

Science and Industry

ANTQUITY OF THE PLANE.—A very interesting discovery has been made at the Roman city of Silchester. The excavators came across a dry well, which, on being explored, proved quite a little museum of antiquities. Some fifteen feet down, a corruspondent and the diggers found an urn-shaped pottery vase, about a foot in length, quite intact, and, curiously enough, protected by lumps of chalk built around it. The vase, which probably originally contained some precious substance, was, however, quite empty. Above it were deposited a great number of iron implements, most of which were in a wonderful state of preservation. They seem to have been the tools of a carpenter and a cooper, or silversmith, with some miscellaneous objects of blacksmith's work thrown in. The principal specimen is a carpenter's plane of quite modern type, although unquestionably more than 1,500 years old; three or four axes, retaining their fine cutting edges and still quite serviceable; a number of chisels and gouges of all shapes and sizes, hammers, adzes, saws, files, etc. In the smith's department may be specified a brazier for burning charcoal, quite complete, two or three anvils of different sizes and shapes, a fine pair of tongs, adapted for lifting crucibles, a curious tripod candelabrum lamp or candlesticks, and several other curious objects, the precise uses of which have not yet been determined. In addition, there are several large bars of iron, a couple of ploughshares, and a broken sword. Probably more will be found deeper down in the well. This is undoubtedly the most important find at Silchester since the discovery of the

bronze Roman eagle, now at Strathfieldsaye, some years ago. Bishop McGolrick, in a letter to Rev. Father White, P.P., of Menagh, thus refers to the find: "There is to push on the new movement inaugurated in Ireland for technical training. His Lordship says:— For over thirty years I have seen how our Irish artisans have been handicapped for want of accurate technical knowledge. Side by side, at the same bench, two carpenters are working—one Irish, the other Norwegian. In the course of a few years, you can find the Norwegian an employer, a "boss," as they say, and laying out work for his Irish fellow workman. The Norwegian knows the mathematics of his work; can take a contract, draw a plan and make his details. The Irishman, a better practical carpenter, knows nothing of these matters, and is, therefore, deprived of splendid opportunities for advancement. This is not an instance, among the many, of the injury done to our people by defective education. Thank God, this whole system of education is to be, I hope, radically changed. I confess, it gives me much hope for the future in Ireland. While the Government has been slow, to adopt any plan for the benefit of the country,—often of set purpose, reducing people to beggary rather than encourage honest industry,—at last, there is the dawning of a happier day. What is particularly happy is to notice how the Irish priesthood, the true friends of the people, have hastened at once to identify themselves with this technical project.

seed corn, which the instructors in the Agricultural College say is unknown to many farmers of years of experience. The experiment as outlined in the course adopted for the schools is as follows:— Take five kernels from each of twenty ears. Fill a common plate with soil and cover with three or four thicknesses of coarse cloth. Moisten the cloth and the soil well. Lay the hundred kernels on the cloth, cover with another plate turned bottom side up to keep in the moisture, and set in a warm place. Examine every day and keep moist. At the end of six days count the kernels that have sprouted and estimate the per cent. of seed that will grow. In the same way test the vitality of cold seeds collected in the fall. In connection with the crop studies daily weather observations will be made designed to draw attention to the climatic changes from day to day. The record will be kept in a special book, using one page for each month.

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NOTES OF NATURALISTS.

MULE SENSE.—The mule is thought to be an exceedingly dull and unappreciative beast, but there is one in Chicago that is neither dull nor unappreciative. His driver belabored him unmercifully for not pulling a load that was heavy enough for two mules to haul. The man pounded and swore and pounded again; but, do his best, the mule would not do from the careless way in which the driver attempted to see what the next form of punishment would be, but subsequent events showed that his muleish mind was figuring on revenge against the driver. Doubtless he got the idea of what he would do from the careless way in which the driver fooled about his hind legs. But anyway his muleishness seemed very much pleased when he found he was to be released from the wagon, even if it was to give the driver a freer hand with his club. In a few minutes the mule found himself tied to one of the wheels of the wagon and felt the heavy blows of the club, but he took things philosophically and kept one eye on the driver. Presently the driver got in the position that the mule was waiting for, when, like a flash of lightning, two heels struck the driver, and when they picked him up it was found an ambulance would be needed to take him home. The mule seemed to glory in his work, or kick, rather, and perhaps the bystander who laughed to see the driver punished for his brutal treatment of the mule only imagined it, but he felt sure the mule joined in the laugh, for his eyes seemed to say that he was immensely pleased over the play he had made with his heels.

But, be that as it may, when the bystander approached the mule he was met with marked demonstrations of friendship, the mule going so far as to try to rub his nose against the bystander's face. When the ambulance came the mule watched them put his driver into it, and as it drove away he raised his voice in a deafening bray and pranced about as if too happy to enjoy even a good meal of oats, corn, and hay. The bystander went away firmly of the belief that mules know a whole lot.

THE FARMER AND THE BEE.—Every farmer should have an orchard, to furnish fruit for the home consumption, at least. There should not be an orchard without its bees. The more thought and observation made concerning the relation of the bee and blossom, the more apparent it becomes that the blossom, to bear fruit, depends as much upon the bee as the bee depends upon the blossom. There must be some carrying medium between the blossoms to take the fertilizing pollen from one to the other. The chance of the wind carrying the pollen in sufficient quantities to fertilize a blossom is small in comparison to the bee that visits hundreds of flowers in his daily rounds. A few years ago there was almost an entire failure of the apple crop in a certain district. During the blossoming season there was an almost incessant cold, damp and blowing from the northeast—always cloudy, misty, and raining. The owners of the orchards laid the failure to the cold, damp weather "chilling" the fruit. But it was rather that the weather chilled the bees. One farmer was more fortunate than his neighbors that year, having more fruit on his trees than any other orchard for miles around. He attributed this to his bees, a number of stands being in the orchard, where they could take full advantage of all favorable moments. Bees are comparatively little trouble to keep. They require a little attention, to be sure, but here are a few things that bring pleasure or profit in this world that do not require attention. Compared to the cost of raising, there are few things about a farm that will bring greater reward than bees, leaving out the question of their benefit to the unfertile blossoms. Honey is a luxury within the reach of all. It is too, a source of revenue, as it always finds a ready market. The farmer or orchard owner who has not already a dozen stands of bees should get them as soon as possible and set them among his trees. A couple of stands will increase to this number in two or three seasons. Bees are not so difficult to handle. Self-confidence, a little nerve, and a knowledge easily gained through some work on bees, or better by conversing with some apiarist, and anyone can successfully handle them. Bees are one of the too much neglected items that the successful farmer of the future will pay more attention to.

A STORM IS BREWING.—Your old rheumatism tells you so. Better get rid of it and trust to the weather reports. Scott's Emulsion is the best remedy for chronic rheumatism. It often makes a complete cure. Life is passing, youth goes, strength decays, but duty performed, work done for God—this abides for ever, this alone is imperishable.

HOUSEHOLD NOTES.

The domestic service problem is always with us. Recently some experiments were made in Boston under the direction of the Women's Industrial and Educational Union, which began four years ago to investigate the reasons for the evident preference of girls for every other sort of occupation rather than housework. Hundreds of working girls in city stores and town factories were asked why they would rather do what they were doing than go into household service. A variety of answers were returned, some bearing upon the social inequalities of employer and employee, others on the matter of loneliness, etc., but all had the one objection to doing housework, that it deprived them of their freedom. Money, comfort, no other consideration weighed in comparison with that. The committee in charge of the investigation decided that servants and mistresses needed training to make the conditions of housekeeping more satisfactory. The mistresses even more than the maids. Accordingly the Boston School of Housekeeping came into existence. Girls were induced by the prospect of a free training which would fit them for better positions to enter the school. They were encouraged, instructed in plain sewing and other resources for passing the hours which belong to themselves pleasantly and profitably developed. Neatness and economy were emphasized equally with proficiency in the care and cooking of food. Every effort was made to place these girls in homes where they would receive considerate treatment. In the training school for employees many rich women were among the pupils. They were asked

to do different kinds of work, which they never had done and never expected to have to do at home, that they might be able to appreciate better the time and work that would be required of a servant performing the same task. What to buy, when to buy it, and how to cook or serve it to get the greatest amount of food value for the money was studied thoroughly. Each woman was compelled to make out menus for the week according to the sum she had to expend for each person, from 15 to 70 cents a person for each meal, and then to put them into effect at home. Sometimes a meal that looks well on paper and is scientifically and economically correct will not be appetizing or for some other reason will not work out well in practice. Getting the most for your money is the keynote of the instruction to the housekeepers of limited incomes. To prove that two persons can live well on \$10 a week the officers of the school for six months received that sum from a young married couple, who had only that amount to live on, and spent it in such a way as to arouse astonishment and gratitude in the beneficiaries. Make housekeeping a profession and service a business is the advice of the School of Housekeeping to those who want their domestic machinery to run smoothly. As far as possible keep to regular hours and let your employee use her time outside of those hours, as she pleases, as long as her efficiency is not interfered with by the idleness of her service. This, it is believed, is to do away with many of the difficulties that fret the household to-day and keep maid and mistress antagonistic.

WITH THE FARMER.

AGRICULTURAL SCHOOLS.—Elementary courses in agriculture will be introduced into the public schools of Illinois with the beginning of the next school year, to rank with other studies now pursued. With the primary purpose of interesting country boys in what probably will be their work in future, the course will be adapted especially to the country schools, but they will be introduced into town and city classes also in an elementary way. The greatest success for the new course is expected in the country and smaller towns. A result of the introduction of agriculture as a study is expected to be that the tide of migration of country boys from farm lands into cities will be stemmed. The aim of the course will be to make work interesting to the boy who is to be a farmer and to give him a knowledge of surroundings which will remove his labor from the commonplace and open up to him possibilities for great development as can be found in a city. In this hope the State Board of Agriculture has voted the new study into the State course of instruction. The course in agriculture which has been adopted by the Board was prepared by Dean Davenport, of the Department of Agriculture in the University of Illinois, in cooperation with the Department of Agriculture in the University of Illinois, and Superintendent G. W. Shawhan, of the Champaign County schools. It will be of an elementary character at first. None of the topics considered will be beyond the comprehension of any boy or girl in primary observation. Its greatest difficulties are expected in the towns and cities, though even there the Board of Education is confident that the larger part of the work can be done. Following are some of the questions from text for the second month: KEEP your blood pure and your stomach and digestive organs in a healthy condition by taking Hood's Sarsaparilla and you will be WELL.

of study, which indicate the character of the study as it will be introduced into the schools:— How many rows are on an ear of corn? Is the number odd or even? About how many kernels are there on a medium ear? What is the color of the cob in white corn? In yellow corn? How many ears of corn in a bushel? What is the legal weight of a bushel of ear corn? Of shelled corn? How many kernels are usually planted in a hill? How many stalks do you find in a hundred hills? How many of these are barren? What varieties of corn are found in your neighborhood? As time advances the scope of the study will be broadened, so that finally the public schools of the State will offer almost as good a course in agriculture as the short courses in farming at the State University. The study during the late months is to be much more difficult than that given in the spring. In all instances, however, the course is to be eminently practical. There will be few questions asked which do not have a direct bearing upon farm work, and few which will not mean dollars and cents to the boy who takes the course. The course of one month requires the pupil to make a list of all insects injurious to crops, and to describe the damage and extent of loss occasioned by their ravages. He is required to find how much a horse will eat in a month, and the cost of keeping for a year. He is directed to ascertain the color of a "bunch" of sheep, what the cattle will eat in a day, and which ones fatten most rapidly. The matter of term life is brought to his attention by the simple experiment of sticking a pin in a rotten apple, and then into a sound one, and watching results. For the spring months a number of experiments have been devised. Among them is one to test the vitality of

To the Heads of the House. The responsibilities of the household, the care of children and the preservation of an even temper all come easier to the heads of the household when good health is theirs. Healthy people have healthy children. Healthy people are not usually crusty and irritable. We may all make mistakes, but with good health as our share we are liable to make less of them. Bear in mind always that THE DAILY USE OF ABBEY'S EFFERVESCENT SALT WILL KEEP YOU IN GOOD HEALTH. Millions of people in Great Britain, Europe, India, Canada and the United States know that this marvelous English remedy, made from the salts extracted from the juices of Fresh Fruits, is a positive preventive of Dyspepsia, Biliousness, Constipation, Sick or Nervous Headaches, Flatulency, and all the ailments caused by these primary causes of disease. There is nothing else like it as good in the world. Your physician will tell you this. Here is what one of thousands of them says: "I prescribe Abbey's Salt and think it should be better known. It is very pleasant to take and it is a most reliable remedy. I recommend it to adults and children who have sluggish livers and constipated bowels." Dr. S. Matthews, N. Y. All druggists, etc., and 60c.

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The honeymoon was over, and the husband, returning from business, was grieved to find his little wife crying bitterly. "Oh, George," she sobbed, "such a dreadful thing has happened! I had made you a beautiful pie all by myself, and Eldo went and ate it!" "Well, never mind, my dear," he said, cheerfully, "we can easily buy another dog."

Society Directory.

LADIES' AUXILIARY to the Ancient Order of Hibernians, Division No. 1.—Meets in St. Patrick's Hall, 92 St. Alexander Street, on the first Sunday, at 4 p.m., and third Thursday, at 8 p.m., of each month. President Sarah Allen; Vice-President, Stasia Mack; Financial Secretary, Mary McMahon; Treasurer, Mary O'Brien; Recording Secretary, Lizzie Howlett, 383 Wellington street.—Application forms can be had from members, or at the hall before meetings.

A.O.H.—DIVISION NO. 2.—Meets in lower vestry of St. Gabriel New Church, corner Centre and Laprairie streets, on the 2nd and 4th Friday of each month, at 8 p.m. President, Michael Lynch; Recording Secretary, Thomas Donohue, 812 Hibernian street.—to whom all communications should be addressed; Peter Brophy, Financial Secretary; E. J. Colfer, Treasurer. Delegates to St. Patrick's League.—J. J. Cavanagh, D. S. McCarthy and J. Cavanagh.

A. O. H., DIVISION NO. 3.—Meets on the first and third Wednesday of each month, at No. 243 St. Anne's street, near McGill. Officers: Ald. D. Gallery, president; T. McCarty, vice-president; F. J. Devlin, recording-secretary; 1635 Ontario street; John Hughes, financial-secretary; L. Brophy, treasurer. M. Fennel, chairman of Standing Committee; marshal, M. Stafford.

A.O.H.—DIVISION NO. 9.—President, Wm. J. Clarke, 208 St. Antoine street; Rec-Secretary, Jno. F. Hogan, 86 St. George street, (to whom all communications should be addressed); Fin-Secretary, J. Doyle, 12 Mount St. Mary Ave.; Treasurer, A. J. Hanley, 796 Palace street; Chairman of Standing Committee, R. Diamond; Sentinel, M. Clarke; Marshal, J. Tynan. Division meets on the second and fourth Wednesday of every month, in the York Chambers, 2444 St. Catherine street, at 8 p.m.

C.M.B.A. OF CANADA, BRANCH 96.—(Organized, 13th November, 1883).—Lunch meets at St. Patrick's Hall, 92 St. Alexander Street, on every Monday of each month. The regular meetings for the transaction of business are held on the 2nd and 4th Mondays of each month, at 8 p.m. Applicants for membership or any other desiderata of information regarding the Branch may communicate with the following officers:—Jas. J. Costigan, President; P. J. McDonagh, Recording Secretary; Robt. Warren, Financial Secretary; Jas. H. Malden, Treasurer.

ST. PATRICK'S T. A. & B. SOCIETY. Meets on the second Sunday of every month in St. Patrick's Hall, 92 St. Alexander street, immediately after Vespers. Committee of Management meets in same hall the first Tuesday of every month, at 8 p.m. Rev. S. C. Hallissey, Rev. President; James J. Costigan, 1st Vice-President; W. P. Doyle, Secretary, 220 St. Martin street.

ST. ANN'S YOUNG MEN'S SOCIETY organized 1885.—Meets in its hall, 157 Ottawa street, on the first Sunday of each month, at 2.30 p.m. Spiritual Adviser, Rev. E. Strubbe C.S.S.R.; President, D. J. O'Neill; Secretary, J. Murray; Delegates to St. Patrick's League: J. Whitty, D. J. O'Neill and M. Casey.

YOUNG IRISHMEN'S L. & B. ASSOCIATION, organized April 1874. Incorporated, Dec. 1875.—Regular monthly meeting held in its hall, 19 Dupre street, first Wednesday of every month, at 8 o'clock, p.m. Committee of Management meets every second and fourth Wednesday of each month. President, Hugh O'Connor; Secretary, Jas. O'Loughlin. All communications to be addressed to the Hall, Delegates to St. Patrick's League: W. J. Hinphy, D. Gallery, Jas. McMahon.

ST. ANN'S T. A. & B. SOCIETY, established 1863.—Rev. Director, Rev. Father Flynn, President, John Killfeather; Secretary, James Brady, No. 97 Rose Street. Meets on the second Sunday of every month, in St. Ann's Hall, corner Young and Ottawa streets, at 3.30 p.m. Delegates to St. Patrick's League: Messrs. J. Killfeather, T. Rogers and Andrew Cullen.

ST. PATRICK'S COURT, NO. 95 C.O.F.—Meets in St. Ann's Hall, 157 Ottawa street, every first and third Monday, at 8 p.m. Chief Ranger, James F. Fosbre, Recording Secretary, Alex. Patterson, 197 Ottawa street.

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