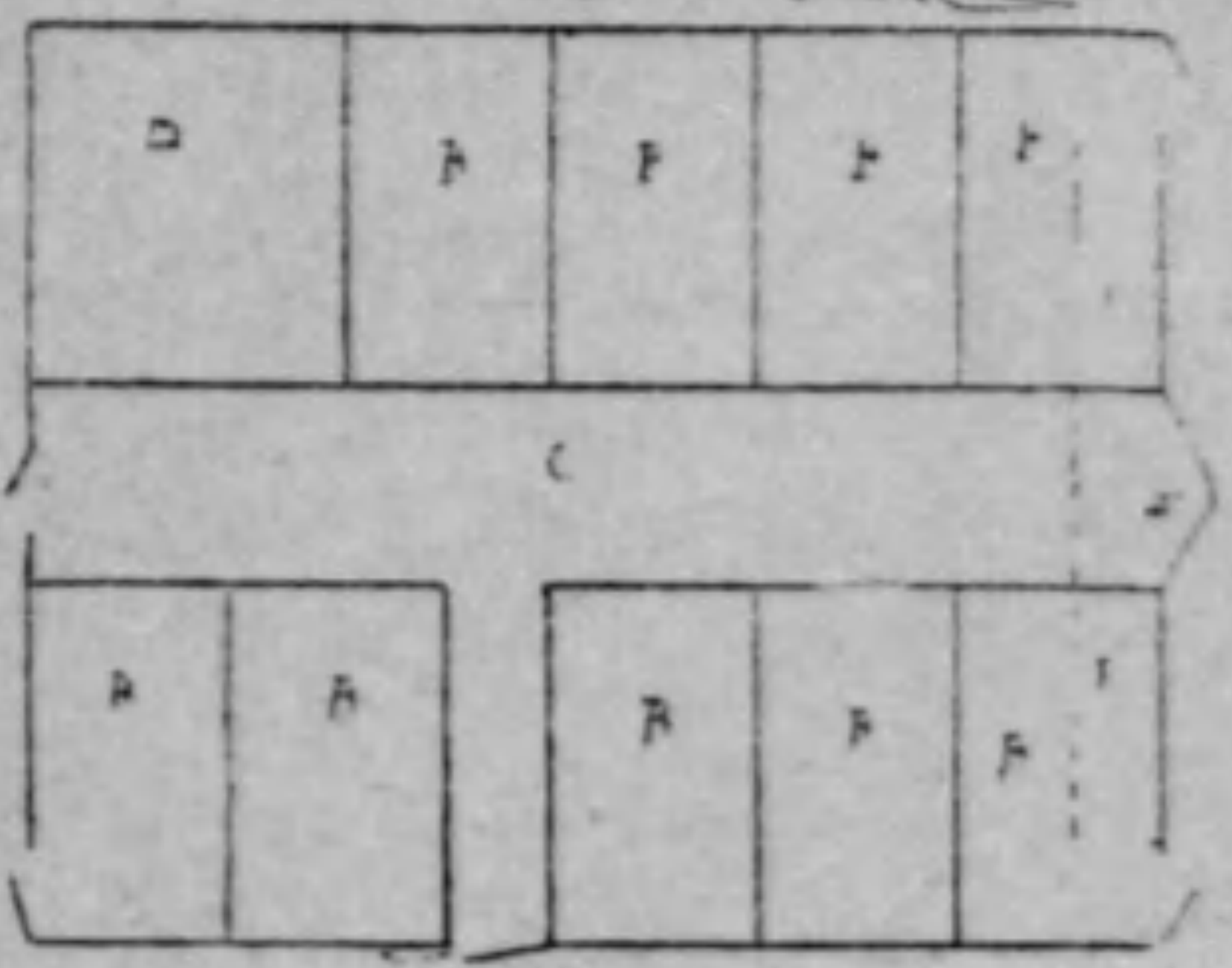


AGRICULTURAL.

A Horse Barn.

GENERAL PLAN, MEASUREMENTS AND TOTAL COST.

Our illustration is of a horse barn for the ordinary farm. It is made of good lumber and the frame is of heavy, substantial timbers. It is 44 feet long by 36 wide. The corner posts are 18 feet high and the roof is well pitched. The whole is well lighted with windows and proper ventilation is provided. Hay is taken into the mow by means of a fork. In the ground plan A is a workshop 12x14 feet. B B are double horse stalls 14 feet from front to rear and eight feet wide. C is a feed and driveway running through the middle between the stalls and is eight feet wide. At one end are double doors and at the other a single door. F is



A GOOD HORSE BARN.

a passage way leading from the interior to the outside. In this the stairway to the mow is placed. In the mow above the stalls and extending across the feedway are two bins, D and E, one for oats and the other for corn. These are connected with a covered scoop box on the first floor by means of a chute. The grain is thus always handy, and as the bottoms of the bins slope toward the opening in the chute, the contents all run out and are easily got at. The stalls, partitions, mangers, etc., are made of hard wood. The stalls are floored with 2-inch white oak lumber. The bins, siding, flooring, etc., are of ship lap. This barn will cost between \$900 and \$1,000 and holds 18 horses. Feed is near the horses and everything quite convenient.

A Few Thoughts.

I have just been looking at the roof of a barn, belonging to another, which points a moral. The roof was evidently shingled only a few years ago, and, in the main, looks fair and smooth to-day, but in countless places, all over it, there are small openings, many of them directly over the cracks, between the roof boards, so that from the inside, one can see the light in many places while from the outside the rain finds no difficulty in gaining entrance. The trouble does not appear to have been so much in a poor quality of shingles, as in the fact that they were hurriedly and improperly laid. Some one was undoubtedly hired to do the work, and no oversight was given. As a consequence, the particular Tom, Dick or Harry who did this shingling slighted his work, did not take care to properly "break joints," and in many shingles put but one nail, and the result is a roof, that from now on must be continually patched and tinkered, until these shingles are stripped off and new laid, when very likely the same programme will again be followed!

A few years ago, a neighbor built a house at considerable cost, and to save some expense used a poor quality of shingles that he could have obtained by paying a dollar and a half or so extra, when his roof would have stood sound and whole for fifteen or twenty years. As it is, the roof is now in need of repairing, and these repairs will, undoubtedly, have to be continued every year or two from this time on. Economy is desirable in all things, but there is a so-called economy that is the rankest kind of extravagance, and "pity 'tis, 'tis true" that a great many people are practising that kind of "economy" who really cannot afford to do it.

There is another characteristic implanted in a great many persons, who are forever "fixing things up kind of temporary like." If their cattle break down a piece of pasture fence, that fence is propped up at the expense of a half-hour's time, and left to await a second attack. A second break and twenty or thirty dollars damage to their corn, or other crops, do not, unfortunately, very often lead such persons to see the error of their ways. A picket is off the hen yard fence, and as hammer and nails are not at hand when discovered, the picket is propped in its old place, and the next gentle zephyr, or cow, that passes that way, loosens this temporary support, and the hens do irreparable damage to the good wife's flower garden.

A dozen and one other things, that need business-like and thorough repairs, are treated in the same way, until things are contently at loose ends in all directions. I suppose there is small hope of turning an old temporizing sinner from the error of his ways, by the ordinary arguments, but I have one that ought to secure a good leverage in this direction.

Such shiftless habits are for the most part contracted in youth, and the knowledge of this fact ought to lead anyone who has such a characteristic grounded into his own nature, and who has also some growing boys and girls, to make a desperate attempt to get upon a new basis, for the sake of the children, whose childhood habits are likely to be the habits of manhood and womanhood.

A great many people are not able to place very much money, or other property, in the hands of their children when they leave the farm to work out their own salvation in life, but it is a shame that young people should go out handicapped not only by lack of means to establish themselves, but also by habits which will be a continual drawback to success. It is not essential that a young man should have money at the start, in order to make a success in life; but it is essential that he be well-equipped with business-like, painstaking habits.

About the Churn.

Some persons are ever saying that the churn can decide the merit of a cow's value

as a producer of butter, and nothing else is practical in the assignment of values. But this is a matter that is fast being reconsidered, and the test for butter fat is now, as a rule, placed above in accuracy, creaming or churning. Of course the churn makes commercial butter, but it is being proven that the churn is variable in its accounts, and the man who uses it needs to be guided by the accurate fat-test in advance. So accurate has the test come to be regarded, that even our English cousins at the London Dairy Show just closed used the fat-test in awarding premiums, and gave out "Cups" by its decision. At the Chicago show, so convinced were the superintendents of the breeds that the test was more nearly correct than the churns to give credit to individual cows, that they accepted the Babcock test as the arbitrator. So the announcement that such a cow made one, two or three pounds of butter in 24 hours, was the total of the fat test. The sample was taken of a cow's milk, and then the milk of all the cows of a breed was massed in a vat, and all individuality was obliterated. The butter of no cow was churned by itself to find superiority. Later on even the churning was suspended, the tests were taken, and the milk sold. The time has arrived in the testing of a cow when she should be credited with all the fats she puts in her milk, not what the churn may happen to "bring." The man is at fault if the churn does not practically agree with the fat test.

Keep Cattle Contented.

The writer for several years has made it a matter of practice to have every cow have a stall of her own, and in every way make her quarters home-like, and make the matter of contentment prominent. The cow is largely a creature of strong inclination to fixed habits, and changes in her location and comfort, are, as a rule, noticeable in an unfavorable way, and such abrupt changes should be avoided. In the stable, comfort should be the object next to feed, and contentment is attained in having the cow associate comfort and food feeding together. One feature is not prominent in too many barns: Cows in the stables more hours in the winter, especially if the cow is in milk. Such an animal needs very little out-door life if the stable is light, warm, and with pure air. When the cow comes to know that her stall is the most comfortable place in the winter, contentment becomes her habit, and she desires very little change, and it will be a very pleasant day indeed when allowed her way, she will not very soon return to her stall. It is these contented cows that give the largest and most profitable messes of milk.

Well vs. Poorly Balanced Rations.

From a late bulletin of the Maryland Agricultural Station, on data as between a well-balanced vs. a poor balanced ration, we give a summary of conclusions as follows.

For fattening steers, a well balanced ration is very much more profitable than a poorly balanced one.

Steers fed on a well balanced ration made an average daily gain of 2.78 pounds; those given a poorly balanced ration, made an average daily gain of 1.70 pounds.

The increased profits from this test showing a difference of \$7.06 per steer, were in favor of the well balanced ration.

With a well balanced feed, ninety days is ample time in which to prepare an animal for market.

Where the more nitrogenous foods are used, it is believed nearly as good daily gains can be made by mixing the grain with cut corn fodder as though hay were used.

The use of cut corn fodder, instead of hay in feeding cattle, may make the difference of a profit instead of a loss.

Fifty per cent. more manure was made from the animals receiving the well balanced ration than from those receiving the poorly balanced one.

The manure is also much richer in plant food.

Practical Pointers.

The rhubarb and asparagus beds should be well manured now, so that the fertility can be sinking down to the roots as the snows of winter melt into the soil. The more generous you are with the manure the more profitable will you find these items of your garden.

Fertility tends to make fertility. Good crops grown from the land, fed to good stock upon the land, and the by-products returned to the land with due care, will make better land, bigger crops, and enable the feeding of more stock. Then you have more manure again, and the same round goes on and grows more money as it does so.

It is foolish business to plant seeds without testing their germinating power. It is so easily done that there is no excuse for omitting it. Place them between two cloths and keep them damp and in a warm room for a few days. Probably more will germinate thus than in the earth, but if ninety per cent. prove good you may safely plant them.

Decaying matter of any sort, even piles of rotten wood about the premises, is a constant menace to health and a breeding place for insects that will do damage to your crops. Do not think that because the snow covers them up that it prevents them from doing harm. Get all such things cleared up before you consider yourself ready for winter.

There is one thing that must be avoided in buying a run down farm. That is, the effort to make it yield good crops at once, and to improve in condition while doing it. Such a course will only make the land poorer. Be content, to do one thing at a time, and let the first be the building up of the soil. Then the good crops will come in their own good time.

When the boy is grown up and married and wanting a farm of his own, do not send him a thousand miles away to look for one. Take the measurement of the home place carefully and see if it is not large enough to cut in two. If it is not now it may be made so by increasing the depth of the soil, manuring more heavily, and giving twice as good cultivation as you could do if you keep the whole of it alone.

Fortunately not many farmers have suffered by the present financial depression to such an extent that they must sacrifice their farms. Yet there are occasional instances of this, and other causes contribute toward throwing a good many farms on the market. Our advice to young farmers, and to others who want to buy more land is to buy these now at the ruling prices, without fear. They are bound to grow in value.

The buying of a run-down farm, at a low price, is always a good speculation for a man who knows how to bring the land up, and who has the patience to wait for the outcome. For an intelligent young farmer there is almost no more certain way of accumulating valuable property for his later years.

A Bad Year for Insurance Companies.

The year just drawn to its close has been a most disastrous one for fire insurance companies, not only in Canada, but the United States. While the managers of insurance companies and unfortunate stockholders are discussing the extent of fire losses and devising means to stay the ravages of fire, the general public, to all appearance, is quite indifferent to the cause or consequence of the tremendous national waste of capital from this cause from year to year. Nothing will arouse the public mind, it seems, unless it be a direct tax on every man's property. The loss by fire is an onerous indirect tax, for it is the public that has to bear it. The notion that the insurance companies bear it all is erroneous. The rate of insurance is based on the united experience of fire insurance associations. The greater the loss by fire, the higher is the rate of premium required to be paid by the public who insure to meet fire losses. There is one phase, however, of the insurance question which will never be bettered until the public conscience is aroused to the enormity of the crime of incendiarism. In this sense, certainly, the moral sense of a great number of insurers must be blunted. If we are to believe insurance statistics, a very large per centage of the losses by fire are caused by incendiarism by parties wishing to obtain the insurance money. The Monetary Times on this point says:—"Incendiarism has been very prevalent in some places during the past year. Perhaps Sarnia has been more noted in this respect than any other town. We understand that the classification of Sarnia has been temporarily lowered until the town authorities succeed in stamping out this foul crime. We learn from the Sarnia papers that the municipal council and Board of Trade of that place are taking most energetic steps with that end in view. The incendiary fires are as mysterious and inexplicable as anything of the kind. Most of them take place on a Saturday night or a Sunday morning. The noted village of Lucan is another place where incendiarism is rampant. It is sincerely to be hoped that the energetic measures now being taken will soon put an end to this species of vandalism." The editor of the New York Chronicle estimates the yearly losses by fire to exceed the cost of all the Public Schools in the country. No doubt this is equally true of Canada. Such a statement should remove the criminal agathy of the public to this enormous waste of wealth going up in smoke week by week and year by year. This is a phase of life in which every man is his brother's keeper in so far as he is morally bound to conserve his neighbor's property and his own by means of precautions against fire which experience has shown to be needful.

Do Not Heed Them.

It is astonishing how ordinarily shrewd and intelligent persons allow themselves to be imposed upon by anything coming through the mails. It appears to be useless to tell a certain class of people that there is no legitimate method by which a fortune may be realized in a day, and that if anyone says he can do it for them, he should be regarded as a crank or a thief. This is becoming a serious matter, for there is an enormous amount of money lost every year by simple-minded men and women, who allow themselves to be imposed upon by ingenious communications, promising them untold wealth, if they will only follow the writer's advice and carry out the very simple conditions imposed. And this is how it is effected. They receive a letter or circular announcing that the "subscribers" have discovered the method of making money rapidly without incurring the slightest risk. To those who are interested they undertake to show their books and explain the plan in detail. There is an appearance of frankness about the entire statement which proves irresistible. The whole thing is put in the most plausible shape, and those who are preparing "to bite" always fail to see the bait that is underneath. They never think of consulting a friend in the case, assuming that they can see for themselves, and send their money, which it is needless to say they never lay eyes on again. In this way it happens that the thrifty and hard working men or women, naturally desirous of increasing their little store, are induced to send the greater portion of it to sharpers, and are almost heartbroken when they discover that they have been so weak minded as to trust in people they had never known or seen. Another time, the scheme takes the form of a representation that an immense sum of money is deposited in the Bank of England waiting for some one to claim it. A certain John Smith, or Brown, or Jones, who had acquired a vast fortune by the manufacture of axle-grease and had been knighted by "Her Majesty, the Queen," in consequence, has died intestate and the "American heirs" of that particular name are requested to send their names to the law-firm of Grab-all and Co., who are prepared to take care of their interests. N. B.—A sum of \$20 must be sent as a guarantee of good faith, which will be returned in case the claim is not made good. The money is sent by several putative first cousins of the lamented deceased and that is the last of it. It seems to be useless to warn such people as they evidently belong to the great cavansary who take pleasure in being imposed upon.

Dimple (examining her new Christmas doll)—"Buddy, how do you s'pose Santa Claus got pieces just like mamma's wrapper to make dolly's dress?" Buddy—"I don't know, less maybe Mrs. Santa Claus buys remnants."

George Johnston, of Highgate, Ont., was found dead in a ditch Wednesday morning. It is supposed that he fell there while getting out of the way of an approaching train, and being intoxicated, was strangled.

Wednesday was declaration day in Prince Edward Island. There is no material change in the figures, the parties standing twenty-three to two. In the plebiscite the vote in favour of prohibition was more than three to one.

Miss Fowler, of Kingston, Ont., an old lady of considerable means, died on Sunday. Five years ago, when asked for a subscription for the Young Men's Christian Association building, she donated \$500 in gold, the first subscription received in cash.

PARCELLING THE SOUDAN.

England Gets the Lion's Share.

France Outgeneralled. A few weeks ago the representatives of the British and German Governments met very quietly in Berlin and prepared a little surprise for France. They drew up and signed a convention in which they divided between them the entire region of the Lake Tchad basin. They did not leave an acre in all that wide domain for France. That country has been very much engrossed by her internal affairs for some weeks, and the Government, apparently, has done nothing except to send Capt. Monteil and M. Haasman to Berlin, duly accredited to look into the matter. A part of the Paris press asserts that France will never agree to the proposed freeze-out, and that she will assert her right to a fair share of the rich central Soudan. Some of the newspapers say the matter must be submitted to arbitration if England and Germany are not disposed to render to France what should belong to her.

As far as France is concerned, the agreement between Great Britain and Germany is indeed, a sorry outcome of the fine record she made in the exciting race for Lake Tchad, which began over two years ago. In all that superior part of Africa, where semi-civilized governments exist, where substantially built cities, with 50,000 or 60,000 inhabitants, are found; where manufactures are considerably advanced, and where horses are reared by HUNDREDS OF THOUSANDS, not a white man was living two years ago. European influence has not penetrated any part of the central Soudan. No white man had been there since Nachtigal, in 1871. The first European power to reach Kuka, capital of the empire of Bornu, near the western shore of Lake Tchad, was likely to reap advantages, and so the race began.

Almost simultaneously the three Governments put their expeditions in motion. The English, under Macdonald, started from the lower Niger; the French, under Monteil, from the upper Niger; and Germany's two expeditions, at an interval of some months, started from the Cameroons. In the language of the turf, the Germans were never in the race. Hostile tribes brought their expeditions to the deepest grief before their journeys were a third completed. The English got to Kuka first; but according to Macdonald's own story, he met with a very cool reception. In fact, the Emir told him he wanted nothing of the English except to be let alone; and he advised his guest to go about his business, the sooner the better, because if he dallied on the way within the confines of Bornu his Highness would not be answerable for the consequences. Macdonald still has a very poor opinion of Bornu's hospitality.

Some months later, Monteil arrived on the scene. According to his story, he was welcomed with open arms. He says the British made the fatal mistake of trying to impress the people by a dazzling display of gilt buttons, red coats, and firearms. He asserts that the Emir and the notables pledged to France their

ETERNAL FRIENDSHIP.

However that may be, it is certain that Monteil prolonged his sojourn at Kuka for more months than Macdonald did his for weeks, and the Emir finally sent him, under safe conduct, to Algeria, where he was received as a conquering hero.

Meanwhile France had started Mizon up the great Benue tributary of the Niger to Yola, the capital of Adamawa. He says that on his visit to Yola the Emir agreed to a French protectorate over Adamawa. The Emir denies it, and he probably speaks the truth, as there are various reasons for believing that M. Mizon is gifted with a vivid imagination. But another Frenchman, M. Maistre, has made the most notable of recent journeys in Africa by advancing north from the Congo into the southern edge of Baghirmi and then west through Adamawa, revealing much new country, and accompanied in the last stages of his journey by hundreds of native riders.

The agreement between England and Germany is the result of give-and-take compromise, and a considerable sop is thrown to France, which, however, has nothing to do with the great basin of Lake Tchad, for a share of which she has been struggling.

By the treaty of 1885 between Germany and England, the northern boundary of the German domain was to be a straight line connecting a certain point in her Cameroons possessions with Yola on the Benue River. But England has repented of her generosity, for Yola is the centre of a large trade, and she wants it. So Germany has relinquished the whole of the Yola district, and England is left in possession of the entire navigable part of the Benue, the only river in Africa that affords uninterrupted communication by steamboat from the sea to the far interior. She now adds Bornu and the richest part of Adamawa to her sphere of exclusive influence. In other words, having already an assured hold upon Sokoto, the entire western half of the central Soudan from the Niger River to Lake Tchad falls to her share under the new agreement.

The eastern part of the central Soudan including part of Adamawa, the southern shore of Lake Tchad, the large countries of Baghirmi and Wadai, and the regions beyond to the eastern limit of the Shari River or Lake Tchad basin, becomes a German preserve. Germany agrees not to go east of the Shari basin. In other words, she will not intrude upon Darfur, Kordofan, or the Bahr-el-Gasal, which are left to England, with the rest of the Egyptian Soudan.

France is to enjoy a more moderate blessing. For a long time the enterprising De Brazza has been pushing up the great Sanga tributary of the Congo and its northern affluents, planting a line of stations almost to the borders of Adamawa, and evoking energetic language from the Berlin press, which has accused him of poaching upon the Hinterland of the Cameroons colony. According to the map showing the English-German partition, which has just reached this country, Germany acknowledges France's supremacy in the region of De Brazza's activity.

But, on the whole, France appears to have been greatly outgeneralled. No matter what arrangements Monteil may have made with the Emir of Bornu, it was distinctly stipulated in the treaty with England, by which practically the whole of the Sahara was assured to France, that France's interests in the neighborhood of Lake Tchad were to stop at Barrua, on its north-west coast.

ENGLAND'S CLAIM

to Bornu is based upon this treaty, and she has not been at all disturbed by Monteil's brilliant journey. As for Adamawa, France was simply made ridiculous there by the remarkable doings of her agent Mizon, who has been recalled in disgrace. Of course these big countries have not the faintest idea of the importance they have suddenly acquired. They have simply been parcelled out like spoils among the victors with this difference, that no victory has yet been won. England and Germany have simply agreed not to tread on one another's toes while carrying out the work of making the coveted lands theirs in fact as well as in name.

Speculation in Wheat.

Wheat it appears is just as much a necessity to the speculative requirements of the age as to the sustenance of human life. And the extent to which speculation is indulged in by merchants in almost all lines of business was amply demonstrated on Tuesday of last week, when the prices of May wheat in Chicago unexpectedly duked under, and sold down to 67 1/2 cents a bushel, or within a cent of the lowest price reached a short time since. Divers reasons were given for the decline and it was clear that everyone was a bull on wheat, more on account of extremely low prices than anything else. Available supplies still continue to increase in spite of repeated assertions to the effect that farmers in the United States would stop delivering, that the Baltic ports would cease exporting, and the Indian shipments would fall off. In face of all these reasons, however, for the decrease in supplies, they keep on augmenting. For instance, the exports from India last week increased from 240,000 bushels the week previous to 740,000 bushels, an increase of half a million bushels, and the visible supply in the United States and Canada made a further gain last week of 694,000 bushels. The total amount of wheat and flour now on passage to Europe with the visible supply of wheat on this continent has increased to about 112,000,000 bushels, against 105,000,000 bushels a year ago. And yet, owing to the abnormal depth to which prices have dropped, the crowd of speculative operators are naturally on the bull side waiting for the promised advance. British consular reports from different parts of Russia do not in any way confirm the recent official estimate of the extraordinary abundance of the spring wheat crop in that country. Consul-General Woodhouse, at Odessa, points out that the untimely rains and the subsequent heat at harvest time seriously affected both the color and natural weight of the crops. It is, moreover, by this time well known that much of this year's wheat is of poor quality, which is hardly compatible with the abundance which the Russian Department of Agriculture would have us believe. With regard to the Government measures for assisting Russian growers to hold their stocks, these seem to have had no beneficial effect, and to have been taken advantage of in only a few cases, owing to the difficulty of complying with the conditions under which the advances are made. The great majority of the small farmers have in fact been forced to sell at the ruinous prices current.

A Slave Mart in Finland.

A regular slave mart still exists in many country districts of Finland. Once a year such paupers, aged people, and lunatics as cannot support themselves are put up to public auction and consigned to those people who will board them at the lowest price offered by the parish authorities. The helpless creatures are made to work as much as possible by the owners, who have the right to chastise them, and who are usually most inhuman in their treatment of the wretched lunatics. The aged folk are physically unable to perform much hard work, but the lunatics, though mentally deranged, are often bodily capable of undergoing a great deal of strain. Consequently the farmer shows little mercy toward them, harnesses them to his plough and thrashes them with his whip as if they were oxen, while the piteous appeals and driveling wanderings of the idiots do not tend to soften the blows.

The Height of Clouds.

Prof. Moller, of Karlsruhe, has made some interesting observations on clouds. The highest clouds, cirrus and cirro-stratus, rise on an average to a height of nearly 30,000 feet. The middle clouds keep at from about 10,000 to 23,000 feet in height, while the lower clouds reach to between 3000 to 7000 feet. The cumulus clouds float with their lower surface at a height of from 4000 to 5000 feet, while their summits rise to 16,000 feet. The top of the Alps are often hidden by clouds of the third class, but the bottom of clouds of the second class, and especially of the thunder clouds often enfold them. The vertical dimensions of a cloud observed by Prof. Moller on the Netelburg were over 1200 feet; he stepped out of it at a height of 3700 feet and high above the mountain floated clouds of the middle class, while veils of mist lay on the ravines and clefts. The upper clouds were growing thicker, while the lower ones were dissolving, and it soon began to rain and snow.

Robbed on a Railway Platform.

A Montreal special says:—A Canadian who has been employed in the World's Fair Department of Quebec was returning home on the regular train which left Chicago on Friday evening. He left the train at Battle Creek, Mich., to get some refreshments, and afterwards walked out to the end of the platform, as contemplative travellers are sometimes wont to do. He was just at the rear end of the train, in security, as anyone would imagine, when he was ordered to hold his hands up by one man, while two covered him with revolvers. He could only comply. They relieved him of \$110, which he carried in an inner pocket, and his gold watch. They even took a gold ring off his finger, and held him until the train was moving off, when they ordered him to get upon the platform of the rear car, and covered him until they made sure the train had carried him off. The men are described as burly, smooth-shaven, and desperate-looking characters.

The preliminary arrangements for the Queen's visit to Florence are completed. After a stay of three or four weeks she will proceed to Cobourg, where she will be the guest of the Duke and Duchess at the palace.