

UNITED STATES PATENT OFFICE.

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PROCESS OF PRODUCING BETA-GAMMA-DIMETHYLERYTHRENE.

1,069,423.

Specification of Letters Patent.

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No Drawing.

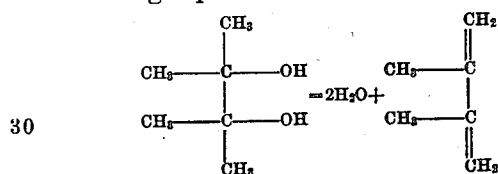
Application filed May 9, 1912. Serial No. 696,160.

To all whom it may concern:

Be it known that we, FRITZ HOFMANN, KONRAD DELBRÜCK, and KURT MEISENBURG, doctors of philosophy, chemists, citizens of the German Empire, residing at Elberfeld, Germany, have invented new and useful Improvements in Processes of Producing Beta-Gamma-Dimethylerythrene, of which the following is a specification.

Our invention concerns a new and valuable process which results in an excellent yield of beta-gamma-dimethylerythrene and which consists in heating pinacone with a small quantity of sulfuric acid or a sulfonic acid. The use of a small amount of acid (less than the amount of pinacone reacted upon) results in much larger yields of the hydrocarbon than has been obtained by processes heretofore known. With a fraction of a per cent. only of the acid, and even with a few thousandths of a per cent. of the acid, unusually large yields are obtained.

The process proceeds according to the following equation:



In order to illustrate the new process more fully the following example is given, the parts being by weight:—10000 parts of pinacone are heated with 1 part of sulfuric acid (20 per cent.) to 130–140° C. Dimethylerythrene and water distil over besides pinacone hydrate and small quantities of pinacolin. The beta-gamma-dimethylerythrene isolated from the mixture boils at 68 to 69° C.

Instead of sulfuric acid some crystals of naphthalene 1.5-disulfonic acid, etc., can be used.

The acid thus used in small amounts acts probably as a catalytic or dehydrating acid.

We claim:—

1. The process of producing an erythrene hydrocarbon which comprises distilling a pinacone with a small percentage of a dehydrating acid, and then separating the erythrene hydrocarbon, substantially as described.

2. The process of producing an erythrene hydrocarbon which comprises distilling a pinacone with a fraction of a per cent. of a dehydrating acid.

3. The process of producing an erythrene hydrocarbon which comprises distilling a pinacone with a fraction of a per cent. of sulfuric acid.

4. The process of producing an erythrene hydrocarbon which comprises distilling a pinacone with about one one-hundredth of one per cent. of dilute sulfuric acid.

5. The process of producing beta-gamma-dimethylerythrene which comprises first distilling pinacone with a small percentage of sulfuric acid and then separating the beta-gamma-dimethylerythrene, substantially as described.

6. The process of producing beta-gamma-dimethylerythrene which process comprises first distilling pinacone with about one one-hundredth of one per cent. of dilute sulfuric acid and then separating the beta-gamma-dimethylerythrene, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

FRITZ HOFMANN. [L. s.]
KONRAD DELBRÜCK. [L. s.]
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Witnesses:

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