A. E. MAYNARD.

SPECTACLE CONSTRUCTION.

APPLICATION FILED MAY 10, 1920.

1,386,068. Patented Aug. 2, 1921.

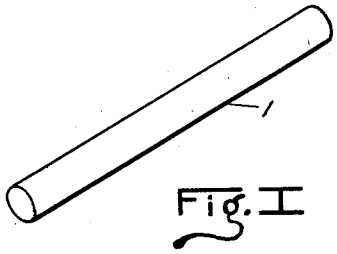


Fig. I

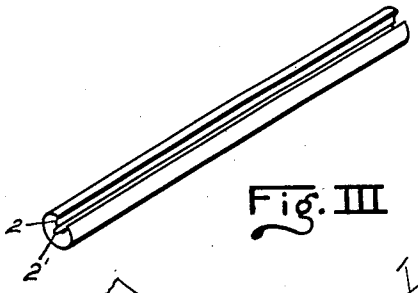


Fig. III

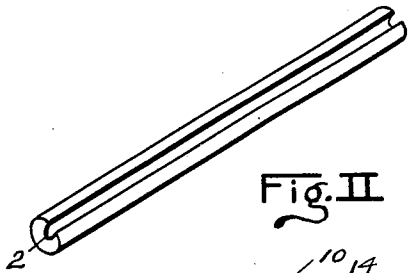


Fig. II

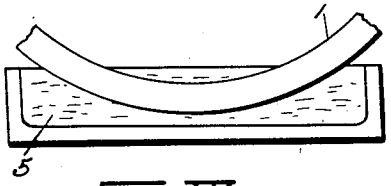


Fig. IV

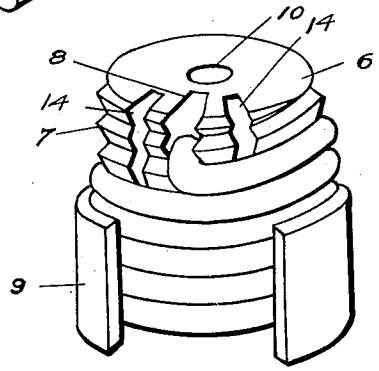


Fig. V

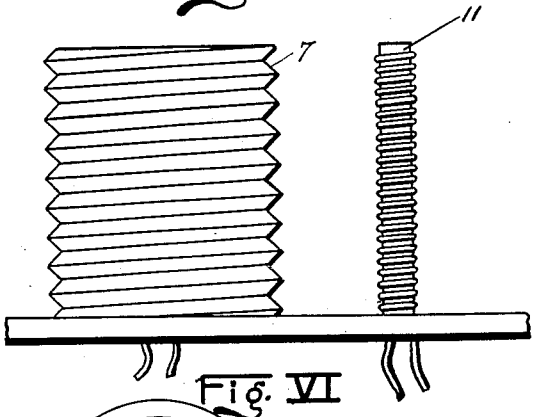


Fig. VI

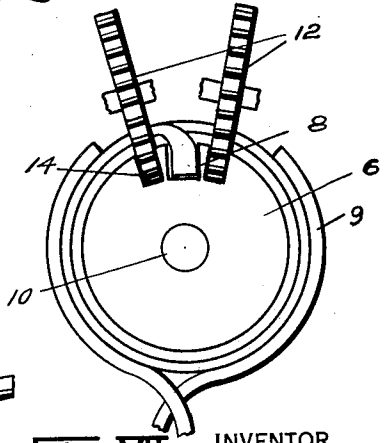


Fig. VII

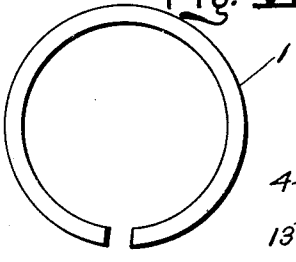


Fig. VIII

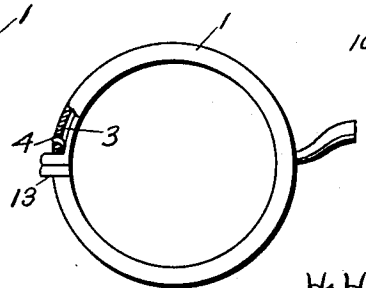


Fig. IX

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UNITED STATES PATENT OFFICE.

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SPECTACLE CONSTRUCTION.

1,386,068. Specification of Letters Patent. Patented Aug. 2, 1921.

Application filed May 10, 1920. Serial No. 380,302.

To all whom it may concern:

Be it known that I, ALBERT E. MAYNARD, a citizen of the United States, residing at Southbridge in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Spectacle Construction, of which the following is a specification.

This invention relates to improvements in spectacle construction and has particular reference to a novel and improved process of preparation of certain of the parts of mountings of this character.

The object of the present invention is the provision of a novel and improved process which shall greatly facilitate the manufacture of parts for spectacle and eyeglass mountings, shall permit of standardization of the various steps in the process of manufacture, including the preparation of the stock in standard form irrespective of the particular size of article to be subsequently formed from the stock, the insuring of the parts being of proper size and shape when completed and in general the provision of a process which shall facilitate the satisfactory commercial production of ophthalmic mountings.

Figure I represents a fragmentary perspective view of a portion of stock.

Fig. II represents a view of one step in the process.

Fig. III represents a view of another step in the process.

Fig. IV represents a softening step.

Fig. V illustrates the stock at the completion of a further step during the process.

Fig. VI illustrates the setting step in the process.

Fig. VII illustrates the cutting off of the completed article.

Fig. VIII represents a view of the completed part after being cut.

Fig. IX represents a view of the parts made up into the finished mounting, a part being broken away to illustrate the manner of assembling of the parts.

This invention, as previously stated, relates to an improved process for forming parts for ophthalmic mountings and has particular reference as here illustrated to the formation of parts from xylonite or other composition material, the parts in question being intended as the frames of what are commonly termed "Windsor" mountings, that is to say, mountings having an inner metallic frame receiving the lens and an outer non-metallic cushioning or ornamenting frame. In the construction of mountings of this character a portion of xylonite or other composition material 1 is formed into a long rod, the rod being then grooved by suitable mechanism, as at 2, in order that it may properly receive the frame 3, the groove extending longitudinally of the entire piece of material. Additional to the groove 2 there is formed longitudinally of the entire strip of material a supplemental groove 2′, the purpose of this groove being to receive the fastening pins 4 for the completed mounting. It will, of course, be understood that it would be possible to dispense with the groove 3 and to merely form slight notches for the fastening pins 4, or possibly no notches at all, but the additional advantage I have found in my improved process of extending the supplemental groove 2′ the entire length of the stock is that I may then cut off the stock in any desired length for different sizes or shapes of mountings and always have a proper groove 2′ at the necessary point for the short securing pin 4. In any event, the stock having been formed with the necessary groove or grooves, I preferably submit it to a softening action as by placing in a bath 5 of warm water or the like, and after softening wind the stock on a suitable arbor 6. I have illustrated in Fig. V an improved construction of arbor for this purpose having the thread 7 to fit within the groove 2 to insure exact proper positioning of the stock around the arbor and having a slot 8 into which the bent end of the stock may be inserted to secure the same in place during the winding operation. After having wound the stock in any suitable manner upon any desired form of shaping member, I preferably place therearound a suitable clamp 9 and suitably heat the arbor stock and clamp to such temperature that the stock will become softened and properly set to the new form. This may be conveniently accomplished by making the arbor hollow, as at 10, and slipping it over an electrically heated pin 11, as is indicated in Fig. VI. This having been accomplished

I may either allow the parts to cool gradually, or may suddenly chill the stock by dropping in a cold bath or other suitable manner, the particular details of the chilling being unimportant and, therefore, not illustrated.

After this operation has been completed I preferably sever the several coils, as for example by a double cutter 12, indicated in Fig. VII, the particular advantage of the double cutter being that in place of a single radial cut a pair of substantially parallel cuts may be formed through the stock so that the ends will best and most tightly fit against the end pieces 13 of the frame on which the parts are to be mounted, thus making a slightly better joint than if the stock were cut radially at a single point, when the separation caused by the end pieces 13 would cause a slight tilting of the ends tending possibly to interfere with the satisfaction of the joint.

It is to be understood that while I have shown certain mechanical features in connection with the various steps of the process these are capable of wide variations and that the desired results may be accomplished in many ways so long as there is no departure from the generic ideas involved in the process here disclosed.

To facilitate the cutting of the several coils of the stock 1 it is to be noted that I preferably form in the member 6 the pair of kerfs or slots 14 of size to readily receive the cutters 12 so that the cutters may be sure to go entirely through the material in a clean and neat manner and properly sever the parts. The length of the material will then be the circumferential length from edge to edge of the kerf around the shaper 6 and so be positively determined by the formation of the former, it being understood that different sizes or notching of formers are employed for different size eyes.

I claim:

1. The process of forming non-metallic part for ophthalmic mountings, consisting in grooving the stock, winding the stock on a suitable arbor, treating the stock to cause it to set to the form of the arbor, and subsequently cutting the stock into individual sections.

2. A process for the purpose described, consisting in forming a double groove within the stock, winding the stock on a suitable arbor, setting the stock to the shape of the arbor, and severing the several coils of the stock while retained in position on the arbor to provide a plurality of frame portions each of uniform size.

3. The process of forming stock for pin retained non-metallic frame members, consisting in longitudinally grooving the stock to receive a metallic frame, and forming a continuous supplemental groove lengthwise of the stock whereby a fastening pin may be positioned at any point along the stock, and a receiving groove therefor will be present.

4. The process of forming an ophthalmic mounting, including forming a non-metallic strip in rod form, grooving the strip longitudinally thereof, softening the groove strip, winding the softened strip on a shaper, treating the stock while wound to cause it to set to the shaper, and cutting the stock before removing from the shaper to produce a plurality of parts each of uniform size.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ALBERT E. MAYNARD.

Witnesses:
ALICE G. HASKELL,
ESTHER M. LAFLER.