

UNITED STATES PATENT OFFICE.

GUSTAV KEIL, OF HÖCHST-ON-THE-MAIN, GERMANY, ASSIGNOR TO
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ON-THE-MAIN, GERMANY, A CORPORATION OF GERMANY.

PROCESS OF MAKING DIALKYL MALONYL UREAS.

No. 822,672.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed December 22, 1905. Serial No. 292,915.

To all whom it may concern:

Be it known that I, GUSTAV KEIL, Ph.D.,
chemist, a citizen of the Empire of Germany,
residing at Höchst-on-the-Main, Germany,
5 have invented certain useful Improvements
in the Manufacture of Dialkylmalonyl Ureas,
of which the following is a specification.

I have found that dialkylmalonylthio ureas
may be transformed into dialkylmalonyl ureas
10 by heating the former for a considerable time
with a solution of salts of heavy metals, such
as lead and copper salts.

The process may be carried out, for in-
stance, as follows: One part, by weight, of di-
15 ethylmalonylthio urea is boiled for forty-eight
hours with a solution of four parts, by weight,
of lead acetate in forty parts, by weight, of
water. Lead sulfid is soon formed, yet boil-
ing is necessary for a considerable time to
20 complete the transformation. The excess of

lead may be removed from the solution by
means of hydrogen sulfid or sulfuric acid and
the diethylmalonyl urea of known properties
is then obtained by crystallization. In an
analogous manner otherdialkylmalonyl ureas 25
are transformed also while using other salts
of heavy metals.

Having now described my invention, what
I claim is—

The process herein described for the manu- 30
facture of dialkylmalonyl ureas, which con-
sists in heating dialkylmalonylthio ureas
with solutions of salts of heavy metals.

In testimony that I claim the foregoing as
my invention I have signed my name in pres- 35
ence of two subscribing witnesses.

GUSTAV KEIL.

Witnesses.

JEAN GRUND,
CARL GRUND.