

# UNITED STATES PATENT OFFICE.

ALFRED DUNHILL, OF ST. JAMES, LONDON, ENGLAND.

## TOBACCO-PIPE.

1,341,418.

Specification of Letters Patent.

Patented May 25, 1920.

No Drawing.

Application filed October 14, 1918. Serial No. 258,053.

*To all whom it may concern:*

Be it known that I, ALFRED DUNHILL, subject of the King of Great Britain and Ireland, residing at 30 Duke street, St. James, London, S. W., England, in the county of London, England, have invented certain new and useful Improvements in or Relating to Tobacco-Pipes, of which the following is a specification.

This invention relates to the treatment of the surface of the wood of wooden tobacco pipes, for decorative purposes, and refers to a process by which the grain is accentuated or made to stand out in relief, thus giving the wood a very elegant appearance, without interfering with the durability or smoking qualities of the pipes.

In the manufacture of tobacco pipes, from brier and other woods it is often advisable to employ oil in the preparation and finishing of the pipe, but such employment of oil is open to the objection that when such pipes are first used the heat of the burning tobacco causes such oil to exude, and not only impart an unpleasant flavor in the mouth of the smoker, but also destroy the finished glossy appearance of the exterior surface of the pipe. In order to overcome this objection, more especially in pipes of high quality, they are frequently stored for a considerable period, such as twelve months or longer, to insure the perfect incorporation of the oil with the fibers of the wood and to thoroughly season the pipe. But it will be obvious that such storage of manufactured or partly manufactured articles represents capital lying idle, and the object of the present invention is to so prepare and season such pipes, as to render them ready for sale and use in a comparatively short space of time.

In carrying out my invention, I shape the pipe in the ordinary way, leaving the wood with a comparatively rough or slightly polished surface.

I then steep it for a suitable time in a mineral or vegetable oil.

For instance in the case of Algerian brier, a wood very suitable for the production of these new tobacco pipes, the article may be steeped for a long period, say for several weeks, in olive oil.

After it has been removed from the oil, I subject the article to the action of heat, which is preferably effected by means of the

apparatus described in the specification of my British Patent No. 2157 of 1913.

For this purpose I employ a seasoning and heating apparatus which consists of a number of plugs or nozzles of sizes corresponding to the bore and internal shape of the bowls of the pipes to be treated. These plugs or nozzles are suitably mounted upon a hot plate which is maintained at a suitable temperature by means of one or more gas burners or other heating devices disposed beneath the said plate. Each plug or nozzle receives the bowl of a pipe and conducts the required degree of heat to the same in a continuous, even and regular manner. The plugs or nozzles may be of any suitable material but I have found that copper gives good results.

In some cases I provide a passage through each plug or nozzle by which a current of heated air may be allowed to pass from the heated space beneath the hot-plate, through the bore of each pipe, and thence into the outer atmosphere.

In the case of preliminary treatment of partly finished pipes, the plugs or nozzles may be disposed comparatively close together, as such preliminary treatment would take place prior to the fitting of the mouthpieces. But in the case of treatment of the completed pipes, I prefer to dispose of the plugs or nozzles around the outer edge of the hot-plate, which may be of circular, square, or other convenient shape, the stems of the pipes extending radially outward away from the hot-plate so that the mouthpieces are not subjected to the heat arising therefrom; and in some cases, I may still further protect the mouthpieces by interposing asbestos or other bad conductor of heat between the said mouthpieces and the heated portions of the apparatus.

The hot plate, with the plugs or nozzles and the pipes thereon, may be arranged to rotate, and each of the plugs or nozzles may be furnished with a flange which may rest upon or be attached to the hot-plate, or with a pin or dowel which may enter a suitable hole or recess therein. or the plugs or nozzles may be otherwise fitted so as to be readily attached to or detached from the hot plate according to requirements.

This process occupies a number of days, the oil exuded or coming to the surface being wiped off periodically.

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The result of the treatment is that the grain of the wood is hardened and stands out in relief to a certain degree, but the oil coming to the surface forms an impervious coating.

For the purpose of a further treatment with oil it is therefore necessary to remove the impervious coating. This cannot be done in the ordinary manner by "buffing," which simply removes the projecting portions, or parts in relief, before the abrading tool reaches the lower portions, thus destroying the effect desired. It is therefore necessary to provide means which will act simultaneously over the whole surface, whether in relief or not.

In order to remove the dried out oil uniformly from the surface of the article, I submit it to the action of the sand jet or sand blast, which removes the hardened coating of oil and also has the effect of cutting away the softer wood between the grain and leaving the harder portion—the hardness of which has been intensified by the process of steeping and heating—in very high relief.

If the article is again steeped in oil, it will take up a further amount, as the impervious coating constituting a varnish has been removed, and the treatment by heat and the sand jet or sand blast may be repeated; and so on for as many times as may be required according to the extent to which it is desired to accentuate the grain or make it stand out in relief.

The resulting article is extremely hard and constitutes an admirable tobacco pipe for the smoker.

Where desired, the surface of the pipe may be polished, giving a very elegant effect, as the raised portions of the grain take the high polish while the sunken portions remain dull or matt.

In some cases the preliminary steeping may take place before the pipe is shaped from the wood.

Although the sand blast has been used previously for the treatment of the surface of wood, to accentuate the grain, I have found in practice that this treatment in itself does not give satisfactory results, as there is a tendency for the wood to become cracked and injured, a result which does not occur with my process where it is used as an auxiliary to the treatment of steeping and by heat.

What I claim as my invention and desire to secure by Letters Patent of the United States of America is:—

A process for the production of tobacco pipes, consisting in shaping the article in the ordinary way from wood, steeping the wood in a vegetable or mineral oil, subjecting the wood after steeping to treatment by heat of a sufficient degree to cause exudation of the oil, then to the action of a sand jet or sand blast until the oily exudation and softer portion of the wood are slightly removed and the more resistant portions left in relief.

Dated this 19th day of September 1918.

ALFRED DUNHILL.

Witnesses:

A. E. VIDOL,  
V. E. S. CREW.