

NOTES AND COMMENTS.

If the report that a French expedition has re-occupied Fashoda, on the upper Nile, is correct, the contest between England and France in those regions promises soon to become acute. What England wants is to hold the whole valley of the Nile up to the great lakes, and through British East Africa to extend her empire from the Mediterranean to the Cape, while France wants to control the upper Nile as a weapon with which to force England to relinquish her hold upon Egypt in favor of the republic. The former bases her claim to the upper Nile territory on the fact that it once constituted a part of the old Egyptian Sudan, and alleges that the boundary between it and the French Congo on the west is the water shed between the Nile and its tributaries and the Congo and Shari and their tributaries. On the other side France insists that Egypt forfeited her right to the region when, in 1883, at England's advice, she formally evacuated it, that in consequence it reverted to Turkey as Egypt's suzerain, and that with the latter's assent, any power may occupy it. Acting on this theory, a French expedition under M. Marchand was some time ago despatched from the French Congo to the Nile to occupy the territory for France, another column setting out about the same time from Obock, on the East African coast, to effect a junction with it. Attempt was made by the British to head off the former expedition by advancing a column from Uganda under Major MacDonald, but failed owing to the revolt of the Sudanese troops composing it, and it is now reported that M. Marchand has successfully occupied Fashoda on the White Nile, some 400 miles south of Khartoum.

Apparently, the French have won the race for the upper Nile, thus extending their French Congo territory eastward to that stream; though the rumors that the Marchand expedition is descending the river in order to make good the French occupation as far north as Khartoum, is to be discredited as involving an alliance with the Khalifa, regarded as wholly improbable. Moreover, as the British are at Berber, and their gunboats patrol the river as far south as Shendi, within 100 miles of Khartoum, they must in any race for possession of the latter place, have the better chance of reaching it first. But the fact that France has established herself at Fashoda, and is thus in position to challenge British control of the Nile, and to defeat the proposed extension of the Egyptian empire to the south, has produced a situation so grave that the British force in Egypt is being largely reinforced and preparations made for an immediate advance southward. True, announcement is made that the movement is due to a threatened advance of the Dervishes toward Berber, and that it does not imply any early advance toward Khartoum; but there is little doubt that the British authorities intend to leave nothing to chance, and so far as possible, to make their claims good by actual occupation. The real question is, however, not whether a final movement is to be made against the Dervishes, but whether France will insist upon ownership and control of the region between the French Congo and the Nile traversed by her agent, and that will be settled, not by advance on Khartoum but by negotiations between London and Paris.

SIZED UP.

Are you the manager of this store? Yes, sir. What can I do for you? I want to enter a complaint. What's wrong? I asked that young woman over there if she had any ear muffs. She said, "For yourself?" I said "Yes," and she told me to go to the third counter south.

The third counter, south, sir, is the overshoe counter.

HIGH LICENSE VS. PROHIBITION.

Temperance Advocate—I see you have high license in your town. How does it operate? Col. Rumson—Miserably. There are so few saloons that you can't enter one without having to treat a dozen friends; and there being no competition, the whisky is vile. High license is a failure. Give me prohibition and plenty of drug-stores.

HIS RANK.

Twyn—You addressed that man as General, didn't you? Triplett—Yes. How did he acquire that rank? I conferred it on him. What for? Because he is a general nuisance.

IN THE FULLNESS OF TIME.

Mabel, how long has young Spoonmore been coming to see you? Four years papa. You can tell him I think that's long enough. He knows it is. He's coming to see you next time.

PRACTICAL FARMING.

TO GROW A GOOD CROP OF OATS.

First it is necessary to have a good seed bed. Soil that has been exhausted much by previous cropping will not do. Oats will not do well if sown after wheat, neither will they flourish on sod ground; that is, land from which a crop of hay was taken the previous year, especially timothy, writes John Jackson. Sod ground, well covered with barnyard manure, plowed early in the spring and planted to corn, if kept free from weeds, makes an excellent seed bed for oats the next spring.

After the corn has been removed in the fall, and before wet or freezing weather sets in, plow to a good depth, leaving plenty of open furrows so that all surface water will run off freely. Land that has been plowed in this manner in the fall will dry off and be fit to work early in the spring. After the ground is dry enough to work, the sooner it can be fitted and the oats sown, the better. Fall plowed ground will require more harrowing or cultivating than if sowed in the spring. On this account many advocate spring plowing for this crop. But after years of experience and observation, I am convinced that it is better to fall plow for oats, because they require a compact seed bed and the seed can be sown a week or ten days earlier, which often makes a gain in yield of ten or fifteen bushels per acre.

Good clean seed is necessary for a good crop. No matter how clean oats may appear as they come from the threshing machine, it always pays to reclean them by running through a good fanning mill. The amount of seed per acre often depends on the kind of soil, and every farmer should be able to settle this question for himself. On heavy land oats generally do best sown broadcast and the roller should always be used to finish up with.

ECONOMY OF GARDENING.

If farmers will estimate the cost of the things they purchase which they can produce, the sum will be a comparatively large one for an entire year. It may be urged that the cost of a garden is too great when one is busy with corn and other staple crops, but there are hundreds of acres of corn and wheat produced which do not give a profit of \$5 an acre, while an acre devoted to a garden will give ten times as much. The market for the product of the garden being at home, there are no transportation expenses, and at the present day, with horse-hoes, wheel-hoes and other labor-saving implements, the cultivation of a garden has been reduced to the minimum cost, but the little hand hoeing being necessary. The farmer who is careful to give his animals pasturage and green food, because by such methods he promotes their comfort and thrift, should do the same for himself and family. He should make a beginning at some time, and first make it a point to have in addition to apples, pears, plums, peaches and cherries the small fruits, such as raspberries, strawberries, currants, and gooseberries. Establish an asparagus bed, and plant for an early supply onions, peas, lettuce, radish, kale cabbage, cauliflower, beets, parsnips, salsify, and even early potatoes, later putting in more peas and also Lima beans, tomatoes, string beans, late cabbage, squash, melons, etc.

TICKLE THE EARTH WITH A HOE.

The gardener will always find abundant success if he will not neglect this tickling of the soil with a hoe or cultivator. It is wonderful what tillage will bring out of the soil. Most men must till to keep down weeds. They do not realize that the benefits of this work are far above any mere weed killing.

By persistent cultivation we get the soil loose and mellow, porous and light, so air can enter and roots freely branch and distribute themselves throughout the entire mass of earth within their reach. Furthermore, tillage is a breaking-up process, particles of rock and organic matter being reduced in size and made available for the nutrition of crops.

Then there is the immeasurable effect of shallow surface cultivation in forming a mulch upon the surface of the ground, a thin layer of loose, dry earth to cut off the rise of moisture to the surface and its subsequent evaporation and loss to the use of the growing plants. Water in a drouth is a priceless boon to vegetables, and conserving the supplies of moisture is one of the most vital subjects with which the agriculturist has to deal. Tillage is to a certain degree manure, as was claimed by Jethro Tull of old.

TO MAKE A STABLE FLOOR.

First make a tight gutter of planks and out it in place, then fill in front of the gutter, where the cows are to stand, with clay. Place a two by twelve plank next to the gutter for the hind feet of the cow to stand on. Spike this plank to the edge of the gutter. Fill with clay, well pounded down even with the plank in front of it. After this clay gets dry it will make an excellent floor, and it will stay good as long as it is kept dry, but if it gets moist where the front feet of the cow stand, there will be holes and depres-

sions made. A short time ago we visited a large dairy farm, where one hundred or more cattle were kept. A part of the stable floors were made of clay, as we have described, and a part were cement. To our mind the clay floor was fully as desirable as the cement. They had both been used about a year. There were some slight depressions in the clay floor, where the front feet of the cows stood, but this was accounted for by the owner by the fact that these floors were put to use before the clay was thoroughly dry. These depressions can be easily filled up with clay and the floor made smooth again, and it would remain so if allowed to get perfectly dry before the cows were put on it again.

THE MANURE HEAP.

"Fire fanging" of manure is destructive and, although it is a well-known occurrence in manure heaps, some farmers do not try to prevent or suppress it. It is simply overheating to the manure, due to rapid decomposition, a large proportion of the ammonia being liberated and lost. When fire-fanging occurs drive a crowbar into the heap in several places, and pour in cold water. What is better, wet the manure and turn the heap over, adding dry earth and plaster, placing the coarse portions of the manure in the center. Cold water absorbs ammonia and prevents its escape, and unless it is used much of the volatile ammonia will escape while the manure is being handled. The heap should not be kept wet, however, but slightly damp, which will promote decomposition; but overheating may always be controlled by cold water.

ECONOMY IN HAULING.

When hauling a load it is better to have the horses draw as much as they can, making the load the maximum in weight as the horses have traveled the distance, whether the load is small or large, and it is the time lost in traveling that makes hauling expensive. If the roads are good heavy loads can be carried. If not then two trips must be made and smaller loads carried. Let any farmer estimate how much he loses as the difference in large and small loads, and loss of time in the mud, and he will make less objection to road tax in the future.

WALKING GAIT.

Walking is one of the gaits that is nearly always neglected, and yet an active, quick, clear-footed walk is a valuable gait to the horse intended for the farm, for use as a roadster or for a saddle. A horse broke to harness is generally trained for awhile at the side of some steady old animal, and the youngster, if inclined to walk fast, soon begins to learn that it is not the thing to do. For that reason it is best to break a young horse in single harness or under the saddle, and train him to be a good walker as well as good at other gaits. A three-year-old is generally a better walker than he will be at any other age if he is kept as a harness horse, unless specially trained with a view to brisk, active movement in that gait.

GERM LIFE.

It is impossible to obtain milk free from bacteria.

The friendly services of the bacteria outweigh the injuries they inflict upon us.

Certain food, such as Limburger cheese, is not relished until it is teeming with organisms.

Plants make use of micro-organisms and vegetation is immensely assisted by nitrifying organisms.

All cold meats contain numbers of organisms large enough to frighten timid persons. Potted meats are similarly infected.

Sound food often contains large quantities of bacteria, so that we habitually consume numberless micro-organisms.

Bacteria in milk is frequent cause of enteritis in children especially during the hot summer months, and this affection destroys the lives of many infants.

It is important to avoid all dangers and risks by collecting and preparing food properly, by cooking it sufficiently and consuming no food that has been kept too long.

Numbers do not form an exact criterion as to the harmful properties of a fluid or food; the character of the bacteria and the manner in which they were introduced are more important.

Oysters and cold game are also thoroughly impregnated with bacteria. The only real danger with the former is that the beds may have been contaminated with sewage pollution.

The difference in the character of the germs in our food and their method of introduction are the factors in determining why one should be suppressed and the other pronounced harmless.

SAFE.

She—Mamma is in the next room. He—Do you suppose she would knock if I should kiss you? She—Oh, no. She is very deaf.

MADE THE ALLOWANCE.

Oratory is a gift, not an acquirement, said the proud politician as he sat down after an hour's harangue. I understand, said the matter-of-fact chairman. We're not blamin' you. You done the best you could.

BRITISH TROOPS TRAPPED.

AN INCIDENT OF THE FIGHTING ON THE INDIAN FRONTIER.

Brave Men Placed at a Disadvantage and Shot Down—Honourable Country a Great Help to the Afridis—Thrilling Account of a Desperate Struggle.

The troops breakfasted early and started at about seven a. m. Within about two miles of camp they encountered opposition, and dispositions were made to attack, writes a correspondent of the London Times. The artillery, escorted by the Fifteenth Sikhs, climbed a steep hill on the right and, coming into action against groups discernible on the lower slopes of the mountain, speedily dispersed them. The Dorsets were sent to the left to make that flank secure, the Northampton and Sappers advanced in the centre, and the Thirty-sixth Sikhs on their right. The enemy, as usual, gave way before this direct attack, and by eleven a. m. the summit of the mountain had been gained with only trifling casualties. The survey party at once got to work, and Sir William Lockhart arrived later and joined Brigadier-General Westmacott on the crest of the ridge, whence a fine view was obtainable of the country beyond.

So far so good. If only we could always advance and never retire! So long as we front our foes and attack them and press them, no matter what the odds, so long do they acknowledge our superiority and yield to the inevitable. But our first movement in retreat is the signal for them in turn to become the assailants. And so it was now. At two p. m. the retirement commenced. The Sappers and the Thirty-sixth Sikhs were first sent back to a position in rear, followed later by three companies of the Northampton. Thus five companies of this regiment were temporarily left on the crest by themselves, more than enough to hold their own against any number of Afridis, for there was

STILL PLENTY OF DAYLIGHT.

and support was close behind. At this time hardly an enemy was in sight; but as these companies were gradually withdrawn the tribesmen appeared as if by magic, and, pressing on their heels, delivered a hot fire at close range, causing many casualties in the rearmost company, commanded by Capt. Parkin. The men, however, rallied bravely round their officer, and with great courage and coolness kept the foe at bay while the wounded were picked up and brought along. Sergt. Lennon of this company distinguished himself by his deliberate shooting, and set an excellent example of steadiness in a trying situation which had the best effect. The result was that the supports in rear were at least safely reached, and the casualties up to this time were only ten or twelve men wounded.

The Thirty-sixth Sikhs, well posted now, allowed the whole of the Northampton to pass through them, and, when they had given them time to reach the foot of the hill, followed them down, easily keeping the enemy at arm's length and incurring no casualties themselves. At the base of the hill they overtook the Northampton, who, encumbered by their wounded, had been able to move only slowly; so Capt. Haughton, commanding the Thirty-sixth, again took up positions to cover their further retreat. At this point the ground breaks up into deep stony ravines. The Northampton unfortunately elected to regain camp by marching through one of these which led almost directly home from this point. I say "unfortunately," because if attacked in such a situation the best and bravest men must be dreadfully handicapped; companies and sections get broken up and separated, and regular control or united action becomes impossible. And something of this kind happened now. It was already close on six o'clock and getting dusk. The camp was only a short mile distant, and, slowly trailing its weary length over the difficult boulder-strewn bed of the stream, the head of the Northampton column was almost home, while the tail was still at the foot of the hill in touch with the covering Thirty-sixth Sikhs. When Col. Haughton was assured by a report sent to him that the Northampton were fairly started, assuming them to be in line with the Dorsets guarding their right flank, he withdrew, clear of the ravine, and eastward of the hill on which the guns had been in action in the morning, in order to fulfill the role assigned to himself of safeguarding the left flank of the force on

THE HOMEWARD MARCH.

Shortly after seven p. m. he reached camp with his regiment. In the meantime a tragedy had been enacted in the centre. A body of Afridis, who had from the slopes above marked the situation, swooped down on the Northampton entangled in the ravine, and, firing from the high banks on the western side, they shot down the stretcher-parties who were nobly engaged in carrying off and protecting their wounded; and though officers and men battled bravely for honor's cause yet they were not fighting on equal terms, and the desperate struggle went heavily against them. At this juncture a company of the Thirty-sixth Sikhs, under Lieut. Van Someren, not one of those that had been with Col. Haughton, but one that had previously been detached to support the guns, returned to their aid, and, taking the

enemy in flank and rear, extracted the Northampton from their perilous plight. On reaching camp, at about half-past seven, the roll was called, and it was found that Lieut. Waddell and six men were killed. Lieut. Trent and thirty-one men wounded, and Lieut. Macintyre and fifteen men missing. I may say here that these "missing" were all killed. A search party found their bodies the next day in the ravine where the fight occurred. They had, of course, been stripped of clothing and arms and some of them slashed with swords, but their bodies had not otherwise been mutilated. The further casualties incurred on the 9th were: Dorsets—Lieuts. Ingham and Mercer and six men wounded; Fifteenth Sikhs—Three men killed and three wounded; Thirty-sixth Sikhs—Three men wounded.

LORD KELVIN'S PREDICTION.

No More Coal Three Hundred and Forty-Five Years From Now.

In 346 years there will not be a pound of coal or a gallon of petroleum left in the whole earth, according to the statement made by Lord Kelvin before the Mathematical and Physical Section of the British Association at its recent meeting in Toronto. Lord Kelvin, with his unrivalled power of applying his mathematical knowledge to the solution of practical questions, has made this startling calculation very carefully.

A fair average of the growth of coal in the earth, Lord Kelvin said, was two tons for each square metre in a thousand years. Dividing the figures already obtained, would give the age of the earth since plant life began, as 20,000,000 years. Turning to Great Britain, Lord Kelvin said that there was still available in that country 146 thousand million tons of coal, or about six-tenths of a ton per square metre of area. Judging from the present rate of consumption this supply might last 100 years or less.

Sir Henry Bessemer, the great steel manufacturer, has made some calculations about coal which will make these figures better understood. One million tons of coal would form a cube 306 feet square by 300 feet high, or they would represent a bed of coal one mile square by one foot thick. The coal mined in Great Britain in 1881 would make 555 great pyramids, or would rebuild the great wall of China, with one quarter to spare. The British output of coal in 1883 would form a pillar one mile high by 164 feet square.

Edward Hull, a famous English geologist, has calculated that the amount of coal in Great Britain, which exists at depths at which it can be mined is EIGHTY THOUSAND MILLION TONS.

W. Stanley Jevons, reasoning from these figures, calculated that the British coal supply would be exhausted in 1975. Sydney Lupton, reasoning from another set of figures, set down the consumption of the last pound of British coal for 1900. Mr. Lupton, replying to a suggestion that Great Britain might import its supply of coal from North America, which now has forty times as much as the United Kingdom, after its own stores were exhausted, figured out that it would take 2,100 steamships, each making thirteen trips a year, and each carrying 6,000 tons of coal as cargo to make up England's deficiency.

Huxley pointed out in a carefully written article that, "wanting coal, all the great towns of Lancashire and Yorkshire would vanish like a dream. Manufactures would everywhere give place to agriculture and pasture, and not ten men could live, where 10,000 are now amply supported." Richard P. Rothwell, who was the mining expert in the eleventh United States census, gives the coal production of the United States for 1896 at 186,241,271 short tons, and adds that the anthracite mines of Pennsylvania are being rapidly worked out.

Lord Kelvin says that, when the world's supply of coal is exhausted at the end of 346 years, mankind will only have wood left for fuel. Meanwhile, he advocates the use of all the power of Niagara Falls, which he calculates at 4,000,000 horse-power. While this power could be distributed by electricity over a radius of 300 miles at a pressure of 80,000 volts, with a loss of only 26 per cent., Lord Kelvin thinks that all the factories which want to take advantage of Niagara's power should be gathered within a radius of forty miles.

UNSATISFACTORILY ANSWERED.

Five-year-old Dickey had been instructed that whenever he wanted anything he should pray for it.

He had prayed long and earnestly for a bicycle, but his father, thinking him too young to ride one, had bought him a tricycle. When he awoke, on the morning of his birthday, and found the three-wheeler by his bedside, he was disgusted.

Doesn't the Lord know the difference between a bicycle and a tricycle? he whimpered.

TO UNCOVER.

There's a burglar in the house! she gasped.

I have never yet uncovered my head for any man, her husband rejoined, with an affection of hauteur.

FOOLING HIM.

Dumpley, I hear that you have been misrepresenting me, said his neighbor indignantly. Brozer told me all about it.

All I said to him was that you were one of the most honorable men and considerate neighbors that I ever knew. Wonder where I can find that infernal Brozer.

BUNNY

"Bonnie Bess and rightly end land lassies wh kirk Sabbath m so pretty and Squire Renfr desperately sought to make difference in Red Pass were in the neighbor storehouses we was a bachelor score years old nie Bessie" for "If the lassie me," he said, ad mother, as he brown rafters cottage, a hot shining crown lassie thinks sh gain's made. I lead her to the a good, true hu silver will ma as happy as a Bessie listen eyes, burning lips. She held and slim, in a until her gray his leave. The vehement, pass The old gran storm until her "Well, 'tis o' down and keep ye have your mine. We're p found it hard t but my own m I've been burd to bed many a ger. But I've my best, an' g' you a share "But dearest "Now, lookee rrupted the old v finger and glow sie, "if ye're fu good fortin", th You pack out d press the thresh Bessie was i beyond the Hig dim and far av scenes were so The autumn d the springtime with Squire Re wife.

The springtim ding day was ch svening just fell ie went to fill l the rocky spring sionpled her k pitcher to her s ed for the cottag feet twinkling p petticoat as she stone in crossin stream, when su stilled cry and grown boulder, s pitcher hastily o her hand on her all over.

"It's his ghaist cried, "and O, K me!" "Whatever she she had seen th sight when she r ing except the o' glen, the brook s ening light, and swaying s' c' trail "He has come cried, glancing dare ne, dare na Jamie, that I eve She drew her th circled her throa she spoke and k never ha' peace if she said, "and I shall feel I am a Jamie, after all, I and never can."

Suddenly she r stamped on every "I must give b back," she said, b from her eye. "It there is no other then perhaps you" Leaving her pitc back her abundant this adjuration through the fallin light foot of a cha When she reache bright glow of the windows. She est one and presse resolute face agai A minute an against the glass, quickly, stared, an feet.

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