G. T. MAY.

CIGARETTE TIP AND METHOD OF FORMING SAME.

APPLICATION FILED JUNE 10, 1920.

1,369,041. Patented Feb. 22, 1921.

Fig. 1.

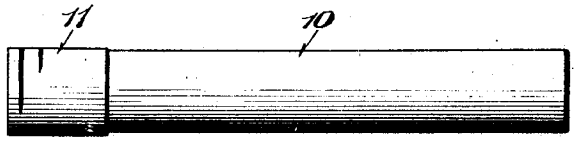


Fig. 2.

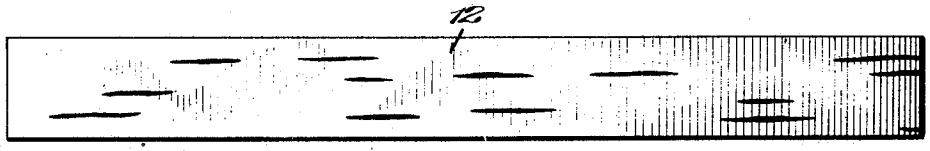


Fig. 3.

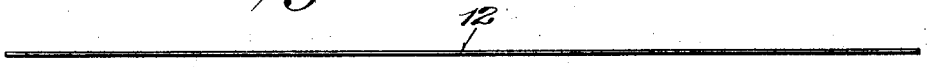
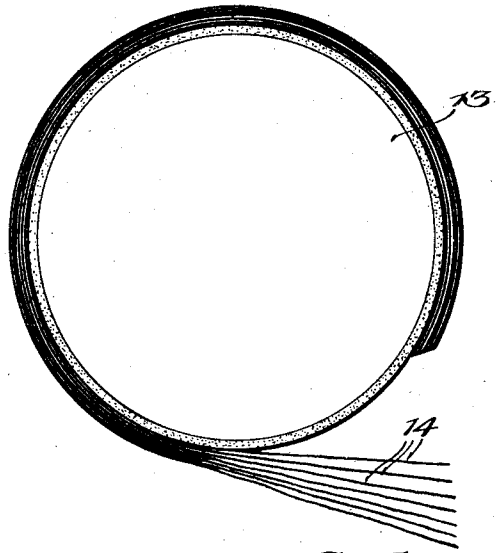


Fig. 4.



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CIGARETTE-TIP AND METHOD OF FORMING SAME.

1,369,041. Specification of Letters Patent. Patented Feb. 22, 1921.

Application filed June 10, 1920. Serial No. 387,873.

To all whom it may concern:

Be it known that I, GERTRUDE T. MAY, a citizen of the United States, residing at Washington, District of Columbia, have invented new and useful Improvements in Cigarette-Tips and Methods of Forming Same, of which the following is a specification.

The present invention relates to tips for cigarettes and method of making same.

It has for its object to provide a new and useful tip having certain advantages over the tips now in use, so far as known to me, and a novel method of producing the same, and the material from which it is made.

I am aware that cigarette tips have been made of various materials, among which may be mentioned cork and straw, and I do not claim, therefore, to be the first to conceive of the tipping of cigarettes with a natural vegetable growth.

I have discovered that the soft, membranous, papery, inner layers of the bark of certain trees possess physical characteristics which render them superior to the materials now in use for the purpose of tipping cigarettes. I have found that the bark of trees of the *Betula* order are particularly well adapted for this purpose, the bark of trees of that order, beneath its outer skin, being made up of a plurality of thin, tough, pliable layers; readily separable one from the other; readily divided along natural lines of cleavage; and having the qualities of strength; impermeability to moisture; ease of manipulation in preparing and applying to the cigarettes, and an appearance and "feel" which are attractive and pleasing when utilized for cigarette tips.

While I do not confine the practice of my invention to material obtained from this specific order (*Betula*) of trees, I have found that, so far as my present knowledge goes, the material obtained from them is best adapted for the purpose, the common white birch (*B. alba*) furnishing excellent material for the purpose, and, I believe the other birches, as, for example the canoe or paper birch (*B. papyracea*), and probably the black birch (*B. lenta*), are adaptable for this purpose. I believe, furthermore, that the Himalayan birch (*B. bhojputtra*) is well suited for this use, as the latter species is noted for the large number of thin, papery layers which may be procured in sheets of relatively large area from the bark stripped from its trunk.

The materials now in use for tipping cigarettes, particularly cork and straw, while they are useful and meet with favor, present certain problems in the matter of preparation which are not present in connection with the material which I have discovered and invented as applicable for this purpose. Cork, by reason of its porosity, develops, in the thin sheets into which it is cut, a series of minute holes, which necessitate the provision of an appropriate backing to give it the requisite strength for handling and to render it impermeable to moisture. Furthermore, the strips used for tipping must be cut from the blocks or plates of cork, involving more or less complicated machinery and methods to bring it to the desired thinness, all of which adds to the cost of this material. With respect to tips of straw, these must be produced from sheets or strips of straw made up of a plurality of split straws pieced together, this being necessary to give sheets or strips of a proper area, and this involves more or less tedious and expensive methods,

The bark layers, particularly those of the birch, which I regard as the best, may be obtained in large quantities, are readily separated, one layer from another, and when so separated are of the proper thinness and texture for use when cut into strips of appropriate widths, which strips may, of course, be pieced together to give a continuous strip roll for practical use in cigarette tipping machines. As stated, this material, the usefulness of which I have discovered, is impermeable to moisture; it is tough, so that it may be successfully and easily handled and requires no backing, and is, therefore adaptable in substantially its natural state for immediate application to cigarettes. Its surface is velvety and has a sufficient frictional quality to give it a good gripping surface without any unpleasant feeling to the lips; and its appearance is pleasing and attractive, this quality being heightened by the irregular specking of its surface with the brown spots or short lines characteristic, at least, of the ordinary white birch.

The method of producing the material from which these tips are made, is, owing to

the physical characteristics of these bark layers simple and expeditious. The tensile strength of these layers of bark is greatest along lines perpendicular to the axis of the tree or limb, in other words, around the tree, and such layers have a natural tendency to separate from one another in sheets, and, furthermore, to cleave or split along lines perpendicular to the axis of or around the tree. These characteristics lend themselves readily to the practice of my method in producing the material, for the bark may be removed in sheets of any desired size and may then be prepared by either first separating into layers and thereafter split or cut into strips, or, if preferable, the bark may be split into strips of appropriate widths and the layers of such strip thereafter separated, my invention contemplating either of these two methods. Obviously, another variation in manufacture would be separation of the layers, their piecing together end to end in sheets, and thereafter splitting the separated and pieced-together sheets into strips of appropriate widths.

In order that the discovery and invention may be more clearly disclosed, I have illustrated it conventionally in the accompanying drawings in which—

Figure 1 is a cigarette in side elevation, with a tip applied thereto.

Fig. 2 is a plan view of a strip of material.

Fig. 3 is an edge view of the strip shown in Fig. 2, although it will be understood that the illustration in Fig. 3 is purely conventional, as the membranous layers are exceedingly thin and cannot be illustrated as to the dimension of thickness in a conventional way.

Fig. 4 is a conventional view of the end of a tree or limb, with the layers of the bark conventionally illustrated and their loose ends separated, no attempt being made to illustrate accurately the number of layers, as these vary with the size and age of the tree.

Referring to the figures by numerals, 10 indicates the cigarette, to the end of which by any approved machinery or methods, the tip 11 formed of the thin, bark membrane is applied. Such tip will, of course, be severed from a strip 12 (see Figs. 2 and 3) of any appropriate width and made up into such lengths as may be desired, it being apparent that the stripped and cut sections may be pieced together at their ends to give strips which may be of any length and wound into rolls of any workable or customary size.

In Fig. 4 is illustrated conventionally the end of a limb or trunk 13, showing the bark with a plurality of layers 14 stripped off and separated.

The method of forming the strips may be carried out by hand or by any appropriate machinery, the steps of that method as above stated, being to remove the bark as conventionally illustrated in Fig. 4, and thereafter preparing it in any sequence of steps that is preferable, either first separating the layers and then splitting into strips; or, splitting the bark as a whole into strips and thereafter separating; or, piecing together separated layers and cutting or dividing the sheets thus formed into strips of appropriate widths.

The natural condition of the material imparts to it a tendency to maintain a curved form, such tendency being due to the circular contour of the tree or limb, and results in a condition of the material which lends itself to ready spooling or reeling for use and for laying it about any curved surface, such as the curved surface of a cigarette, the material having a natural tendency, by reason of this set curvature, of hugging closely a curved surface.

The material will, of course, be applied in any approved manner, by hand or machinery as may be preferred, the usual methods for applying the material to the cigarette being obviously adaptable, and any suitable adhesive such as is now commonly used and approved may be employed to secure the tips to the cigarettes.

It will be apparent from the foregoing that I have provided a cigarette tip, and tipping material, which are cheap, easily worked, and have, as recited above, the characteristics which I believe make them superior to the tips and materials now in use.

While, as indicated, the bark of trees of the birch order lends itself best to this use so far as I am at present advised, it will be understood that I do not limit myself to this particular order of trees, as I believe I am the first to utilize the thin membranous layers of tree bark for the purpose of tipping cigarettes; and, furthermore, although specifically applied to cigarettes it is to be understood that the term "cigarette," as here used, is not to be taken literally, but that my invention contemplates the application of this tip to cigarettes, little cigars, cigars, cigarette and cigar holders, and pipe bits.

I claim:

1. As a new article of manufacture; a cigarette having a tip formed of a thin, membranous, natural layer of tree bark.

2. As a new article of manufacture; a cigarette having a tip formed of a thin, membranous, natural layer of the bark of the birch tree.

3. As a new article of manufacture; a cigarette having a tip formed of a thin, membranous, natural layer of tree bark divided along its natural lines of cleavage.

4. As a new article of manufacture; a

strip of cigarette tipping material formed of a thin, membranous, natural layer of tree bark.

5. As a new article of manufacture; a strip of cigarette tipping material formed of a thin, membranous, natural layer of the bark of the birch tree.

6. As a new article of manufacture; a strip of cigarette tipping material formed of a thin, inner, membranous, natural layer of the bark of the birch tree.

7. As a new article of manufacture; a strip of cigarette tipping material formed of a thin, inner, membranous, natural layer of tree bark divided along its natural lines of cleavage.

8. The method of forming cigarette tipping materials which consists in removing bark from a tree and forming strips of appropriate widths from the separated natural layers of the bark.

9. The method of forming cigarette tipping material, which consists in removing bark from a tree, separating the bark into its natural layers, and dividing such layers into strips of appropriate width.

10. The method of forming cigarette tipping material which consists in removing bark from a tree, separating the natural layers of the bark, and dividing such layers into strips of appropriate widths along the natural lines of cleavage of said layers.

11. The method of forming cigarette tipping material which consists in removing bark from a birch tree, separating the natural layers of the bark, and dividing such layers into strips of appropriate widths along the natural lines of cleavage of said layers.

In testimony whereof I have hereunto set my hand.

GERTRUDE T. MAY.