YALE EXPOSITOR.

TEN PAGES.

YALE, MICH.

Mrs. Robert Louis Stevenson has had a fire-proof vault built in her San Francisco house, where she keeps the numerous unfinished or unpublished manuscripts of her husband.

A commercial weekly, in reviewing current prices, says that lemons are "stronger" and raspberries "firmer." Unfortunately this does not mean that a dozen lemons will make more lemonade or that it will be harder to convert raspberries into jam.

The first gold pens made in this country were all manufactured by hand, the gold being cut from strips of the metal by scissors, and every subsequent operation being performed by hand. These hand-made gold pens cost from $5 to $20, and were far inferior to the machine made article of the present day.

The sixth contract for American locomotives to be delivered in Japan has just been closed with the American locomotive company and will be filled from Schenectady. It is for eighteen engines. An order for thirty locomotives for the government railroads of New Zealand is being filled at the Baldwin works in Philadelphia.

The tendency among the British middle classes is rather to live above their incomes than within them. There is also a passion for luxury in London and a desire to display, which seems a peculiarly stupid and useless desire in a huge city, where one seldom knows one's neighbors. And so, too, the cordial "pot luck" dinners of a generation ago have given place to ceremonial champagne functions, in which a man out of dress clothes is out of place.

A detective of a big department store said the other day: "Winter is by all means our busiest season. In summer time the stores are bothered but little by shoplifters, but as soon as cool weather sets in their annual reapparance begins. Why? Well, I figure it this way. First, there are fewer persons in the stores in hot weather and the nimble-fingered ones run a greater risk of discovery. Then, again, winter clothes—long overcoats and wraps—are the best possible means of concealing their booty. That is probably the main reason for the shoplifter's inactivity during the warm months."

Probably the most elaborate meerschaum pipe in this country is now in process of coloring by a New York merchant, who bought it from a local manufacturer recently for $1,800. The pipe is known as a "character" pipe to the trade, and is a wonderfully carved reproduction of the painting "St. John at His Bath." It represents six maidens grouped around a fountain and either St. John is concealed behind the fountain or in it; he is not in sight, at any rate. The figures are chiseled from a solid piece of meerschaum, which was imported from Turkey. The labor expended upon it extended over a period of two years, and the amber mouthpiece alone cost $500.

The money value of a title in other than a matrimonial market is illustrated by the policy of an old established manufacturing business in New York city which sells its products all over Europe. The present manager, like his father, is very democratic, but for business reasons he continues the policy established by his father. No agents are employed abroad except men with titles. This is easily arranged in Germany and France and Russia, but it sometimes causes inconvenience in England. A titled agent on the continent, no matter how poor he may be, can usually get a hearing in a business house easier than a man without a title. No bogus titles are allowed, and the company's list of foreign agents reads like a court circular.

Books that sell by the hundred thousand are not common, yet there are some instances that are not modern. It is now just about two hundred and forty years since one John Bunyan was shut up in Bedford jail. He stayed there twelve years; but a book of his went free, and no man since that day could have suppressed or imprisoned it, even had he wished. Millions of copies of it have been printed. Probably more copies are sold in any one month, now, than could have been disposed of in a year during the author's lifetime, and the book is as vital a part of this twentieth century as it was of any preceding time. There are excellent books among the "popular novels," but—spite of all the adulatory comment—it would be hard to point out one that seems likely to weather two centuries and more as bravely as has "Pilgrim's Progress."

During a recent French duel one of the combatants acidentally touched the point of his sword to the ground. The seconds immediately stopped the combat until the sword could be sterilized. One cannot help recalling the famous cartoon in Punch which represented the two Irishmen waiting behind a rock for their landlord, one with a shotgun, the other with a club. "Sure the master do be very late," says one anxiously. "He is," says the other, "I hope he have met wid no accident." After this one cannot regard that cartoon as merely a humorous fancy.

HORTICULTURE

Horticultural Observations.

The plum orchards of the past still exist in the memories of our middle aged and old people. They are mostly remembered as hanging full of purple and white and black fruit, brightened by the dews of morning. Those were the days of big dreams concerning plums. The curculio was unknown and the black-knot had not begun to be a burden. In every part of the east the orchards were set out and flourished. Every home had its group of trees and the children played under the branches and culled the pretty fruit as they did the flowers. People looked forward to the time when plums would be in surprising abundance in every locality. But the dream was not to come true. From Europe came a pest with which Americans did not know how to grapple. It swept like a destroyer over the country. Little by little the beautiful branches of the plum trees became filled with unsightly black knots and ceased to bear fruit. Tree after tree was cut down but the pest merely reappeared on other trees. No variety was potent against it and every defense failed. No man knew the nature of the enemy. So the plum orchards disappeared, and men in despair ceased even to try to grow them. From that point the scientists took up the work. Little by little the nature of black-knot was found out and remedies discovered. Today the fruit grower knows how to combat the most destructive of all these diseases and the plum orchards are reappearing. Let us hope that the time is not far distant when every home will have its little grove of plum bearing trees. Every farmstead will be made more beautiful and more pleasing to its inhabitants if a plum orchard exists on it. Today the culture of plums has been reduced to such a science that the novice and the amateur can succeed with them. Within the last ten years many plums have been brought in from foreign countries, and more varieties have been discovered growing wild in our own woods. These have been cultivated and developed till we have a very large list from which to draw.

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weeds his greatest obstacle to success. The experienced farmer or fruit grower seldom mentions them. He knows that they are easily kept down by the cultural methods that the crops should have whether there be weeds or not. When fruit culture is carried on on a small scale one of the best means of keeping down weeds is the mulch. This mulch may be of any kind of verdure—grass or straw or weeds. The writer has found it a very serviceable thing in the culture of tomatoes. There is a good deal of grass and weeds mown that is not suitable for hay and this is placed between the rows of tomatoes. It ensures three things: The keeping down of the weeds, the conservation of moisture and the protection of the fruit from dirt. There is a fourth object that is perhaps attained and that is the increase of nitrogen in the surface soil due to proper shading and moisture under the mulch.

Root-Killing of Fruit Trees.

At the last meeting of the Southern Minnesota Horticultural Society Clarence Wedge of Albert Lea, dealt with this most important subject to northwestern horticulturists. "In that portion of our country west of Lake Michigan and north of Missouri there is no menace more constantly hanging over the fruit interests of the country than that of root killing." Last winter was a severe and emphatic lesson in this line, but on account of snow protection when the thermometer was the lowest we did not fare as badly as our Wisconsin and South Iowa brethren. It seemed to matter little last winter what the condition of the soil happened to be, if the snow were blown off and the earth fully exposed. The moist low places suffered fully as much as the dry exposed hills.

The strongest defense we can make is by the use of soil covering of some kind. A very thorough mulch should be maintained in orchards at all seasons of the year, and to hold this in place and also to keep the snow, Mr. Wedge favors the growing of raspberries along the orchard rows. If Prof. Hanson's recently recommended trial of the little Siberian bush crab as a stock apple proves all that may be hoped for it, we may not always be at the mercy of a winter drouth as in our nurseries we surely are very largely at the present time.

Root killing among small fruits is a very hard matter to provide against, and is a very serious cause of loss to berry growers. Here a cover crop is out of the question and a mulch would be too expensive and frequently of no avail. A cheap and effective system of irrigation is about the only remedy. In the roots of the wild plum we fortunately have an iron-clad stock upon which to graft, and about the only protection needed is a dust blanket in summer and a well-loosened soil for winter. If, however, the plum is grafted on the peach or some foreign stock it will need even more careful winter cover than the apple.

Scurf of Sweet Potatoes.—Attacks underground portion only, giving to them a rough, brownish, and sometimes a shriveled appearance. Remedy—Discard all diseased tubers in producing sets and rotate crops.

FARM MISCELLANY

Feeding Mare and Foal.

The eventual value of the foal depends a great deal on how the youngster is fed at this time of the year, when on account of drouth the pasture grasses have become scant and flies cause animals untold misery. Well is it for the man who has provided an ample supply of green fodder for the eking out of the grass supply. We well remember the success of a certain well known breeder of heavy horses in Wisconsin whose foal crop was always developed in a manner that astonished everyone. This gentleman attributed his success to the way in which he fed the mares going upon grass. It was his custom to provide a strip of fodder corn thickly sown beside the pasture. The strip was about ten rods wide and the seed was dropped from a seeder. So as to plant it thickly the alternate spouts were shut off. This corn came up "as thick as hair on a dog" as he used to say, and when the pasture grass began to dry up was ready for cutting as an adjunct food. The brood mares and foals were kept in the barn during the day time in wide well ventilated box stalls if they were to be shown at the fall fairs, or in sheds if they were not to be shown. When turned out in the evening they were given a good feed of this corn which was cut and thrown over the pasture fence at the rate of a large armful for each mare. Having been fed a feed of oats and bran before being turned out this filled them up and they did not require to range all over the pasture or bite it too close. It was found well to conserve the pastures so that when the fall rains came they would be in good shape to send up a strong, quick growth of new grass. The first thing in the morning the corn was again cut and eaten by the mares and they were then turned into box stalls or sheds as the case might be and here given a full feed of oats and bran, mixed with cut hay. In the pastures and yards there was a supply of fresh water at all times which the mares and foals could take at will and the foals were early accustomed to eat at the same time as their dams. They had their troughs separate from those containing the grain rations of the mares and these were well filled with the same mixture of grain and finely cut hay but the grain was crushed and wetted. This was given to the foals morning, noon and night, and the mares fed in the same way on grain and bran along with the green corn and grass always had a full flow of milk so that the foals came along in the fastest possible manner whereas foals kept by neighbors in the usual way made a sorry appearance in comparison. It pays to feed in this manner so that the foals may be kept steadily growing despite the warm, dry weather of summer and long dry spells such as we have been experiencing and there is no cheaper food than corn fodder for the mares, nor do we know of any other crop that will produce so much from a given area if the seed be put in at intervals of a week or ten days for three or four successive seedings so as to have green corn right along for a long period of time. The mares do wonderfully well on this feeding and their milk seems to secrete freely and afford the highest possible nourishment for the foals which are at all times sleek-skinned and thrifty. It is a much better plan than feeding the foals nothing but their dam's milk and keeping the latter in the pasture, a practice which is besides ruinous to the pasture. Where additional feed is not given it is little wonder that the heavily taxed mare will eat the heart out of the pasture in search of sufficient food for herself and foal, and where such drafts are made upon the pasture in a dry spell it will often be found impossible to bring the grass back in its former strength when welcome rain come towards fall. There is a double or trebble economy in keeping the mares and their foals off grass in the day time, feeding corn fodder night and morning and a grain, bran and cut hay ration three times daily. If the plan outlined were more generally followed there would be a wonderful improvement in the class of horses annually raised on the farms of the country.

During the five years of careful investigation in regard to the cost of production of butter between cows spare and angular in form and cows carrying considerable superfluous tissue, our records show that in every instance the cow that carried the least flesh charged the least for butter, and just in so much as one cow was a little smoother and plumper than the other would her butter product cost more than the other. It should be borne in mind that the results are from accumulated testimony, showing not only that every day, every week, every month, but during her entire lifetime, the spare cow is better. That she should be so much better is almost incredible, strong and uniform as the evidence is.—Professor Haecker.

Trees should be cut low if they are to be used for lumber. A foot in length saved of the clear timber in the butt of the tree is worth several feet in the top of the tree. There is not only the difference in the increased scale of the butt, but also the difference of the two extremes of quality—the clearest and best timber is in the butt, and the smallest and most knotty in the top.

AGRICULTURE

A Plea for Orchard Grass.

Can anyone tell why orchard grass, one of the most common as well as one of the most valuable forage plants in the United States, is not better known and more appreciated? Many a farmer does not even recognize it at sight, though he has had chances to observe it all his life. A veritable gypsy, it has found a home in every country of Europe and America, in Northern Africa and in Asia. Cheerfully adapting itself to all soils and conditions, it flourishes in wet or dry weather, sun or shade, and in a porous subsoil will send its roots to a great depth.

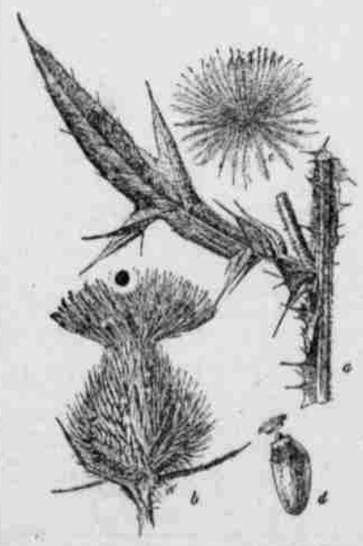
This perhaps accounts for its persistence. When once it has secured a foothold it may be relied upon to yield an abundance of forage year after year with no attention except that it thrives best under cropping. In the spring it is fit for pasturage considerably earlier than other grasses and five days' growth will give a good bite. Its blossoming season is the same as that of red clover, and they are frequently sown together by farmers who have learned the value of the combination. A Kentucky stock grower who relies upon it for his pastures once said relative to its capacity for sustaining itself when other grasses are dried up: "It will make more growth in one summer day than blue grass will make in a week." Such a commendation from the land of the famous blue grass pastures is surely a great tribute to its good qualities.

A farmer in Northern Ohio has written enthusiastically of a piece of orchard grass on his own farm which seeded itself twenty-six years ago and which has been cut annually every June since. This season it stood higher than any rye in the vicinity and was so heavy that it lodged. For early soiling and long pasturage he considers it superior to any other grass, but he utters a caution about cutting it as soon as matured, for if allowed to get dead ripe it is of little account.

Like other drought resisting grasses it shows a disposition to grow in tussocks, but this may be prevented by thorough preparation of the ground before sowing and an abundance of seed uniformly distributed. Two bushels of seed to the acre are usually considered sufficient, or half that amount when sown with clover. It is said to be much less exhausting to the soil than timothy, which is so often grown with clover. It was introduced into England from Virginia in 1764 and is there so highly esteemed that it has taken rank as one of the most valuable forage plants produced in the "tight little island." The luxuriance of its aftermath makes it especially fine for pastures, and stock of all kinds relish it. Sheep, it is said, will leave all other grasses to feed upon it.

Bull Thistle.

This thistle is known botanically as Cardnus lanceolatus. It is an introduced biennial species. It is distributed exclusively by the seeds, but these are produced in such great numbers that the plant multiplies very rapidly. It often forms patches several acres in extent on newly cleared land, but in old fields the plants are usually more scattered. It seldom persists in any great quantity and is readily destroyed by cultivation. It may be easily distinguished from Canada thistle by its greater size and much larger heads, with spine-pointed scales and by its leaves, the upper surfaces of which are always rough, like a cat's tongue.



Bull thistle. a, piece of main stem, with leaf; b, flower head; c, seed, with pappus, natural size; d, seed, enlarged, with pappus detached.

Up to 1899-1900, no sweet potatoes had been shipped to foreign ports, so far as we are able to gather from the official statement of exportations. Sweet potatoes are not produced to any considerable extent in Europe, and as a general thing the Europeans have not developed a taste for the tuber mentioned. It is reported that they are planted in a small way in the south of Spain. What few are imported are in the nature of luxuries and have been brought from the Canary Islands and Africa. In 1899 some American growers made a few trial shipments to England, where they began to win their way. Probably the Americans resident in foreign countries will be the first and best customers, and their example will be followed by others.

The 31 beet-sugar factories in this country now yield more than a third of our domestic sugar product.

OPHTHALMIA IN CATTLE.

Description of the Disease and a Remedy for It.

R. A. Craig, assistant state veterinarian at the Purdue University agricultural experiment station, in a bulletin on "Infectious Ophthalmia in Cattle says: This disease is infectious, and when started in a herd is likely to attack a large per cent. of them before running its course. It occasionally affects sheep, but rarely horses. It has been attributed to a variety of causes as the pollen from some plants, and to dust. The disease does usually occur at a season of the year when both pollination and dust are at their most irritating stage, but we are inclined to believe that these are only secondary causes. The germs that have been found are pus producers. This station regards the disease as one produced by a special organism. The disease is not new, having made its appearance in this state ten years ago, and remained ever since.

The symptoms are local and general. The body temperature is raised, the appetite interfered with, and rumination checked. In the mild cases these symptoms are not marked. When first affected one or both eyes are held nearly closed, the lids swell, the tears pour over the face. A whitish film forms over the eyes which may become dense. The cornea may bulge forward owing to the pressure of the abcesses from within. Yellow spots from the size of a pin head to that of a grain of corn form and from the margin will radiate with reddish lines. These are abscesses and when they heal whitish scars will take their places. One eye may be attacked and then the other. The course will last from three to six weeks, but it rarely happens that there is complete blindness in both eyes.

The treatment is comparatively simple. Keep the badly effected cattle in the shade of a woods, or in the barn if necessary, during the middle of the day, to prevent aggravation. Locally, apply equal parts of finely powdered boracic acid and calomel, by means of a small insect powder blower. This can be done quickly with little restraint and is preferable to an eye wash for the cow.—Indianapolis News.

MOSTLY GIGANTIC SUNS.

Light from Milky Way Stars Reaches Us in 1,000 Years.

I estimate that the nearer portion of the general body of the Milky Way is something over 5,000,000,000,000,000 miles from us, and it requires the light about a thousand years to travel from this part to our eyes. If we can imagine that this nearest portion is inhabited and that its people have telescopes looking down upon us, they would view the earth as it appeared about the time of the death of Alfred the Great. I estimate that the farthest portions of the Milky Way are about as ten times as far or more than 50,000,000,000,000,000 miles from us, and if there are eyes there capable of seeing our world, it appears to them as it was 10,000 years ago, or before the beginning of human history. As the Milky Way is now known to astronomers it is composed of about 10,000,000 stars. It is an endless band, deep, not flat. These 100,000,000 stars are mostly gigantic suns. The distance between them is of the same order of magnitude as that which separates us from the star Alpha Centauri, removed from us 275,000 times farther than our sun. They are not all single stars, but are occasionally composed of two associated stars, very close together and revolving under the law of gravitation. In other words, they are held together by mutual attraction.—New York Sun.

The Popular Potato.

One of the best known physicians in Worcester declares the potato famine a blessing in disguise, if people will replace the potato with substitutes of greater food value. He thinks as we do, that there is none of the articles of food in common use that contain so little nutriment as the potato, and many others furnish more in smaller amounts at much less relative cost. He especially names shredded wheat, rice, raw cabbage, and fruits as more nourishing than potatoes—and, in fact, all grain foods.

When the potato rot brought famine to Ireland the people of that country were not prepared to resist it, as they were probably at the lowest condition, both mentally and physically, that the people of that country ever were, and thousands whose subsistence had been for years upon that root, perished from famine; then America sent them shiploads of corn and other provisions, and those who could do so emigrated to this country, where they found work and food. Now there are those who are asking Ireland to ship us all the potatoes they can spare, not as a charity, but in return for such food products as we have in abundance, or for our good money. The man who gives a peck of corn for a bushel of potatoes is making a poor trade as far as food properties go.—Boston Budget.

Palace Cars for a King.

Spain's little King Alfonso is the "magnate" who will ride in a pair of palace cars recently shipped abroad from Wilmington, Del. One of the king's private cars is a drawing room coach, similar to a Pullman drawing-room, except that it is only thirty feet long. It is of royal blue color, with gold trimmings and lettering, with the royal coat of arms on each side. The interior is finished in hand-carved mahogany. It is elaborately furnished. The other is a dining car of the same size.