Science Notes.

THE WORK OF PASTEUR.

By the death of M. Pasteur we have lost one of the most prominent scientific men of our time. His death is hardly an unexpected loss to science since he had attained the ripe age of 72. We should rather feel that his whole life has been a great gain to science, and it is from that point of view that we must necessarily speak. The loss of a good man is to his relatives and friends always a grief, as inevitable as death itself.

Pasteur did not obtain a degree in medicine, yet his researches have led to greater advances in both medicine and surgery than those of any other man. Before Pasteur's time there was general belief in spontaneous generation. It was found that beef-tea or infusion of hay, in fact almost any animal or vegetable matter in a moist condition, was subject to decomposition or putrefaction. The decomposition was traced to minute organisms, and these were supposed to arise spontaneously. It was Pasteur who showed that the presence of germs in the air was responsible for their development, and that substances, which under ordinary conditions rapidly putrefy, could be prevented from doing so by keeping the neck of the bottle containing them perpetually heated. Germs are better able to resist unusual cold than unusual heat. Pasteur also succeeded in keeping in good condition for many months decomposable fluids by simply drawing out the neck of the containing bottle and twisting it in a corkscrew form. The intricacies of the passage, which was left freely exposed to the air, were sufficient to prevent the germs from entering the fluid. When, however, the vessel was moved so that the fluid came in contact with the dust deposited in the bends of the neck, the fluid putrefied and was swarming with bacteria in less than twenty-four hours.

Further details of Pasteur's work are hardly necessary to show how, by discrediting the theory of spontaneous generation, he laid the foundations of the success of modern aseptic surgery and also of the treatment of infectious diseases.

It is satisfactory to know that he was able himself to apply his knowledge to practical ends and so demonstrate to the non-scientific how the mysterious researches of the laboratory may be the means of securing a livelihood to thousands of humble agriculturists. When the fungoid disease of the silkworm threatened to ruin the silk industry in the South of France it was Pasteur who investigated it, and by means of his suggestions it was stamped out. He also discovered the bacillus of anthrax, a disease which was fatal to vast numbers of sheep, and which occasionally attacks man, and is known as "wool-sorter's disease"; and having discovered it he found a vaccine by means of which sheep could be rendered immune.

To many persons Pasteur is (or was until his death) known only in connection with the Pasteur Institute, erected by the Academy of Science, for the treatment of hydrophobia by innoculation with attenuated virus.

This latest work of the great bacteriologist has been the subject of much hostile criticism, and it may be that it is yet too recent to permit of a reliable verdict being passed upon it. Meanwhile, it is a fresh claim on our gratitude to Pasteur that he should have spent so much time and thought in his attempts to grapple with a dreaded disease, and it is doing an injustice to his memory if we do not endeavour to prevent his being known only as someone who attempted to cure hydrophobia, with doubtful success.

Notes on Art.

DESERTED VILLAGES IN EAST ANGLIA.

It is reported that there were formerly three churches at Walberswick; and so rich was the town through the large harbour-dues, which all went to the churchwardens, that in the middle of the fifteenth century the contract was signed for the building of the tower of the noble church whose dismantled fragments are all that meet the eye to-day. Very quaint reading this contract is, with its provision of casks of herrings for the sustenance of the builders: the work—that is to say, the building of the tower alone—took eight years, for the townsmen prudently stipulated that no building should go forward in time of frost.

It is a most complete and graceful specimen of the flint inlaid work which is so characteristic of the district; its proportions are finer, and its detail more elaborate, than that of any of its sister churches.

It affords a most tempting specimen of what the rest of the edifice must have been. But the time of prosperity was short. The Reformation alienated the Church lands, and by driving out the monks of Blythburgh, threw all the poor of the district upon the fast vanishing custom dues, and in 1689, the few remaining inhabitants of the once prospering town obtained a faculty permitting them to dismantle the decaying church, and sell the lead, stained glass, and stone facings, to raise money to erect a little chapel within the walls, which should be weatherproof. So matters stand to-day. The tall, gaunt skeleton of the once richly furnished church stands a mournful sentinel among the bracken, golden gorse, and heathery swells of the wide moorland that encompass it, at the head of the picturesque, straggling village, with its forsaken harbour, and horse-ferry, where the sinking sun turns the dykes that intersect the low coast to blood.

Sad as is Walberswick, it is yet not so sad as Cove Hythe. Walberswick has, at least, the help of a vicar with a "feeling for history"—who loves every stone of its antiquities, and has raised five hundred pounds from nowhere, to thoroughly and permanently repair the tower. But no friend has arisen for Cove Hythe. Here, the number of cottages that compose the village cannot be more than a dozen at the most; yet at the time it was built there must have been a town or port, demanding a church of almost minster-like proportions. The few fragments of carving which now survive lead to the conclusion that originally it was the finest of the series; but its ruin is the most hopeless of all.

The good folk who remodelled Walberswick seem to have wished to do their work as well as their narrow means would allow; but at Cove Hythe, neither taste nor feeling contended with poverty. On the nave walls of the squalid place where, within the majestic ruins, service is still occasionally held, appears the following strange legend:—

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