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Braginetz

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[54] **HANDLE CONSTRUCTION**

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[73] Assignee: **Philip Morris Incorporated,** New York, N.Y.

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[52] **U.S. Cl.** ..... **30/85;** 16/110 R; 29/453

[51] **Int. Cl.** **B26b 21/52**

[58] **Field of Search** ..... 16/110 A, 110 R, 116 R; 29/453, 462; 30/32, 34 A, 47, 85, 86, 340, 342; 403/326, 329, 345

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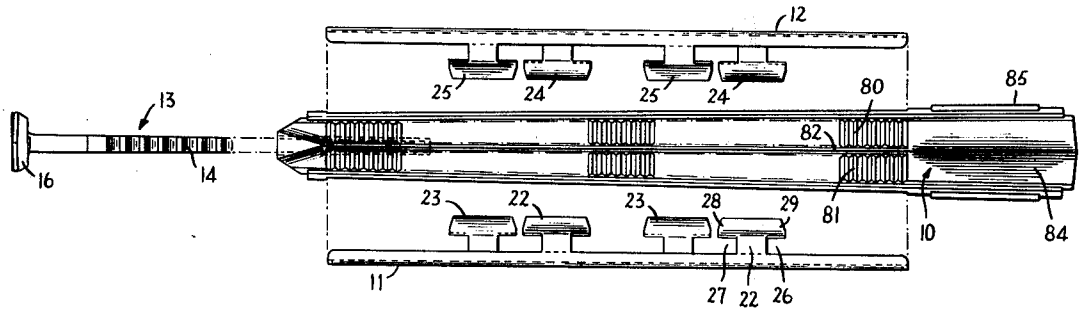
Attorney, Agent, or Firm—Watson Leavenworth Kelton & Taggart

[57] **ABSTRACT**

An elongated handle member particularly adapted for a safety razor embodying a main stem of plastic material which has at two opposite sides metal strips which are channel shaped with flanges engaged in longitudinal openings in the respective sides of the stem the flanges having T-shaped flexible fingers projecting therefrom engaged over lugs in the respective side walls of said openings, the handle including a head secured to the stem having a saw-toothed tang extending axially of the stem at one end thereof, the head having a pair of opposed relatively large faces bearing appropriate indicia.

9 Claims, 8 Drawing Figures



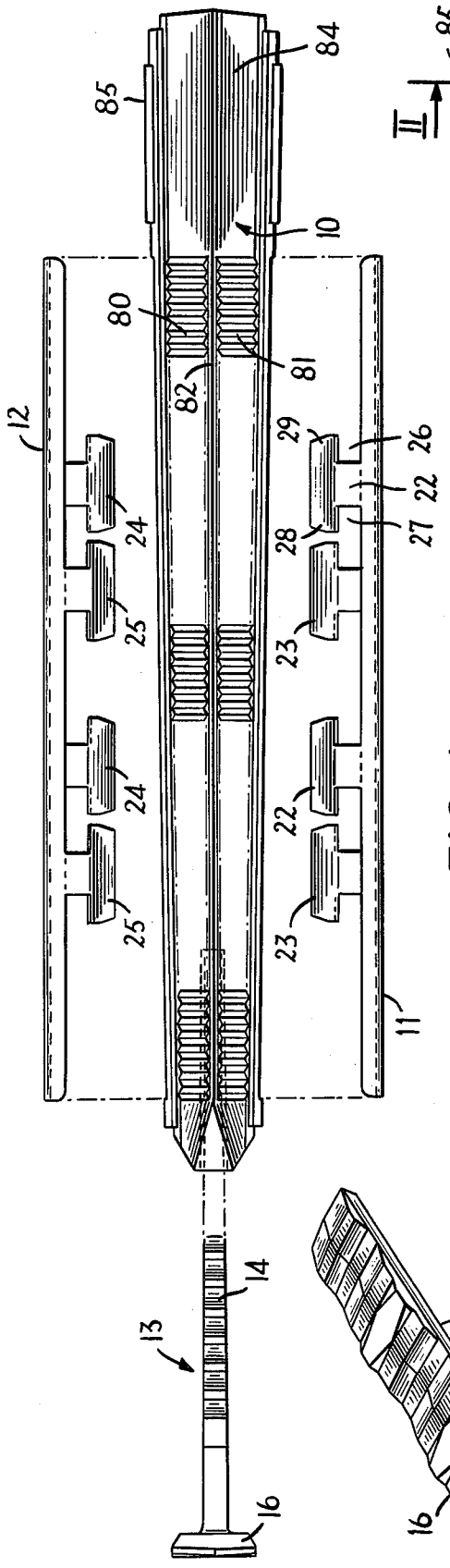


FIG. 1

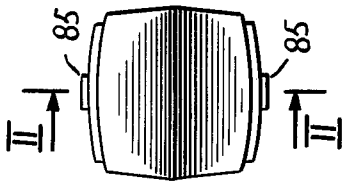


FIG. 1a

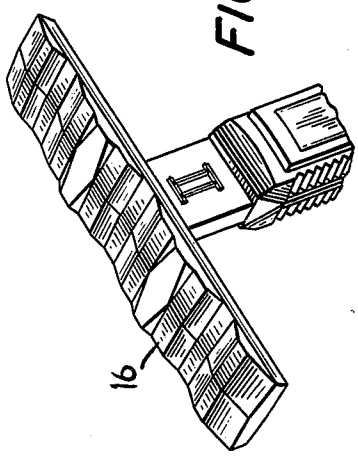


FIG. 7

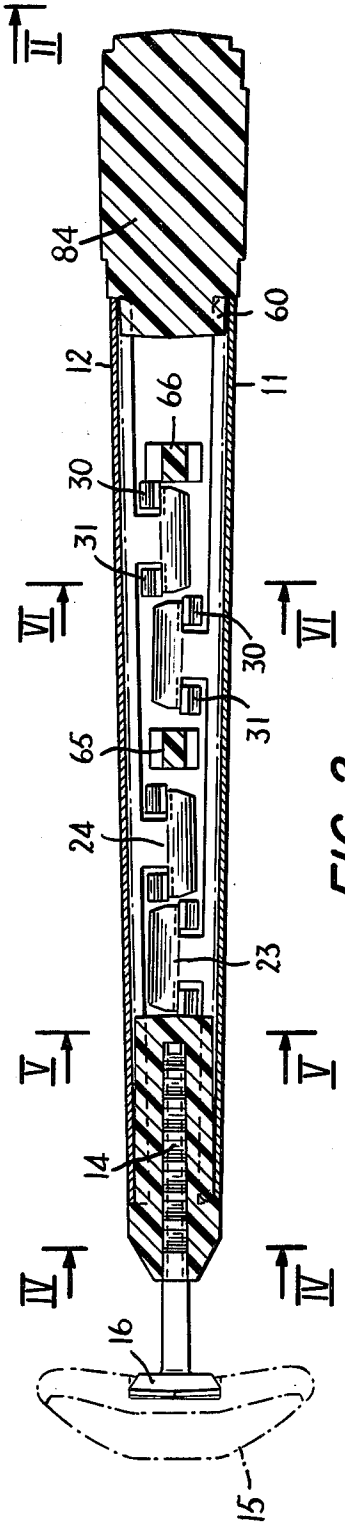


FIG. 2

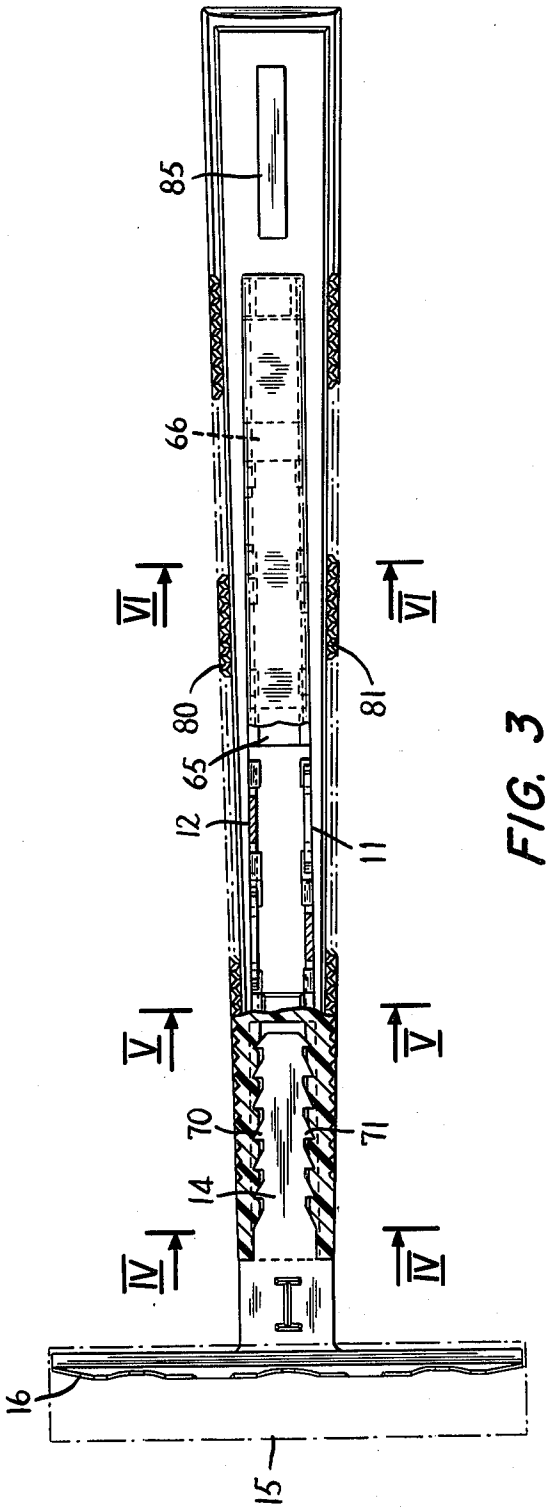


FIG. 3

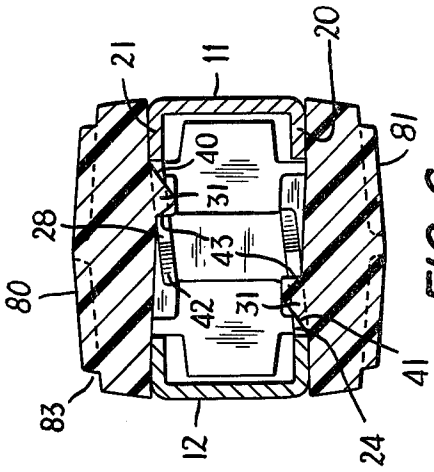


FIG. 6

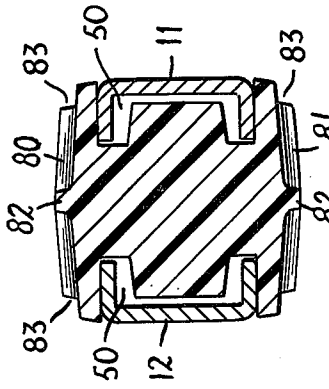


FIG. 5

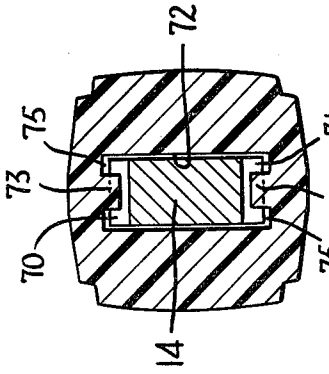


FIG. 4

HANDLE CONSTRUCTION

The invention is concerned with a handle construction of the slender elongated type adapted to have an article attached to one end particularly a safety razor head or cartridge. The handle is both attractive and well adapted functionally for the purpose and may be easily and economically fabricated.

It includes a main elongated stem part of plastic material having a long slot at each of a pair of opposite sides into which is fitted in each case a long channel or U-shaped trim insert of flexible material such as metal, the inwardly projecting side flanges having small finger extensions with openings therein adapted to engage over lugs protruding from the side walls of the stem slots, the fingers being flexible enable them to be spring-snapped into locking position behind shoulder edges of the lugs.

For securing an article to the end of the handle, a connecting part has a flat saw-toothed tang press fitted into an axial slot extending inwardly from one end of the handle, the tips of the saw teeth being embedded in the deformable plastic material.

The handle is composed of but a few parts which are easily press fitted together in final interlocked condition.

The objects of the invention and its advantages will be made more fully apparent from a consideration of a preferred embodiment depicted in the drawings in which:

FIG. 1 is an exploded view of the members;

FIG. 1*a* is a bottom end view;

FIG. 2 is a longitudinal cross sectional view of the handle with the parts assembled taken on the plane II—II of FIG. 1*a*;

FIG. 3 is a plan view of the assembled handle with a portion of the plastic main stem part and also a portion of one of the channel inserts broken away;

FIGS. 4, 5 and 6 are transverse cross sectional views taken on the planes 4, 5 and 6 respectively of the handle; and

FIG. 7 is a perspective view of the upper end of the handle showing indicia applied thereon.

In the specific embodiment of the handle the several parts shown particularly in FIG. 1 comprise a main stem part 10 of plastic material, elongated side inserts 11 and 12 of elastic material such as thin metal and an end part 13 having a tang portion 14 adapted to be press fitted into an axial opening at the normal upper end of the main stem part 10, the end part 13 serving as a means for connecting an article to the handle which in the present case is particularly adapted for securing a razor head or cartridge thereto indicated in broken lines at 15 in FIG. 2, the connecting part 13 in this case having a dovetail head or key 16 adapted to engage in a complemental dovetail slot in the razor cartridge 15.

The channels 11 and 12 may be identical but reversed end for end as assembled in the handle. Each is provided with fingers projecting inwardly as continuations of the side flanges of the U-shaped channel part. Specifically the channel part 11 for example as assembled in the stem 10 has opposed side flanges 20 and 21, a pair of finger elements 22 projecting from the flange 21 and a pair of finger elements 23 projecting from the opposite flange 20. Each finger has an opening adapted

to engage over a lug on the corresponding wall of the slot in the main stem member 10. As stated above the insert channel member 12 is similarly shaped and as assembled in the stem has fingers 24 at one side flange and fingers 25 at the opposite side flange.

In the present case each finger is made T-shaped with side openings such as shown at 26 and 27 of a finger 22 resulting in lugs 28 and 29 which are adapted in the case of each finger to engage over a pair of lugs 30 and 31 on the wall of the slot in the main stem, the lugs having an inclined surface facing outwardly as indicated at 40 and 41 in FIG. 6. Also the inner end of each finger is bent inwardly a small amount toward the central area of the channel as indicated at 42 in FIG. 6. The trim inserts 11 and 12 therefore are easily applied by a small amount of pressure until the T-shaped end snaps over the corresponding lugs the lugs having an inner square shoulder as indicated at 43 in FIG. 6 for locking the respective finger and thereby the channel in place.

Each channel is elongated at its upper end beyond the finger parts into a plain U-shaped channel with the flanges received in slots in the corresponding portions of the main stem 10 as indicated at 50 for example in FIG. 5 which is a section adjacent the upper end of the handle. The lower ends of the channel inserts are correspondingly fitted into short grooves in the lower portion of the handle as indicated at 60 in FIG. 2. The opposed major slots in the stem member coincide and merge and together extend entirely through the stem part 10 but in such case there is preferably included a pair of cross braces 65 and 66 as shown particularly in FIG. 2.

Referring again to the mounting of the connecting part 13 the tang 14 has roughened opposed edges which may be saw teeth as indicated at 70 and 71. The axial slot 72 for receiving the tang 14 is provided with opposed ribs 73 and 74 leaving small channels 75 at each side of the rib (FIG. 4). It will be understood that for a handle adapted to be embodied in a razor the dimensions will be relatively small, the width of the tang between peaks of the opposite saw teeth 70, 71 being in the range of about 0.200 of an inch. This width will be somewhat greater than the distance between the ribs 73 and 74 as initially formed and consequently when the tang is forced into the axial slot the teeth will be embedded in the ribs 73 and 74 as indicated in FIG. 4 and to the extent required the plastic material of the ribs 73, 74 and may flow laterally into the grooves 75. The handle is composed of a suitable plastic material such as an appropriate grade of polystyrene having a homogenous molecular structure which responds to the memory of its former molded geometry, and after tang 14 is fully seated the displaced plastic forced into grooves 75 will partially return to its original geometry between the saw teeth 70 and 71 so that retraction of tang 14 is difficult.

As heretofore mentioned the main stem part 10 is preferably composed of plastic material such as polystyrene. The trim inserts 11 and 12 are of elastic material such as metal and may be decoratively finished or coated as with chromium plating, and being thereby of a color contrasting with the stem part 10. The other two sides of the main stem are preferably finished in decorative manner as by serrations 80, 81 extending transversely across the stem member the kerfs extending inwardly from each corner, those from one corner registering respectively with those from the opposite

corner but separated at the center line by a flat longitudinal strip **82**. FIG. **5** is a section taken through the bottom of the kerfs and FIG. **6** is a section taken through the ribs between the kerfs. Preferably for appearance purposes each longitudinally extending corner is cut out as indicated at **83**.

The serrations terminate at the ends of the inserts **11** and **12** but the bottom end section **84** has on opposite sides a pair of flat longitudinal strip areas **85** which may bear desired indicia or logo such as a trade name.

As indicated generally in FIG. **2** the handle is adapted to support a double edge safety razor head **15** with opposed cutting edges. The connector part **14** has a body part which is generally rectangular in cross section with a pair of opposed flat sides adapted to receive desired indicia. In the case of the razor in the present case it bears on one side the Roman numeral I and on the opposite side the Roman numeral II whereby the user can identify and select the razor edge desired as for example he may use the side I until it becomes dull and then use the side II.

Since various changes may be made in the razor shown and described herein and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained herein shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A handle construction embodying an elongated main stem of plastic material, and an end element for connecting the handle to an article, said element having a tang extending into a longitudinal opening at said one end of said stem, said tang being generally flat with opposed saw tooth edges, said stem opening having opposed longitudinal ribs complemental to the respective said saw tooth edges, the distance between the opposed inner edges of said ribs being normally less than the overall width of said tang whereby the tips of the saw teeth are embedded in said ribs, said tang being press fitted into said stem, and said ribs being defined by a longitudinally extending recess at each side permitting the plastic material to be laterally deformed into said recesses in the press insertion of the tang.

2. A handle construction in accordance with claim **1** in which said longitudinal opening in said stem and said tang are generally rectangular in cross section and the thickness of said tang is substantially equal to the width of said opening transverse to said ribs.

3. A handle construction in accordance with claim **1** in which said end element is adapted to support a safety razor head.

4. A handle construction comprising an elongated main stem having a longitudinally extending opening in the form of a slot with opposed side walls and longitudinally extending outer substantially flat edge strips, an elongated channel shaped member having side flanges engaged within said slot and having a substantially flat outer face, said side flanges each having a plurality of finger locking elements spaced along the respective flange comprising inward continuations of the flange, said finger locking elements each having an opening, the said side walls of said slot having lugs projecting into corresponding said openings respectively of said finger locking elements, said outer face of said channel member merging substantially with said edge strips of the stem.

5. A handle in accordance with claim **4** having a pair of said channel members arranged in said stem in opposed relation and similarly secured in said stem.

6. A handle in accordance with claim **5** in which the slots for the opposed channel members generally coincide with communication transversely through the stem.

7. A handle in accordance with claim **5** in which said main stem is of plastic material, and said channel shaped members are of metal in contrasting color.

8. A handle in accordance with claim **4** in which said finger locking elements are composed of flexible material, and said lugs have outer inclined surfaces and inner shoulder edges aiding in receiving said finger locking elements and locking the channel member in place.

9. A handle in accordance with claim **4** in which said finger locking elements are generally T-shaped with an opening in the form of a notch at each edge and the side walls have a pair of spaced said lugs each engaged in a corresponding said notch.

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