

It Made them Mad

The Mad Hatter is one of the most memorable characters from the children's book *Alice in Wonderland*, by Lewis Carroll (first published 1865). But did you know that the Mad Hatter's strange behaviour demonstrates the classic symptoms of mercury poisoning? Mercury poisoning was the 'mad hatter's disease'.

Sufferers would at first seem to be drunk. Mental degeneration gradually worsened, and death was the ultimate outcome. Perhaps Lewis Carroll heard of these symptoms in his native Cheshire, where mercuric nitrate was commonly used in the manufacture of fur felt hats.

Alternatively, perhaps he had heard of mercury poisoning through the academic community in Oxford in the 1860s, where it was beginning to be studied.

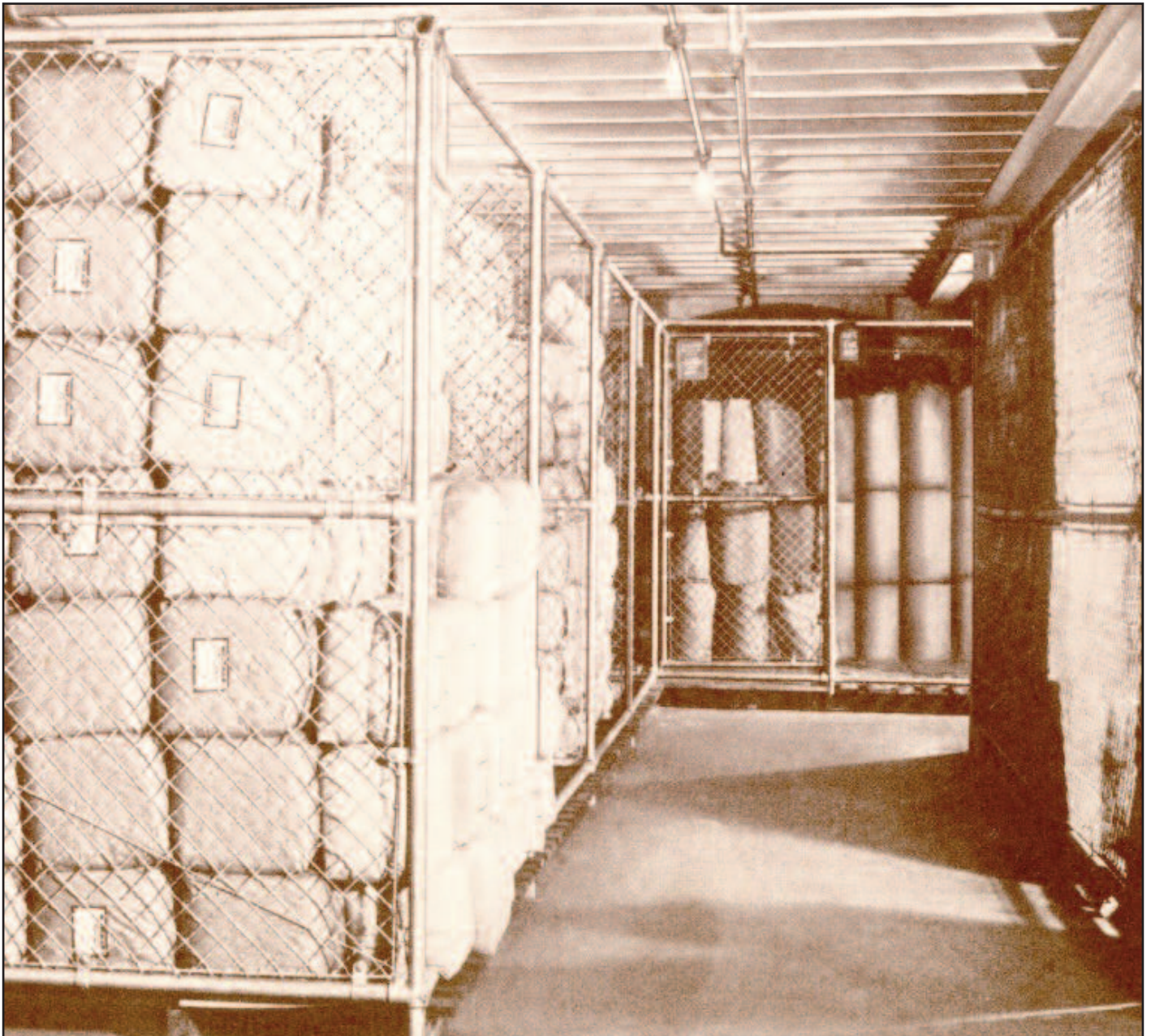
Why Mercury?

The mercury compound mercuric nitrate was found to help felt fur fibres together. Hatters gave different reasons as to why it worked. Some said it got rid of the grease on the fur. Others said it roughened or twisted the fur fibres, so that they hooked together easily.

There is a story that the effect of mercury on fur was discovered by hatters who were being treated for the disease syphilis. The treatment involved mercury. Hatters used to clean the fur with urine, and they noticed that the urine of the syphilitic hatters made the fur much easier to felt. Hatters also noticed that the mercury turned the fur orange. For this reason, the process became known as 'carrotting'.



Mad Hatters Tea Party. Illustration to the fifth chapter of *Alice in Wonderland* by John Tenniel. Wood-engraving by Thomas Dalziel. Image courtesy of www.victorianweb.org/art/illustration/tenniel/alice



Wilson's of Denton, fur storage cellar.

The use of mercury compounds to treat fur spread all over the world. It was used in France, and in the American hatting town of Danbury, Connecticut. The resulting disease was known in the States as 'the Danbury shakes'.

No More Mad Hatters

In 1899, mercurial poisoning was made a notifiable disease in the UK under the Factories Act. From 1906 workers were entitled to compensation if they were poisoned with mercury. Yet even as late as 1939, hatters' furriers were brushing compounds of mercury on to rabbit fur (see Hat Works Information Sheet 1: *From*

Bunnies to Factory Gates for more information on preparing fur to make hats). By this stage though, they wore masks and took regular breaks.

Mercury has not been banned in industrial processes in the UK today. However, there is a detailed guidance publication produced by the Health and Safety Executive requiring employers to take careful precautions in its use.