(No Model.)

H. G. GUILD.

COMB.

No. 504,979. Patented Sept. 12, 1893.

Fig. 1.

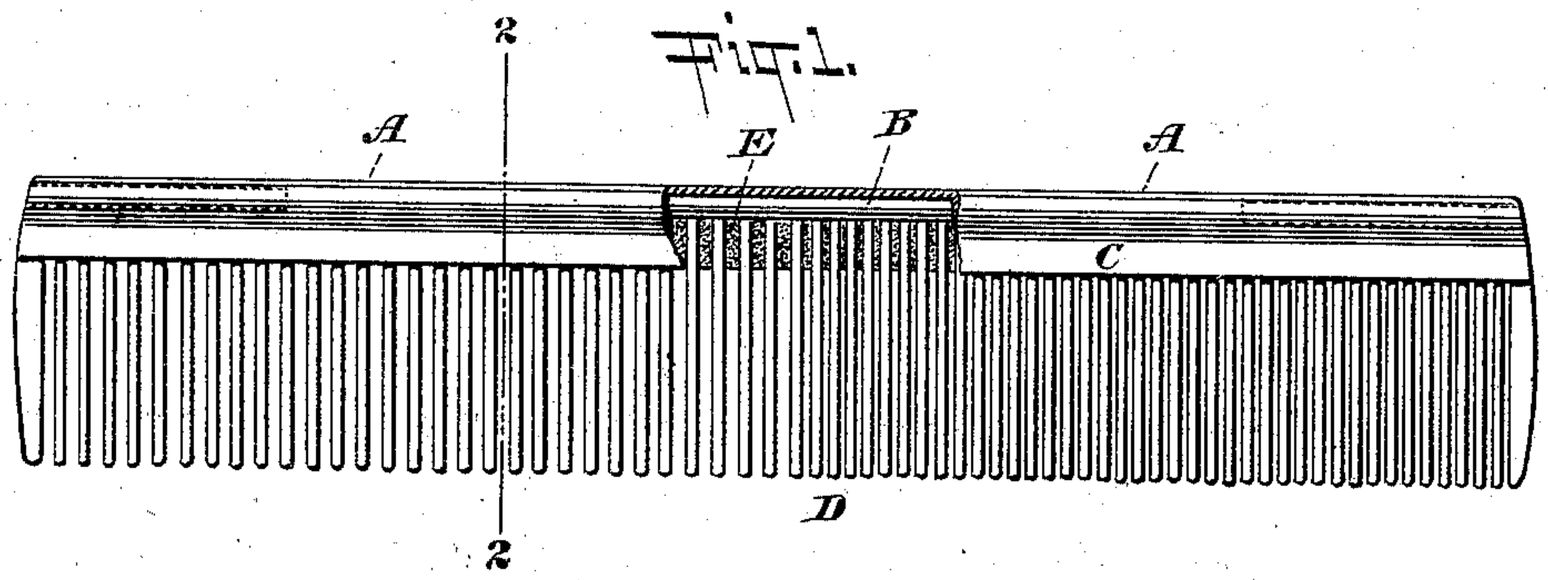


Fig. 2. Fig. 3. Fig. 4. Fig. 5. Fig. 6. Fig. 7. Fig. 8.

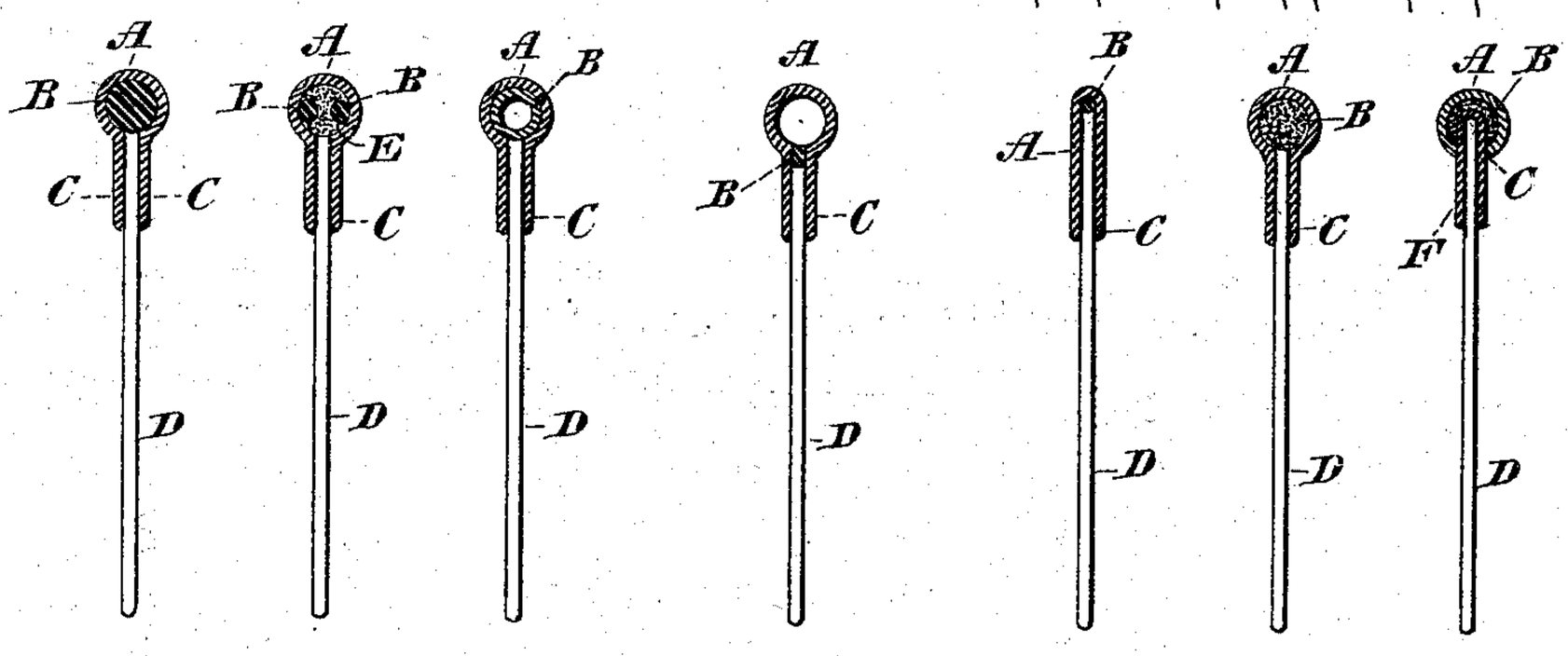


Fig. 9.

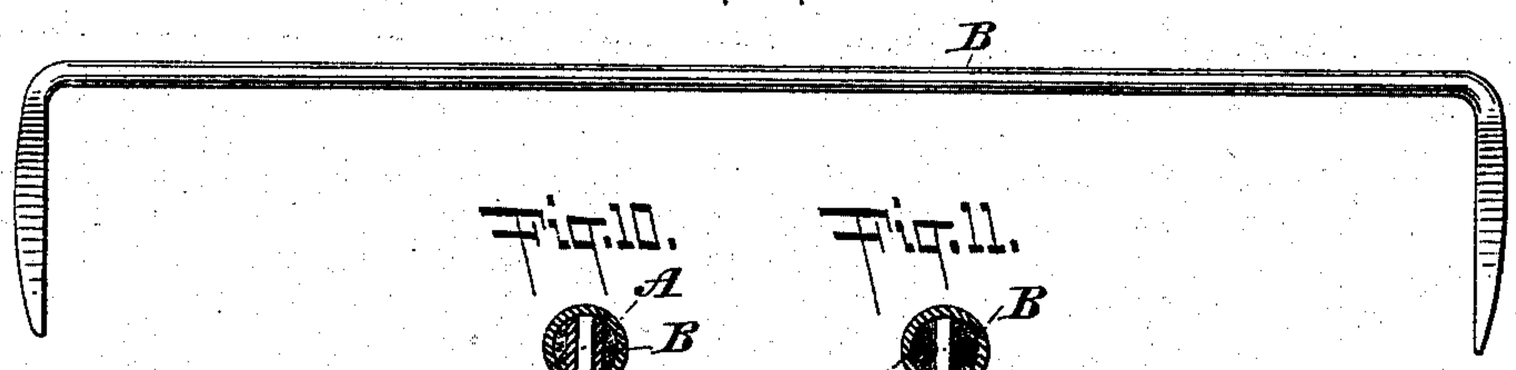


Fig. 10.

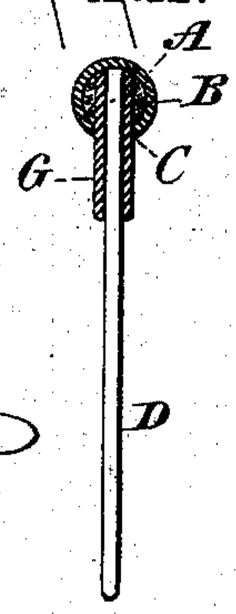
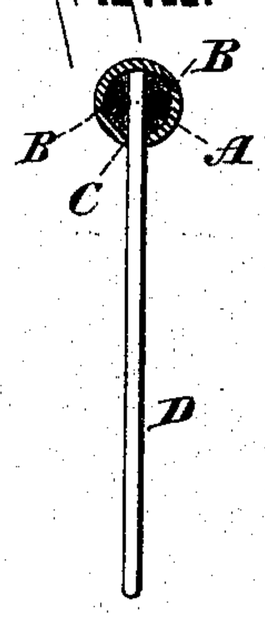


Fig. 11.



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COMB.

SPECIFICATION forming part of Letters Patent No. 504,979, dated September 12, 1893.

Application filed February 3, 1893. Serial No. 460,884. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. GUILD, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Combs and the Manufacture Thereof, of which the following is a specification.

My present invention relates to improvements in combs.

In my application filed June 8, 1891, Serial No. 395,484, I have described a method of manufacturing combs which consists in applying to the back of the comb a strengthening strip or strips of metal, or other material, and subsequently casting, molding or otherwise applying metal to said back and strip and partially or entirely covering the same therewith. While the said application is designed to cover combs of all descriptions generically, I desire in the present case to cover the specific application of the invention to all metal combs, which involves a somewhat different process.

The object of the invention is to provide an all-metal comb with a very strong back which will, at the same time, be neat in appearance and light in weight.

With these and other ends in view, the invention consists of a comb formed by drawing or otherwise applying a channel-piece around a strengthening strip, inserting the teeth between the projecting lips or edges of the channel-piece and then uniting the parts firmly and rigidly together by means of molten metal, as will be fully pointed out and described hereinafter.

To enable others to more readily understand my invention, I have illustrated the same in the accompanying drawings, in which—

Figure 1 is a plan view of a comb embodying my invention and partially broken away to show the strengthening strip. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Figs. 3 to 8 inclusive and Figs. 10 and 11 are transverse sectional views of combs constructed in accordance with my invention and showing various forms of strengthening strips and different methods of arranging the same in the comb. Fig. 9 illustrates a strengthening strip having its ends turned down to form the end teeth of the comb.

Referring to the drawings in which like letters of reference denote corresponding parts in all of the figures, A designates the channel-piece for my improved comb, which is preferably made of sheet metal, although other metal may be used with equally good results, if desired. The channel-piece is secured around the strengthening strip or reinforce B and it is provided with the projecting lips or edges C between which the teeth D are inserted, and then the molten metal E is run in and the whole rigidly secured together thereby.

In carrying my invention into practice, I take the strengthening strip B, which may be made of metal, wood, or any other suitable material, and having secured the same in a rigid position I draw or press the channel-piece A around said strengthening strip until it fits snugly and tightly upon the same; or, the channel-piece may first be struck up or cast into the desired shape and the strengthening strip inserted therein afterward, if desired, and this is usually done when the strengthening strip extends only partially through the channel-piece or consists of short plugs inserted in each end of the channel-piece, as shown in dotted lines in Fig. 1. As I have said, the channel-piece may be made of sheet metal or it may be cast, molded or otherwise produced, the only essential being that the space for the strengthening strip B be provided, substantially as shown in the figures of the drawings. The teeth D are now inserted in between the lips or edges C in a manner well-known in the art, and then the molten metal E is run in around the teeth to secure the channel-piece, strengthening strip and teeth rigidly and firmly together. When the metal is run in it will fill the spaces between the teeth within the lips and also run around the strengthening strip to form a perfectly solid comb. If desired, the channel-piece may not be arranged tightly upon the strengthening strip but a space may be left between them to permit the molten metal to run entirely around said strengthening strip. This strengthening strip may be arranged in various ways, and I have illustrated several of the preferred constructions in the drawings. In Fig. 2 the strengthening strip is fitted closely against the upper part of the

channel-piece, but this is not necessary as I have hereinbefore explained. Two or more strengthening strips may be employed, as shown in Fig. 3, or a hollow tube, as shown in Fig. 4. In some cases it may be desired to have a large back for the comb, and in this event the strengthening strip can be arranged as shown in Fig. 5, and the tube-like portion of the channel-piece filled with the molten metal or left hollow.

The size and material of which the strengthening strip is made are varied according to the size and appearance of the comb which it is desired to produce, and it may consist of a small wire for the style of comb shown in Fig. 6, or it may be soft metal run in as shown in Fig. 7. The channel-piece and strengthening strip may also be applied to combs in which the teeth are provided with a metallic back F, as shown in Fig. 8, the essential features being the same. The downwardly extending lips on the channel-piece may be omitted and the same result accomplished by the edges of the channel-piece, as illustrated in Fig. 10 in which said edges impinge tightly against plates G arranged on opposite sides of the teeth, and in Fig. 11, in which the edges grasp the teeth directly. In both instances the channel-piece will be secured to the teeth by molten metal as in the other forms before described.

When the reinforce or strengthening piece B consists of a wire or strip of metal the ends may be bent downward to form the end teeth of the comb, as illustrated in Fig. 9, or the wire plugs shown in dotted lines in Fig. 1 may be provided with the end teeth.

By constructing a comb as above described, the channel-piece, which is preferably made of brass, a comparatively expensive metal, may be made much thinner than in combs of the ordinary construction, as in the latter case the brass back is wholly relied upon for the strength, while in my construction a portion of this expensive metal is replaced by a cheaper metal of greater strength. The use of a reinforcing or strengthening strip partially filling the channel-piece, also causes a great saving in the quantity of solder or binding metal, the cost, as well as the weight, of the comb being thereby decreased, while its strength is increased. When a larger back is desired for ornamental or other purposes wood strengthening strip or strips may be used.

I have not thought it necessary in this application to describe any form of mold for use in connection with my invention but may use any kind adapted for the purpose.

I am aware that changes in the form and proportion of parts and details of construction of my invention may be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make all such changes as fairly fall within the scope of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An all-metal comb, constructed of a thin sheet metal channel-piece, a strengthening piece inclosed within said channel-piece, teeth arranged between the lips or edges of said channel-piece, and a binding metal run in around said teeth and strengthening piece, whereby a lighter channel-piece and less binding metal may be used for making a cheap, light and strong all-metal comb, substantially as described.

Signed at New York, in the county of New York and State of New York, this 2d day of February, A. D. 1893.

HENRY G. GUILD.

Witnesses:
HERMAN GUSTOW,
WM. O. BELT.