# N° 25,433 A.D. 1908

*Date of Application, 25th Nov., 1908*

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## PROVISIONAL SPECIFICATION.

### "Process of Manufacturing Anhydrides of Fatty Acids, especially Acetic Anhydride from Fatty Acid Salts."

I, CHRISTIAN ALBERT JENSEN, of 77, Chancery Lane, London, W.C., Chartered Patent Agent, do hereby declare the nature of this invention (a communication to me from abroad by the Firm Th. Goldschmidt, of the Chemische Fabrik und Zinhütte, Essen-Ruhr, Germany) to be as follows:—

This invention relates to a process of manufacturing anhydrides of fatty acids, especially acetic anhydride from fatty acid salts.

It has already been proposed to manufacture fatty acid anhydrides by heating the fatty acid salts together with chloride of sulphur. But the manufacture of this chloride of sulphur ($SCl_2$) has proved to be very troublesome and expensive. Now it has been found by the communicators that the manufacture of such chloride of sulphur may be avoided and the whole process carried out with much less trouble, by mixing the fatty acid salts in a dry state together with powder of sulphur or flowers of sulphur and acting on such mixture with dry chlorine gas. Some experiments have shown that the process is advantageously carried out at a low temperature. Good results have been obtained when taking the materials say, for instance, in the proportions of about 8 molecules of acetate to 1 atom of sulphur, but these proportions are by no means given as essential. The reaction being finished say at a low temperature, the product obtained by the reaction may be moderately heated for some time, in order to transform the fatty acid chloride into anhydride, whereafter it is distilled under vacuum by known means.

In order to make the new process more clear, the following description is given as an example: A well dried mixture of acetate of sodium and sulphur is introduced into a vessel advantageously provided with stirring and cooling means. The vessel being put under vacuum, dry chlorine is introduced, whilst the contents of the vessel are cooled to say about 24°, or to a still lower temperature. The introduction of chlorine being finished and the reaction having taken place, the product is subjected to a moderate heating (for instance about 90° C) for some hours, in order to transform the chloride of acetyl still present into acetic anhydride, after which it is distilled under vacuum. During the reaction and the distillation it is advisable to stir the mass.

The acetate of sodium may wholly or partly be replaced by another salt, as for instance acetate of calcium.

Dated this 25th day of November 1908.

JENSEN & SON,
77, Chancery Lane, London, W.C.,
Chartered Patent Agents.

## COMPLETE SPECIFICATION.

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I, CHRISTIAN ALBERT JENSEN, of 77, Chancery Lane, London, W.C., Chartered Patent Agent, do hereby declare the nature of this invention (a communication

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