

UNITED STATES PATENT OFFICE

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SMOKING TOBACCO

No Drawing.

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The object of my invention is to automatically extract all, or a desirable portion, of the major injurious ingredients in smoke produced by the combustion of tobacco, whereby such smoke will be acceptable to those smokers who desire to avoid injurious effects produced by absorption of such injurious ingredients.

I am aware that it has been heretofore proposed, in many prior patents, to introduce, in cigars, cigarettes, pipes, etc., between the point of combustion and the mouth of the smoker a filter material which will absorb or arrest part or all of the nicotine, pyridin, leucine, empyreumatic oils etc., but such arrangements have the disadvantage of requiring special construction and application; are relatively expensive; and, being continuously subjected to the heat of the on-coming smoke, are likely, towards the end of the smoking period, to permit volatilization of the accumulated extracted materials, whereupon such volatilized elements will pass into the mouth of the smoker.

I have discovered that gels, and particularly silica gel, of the character specified in the patent of Walter A. Patrick, No. 1,297,724 dated March 18th, 1919, will, when mixed with smoking tobacco, serve to absorb and retain the objectionable volatile ingredients of tobacco smoke; that these gels, which are stable up to 700 degrees C., having once absorbed nicotine, pyridin, etc., from the tobacco smoke, will not part therewith while the gel is being subjected to the combustion temperatures produced during smoking; and that by varying the quantity of gel mixed with and distributed through the body of tobacco which is to be smoked, the percentage of ingredients of the smoke which will be absorbed will be regulated, whereby more or less of the ingredients, such as nicotine, pyridin, leucine and the empyreumatic oils will be absorbed and strong tobaccos may be made more mild, or may be rendered entirely innocuous. In fact, if a sufficient quantity of the gel is mixed with the tobacco all vestiges of smoke even may be obliterated.

The gels which lie within the range of my discovery are characterized not only by their

stability and high adsorptive properties at high temperatures; but also by the fact that the particles are very highly porous and that the pores are very numerous and ultra-microscopic.

I am not able to state just what the reaction is nor to state the precise quantity of gel which should be mixed with the tobacco. The gel is in the form of a light fluffy powder which is highly moisture absorbent and I have found that, in order to prevent too great a drying out action upon the tobacco, it is advisable that the water absorptive capacity of the powder be at least partially satisfied before admixture with the tobacco. This may be accomplished by direct adding of water to the gel or by allowing the gel to stand in the atmosphere for a week or ten days before using. The quantity of gel to be used will of course vary with the desires of the smoker and the quality and strength of tobacco, more being used if greater mildness is desired, and vice versa. I have found, for instance, that a small pinch of silica gel mixed with a quantity of very cheap tobacco sufficient for an ordinary cigarette will eliminate all of those strongly objectionable elements of odor to which many people object, and that with such a mixture the injurious ingredients of the smoke are practically eliminated.

In practice the gel, preferably silica gel so far as I now know, may be sprinkled into and thoroughly mixed with the granulated tobacco to be used for cigarette filling, or with the tobacco, in whatever form to be used for pipe filling, or with cigar filler, and cigarettes and cigars and pipes filled in the ordinary way.

I have noticed that with cigarettes made from such a mixture the ash, instead of being white or a grayish white, as is the case with untreated tobacco, is distinctly black. Whether this change of color is due to an extraction of part of the carbon particles from the smoke or due to a carbonization of the extracted oils, I am not prepared to say.

The gels referred to may also be distributed over a carrier, such as moss or loose fiber and formed into a capsule or cartridge ar-

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ranged between the combustion zone and the mouth of the smoker and will be found much more efficient, when so used, than any other smoke-filtering material of which I have
5 any knowledge and such use I believe to be within the scope of my discovery but primarily my discovery is that gels of the character mentioned may be distributed through the body of tobacco to be smoked where they
10 will be ultimately subjected to the extreme temperatures of tobacco combustion and that these gels will, under such conditions, successfully extract undesirable ingredients from the tobacco smoke.

15 I claim as my invention:

1. A smoker's mixture comprising smoking tobacco and silica gel in powdered form intermingled with the tobacco.

20 2. An association of a smoking tobacco and silica gel in a smokable unit with the gel arranged in the path of volatilized ingredients of the tobacco, to the smoker.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 5th
25 day of January, A. D. one thousand nine hundred and twenty-nine.

DUDLEY HOWARD WIGGINS.

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