

No. 649,679.

Patented May 15, 1900.

J. POMEROY.

STRIP OF MATERIAL FOR MAKING TAPERING ARTICLES.

(Application filed Dec. 4, 1899.)

(No Model.)

Fig. 1,

Fig. 2,

Fig. 3,

Fig. 4,

Fig. 5,

Fig. 6,

Fig. 7,

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## STRIP OF MATERIAL FOR MAKING TAPERING ARTICLES.

SPECIFICATION forming part of Letters Patent No. 649,679, dated May 15, 1900.

Application filed December 4, 1899. Serial No. 739,181. (No model.)

*To all whom it may concern:*

Be it known that I, JULIAN POMEROY, a citizen of the United States, residing in Becket, in the county of Berkshire and State of Massachusetts, have invented a new and useful Strip of Ratan or other Material Adapted for Use in Making Whips or Similar Articles, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, which form a part hereof.

The invention relates to a new form of strip of ratan or other similar material which is especially adapted for the manufacture of whips, fishing-rods, or similar articles.

Heretofore it has been the practice in the manufacture of whips or similar articles to divide the stalk into two or (at the most) four strips and then by a succession of operations to trim the sides of these strips, and thus prepare them for being put together or combined so as to form a complete whip. These two methods have involved a large number of separate operations, each one necessarily increasing the cost of the product. The article formed thereby has been in many respects imperfect and unsatisfactory. Moreover, by these old methods it has never been possible to make more than one whip out of a single stalk of ratan or similar material, and frequently more than one stalk has been required for each whip.

The objects of the present invention are to simplify the method of making such articles, to decrease the cost by the saving both of material and of labor, and to improve the quality of the product.

The invention consists, first, in a new article of manufacture comprising a strip of ratan or similar material tapering throughout the whole or part of its length, according to whether it has a butt portion or not, the strip having an outer and two inner surfaces, one or both of the inner surfaces being substantially helicoidal, the edges of the outer surface converging along the tapered portion of the strip. In the best form of the invention both of the inner faces are made with substantially-helicoidal surfaces.

The invention also consists of a piece of ratan or similar material in the form of a strip tapering throughout the whole or a part of its

length, sector-shaped in cross-section, and having an outer and two inner faces, one or both of the inner faces having a substantially-helicoidal surface, the edges of the outer surface converging along the tapered portion of the strip. In the best form of the invention the strip is of such dimensions as to form an aliquot portion of a piece or stalk of ratan.

The invention also consists of other features and combinations hereinafter described and claimed.

My improved strip is illustrated in the accompanying drawings, in which—

Figure 1 represents, diagrammatically, a stalk of ratan, showing the lines of splitting or cleavage which are made in the material in producing my improved strip. Fig. 2 shows a series of cross-sections of the stalk, representing the lines of cutting or cleavage at twelve different points along the length of the stalk. The first two sections at the left hand show the lines of cleavage at the butt portions, there being here only two lines of cutting through the axis of the stalk. In the third section four lines of cleavage or cutting are shown passing through the axis of the stalk, thereby splitting the stalk into eight parts, all of which are tapering. In the fourth section the lines of cutting diverge still more, and so on, until in the section next to the last there are again only two lines of cleavage, the stalk being here separated into four parts to form the butt portions at the other end of the stalk. Fig. 3 represents my improved strip. Eight strips of this kind are formed from each stalk when the stalk is cut in the manner just described. Fig. 4 contains a series of cross-sections taken at different points along this strip. Fig. 5 contains a similar series of cross-sections, showing the shape of the strip after its sides have been trimmed. Fig. 6 shows a completed whip made by combining four of these strips. Fig. 7 contains a series of sections of this completed whip, showing the manner in which the strips are put together.

Similar numbers denote similar parts in the different figures.

I do not herein claim the improved method of dividing a stalk of ratan into strips, each adapted for use in making whips or similar articles, which is herein described, nor do I

claim herein the improved method of making whips or similar articles which is herein described, as these claims have been included in a previous application filed by me, Serial No. 674,569. What I claim herein is the improved strip which is produced by my improved method.

I will now describe the best method known to me of making my improved strip, from which its construction and characteristics will fully appear.

Referring to the drawings, 1 is a stalk of ratan or similar material. Beginning at one end—for example, at the left-hand end, as represented in Figs. 1 and 2—the stalk is split into four equal parts by cutting it on the lines 2 and 3. (See Fig. 2.) These lines of cut pass through the axis of the stalk and are made at right angles to each other, so as to divide this part of the stalk into four equal parts. The stalk is cut in this way for a distance equal to the length which is to be given to the butt portions in the completed whip. From this point on the stalk is split into eight parts by being cut on the diagonal lines 4, 5, 6, and 7. These four lines of cut or cleavage pass through the axis; but the lines 4 and 5 diverge from each other and the lines 6 and 7 diverge from each other, while the lines 5 and 6 converge and the lines 4 and 7 converge. At the middle of the stalk these lines are equidistant and cut the stalk into eight equal tapering parts. The lines of cutting continue in the manner already described until, as represented in the last two sections at the right in Fig. 2, the lines of cutting 4 and 7 have merged into the line 8 and the lines 5 and 6 have merged into the line 9. It will be seen that the right-hand end of the stalk is cut into four equal parts on the lines 8 and 9, thereby forming the butt portions at that end. The stalk is thus divided into eight equal strips, each of which has a butt portion equal in size to one-quarter of a stalk and a tapering portion tapering gradually from the butt portion to the tip. One of these strips is represented in Fig. 3. Fig. 4 contains a series of cross-sections representing the shape of this strip at different points.

It is apparent that the strips may be made either with a butt portion or without a butt portion. If they are made without a butt portion, the strips taper throughout their entire length. When cut by the method already described, the strips have an outer face 10 and two inner faces 11 11, the inner faces having substantially-helicoidal surfaces and the edges of the outer surface converging along the tapered portion of the strip. Each of these strips is an aliquot portion of the stalk of ratan and is sector-shaped in cross-section. The stalk, which is shown in Figs. 1 and 2, is divided into tapering strips upon lines of cleavage, of which any two adjacent ones converge or diverge opposite the tapered portions of the strip. In the form shown the stalk contains a sufficient number of tapered strips to make

two whips. It will also be observed that the inner surfaces or faces of the strip intersect lengthwise of the strip. In making a whip or other similar articles from strips of this kind the inner faces 11 11 of the strip are cut away or trimmed in any suitable manner, so as to reduce the strips to their proper size and shape for being combined with other strips to form a whip or other article. Fig. 5 contains a series of cross-sections of the strip, taken at the same points as the sections shown in Fig. 4 and representing the shape of the strip after its faces have been trimmed in this way. The strip is then ready to be combined with other strips which have been similarly treated, so as to form the completed whip or other article.

Figs. 6 and 7 show a whip made of four of my improved strips of ratan trimmed and united in any suitable manner.

By the use of my improved strip it will be found that two complete whips or similar articles can be made out of a single stalk, thus producing great economy of material and substantially preventing any waste. The strip can be easily made or cut.

The enamel or skin of the material is preserved throughout the entire length of the strip. No appreciable part of it is cut away or wasted. This enamel adds strength and elasticity to the strip. Its strength is also increased by the fact that along the middle line of each strip the fiber of the material extends from end to end. The strips are naturally and necessarily straight and are adapted when properly combined to form a straight true whip or other article having no tendency to be permanently bent or curved at the tip end, but possessing great elasticity. The strips are thus adapted to produce whips or other articles superior in quality and character to the whips or other articles heretofore made from split material.

While my invention is especially adapted for use with strips of ratan or similar material having an outer enamel or skin, it can also be advantageously employed with other material where for any reason it is desirable or useful to preserve the outer part of the material in contradistinction to cutting it away, as has been done heretofore in the manufacture of whips or similar articles from split material.

What I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a strip of suitable material tapering throughout the whole or a part of its length, having an outer and two inner faces, at least one of the inner faces having a substantially-helicoidal surface, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.

2. As a new article of manufacture, a strip of material such as ratan tapering throughout the whole or a part of its length, having an outer and two inner faces, the inner faces

- having substantially-helicoidal surfaces, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 5 3. As a new article of manufacture, an aliquot portion of a piece of material such as ratan in the form of a strip tapering throughout the whole or part of its length, sector-shaped in cross-section, and having an outer and two inner faces, one of the inner faces having a substantially-helicoidal surface, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 10 and two inner faces, one of the inner faces having a substantially-helicoidal surface, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 15 4. As a new article of manufacture, an aliquot portion of a piece of material such as ratan in the form of a strip tapering throughout the whole or part of its length, sector-shaped in cross-section, and having an outer and two inner faces, the inner faces having substantially-helicoidal surfaces, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 20 and two inner faces, the inner faces having substantially-helicoidal surfaces, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 25 5. As a new article of manufacture, a piece of material suitable for making tapering articles such as whips in the form of a strip tapering throughout the whole or part of its length, sector-shaped in cross-section, and having an outer and two inner faces, one of the inner faces having a substantially-helicoidal surface, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 30 6. As a new article of manufacture, a piece of material such as ratan in the form of a strip tapering throughout the whole or part of its length, sector-shaped in cross-section, and having an outer and two inner faces, the inner faces having substantially-helicoidal surfaces, the edges of the outer surface converging along the tapered portion of the strip, substantially as described.
- 35 40
- In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.
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JULIAN POMEROY.

Witnesses:

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