

Sept. 20, 1960

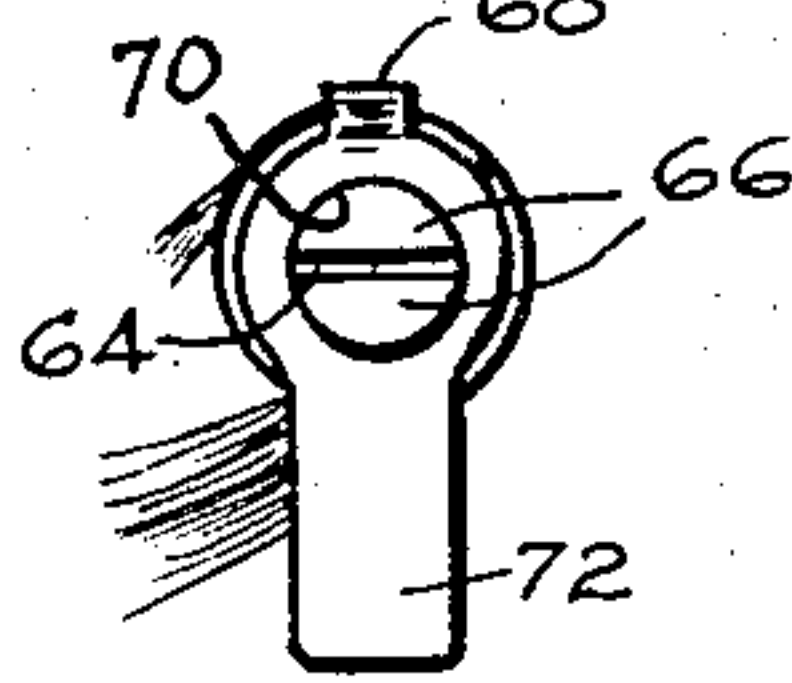
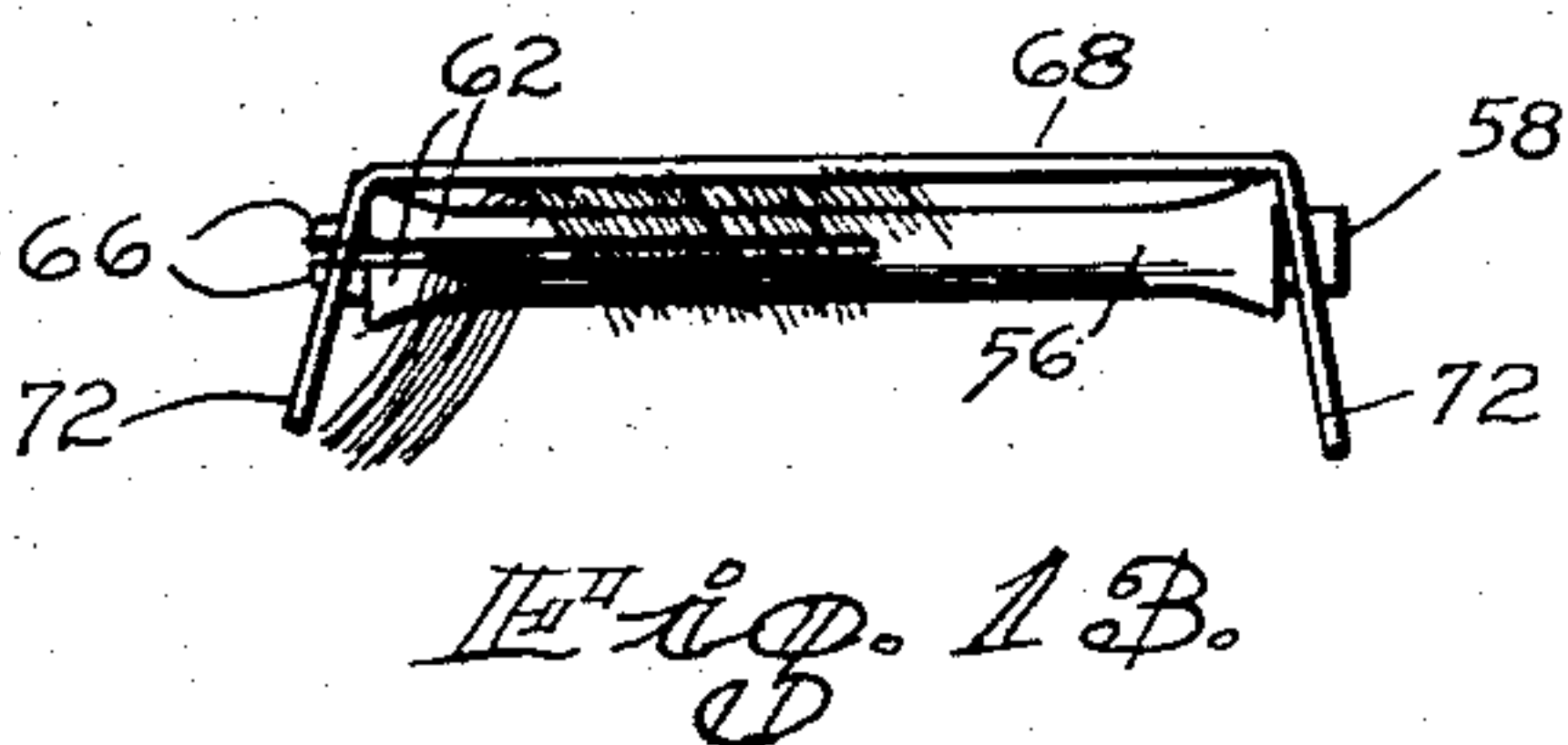
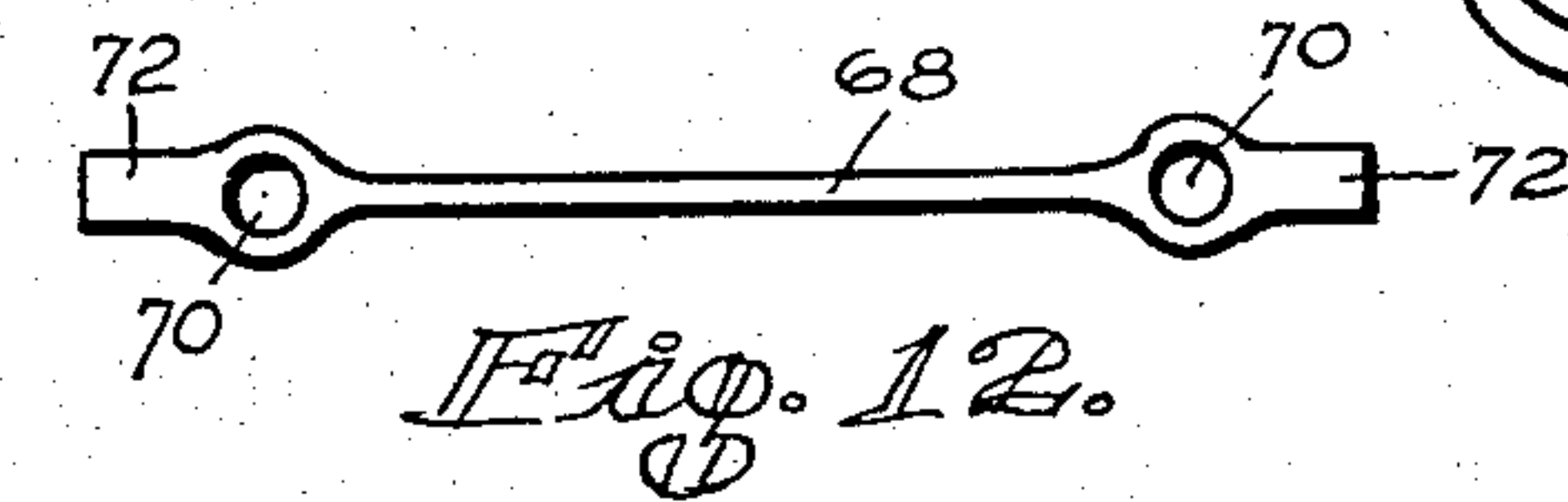
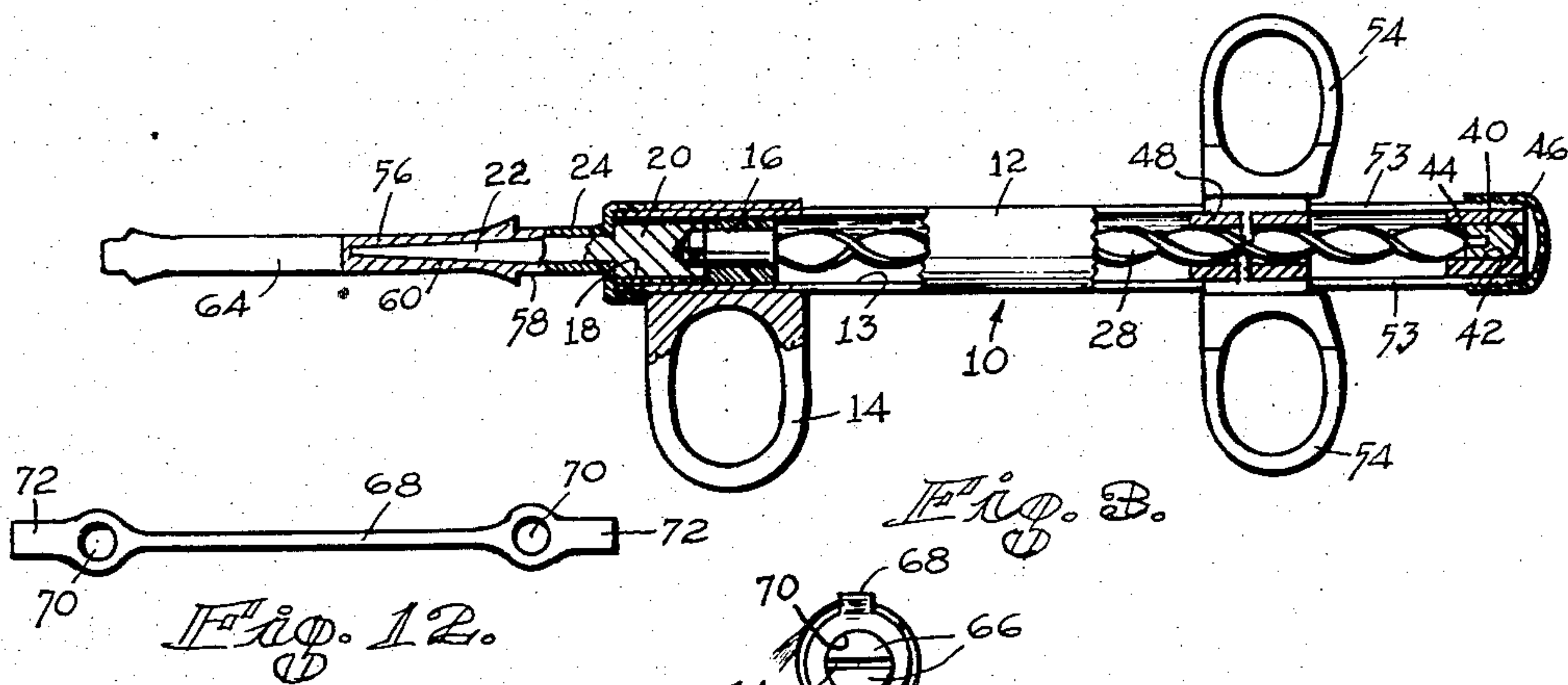
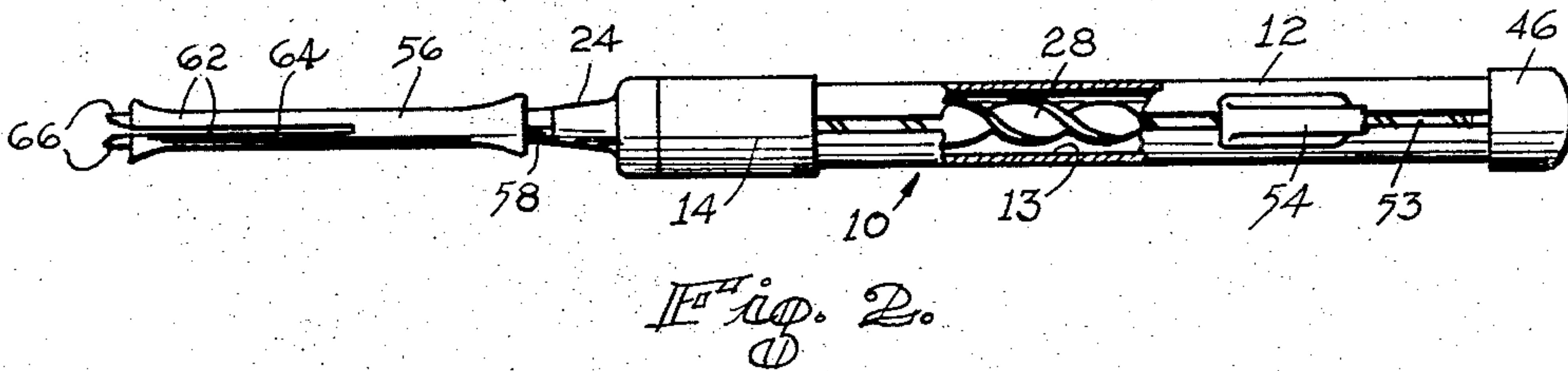
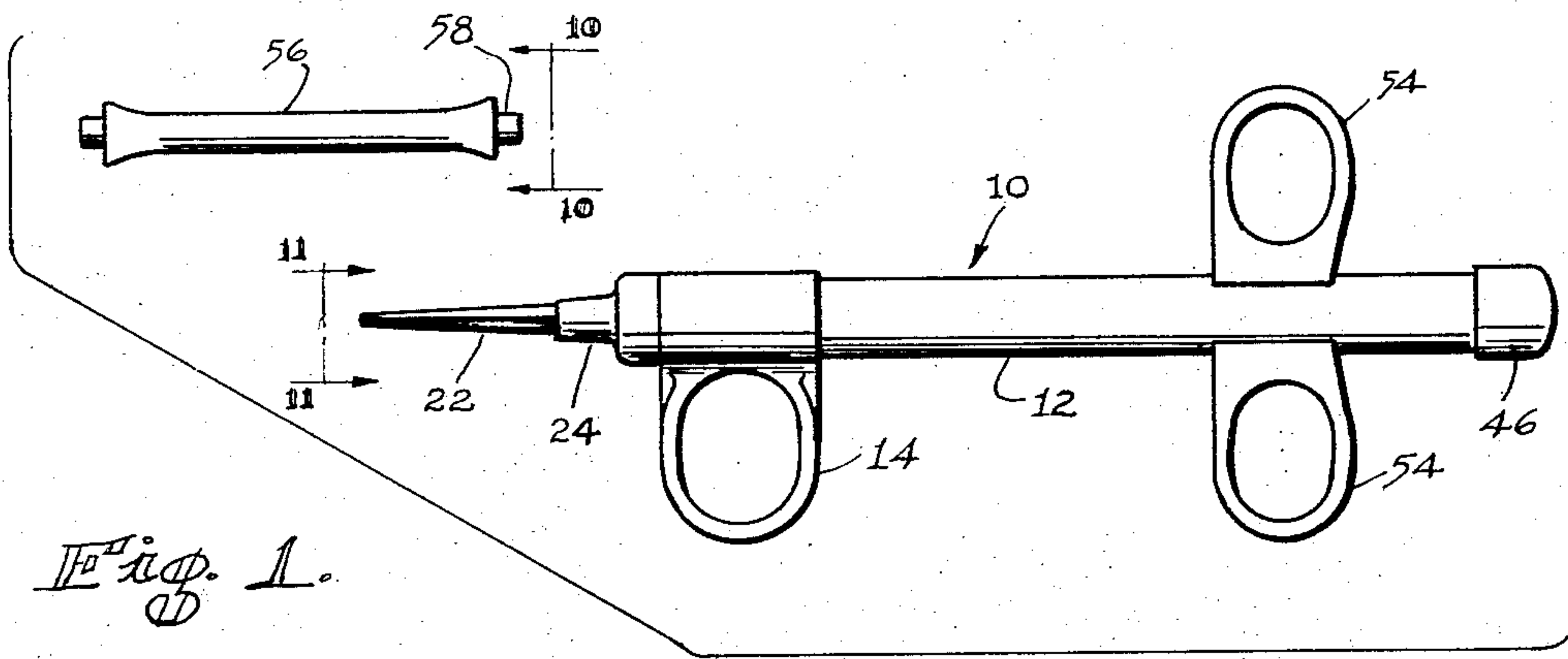
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2,953,138

HAIR CURLER

Filed Sept. 11, 1958

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

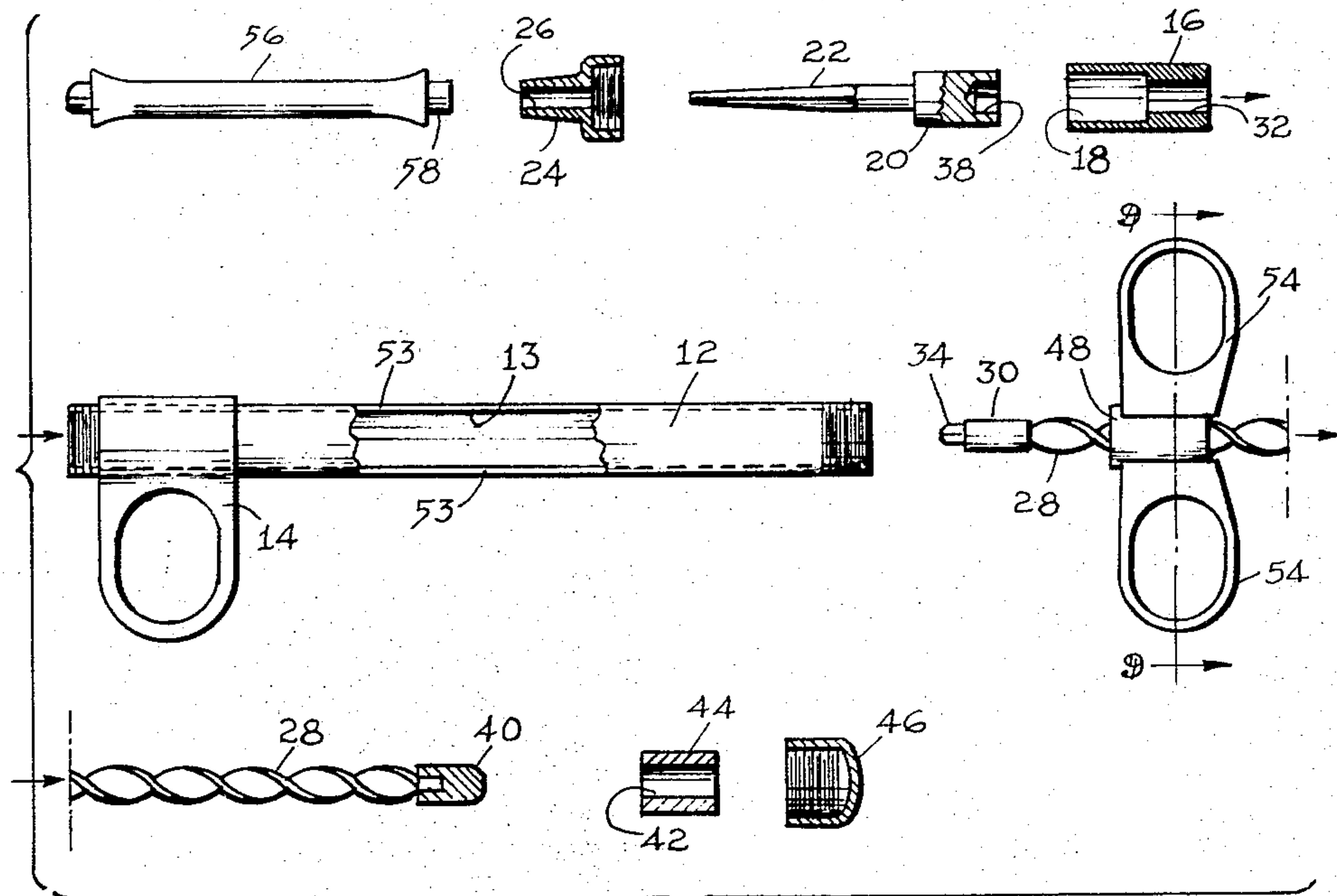


Fig. 4

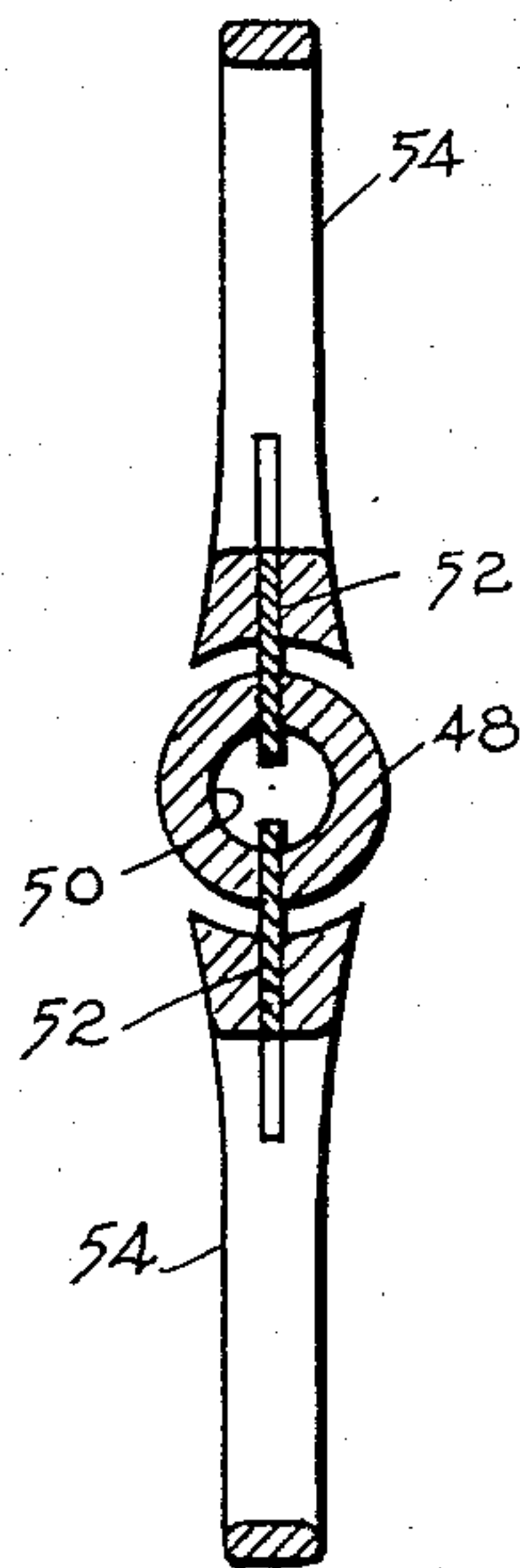


Fig. 9

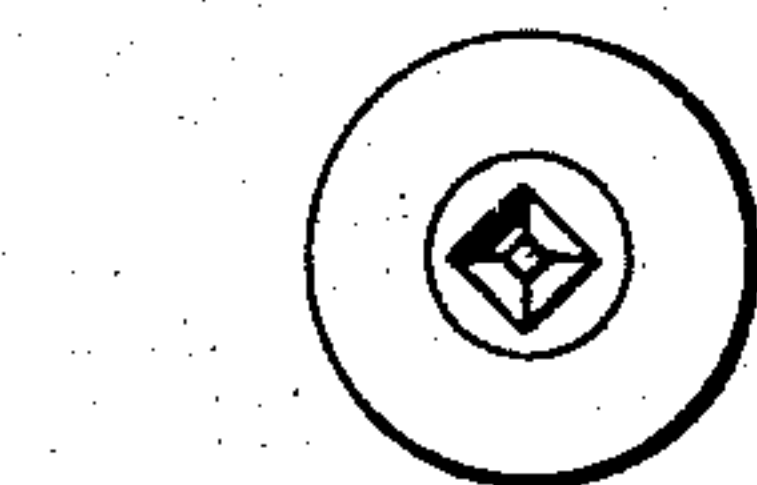


Fig. 10



Fig. 11

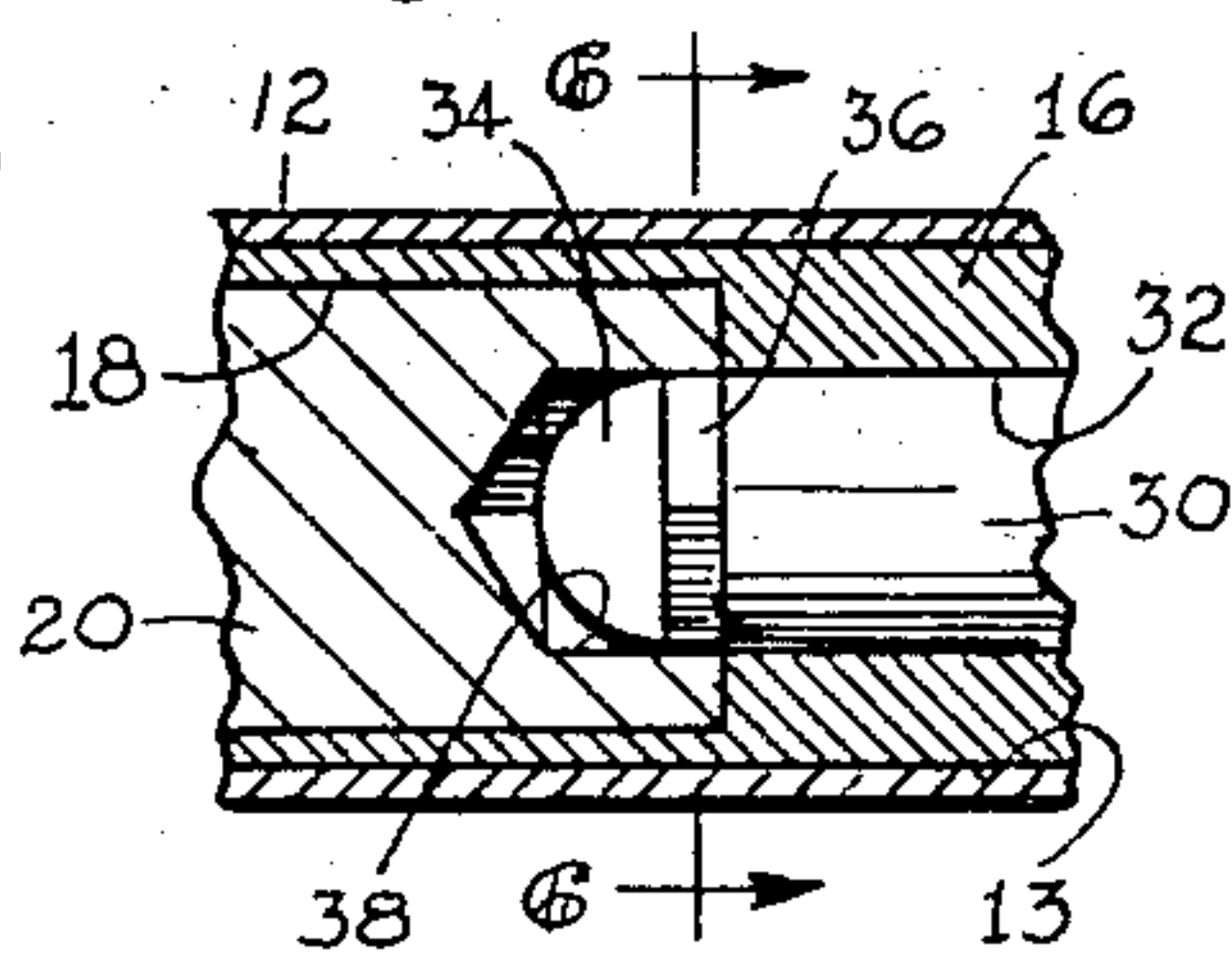


Fig. 5

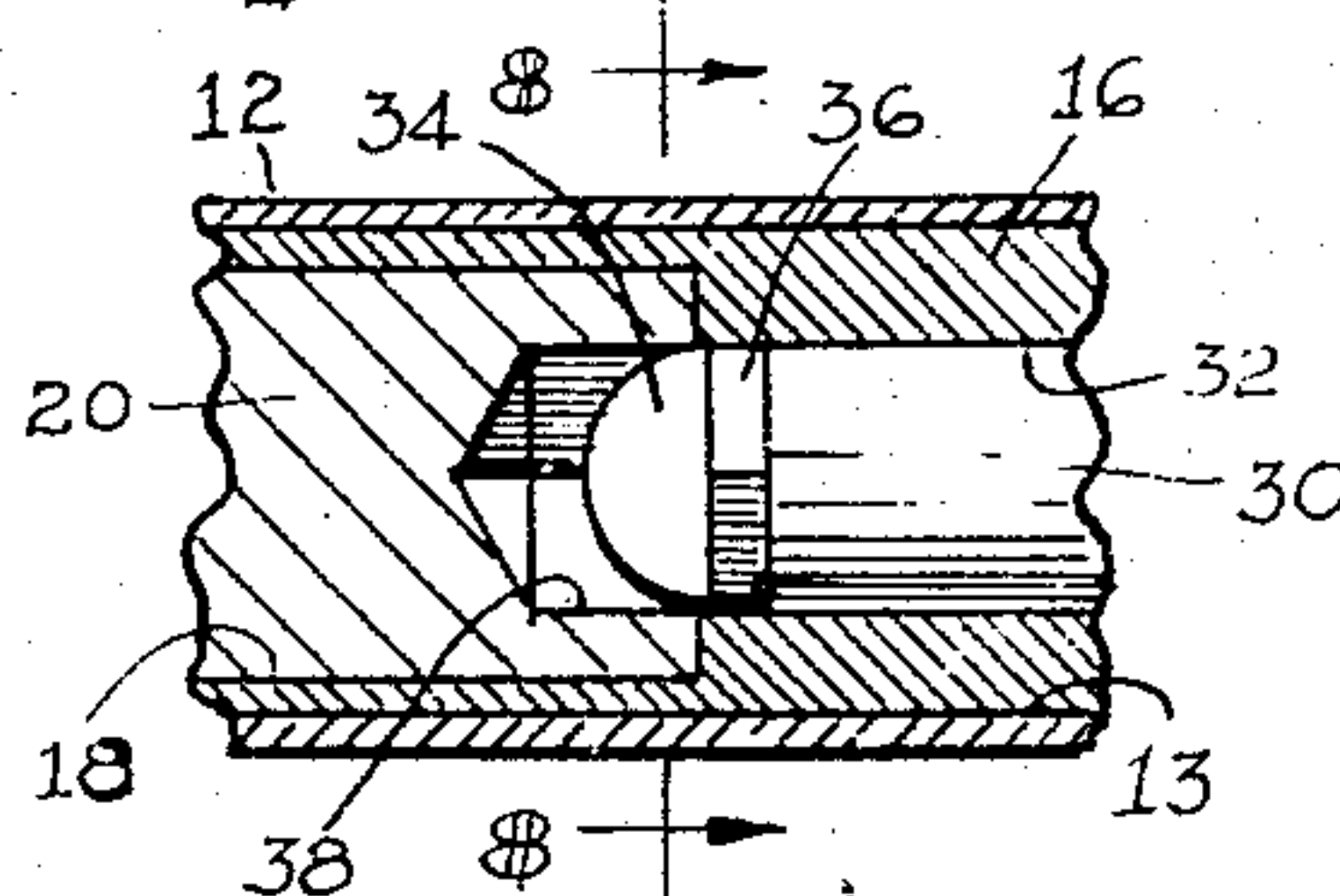


Fig. 7

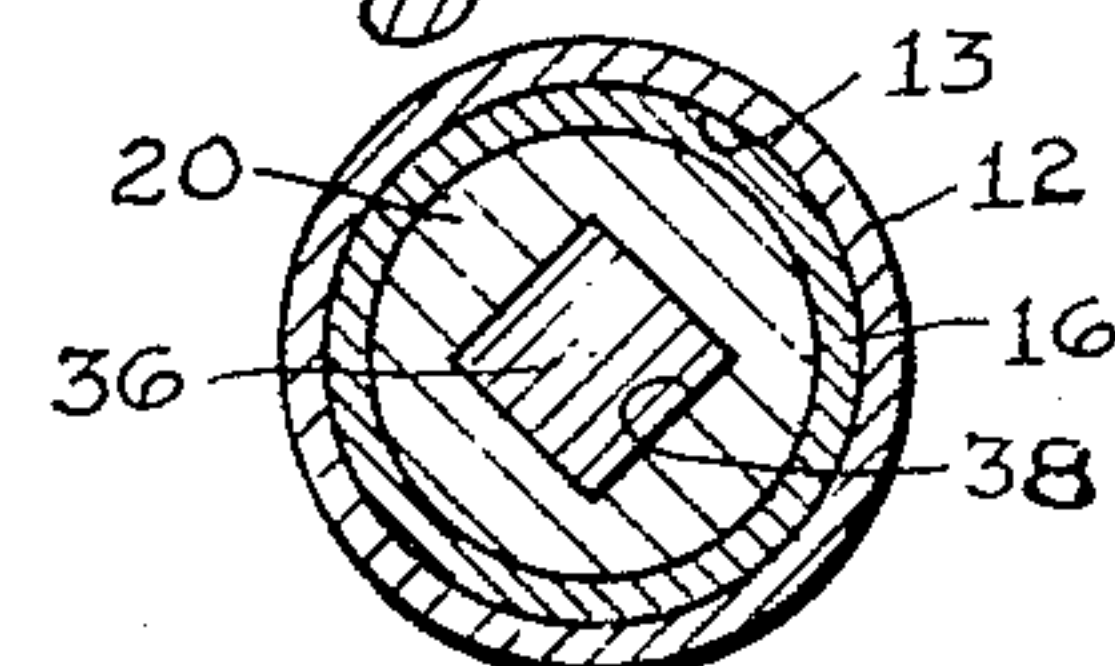


Fig. 6

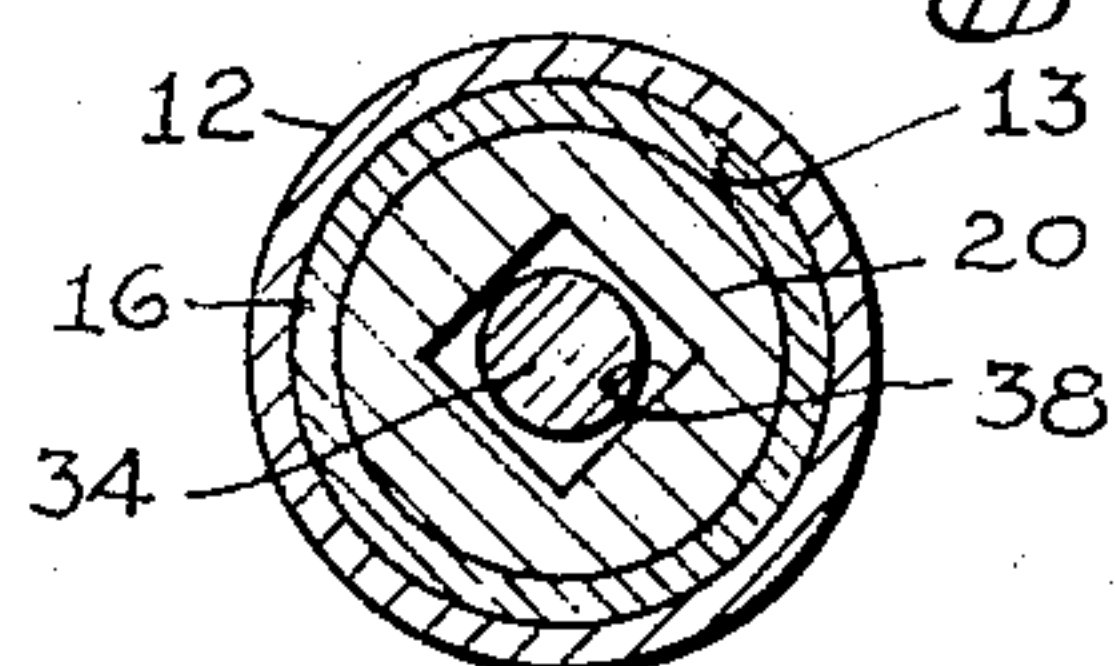


Fig. 8

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2,953,138

## HAIR CURLER

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1 Claim. (Cl. 132—34)

This invention relates to hair curling apparatus and more particularly to a device for facilitating the setting of the hair.

It is an object of the present invention to provide a semi automatic device that is completely manually actuated which will enable locks of hair to be quickly and neatly spun upon a curler in a simple and efficient manner.

Another object of the present invention is to provide a novel hair curler and curler spinning assembly in which the actuator mechanism is manually operated and which is releasably engaged with the curler so as to enable a single spinning unit to be used with a large number of individual curlers.

Still an additional object of the present invention is to provide hair curling apparatus of the above type that may be used by professional and amateur hairdressers with equal facility and without requiring a large degree of skill.

Other objects of the invention are to provide a hair curling apparatus bearing the above objects in mind which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in operation.

For other objects and for a better understand of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

Figure 1 is an exploded side elevational view of hair curling apparatus made in accordance with the present invention;

Figure 2 is a top plan view, with parts broken away, of the unit shown in Figure 1 in an assembled relationship;

Figure 3 is a side elevational view, with parts broken away, of the apparatus shown in Figure 2;

Figure 4 is an exploded side elevational view, with parts broken away, of a complete hair curling assembly made in accordance with the present invention;

Figure 5 is an enlarged fragmentary sectional view of certain parts of the apparatus shown in Figure 3;

Figure 6 is a transverse cross sectional view taken along line 6—6 of Figure 5;

Figure 7 is a view similar to Figure 5, showing a clutch mechanism forming a part of the present invention in a released position;

Figure 8 is a transverse cross sectional view taken along line 8—8 of Figure 7;

Figure 9 is a transverse cross sectional view taken along line 9—9 of Figure 4;

Figure 10 is a plan view taken along line 10—10 of Figure 1;

Figure 11 is a plan view taken along line 11—11 of Figure 1;

Figure 12 is a plan view of an elastic band forming a part of a hair curler made in accordance with the present invention;

Figure 13 is a side elevational view of a hair curler

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made in accordance with the present invention in actual use; and

Figure 14 is an enlarged end elevational view of the assembly shown in Figure 13.

Referring now more in detail to the drawing, hair curling apparatus 10 made in accordance with the present invention is shown to include a spinning device having a main body member 12 of substantially cylindrical tubular configuration defining a longitudinal bore 13 there-  
within. A finger grip member 14 is secured to one forward end of the main body member 12 for coaction with another finger grip member in a manner hereinafter more fully described.

The forward end of the main body member 12 rotatably supports a bushing 16 having an enlarged forwardly opening bore 18 within which a bearing member 20 of a drive spindle 22 is rotatably positioned. The forward non-circular end of the drive spindle 22 is rotatably received within the central bore 26 of a closure member 24 that is threadedly engaged with the forward end of the main body member 12. A spiral shaft 28 is rotatably supported within the enlarged central bore 13 of the main body member 12 and has a bearing member 30 secured to its forward end that includes a segment 36 of non-circular configuration that is retractably received within a similar non-circular opening 38 within the rear end of the bearing member 20. The opposite end of the spiral shaft 28 is secured to a bearing element 40 that is rotatably positioned within the longitudinal bore 42 of the bushing 16 that is rotatably and slidably positioned within the opposite end of the main body member 12 for reciprocating longitudinal movement through a short distance with respect to the rear closure cap 46 threadedly carried by the main body member 12. This longitudinal movement of the bearing 40 and spiral shaft 28 provides a clutching action, hereinafter more fully described.

An actuator member 48 that is slidably supported within the main body member 12 for reciprocating longitudinal movement, has a central bore 50 which slidably receives the mid section of the spiral shaft 28. A pair of diametrically oppositely extending fingers 52 partly projecting into the interior of the actuator 48, extend outwardly through the longitudinal slots 53 on diametrically opposite sides of the main body member 12 for attachment to a pair of finger grips 54. These fingers 52 are received within the convolutions of the spiral shaft 28 to effect rotation thereof in response to longitudinal sliding movement of the actuator 48.

A curler 56 made in accordance with the present invention has a main body portion that is bifurcated at one end to provide two legs 62 that define a longitudinal space 64 therebetween for receiving a lock of hair. Each of these legs 62 is provided with a semi cylindrical post 66 that is releasably received within an opening 70 adjacent one end of an elastic band 68 that is used to retain the lock of hair in the curled position upon the curler 56. End tabs 72 are provided to facilitate the application and removal of such elastic band in a well known manner. The opposite end of the curler 56 is provided with a post 58 that defines a longitudinal inwardly tapered non-circular bore 60 that slidably receives the drive spindle 22 therewithin.

In actual use, the curler 56 is applied to the spinning device in the manner shown in Figures 2 and 3 of the drawing. The outer end of the lock of hair is inserted into the space 64 between the legs 62 of the curler and the finger grips 54, 14 are urged toward each other. During the forward longitudinal movement of the actuator 48, the non-circular portion 36 of the bearing 30 is moved into driving engagement within the non-circular opening 38 of the bearing 20, thus effecting rota-



tional movement of the spindle 22 in response to continued forward movement of the actuator along the length of the spiral shaft 28. Upon movement of the finger grip 54 in the opposite direction, the non-circular portion 36 of the bearing is first retracted to the disengaged position illustrated in Figure 7 of the drawing, following which the spiral shaft 28 will rotate free of the bearing 20 and drive spindle 22, thus preventing rotation of the curler in the unwinding direction. The space between the end of the bearing 40 and the end cap 46 allows for this limited rearward movement of the spiral shaft 28, as hereinbefore described. The spinning device may then be removed and the elastic band 68 applied to the curler 56 in the manner illustrated in Figures 13 and 14 to retain the curled lock upon the curler.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What I claim as new and desire to protect by Letters Patent of the United States is:

Hair curling apparatus comprising, in combination, a hair curler upon which a lock of hair is to be wound and retained, an appliance for spinning said curler about a longitudinal axis to wind the lock of hair thereupon, said appliance comprising a housing having opposed slots therein, a drive spindle rotatably supported within one

end of said housing and having a non-circular curler receiving portion on one end and a non-circular female portion on its other end, a spiral motion transmitting shaft rotatably and longitudinally mounted in the housing and having a bearing on its end remote from the curler and a non-circular male portion adapted to mate with the non-circular female portion on its other end, a fixed finger grip integral with the housing at its end adjacent the curler, a movable finger grip portion mounted in said slots in said housing and having fingers engaging said drive spindle, whereby movement of said movable finger portion toward said fixed integral finger portion will rotate said drive spindle and mate the non-circular male and female portions and cause rotation of said curler, and movement of said movable finger portion away from said integral finger portion will unseat said male and female portions and allow said curler to remain in rotated position.

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