

March 16, 1926.

1,576,588

M. FINSTONE

ART OF MANUFACTURING FOUNTAIN PEN CAPS AND BARRELS

Filed Feb. 20, 1925

Fig. 1.

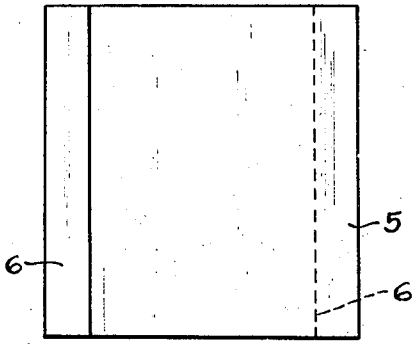


Fig. 6.

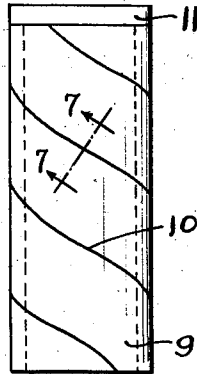


Fig. 5.

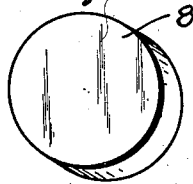


Fig. 2.

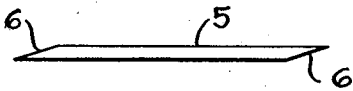


Fig. 7.



Fig. 8.

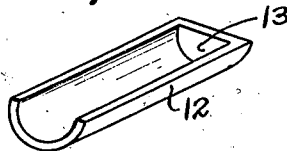


Fig. 3.

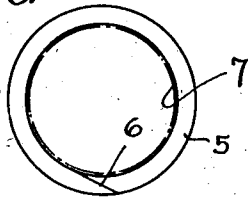


Fig. 9.

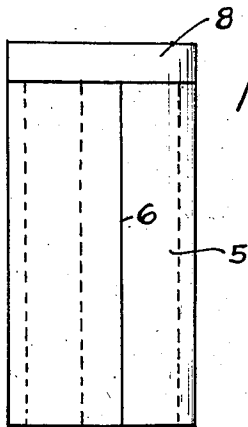
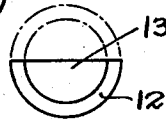


Fig. 4.

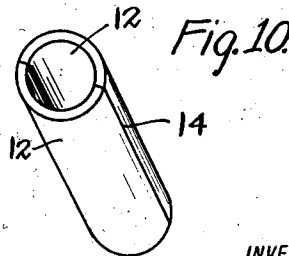


Fig. 10.

INVENTOR  
MARX FINSTONE  
BY  
*Wm. H. Moel*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

MARX FINSTONE, OF NEW YORK, N. Y.

ART OF MANUFACTURING FOUNTAIN-PEN CAPS AND BARRELS.

Application filed February 20, 1925. Serial No. 10,709.

*To all whom it may concern:*

Be it known that I, MARX FINSTONE, a citizen of the United States of America, residing at New York city, county of New York, and State of New York, have invented certain new and useful Improvements in the Art of Manufacturing Fountain-Pen Caps and Barrels, of which the following is a specification.

10 This invention relates to the art of manufacturing fountain pen barrels and caps and in particular to a method of forming the parts from flat stock.

A particular object of the invention is to make a barrel or cap from a flat piece of stock by rolling or forming the same and fusing the edges thereof together with an acid cement whereby the finished product will not show any joining seams.

20 A further object is to make up a barrel or cap of a strip of material wound spirally around a mandrel and joined by cement at the meeting edges to provide a completed barrel or cap.

25 A further object of the invention is to make up the barrel or cap member from a flat piece of mottled or marbled pyroxylin or celluloid thus doing away with casting molds, and other accessories necessary heretofore in the casting of barrels and caps which were unsatisfactory and left the exterior of the barrel or cap in roughened condition thereby necessitating turning and polishing. In my present method of construction no polishing or turning is necessary as the finished stock is turned around a mandrel and when joined completes the finished product.

40 Referring to the drawing wherein I have shown a preferred embodiment of my invention:—

Figure 1 is a top plan view of a piece of stock used in the manufacture of the pen barrels and caps.

45 Figure 2 is an end edge view of the piece of stock as shown in Figure 1.

Figure 3 is an end view of the barrel or cap stock as formed around a mandrel.

50 Figure 4 is a view in elevation of a cap having an end closure thereon and as it would appear after being finished, the joining seam being exaggerated for the purpose of illustration.

55 Figure 5 is a view in perspective of the top piece which is used to close one end of the barrel or cap.

Figure 6 is a view in elevation of a barrel or cap made up from a spirally twisted piece of flat stock having an end cover thereon. 60

Figure 7 is an enlarged section on the line 7—7 of Figure 6.

Figure 8 is a view in perspective showing how a half portion of the pen barrel or cap may be made by pressure in a forming die. 65

Figure 9 is a section on the line 9—9 of Figure 8, and

Figure 10 is a view in perspective of the two halves of a pen barrel or cap as made up, one of the halves being shown in Figures 8 and 9. 70

Referring to the drawing in detail 5 indicates a flat piece of stock, the same composed of marbled or mottled, or plain pyroxylin or celluloid which is trimmed along its meeting edges to form bevels 6. 75

In the method of making up a barrel or cap the following steps are observed. First the stock 5, of any desired thickness is trimmed down to size so that when rolled into position it will be the correct diameter and length. The edges are then beveled, the trimming and bevelling being done while the stock is cold. 80

The stock is then heated and placed around a mandrel 7 as shown in outline in Figure 3 and the bevelled edges when brought together are joined by fusion caused by using an acid-containing cement under high pressure, the acid acting under heat pressure to dissolve the stock at its meeting edges to fuse the same together without marring it or destroying its smooth finish. In all forms hereinafter described the fusing method of attaching the parts or edges together is carried out by the use of the particular stock-like cement having compounded therewith an acid, which under heat uses the stock and cement to thereby securely fasten the same together. 85

After the cylindrically formed stock is completed a top or end piece 8 is cemented or fused thereon and the barrel or cap is completed and ready for threading or other operations necessary to its completion, as shown in Figure 4. 90

If desired a long strip 9 may be used having its edges beveled and the same wound around a mandrel spirally as at 10 and the edges thereof cemented or fused as described after which an end piece 11 is placed there- 100

on. In Figure 7 the contacting or fused edges of the stock are shown.

Another method of making up a barrel or cap is shown in Figures 8, 9 and 10 in which 5 12 represents one half of the barrel or cap which is made in a forming die under heat and pressure, the end closure 13 being formed by the stamping process so that when two halves so formed are joined at their 10 edges as at 14 by fusing the pen barrel or cap is completed. If desired the halves may be square or any desired shape in cross section to provide a novel pen. Further with my fusing method I can make up a pen body 15 and cap the cross section of which will be hexagonal or pentagonal in shape, the panels making up the sides of the article being joined by fusing to make the completed product.

20 It will be evident that I have provided a new and inexpensive method of making up pen barrels and caps of pyroxylin or celluloid by forming the body out of one or more pieces of stock and fusing the same together 25 whereby time and money are saved in manufacture with a resulting benefit to the consumer.

My improved method enables one to make 30 fountain pen barrels and caps out of the mottled or marbled pyroxylin. While it is possible to draw out a tube of noncolored or nonmottled pyroxylin, it is impossible to draw out a tube of the marbled pyroxylin, because the drawing out process destroys the 35 color effect. The only way therefore to make up this kind of a barrel is to drill the same out of solid stock, thereby entailing great waste. My improved method therefore does

away with the waste and reduces the manufacturing cost.

Having described my invention what I claim is:—

1. The method of manufacturing pen barrels or caps which consists in forming a piece of stock around a mandrel and fusing the 45 edges of the stock together.

2. A fountain pen barrel or cap composed of pyroxylin or the like made from a cylindrically formed piece of stock the meeting 50 edges of which are fused together.

3. A fountain pen barrel or cap composed of pyroxylin or the like made from a cylindrically formed piece of stock having bevelled meeting edges, the same being joined 55 by fusing with an acid-containing cement to complete the barrel or cap.

4. The method of manufacturing fountain pen barrels or caps which consists in forming a piece of pyroxylin or celluloid around a mandrel, cementing the meeting edges 60 thereof together, and then cementing an end on said piece.

5. The method of manufacturing fountain pen caps and barrels which consists in trimming a piece of flat stock to size, heating the 65 same and forming it around a mandrel and then joining the meeting edges thereof by fusion under high pressure.

6. The method of manufacturing fountain pen barrels or caps which consists in bevel- 70 ling the opposite edges of a piece of pyroxylin or the like, heating said piece, forming the same around a mandrel and then cementing said bevelled edges together under high pressure.

MARX FINSTONE.