

UNITED STATES PATENT OFFICE.

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 FARBENFABRIKEN VORM. FRIEDR. BAYER & CO., OF ELBERFELD, GERMANY, A
 CORPORATION OF GERMANY.

PROCESS OF PRODUCING BETA-METHYLTETRAMETHYLENE-DIAMIN.

991,721.

Specification of Letters Patent.

Patented May 9, 1911.

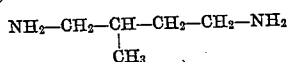
No Drawing.

Application filed November 23, 1909. Serial No. 529,546.

To all whom it may concern:

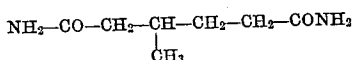
Be it known that we, FRITZ HOFMANN and
 CARL COUTELLE, doctors of philosophy,
 chemists, citizens of the German Empire,
 residing at Elberfeld, Germany, have in-
 vented new and useful Improvements in
 Processes for Producing Beta-Methyltetra-
 methylene-Diamin, of which the following
 is a specification.

Our invention relates to a new and val-
 uable process for producing beta-methyl-
 tetramethylene-diamin.



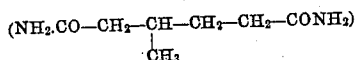
which is a valuable intermediate compound
 for the production of pharmaceutical com-
 pounds, dyestuffs, etc.

The new process consists in treating the
 diamid of beta-methyladipic acid



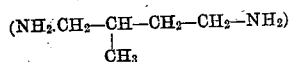
with aqueous solutions of halogens in caus-
 tic alkaline lyes.

In order to illustrate the new process more
 fully the following example is given, the
 parts being by weight: 8 parts of bromin
 are added while stirring to a solution of 8
 parts of caustic soda (NaOH) in 96 parts
 of water. Subsequently a solution of 3.9
 parts of the diamid of beta-methyladipic
 acid



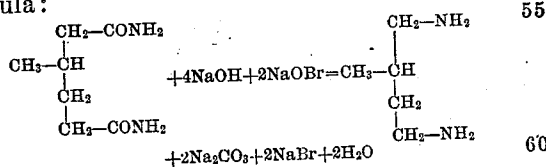
in 10 parts of hot water is added. After
 heating for a short time to 70-80° C. the
 product of the reaction is neutralized with
 BrH and then concentrated by evaporation.
 Sodium bromid separates which is filtered

off. The filtrate contains part of the BrNa
 and the bromohydrate of the base



from which the latter base is set free by
 treating the solution with caustic soda.
 The free base is isolated in the form of an
 oil, it is dried and finally purified by distil-
 lation.

The formation of the product takes prob-
 ably place according to the following for-
 mula:



The process is carried out in an analog-
 ous manner on using instead of bromin the
 equivalent amount of chlorin. In this case
 the product of the reaction is neutralized
 with hydrochloric acid.

We claim:—

The process for producing beta-methyl-
 tetramethylene-diamin, which process con-
 sists in treating the diamid of beta-methyl-
 adipic acid with an aqueous solution of hal-
 ogen in caustic alkaline lyes and isolating
 the free base by treating the halogen salt
 with alkali, substantially as described.

In testimony whereof we have hereunto
 set our hand in the presence of two subscrib-
 ing witnesses.

FRITZ HOFMANN. [L. s.]
 CARL COUTELLE. [L. s.]

Witnesses:
 OTTO KÖNIG,
 CHAS. J. WRIGHT.