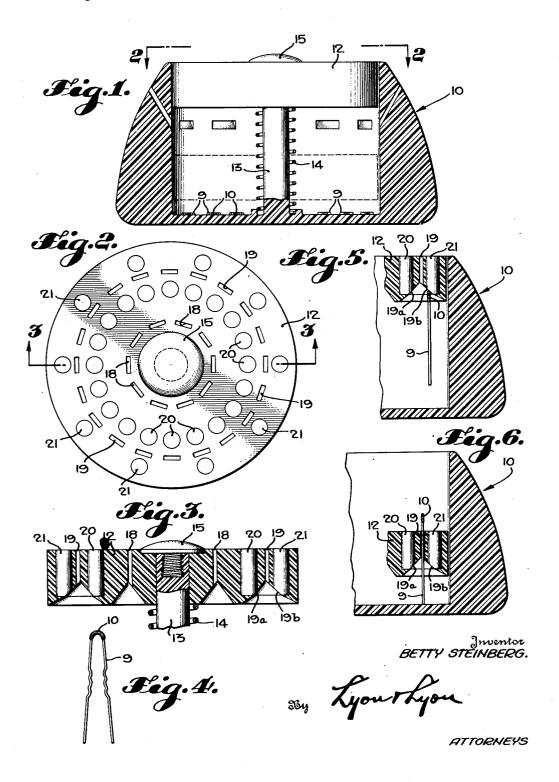
HAIRPIN DISPENSER

Filed Aug. 2, 1948

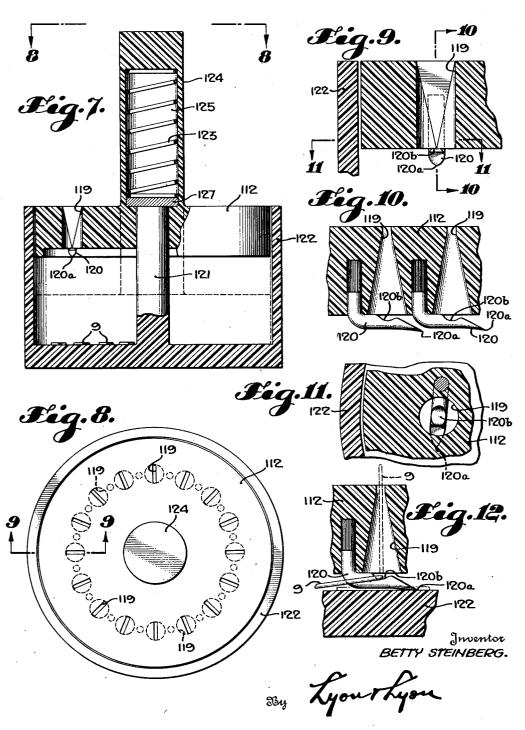
2 Sheets-Sheet 1



HAIRPIN DISPENSER

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ATTORNEYS

## UNITED STATES PATENT **OFFICE**

2,544,114

## HAIRPIN DISPENSER

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8 Claims. (Cl. 312-35)

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The present invention relates to a dispenser for hairpins, bobby pins, paper clips, and the like from a pile in which such members are randomly disposed, and has particular applicability to dispensing hairpins and bobby pins.

It is desirable that hairpins, bobby pins, and the like be maintained in a predetermined position, being a readily accessible one, and of such nature that there is little likelihood that the appearance of a woman's dressing table might be 10 ment of the hairpin attached thereto; impaired in day-to-day use of such articles, and such that the necessity of searching for such "lost" pins is greatly reduced.

It is therefore an object of the present invenby the aforesaid desirable results may be ob-

Another object of the present invention is to provide an ornament useful for both decorating a dressing table and for holding and storing members, such as pins in the hollow base thereof.

Another object of the present invention is to provide a hairpin dispenser useful either in the home or in beauty parlors arranged to dispense in orderly manner, hairpins, bobby pins, and the 25 hook a hairpin. like disposed in random fashion in a container.

While I appreciate the fact that many different mechanisms have been suggested for holding, storing and dispensing hairpins, bobby pins, and the like, some of which employ magnetic means. 30 none of such prior art arrangements function or are capable of functioning to dispense in orderly fashion, hairpins disposed in random fashion.

Still another object of the present invention is therefore to provide a dispenser arranged to dis- 35 pense in orderly fashion, hairpins, bobby pins, and the like disposed in random fashion.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. This invention itself, both as to its organization and manner of operation, together with further objects and advantages thereof, may be best understood by reference to the following description taken in connection with the accompanying drawings 45 in which:

Figure 1 is a cross-sectional view of a combined hairpin storage chamber and dispenser embodying the present invention.

Figure 2 is a top plan view of the lid of the 50 same, taken in the direction indicated by the arrows 2—2 in Figure 1.

Figure 3 is a sectional view taken substantially on the line 3-3 of Figure 2.

Figure 4 is a view in elevation of a hairpin of 55 14 for biasing it in operative position.

the type dispensed by the arrangement shown in Figure 1.

Figure 5 is a view similar to the view shown in Figure 3, showing the manner in which a hairpin is held thereon in position for subsequent dispensing after the upper lid member is moved downwardly to its position shown in Figure 6;

Figure 6 shows the lid member of Figure 5 in a different operating position for relative move-

Figure 7 is a cross-sectional view through a modified pin storing chamber and dispenser embodying the present invention;

Figure 8 is a top plan view of the same taken in tion to provide an improved arrangement where- 15 the direction indicated by the arrows 8-8 in Figure 7:

> Figure 9 is a sectional view of the upper movable lid member taken substantially on the line 9-9 of Figure 8;

> Figures 10 and 11, respectively, are sectional views taken on corresponding lines 19-19 and | | - | | in Figure 9; and

> Figure 12 shows the lid member of Figure 10 rotated to a position wherein it is effective to

The arrangement shown in Figures 1, 2, 3, 5, and 6 is effective to dispense hairpins of the type shown in Figure 4 having only the portion at the U-bend 19 magnetizable, whereas, the arrangement as shown in Figures 7 through 12 does not depend on magnetism for its operation and function. Referring specifically to the first arrangement shown in Figures 1, 2, 5, and 6, the device is in the form of a hollow container or chamber in the interior of which are disposed the randomly disposed hairpins 9 of the type shown in Figure 4 having only the U-bend 10 magnetizable. These hairpins 9 may be of the type shown and described in the Hovious et al. Patent No. 2,083,845.

The device incorporates a circular lid or closure member 12 which is slidably mounted on the central guide post 13 and which is normally maintained in its position shown in Figure 1 by the coil supporting spring 14 encircling the post 13 which biases the lid member 12 upwardly against the screw-threaded cap member 15 on the upper end of the post 13, the cap member 15 serving as a stop member which may also be completely removed from its post 13 to allow removal of the lid 12 to gain access to the interior of the device 10. The structure of the lid or closure member 12 is of importance and forms an important feature of the present invention taken alone or in combination with the spring means 3

The spring biased lid or closure member 12 is circular and has a plurality of rectangular series of apertures 18 and 19 disposed at corresponding equal radial distances from its center. These series of openings 18 and 19 are arranged to allow passage therethrough of the hairpins 9, but to simultaneously cause the legs of the hairpin 9 to move closer together so that the legs of the hairpin resiliently press the shorter opposite walls of the openings 18 and 19 to thereby self maintain themselves in position wherein only their upper ends project through such openings 18 and 19 for convenient grasping when it is desired to use the same.

Each one of the openings 18, 19, of course, is 15 arranged to so receive and to hold a single hairnin

As shown in Figures 2 and 3, there is mounted on opposite sides of some of the apertures 19 a pair of permanent Alnico cylindrical magnets 20, 21, the other apertures 19 being adjacent magnets 20, the magnetism of which permeates not only the region adjacent such other apertures 19 but also the region adjacent apertures 18 as well. The particular disposition of these magnets 20, 21 with respect to the corresponding openings 18, 19 is of importance as well as the cam surfaces 19A, 19B forming the mouth to such openings.

For the purposes of simplicity the openings 19 and associated magnets 20, 21 are described in 30 detail, it being understood that the identical structure is associated with and includes the other series of rectangular openings 18.

As indicated, the cam surfaces 19A, 19B define a mouth to the openings 19. These cam surfaces 35 19A, 19B are preferably contiguous chamfered surfaces on the magnets 20, 21 to increase their effectiveness, the magnets 20, 21 having like poles opposite.

In operation of the device shown in Figure 1 40 the closure member 12 is pressed down twice. The first time the closure member 12 is pressed down the magnets 20, 21 are moved adjacent to randomly disposed magnetizable hairpins 9 disposed in the well of the container to attract them and to hold them in contact with a cam surface 19A or 19B, as the case may be. The closure member 12 is then allowed to move upwardly under the influence of spring 14 to assume the position shown in Figure 5. The closure member 12 is then moved downwardly a second time to assume the position shown in Figure 6, and in its movement from its position shown in Figure 5 to its position shown in Figure 6 the lower end of the hairpin 9 abuts against the lower surface of the well to force the hairpin up through the rectangular opening 19. As explained previously, these openings 19 are of predetermined size so that the legs of the hairpin resiliently press the sides of the apertures to maintain the hairpin thereon with its upper end projecting upwardly therefrom in a position for convenient use. The hairpins thus projecting outwardly from the cover member 12 may be used as needed, and when additional hairpins are required the closure 65 member 12 is then moved downwardly twice in suction to again cause the hairpins to assume the positions in the cover member indicated in Figure 6.

While I have utilized magnetic means in the 70 modified arrangement shown in Figures 1 through 6, the same result may be achieved by clearly mechanical structural means as shown in the modified arrangement in Figures 7 through 12.

In Figure 7 the closure member 112 is provided with a series of tapered apertures 119 therethrough at the mouth of which is disposed a hook member 120 attached to and projecting from the bottom of the closure member 112. The closure member 112 is movable vertically on the cylindrical guide rod 121 centrally located in the stationary hairpin container 122. The closure member 112 is normally biased to its position shown in Figure 7 by the coil compression spring 123 disposed within a hollow cylindrical portion 125 of the handle member 124 which is integrally formed with the cover member 112. The spring 123 has its upper end pressed against the handle member 124, and the lower end of the spring 123 is pressed against the spring seat 127 which rests

against the central stationary post 121.

It is apparent that the structure is such that the handle member 124 may not only be moved downwardly to move the integrally formed cover member 112 downwardly but also may be rotated to carry out the operation described hereinbelow.

It is noted that each one of the hook members 120 is disposed very close to the mouth of the tapered apertures 119, terminates in a point 120A, and has a re-entrant portion 120B serving as a saddle for a hairpin.

In operation of the device shown in Figure 7 the cover member 112 is initially moved downwardly to bring the hook members 120 in a position where they engage randomly disposed hairpins stored within the well of the container 122. Simultaneously, or shortly thereafter, the cover member 112 is rotated with the hooks at such lowered position so that these hooks 120 may hook a hairpin as indicated in Figure 12. Thereafter, after the hairpins are thus hooked, the cover member 112 is allowed to move upwardly under the influence of spring 123 to its uppermost position, allowing the hairpins to hang vertically on the hooks 120 in their saddles 120B. Thereafter, the cover member 112 is again moved downwardly to press the lower ends of the hairpins against the bottom surface of the well of the container 122 to press such hairpins upwardly into their apertures 119 through which they project. The apertures 119 are of predetermined size with respect to the distance between the legs of the hairpin so that the legs resiliently press against the sides of such grooves 119 to self-support themselves with the upper ends of the hairpins projecting from the cover 112 for convenient use.

Preferably, the closure member 112 is made of transparent plastic material to allow vision therethrough and to observe the position of the hooks 120 and whether they hook hairpins as they are rotated in the operation described hereinabove.

While I have described my dispenser shown in Figure 7 in connection with hairpins, it is readily apparent that other articles may be dispensed by this same operation described above. Such other articles may be bobby pins, paper clips, and the like.

While the particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that 70 changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of 75 this invention.

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I claim:

1. A dispenser for magnetizable articles, the subcombination comprising a container having a movable cover member, said movable cover member having a plurality of apertures therethrough and magnetic means mounted on said cover member adjacent to said apertures to permeate said apertures with magnetism to thereby maintain said magnetizable objects against the walls of said apertures, said apertures each having a 10 cross-sectional area slightly larger than the cross-sectional area of said articles to assure single file movement of said articles therethrough upon relative movement of said articles and said cover member.

2. A dispenser comprising a container having a movable cover member, said cover member having a plurality of apertures therethrough, magnetic means on said cover member disposed adjacent to said apertures, said cover member hav- 20 ing a cam surface forming a mouth for each one of said apertures, said cam surface being disposed in proximity to said magnetic means and under the magnetic influence of said magnetic means, and said magnetic means being of suffi- 25 cient strength that articles may be supported thereby in engagement with said cam surface.

3. A dispenser comprising a cover member, said cover member having a plurality of apertures therethrough, each one of said apertures 30 having a tapered mouth portion, and magnetic means mounted on said cover member adjacent said tapered mouth portion to permeate the same with magnetism to support articles magnetically attracted thereby in engagement with said mouth 35

portion.

4. A hairpin dispenser comprising a movable cover member having a plurality of apertures therethrough of such size that a hairpin may be self-supported in said apertures by the legs 40 of a hairpin resiliently pressing against the walls of said apertures, and magnetic means mounted on said cover member adjacent to the mouth of said apertures to permeate said mouth with magnetism to support hairpins magnetically at- 45 tracted thereby against the wall of said mouth.

5. A hairpin dispenser comprising a container

having a movable cover member, at least one aperture in said cover member, said aperture having a mouth portion, and means mounted on said cover member below said mouth portion at and cooperating only with the U-bend in the hairpin for holding said U-bend below said mouth

portion.

6. A container with a well for storing randomly disposed U-shaped members to be dispensed, a vertically movable cover member movable initially from an upper position to a lower position adjacent said randomly disposed members, means mounted on the bottom of said cover member arranged to cooperate with the U-bend in said members to support in suspended position said members, said cover member having a plurality of apertures therethrough disposed adjacent said means, said apertures having a mouth portion adjacent said supporting means into which said members may be pressed upon subsequent downward movement of said cover mem-

7. A hairpin dispenser comprising a container having a movable cover member, at least one aperture in said cover member, and a hook mounted on said cover member below the mouth of said aperture adapted to engage and to hold said hairpin at its U-bend.

8. A hairpin dispenser comprising a container having a vertically movable and rotatable cover member, at least one aperture in said cover member, and a hook shaped member extending below the mouth of said opening adapted to engage and to hold a hairpin at its U-bend.

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