

small proportions relatively to the other. This is enough to cause new chemical properties to appear. In this manner, also, the fundamental properties of mercury may be altered by the combination with it of one-fourteenth-thousandth of its weight of magnesium."

In the ordinary state, the writer goes on to say, these two metals refuse to combine; but to force the mercury to dissolve a small quantity of magnesium a slight pressure is sufficient. This pressure may be very light, but it must be continuous. The properties of the mercury are then profoundly modified. Thus transformed, the mercury possesses the property, as curious as it is unexpected, of oxidizing rapidly in dry air and of energetically decomposing water when plunged into that liquid. The modified mercury loses its properties rapidly when exposed to air, but they can be preserved indefinitely simply by covering it with a thin layer of vaselin.

M. Le Bon goes on to say that the dissolution of the magnesium in the experiment may be hastened by the presence of a reagent that attacks magnesium, muriatic acid, for instance. He promises to give other instances of this curious modification of chemical properties.—*Translation made for THE LITERARY DIGEST.*

### BRITAIN'S NEGLECTED INDUSTRIAL OPPORTUNITIES.

NOT so very long ago Great Britain was easily first in every new commercial and industrial project. This is no longer the case, and in a recent letter to *The Commercial Advertiser* (New York, October 8) the English correspondent of that paper asserts that the cause of waning English industrial supremacy has been England's neglect of opportunities, owing to her somewhat contemptuous feeling that her position was quite secure from attack. She is beginning now to awaken to the real state of the case. Says *The Advertiser's* correspondent:

"An illustration of the peculiar way in which Great Britain neglected an opportunity for commercial development is to be found in the aniline dye industry. Here was a chance to establish a brand-new business of an exceedingly profitable character; a business which would obviously revolutionize many of our most important industrial processes, and which would bring large and safe profits to those who should exploit it. British capitalists decline emphatically to spend money over this trade, and the result is to be seen in the absolute control obtained by Germany in all the branches of aniline color manufacture. With regard to electrical business, it was seen clearly more than twenty-five years ago by all who are accustomed to look ahead that the main engineering activity of the twentieth century would be associated with electricity as the motive power. Yet, incredible as it may appear, British industrial leaders, then certainly at the head of the world's industrial activities, failed to take advantage of their position and allow the supremacy in this new business to pass into other hands.

"The present position of Great Britain in the matter of electric tractions, electric industrial power, and electric lighting is ludicrous and pitiable. She is just now engaged in the installation of electric tramways of a type which was in existence in some of the chief towns of Italy nearly a quarter of a century ago; in lighting she is far behind any of the principal continental cities, in telephones she is beaten hopelessly by little Norway and even by Finland. . . .

"It would be both interesting and serviceable if some statistician with plenty of time upon his hands would collect information with regard to the attitude of British manufacturers toward new inventions for the first half of the nineteenth century, and compare the results with the attitude taken up during the second half of the same period. The difference would probably surprise those who brand as pessimists all who have the courage to point out the causes of declining commercial supremacy.

"Evidence is accumulating with every succeeding year that Great Britain is standing still while other nations are pressing forward, and, notwithstanding the enormous headway which she has gained by strenuous endeavor in the past, she can not afford

to adopt any such conservative methods. Competition in quantity of output with the United States is, of course, impossible; the circumstances are such that no amount of energy or imitation will counterbalance the enormous material advantages of the latter country; but there is no need for permitting other European states, limited in a similar manner in regard to raw material, to pass Great Britain in the race for commercial development."

This state of affairs, the writer points out, is certainly not due to lack of mental activity among British scientists in the matter of electrical discoveries. At the last engineering congress over a hundred papers were submitted by them dealing with interesting discoveries and suggestions. He goes on:

"The men of science are fully prepared to do their share of the work; but what is conspicuously lacking is the will to risk money in carrying out new scientific ideas on the part of the captains of industry. In this respect Great Britain is as far behind the rest of the world now as she was in front fifty years ago. Probably the accumulation of large fortunes in comparatively few hands has something to do with this decadence. Men of moderate fortune are diminishing in number, and it is these men who are more likely to risk their capital in the hope of increasing their business than those who have already more than they know how to employ. Whatever may be the cause, the effect is plainly seen, and unless some means be devised by which a complete alteration shall take place in the attitude adopted by capitalists toward fresh enterprises, it is easy to prophesy that the position of Great Britain in the industrial world is doomed to decay."

### SCIENCE BREVITIES.

"A pathetic incident in connection with a biograph scene occurred in Detroit, Mich., March 17 last," says *Popular Science*. "A view made at the occupation of Peking was being flashed across the screen. It represented a detachment of the Fourteenth United States Infantry entering the gates of the Chinese capital. As the last file of soldiers seemed literally stepping out of the frame on to the stage, there rose a scream from a woman who sat in front. 'My God!' she cried hysterically, 'there is my dead brother Allen marching with the soldiers.' The figure had been recognized by others in the audience as that of Allen McCaskill, who had mysteriously disappeared some years before. Subsequently Mrs. Booth, the sister, wrote to the War Department and learned that it really was her brother whose presentment she so strangely had been confronted with."

KOCH's theory of the non-identity of human and bovine tuberculosis is upheld, according to *The Tribune* (New York, October 10), by experiments now being made at the bacteriological laboratory of the Board of Health. Says this paper: "So far the experiments have shown the theory to be correct, it is said. All the calves reacted, however, to a tuberculin test, but the reaction was very slight, and may have been due, it is said, to inflammation or other causes, considered by the investigators at the laboratory to be of minor importance. One calf was killed on Tuesday, and an autopsy was held on the body yesterday. It failed to reveal any tubercle bacilli, and it was thought that the slight infection indicated by the tuberculin test might have been diminishing and not progressive. . . . The other calves will be kept at the laboratory for about ten months more, and will be carefully watched. They are now in fairly good health."

BACTERIA IN RUSSIAN MILK.—"According to a Russian savant, M. Lakerbekoff, who carried out an elaborate inquiry into the bacterial quality of the milk supplied to St. Petersburg, the condition of affairs in that city is appalling," says *Modern Medicine*. "Milk described as the purest obtainable was found to contain a minimum of over 10,000,000 and a maximum of over 83,000,000 bacteria in from twenty to twenty-five drops; while in other samples a minimum of 20,000,000 and a maximum of 114,000,000 were found. Such pollution as this is unnecessary, for milk under normal healthy conditions contains very few bacteria as it issues from the cow. Indeed, some authorities consider that it is absolutely devoid of microbic life. If due precautions are taken in keeping the cows and their stable clean, if the milker is made to keep himself and his clothes in a thoroughly clean condition, milk can be placed upon the table which is practically free from all micro-organisms. Of course, the milk-cans require proper attention, and the cows ought to be under the supervision of a veterinary surgeon."

TELEPHONING THE HOSPICE OF ST. BERNARD.—"Mr. John W. Gates, of the United States Steel Corporation, tells a story about a friend of his who went into the Alps last summer," says *The Electrical World*. "My friend began the ascent to the hospice of St. Bernard," said Mr. Gates. "When about an hour's climb from the pass he was stopped by a dense fog. He waited gleefully, expecting to be rescued by the dogs, and so he was able to come back to us with a thrilling story. The dogs did not come, however, and the fog partly lifted, so he resumed his climb, and finally arrived at the hospice, where he was welcomed warmly by the brothers. His first question was: 'Why did you not send the dogs out in so dangerous a fog?' He nearly dropped from his chair when one of the brothers said: 'You did not telephone us.' 'Telephone you?' he ejaculated. 'Yes,' was the answer. 'You see, shelters have been built all along the climb, and each shelter has been provided with a telephone. If a fog comes up all one has to do is to go to the nearest shelter and telephone. We immediately send a man and dog to that shelter. The dog carries bread, cheese, and wine. As we know at just what shelter the climber is no time is lost in looking for him.'" Mr. Gates says his friend was so disgusted with having his romantic notions knocked in the head that he left Switzerland at once.

## THE RELIGIOUS WORLD.

## RELIGIOUS FAITH AND THE "HIGHER CRITICISM."

THAT kind of investigation commonly known as the "scholarly" method of Biblical criticism is not looked upon as an aid to religious faith by most denominational journals. It is noted with satisfaction by *The Advance* (Congreg., September 19) that the following resolution was recently adopted by the Berlin Pastors' Conference:

"The Pastors' Conference does not wish to ignore the intention of Professor Harnack in his lectures on 'The Fundamentals of Christianity' to bring again the blessings of Christianity near to our people so estranged from it. But they must give voice to their conviction that the contents of these lectures, by falling back to the superficial point of view of obsolete rationalism, and by thrusting aside the essentials of Christianity, proven by both Scripture and history, satisfy neither the demands of history, the true gospel nor the needs of humanity. They confess with reformers and believers of all ages, who spoke in the power of the Holy Ghost that Christ, the Son of God, inseparable from the Gospel, in the Word of God, must continue to be the very heart of Christianity, and they testify 'I believe in Jesus Christ, the only-begotten Son of God, our Lord.'"

*The Advance* sees in this utterance, made in the recognized home of advanced religious thought, another sign of a reaction against the higher criticism largely due to its subversive character. That there is such a reaction is declared to be the case by the St. Louis *Christian Advocate* (M. E. Church, South, September 11) also, which says:

"Every one knows something of the peculiarities of the human mind when it devotes itself to a hobby, and the strange manner in which it perverts to its own purposes odds and ends of evidence which has little, if any, bearing on the case. Most of the men who have devoted their attention to the critical study of the Old-Testament writings along the lines suggested by the German scholars have become so biased, no doubt unconsciously, as to accept hypotheses regarded by others as inadmissible. Now has come the reaction, and some even of the adherents of the extreme school of criticism are beginning to admit that they have gone too far, and that their position, from the point of view of common sense, is untenable. Add to this consideration the fact that every year brings new confirmation, not only of the reliability, but also of the unity of plan plainly visible in the Old-Testament writings, and it is easily seen that the extreme views taken by the most pronounced advocates of the German school can no longer be maintained."

Prof. Nathaniel Schmidt, of Cornell University, writing in Chicago *Unity* (Unitar., September 12), does not deny that Biblical criticism may be, and at times actually is, subversive, not only of dogma, but of religious faith as well. He does not conclude from this, however, that we should cease to investigate, and "content ourselves with proclaiming the traditions of the fathers," or with "defending a faith whose foundations we dare not examine, in order to cause no offense." On the contrary, Professor Schmidt is an advocate of Biblical criticism because he believes it actually promotes true religion. He says:

"Even the negative results of Biblical criticism have a value as promotive of religion, for they remove serious obstacles in the way of faith. Such are the fictions woven about the Bible. Historic accuracy, prophetic infallibility, final authority are of their number. The Hebrew and Christian Scriptures contain many myths, legends, and miraculous tales. These find their natural explanation in peculiar historic circumstances and universally observable modes of thought. If it is demanded that they be regarded as sober accounts of actually occurring events, men may readily be tempted to live without the comforts of religion rather than thus to stultify themselves. . . . If, then, it is urged that all the vast and varied contents of a literature extending over a thousand years must be construed to body forth the same unchanged ideas, or that what happens to be its latest

utterance written more than seventeen centuries ago must be taken to be the ultimate revelation of religious and moral truth to mankind, so preposterous a demand might easily lead thoughtful men to suspect that religious faith is not compatible with mental sanity. Biblical criticism, by removing these fictitious values, takes away the obstacles that are to-day most baneful and allows the free exercise of the religious instincts."

But criticism is not merely destructive, continues this writer; it is chiefly constructive. To quote him further:

"Its positive gains are most efficient aids to religious faith. Its aim is to restore the original. As textual criticism it seeks to reproduce the original words; as literary criticism it endeavors to find the mind expressing itself in the words; as historical criticism it undertakes to discover the social *milieu* in which the mind conceived such ideas and expressed itself in such words. . . . The critic listens to the pulse-beats of the author he is interpreting. He lives with him, forgets his intellectual home and kindred to walk with him, a pilgrim through a strange land, thinking his thoughts and feelings as he did. . . . Such intimacy, therefore, can not but leave a powerful impression upon the interpreter. Faith engenders faith. A genuine inspiration is contagious, it causes others to be inspired. A true revelation is a drawing aside of the curtain to show another veil beyond. For there are folds upon folds to truth. Thrown into the midst of the rushing life of Israel, the critic realizes that the great forces operating in that life are forever working in mankind, that the river of God flowing with light and inspiration through this ancient people is a perennial stream running through all ages and all climes. He comes to believe in a present inspiration and a continuous revelation. The religious value of this new recognition lies in the fact that it strengthens men's confidence in their immediate intuitions of truth and justice, and allows faith to settle with triumphant assurance upon what is a present reality to the soul."

## SECULAR PRESS COMMENTS ON THE PROTESTANT EPISCOPAL DIVORCE CANONS.

HOW the Protestant Episcopal Church will finally decide on the problems of divorce and the remarriage of divorced persons, must remain unsettled for at least three years longer. No further action upon the matter, beyond *ex parte* consideration during that period by the committees appointed, can now be taken until the next triennial convention at Boston. This disposition of the whole question is brought about by the defeat, in the San Francisco convention, Tuesday, October 15, of proposed changes in the existing canons on marriage and divorce. The decisive action was not that of the House of Bishops, which had previously adopted the amended articles. It was the vote by dioceses of the House of Deputies, composed of lay and clerical delegates, to which the action of the bishops came for acceptance or rejection. The text of the defeated marriage and divorce amendments was as follows:

"No minister shall solemnize a marriage between any two persons unless nor until by inquiry he shall have satisfied himself that neither person is husband or wife of any other person then living, nor has been husband or wife of any other person then living; unless former marriage was annulled by a decree of some civil court of competent jurisdiction for cause existing before such former marriage."

"No person divorced for cause arising after marriage and marrying again during the life-time of the other party to the divorce, nor any person marrying a person so divorced, shall be admitted to baptism or confirmation or be permitted to receive the holy communion until the written approval of the bishop shall be given; provided, that this prohibition shall not apply to the case of the innocent party to a divorce for cause of adultery; and provided, also, that the sacraments shall in no case be refused to a penitent person in imminent danger of death."

In advance of any vote, the New York *Press* said editorially (October 9):

"The teaching of the marriage service in the Prayer-Book is one thing and that of the canons of the church is another. The