Dec. 24, 1940. J. D. SPRECKELS 2,226,351

HAIRPIN MAGAZINE FOR HAIR CURLERS

Filed Oct. 24, 1938 2 Sheets-Sheet 1

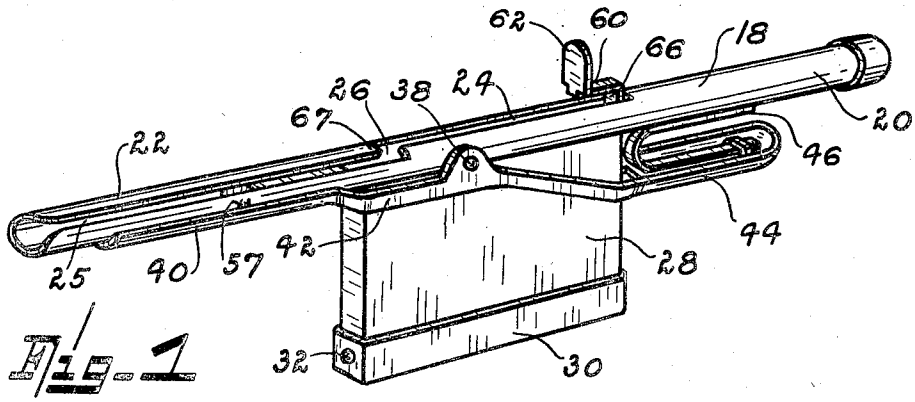


Fig. 1

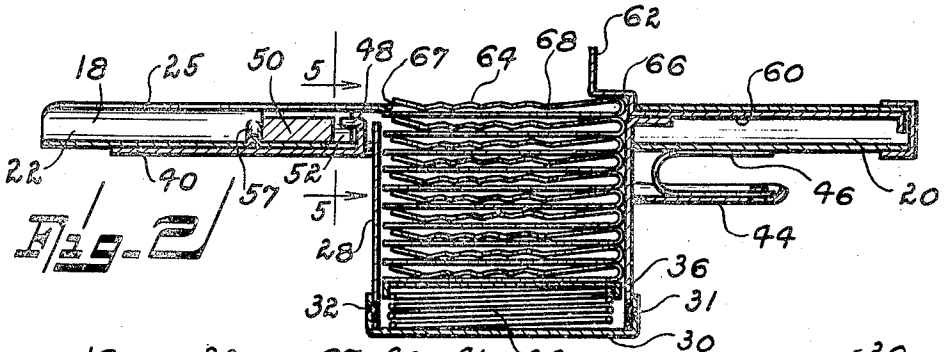


Fig. 2

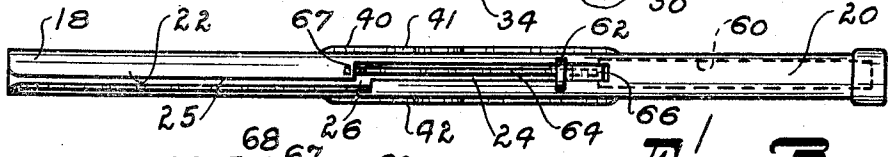


Fig. 3

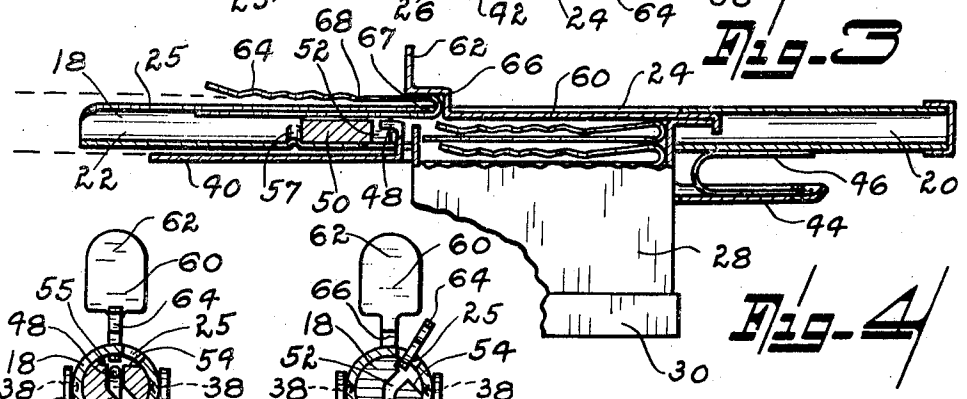


Fig. 4

Fig. 5

Fig. 6

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Fig. 7

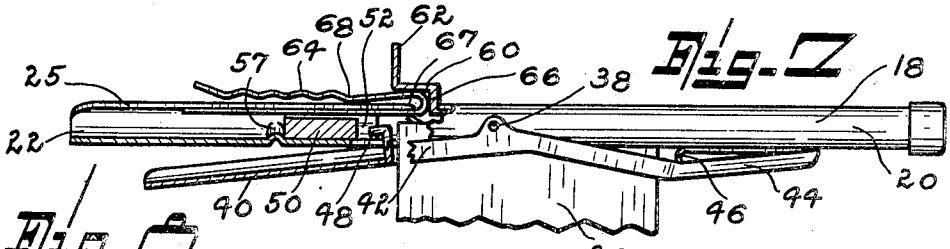


Fig. 8

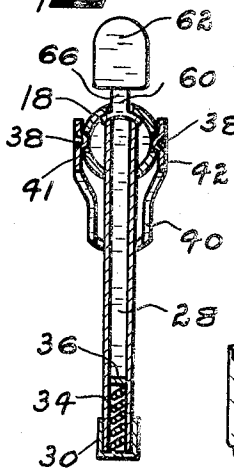


Fig. 9

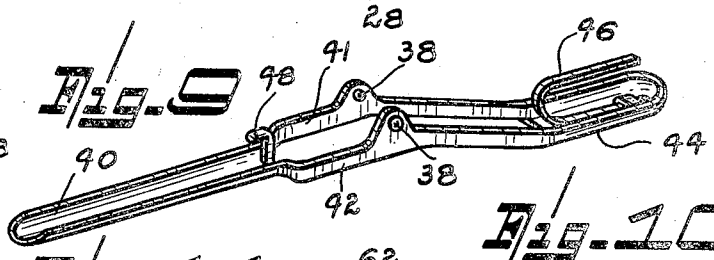


Fig. 10

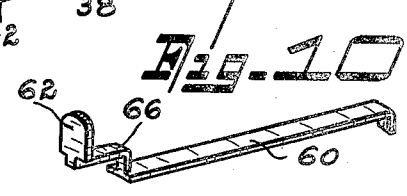


Fig. 11

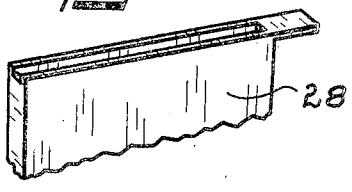


Fig. 12

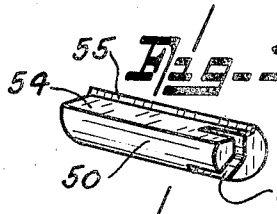


Fig. 13

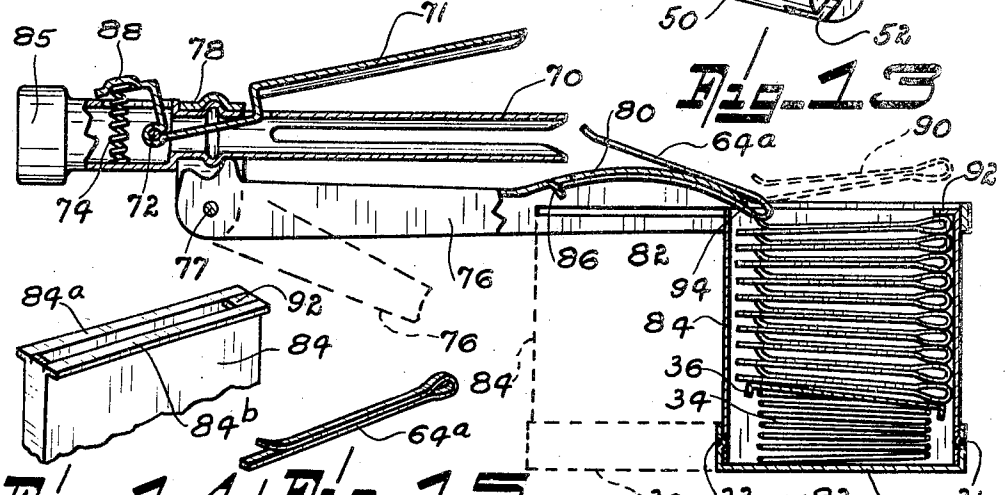


Fig. 14

Fig. 15

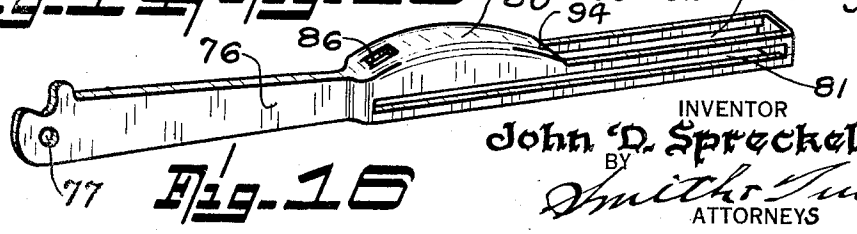


Fig. 16

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UNITED STATES PATENT OFFICE

2,226,351

HAIRPIN MAGAZINE FOR HAIR CURLERS

John D. Spreckels, Seattle, Wash.

Application October 24, 1938, Serial No. 236,757

6 Claims. (Cl. 132—33)

My present invention relates to the art of hair curlers of the type that are employed to make bob curls in the hair and to position the spring type hair pins known as "bobby pins" so as to assure their proper placement and, more particularly, my invention relates to a hairpin magazine for hair curlers. The present styles which call for the setting of a large number of small curls in an average hair dressing has prompted the creation of many styles of hair curlers which are provided with means for accurately positioning the bobby pins which are then left on the curls. Normally, the curling is accomplished by moistening the hair either with water or a waving solution and then holding the hair in the curled position, by means of the bobby pins, for reasonably long periods until the curl has been definitely set. Inasmuch, however, as the average hair dressing requires a large number of such curls, the positioning of the bobby pin in the curling device, one for each curl, requires a good deal of time and the placement of the pins is rather difficult to accomplish due to the unusual strength of the spring stock used in manufacturing such pins to make them effective.

The principal object of my present invention is, therefore, to provide a magazine arrangement, that may be likened to the cartridge feeding magazine of a gun, which will normally hold the number of pins that will be used in a single hair dressing and will feed these accurately into position where they, in turn, can be applied one to each curl after it is formed on the curling device.

In the accompanying drawings I have illustrated two forms of adapting my hair pin magazine to the conventional type of curlers.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings, wherein

Figure 1 illustrates in a perspective view my hairpin magazine as applied to one type of hair curler in which the bobby pin is moved over the curl while it is still on the curling device.

Figure 2 is a longitudinal, sectional elevation of the curler shown in Figure 1.

Figure 3 is a top view of the same.

Figure 4 is a view similar to Figure 2 with a part of the magazine being broken away and showing the device in the final stage of forcing the bobby pin over a curl of hair.

Figure 5 is a cross-sectional view taken along the line 5—5 of Figure 2.

Figure 6 is a view similar to Figure 5 but showing the bobby pin revolved to its discharge position as occurs when the curling clamp member is opened.

Figure 7 is a view in elevation with part of the magazine broken away and partly shown in section, showing the last operation just before the hair pin and hair curl is stripped from the curler.

Figure 8 is a cross-sectional view taken through my hair pin magazine the same being shown with the spring depressed but without hairpins in place.

Figure 9 is a perspective view showing the latch or hair securing member used with this form of curler.

Figure 10 is the sliding bolt which is used to select and move the hair pin to the finished position.

Figure 11 is a perspective view showing the top of my hairpin magazine adapted for use with the type of curler illustrated in Figure 1.

Figure 12 is a perspective view showing the cam means used to locate and revolve the bobby pin in the act of placing it on a curl.

Figure 13 illustrates, in vertical sectional view, a different type of hair curler in which the hairpin is held in a spread position necessitating that the curl, after being formed, be stripped off the curler and brought in between the legs of the hairpin.

Figure 14 illustrates in a fragmentary perspective view, the upper portion of my hairpin magazine.

Figure 15 is a perspective view illustrating a typical bobby pin as used with this type of curler.

Figure 16 is a perspective view showing the hinged member which holds the bobby pin in position to receive a hair curl that has been formed on the curler and also provides the guideway and support for my hairpin magazine.

Referring to the drawings, throughout which like reference characters indicate like parts, numeral 18 designates the main tube, or barrel, of one form of curler to which my magazine is adaptable. This is provided with the handle portion at 20 and the curler portion at 22. It is further provided with an offset slot having one portion disposed on the upper side of the tube as at 24 and another portion disposed around one side as 25, the two slots being connected by a transverse slot at 26.

Fixedly secured to barrel 18 is a bobby pin magazine 28 which in turn is provided with a removable cap, or bottom, 30. This is arranged with detents at 31 and 32 which engage openings in the magazine proper so as to form a frictional

engagement that locks the bottom to the magazine in a manner permitting its easy removal for recharging. Preferably secured to the bottom 30 is the compression spring 34 and in turn secured to it is the magazine follower 36.

Pivotally secured to barrel 18 as by pivot detent 38 is the hair clamp 40. This is provided at one end with a curved portion so as to snugly fit around the curling portion 22 of barrel 18 and in its mid section it is split, as is probably best illustrated in Figure 9, into the two side portions 41 and 42. At its extreme opposite end, or to the right hand end as shown in the various views, is the operating handle 44. This has secured to it, preferably, the U-shape spring 46 which tends at all times to urge clamp member 40 into snug engagement with the curler portion 22. Also formed as part of clamp member 40 is an operating lug 48.

Lug 48 is adapted to operatively engage cam member 50, the same being provided with a cam slot 52 into which lug 48 engages. The purpose of this engagement is to provide for a partial revolution of cam member 50 as handle 44 is pressed up against barrel 18. This provides a partial rotation of the bobby pin during its cycle of operation. To facilitate this operation the cam member, which is substantially cylindrical, is machined at 54 so as to provide a flat bearing portion and an upstanding lip portion 55. Member 50 should have reasonable length, as shown, so that it will engage the bobby pin over considerable of its length to the end that it can move the bobby pin around a partial revolution to facilitate the operation of placing the bobby pin on a curl. It has been found desirable to confine cam member 50 and, to this end, I have provided a raised lug at 57 formed inside of tube 18 in the curling portion 22.

In using my machine, with this form of curler, the end of a wisp of hair is caught under clamp 40 and the curler is then revolved, winding up the hair on the curler portion 22. When the curl is fully formed the pin manipulating member or bolt 60, probably best illustrated in Figure 10, which is housed within the handle portion 20 of tube 18, is grasped by its upstanding handle 62 and moved to the left as viewed in the various views. This action will carry the upper bobby pin 64 to the left. The pin has previously been positioned by spring 34 forcing the column of pins up against the stop member 66 formed as part of bolt 60 and at its opposite end it is caught under the overhanging ledge 67. Ledge 67 is formed with a sharpened leading edge after the showing particularly of Figures 2, 4, and 7, so that it will spread the two legs of the bobby pin; the lower leg will pass underneath ledge 67 and be contained within sleeve 22, whereas the upper leg will ride over the same and when the crinkled portion at 68 rides over ledge 67 the pin will be spread considerably so that it can easily slide over any normal curl that has been formed on portion 22. When the pin has been moved to the left to the degree shown in Figure 4, so that the return bent portion of the pin contacts ledge 67, the bolt member 60 can then be retracted to its normal position. The operator then presses on handle 44; this accomplishes two operations, one being that clamp 40 is raised from the hair, freeing the same and, due to the action of lug 48 in the cam slot 52, which operation is probably best illustrated in Figures 5, 6, and 7, the bobby pin is partially revolved and the lower leg, which has up to this point been confined inside of tube 22 is then free to pass out slot 25, fully gripping the hair. At this point the operator slides the bobby pin and curl off the curler and that curl is fully formed and clamped in place and left to set.

Figures 13, to 16, inclusive, show a different form of curler. Here, a cylindrical curler portion 70 is employed having a clamp member 71 pivoted at 72 in the curler proper and urged into its closed position by spring 74. In this form a pin positioning member 76 is employed which is pivotally secured at 77 to a sleeve-like member 78 which encircles the curler and forms a bearing for the same as it is revolved inside sleeve 78 during the curling operation. Member 76 is provided with a bobby pin expanding or spreading cam surface 80 and magazine guides at 81 and 82. Adapted to reciprocate within guides 81 and 82 is my magazine 84. Magazine 84 is provided with the outstanding guide flanges 84*a* and 84*b* which in turn engage slots 81 and 82. This magazine is formed substantially as previously described employing the same general construction in that a removable cap 30 is employed having the compression spring 34 with a follower 36 and the same clamping means as at 31 and 32.

In operation the curl is formed, as previously described, by gripping a wisp of hair under clamp member 71 and revolving member 70 as by handle 85 within sleeve 78. Either before or after the curl is formed magazine 84 is moved to the left, as viewed in Figure 13, and the upper bobby pin is placed in position, as illustrated in Figure 13, with its lower leg underneath cam surface 80 until it abuts the stop 86. The curvature of cam surface 80 spreads the two legs of the bobby pin 64*a* apart so that, when the curl is formed, pressure on handle 85 will raise clamp 71 from the curl and the operator then slides the curl off member 70 and between the two legs of the pin 64*a* and slips the pin off the cam surface 80. The pin is carried off over the magazine as is shown in dashed line at 90. As soon as one pin is used spring 34 forces the next pin up into the loading position with one end abutting shelf 92 and the other end abutting the tapering or sharpened ledge 94 so that a movement of the entire magazine to the left will again place a new bobby pin on cam surface 80 in the spread position ready for reception of another curl.

The foregoing description and the accompanying drawings are believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims:

I claim:

1. The combination with a hair curler of the pivoted jaw type, of a magazine adapted to contain bifurcated pins, means for feeding a pin from the magazine, means for placing said pin on the curler for engagement with a curl, and means actuated by pivotal releasing movement of the jaw for releasing the curler from the pin.

2. The combination with a hair curler of the pivoted jaw type, of a magazine adapted to contain bifurcated pins and means for automatically feeding successive pins from the magazine, a manually operated slide for placing a pin on the curler in engagement with a crul, and means actuated by the pivotal releasing movement of the pivoted jaw for releasing the curler from the placed pin.

3. The combination with a hair curler of the pivoted jaw type, of a magazine for bifurcated pins and means for automatically feeding suc-

cessive pins to set position, means for retaining the set pin in position, means for moving a set pin into place on the curler for engagement with a curl, and means actuated by the pivotal releasing movement of the jaw for releasing the curler from the placed pin.

4. In a hair curler of the pivoted jaw type, the combination with a tubular housing having a receiving slot for a bifurcated pin and a releasing slot off-set therefrom, of a manually operated slide for moving the pin from the receiving slot and placing said pin on the curler adjacent the releasing slot, and rotary means actuated by pivotal releasing movement of the jaw for releasing the curler from the placed pin.

5. The combination with a tubular housing having a central longitudinally extending receiving slot, a transverse slot and a longitudinally extended releasing slot for use with a bifurcated hair pin, of a pivoted curl-clamping jaw mounted on the housing and adapted to clamp a curl adjacent the releasing slot, a manually operated slide for moving the pin from the receiving slot and placing said pin on the housing adjacent the releasing slot, and means actuated by releasing movement of the curl-clamping jaw for turning the placed pin into alinement with the releasing slot, whereby the pin is released from the housing.

6. The combination with a hair curler of the pivoted jaw type comprising a tubular housing having longitudinally extending receiving and releasing slots and a transverse slot intermediate thereof, of a manually operated slide for moving a bifurcated pin from the receiving slot and placing said pin on the curler-portion of said housing astride its wall and adjacent the releasing slot, a cam-actuated rotary block adjacent the releasing slot, an actuating head on the pivoted jaw engaging said block when the jaw is clamped, and said block having a cam face co-acting with said head when the jaw is unclamped whereby the bifurcated pin is moved laterally into alinement with said releasing slot.

JOHN D. SPRECKELS.