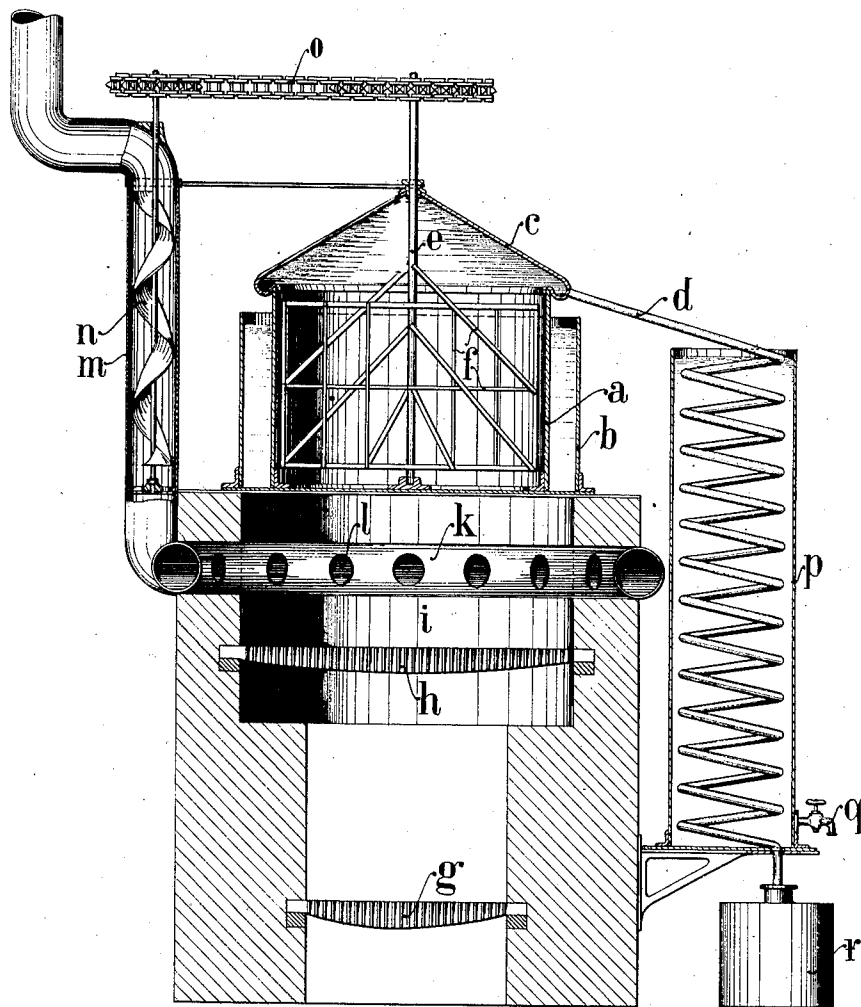


J. ZEHETNER.
 PROCESS OF PREPARING A TOOTH HEALING PREPARATION.
 APPLICATION FILED MAR. 8, 1909.

972,316.

Patented Oct. 11, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEF ZEHEITNER, OF VIENNA, AUSTRIA-HUNGARY.

PROCESS OF PREPARING A TOOTH-HEALING PREPARATION.

972,316.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed March 8, 1909. Serial No. 482,186.

To all whom it may concern:

Be it known that I, JOSEF ZEHEITNER, a subject of the Emperor of Austria-Hungary, and resident of Vienna, in Austria-Hungary, have invented a certain new and useful Process of Preparing a Tooth-Healing Preparation, of which the following is a specification.

Products generally used in the trade under the name of tooth healing preparations, do not in any way deserve that name, as they do not heal hollow teeth, but owing to their corrosive ingredients and the like, merely still the pain for a moment, and later, owing to the corrosive action, the pain begins again with greater violence.

Contrary to tooth healing preparations hitherto known, this invention relates to a process and apparatus for manufacturing a preparation which really heals hollow and inflamed teeth and does away with any tooth-ache. As has been proved by numerous practical experiments, the essential ingredient of the tooth preparation according to this invention is formic acid extracted from ants by means of alcohol. Curiously enough, meadow ants have been proved to be more particularly suitable for the purpose in question, as, when treated with alcohol, they supply in addition to the formic acid other organic substances, the composition of which has not been yet ascertained and which are of special importance for healing hollow teeth. As in many cases it is impossible to obtain the desired quantity of natural formic acid, it is possible to replace the natural formic acid partly by artificial formic acid. In manufacturing the healing preparation in question, the process is such that ants are treated for 10 to 14 days with alcohol of 96% strength, in the sun and the ants are then separated from the alcohol, the formic spirit remaining then for another eight to ten days in the sun. The alcohol and ants are in the following proportions:

Alcohol of 96% strength	100 liters
Living wood ants	25 liters
Living meadow ants	28 liters

After having the ants separated from the alcohol the ingredients given below are each added at an interval of five to six days,

which should be done preferably in the sun. The said ingredients are as follows:

Artificial formic acid	5 liters	
Carbolic acid fluid of 90% strength	4 liters	
Benzoic acid	2 kilos	60
English peppermint oil	2 liters	
Cajeput oil	4 liters	
Thyme oil	4 liters	
Eugenol (of pink oil)	3 liters	
Wintergreen oil	5 liters	65
Eucalyptus oil	5 liters	

After all the ingredients have been mixed together the mixture is left for a few weeks in the sun and then distilled through the described distilling apparatus. The product obtained by the distillation is left again for a few days when it will be found ready for export.

The construction of the distilling apparatus as used for the manufacture of the tooth preparation, is given by way of example in the accompanying drawing.

The mixture in question is introduced into a tank *a* surrounded by a second casing *b*, the space between the two walls being filled with water. On the tank *a* is then placed a cap or lid *c* provided at its lower edge with a downward heading to which is connected the discharge pipe *d* for the distilled vapors. Through the cap *c* passes a spindle *e* to which is secured a stirring device *f* consisting of wooden bars in the shape of a cross—or the like. All the parts of the distilling apparatus which come into contact with the preparation, must not be of metal but made of earthenware or the like. Under the distilling vessel is arranged a grate *g* on which is placed the fuel. Above the said grate *g* is arranged a second grate *h* in order to prevent the combustion gases from coming into direct contact with the distilling tank. In order to afford an escape to the combustion gases, a conduit or pipe *k* is provided around the heating chamber *i*. The connection between the heating chamber *i* and the pipe or flue *k* is established by means of openings *l*. These openings near the chimney have a smaller cross-section than those provided at the opposite point. In the smoke discharge flue *m* is arranged a worm *n* rotated by the escaping combus-

tion gases. The said rotating movement is transmitted by means of a chain drive or a cord to the spindle of the stirring device. In that way the preparation is automatically stirred during the whole time of the distillation in order to prevent it from settling on the boiler walls. The vapors escaping through the pipe *d* pass into a cooling device *p* through which cold water circulates continuously. The water from the said cooling tank can be discharged by means of a cock *q*. The condensed vapors of distillation pass into a tank *r*, bottle or the like arranged below the cooling coil. The product obtained by the distillation is left for another fortnight in the sun, and then bottled and made ready for export.

What I claim as my invention and desire to secure by Letters Patent is:—

The process of preparing a tooth healing preparation which consists in successively adding to an alcoholic solution of formic acid, carbolic acid, benzoic acid, peppermint oil, wintergreen oil, thyme oil, cajeput oil, eucalyptus oil, and eugenol substantially as described, and finally distilling the resultant mixture with constant stirring.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEF ZEHEITNER.

Witnesses:

AUG. RUDOLF FREUMERY,
SCHNEDER JOHANSBERGER.