a very simple, easily operated holder for paper, or the like, which device is such that it can be operated easily, and quickly, by the slight application of pressure at a convenient accessible exposed part. The present invention is such as to provide a structure that can be handled and manipulated easily and conveniently by one hand, making it a structure that can be used to advantage by handicapped persons or in situations where but one hand, or even a part of one hand, is available for use.

Another object of the invention is to provide a structure of the general character referred to which is wholly free of complicated or delicate mechanical parts such as hinges, fasteners, or other such mechanical elements.

Another object of the invention is to provide a paper holder characterized by a magnet and which is such that it can be used to advantage on or in connection with any base provided with a magnetic part at which the holder can be operated or employed.

It is a further object of the invention to provide a holder of the general character referred to which is of simple, unitary form and construction and which is wholly without undesirable projections or features that are difficult or expensive of manufacture.

Another object of the invention is to provide a holder of the general character referred to which is such that it will remain in either the working or the open position upon its being moved thereto, it being unnecessary to hold or retain any spring urged part or parts under any circumstances.

The device of the present invention involves, generally, a base on which a sheet or group of sheets of paper can be placed, and the base has at least a portion, as at the point where the paper is to be held, which is of magnetic material. In a simple form the entire base may be formed of soft iron or steel giving the base the desired character. The holder provided by the invention cooperates with the base and is characterized by a body preferably of non-magnetic material and a magnet carried by or incorporated with the body so that these parts form a unit. The body in the preferred form is elongate and has a bottom, front and rear sides, and a top. In the preferred form the holder involves two magnets, preferably like magnets, and the magnets are spaced apart longitudinally of the body to be at the end portions thereof, and to be incorporated in the body so that each has a polar end at and preferably exposed at the bottom of the body.

2

Each magnet has its lower end formed to have a rear or rest face approaching or adjoining the rear wall of the body and it has a clamp face approaching or adjoining the front wall of the body. The rest and clamp faces are in planes inclined relative to each other so that a reflex angle occurs between the faces at the bottom of the holder and, in practice, this angle is preferably about 195°. Furthermore, it is preferred that the clamp face be of substantially twice the extent of the rest face. In one form of the invention the clamp and rest faces may adjoin at an edge or ridge which forms a pivot about which the holder can be rocked, whereas in another form there may be a stop shoulder where the faces adjoin and in a further form there may be a recess or channel where the faces approach each other, one wall of the channel forming a stop.

In the preferred construction the bottom of the body has front and rear portions in the planes of the faces of the magnets and the body has a handle portion projecting therefrom, preferably at the rear edge portion of the body, to facilitate convenient operation of the body. The normal operation of the holder involves rocking of the holder on the base between a position where the rest face is parallel with and opposing the base and a position where the clamp face is parallel with and opposing the face.

The various objects and features of my invention will be fully understood from the following detailed description of typical preferred forms and applications of the invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a perspective view illustrating a typical embodiment and use of the invention, being a view showing a rectangular base, a sheet of paper or the like on the base, and a holder embodying the invention cooperating with the base holding the sheet of paper thereon. Fig. 2 is an enlarged detailed sectional view taken through the base, the holder and the paper, showing the holder in position with the rest faces of the magnets parallel with and adjoining the base, while the sheet of paper is introduced into the opening that occurs between the base and the clamp faces. Fig. 3 is a view similar to Fig. 2 showing the holder operated or rocked to a position where the clamp faces of the magnets overlie the edge portion of the paper in which position the holder is maintained by magnetic action, so that the paper is held between the holder and the base. Fig. 4 is a bottom elevation of a holder such as is illustrated in Figs. 1, 2 and 3. Fig. 5 is a view similar to Fig. 4 showing a slightly different form wherein the rest and clamp faces are joined by the stop shoulder. Fig. 6 is a view similar to Fig. 3, showing the form of structure shown in Fig. 5. Fig. 7 is a bottom elevation of the holder shown embodying the structure illustrated in Figs. 5 and 6. Fig. 8 is a view similar to Fig. 2 showing another form of construction wherein a channel or recess occurs in the magnet between the rest and clamp faces. Fig. 9 is a view similar to Fig. 3 showing the construction that is illustrated in Fig. 8, and Fig. 10 is a bottom elevation of a holder embodying the construction shown in Figs. 8 and 9.

In the structure shown in Figs. 1 to 4 of the drawings there is a base A, a sheet of paper P on the base, and a holder B is shown cooperating with the base to hold the paper P thereon.

The base A contemplated by the present invention preferably has or presents a paper receiving face or top 10 which, in practice, is preferably flat, and the base is provided in the area or region where the holder B operates with a portion or section which is of a magnetic material such as iron or steel. In the form of the invention shown in the drawings the base A as a whole is formed of a single unitary body or sheet of magnetic material, for instance, it may be a simple sheet of steel or soft iron.

The paper P shown in the drawings as being in simple sheet form may be any sheet of non-magnetic material subject to being held between the magnetic holder B and the base A, and when I employ the term "paper" or "sheet of paper" I mean to include any other sheet or element having characteristics that adapt it for use with the base and holder of the present invention.

The holder B provided by the invention may, in practice, vary widely in form and construction. However, in the preferred form it is a unitary element of simple form and construction, and in the case illustrated it is shown characterized by a body 12 and magnets 13.

The body 12 of the holder is shown as a simple, elongate body of non-magnetic material having a bottom 15, a rear side wall 16, a front side wall 17 and a top wall 18. The body is further provided with ends 19 which are shown rounded so that the structure is free of any undesirable protuberances. In accordance with the invention the body 12 is formed entirely of one continuous or integral body of non-magnetic material, and in practice it can be formed to advantage of any one of a number of so-called plastic compositions, since any material or composition of materials which is reasonably rigid, which presents a smooth surface, and which is non-magnetic in character, can be employed. In employing so-called plastic materials the body can be made, for instance molded, so that its various surfaces are smooth and pleasing to touch, its corners are all suitably rounded or finished; and it can be transparent or colored to meet varying tests or conditions.

In accordance with the broader aspects of the invention one or more magnets 13 can be employed in connection with the body 12 and in the case illustrated two magnets are employed and they are located or embedded in the end portions of the body A and they are alike. Each magnet 13 is preferably a simple block or body of magnetic material, and it is preferably held or embedded in the body 12 so that it has but one portion, namely its lower end which is one pole of the magnet, at the bottom of the body 12, and preferably exposed to the bottom of the body 12.

In accordance with the present invention the bottom or polar end of the magnet 13 exposed to the bottom of body 12 has a clamp face 20 and a rest face 21, and these faces are in planes angularly related to each other so that a reflex or obtuse angle is formed between them at the bottom of the holder. In the preferred construction the rest face 21 is at the rear portion of the holder 12 adjacent or close to the rear edge 16 of the holder, and it projects forward while the clamp face 20 is close to or adjacent the front edge 17 of the body and projects rearwardly. In the form of the invention under consideration the faces 20 and 21 join or come together at an edge 25 which forms a fulcrum or pivot about which the holder can be rocked, as it operates on or is operated in connection with the base A.

When I refer to the "polarized" or "polar" end of the magnet or magnets I mean to include one or more magnetic poles of the magnet or magnets. In some cases a magnet with two poles can be used with both poles at what I will term the polarized end of the magnet.

In accordance with the invention the exposed polar end of the magnet 13 with the faces 20 and 21 may be varied in size and shape. In a typical case such as is illustrated in the drawings the said end of the magnet may be rectangular in form and the faces 20 and 21 can be elongate and disposed to extend longitudinally of the body 12, as clearly shown in Fig. 4 of the drawings. In accordance with the invention the faces 20 and 21 vary in extent, it being preferred to form the clamp face 20 so that it is of about twice the extent of the rest face 21. In the case illustrated the faces 20 and 21 are co-extensive lengthwise of the body but in a direction transverse of the body, the clamp face being about twice the extent of the rest face 21. Further, in practice the angular relationship of the faces 20 and 21 may be varied and this relationship of the faces may, in practice, vary with the relative extent of the faces. In the case where the faces 20 and 21 are proportioned or related substantially as above described they can be arranged to advantage so that the reflex angle between the faces is about 195°, as shown in the drawings.

In the preferred form of the invention the bottom 15 of the body 12 is flush with the faces 20 and 21 of the magnets 13 and as shown in the drawings, the bottom of the body has a portion X flush with the clamp faces 20 and a portion Y flush with the rest faces 21.

It is contemplated by the invention that one or more handle-like parts or projections can be provided on or in connection with the body 12 to facilitate its operation or rocking, as shown in Figs. 2 and 3 of the drawings. In the particular holder illustrated in the draw-

ings a single handle portion 30 can be employed to advantage and this handle portion is shown as a projection or extension at the rear edge of the body with a bottom flush with the bottom portion Y of the body and 5 with a top having a recess 31 therein that can be readily engaged by a person's finger or an implement, when it is desired to depress the handle portion from the position shown in Fig. 3 to that shown in Fig. 1. To 10 rock the holder from the position shown in Fig. 2 to that shown in Fig. 3 it is merely necessary to provide slight pressure on the upwardly projecting corner occurring between the top 18 and front 17 of the body in the direction indicated by the arrow Z in Fig. 2. The clamp faces 20 of the magnets being of substantially 15 greater extent than the rest faces 21 slight overbalancing or movement of the holder from the position shown in Fig. 2 toward that shown in Fig. 3 results in the magnetic attraction between the clamp faces and the base prevailing as against the attraction between 20 the rest faces 21 and the base, with the result that the holder snaps to the position shown in Fig. 3 and there effectively holds the paper or papers P, as shown in Figs. 1 and 3. To release the holder the magnetic attraction between the clamp faces and the 25 base must be overcome and it is to gain this operation that the leverage of the handle projection 30 is desirable.

In Figs. 5, 6 and 7 of the drawings a structure is shown somewhat different in form than that above described, 30 in that a stop shoulder 40 is provided at the lower or polarized end of each magnet 13a between the clamp and rest faces 20 and 21. The stop shoulder presents a part against which the sheet of paper P can be stopped accurately, as illustrated in Fig. 5. It is to be understood that when a stop shoulder 40 is employed 35 a corresponding shoulder 41 aligned with the shoulder 40 can be provided at the bottom of the body 12 connecting the portions X and Y of the bottom 15. In the form of the invention illustrated in Figs. 8, 9 and 40 10 a somewhat different construction is illustrated. In this case a recess 50 in the form of a groove or channel occurs at the bottom of each of the magnets between the clamp faces 20 and 21 of the magnet. In this case the side wall 51 of such recess forms a stop for 45 the paper or papers, as illustrated in Fig. 8. Further, in this case a continuation 50a of the recess 50 can be provided in the bottom 15 of the body 12.

From the foregoing description it will be apparent 50 that the invention provides or requires but two very simple, inexpensive, easily operated parts, namely, the simple base A and the holder B. The holder B cooperating with the base can be very easily operated or rocked between a paper receiving position and a paper holding position. The operation of the holder requires mere downward pressure either on the handle projection 30 or on the corner between the top 18 and the front wall 17. When the holder is in the receiving 55 position illustrated in Figs. 2 and 8, one or more sheets of paper or the like can be readily inserted beneath the clamp faces of the magnets and slight pressure in the direction indicated by the arrow Z will cause the holder to rock to the clamping position shown in Figs. 3, 6 and 9, and in that position the holder is effective in maintaining the paper tight against the base 60 and in practice will hold the paper so that it can be used or maintained in that position on the base, as circumstances may require.

Having described only typical preferred forms and applications of my invention, I do not wish to be limited 70 or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the following claims.

Having described my invention, I claim:

75 1. A wholly unrestrained unitary paper holder adapted to be used on a base of magnetic material and including, a body of non-magnetic material having a bottom, and a magnet carried by the body with a polarized end at the bottom of the body, the said end of the magnet 80 having a clamp face and a rest face in obtuse angular relationship, said body and magnet being rockable into engagement with the paper.

2. In combination a base of magnetic material with a substantially flat top face, a body of non-magnetic material with a bottom opposed to the face of the

base, and a magnet carried by the body with a polarized end at the bottom of the body, the said end of the magnet having a substantially flat clamp face and a substantially flat rest face in obtuse angular relationship, the clamp face being of greater extent than the rest face, the angular relationship between the faces being substantially 195°.

3. A freely portable unitary paper holder adapted to be used on a base of magnetic material and including, a body of non-magnetic material with a bottom, and a magnet carried by the body with a polarized end at the bottom of the body, the said end of the magnet having a clamp face and a rest face in obtuse angular relationship, the clamp face being of greater extent than the rest face, the body having a projecting handle portion adapted to be manually engaged to effect rocking of the holder relative to the base.

4. A free unitary paper holder applicable to a base of magnetic material and including, a body of non-magnetic material with a bottom, and a magnet carried by the body with a polarized end at the bottom of the body, the said end of the magnet having a clamp face and a rest face in obtuse angular relationship, there being an elongate stop shoulder at said end of the magnet joining the said faces, said body and magnet being adapted to rock at the shoulder into engagement with the paper.

5. In combination a base of magnetic material with a substantially flat top face, a body of non-magnetic material with a bottom opposing the face of the base, and a magnet carried by the body with a polarized end

at the bottom of the body, the said end of the magnet having a clamp face and a rest face in obtuse angular relationship, there being an elongate recess in said end of the magnet between said faces, said body and magnet being adapted to rock at the recess into and out of engagement with the paper.

6. An unrestrained unitary paper holder applicable to a base of magnetic material and including, an elongate body of non-magnetic material with a bottom, and a pair of magnets carried by the body, the magnets being spaced apart lengthwise of the body and each having a polarized end at the bottom of the body, the said ends of the magnets each having a clamp face and a rest face in obtuse angular relationship, the clamp faces being of greater extent than the rest faces transversely of the body, the clamp faces of the magnets being adjacent one longitudinal edge of the body and the rest faces of the magnets being adjacent the opposite longitudinal edge of the body.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,236,234	Troje -----	Aug. 7, 1917
2,177,905	McKeehan -----	Oct. 31, 1939
2,474,036	Curley -----	June 21, 1949
2,503,043	Gruen -----	Apr. 4, 1950
2,503,061	Moholy-Nagy -----	Apr. 4, 1950