July 15, 1952 N. L. SOLOMON ET AL 2,603,224

DEVICE FOR FORMING AND APPLYING BOBBY PINS TO FLAT CURLS

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Fig. 1.

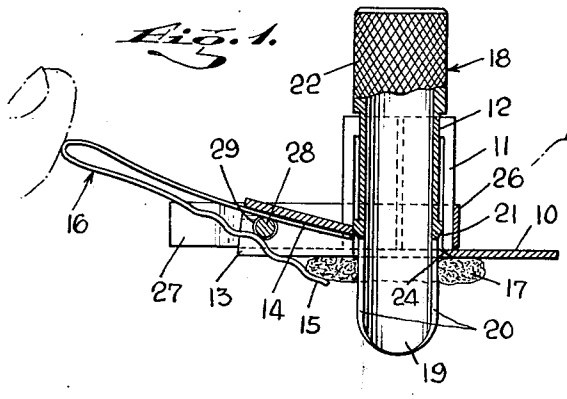


Fig. 2.

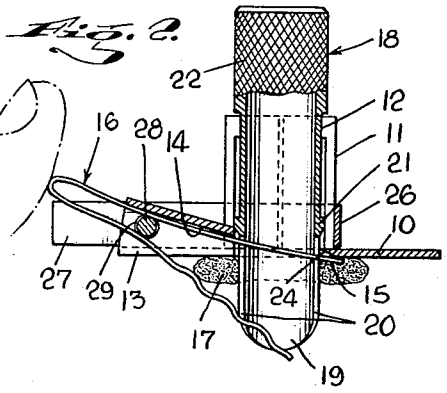


Fig. 3.

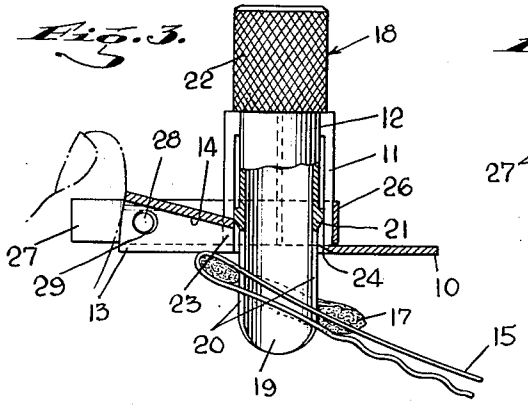


Fig. 4.

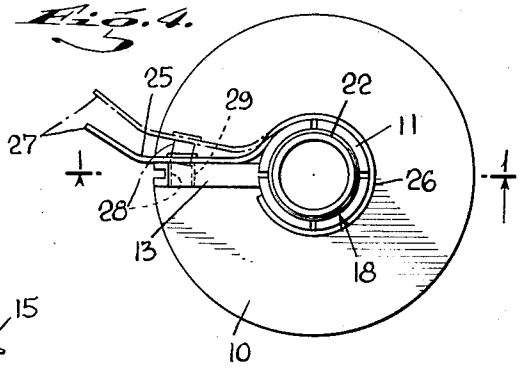


Fig. 5.

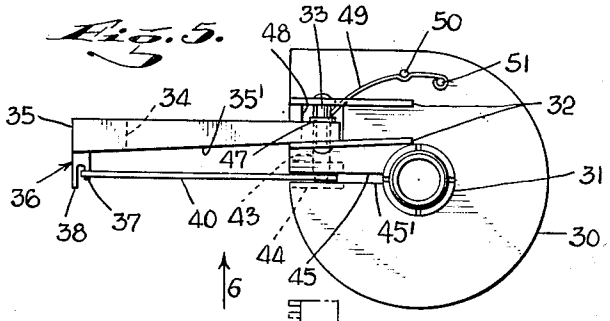


Fig. 6.

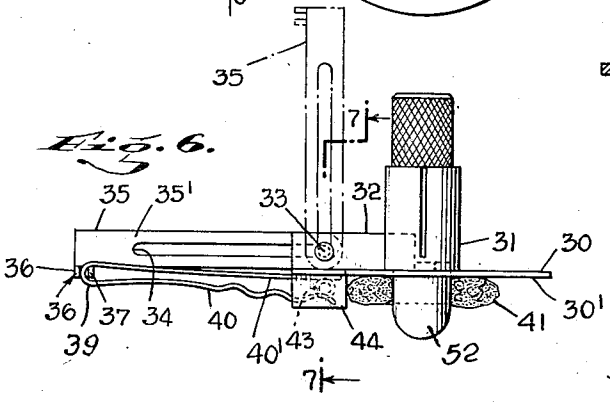
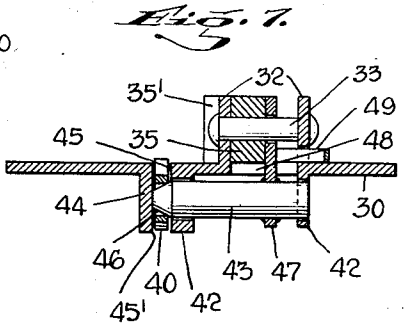


Fig. 7.



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DEVICE FOR FORMING AND APPLYING BOBBY PINS TO FLAT CURLS

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7 Claims. (Cl. 132—33)

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This invention deals with devices facilitating the formation of what are known as flat pin or sculpture curls. More particularly, the invention deals with a device of this kind having means for supporting a bobby pin thereon and for mounting the bobby pin on the formed curl and in automatically displacing the bobby pin from the device in attaching the same with the curl. The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, separate parts are designated by suitable reference characters in each of the views and, in which:

Fig. 1 is a sectional view through a device made according to our invention showing the formation of a curl therearound.

Fig. 2 is a view similar to Fig. 1 with the bobby pin in a different position.

Fig. 3 is a view similar to Figs. 1 and 2 showing the pin attached to the curl.

Fig. 4 is a plan view of the device detached and showing one part in a different position in dot and dash lines.

Fig. 5 is a view similar to Fig. 4 showing a modification.

Fig. 6 is a view looking in the direction of the arrow 6 of Fig. 5; and

Fig. 7 is a section on the line 7—7 of Fig. 6 on an enlarged scale.

In Figs. 1–4, inclusive, one form of the device is shown in which the curler comprises a disc or plate member 10 having axially thereof a projecting tubular portion 11 having an inwardly set annular flange 12 forming a stop, as later defined.

At one side of the disc is a channel portion 13 having an inclined or tapered bottom wall 14 of such an angle and so positioned as to extend one side 15 of a bobby pin 16 to a position engaging opposed side portions of a flat curl 17 which is formed upon a rotatable curl forming element 18.

The element 18 is in the form of a tubular body having a rounded lower end 19, the lower end being split at opposed sides, as seen at 20, for reception of the end of a swatch of hair, as in other devices of this kind, preparatory to winding the hair on the element 18. Inwardly of the split, the element has an annular shoulder 21 which engages the flange 12, in checking movement of the element in one direction. The tubular body 11 can be split to facilitate forcible insertion of the element 18 in assemblage of the

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device. The outer end of the element 18 has an enlarged knurled head 22 which checks movement of the element in the other direction in the tube 11.

The tube 11, at the base thereof or adjacent the disc 10, has opposed slits 23 and 24 therein in registering alinement with the channel portion 13 to extend the bobby pin side 15 to a point to engage the far side of the flat curl 17.

Fixedly secured to the lower portion of the tube, adjacent the disc 10, is a spring arm 25, the mounting end 26 of which is looped around the tube 11. The arm 25 has an offset fingerpiece end 27 which extends beyond the periphery of the disc 10, as clearly seen in Fig. 4 of the drawing. The spring arm 25 carries a pin 28 which passes through an aperture 29 in one wall of the channel 13, as clearly see in Figs. 1 to 3, inclusive, and this pin serves to spread the bobby pin and, as the bobby pin is advanced through the curl, as indicated in Figs. 2 and 3, the finger of the hand engages the fingerpiece end 27 to move the pin 28 out of the channel 13 sufficiently to release the bobby pin in the manner seen in Fig. 3. The pin 28 also serves as means for supporting the bobby pin in position preparatory to engaging the curl after the curl has been formed around the element 18 or the split end thereof. After the bobby pin 16 has been attached to the curl, it can be removed from the element 18 by simply pulling outwardly on said element.

In Figs. 5–7, inclusive, we have shown a modification, in which the device comprises a disc 30 generally of the shape seen in Fig. 5 of the drawing, the disc having an axis portion, as at 31, common to the parts 11 and 18 in Figs. 1–4 inclusive, modified to the extent of adapting it for use as seen in Figs. 5–7 inclusive. The disc has, on one surface thereof, parallel bearing and guide plates 32. in which a pin 33 is mounted. The pin passes through an elongated aperture 34 in a bobby pin supporting and operating element 35. The element 35, at its outer end, has an offset yoke portion 36 having a short leg 37 and a long leg 38, note Fig. 5. This yoke is adapted to receive and support the looped end 39 of a bobby pin 40, as clearly illustrated in Fig. 6 of the drawing. The element 35 is free to swing on the pin 33 from the position shown in dotted lines in Fig. 6 to the full line position of said figure, thus keeping the element 25 out of the way or more or less parallel to the portion 31 as a curl is being formed on the surface 30' of the disc 30, the curl being diagrammatically indicated at 41 in Fig. 6.

Projecting from the surface 30' of the disc

is a pair of shorter bearing plates 42 for a sliding pin 43. An auxiliary plate 44 is arranged adjacent one of the plates 42 to form a guide channel 45 for the bobby pin. The pin 43, within the channel 45, has a tapered portion 46. Secured to the pin 43 is a bracket or link portion 47 which extends through an aperture 48 in the disc 30 and is movable on the pin 33.

A spring 49 is mounted on the disc 30 and bears against the link 47 to normally support the pin 43 in the depressed or operative position and also to maintain the element 35 upon the lower guide plate 32. In this latter position, the bobby pin 40 is supported on the short leg 37 in direct alinement with the channel 45, as well as a registering channel 45' formed in the disc 30, so that one prong 40' of the bobby pin can extend to a point beneath the curl 40, as will appear from a consideration of Fig. 6 of the drawing.

The spring 49 is supported on two pins 50 and 51 and tensioned to hold the parts in the normal position, as seen in Fig. 5.

In the use of the device, after the curl has been formed on the split end 52 of the curl winding element, which constitutes part of the axis portion 31, the element 35 is swung into the position shown in Figs. 5 and 6 and then the element is pushed to the right, being guided in this operation on one of the plates 32 and by the pin 33 and, as the element moves to the right, the bobby pin is spread by the lower tapered end 46 of the pin 43 and, as this movement continues, the pin is raised by reason of the cam surface 35. The taper 46 minimizes the spreading of the bobby pin and finally the end 37 of the pin will be disengaged from the short leg 37 and the pin snapped into engagement with the curl 41 when the tapered end 46 has freed the channel 45.

With devices of the kind disclosed, the formation of the flat curls and the attachment of bobby pins to the formed curls is facilitated and, after a little use, the operator will be able to accomplish the desired result quickly and easily. These flat curls are sometimes referred to as "pin" or "sculpture" curls.

By reason of the simplicity in the structure of the device, the same can be produced at a nominal cost and the use of the device is more or less unlimited. The device can be constructed of metal or plastic or combinations of metal and plastics, as desired.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A device of the class described comprising a disc, a curl forming element rotatably mounted in and movable axially of the disc, means on the disc for supporting a bobby pin at one side of said element, said means including a pin for spreading the bobby pin in moving the same into engagement with a curl formed by said element on said disc, manually operated means engaging said pin for moving the pin in position to free the bobby pin in clamping the bobby pin onto a curl, and said last named means comprising a cam portion on the bobby pin supporting means.

2. A device of the class described comprising a plate member, a tubular bearing portion on the plate member, a curl forming element rotatably mounted in said tubular portion and movable axially thereof, spaced means on said element engaging said tubular portion in checking movement of the element in both directions, said element having a split end portion for reception of a bobby pin, the plate member having means at one side of the tubular portion for supporting a bobby pin in position for engagement with a curl formed on the plate member by said element, said supporting means including a pin member, manually actuated means on and movable relatively to said plate member for displacing the pin member in movement of the bobby pin into curl engaging position, said means comprising an arm pivotally and slidably supported in connection with said plate, and said arm and pin member having interengaging means for moving the pin member into inoperative position.

3. A device of the class described comprising a plate member, a tubular bearing portion on the plate member, a curl forming element rotatably mounted in said tubular portion and movable axially thereof, spaced means on said element engaging said tubular portion in checking movement of the element in both directions, said element having a split end portion for reception of a bobby pin, the plate member having means at one side of the tubular portion for supporting a bobby pin in position for engagement with a curl formed on the plate member by said element, one surface of the plate member having a channel portion, said means including a pin member transversing said channel portion, and manually actuated means slidably engaging said channel portion and pin member for displacing the pin member in movement of the bobby pin into curl engaging position.

4. A device of the class described, comprising a disc, a curl forming element rotatably mounted in and movable axially of the disc, means on the disc for supporting a bobby pin at one side of said element, said means including a pin for spreading the bobby pin in moving the same into engagement with a curl formed by said element on said disc, and manually operated means engaging said pin for moving the pin transversely of the movement of said bobby pin into position to free the bobby pin for clamping onto a curl.

5. A device of the class described, comprising a plate member, a tubular bearing portion integral with the plate member, a curl forming element rotatably mounted in said tubular portion and movable axially thereof, spaced means on said element engaging said tubular portion in checking movement of the element in both directions, said element having a split end portion for reception of a bobby pin, the plate member having means at one side of the tubular portion for supporting a bobby pin in position for engagement with a curl formed on the plate member by said element, said supporting means including a pin member, said pin member being mounted in an aperture of said supporting means, and manually actuated means on and movable relatively to said plate member for moving the pin member axially of said aperture and out of engagement with the bobby pin to free the bobby pin for movement into curl engaging position.

6. A device of the class described, comprising a plate member, a tubular bearing portion integral with the plate member, a curl forming element rotatably mounted in said tubular portion and movable axially thereof, spaced means on said element engaging said tubular portion in checking movement of the element in both directions, said element having a split end portion for reception of a bobby pin, the plate member having means at one side of the tubular portion for

supporting a bobby pin in position for engagement with a curl formed on the plate member by said element, said supporting means including a pin member, said pin member being mounted in an aperture of said supporting means, manually actuated means on and movable relatively to said plate member for moving the pin member axially of said aperture and out of engagement with the bobby pin to free the bobby pin for movement into curl engaging position, and said manually actuated means comprising a spring arm, on which said pin member is supported.

7. A device for forming and clamping flat curls, said device comprising a plate member having a tubular body, a rotatable and slidable curl forming element therein, means on said member for supporting a bobby pin on the body part at one side of said element, said means including means for guiding the bobby pin into engagement with a formed curl on the body part, said supporting means having a transverse aperture, a pin member in said aperture for spreading the bobby pin in movement of the same into curl engaging position, and means operatively engaging said pin member to move the same axially of said aperture into position freeing the bobby pin for clamping engagement with a formed curl.

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