NOTES AND COMMENTS.

The latest report of the chamber of commerce of Middle Franconia, the most important hop district of Germany, shows that American hops are gradually driving the German product from the British market.

In mitigating the Indian famine the British Government has expended on its own account or as a disburser of loans and charitable contributions more than $10,000,000. What a vast difference in the amount of misery in India this sum must have made!

The London Globe says that a clever photographer has "doctored" a snapshot of an informal royal family group taken at Darmstadt, and produced a new and ostensibly official picture, representing the Kaiser and the Czar with their arms affectionately entwined. In Berlin they buy it by the gross; in St. Petersburg it has been forbidden by law. One capital's meat is another capital's poison.

Dr. Nansen appears to be booming the Arctic regions as a great health resort. According to his testimony, the atmosphere of the frozen zone is absolutely free from all disease germs, and no such things as bacilli or microbes can survive there. It will have to be allowed that this is a handsome recommendation, though, as a Boston contemporary points out, it is somewhat hampered by the danger of freezing to death.

"The Stanford (Ky.) Journal" says: "The unusual sight of a thirty-five-year-old man going to school can be seen any day at the public school here. It is 'Ed' Hubbard, who a year or so ago decided to make a preacher of himself, and, having no education, he is taking every opportunity to secure it. He is a good scholar, Professor Grubbs tells us, but it occasionally becomes necessary to 'keep him in to make him work a little harder. He plays with the boys at recess, and seems to relish football and other games as much as his playmates, the majority of whom are a score or more years younger."

The dream of the deviser of long felt wants in the bicycle business has at last been realized. It is by the successful completion of an automatic bicycle pump which will fill a bicycle tire to the required degree of hardness by the simple pulling of a lever after connecting the hose to the tire and dropping a penny in thte slot. The remarkable thing about this invention is, that the air is compressed into the tire by the action of the lever moved by the hand of the rider. The great power necessary to effect the result is secured by an arrangement of mechanical appliances entirely new to the construction of pumps. The pump is always ready to work and when placed in front of the road houses and inns along the boulevards and bicycle paths in the neighborhood of large cities, will save riders an immense amount of inconvenience and discomfort. It is expected also that the machine will be used universally for pumping carriage tires.

The London Globe says that a number of comments will appear in the skies during the year 1898. "The Pons Winnecke comet should open the list by appearing in April, after an absence of about five and one-half years. In May the celebrated Encke comet is due. This comet has a period of only three and one-fourth years, and its frequent appearance has been the means of astronomers discovering a great deal about comets and their wanderings through space. In June we should have two of these cosmical visitors—Swift's and Wolfe's comets—the former after an absence of six years and the latter a trifle longer. Temple's comet completes the visitors' list by arriving in September. These comets are all regular visitors, whose periods are so well known that their arrivals may be timed almost to the hour. Others, no doubt, will arrive, but they will doubtless be casuals, of whose antecedents nothing is known, and most of them such small fry as to catch the attention of only the most assiduous observers."

While the code duello, in its sanguinary character, is rapidly becoming obsolete in the United States, it appears to be still in high favor on the other side of the Atlantic. In Germany some 4,000 engagements are yearly fought on the field of honor with sanguinary results. Most of these engagements take place in the neighborhood of college towns. Within the space of twenty-four hours as many as twenty duels have occurred in the neighborhood of Jena. Next to Germany in allegiance to the code duello, comes France. There are some 1,200 duels fought annually in France, the participants being mainly officers in the French army. Italy comes next to France, with some 272 duels annually. During the past ten years Italy has furnished 2,759 duels. Austria, Russia, Spain and Great Britain rank next in the order named. In Great Britain the code has become almost as obsolete as in the United States. Most of the duels fought on the European continent are fought with the sword, though pistols and knives are used occasionally.

Some young men of Irving, a suburb of Chicago, have formed an anti-marriage association. The member who marries must pay $25 and give a banquet to the members. To visit a girl twice in a week costs $2, and $1 is assessed against those who take a girl home by the shortest route. The members of the association expect to enjoy many banquets in the near future.

The Stone Family Association has grown so rapidly in the last three years, according to the New York Tribune, that it promises to be stronger in numbers than any similar organization in the country. At ae recent meeting in Boston, lately discovered information as to the English birthplace and ancestry of Simon and Gregory Stone was presented, and William E. Stone, of Cambridge, Mass., was authorized to have it published for the benefit of the descendants. It seems that Simon Stone sailed from London for New England in the ship Increase, on April 15, 1635, and that Gregory Stone reached Cambridge soon afterward.

Inspector General Breckinridge believes there is great need in the army for a system of rewards for conduct, and has proposed to present good-conduct badges to deserving soldiers. Referring to the recommendations, which have been indorsed by General Miles and Secretary Alger, General Breckinridge says: "Some armies adopted a system of good-conduct pay and badges and have derived marked benefit therefrom; and its introduction into our army would prove equally beneficial. The total number of men in the army worthy of good-conduct badges last year was 4,614, and over 17,500 men were reported as not having been tried, and 20,580 had not been in confinement, or 79.4 and 92.9 per cent. respectively, of the total number of enlisted men reported present and absent. These figures bring the troublesome element within 20 per cent., and speak well for the army; and they are a fair indication of the behavior of our troops. It is safe to say that the adoption of good-conduct badges would improve the morals of our army, and supplement the much-valued medals of honor and certificates of merit, which are hardly within reach in the quiet time of peace."

A singularly interesting announcement is that Mr. Jackson, the intrepid and accomplished explorer of Franz Josef Land, means to make an attempt to reach the North Pole by way of Grinnell Land. He at first planned to go up the east coast of Greenland and strike poleward from the north of that island, but abandoned that route when he found that it was already pre-empted by Lieutenant Peary, who will reach it from the west coast of Greenland. He will, therefore, go up the west coast of Greenland, just as the American explorer will, but on reaching high latitude will turn to the west, instead of to the east. While Lieutenant Peary makes his dash toward the pole on or near the thirtieth meridian west from Greenwich, Mr. Jackson will make his probably somewhere between the seventieth and eightieth. In those high latitudes, however, they will not be far apart ,and every mile made toward the pole will bring them nearer to each other. It is an interesting feature of the case, too, that the American will travel by way of Sherard Osborn Fiord and Nares Land and other regions bearing the names of English adventurers, and the Englishman will proceed by way of Grinnell Land and Grant Land, and perhaps Cape Columbia.

Alive Without Her Stomach.

The astonishing discovery made by a foreign surgeon, who has found that a human being can live without a stomach, will be regarded with wonder by the men of science everywhere. The physician who accomplished the triumph removed a woman's stomach four months ago, but the woman is still alive, working and in good health. She eats and she gets the benefit of her food, which is digested, presumably, by the other organs in the intestinal tract. The operation may not be of immediate practical value. It seems to be doubtful whether it will ever be tried save in rare cases where the life of the patient is dependent upon relief from some sort of stomach trouble. The fact remains that the performance is of great importance as an indication that the digestive and assimilative power of the stomach has been overestimated and that much work of the kind is performed by intestinal organs which have been little regarded. Heretofore it has been taken for granted that the stomach was an indispenable part of the vital system; that without it no one could take food or assimilate it. The recent sensational operation has opened up a whole new sphere of physiological science by disclosing that it is actually possible to get along without the organ altogether. The discovery is another of the triumphs which the daring and skill of modern surgery have encompassed within a quarter of a century.

The French Peasant.

The French peasant has an independent means of existence. He owns the soil he tills. If he employs laborers they, at least, will own a house and garden, and hope to own a plot. The English villager is either a small tradesman or a laborer. A garden which he cultivates but does not own is as a rule the extent of his possessions. There are two classes in an English village and these may be subdivided into various religious sects. There is only one class in our French commune—a fact which has a material bearing upon the social economy of the community. Every inhabitant of the commune is a proprietor of something, and all are bent on saving, yet, with all their individualism, they combine for common and mutual interest. This is illustrated by the organization of the syndicate for buying at wholesale prices. They unite for the cultivation of the soil, lending each other horses and making up teams. Every commune has a field, which is common property, and where, on payment of a trifling fee, animals graze. After the harvest all the fields become common property, and the gros betail and the other betail are allowed to roam at large.—Contemporary Review.

Luck in Venice.

There is a curious superstitition in Venice that if a stranger dies in a hotel the number of his room will be lucky at the next lottery.

THE FARM AND GARDEN.

ITEMS OF INTEREST ON AGRICULTURAL TOPICS.

Salt for Apple Orchards - Experience with Turkeys---Large Trees Near Buildings---Whitewashing Apple Trees---Etc., Etc.

SALT FOR APPLE ORCHARDS.

While it is well understood that salt is not a manure, it is so good a solvent of other minerals that where they exist in the soil it may always be used with advantage. We have often advised farmers to apply both potash and phosphate to apple orchards. But if this is done every year it is probable that some of these minerals revert to an insoluble condition. Whenever the apple trees set full for bearing it will pay while giving the usual annual dressing of potash and phosphate to add some salt to it, which will be much cheaper and probably more effective than supplying directly the minerals which the salt will indirectly furnish.

EXPERIENCE WITH TURKEYS.

By experimenting the Rhode Island turkey raisers find that the turkeys that roost out of doors the year through do best. They can withstand wind, rain and snow without injury if they roost in the lee of a hill or thick wood. On land where the wind has full sweep a windbreak of some kind should be provided for them. An empty barn having plenty of cracks may be used to shelter breeding turkeys, but we would use nothing smaller or tighter. They may be allowed to roost on trees in the orchards or in roosts built where they will be protected by some building. Large poles laid on a frame ten or fifteen feet high answer the purpose.

WHITEWASHING APPLE TREES.

It was once a common practice with many orchardists to whitewash the trunks of apple trees just before the winter came on. We could never see much advantage in this, though, as more or less of the rough bark was scraped off preparatory to whitewashing it destroyed some injurious insects that had prepared to make this shelter their winter home. But most of these insects would be destroyed by that most valuable friend of the orchardist and the grower, the wood-pecker, which remains here through the winter for that purpose. To kill off insects by other means is to some extent cheating these useful friends, provided the work is done in the fall. The whitewashed trunks make a striking appearance when the trees leave out in spring. But we could never see that the trees were beautified. A ready helpful wash would be to dissolve hardwood ashes in water, and wash the trunks with this. That would make no show at all, but it will clear the trunks of most insects, and if some carbolic acid were put in it, tae wash will be a good one to apply in summer to repel the borer.—Boston Cultivator.

FEEDING BUCKWHEAT BRAN.

The bran of buckwheat has much less nutrition in it than has wheat bran, and as it is very harsh, it is difficult to digest. On this account it ought not to given to horses or hogs. It will cause diarrhoea from its effect in scarifying the stomach. The hog having only the small places in its fore legs through which to perspire will suffer more than other animals. It will often cause mange in hogs after a few weeks' feeding with it. But we never had any trouble from feeding buckwheat bran to cows, though it never made a very large part of their ration. There should always be some grain fed with buckwheat bran in order to keep the animal in good thrift. Even buckwheat flour has the reputation of causing itching pimples on those who eat it, though these are thought by some to be favorable symptoms, as they represent what was already in the blood, and it is better that it be out than inside the system. But winter is the season when much more fat and grease is eaten than at any other season. It is quite possible that the quantity of pork gravy eaten with buckwheat cakes caused the bad humors in the blood, and that the cakes themselves performed their good service in expelling these humors from the body.

SUGAR BEET REFUSE AS FEED.

In considering the profit in the production of sugar beets farmers until recently have overlooked the value of the residue of the beet after the sugar has been extracted. While it contains considerably less nutriment than the standard coarse fodders, it serves a very useful purpose as a food, says the Burlington Corn Belt. One hundred pounds of beets contain something over a pound of digestible muscle-making food, while red clover contains about six and one-half pounds and timothy hay nearly three pounds. The value of beets as a food, however, largely lies in their influence on the digestive organs at a time of year when stock is usually fed on dry food. They are diuretic in their action and the almost universal report from practical feeders and experimenters is that roots are valuable as winter food for stock, and that sugar beets lead in this respect.

The Purdue agricultural station has demonstrated that sugar beets contain more nutriment than do mangels, carrots, rutabagas and common turnips. Their sugary nature makes them especially palatable. For sheep or milk cows no better roots can be fed. They keep the bowels open and tend to prevent impaction with cattle and sheep and give a gloss to the coat and condition to the skin not secured by dry feed.

At the Grand Island (Neb.) sugar factory a flock of 50,000 sheep and a number of cattle are now being fed almost exclusively upon the sliced beets, after the juices and sugar are extracted. City delivery wagons deliver to owners of cows or other live stock in the city all the feed of this kind that can be consumed for the nominal price of 25 cents a week. At first only one wagon supplied the demand, but now there are three engaged in the service. To encourage the industry the Grand Island factory exacts no charge for the food. Stock feeders and farmers are at liberty to haul away the product in unlimited quantities. At the stock yards near by 150 tons of the beet refuse are fed daily and stockmen find that with the addion of small quantities of grain cattle and sheep are quickly placed in fine condition for the market.

In feedng experiments conducted in the United States with sugar beets these roots have been fed in connection with other foods. At the Purdue station beets invariably have been fed to advantage, and they have used sugar beets for years for cattle and sheep. At the Ohio station, where corn silage and field beets have been compared in feeding dairy cattle, the beets have causd the best gains in weight of cows, size of milk flow and production of butter fat.

The sugar beet has no quality injurious to the milk, when fed to a dairy cow, while turnips, unless fed with great care, give an objectionable flavor to it.

At the Lehi (Utah) factory a feeding company has contracted for all the pulp for a term of years and feeds its cattle in sheds near the factory. It is said that the cattle eat from 100 to 125 pounds of pulp a day each, besides about fifteen pounds of hay. Analyses by the California experiment station show beet pulp to contain nearly as much protein as corn silage, and somewhat less of the other food ingredients.

THE UNPROFITABLE COW.

It does not follow as some people appear to suppose, that the reason a cow is unprofitable is because she is incapable of being profitable. There are cows, a great many of them, that are so deficient in the qualities that go to make good dairy animals that they can never be made profitable. But there are also a great many cows that have capacities which have never been developed. These cows are not profitable simply and only because they are not properly managed. The fault is not with the cows, but with the men who feed and care for them, and who do it so imperfectly that the best returns which the animals are capable of making can not possibly be secured.

Any one can see that an engine that is allowed to get rusty, and that is only partially supplied with fuel, or is run with fuel of an inferior quality, cannot give satisfactory service. In order to answer the design of its maker it must be constantly kept in good condition and must have an abundance of the proper kind of fuel. A similar principle governs in the work of all machines. In order to be effective the conditions of their successful working must be complied with. Now the cow is a sort of a machine for converting hay and grain into milk. She is a good deal more than a machine, for she has a vital element that no machine has, but to a certain extent she is a machine and is subject to the same conditions as are other machines. If she is to be profitable she must be properly cared for, and must be adequately supplied with suitable materials from which to elaborate her products.

Before a cow is condemned as unprofitable an inquiry should be made as to whether she is receiving proper care, whether she has all the food she needs, and, what is a very important factor, whether the food contains, in their proper proportions, all the elements that she requires. A change in treatment, as regards protection from storms and from extremes of temperature, and, in some cases, more gentle handling, would work a great improvement in many cows. A better selection of food materials, with perhaps an increased quantity, together with more regular periods for feeding and watering, would also cause a great change for the better. While they would not always change the owners' opinion, I am confident that carerul experiments along the lines above indicated would take a great many cows regarded as of inferior quality into the ranks of profitable dairy animals.—Journal of Agriculture.

Ringed by a Bicycle Nut.

Young Edward Bunk, of Brooklyn, doesn't hold the romantic and tender views on the subject of rings that are proper to his age and sex and that he probably held until a day or two ago. That is because he has worn one.

Edward is a machinist by trade, and he was polishing a big bicycle nut of highly tempered steel when suddenly it flew from its moorings, slipped over his index finger and, still revolving, rolled up the finger, cutting a thread as it went until it was stopped by the knuckle.

The finger began to swell. It was impossible to screw off the nut except by a process similar to the one by which it was put on. The surgeons greased the finger with antiseptic vaseline and unscrewed the nut, following the thread that it had cut on the finger.—New York Journal.

Strength of a Spider's Webb.

Size for size, a thread of spider's silk is decidedly tougher than one of steel. An ordinary thread will bear a weight of three grains. This is about fifty per cent. stronger than a steel thread of the same thickness.

NEW YORK'S STEADY GROWTH.

The City Has Never Halted Since it Was First Fairly Started.

Ernest Ingersoll writes a paper on the Greater New York, entitled "Reasoning Out a Metropolis," for St. Nicholas. Mr. Ingersoll says:

The people of New York, Brooklyn, Staten Island and certain near-by northern towns resolved to join themselves together into one city, which is now the Greater New York. It embraces 341 square miles of territory, and includes a population of nearly 3,400,000.

Besides these, at least another million dwell on the New Jersey side of the Hudson River, quite as near and as closely identified with the great city on Manhattan Island as are those of the northern and eastern suburbs. This makes a population of nearly 4,500,000 which may be said to belong to New York, making it not only by far the largest center of human life and interests in America, but, excepting only London, the most populous spot on the globe.

How has it happened that this vast city has grown up where it stands? Why did not the American metropolis arise somewhere else? Is its position an accident, or does history show sound reason for its situation? The earliest settlement here was merely a trading station that gradually became a small seaport, like a dozen others along the coast. Before the year 1700 these were so nearly alike that he would have been a wise prophet who truly foretold which would thrive. Indeed, many men of that day firmly believed that Newport and Annapolis were to be the two great American seaports.

Great cities arise at the points where the greatest number of people find it convenient to meet at first for business and later for pleasure. You cannot force a city to grow in an unnatural or unsuitable situation; and it is no easier to prevent a city from growing in its proper place. But the conditions that change a village into a big town and expand the town into a city or metropolis are not the same in different parts of the globe, and vary with the march of centuries; so that now many an ancient world market, like Nineveh or Memphis, has totally disappeared; while towns like Berlin have lately increased with amazing rapidity, after a long history as small and insignificant places. As for New York, it has never halted nor gone backward for a moment since it was fairly started on its career in 1625.

Sex in Flowers.

Professor Kenjiro Fujii of the Imperial University of Tokio, Japan, has recently published a paper in the proceedings of that institution explaing the law that determines the male or the female sex in flowers. His observations and experiments have been made on the prevailing pine tree of that country. He gives, in full detail, the results of many observations and comes to the following conclusions: That the sex of the flowers is undetermined until a certain stage of their growth, and that a flower that would otherwise develop into a male has a tendency to become a female when local increase of nourishment takes place at a certain stage, or during certain stages of its development. It is very interesting to note that this discovery as to the law regulating the reproduction of the separate sexes in flowers was first made and reported some quarter of a century ago by Prof. Thomas Meehan; and the paper read by him before the American Society for the Advancement of Science appears in the printed proceedings of the Salem meeting. The doctrine met with some opposition at that time, Prof. Agassiz especially making a powerful protest against the sentiments of the paper. But it has since been adopted as a demonstration, and is the accepted theory of sex in the article on this subject in the ninth edition of the "Encyclopedia Britannica." The American view, differs slightly from that of the Japanese scientist in this, that while the latter seems to regard the male characteristics as the normal condition, the accident of abundant nutrition only causing an advance of female characteristics, the former regards the female as the normal condition, and the cutting of the fall supply brings about the male flowers. Again, the American exponent not only requires an abundant supply of nutrition to insure female nowers, but a high vital power in the nucleus to avail itself of the nutrition. Prof. Fujii shows by his paper that he is in ignorance of the occupancy of the field before him by the American philosopher; and the fact gives additional interest to the paper in this respect, that so nearly the same results should follow observations made in such widely separated quarters of the globe. —New York Independent.

A Rat Catcher's Story.

There are tricks in all trades, and probably as many in that of the professional rat-catcher as in any other line. According to the story of a man who has made a barrel of money in that business, but who has since drifted into other pursuits, it was once easier to make a living catching rats than by running a shell game at a country fair. "I used to use ferrets for the extermination of the rodents," he said, "and when I received an order to clear a warehouse of the pests I always insisted that the pay should be gauged by the number of rats killed, at so much per head. I carried the ferrets in a big wooden box, with a false bottom. In a secret drawer, underneath, I would place four or five dozen live rats before starting out, let them run loose upon reaching the place to be rid of rodents, and then free the ferrets. Of course, with fifty or sixty rats running around loose, there was always a great slaughter, and sometimes the ferrets would kill nearly all the rats I turned free. In this way I was always sure of receiving handsome remuneration for an evening's work, upon the presentation of the carcases to the parties who employed me."—Philadelphia Record.

Invited Grant to Go to Her Cellar if He Got Frightened.

Summer Hill, close to Studley, Va., is a very interesting place, built over a hundred years ago, and was the arena of much active warfare about the year 1862. Mrs. Newton resides there, the widow of Capt. William B. Newton, a scholarly gentleman and brave commander of cavalry in Gen. Fitzhugh Lee's brigade, who was killed at the battle of Culpeper Court House. He was a brother of the late Bishop John Brokenbough Newton, who died last Ascension day. Summer Hill was taken for headquarters by Gen. Grant, and there he held a council of war with Gen. Hancock and Gen. McDowell. Gen. Grant told Mrs. Newton he was expecting an attack and that a battle would be fought under her very roof-tree, and added:

"I advise you strongly, madam, to go over into King William County with your little children. I will be glad to furnish you an ambulance and safeguard to cross the lines."

She answered: "No, I prefer to stay here. This old home is all I have left, and if its fate is to fall down it will have to fall on my head. I can put the children down in the potato cellar, and, General, if you get scared when the firing begins you can go down there with them."

Gen. Grant laughed heartily and said: "Have your own way, madam. You are brave enough."

After the war was over he inquired very particularly of her, and expressed the hope that she came out all right.—Boston Transcript.

Golf Breed's Thrift.

The rapid spread of golf in this country has opened a new field for the enterprising American boy.

It is good, healthful work for a lad, for it keeps him out in the open air, and he often gets as much fun and more work out of a game than the player himself. His earnings are more than those of most of his fellows in stores and offices, too. The usual rate of pay is from 10 to 15 cents an hour, and with the tips from players the caddie's earnings often amount to $8 or $10 per week in the golf season. In some places the caddies are paid by the round, but that is not so fair as the time pay system, as the lest skilful players, who are apt to give the caddies most work, take the longest time to go over the course.

In the neighborhood of the big cities, where most of the golf links are located, many business men play the game, going over the links early in the morning or on their return from business after 4 in the afternoon. In such places most of the caddies are schoolboys, who can do this work outside of school hours, as the links are practically deserted during the middle of the day except on Saturday, which is, of course, a holiday for the schoolboy, as well as for the business man. There are any number of thrifty caddies who are paying all their school expenses this winter with the money they earned running after balls during the long summer days.—Chicago Inter Ocean.

New Use for the Megaphone

An interesting application of a recent invention to the work of constructing the modern "sky scraper" is shown in a large office building now going up not far from Broadway. When the building had reached a height of but two or three stories, the contractor had no difficulty in mounting to its top and urging the workmen on to renewed effort, or chiding them in any form of words that occurred to him. But eight or ten floors added, he found it took more of his time than he could spare to mount to the top on every occasion when he was needed. So he conceived the brilliant idea of having a megaphone constructed to connect his headquarters in the first story with the top, where the men were at work. When the work lags now or any conflict of authority arises, he is able to make his voice heard at the seat of the trouble without moving from his seat, much to his own satisfaction, if not to that of his employees.

If the statement of one of the bricklayers is to be accepted as true, the megaphone lends itself with peculiar readiness to the transmission of profane language. Hearing an adjuring voice from seventeen floors is said to have a highly stimulating effect upon the workman's movements.—New York Commercial Advertiser.

Cold Storage.

Some fifteen millions of dollars are invested in this business, and poultry, eggs, oysters, beef, vension, lamb, etc., may be kept in perfection for months, even from one season to the next.

A visit to one of these warehouses is interesting. The walls are of extraordinary thickness, sheathed with wood and filled with huge ice boxes. In some of the modern warehouses, the same chemicals used to make artificial ice are circulated through the rooms by means of pipes, which keep the temperature several degrees below zero. The fish, meat or game to be preserved is packed in the ice boxes, which have double walls and the ice is packed around them. With the atmosphere around them below zero, the articles to be preserved are kept at a temperature that would make an Arctic explorer shiver, until they are wanted, when they are taken out and sold, sometimes in a few days, and as often in a few months. The refrigerator cars have helped to develop the cold-storage business.