Aug. 20, 1940. I. J. PIKEN 2,212,326

MAGNETICALLY HELD CURTAIN

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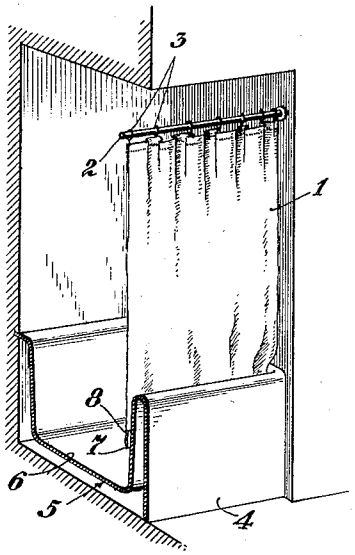


Fig. 1

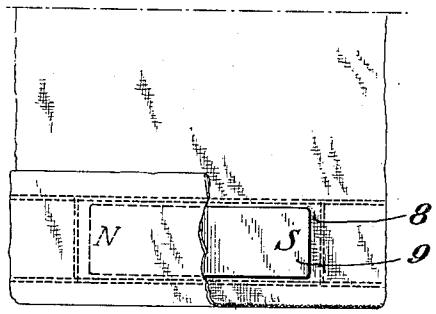


Fig. 2

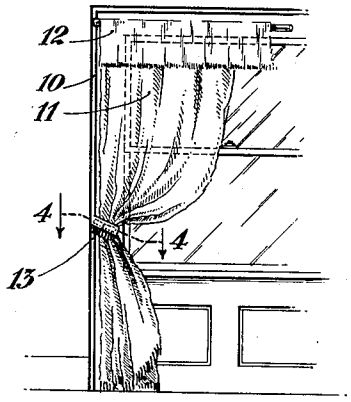


Fig. 3

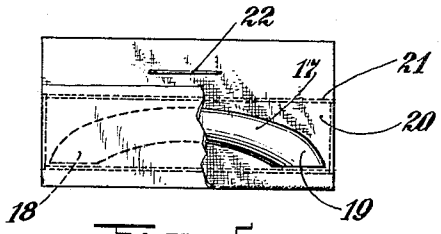


Fig. 5

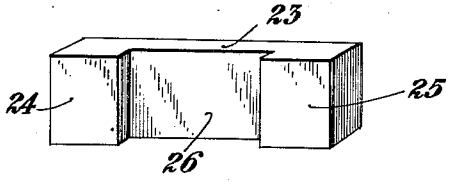


Fig. 6

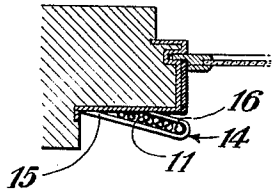


Fig. 4

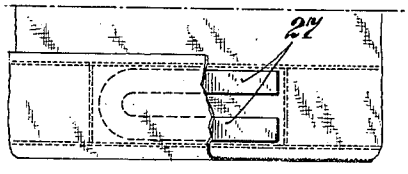


Fig. 7

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MAGNETICALLY HELD CURTAIN

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3 Claims. (Cl. 4—149)

This invention is directed to curtains, such as shower curtains, draperies, and the like, and more particularly to means for holding the free edges thereof in position so that disturbances such as drafts or the like are ineffective in moving said curtains and the like.

It has been proposed heretofore to hold the lower edges of curtains and the like from swaying by inserting in the hem thereof a series of weights, which were intended to prevent undesirable movement thereof. However, unless such weights were of comparatively large size, it was almost impossible under many conditions to prevent the swaying of the curtain. If the weights were sufficiently heavy, then there was danger of tearing of the curtain. Another method previously proposed consisted in providing suction cups of soft rubber or the like, which were secured to the curtain and were intended to contact with a bathtub, for example, and by the vacuum produced to hold the curtain in place. However, this also was ineffective for a number of reasons, in that such cups were subject to deterioration, the vacuum produced thereby could be readily broken, it was difficult to firmly press the cups into holding contact with the bathtub, and the entrance of water into the cup would tend to prevent the formation of the necessary vacuum. Other means have also been proposed such as clips for holding the curtain to the object. However, such clips were undesirable, in that they constituted separate members which were apt to be lost, they were unwieldy, and were not at all effective in holding the curtain.

The present invention is intended and adapted to overcome the disadvantages of the prior art and to provide a means for holding various types of curtains in place, particularly shower curtains associated with a bathtub, or shower stall.

In practicing the present invention, I first provide a shower curtain, or the like, as usual, which is suspended from above, usually by means of hooks or the like passing over a rail, and the lower end of said curtain is free. At the lower portion, which might be at the lower edge of the curtain or at an intermediate portion, I may provide a plurality of pieces of magnetized material, or, in other words, I introduce into the curtain one or more magnets. If a shower curtain is to be so provided, the position of the magnets is such as to be in proximity to a bathtub of ferrous metal. Even though the magnetized material may be encased in fabric, such as the hem of the curtain, and the bathtub or the like may be provided with enamel, paint, or other surface coating, the magnetized material is effective, in that the magnetic flux emanating from the magnets will penetrate through such material and the magnets will be attracted to the ferrous metal. I have experimented with various forms of magnets and have found that many different types are suitable. Also, the number of magnets, the exact positions in which they are placed, may be varied with good results. While permanent magnets are preferably used, it is, of course, possible to use other types of magnets, as for example, magnetic coils and the like. The magnets may be individually sewed into pockets which are attached to the curtains, or they may be woven into fabric tubing which may be later attached to the curtain, or the bare magnets may be secured to or in said curtain.

In the accompanying drawing, constituting a part hereof, and in which like reference characters indicate like parts:

Fig. 1 is a fragmentary view of a curtain made in accordance with the present invention and associated with a bathtub;

Fig. 2 is an enlarged fragmentary view of the hem of a curtain showing a magnet in place therein;

Fig. 3 is a partial view of a window showing a curtain in place and embodying the present invention;

Fig. 4 is a detail view of the tie-back made of magnetic material;

Fig. 5 illustrates a different form of magnet associated with an individual pocket; and

Figs. 6 and 7 are views showing still other forms of magnetic material capable of use with the present invention.

The curtain 1, which may be of any type of material, is secured to a bar 2 by means of hooks 3 passing through the upper edge of the curtain. A bathtub 4 or the like has its body portion 5 composed principally of ferrous material and having a thin lining or glaze 6 of enamel or the like. The lower edge 7 of the curtain 1 hangs within the bathtub and is provided with a hem 8. Within the hem are inserted one or more magnets 9 which are plain, rectangular bars having an approximately square cross-section.

In operation, the hem of the curtain is placed in proximity to the bathtub whereby because of the magnetic field produced by the magnet 9, the same is attracted to the side of the bathtub and is held in place. As a result, the curtain is also firmly held in position. The strength and character of the magnets and the number and distribution thereof are such as to hold sub-

stantially the entire edge of the curtain in the desired position. When the shower is turned on, even though the force of the flowing water is considerable, the magnetic flux is sufficient to hold the curtain in position. This effectively prevents the shocks which the person taking a shower normally would experience in the movement of the curtain due to the force of the water and the breezes generated thereby, and avoid the contact of the curtain with various parts of the body.

In Fig. 3 there is shown the application of the present invention to a window curtain. There is provided a window frame 10 of ferrous metal and a curtain 11 is hung, as usual, at its upper edge from a pole 12. At the lower portion of the curtain there is provided a tie-back 13 of magnetic material. As shown in Fig. 4, it may consist of an arcuate portion 14 which surrounds the curtain 11 and two legs 15 and 16 constituting the poles of the magnet. As shown, pole 16 is longer than pole 15 whereby the curtain may be held at a slight angle while the poles make direct contact with the window frame. It has been found that this device is effective to prevent swaying of the curtain, even though there may be a breeze of considerable velocity entering the window. A tie-back of this construction has an additional advantage in that it may, without any change in the curtain or connections, be shifted into various positions, or entirely removed if desired.

In Fig. 5 there is illustrated a magnet 17 of circular cross-section, having the poles 18 and 19 in alignment. It is encased in a cover or bag 20 which is sewed along the top edge 21, providing a margin in which a clip 22 or other means may be provided for fastening the same at the lower edge, or even below the lower edge of a curtain.

Other forms of magnets may be used, as for example, that shown in Fig. 6, which consists of a bar 23 of rectangular cross-section having poles 24 and 25 formed therein by the removal of material at point 26. In Fig. 7 there is shown the ordinary horse shoe magnet 27, such as is well known.

From the above it will be seen that my invention comprises the idea of using magnetic material for holding curtains in desired positions where such curtains are associated with ferrous metals or the like. Although I have described several embodiments of my invention, it is apparent that many changes in the details thereof are possible within the scope of the invention. For instance, the magnets may be placed in various positions above the lower edge of the curtain, at the lower edge, and may even be suspended below the same. They may be placed within the curtain or the like, or upon, at or near the bottom, sides or center of the curtain or in any other desirable position depending upon the conditions involved.

The magnets may be spaced in various manners, and the sizes, shapes and alignments thereof may be varied to suit the conditions. In addition to the forms described above, I may use tubular, circular, elliptical, arcuate, triangular, square or other shapes of magnets.

The magnets may be attached to the curtains at the time of manufacture or after the curtains have been installed. The magnets or magnetic materials may be placed within pockets or provided with covers or placed in containers of various types of materials, or they may be provided with surface coatings of paint, enamel and, if desired, they may be rust-proofed. The magnets may be permanently attached to the curtains or removably secured thereto, and provision may be made for shifting the magnets or attaching them at different points in the curtain. The magnets may be more or less continuously placed along the entire edge of the curtain, or at a few suitably spaced intervals. The magnets may be linked in the form of a chain or the like, with alternate components of non-magnetic, metallic, or non-metallic materials. They may be formed in any desired manner, as by casting, punching, rolling, cutting, grinding, molding, or the like.

Various magnetized materials are suitable for the purpose, as, for example, the ordinary high carbon steels and various alloy steels, such as those containing cobalt, tungsten, chromium, or the like. Also suitable for the present purposes are the aluminum nickel alloys and also such alloys modified by other metals, as for instance, cobalt, iron, or the like. Other compositions of magnets may be used in place of those set forth above. And compositions which are only partly magnetic may be used. It is even possible to use electro-magnets, with or without cores, and such cores may be of magnetic materials, although in most cases the use of electrical conductors is undesirable.

The curtains may be of any desired type, and in shower curtains the straight line curtain shown in Fig. 1 is not at all essential, as various other forms, as, for example, the ordinary circular type of curtain, may be similarly provided with magnetic material. It is not necessary to provide a bathtub or window frame of ferrous metal, but in many instances it will be possible to provide a fixed member of ferrous material, as an iron bar or an iron plate inserted into a wall to provide the desired cooperation with the magnets.

The magnets need not be attached to the curtain, but may be secured to a bathtub, stall, window, door, or the like, and be made part thereof. To supplement the action in such case, the curtain is provided with material which will be attracted and held by such magnets. The contact of the magnet with the ferrous material may be along the top, sides, bottom, or end of the bathtub, and may, in fact, be made in any desired position. The curtain may be provided with stiffening material or ribs in the neighborhood of the magnets or other material in order to increase the area of effectiveness of the magnetic material. I may provide material which has not been magnetized and attach the same to the curtain or to the fixed member cooperating therewith and the same be magnetized in position. Or, I may provide material which at the time of manufacture is not magnetized but may be caused to become magnetized at a later stage.

While I have described several uses for the present invention, it is adapted for other uses in addition to windows and doors, as, for example, draperies, sheets and similar articles may be held by the present invention in suitable enclosures, compartments, closets or the like, all as will be apparent from the above specification.

From the above it will be noted that my invention is broad and that numerous variations in many respects are possible within the spirit and scope thereof. Therefore, the present invention is to be broadly construed and not to be limited except by the character of the claims appended hereto.

What I claim is:

1. In combination a shower curtain, means for suspending the same from an upper support, the

lower portion thereof being free, a bathtub of ferrous metal and having a non-metallic enamel surface, said curtain hanging in the same, and a series of permanent magnets at said portion spaced a substantial distance apart, whereby said magnetized material may be attracted to said ferrous metal through said enamel surface to hold said curtain in a desired position and a closed magnetic circuit is formed through the magnet, enamel and metal.

2. In combination a shower curtain, means for suspending the same from an upper support, the lower portion thereof being free, a bathtub of ferrous metal and having a non-metallic enamel surface, said curtain hanging in the same, and permanent magnetized material at said portion, said magnetized material having a pair of opposite poles projecting in the direction of and in proximity to said ferrous metal, whereby said magnetized material may be attracted to said ferrous metal through said enamel surface to hold said curtain in a desired position and a closed magnetic circuit is formed through the magnet, enamel and metal.

3. In combination a shower curtain, means for suspending the same from an upper support, the lower portion thereof being free, a bathtub of ferrous metal and having a non-metallic enamel surface, said curtain hanging in the same, and permanent magnetized material at said portion, said magnetized material being encased in textile material and having poles in proximity to said ferrous metal, whereby said magnetized material may be attracted to said ferrous metal through said enamel surface to hold said curtain in a desired position and a closed magnetic circuit is formed through the magnet, enamel and metal.

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