of the peptones, are very liable to become mouldy. It is very rare to find mould where a high grade glue has been employed. I give examples of good and bad glues, both used for cotton goods.

	Good.	Bad.
	per cent.	per cent.
Water	14.23	16.00
Ash	1.33	2.35
Gelatin	78.08	60.25
Peptones, etc.	1.95	11.42
Non-gelatinous bodies	4.41	3.08

Careless storing of finished goods is sometimes responsible for the development of bacterial growth. This is often noticed in those that are made for export to warm and damp climates. All cotton goods, however carefully prepared, contain numerous organisms, and the conditions of storing should always be such as will discourage their growth. Of course cleanliness is also an important factor. Occurrence of mouldiness is not infrequently found to be due to organisms indigenous to the customers premises, and does not recur after the application of sanitary precautions.

A NEW CHROMOGENIC ORGANISM.

BY S. R. TROTMAN, M.A., F.I.C.

I recently had occasion to examine some skivers which had developed a discolouration during drying. This varied from pinkish-brown to a distinct pink. An analysis of the skivers showed a slight excess of lime and a preponderance of soluble extractive matter in the damaged goods. As excess of lime is liable to produce harshness and brownish discolouration, there was some reason for supposing that this might be the cause, but this would not account for the increased extractive matter. This suggested a decomposition possibly resulting from bacterial growth. Cultures made from the pink skin showed the presence of two chromogenic organisms;

one of these proved to be a variety of pink torula which produces a reddish brown growth on gelatin media, but not identical with the ordinary pink torula. The second was a mould which forms a bright scarlet mycelium, and when sown on sound skins produces a colour which is identical with that observed on the damaged ones. On gelatin the colonies start as colourless or faintly pink spots, which gradually become darker till they have a bright red colour. After growing for about a week a number of colourless aereal hyphæ are thrown up, the colour being confined to the mycelium, which forms a skin-like growth on the surface of the gelatin and gradually causes its liquefaction. I believe that no instance of such an organism has been hitherto recorded.

New York Section.

Meeting held on Friday, October 22nd, 1909.

MR. MAXIMILIAN TOCH IN THE CHAIR.

A NEW FORM OF LEAD SULPHURIC ACID CHAMBER.

BY FREDERICK J. FALDING.

(See this Journal, October 15th, 1909, 1032).

Scottish Section.

Meeting held at Glasgow, on Tuesday, October 19th, 1909.

MR. D. J. PLAYFAIR IN THE CHAIR.

TEA MANUFACTURE: THE WITHERING PROCESS.

BY W. CARRICK ANDERSON, M.A., D.Sc.

(c.f. this Journal, 1909, 285—288.)

Journal and Patent Literature.

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I.—PLANT, APPARATUS, AND MACHINERY.

Magnesium chloride ; Action of feed water containing — on the walls of steam boilers. A. E. Lange. Z. Ver. deutsch. Zuckerind., 1909, 1011—1019.

AFTER a brief account of earlier work on this subject, including that of Ost (this J., 1902, 1177), and that of Heyn and Bauer (this J., 1908, 569), the author describes experiments on the action of solutions of magnesium chloride at 100° C. alone, and in presence of different quantities of calcium carbonate, on iron. Polished iron plates, of equal areas, were used, and in most of the experiments the plates were wound with 2 turns of 1 mm. copper wire in order to approximate as closely as possible to the conditions which obtain in a boiler (i.e., iron in contact with copper). The plates were weighed, then immersed in the solution (maintained at a temperature of 100° C.) for 3 hours, and subsequently weighed again. In some comparative experiments, the plates were immersed in distilled water and in Berlin tap water. The main conclusions are as follows:—Iron is more strongly attacked by distilled water than by tap water. Magnesium chloride attacks iron in contact with copper more readily than iron alone; if an equivalent quantity of calcium carbonate is added to the magnesium chloride solution, the

extent to which the iron is attacked both in presence and in absence of copper, is reduced by more than 50 per cent. In absence of calcium carbonate, the passage of air through the solution of magnesium chloride, only slightly increases the action on iron; in presence of calcium carbonate (in quantity equivalent to the magnesium chloride), aëration considerably increases the action on iron; these two statements apply both when copper is present and when it is absent. A solution containing 5 grms. of magnesium chloride per litre attacks iron to about the same extent as tap water. The following are some of the figures showing the action of magnesium chloride on iron (copper being present in all cases) and the inhibitive influence of calcium carbonate on this action, the action of distilled water being represented by 100:—

5 grms. MgCl ₂ (per litre)	80.75
" " " + 1 eq. CaCO ₃	27.00
" " " + 1 " "	22.10
10 grms. " " "	07.20
" " " + 1 " "	49.10
" " " + 1 " "	43.30
15 grms. " " "	08.20
" " " + 1 " "	03.40
" " " + 1 " "	48.10
25 grms. " " "	127.00
" " " + 1 " "	89.50
" " " + 1 " "	49.00

—L. E.