MEMOIR OF LIFE OF VISCOUNT LAKE

EVIEWING the book just issued from the pen of Colonel Hugh Pearse, "Memoir of the Life and Military Services of Viscount Lake, 1774-1808," the London Times says: Lake, like other great soldiers of

his period, has suffered in reputation by being a contemporary of the great Duke. Wellington so much overshadowed all other British commanders of his day that neither the public of the time nor subsequent historians have done full justice to soldiers who would have stood on pinnacles in almost any other age. Lake, too, has been peculiarly unfortunate, in that his great campaign was being waged when in a neighboring part of India, at Assaye, young Arthur Wellesley was winning the first victory which brought his name to the front. Nevertheless there are several biographies of him by men of his own profession which show full appreciation of his greatness in the field. The chief authority for his Mahratta campaign. is the graphic "Memoirs of the War in India," published in 1818 by Sir William Thorn, who served under him during that period. Malleson also has done him full honor, and more recently Colonel May has contributed an appreciation of him to a volume of essays on great commanders. Colonel Pearse, however, has been well inspired in recalling him again to public notice in this volume entirely devoted to his career. He gives some interesting details as to the previous family history of the Lakes and traces the fortunes of the first Viscount's numerous descendants, while the main facts of his life

are treated with a soldierly directness and a sober judgment, the effect of which is the highest possible tribute to his achievements. To soldiers Colonel Pearse's military knowledge will make this book of great value as a lesson in strategy and tactics, while to the still wider public who are interested in the qualities of the men who won and maintained for us our Indian Empire it will appeal as strongly. Some small defects we may notice in the book. The list of works consulted is not as useful as it might be owing to the confused method of indicating the titles of some of the books quoted, while to one book, "The Campaigns of Lord Lake," (Major H. Helsham-Jones), we can find no reference either in the British Museum or the London Library catalogues. The index also is defective. Thorn, for example, who is often quoted or alluded to in the text is only referred to once in the index; and there are other omissions. Turning to the narrative, we find a few more points to criticize. It is hardly true to say that France's attack on Frederick the Great in the Seven Years War was primarily initiated to punish him for scornful treatment of Mme. de Pompadour, that the Duke of Cuinberland was "an inexperienced commander" in 1756, or that Prince Ferdinand was appointed to command our army in Germany because Amherst and Wolfe could not be spared from America. Again, Thorn, who distinguished himself at the battle of Laswari, and to whom the author is chiefly indebted for his facts on that whole campaign, should have been mentioned for his bravery. But these are minor

points and do not impair the telling effect of Colonel Pearse's simple and straightforward account of one of our greatest Indian generals.

Lake learned his military science in the best possible school, for he entered the army at a time when the elder Pitt and Frederick the Great were each in his way proving that victories can only be won by a vigorous offensive and a calculated rashness. Nor did his own more immediate superiors, Prince Ferdinand and the gallant Marquis of Granby, fail to drive these lessons home. Young Lake himself, however, hardly needed such teaching. From the first he showed the quality of dash and almost reckless audacity which was his leading characteristic through life. At eighteen years of age in the battle of Wilhelmsthal he stayed a momentary panic in his regiment by waving the colors which he carried that day, and standing firm with a few men until the rest rallied round him. In his next campaign, as a colonel at Yorktown, he displayed the same spirit in leading a forlorn hope. In the Duke of York's expedition to Flanders in 1793 Lake, then a major-general, by his omptness in attacking the defeating a force of 5,000 French soldiers with 1,100 Guardsmen at Lincelles, was responsible for the most brilliant exploit of the campaign. In the Irish rebellion of 1798 he had less opportunity of distinguishing himself, but his appointment to the command in India, under Lord Wellesley in 1801, allowed him the best chance of giving full scope to his genius and his courage. Never were two men better fitted to work together in the interests of England than the

great governor-general and his commander-inchief, for each appreciated and encouraged the other's enterprise, nor did any shadow of iealousy ever interfere with their harmonious working. "I am persuaded that many lives have been saved by the early sacrifice of a few brave men, whose gallantry has struck terror into the hearts of the enemy" is a sentence from one of Lord Wellesley's despatches, which might equally well have been written by Lake himself; and is a key to the character and success of both. Indeed in this biography of a gallant soldier no episode is more attractive than the account of the relations between these two men, and their generous tributes to one another's merits.

For two years Lake had peace, but like all true fighters he was all the time preparing for war. And when the war came he had a welltempered sword with which to deal his rapid and unerring blows. He loved his men, and was beloved of them, so that they would follow him anywhere; and no man has ever left India with such an extraordinary testimony of affection as Lake received from all classes. In the Mahratta war of 1803-6, which secured for us the centre of India, Lake displayed the merits which, above all others, have won for the English "Sahibs" the respect and loyalty of Indians. He never avoided a battle, but sought it even against overwhelming odds; as never left his enemy time to recover, but pursued him, and harried him until he had brought him to his knees. Always making a gallant show at the head of his troops, he loved good cheer for himself and for them when opportun-

ity served; but when they were starving himself was content with a few grains of ri or corn munched in the saddle. Unlike most commanders he always led his charges him self, and by his open contempt for person danger added tenfold to the enthusiasm of troops. The only privilege he claimed for white regiments over their colored comra was to give them the toughest work in hottest corners of an engagement. In timating his success it must be remember that the Mahrattas were no undisciplined hordes, but trained to war by good French in structors. Nevertheless in the first war, against Scindia, in a space of two months, with a force never exceeding 8,000 men, he destroed thirty-one of his adversary's best batallio captured the cities of Algirah, Agra, and Delhi. besides 526 pieces of cannon, and won four victories in the field, including the decisive battle of Laswari. But his unwearying pur suit of Holkar in the succeeding war, though less dramatic in its results, was an even more striking achievement. Lake had what is perhaps the greatest quality in a general, an intuition for the right stroke rendered even more acute by the excitement of battle, joined to the bold and quick decision necessary for utilizing his intuition. Pitted against the best European troops, he might perhaps have been found wanting in science, but even defeated he would always have been redoubtable from his power of rapid recovery. In the roll of Indian generals he is second to none, for the temerity which might possibly be laid to his charge is not in the east a defect, but the highest merit.

Canadian Steel Industry

contributes the following article to a re-cent issue of the Engineering supplement contributes the following article to a recent issue of the Engineering supplement of that paper:

Recently compiled official figures show that between 1896 and the end of 1907 the Dominion government disbursed \$13,039,273 in industrial bounties. Of this sum \$1,204,135 went to the refiners of petroleum, \$742,843 to lead-mining companies, \$30,000 to silver-mining concerns, and \$94,601 to the manufacturers of binder twine. By far the larger part of the total of \$13,000,000, however, went to the iron and steel companies in the provinces of Nova Scotia and Ontario. Thirteen of these undertakings are now on the bounty list of the Department of Trade and Commerce at Ottawa. Three of these concerns—the Atikokan Iron Company of Port Arthur, the Lake Superior Iron and Steel Company, and the Ontario Iron and Steel Company, and the Ontario Iron and Steel Company, of Welland—came on the list only in the closing months of 1907. They were paid in Fespect of only \$1.95 tons of pig-iron and 3,618 tons of steel ingots. This was the total production of these three plants in 1907, so that nearly the whole of the \$10,947,690 distributed in iron and steel bounties between 1896 and 1907 went to the larger and longer-established companies, whose plants are at Sydney and Londonderry, Nova Scotia, and at Sault Ste. Marie, Hamilton, and Midland, Ontario.

CORRESPONDENT of the London Times

Although the bounties distributed are now so large and in the case of the older plants have been granted since the first Dominion Bounty Act was passed in 1883, it is possible to trace in the Stock Exchange annuals of Montreal and Toronto the dividend payments of only three companies that participate in them. These are the Dominion Iron and Steel Company, whose plant is at Sydney, the Lake Superior nusis of Montreal and Toronto the dividend payments of Only three companies that participate in them. These are the Dominion Iron and Steel Company, whose plant is at Sydney, the Lake Superior Corporation, of which the Algoma Steel Company, whose plant is at Sydney. He Lake Superior Corporation, of which the Algoma Steel Company, which owns the plants at North Sydney and at New Giagow. Nova Scotia. During 1907 the Dominion Company drew \$1,223,200 in bounties on pig-Iron, steel ingots, and wire rods. It has received nearly \$5,000,000 from the treasury at Ottawa since it first went on the bounty list in 1900. The company is capitalized at \$335,000,000 -\$10,000,000 in first and second morrgage bonds of \$5 and 6 per cent respectively; \$5,000,000 in preferred shares; and \$20,000,000 in common shares. Interest has been regularly paid on the bonds; but the only dividends ever received by the shareholders were for the years 1901-3. During these two years dividends were paid out of capital, under an Act of the Nova Scotia Legislature which untorized such payments while the company was completing its plant. The plant was not complete until July, 1904, when the rail mill was ready for work. Dividends to the preferred shares and so far the history of the company no dividends have since been paid on the preferred shares and so far the thistory of the company no dividends have been paid to the holders of the \$20,000,000 of common stock.

The plant has been a unit since July, 1904. The rail mill has been a lant since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1904. The rail mill has been a durit since July, 1905. The company pays no mandi

Nova Sectia Steel and Coal Company—This company is capitalized at \$9,338,800—in ordinary shares \$4,970,000; eight per cent. Cumulative preferred shares \$1,030,000; 6 per cent. mortgage bonds, \$2,338,000; and consolidated mortgage 6 per cent. bonds, \$1,500,000. This company, unlike the Dominion Iron and Steel Company, has from its inception been an exclusively Canadian undertaking. No American financiers were associated in its promotion, and there are no Americans on its directorate. Under one form or another the Nova Scotta Company has been on the the Nova Scotia Company has been or

bounty list since the early nineties. For the year 1907 it was paid \$63,343 in respect of its tonnage of plg iron, and \$115,867 for steel ingots, as total for the year of \$179,210. Interest has been paid continuously on the bords. In recent years also the preferred shareholders have received their 8 per cent. dividends; and during this period dividends on the common shares have ranged from 5 to 6 per cent. The last dividend on the common stock, which was declared on Pebruary 17, was at the rate of 6 per cent. For the year 1907 business was larger with this company than during any year of its existence. The increase was exclusively in the iron and steel department, because, as compared with 1906, there was a falling off in the company's coal business and in the exports of iron ore from its mines on Wabana Island, Newfoundland. The law calls for no return to the Department of Trade and Commerce of the business and profits of the companies which are the recipients of the iron and steel bounties. Payments are made on certificates of production which are signed by an official of the department, who is the representative of the Dominion Government at the plant. In the case of the Nova Scotia Steel and Coal Company, the published statements of accounts give only the total profits from the iron and steel and the coal and ore business. The aggregate profits so set out for 1907 were \$944, 790... Included in this amount was the sum of \$179,210 aggregate profits so set out for 1907 were \$944. Included in this amount was the sum of \$179,210 received in bountles.

Algoma Steel Company—The sum of \$556,286 was paid to this company in bounties in 1907. The plant is at Sault Ste. Marie, Ontario, and only rails are made. It has been on the bounty list since 1902; and since the rail mil was got to work in the summer of 1904 its receipts from the Treasury at Ottawa have ranged from \$280,000 for the fiscal year 1904-5 to \$556,000 for the calendar year 1907. The Algoma Company is a subsidiary company of the Lake Su-Company is a subsidiary company of the Lake Superior corporation. This is a holding company organized under the laws of New Jersey. In 1904 littook over what was known as the Consolidated Lake Superior Company, also an American promotion, which was a holding company for eight or nine railway, street car, and industrial companies, all established in the neighborhood of Sault Ste. Marie. The older company was in difficulties before the new holding company was organized—difficulties so serious that the Province of Ontario had to become guarantee for two years of an issue of its bonds. The capital of the Lake Superior Company is now some \$50,000,000, and as yet holders of ordinary shares in the steel company have received no dividends on their investments. The disposition of the Canadian Government and people to foster and protect home industries, and in particular the iron and steel industry, has, however, been gratefully acknowledged in the annual reports of the Lake Superior Company.

Hamilton Steel and Iron Company—This is the

Hamilton Steel and Iron Company-This is most obviously prosperous of all the bounty-supported iron and steel enterprises. Its shares are locally held, most of them in Hamilton and To onto, and medicalls of the company are given in the annual finandetails of the company are given in the annual finan-cial review which is published by the Houston Com-pany of Toronto. A year or two prior to 1907 no dividends were paid on the share capital, which in that year stood at \$1,513,000. But at the end of 1907. dividends were paid on the share capital, which in that year stood at \$1,513,000. But at the end of 1907, during which year the company received \$224,546 in bountles, arrears of dividends were paid, and there was a reorganization of the company. It was capitalized at \$5,000,000, and when the shares were distributed each shareholder received three of the new shares for every share that he held in the old company. In this way a stock dividend which amounted to 200 per cent. was distributed. In the meantime a new 250-ton blast furnace had been added to the company's plant, so that in 1908 the company's call on the bounty fund at Ottawa will be larger than at any time in the history of the Hamilton undertaking. It was the third or fourth plant in Canada to come on the bounty list. Its growth and prosperity have put the shareholders among the most fortunate investors in iron and steel enterprises in the Dominion. They have received in dividends and stock didends some two fundred and thirty or forty per cent. on their original investments. This obvious prosperity, however, has had its drawbacks for the Government at Ottawa; as since the dividend in stock was distributed, it has been insisted in many of the Oniario newspapers, without regard to party affiliations, that this Hamilton dividend was proof that bounties should have come to an end at the tariff revision in 1906.

have come to an end at the tariff revision in 1906.

Canada Iron Furnace Company—There is a 30-ton furnace making charcoal iron at Radnor, in the Province of Quebec, and a 125-ton furnace making pigiron at Midiand, Ontario. The Radnor furnace uses Canadian ore—bog ore found in the neighborhood. It is accordingly paid on the higher scale of bounty, and last year received \$12,850 from the Dominion Treasury. The Midiand furnace uses American ore. It is on the lower scale, and last year earned \$32,571 in bounties. The company is practically a private one controlled by two or three large capitalists of Mentreal. Its dividends are not published in the Houston Annual Review. But it is apparently prosperous in its way as the Hamilton Company; for it is now adding a second furnace at Midhand of 250 tons capacity. Similarly, no details are published concerning the Londonderry Iron and Mining Company, which received last year \$43,534 in bounties, or concerning the Maciougall Company, which has a charcoal furnace at Drummiondville, Quebec, which in 1907 received \$5,200 in bounties. During the present year much interest will centre on the operations of the Atikokan Company's furnace at Port Arthur, Ontario. This furnace came on the bounty fist nearly at the end of 1907, and drew only \$17,210 in bounties. This year its call on the bounty fund will be very much larger; for it is the only modern turnace in the Dominion specially equipped for treating Canadian ores. It draws all its supplies from the Atikokan ore deposit in Northern Ontario; and although the capacity of this new

furnace is only 100 tons, it can earn in bounties as much as a 200-ton furnace which is run on Newfoundland or other imported ores. The bounty rates this year are \$2.10 a ton for pig iron from Canadian ore, \$1.10 for imported ore, \$1.65 a ton for steel ingots, and \$6.00 a ton for wire rods, which as yet are made only at the plant of the Dominion Iron and Steel Company at Sydney.

CABLE COMPANIES AND CODES

The International Telegraph Conference, now in session at Lisbon, will have under consideration and for decision a question of more than usual importance to the commercial world and to cable and telegraph companies, that is, how far Clause 8 of the London Convention governs the use of code words, writes a correspondent of the London Times. Concisely stated, this clause admits the use of words of not more than ten letters as one word, provided they are pronounceable in any one of the eight selected languages. Before the London Convention only good or dictionary words were admissible. The change opened up a wide field in code-making by allowing the construction of artificial words, admitted of great economies in coding, and thereby encouraged much freer use of the cable, and unquestionably largely augmented the income of the cable companies. It is stated that the cable companies will endeavor at this convention to have Clause 8 rescinded and the old restriction to diofionary words reinstated. This would seem a curious course to take in view of the great ficrease in coded cablegrams, were there not an explanation forthcoming. The companies state that the letter and spirit of clause eight have been violated, and that they have to handle a large and increasing number of code words which are not pronounceable, but are simply an aggregation of ten letters without regard to the distribution of consonnounceable, but are simply an aggregation of ten letters without regard to the distribution of consonants or vowels; that they are, in fact, required to accept and transmit for the price of a pronounceable

nounceable, but are simply an aggregation of ten letters without regard to the distribution of consonants or vowels; that they are, in fact, required to accept and transmit for the price of a pronounceable word ten arbitrary signs, pronounceable or not; that this abuse of Clause 8 entails upon them a lengthened time in transmission and an amount of labor in the shape of repetitions not contemplated when the Clause 8 privilege was granted. Their claims are easily supported. There are unquestionably in use at the present time codes in the compilation of which no regard has been paid to the question of pronounceability of words, and, still more, probably from ignorance on the part of the compilers, telegraphic synonyms abound in them. They thus not only entail delay in the initial handling, but multiply risks of errors in transmission and necessity of repetition. This means extra cost to the companies, and it means also, very often, inconvenience to users of codes made up in strict agreement with clause eight, as when the cables are fully occupied it is the difficult message, slow of transmission, which regulates the speed of the whole.

The understood intention of the cable companies to move for a return to the ante-London regulations—thus accounted for—has naturally caused a great alarm in commercial circles, and chambers of commerce and commercial obdies in different parts of the world have passed resolutions protesting against the proposed change, but unfortunately, some of them, the London Chamber of Commerce among the number, have not been content with this, but have asked that Clause 8 be altered so as to remove all restrictions as to the unpronounceability of words so long as they do not exceed ten letters. They are thus playing directly into the hands of the cable companies in mphasizing the latters' grievances. It is argued that to change it in the direction of making ten letters a word the only restriction in the complication of a word goes to the other extreme. A strict emforcement of the pronounceabil

There may at times be a difference of opinion as to what is and what is not pronounceable, but there can be only one opinion regarding words with an unlimited use of consonants without a vowel to break their continuity. Upon that the convention may decide, and should its ruling be confined thereto, both the great body of code users and the cable companies would probably be satisfied.

TOLSTOY AS SCHOOLBOYS' FRIEND

Count Tolstoy recently gave his ideas of education and they are not without interest. To a certain extent his method would follow the ancient Greek curriculum. Languages would correspond to the Greek's rhetoric, modelling, and sculpture, and music and singing would correspond to the Greek's "music;" in addition, he urges that some trade be learnt. The subjects of religion and morality, he believes, can be taught to children only by precept at home, but all the others are for the schools. But at this point Count Tolstoy advances a singular plan. The instructor must, indeed, fix and regulate the hours, "but the pupils should be at liberty to come to school or not to come." The Count's theory is that the pupil must be left absolutely free to study or not to study, just as man is free to eat or not to eat.—Harper's Weekly.

Franco-German Relations

HE Paris correspondent of the London
Times, writing under date of May 5, says:
I have purposely refrained from mentioning in my correspondence the few isolated manifestations, promoted chiefly from the other side of the frontier, in favor of a Franco-German rapprochement.

from the other side of the frontier, in favor of a Franco-German rapprochement, because they lacked entirely anything in the shape of popular sanction and had not even the significance of the visit of the English journalists to Berlin. I should have made no reference to them even now had it not been that authorized French writers of all shades of opinion, apparently apprehending that an importance which they do not possess would be attached to these manifestations abroad, are beginning to warn the public opinion of their own country as to their true nature, that is to say, that they are more German than French. Indeed, such is the ostentatious activity displayed, by the Germans at this particular moment to convey the impression that a rapprochement is within sight that impression that a rapprochement is within sight that many people believe it to be in view of the French President's approaching visit to England. If only the idea could be conveyed to the unsophisticated British mind that their French friends are getting lukewarm in their attachment to the entente cordiale if would deprive M, Fallieres's visit to London of half its importance.

portance.

Let me hasten to add that there is not the faintest trace of any such fickleness on the part of the French people or their government. The visit of M. Clemenceau was unmistakable proof to the contrary had any such evidence been required. There has been from the beginning in certain cosmopolitan or rather Franco-German financial circles a disposition to afford Germany financial facilities on the French market for which some show of a rapprochement was indispendent.

the beginning in certain cosmopolitan or rather Franco-German financial circles a disposition to afford Germany financial facilities on the French market for which some show of a rapprochement was indispensable. But in society and among the masses the entere cordiale is more popular than ever, and there has at no time been less chance of its being succeeded in the affections of the French people by a rapprochement with Germany, even if it be thought desirable that normal relations with that country should be maintained. Among the Unified Socialists, of whom M. Jaures is the leader, internationalism is a primary article of faith. M. Jaures advocates a course of foreign policy highly approved of in Germany but souted as scarcely French in his own country. The French professor M. Andler, who recently took a party of students on a visit to Berlin, is stated to be a Unified Socialist and a friend of M. Jaures. A frigid reception in Paris may be safely predicted for the German visitors who are coming here on behalf of the rapprochement scheme. They appear to count upon some leading French politicians for the furtherance of their ends, but it may be safely stated that such co-operation will be conspicuous by its absence.

The Press opinions which I subjoin are of special and important significance.

M. Robert de Caix, the able and well-known contributor on questions of foreign politics to the Journal des Debats, who was one of the most prominent Frenchmen at Algedras, writing in the review Questions. Diplomatiques et Coloniales, plainly states that every time an entente with Germany has been spoken of on this side of the Vosges, great indifference has been affected on the other side. The objects of exchange proposed had no value. Those who were most seduced by the Illusion of an agreement with Germany came back disappointed and convinced that in Berlin they had not abandoned the idea which prompted all the brutality of 1905—namely, that of making France pay for Morocco by the abandonment of her political independence

"The most practical and efficacious manner of con-The most practical and efficacious manner of contributing to an agreement destined to put an end to the occasional and gratuitous difference that has arisen between France and Germany concerning Morocco is to show the Germans by firmness, mingled with courtesy but none the less absolute, that they too have every reason to wish for an entente, as without it they will obtain nothing which it depends upon us to refuse them."

Referring to a statement made in connexion with the visit of the French students by a German writer to the effect that the cordiality of the welcome accorded them was due to the desire of the Germans to show how gladly they would love the French if the latter would consent to be leved by them, L'Opinion, the moderate Republican weekly, says:

"Ces tendresses sont touchantes, but they are not in any case political arguments. The whole German nation, from its Emperor down to the smallest shop-keeper, has always believed that conversations with France on strictly European questions might be purchased by some floral wreaths and honeyed compliments. La France vaut un peu cher. Before speaking of the future it is necessary to discuss the past, and every conversation must be either retroactive or be abandoned altogether. Without a radical revision of previous facts, the German entente in the European sphere would be merely a disguised vassalage. Elle ne s'impose pas a coup de fieurs. But outside

this vast and dangerous domain there is room for precise, limited, and necessary conventions, a fact which M. Pichon has understood."

precise, limited, and necessary conventions, a fact which M. Pichon has understood."

The distinguished and brilliant Academician and Deputy M. Maurice Barres, who has made himself the incarnation of the patriotic sentiment of France in the question of Alsace-Lorraine, repeats the same warning in an eloquent article in the Echo de Paris, entitled Le voyage des treite-et-un maladroits. He declares plainly that in any form of entente sentimentale between France and Germany the French would inevitably be diped. He lays down, as a general rule for Frenchmen speaking abread, that they should always remember the existence of a ministry for Foreign Affairs in Paris. It is from there alone that conversation with Germany should be carried on. M. Barres himself one day received a request from a very courteous German general that they should join in speking a means of reconciliation between Germany and France. After the receipt of the general's second letter he felf that it was necessary to break off the correspondence. "It is only at the Quai D'Orsay and nowhere else that such a conversation could be carried on." M. Barres continues:

"In presence of the immense German army, that is to say, of that powerful and grasping race, each one of us must keep his place in the ranks and leave it to those in authority to speak, as neither you nor I, nor Andler (the professor at the Sorbonne who organized the students visit) are aware of the exact position of the negotiations between France and Germany, Russia and England. Besides, and this is the essential feature of my idea, we run the risk of inspiring France with unfounded hopes by lending ourselves to vain embraces. . Only yesterday the Prussians manifested the most terrible insolence towards us. Remember the overthrow of Delcasse and the nuit historique of Casimir-Perier. They now per-

wards us. Remember the overthrow of Delcasse and the nuit historique of Casimir-Perier. They now perhaps resume their theme of the day before yesferday, and, without taking any engagement, give us to understand that they could, in certain undefined circumstances, restore to us Metz and the surrounding region. All this talk constitutes a sort of rocking chair in which their brutal and knavish diplomacy is pleased to daze us."

TRYING TOBACCO ON THE DOG

ed to daze us.'

Recent French experiments on the effects of to-bacco-smoke when inhaled by animals are described in The Revue-Scientifique (Paris). This paper notes that recently Messrs. Fleig and De Visme have experimented on animals subjected to the direct influence of tobacco-smoke, as well as its products of condensation or dissolution in various liquids, such as salt water, blood serum, alcohol, ether, etc. These authors administered to guinea pigs, rabbits, rats and dogs in the natural state tobacco-smoke by inhalation or by insuffiction in the tissues. We read further:

"Desiring to reproduce the conditions of ordinary tobacco-smoking exactly, they administered the smoke both by pulmonary inhalation (the case of the smoker who inhales his smoke) and by bucco-larnyngeal inhalation (the case of the smoker who does not inhale).

"The authors are stated to a single part of the smoker who does not inhale."

inhale). "The authors experimented on three kinds of to-bacco: (1) ordinary caporal, (2) Maryland, and (3) sweet caporal, which is said to be deprived of its

sweet caporal, which is said to be deprived of its nicotin.

"Wishing to check their experiments with scientific rigor, they caused the animals experimented upon to inhale also the smoke of lucerne.

"With a dog the results were as follows: After the bucco pulmonary inhalation of several whiffs of tobacco, there was an acceleration and increase of amplitude of the respiratory movements. Sometimes this increase was preceded by a momentary stoppage of breath. Then, little by little, the respiration resumed its normal type.

"The arterial pressure underwent a great and sudden fall, which was proportional to the quantity inhaled. At the same moment the heart slowed up extremely. After a short interval the pressure rose much above the normal, and the heart began to beat abnormally fast. Then, little by little, the pressure returned to the normal, or sometimes a little below.

"While the blood pressure was failing the kidney underwent an intense vasoconstriction, followed by dilatation, and the brain went through inverse variations.

"Bucco-laryngeal inhalation (without taking the

"Bucco-laryngeal inhalation (without taking the smoke into the lungs) gave the same results with less intensity. Lucerne smoke produced no vasomotor effects, and with sweet caporal the effects were clearly less intense."

DEVELOPING FORMOSA'S SUGAR IN-DUSTRY

There is, says the United States Consular and Trade Report, much activity at present in South Formosa in the erection of large modern sugar mills. Machinery for five mills, representing an outlay of several millions of dollars, is at present lying on the beach in Takao Harbor, awaiting transportation to the sugar plantations. Experts declare that the soil and climatic conditions of Formosa are peculiarly well adapted to the growing of sugar cane. The Formosan government is doing everything possible to encourage the growing of cane in the island. Furthermore, the Japanese government is determined that Formosa, which at present supplies but 20 per cent. of the Japanese consumption, shall supply the entire consumption, as well as eater the markets of China and the rest of the Far East. That capitalists in Japan have every confidence in the sugar Industry of Formosa is attested by the fact that, in face of a financial stringency during the past year, over \$10,00,000 has been subscribed to sugar manufacturing companies in Formosa.



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