

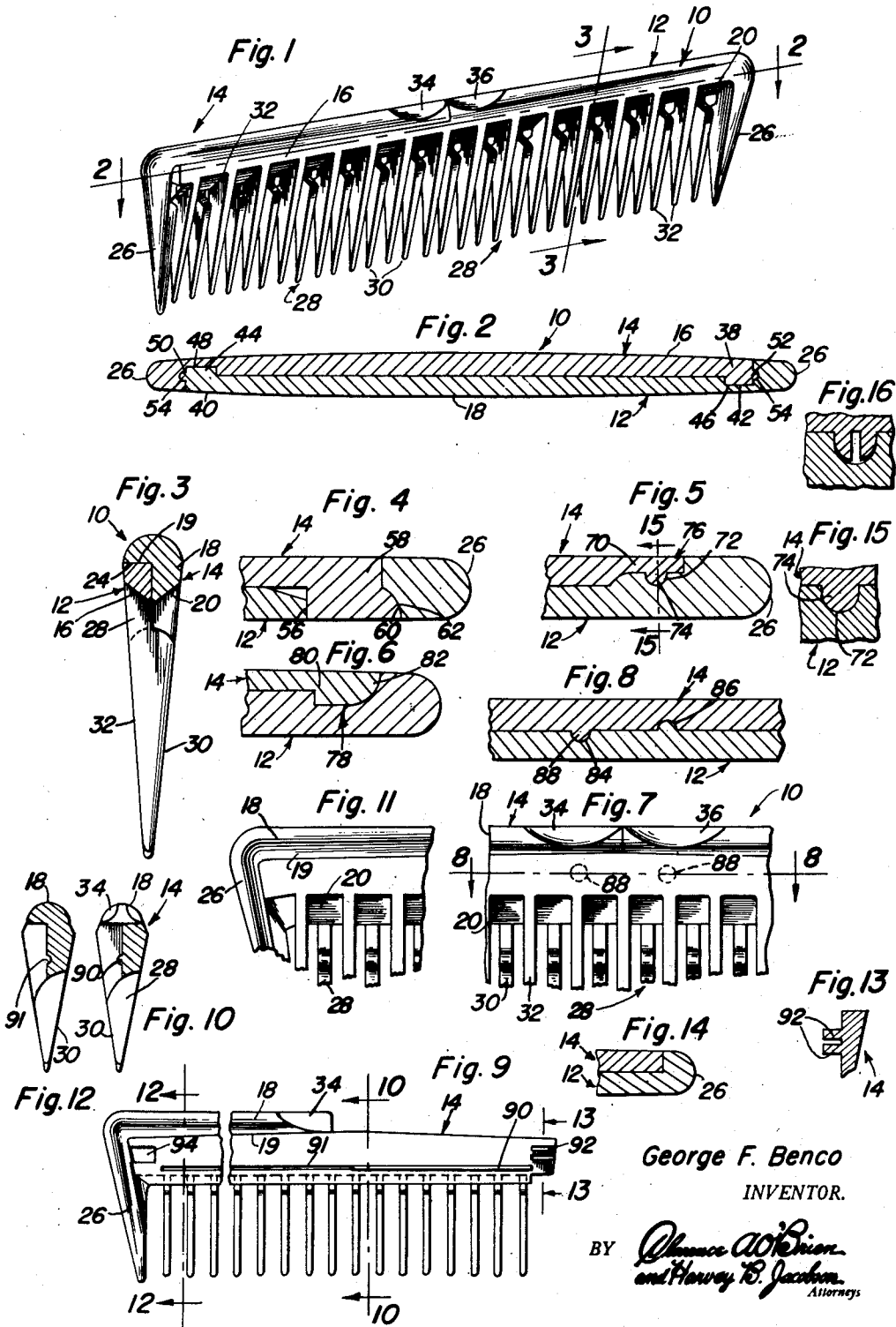
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SECTIONAL COMB

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SECTIONAL COMB

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This invention appertains to improvements in two part or sectional combs and relates, more particularly, to improvements on the sectional comb construction disclosed in Patent No. 2,474,212 issued to George F. Benco on June 28, 1949, a construction wherein the companion sections are separable for easy and practical cleansing purposes.

An object of the instant invention is to provide an improved and more dependable locking means for securing two cooperating sections of a sectional comb together in face to face engagement, the sections being formed with alternately arranged double-spaced teeth, which, when the sections are snapped apart and separated, are then nicely accessible for cleaning and polishing.

Another important object of this invention is to provide a comb having a pair of sections each of which is formed with teeth which are tear drop-shaped in cross-section, the teeth of the respective sections being in staggered relationship so as to properly intermesh when the two sections are locked together in ready to use face to face contact.

Another object of the invention has to do with strengthening the coacting sections by molding or otherwise forming each with novel contiguous back complements wherein the latter have relatively flexible body components of small cross-section with ribs atop the upper longitudinal edges, said ribs being substantially semi-circular in cross-section and abutting each other in end-to-end relation, each rib overhanging one face of its companion body portion, thus providing stabilizing and aligning shoulders and rendering the over-all comb back rigid and substantially unbreakable.

Then, too, novelty is predicted on the above construction in conjunction with unique fastening members or means characterized by male and female components which, while they may be situated at the center of the comb, are preferably arranged just inwardly of the opposite ends (and at the center too, if desirable), the male components being, in certain instances, in the form of friction held elements.

Also, the improved comb has, in addition to the above, tongue and groove means on the mating faces whereby to not only key the parts or sections together but to effect a bond which functions as a seal and prevents extraneous matter from getting in between said faces.

Furthermore, the sturdy endmost teeth have upper stocky end portions with their inward faces flat and providing anti-longitudinal slip-

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preventing abutments for the adjacent free ends of the respective flexible body portions of the two sections, this being desirable for further rigidity, since the latter body portions are of lesser cross-section.

A more general objective is to utilize structural features which are susceptible of being molded from commercial plastics with satisfactory tolerances, thus bringing into being a worthy construction in which manufacturers, retailers and users will find their respective requirements and needs fully met, contained and aptly available.

These and ancillary objects and structural features of merit are attained by this invention, preferred embodiments of which are set forth in the description and accompanying illustrative drawings, wherein:

Figure 1 is a view in perspective of the improved sectional comb;

Figure 2 is a longitudinal sectional view taken on line 2-2 of Figure 1;

Figure 3 is an enlarged transverse sectional view taken on line 3-3 of Figure 1;

Figure 4 is a fragmentary longitudinal sectional view of another form of locking means for securing two sections together;

Figure 5 is similar to Figure 4 and illustrates another form of locking means for the two sections;

Figure 6 is a view similar to Figure 5 illustrating another form of locking means;

Figure 7 is a fragmentary elevational view of the central portion of the comb, illustrating supplemental locking means;

Figure 8 is a sectional view taken on line 8-8 of Figure 7;

Figure 9 is an elevational view of one of the complete sections of the comb, the section being formed with all of its essential features;

Figure 10 is a transverse sectional view taken on line 10-10 of Figure 9 looking in the direction of the arrows;

Figure 11 is a fragmentary elevational view of one end of the complete comb;

Figure 12 is a cross-sectional detail as taken on the line 12-12 in Figure 9;

Figure 13 is a fragmentary sectional detail as taken along line 13-13 in Figure 9;

Figure 14 is a sectional detail of another form of end lock within the concept of the invention;

Figure 15 is a sectional detail as taken along line 15-15 in Figure 5; and

Figure 16 is a view similar to Figure 15 of

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another form of the end lock with resilient detents.

In the accompanying drawings, the sectional or two-part comb 10, with respect to Figures 1 through 3, inclusive, includes a front section 12 and a cooperating and complementary interlocking rear section 14. The sections are duplicates of each other and each is characterized by an elongated body portion 16 of restricted cross-section having a longitudinal reinforcing rib 18 atop its upper edge. One end of each body portion is flat as at 24 with the opposing end extending upwardly and outwardly therefrom forming lateral raised shoulders 19. The bottom surfaces 20 of the body portions are beveled inwardly and the shoulders 19 seat on the flat ends 24 of the opposite body portion when the sections are locked together in face to face engagement. The shoulders are then disposed in longitudinal alignment and abut at their inner ends, as seen in Figure 1.

The enlarged portions or shoulders 19 of the body portions terminate at their outer ends in relatively stout depending end or terminal teeth 26, which are tapered and, when the two sections 12 and 14 are locked together, form the respective end teeth for the comb. Tapered teeth 28 suitably shaped in cross-section, depend in spaced fashion from the beveled lower edge or under surface 20 of both of the body portions, the teeth of each section having lead edges 30 pointed in opposite directions. Thus, the teeth include straight edges 32, which extend downwardly in line with the under surface of each body portion and the lead edges are offset therefrom.

Concave finger recesses 34 and 36 are formed at the inner edges of the enlarged portions 19 of each of the body portions and, as seen in Figure 1, form the means for unsnapping the two sections and spreading the sections apart.

Various means may be provided for locking the two sections together, with their inner faces in engagement and, as seen in Figure 2, the ends 38 and 40 of the cooperating body portions are formed with offset lateral shoulders 42 and 44. The shoulders are preferably rectangular shaped and engageable in cooperating recesses 46 and 48 formed in the opposing faces of the body portions. The shoulders are provided with integral lateral detents 50 and 52, which are adapted to snap into sockets 54 provided therefor in the cooperating sections as seen in Figure 2.

Another form of locking means is illustrated in Figure 4 wherein a transverse opening 56 is formed in one end of one of the body portions and a laterally extending lug 58 is formed on the other end. The lug is frictionally fitted and retained in the opening with the outer end thereof flush with the outer surface of the apertured body portion. An offset 60 is formed on the lug and is received in a recess 62 formed in one of the side walls defining the opening 56.

As seen in Figure 5, another form of locking means 76 is illustrated and includes a tongue 70 formed on one end of each of the body portions, the tongue having a lateral detent 74 which is fitted in a recess 72 formed in the wall of a socket in the cooperating opposing ends of each body portion.

Another form of locking means 78 is set forth in Figure 6 and includes a lateral shoulder 80 formed on the ends of the flat sections 24, the shoulder engaging in a similarly configured socket 82 formed in the outer ends of the shoulder ends 19. As seen in Figures 7 and 8, locking means 86 may be provided for the center portion

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of the comb and, thus, lateral rounded detents 88 may be formed integrally on the inner faces of each body portion to frictionally fit in recesses 84 in the opposing body portions.

As seen in Figures 9 and 12, a hair seal may be provided and includes a longitudinally extending rib 90 and channel 91 formed on the inner face of each of the sections of the comb and provided to cooperate with a corresponding rib and channel alternatively formed and arranged on the complementary section.

Also, another form of end locking means, as seen in Figures 9 and 13, may be provided and includes split lateral projections or male members 92 formed on one end of the inner face of the sections and adapted to engage in sockets 94. The sockets 94 are provided with an opening of a width slightly less than the width of the projections 92 so that the projections are compressed upon insertion in the sockets and a secure end lock is obtained.

Of course, each end of the comb would be provided with one of the locking means, illustrated and above described, and each comb would include the center finger grips or recesses to enable the sections to be unsnapped. Due to the configuration of the teeth and the hair seal, no dirt or hair can become caked and any loose material clinging to the teeth will be dislodged upon breaking the comb and moving the sections apart.

As can be readily understood, the shoulders 19 provide means for partially stiffening sections 12 and 14 to produce a more rigid structure when the sections are snapped together to form the comb.

With further reference to Figures 7 and 8, it will be understood that the centrally arranged detents 88 and their respective coacting recesses or keeper sockets 84 and 86 coact with the respective end-locks and therefore the comb may employ the male and female members forming the respective end-locks by themselves or the stated center locks of Figures 7 and 8 may be added whenever necessary or desired. Then, too, it is believed to be possible to utilize these center locks without the special end locks where, for example, as shown in Figure 14, the special end-locks are omitted and the outer ends of the flexible portions of the respective body portions are cut straight and are adapted to abut the abutments provided on the inner stout upper end portions of the end-teeth 26. Thus, Figure 14 shows a modification characterized by abutting shoulder-forming surfaces.

As previously stated, the end-lock means may be made up of a male detent fitting into a female keeper seat as emphasized in Figure 15, or the detent may be split and transformed into resilient prongs to snap into the accompanying keeper seat as shown in Figure 16. In this respect, the end-locks have sometimes been referred to as snap fasteners.

It will be clear from the specification, taken in conjunction with the views of the drawings, that the over-all comb construction is characterized, briefly stated, by two identical companion sections each of the construction best shown in Figure 9 from which it is evident that the stated section comprises an elongated body portion provided along its lower edge with suitable double-spaced teeth and provided at one end with a stout end tooth whose upper portion constitutes an abutment. There is a rib of semi-circular cross-section on the upper edge which extends one-half the length of the body portion, permitting the remainder of the body portion to be flex-

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ible. The inward flat face of the body portion 14 has the linearly straight keying rib 90 at one end and the correspondingly straight groove or keyway 91 at the opposite end and when the two sections are together these keys and keyways provide the desired seal between the confronting faces of the respective body portions. What with suitable snap-fastener type end-locks and center-locks, if desired, and with the two ribs having their inner ends abutting and with the shoulder portions of the ribs overlying the upper edge portions of the respective flexible body portions, a unique arrangement of especially constructed sections is thus had.

Having described the invention, what is claimed as new is:

1. A sectional comb comprising, in combination, a rear section embodying an elongated flexible body portion of restricted cross-section having a stout non-flexible end-tooth at one end and smaller double-spaced teeth depending from its lower edge and having a longitudinal reinforcing rib atop its upper edge extending from said end-tooth and terminating at the approximate center of said body portion, one longitudinal edge portion of said rib projecting beyond the inward face of said body portion and defining an overhanging shoulder, a front section, the latter having a body portion with double spaced teeth and otherwise corresponding in construction to said rear section, the inward faces of both sections being in mating and overlapping contact with each other with the respective teeth alternating, the inner ends of the respective ribs being in abutting contact, the respective shoulders overlying and resting on the upper edges of the non-ribbed reaches of the respective body portions, the transverse end portions of the respective body portions having contacting abutment means assisting in maintaining said sections in assembled relationship.

2. The structure defined in claim 1, wherein the abutment means at the ends of the respective sections is characterized by respective end-teeth projecting beyond their coating inward faces with the projecting portions providing endwise abutments and the adjacent ends of the corresponding body portions resting against said abutments.

3. The structure defined in claim 1, wherein said inward faces have linearly straight interfitting keys and keyways providing a bonding seal between said sections.

4. The structure defined in claim 1, wherein the abutting ends of the respective ribs are provided with finger-niches to facilitate parting the sections.

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5. The structure defined in claim 1, wherein said lower edges of the respective sections are chamfered inwardly and downwardly.

6. As a new article of manufacture and a component part of a sectional comb of the class described, a comb section having a body portion of a length substantially coextensive with the over-all length of the complete comb, said body portion having its inward face flat and provided at one end with a keying rib and at the opposite end with a groove forming a keyway, comb-teeth attached to and depending from the lower longitudinal edge portion of said body portion, a relatively stout end-tooth attached to one end of the body portion and depending in the same direction as the first-named teeth, the upper portion of said end-tooth being of stout cross-section and providing, on its inner side, an abutment, a reinforcing rib atop the upper edge portion of the body portion and extending from said end-tooth toward and terminating at the approximate center of the body portion.

7. As a new article of manufacture and a component part of a sectional comb of the class described, a comb section having a body portion of a length substantially coextensive with the over-all length of the complete comb, said body portion having its inward face flat and provided at one end with a keying rib and at the opposite end with a groove forming a keyway, comb-teeth attached to and depending from the lower longitudinal edge portion of said body portion, a relatively strong end-tooth attached to one end of the body portion and depending in the same direction as the first-named teeth, the upper portion of said end-tooth being of stout cross-section and providing, on its inner side, an abutment, a reinforcing rib atop the upper edge portion of the body portion and extending from said end-tooth toward and terminating at the approximate center of the body portion, one longitudinal edge portion of said rib projecting beyond the flat surface of the body portion and providing an overhanging assembling and retaining shoulder and the stated flat face of said body portion being provided with male and female fastenings.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,474,212	Benco	June 28, 1949