

Science Siftings

By 'VOLR.'

Famous Flagpole.

The Kew Gardens flagstaff, reputed to be the tallest in the Old World, has had to be taken down owing to time and decay having weakened it at many places in its 150ft length. Experts will have to decide whether it can be re-erected. For over fifty years it has been a landmark in Kew Gardens, and on the death of a reigning Sovereign and the coronation of his successor it has borne a specially large Royal Standard sent down by the Board of Admiralty. This year, when it came to be examined by the men who are hauled to its giddy height by ropes, it was found to have so many weak places that it was deemed advisable to lower it to the ground, and this has just been done. The spar is a remarkably fine specimen of a Douglas fir, and was sent to Kew Gardens by Mr. Edward Grey, a timber merchant in the Canadian trade, in 1861. It came from Vancouver Island, and was then 250 years old.

Fermentation in Paper-making.

Among the recent improvements in handling paper-making materials is a process for extracting the starch from cotton rags that are used in making linen papers. Practically all cotton cloth has some kind of a filler, and much of this is starch. In clippings from new cloth there is a considerable amount of starch filler. It was the practice formerly to soak the rags in warm water, and then boil them in an alkali solution. But the effect of the alkali on starch is very slow, as it causes the starch to swell up, so that the solution reaches the inner part of the starch grains only with difficulty. Malt is added in the proper amount to convert the starch into a soluble sugar which readily dissolves out of the fibre of the cloth and leaves it free of the filler. The active principle of the malt is the 'enzymes' that attack the starch just as they do in the brewing process, and convert it into a form of sugar that is easily disposed of.

Ten Centuries Ago.

Some eight years ago, says *Knowledge*, a ship of the early Viking period was discovered at Oseberg, near Tonsberg, in Norway. It was completely buried in the earth, and when disinterred was found to belong to the grave of a Viking queen, who died about A.D. 800. Horses, carriages, and sledges were also discovered in the grave, together with all kinds of household furniture and utensils and personal ornaments, the whole forming a picture of the state of northern civilisation ten centuries ago. Among the other articles found were two dark rectangular masses, which proved to be wax that has apparently been used for the waxing of sewing thread. This wax has recently been chemically examined by Dr. J. Sebelien, who found that its specific gravity and its melting-point agreed with that of the beeswax of the present day. The microscopic examination of the vegetable debris in the wax proved particularly interesting. The wax was dissolved in warm xylene, and the solution whirled in a centrifugal machine to separate the insoluble matter. The deposit consisted of a few pollen grains, including one which appeared to have been derived from the red whortleberry, since cuticle hairs, similar to those occurring on that plant, were also present. Other pollen grains were identified as belonging to cruciferous plants, while another appeared to have been derived from a member of the chickweed family. In addition to pollen the deposit contained fragments of wood charcoal, hairs from the bodies or legs of bees, the epidermis of barley corn, granules of barley starch, a single oat-starch granule, and particles of conifer wood.

PILES.

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IRISH AND GERMAN METHODS

What is known as the Zabern incident, where German soldiers were court-martialled for insulting and maltreating inoffensive civilians, has had its counterpart, though in a more aggravated form, in the Irish Land agitation.

To Irishmen who lived through the land war and the Coercion struggle the proceedings at the Zabern court-martial read like an echo from those stormy days, says the *Manchester Guardian* in its 'Miscellany' column:—Lieutenant Schad arrested a bank clerk for laughing at him, but the Royal Irish Constabulary in Kerry during the 'eighties went one better than that. Two prisoners were tried at Tralee on the charge of laughing and booing at the police, and a constable in examination said the offence committed was 'not exactly a booh, but a contraction between a laugh and a booh.'

Children Prosecuted Under Coercion Act.

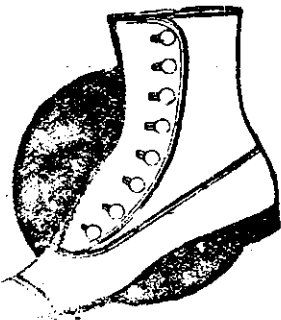
The Germans seemed to have confined their attention to adults: in Ireland children did not escape the pains and penalties of the Coercion Act. There was a classic case in Cork, where Daniel Sullivan, aged twelve, 'who appeared before the magistrates crying,' was solemnly indicted for 'having promoted a certain unlawful meeting contrary to the statute made and provided, and against the peace of our Sovereign Lady the Queen, her crown, and dignity.'

A 'Don't Hesitate to Shoot' Order.

Colonel von Reuter himself might have drafted the circular issued to the constabulary who formed the escort of Mr. Clifford Lloyd, R.M., during his famous regime in Clare. After directing that firearms should be used without hesitation to prevent any attack on the magistrate, it concluded, 'If men should accidentally commit an error in shooting any person on suspicion of that person being about to commit murder, I shall exonerate them by coming forward and producing this document.'

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J. McDiarmid

(NEARLY OPPOSITE POST OFFICE)

Oamaru.

We are Glad to have pleased so many readers of the 'Tablet.' Through this year (as in the past) we shall do our best to maintain your support.

Gaze & Co., Photographers, Hamilton