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G. P. BUTLER.

ART OF MANUFACTURING CIGARS AND ALL TOBACCO CIGARETTES.

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Fig. 1.

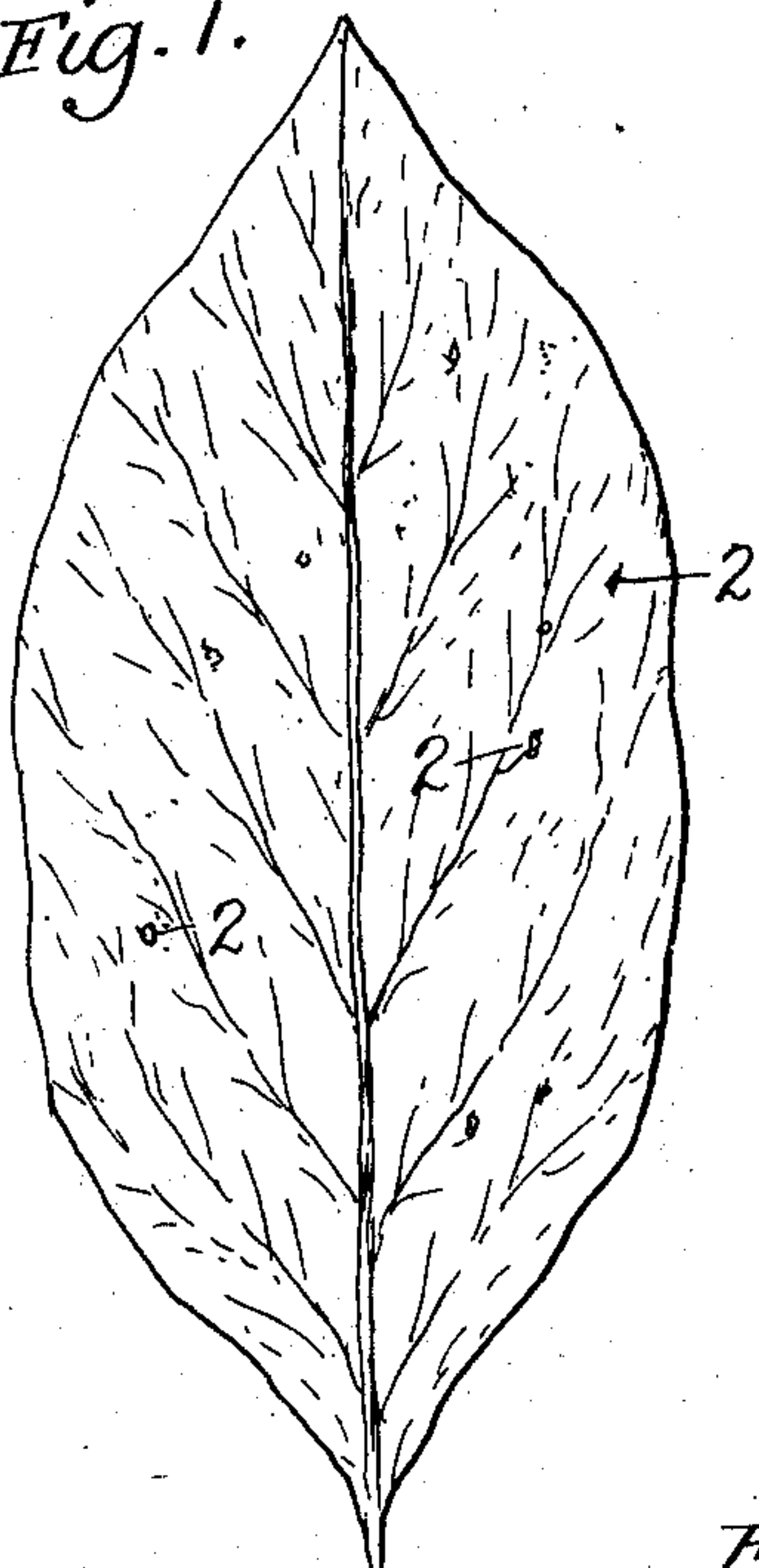


Fig. 2.

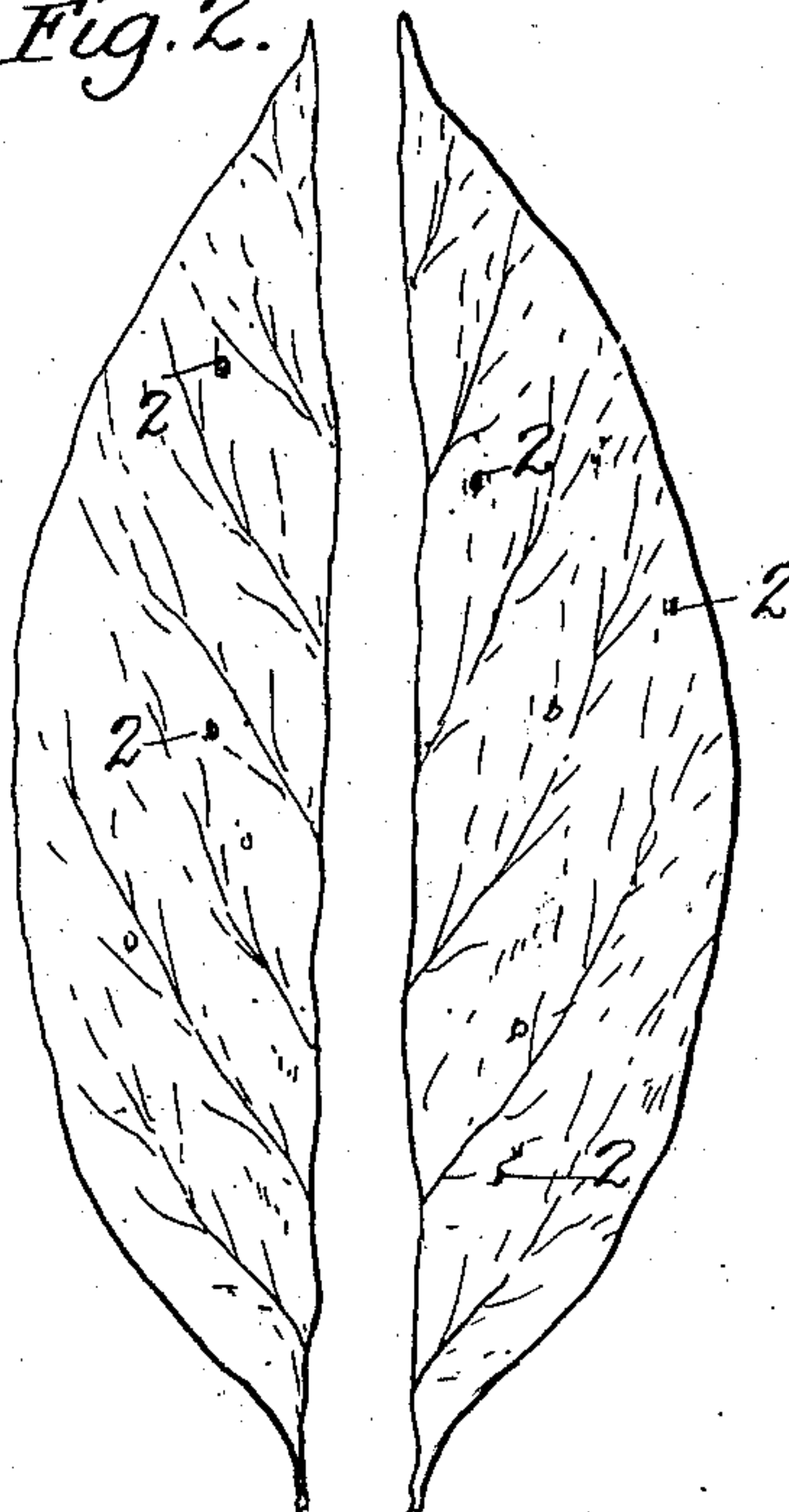


Fig. 3.

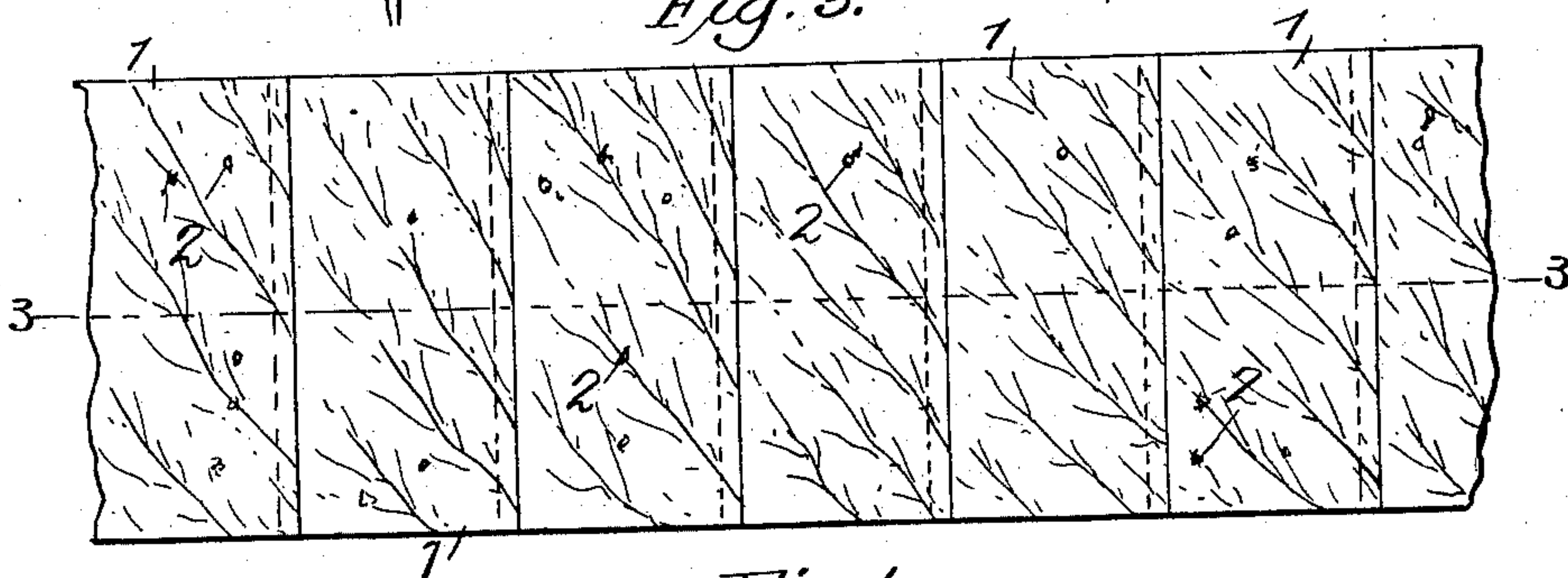


Fig. 4.

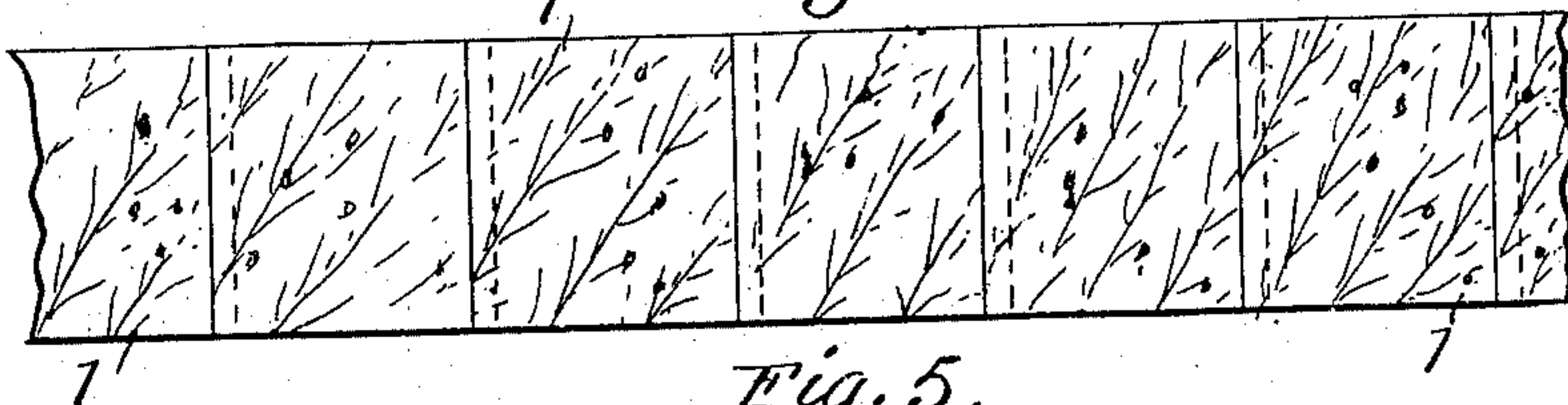
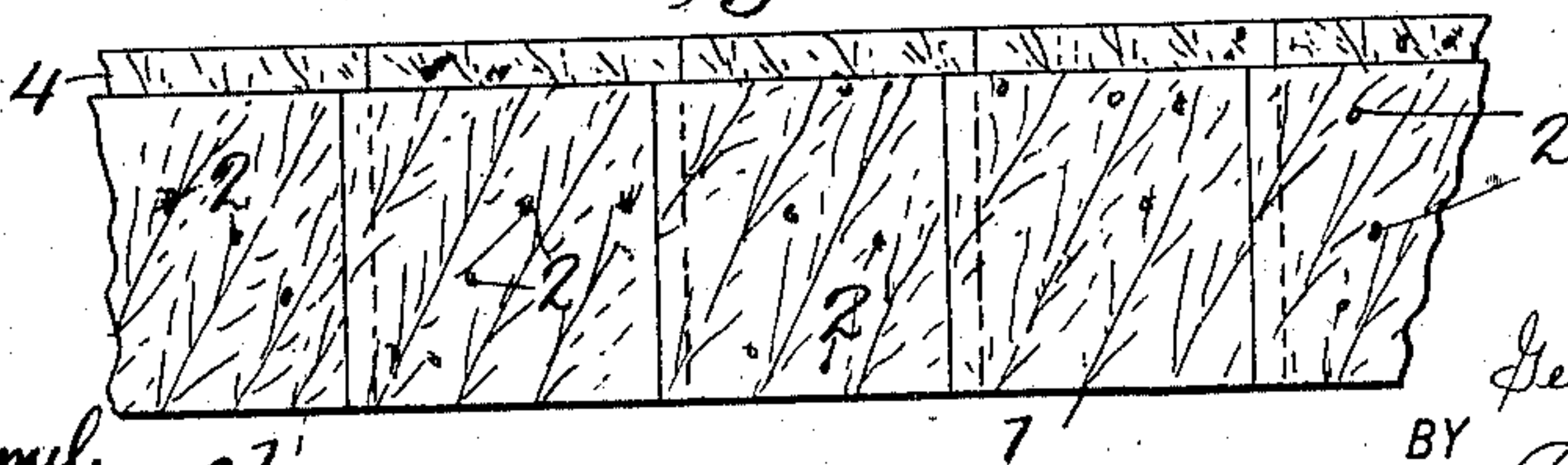


Fig. 5.



WITNESSES

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ART OF MANUFACTURING CIGARS AND ALL-TOBACCO CIGARETTES.

No. 864,948.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed November 6, 1906. Serial No. 342,169.

To all whom it may concern:

Be it known that I, GEORGE P. BUTLER, a citizen of the United States, residing at New York city, New York, have invented certain new and useful Improvements in the Art of Manufacturing Cigars and All-Tobacco Cigarettes, of which the following is a specification.

My invention relates to the manufacture of all tobacco cigarettes or cigars, and introduces certain improvements in this art, hereinafter fully described and defined by the appended claims.

Under present practice all tobacco cigarettes or cigars, whether produced by a machine or by hand are made singly, *i. e.*, one at a time, and the average number of all tobacco cigarettes or cigars which one machine can manufacture daily is 7500, and by hand about 2000 can be made daily by one operator. In making all tobacco cigarettes or cigars by machine, the usual course of operation is as follows:—The filler is fed to the machine on a belt, and then an operator feeds a tobacco leaf under a die which cuts from the leaf a rectangular wrapper from one-half inch to one inch longer than the length which the completed all tobacco cigarette or cigar is to have. After the wrapper has been thus cut it is rolled about the filler from two and one-eighth to two and one-quarter times the circumference and then the all tobacco cigarette or cigar is cut off to the required size. The extra wrapper which is cut off from either end of the all tobacco cigarette or cigar is wasted and is then available as scrap merely.

As above stated the wrapper is rolled about the filler several times, this being essential because virtually all tobacco leaves contain breaks, perforations or other imperfections, and were but one thickness of wrapper to be placed about the filler the smoker would draw air through the perforations instead of drawing smoke through the all tobacco cigarette or cigar from the lighted end. The wrapper is therefore rolled about the filler a number of times in order that the perforations or imperfections in one layer of wrapper may be covered by the material of the next adjacent layer.

In making all tobacco cigarettes or cigars by hand it is customary first to prepare the filler which is inclosed in a binder thus forming the "bunch", placing the "bunch" in a suitable mold to set, and thereafter inclosing the "bunch" in a wrapper.

From the foregoing brief statement of the art, it will be apparent that the present methods of manufacturing all tobacco cigarettes or cigars present certain disadvantageous features, among which may be mentioned the comparatively small number of all tobacco cigarettes or cigars which may be made within

a given time owing to the necessity for making them singly; the quantity of wrapper used for each all tobacco cigarette or cigar in excess of that actually needed as wrapper, and the considerable cost of time and labor in manufacturing the all tobacco cigarettes or cigars. It is the purpose of my invention to obviate these several disadvantageous features, and to so improve the art of manufacturing all tobacco cigarettes or cigars that a great saving in time, labor and material may be effected and the articles themselves will be superior in several respects to those manufactured under present methods.

One object of my invention is to greatly increase the number of all tobacco cigarettes or cigars which may be made within a given time, and I accomplish this object by making it possible to manufacture all tobacco cigarettes or cigars by what, may be termed the "continuous" method; *i. e.*, a method wherein one long all tobacco cigarette or cigar is made, which is then cut into the desired lengths, these several operations being preferably performed by machine.

A further object of the invention is to prevent waste of wrapper by avoiding the use of more wrapper material for inclosing the all tobacco cigarettes or cigars than is actually required for this purpose. This object is accomplished by making a long wrapper of tobacco leaves joined end to end, inclosing the filler therein, and then cutting the resulting long all tobacco cigarette or cigar into the lengths desired. In this connection it may be explained that it is impossible to obtain from one side of a leaf as many wrappers by cutting with a die as may be obtained by cutting the tobacco leaf into strips which are pasted together end to end, and using the leaves thus joined as wrapper material. The operator in feeding the leaf to the die may cut but two or three wrappers from one half of a leaf, whereas by the employment of my invention an equal portion of the leaf would yield five to seven or more wrappers.

Other objects of my invention are to obtain a smoothly finished all tobacco cigarette or cigar which will be so made that any perforations which may be present in the wrapper will not render the all tobacco cigarette or cigar useless; to dispense with the making of the "bunch" and to avoid the use of a binder which is frequently of inferior material and has a detrimental influence on the flavor of the all tobacco cigarette or cigar.

I attain these several objects by employing the novel features hereinafter fully set out, and illustrated in the accompanying drawing wherein,

Figure 1 is a perspective view of a single tobacco leaf; Fig. 2 is a similar view of a single tobacco leaf divided into halves by the removal of the stem; Fig. 3 is a view

of a number of tobacco leaves or strips joined end to end; Fig. 4 is a view of a series of joined strips forming a wrapper folded upon itself, the two parts of the wrapper being coincident; and Fig. 5 is a modified form of the wrapper shown in Fig. 3, one part of the wrapper being wider than the other and presenting a comparatively narrow pasting edge.

In carrying my invention into effect I join a number of tobacco leaves or strips 1, to form a long wrapper such as illustrated in Fig. 2. Tobacco leaves are usually imperfect and have perforations or breaks 2, which unless covered or stopped up render the all tobacco cigarette or cigar useless by permitting the smoker to draw air through the breaks or perforations. To prevent this, and also that the wrapper may have sufficient strength to be wound upon a reel in order to present the smooth appearance desired, I fold the series of joined leaves upon themselves to present a layer of double thickness.

I may make the two layers of wrapper coincident as shown in Fig. 4 by folding at the median line 3 or as shown in Fig. 5, which illustrates the preferred form, the wrapper may be so folded that one layer is wider than the other, whereby I obtain a pasting edge 4 upon the wider layer. The form shown in Fig. 5 is the preferred one because when a pasting edge of single thickness is employed the finished product will be smooth and will not show a raised portion where the jointure has been effected.

When the wrapper has been folded as illustrated in either Fig. 4 or Fig. 5, adhesive material may, if desired, be applied between the layers, filler inserted into the wrapper, the latter closed and pasted about the filler, and the resulting long all tobacco cigarette or cigar cut to the length desired.

From the foregoing description it will be noted that while I dispense entirely with the use of a binder, thus avoiding the use of inferior tobacco, the all tobacco cigarette or cigar is not rendered useless by any imperfections in the wrapper because the two layers of wrapper are superposed whereby the material of one layer will cover up any perforations there may be in the other layer.

I do not need to make a "bunch" and am thus enabled to save the time, and labor incidental thereto. A material saving of wrapper material results from the use of my invention, a saving in the width of wrapper, as well as the further saving which results from the fact that the wrapper is cut to the exact desired length and no pieces of wrapper need be cut off at the ends of the all tobacco cigarette or cigar.

An especially important advantage resulting from my invention lies in the fact that I am enabled to make all tobacco cigarettes or cigars by the "continuous" method, and thus increase the daily average output of a machine approximately to fifty thousand all tobacco cigarettes or cigars.

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

1. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in forming a long wrapper by joining sections of tobacco leaf, and superposing said wrapper to form a plurality of layers, substantially as described.
2. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method

which consists in forming a long wrapper by joining sections of tobacco leaf, superposing said wrapper to form a plurality of layers, and inclosing said wrapper about a filler, substantially as described.

3. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in forming a long wrapper by joining sections of tobacco leaf, superposing said wrapper to form a plurality of layers, producing a rod by inclosing said wrapper about a filler and then severing said rod into desired lengths, substantially as described.

4. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves to form a long wrapper and thereafter folding said wrapper upon itself, substantially as described.

5. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves to form a long wrapper, and thereafter folding said wrapper upon itself in such manner that one layer will be wider than the other, and will have a pasting edge thereon, substantially as described.

6. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves to form a long wrapper, folding said wrapper upon itself and applying adhesive material between the layers, substantially as described.

7. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves end to end to form a long wrapper, and thereafter folding said wrapper upon itself, substantially as described.

8. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves end to end to form a long wrapper and thereafter folding said wrapper upon itself in such manner that one layer will be wider than the other and will have a pasting edge thereon, substantially as described.

9. As an improvement in the art of manufacturing all tobacco cigarettes or cigars, the herein described method which consists in joining a number of tobacco leaves end to end to form a long wrapper, folding said wrapper upon itself in such manner that one layer will be wider than the other and will have a pasting edge, and applying adhesive material between said layers, substantially as described.

10. The method hereinbefore described of manufacturing all tobacco cigarettes by the "continuous process" which consists in dividing the tobacco leaves to provide a plurality of lengthwise sections, joining said sections to one another, end to end, to provide a strip, doubling said strip over upon itself along a longitudinal line, placing the cigarette filling upon the strip lengthwise of the same, rolling the strip thereabout to form a rod and finally cutting said rod into cigarettes of commercial lengths.

11. The method hereinbefore described of manufacturing all tobacco cigarettes which consist in dividing the tobacco leaves to provide a plurality of longitudinal sections, joining said sections, end to end, to one another and to provide a strip, doubling said strip over upon itself along a longitudinal line, reeling the strip, feeding the doubled strip under tension from said reel, placing the cigarette filling lengthwise of the strip as it is fed from the reel, rolling the strip about the filling to form a rod and cutting the rod into sections to provide cigarettes of commercial lengths.

12. The herein described method of producing all tobacco cigarettes or cigars, consisting in joining a number of tobacco leaves to form a long wrapper, folding said wrapper upon itself, inserting the filler into said wrapper, closing the same about the filler and thereafter cutting the resulting long all tobacco cigarette or cigar into desired lengths, substantially as described.

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

GEORGE P. BUTLER.

Witnesses:

CLARINA FRANCK,
OTTO MUNK.