The four girls were dressed very prettily and were in a whirl of excitement, for they were attending the horse races at a country fair and the darling of all their hearts, Philip, had entered his horse and would drive the animal himself. "I just can't look," said one. "I'm so excited I can hear my heart beat. What if Philip didn't win!"

"Girls, I'd just cry my eyes out," declared another. "Oh, look at that horse! He can't win with all that rigging on. What does he have that iron brace over his head for? Looks for all the world as if he had spinal trouble."

"S-s-s-h," warned all the other girls.

"They're off!" shouted some one in the crowd, and the girls stood up with a rush.

"Oh, look, look!" said the girl in brown, "Philip's just beating 'em. Oh, that nasty old horse is trying to get ahead. Go it, Philip! Go it!"

The girl in green clapped her hand over her friend's mouth. "I should think you'd be ashamed of yourself. The idea of yelling like a tough!"

"Don't care," snapped the girl in brown. "Everybody else is yelling."

"Whoopee!" shrieked the girl wearing a red golf jacket. "Philip has won, he's won. I just knew he would. You see 13 was his number, and 13 always was a lucky number with him. He was born on the 13th."

"Don't see as that was a particularly lucky event," growled a cross-natured man sitting near the bunch of girls.

Soon Philip came on the stand and the girls flocked around him with squeals of delight. He looked sheepish and delighted by turns. "That's only one heat," he warned. "Maybe I won't win any more."

"What's a heat?" they asked, and he explained that a heat was part of a race.

Soon the second heat came. "Now," declared the girl in pink, "this is the second race in this heat, and then we'll know whether he's won or not."

The girl in the red jacket spoke very gravely. "I believe this is only a brush. They have brushes sometimes. I've read about 'em and the man that was in at the death was 'it' or something."

"You're thinking of a fox hunt," said the girl in green, contemptuously.

"No, I'm not," snapped the girl in the golf jacket. "I guess I know the difference between a horse race and a hunt. You act as if you thought I didn't know anything. Just because you've had one more year of study than I you think you know everything."

"I wish they'd shut up making such a noise," said the girl in green. "Now, just let me tell you that a brush is in a hunt. Whoever heard of a brush on the turf."

"Turf, indeed," retorted the girl in the golf jacket. "You must be a landscape gardener. Now, I know what a brush is."

A benevolent-looking man spoke very gently to the girls. "Excuse me, ladies, I think I can clear this matter up for you. A brush is a lively argument between two young women, neither of whom knows exactly what she's talking about. A heat is the point at which these two young women arrive just before they dissolve in tears."

"Hurrah, hurrah," yelled the crowd. The girls were all glaring straight ahead of them. "Wonder what they are screaming at," muttered the girl in brown.

"This is the end of the final heat and Philip has won the race," said the benevolent-looking man.

"And we didn't see him do it," gasped all four of the girls.

Old Poem by Whittier

The first poem of Whittier's ever printed was "The Exile's Departure," which appeared in Garrison's Free Press June 8, 1826. The next was "The Deity," published June 22 of the same year, and both these are collected. The third, "The Emerald Isle," appeared in the Free Press Aug. 3, 1826, and was never collected. Whittier was 18 years old when these lines were written, and had not yet the advantage of the academy, nor of any library except that of the "wise old doctor" whom he mentions in "Snow-Bound," Dr. Elias Wold. The unfamiliar poem is printed in the Independent for October.

Brightly figure thy shores upon history's pages,
Where names dear to fame and to science long known,
Like unsetting stars through the lapse of long ages,
From the sea-girdled isle of Hibernia have shone;
Fair island! thy vales are embalmed in the story
Which history telleth of ages gone by,
When Ossian's proud heroes strode onward to glory,
And ocean's wave answered their loud battlecry.
The wild vine is creeping—the shamrock is closing
Its foliage o'er many a dimly seen pile—
Where entombed on the fields of their fame are reposing
The proud, peerless chiefs of the Emerald Isle.

And in far later years, with the purest devotion,
To the high cause of freedom full many a son
Of the green shores of Erin, the Gem of the Ocean,
Fair evergreen laurels of glory has won.
The martyred O'Neal and the gallant Fitzgerald
On the bright list of glory forever shall stand,
And fame circle Emmet, the eloquent herald,
Who wakened the spirit and pride of his land.
They are gone! they are gone! but their memories that linger
On the shores where they perish, no wretch shall revile,
No slave of a tyrant shall dare point the finger
Of scorn at those sons of the Emerald Isle.
Hibernia! though tyrants may seek to degrade thee,
Yet proud sons of science acknowledge their birth
On thy sea-girded shores, whose high genius has made thee
The Gem of the Ocean, the wonder of earth.
Long, long, has the halo of glory surrounded
The memory of Brian, the pride of thy shore;
And o'er thy dim lakes and wide valleys have sounded
The heart-touching strains of Corolan and Moore;
O, soon may the banners of freedom wave o'er thee,
Green island of Erin! may Liberty's smile
To the luster of primitive ages restore thee,
The Gem of the Ocean—the Emerald Isle!

Bottle of Mammoth Size

The largest blown glass bottle in the United States, or in the world, so far as the makers know, is on exhibition in a window in Barclay street, just above Greenwich, says the New York Times. It holds sixty-five gallons and is shaped something like a baby's nursing bottle—narrow at the bottom, bulging at the middle, with a small neck and mouth. The bottle is a trifle less than five feet high and is about four feet in circumference at its widest part.

The man who blew it at the factory in New Jersey is just about as tall as the bottle. If he could manage to squeeze through the neck he could sleep very comfortably inside of it. If the surface area of the glass blown into the bottle were spun silk it would make a gown for a moderately large and stout woman. Although blowing by guesswork, tempered with long experience, the man exceeded by only half an ounce his instructions as to the size of the bottle—sixty-five gallons.

The firm read in a Western newspaper of a "hitherto unaccomplished feat," as alleged, of a blown bottle holding forty gallons. The Barclay street makers sent one of that size to the Philadelphia centennial, more than twenty-five years ago. Just to show that it was still in the ring this sixty-five-gallon bottle was made. The manager says that he could blow a hundred-gallon bottle if he had a place to put it in his window.

Pinned to a card at the base of the big bottle is the smallest bottle in the world, its appropriate running mate. It holds just four drops and must be filled with a hypodermic syringe. It is so small that it has to be fastened against a jet-black background in order that persons looking in at the window can see it. More time was required to make the four-drop bottle than the sixty-five-gallon one.

The substitution of machinery for human labor in glass bottle factories is not making much headway. For the finer grades of work machinery is no good at all. Skilled mechanics are at work improving it all the time and they promise to succeed some day, just as they did with the typesetting machines. Meanwhile the efficient glassblower has the call. There is a great deal of boy labor in the factories, which are scattered through New York, New Jersey, Pennsylvania, Illinois, Ohio and Indiana. Each blower requires from two to three boys to carry bottles from the molder to the annealing room. In some factories the blowers are required to furnish their own boys.

Conceit of the Somali

Perhaps the most remarkable characteristic of the natives of Somaliland is their unbounded, preposterous conceit. Englishmen who know their language have been appalled by it. When watering his camel or his horse the Somali encourages the animal to drink by chanting to it in a monotone. It is at such moments of extemporary effusion that the man shines in all his glory. The subject matter may be the experiences of the day's march, the virtues of the animal beside him, the charms of his latest wife or his own prowess in some bloodless tribal raid. By great good fortune the following literal translation of one of these chants or songs came into my possession, and I insert it without any comment:

"Will you see a man? Then behold me! I am a Somali, as perfect in size and form as Adam was after God had breathed into him his immortal soul. Look how beautiful my curly hair is, and how majestic I look when wrapped from head to foot in my snow-white or jungle-colored tobe, although there be sometimes only one pie (a small piece of money) tied to it. My house is the desert, and I am born a free man. Free as the wind! I know neither king nor master. I am as Adam was, my own master and king. In the jungle I tend my camels and sheep; my only labor is to watch them feed. In my kerrier, my wife, my dear slave, does all the manual work, while tending my offspring, and woe to her if she forgets to prepare my evening meal. The jedal (whip) shall then have its turn to make her remember for next day. In such a state is any man happier than I?"—Golden Penny.

Those Old Love Letters

Richard Harding Davis tells of a friend of his who has been wedded long enough to acquire the average married man's attitude of cynicism toward the written expressions of devotion customarily indulged in by lovers.

According to Mr. Davis, it appears that this friend, with the assistance of his wife, was recently looking over some old papers at home, with a view to weeding out what was unnecessary. They were about to move to another city and did not desire to take any of the papers except what were absolutely necessary.

The husband came upon several huge bundles of letters which he had addressed to his wife in the days when he was striving to overcome considerable opposition to his marriage. He drew a sheet or two from one of the bundles and read them with a slight smile. "Well," he said, "there's no use in being bothered with this guff. Might as well throw it into the waste basket, don't you think?"

"Oh, Tom!" exclaimed the wife, "how can you talk so! Surely you don't want to destroy the love letters you wrote me!"

"Well, all right," assented hubby, carelessly; "but really these seem too soft to file."

Matters in Nebraska.

THE COBBEY STATUTES.

The State is Restrained from Buying the Same.

The state will not buy any Cobbey statutes for distribution among legislators, which it was authorized to do by the late legislature, which passed the measure over the veto of Governor Mickey. Judge Holmes handed down a ruling to restrain the printing board from buying the books. The injunction suit was brought by a representative of the Journal company, which failed to get the contract for printing the books, but did have the contract for printing the Wheeler statutes. The statutes were to cost the state $9 for a set of two volumes.

Judge Holmes held that the act was in contravention of that provision of the constitution which prevents members of the legislature from enjoying any compensation or perquisites in addition to their salary, and in so holding touches up the modern legislator quite freely for his tendency to overlook any little provisions of law that may stand in the way of his acquisitiveness.

HANS IS SENTENCED FOR LIFE.

Motion for New Trial Overruled, but Case Will Go to Supreme Court.

AINSWORTH—Judge Harrington overruled the motion of a new trial in the case of Fred M. Hans, the Elkhorn railroad detective, who was convicted of murder in the second degree. The judge then sentenced Hans to the penitentiary for life—the limit for murder in the second degree. The motion for a new trial was submitted by W. F. Gurley of Omaha, counsel for the accused, without argument. The case will be taken to the supreme court at once on error.

Hans shot and instantly killed David Luce of Brown county in the spring of 1901. He alleged that he did the shooting in self-defense while seeking to arrest Luce on a warrant for shooting horses. The coroner's jury exonerated Hans on this ground, but the matter was later placed before a grand jury and Hans was indicted.

MORE STATE TAXES.

Railroads Promise to Pay Two Months Earlier.

Fifty thousand dollars railroad taxes in addition to the amount paid last year, together with a promise from the railroads that they will pay two months earlier than was required by the law last year, is the pleasing prospect before State Treasurer Mortensen. The new revenue law makes personal taxes due December 1 instead of February 1, and the representatives of the roads have promised to comply with this provision regardless of the date designated in the old law as to delinquents. The last legislature increased the limit for state taxes from 5 to 7 mills. This increase will bring in about $175,000 additional.

Fancy Price for Jersey Heifer.

BEATRICE.—Lake Bridenthal of Wymore was in the city and while here purchased a very fine Jersey heifer of J. B. Smith, for which he paid a fancy price. The animal is a 2-year-old and was the first prize winner at the Iowa and Nebraska state fairs last year.

Typhoid Fever Follows Flood.

GRAND ISLAND.—Three members of the family of Louis Veti, president of the board of education, one in the family of Fred Menck, another in that of a Mr. Hamilton and two in the family of Fred Sander, all in the same portion of the city, are seriously ill with typhoid fever, the result of the high water of last spring in that section of the city.

Canning Factory Project.

FREMONT.—A meeting of twenty business men and farmers was held at the court house with reference to the project for the establishment of a canning factory in Fremont by two Iowa men who are already operating one plant. They were present and explained the plan. They have arranged to buy one of old factory buildings and expect to be ready to operate next year. This city will be expected to see that they get railroad trackage. The promoters want to engage 1,200 acres of sweet corn for the coming season and will pay $4.50 per ton for the product.

Fine Milk Producer.

C. F. Schwager has a cow on his Locust Lane farm in Lancaster county that he thinks is about as free-handed and ambidextrous a milk producer as the limit allows for. "During last year," says Mrs. Schwager, "this cow completed and marketed 11,290 pounds of milk, which would be equal to about 600 pounds of butter. The average cow in this state has a capacity of only about 4,000 pounds."

Lease a Hunting Preserve.

TECUMSEH.—A company of young men hereabouts has leased McLaughlin's lake, some ten miles northwest of the city, and have formed a gun club. The club has been named the Union Gun club, and outsiders caught hunting at the lake will be promptly prosecuted. The lake has long been a mecca for local huntsmen, and during certain seasons of the year duck and snipe abound there. Fishing is good also during the warm months.

Keep Sugar Factory Busy.

NORFOLK.—Grinding out granules of sweetness at the rate of 750 bags per day, the Norfolk sugar factory has already sliced up 6,500 tons of saccharine root and has put on the market 13,000 bags of its finished product during the first nineteen days of the campaign. The factory will eat up 400 tons of the beets from now on every day. The beets are testing up well with about 14 per cent of sugar in them this season.

THE STATE IN A NUTSHELL.

A new lodge of the Sons of Herman has been instituted in Beatrice.

The jury in the case of Charles McMillan, charged with the killing of Lee Jones at Indianola on May 30 last, brought in a verdict, after being out all night, of manslaughter.

Eli Birdsell, a Cass county farmer, suffered a bad fracture of his left leg as a result of the overturning of a wagon load of apples. The accident occurred on a crossing while the driver was attempting to turn the team around.

The electric railway which is being built between Dakota City and South Sioux City by Captain Talbot is progressing rapidly. About three miles are graded and two miles of rails and ties are down. It is expected to be completed to Dakota City by November 15.

A real estate deal of considerable interest was closed at Fremont in which W. R. Lee sold to William Polite, an Iowa stock raiser, 560 acres of land east of that city on the Arlington road for $65 per acre. Mr. Polite is a breeder of polled Angus stock and will bring his cattle to Nebraska shortly.

Charles F. Nelson, an old Swedish resident of Cleveland precinct, Cuming county, commenced his journey with his family to his old home in Sweden, but on their arrival in Chicago his wife became dangerously sick and had to be removed to a hospital. In the meantime the family will return to Cuming county.

Mr. and Mrs. G. W. Turner of Edgar were instantly killed by a passenger train on the Burlington. They were in a carriage and attempted to cross the track in front of an approaching train. The train hit them with a crash that smashed the buggy into small bits and killed the horse. Both occupants were thrown out in front of the engine and horribly mutilated.

The walls on Norfolk's new United States court house are pushing rapidly heavenward and all but two of the 200 carloads of material for the structure have been received. The attic timbers will be laid within a day or so. It is estimated that the freight bills alone for the building have been $20,000 and the product when finished will be magnificent. The appropriation is $100,000.

Two representatives of an Iowa canning company were in Fremont looking for a suitable place for the location of a branch factory there in case they can procure contracts from farmers for not less than 1,200 acres of sweet corn. As a canning factory has been wanted there for some time the corn will be easily secured and negotiations are pending for the purchase of the old Fremont creamery building.

Evidently there is considerable faith in Nebraska as an oil state, as two companies, each with large capital and much push, have filed articles with the secretary of state to develop and run oil fields, lay pipe lines, build gas plants and do a general mineral mining business. The first to file articles was the Sheldahl Oil and Gas company of Omaha with a capital stock of $600,000. The other is the Beaver Oil company of Chadron, with a capital of $40,000.

A dwelling on the farm of Joe Alter, north of Alma, burned. It was occupied by Will Emery and the fire was started from a gasoline stove. It was a total loss.

F. J. Kobes, owner of the Crete brewery, made an ineffectual effort to blow out his brains at the brewery office just outside of the city limits, across the Blue river. As it is, there is a possibility that the would-be suicide may die as a result of his rash act. His right eye was blown out. Business troubles are given as cause.

George Durkee, who lives nine miles north of Hastings, is having an unprofitable experience with a large stack of alfalfa hay. Three weeks ago the hay on the outside of a huge stixy-ton stack turned black and in a week the haystack looked as black as a pile of burned straw. A few days ago a column of dark smoke issued from the center, which still continues. The huge stack became ignited from spontaneous combustion and it is supposed the slow fire will continue a few weeks yet before the stack will be entirely consumed.

At Nebraska City Alice M. Pierson filed a complaint against her husband, Milton F. Pierson, charging him with wife and child desertion. He was located at White Cloud, Kan., and will be brought here for trial. This is the first case of this kind in Otoe county under the new law.

While Mr. Hayden, a well known man in Sarpy county, was engaged in chopping wood, a stick flew up and struck him a hard blow in the left eye. The injury is serious and will result in the loss of the eye.

Governor Mickey and Captain Chase of the university returned from a two days' visit to Fort Riley, where they witnessed the army maneuvers. Both report a most enjoyable trip and both were loud in their praise of the Nebraska boys.

As Lon Simms was moving a threshing machine outfit across a bridge which spans Bear creek, in Gage county, the planks gave way and the engine went down onto the stringers. Fortunately there was no one injured.

Col. McDonald has been furnished a copy of a report made by officers in charge of the entrenching done by national guard troops on the Smoky Hill flats at Fort Riley, Kansas, which pays a high compliment to the third battalion of the Second Nebraska. The report declares that the work done by the Nebraska troops was far superior to that of any other battalion engaged.

The Crete hospital is an institution that has just opened its doors to suffering humanity.

DAIRY

Details of the Udder.

Milk is a secretion of the mammary gland, said J. J. Repp in an address to Nebraska dairymen. This gland is a dependency of the skin, and is a member of the group of glandular structures known as compound saccular or racemose glands. A cow has four such glands which, combined, form what is popularly known as a beg, or udder. Each gland is composed of 15 or 20 distinct lobed which are held together by connective tissue so as to form a single conical mass. Each lobe is subdivided by penetrating septa of fibrous and fatty tissue into numerous lobules which are again subdivided into the individual sacs called acini. The acini are very small, barely visible to the naked eye, and each one is lined by numerous columnar epithelial cells. These cells are microscopic in size, varying from 1,100 to 1,200 of an inch in diameter. Each acinus has a minute tubular duct leading from it. These small ducts unite to form larger ones which constitute the ducts of the lobules. These larger ducts still further unite to form the common lactiferous, or milk-bearing, canals which in turn empty into the large cavities at the lower part of the glands called milk sinuses. The ducts and milk sinuses are lined with epithelium. By way of illustration, in order to make the description which I have given more clear, I will ask you to imagine a very prolific grape vine with fifteen or twenty bunches of grapes hanging close together. This would represent in a rough way a mammary gland, each one of the bunches would figure as a lobule, and each grape on a bunch an acinus. Now conceive each grape hollowed out almost to the hull and then lined with small column-like bodies. These bodies would represent the cells. The stem of each individual grape will represent the small, intralobular duct which conveys the secretion out from the little sack in which it is formed. The main stem of the bunch and the principal branch upon which the various bunches hang, typify the interlobular and the common excretory canals. The fibrous and fatty tissue between the acini and lobules of the gland may be likened to the air which everywhere fills the interstices of the various parts of the vineful of grapes.

Beef or Milk—Not Both.

Speaking to Holstein breeders, Professor H. H. Dean said: Now, some breeders of Holsteins advertise that their cattle are both good for beef and good for milk. In my judgment that is a weak point. The Holsteins, if I know anything about their history and characteristics, are essentially a dairy breed, and I was surprised to find when in Holland that they seem to lay a great deal of stress for both beef and milk. Some of the upon that point, that they were good farmers whom I talked with there criticised that point. They remind me very much of an old German, whom a young doctor was trying to impress with the fact that he knew a great deal about medicine, because he had taken a course in both homeopathy and ordinary medicine. He said: "Vell, that may be so; I vonce had a calf that sucked two cows and he made an ordinary steer after all." Now, I believe a man who is trying to make his stock both good beefing and good dairy cattle, will probably find they are only ordinary steers after all, or ordinary stock after all; and, if you will allow me to say so, I think the men who are emphasizing that point are men who are emphasizing a weak point in connection with the breed. They are essentially a dairy breed, and the man who does not keep that point prominently before him is the man in my judgment who will make a mistake.

A Profitable Cow.

Among the recent reports of the tests of Holstein-Friesian cows we note the following: May Hartog Pauline De Kol 45124, age 4 years, 11 months, 8 days; owned by H. D. Roe, Augusta, N. J. During first two weeks of preparation was given hay, 7 pounds; silage, 30 pounds; bran 8 pounds; hominy, 2 pounds; linseed oil meal, 2 pounds, and turnips, 30 pounds daily. During the third week she ate 49 pounds silage, 112¼ pounds clover hay, 315 pounds turnips and 130 pounds grain mixture, mixed in the following proportions: 26 pounds hominy, 10 pounds gluten meal, 8 pounds bran and 2 pounds linseed oil meal. During the week of the official test commencing 17 days after calving she ate 56 pounds silage, 99 pounds hay, 315 pounds turnips, 51.5 pounds hominy chop, 48 pounds gluten feed, 24.5 pounds oats, 45.3 pounds bran, and 22.7 pounds O. P. oil meal. Total value of food during this week per prices rule 4, $1.959. Products: Butter fat, 22.709 pounds; by-product, 600 pounds; total value, $6.577. Net profit, $4.618. Cost of milk per 100 pounds, 31.5 cents; cost of equivalent butter 80 per cent fat, 6.9 cents per lb.

This is a standard to be worked toward. With such cows dairymen could make good profits on their milk and butter at present prices.

Dairy Cow Constitution.

The first great essential to be sought in the dairy cow is constitution, without which she cannot stand the strain of many years' heavy feeding and milking. The wide chest, good heart girth, and general appearance of vigor are the chief indications of constitution. Other points largely indicative of production are: A wide, strong muzzle and jaw; a comparatively open backbone or chine, indicating tendency to make milk rather than fat; a capacious barrel, capable of making use of large quantities of feed; and a roomy, well-shaped udder with large mammary and udder veins and milk-wells. A well-known Canadian breeder has tersely summarized these qualifications in the words: A big mouth, a big stomach and a big udder.—F. W. Hodson.

Where the Trouble Started.

"I haven't quite determined," said the Charles-street father, "whether to have my daughter's voice cultivated here or abroad. What would you suggest?" "Oh," said the obliging neighbor, "abroad, by all means"—and that's where it all started.—Baltimore News.

Cost of Long-Distance Talk.

The cost for talking over the telephone line between England and Belgium is about $2 for three minutes' time.

An appreciable quantity of soluble matter is washed out with the drainings of the soil.

HORTICULTURE

A Disease of the Privet.

Some of the privet hedges of Stillwater are being greatly damaged, if not destroyed, by a fungous disease of a sort which is called "anthracnose." The fungus of this disease attacks and kills the bark and wood of the stems, says a report of the Oklahoma station. Starting at a point on the stem, it spreads through and around the stems. When the leaves of the plant first begin to wither, the place attacked by the fungus may often be located just below the lowest of the withered leaves and above the green ones, if there are any such on the shoot. Close inspection reveals the fact that the bark is slightly shrunken at the point of injury, and, if the stem be sliced lengthwise, the diseased wood and bark will be found to be discolored, while that below, if healthy, will be fresh, and that above simply seasoned. The wood above the point of the first attack dries out, and the fungus seems to spread down the stem to the crown of the plant, and from there to all the roots and stalks. About the point of first attack black spots appear on the bark, and when the bark thus spotted is scraped or cut, it is found that these spots are the openings of spore-bearing postules. Hedges which have not yet been injured by this disease should be closely watched, and at the first sign of attack by this disease all the injured shoots should be cut off below the affected part and burned. If the crown or roots are affected the plant should be removed bodily and burned. In case the hedge is badly damaged it will probably be best to remove it entirely and not plant privet in the same pl ce, as the soil is likely to be infected with the spores of the fungus. Diseased hedges are a menace to healthy ones in the neighborhood. It has been recommended that the hedges which are exposed to infection by this anthracnose be sprayed with Bordeaux mixture, especially in the spring, at the time when the buds are swelling and expanding, and while the new shoots and leaves are tender.

To Check the Apple Worm.

Spraying alone, though successful within its own limits, cannot ensure the fullest product of perfect apples without the concurrent practice of other methods looking to the final reduction of the numbers of the codling moth. The most important of these associated methods is the banding of the trees and the destruction of the attracted worms every ten days from the fall of the first wormy apple till the fruit is all in the bin. The second is the immediate destruction of all fallen wormy fruit, and the third is the destruction of as many as possible of the worms wintering over under barkscales, in old birds' nests, in cracks in apple bins or barrels, or elsewhere in the fruit room. These associated practices are not to be expected to show their full results in the season in which the work is done, though the immediate value of the first is considerable as a means of reducing the number of worms of the second or later broods of the same season.—E. A. Popenoe.

Great Realm of Horticulture.

A prominent writer on horticulture says: From the horticultural side of the business, there are three great series of questions with which the nurseryman has to deal. These are the whole question of soil, the whole question of propagation and the whole question of varieties. Any one of these fields is large enough to occupy an investigator profitably during a lifetime. The probability is that if any man were to devote his life to either of these series of questions, he would feel at the last that he had touched only the borders of it.

Change in Shire Type.

Now, as regards Shire horses, I think there has been quite as great an improvement in the last thirty years as in Clydesdales. The type of Shires that won at London show twenty years ago would have no chance now, the refining process being most marked in this breed. This improvement has been brought about partly by the organization of the Shire Horse Society and its annual shows, accompanied by veterinary inspection, but principally through the efforts of a mere handful of progressive breeders who, to tell the truth, took their cue from the Scotch breeders and have been endeavoring all these years to remedy the defective limbs and feet and faulty hock action of the massive English horses. The average Shire breeder still maintains with remarkable persistency that the more bone and hair he can produce the better the animal, but this claim is by no means confirmed either by the show rings or the market, unless the animal possesses considerable quality and activity. It is frequently found that the extremely strong-boned, heavy-legged horse, whether Clyde or Shire, has a distinct element of softness in his composition, is phlegmatic in temperament and is neither so active nor so enduring as the horse with less hair and fine skin. How often have we seen big, rough horses that when three years old looked like six, and when six looked like sixteen, if they happened to be alive. Such horses never have been and never can be popular in the United States.—Alexander Galbraith.

Missouri's Example.

The University of Missouri is certainly doing a most excellent work in its efforts to disseminate agricultural information throughout the rural schools of that state. Every year a teachers' summer school is held at which the teacher-students are given instruction in agriculture and horticulture. At least 5,000 children in Missouri are learning this year these subjects because of the instruction given to teachers at Columbia during the past summer. The Department of Education of the state is preparing to work with the College of Agriculture in introducing the study of agriculture and horticulture into the public schools. It is claimed that in this work the University of Missouri is not only leading the state, but the nation as well. It is certainly making a first-class experiment on a magnificent scale. It is demonstrating what can be done in this line. During recent years the policy of the men at the head of that institution has been broad, and energy has been shown in putting it into practice. The fruition of the work is being already seen in Missouri and the example is being felt in other states.

It's a fortunate thing for some men that their ancestors left them an honored name.

WITH THE VETERANS

To-morrow is Another Day.

Over mossy stone and mound,
Where the amaranth is found—
From their footsteps not a sound—
Slowly shadows creep around.
And love sings: "Will Sorrow—
Will Sorrow here forever stay?"
And Hope sings: "To-morrow—
To-morrow is another day."

Life is chequered, hopes and fears
Alternate as smiles and tears,
Through the rain the sun appears,
And from time to time one hears
How Love sings: "Will Sorrow—
Will Sorrow here forever stay?"
And Hope sings: "To-morrow—
To-morrow is another day."
—Isaac Bassett Choate.

Told by Old Soldiers.

"Do you know," said an old naval officer, "that the man who finally solved the steering problem on the monitors and other war vessels was an old soldier and that he lives in Chicago? He does, and I saw him yesterday. When the Miantonomoh returned from the George Peabody obsequies at Portland in January, 1870, she was ordered to Boston. When Mr. Peabody died in London, you will remember, the British government sent the remains across the Atlantic on the warship Monarch, and Admiral Farragut with his fleet met the Monarch at sea, escorted her to Portland, and participated in the funeral exercises.

"Then, as I have said, the Miantonomoh proceeded to Boston, where we expected to remain for some weeks. Scarcely had we dropped anchor, however, when Mr. S. W. Murray, a quiet gentleman from the West, came aboard with an order from Admiral Porter instructing the officers to give the bearer every facility for applying and testing a new steering gear which he had invented.

"The admiral, assuming that Mr. Murray would reach the vessel before we anchored, directed Capt. R. W. Shufeldt to give the Miantonomoh a turn or two to show the working of her machinery. As the officers were dressed for shore this order was not regarded favorably, but Mr. Murray said it was not necessary for him to see the machinery in motion, as he was familiar with the usual steering apparatus. What he wanted was to look over the engines and decide where the new ones should be located.

"It this Mr. Zeigler, the chief engineer, smiled and took Mr. Murray below, where the latter admitted that he could see no place for machinery. But a place was found, two new engines to work the steering gear were put in, and in a few weeks there was a test of the new apparatus very surprising and gratifying to the naval engineers. The new gearing worked smoothly, and whereas with the old gearing it required a minute and a half to turn the rudder, with the new it required only six seconds.

"This steering gear was afterward applied to all the monitors and other heavy vessels, and is in use today. My recollection is that the Miantonomoh was the first war vessel to use the improved gear. If I am wrong some one can correct me. This new steering gear enabled vessels to turn more rapidly, to maneuver to better advantage, and by its use a vessel could be steered in case of fire from any part of the ship.

"It surprised us, however, that such an important improvement should be made by a man who served in the infantry during the war and not by a man bred to the sea. I learned later that Murray had been a steamboat man on the lakes and had contrived his apparatus on Lake Michigan, and when it was perfected had gone to Admiral Porter, who ordered the test at Boston. You can't tell what an old soldier will do."

"That is true," said the major. "Several years ago I was traveling in Mexico and went on a long prospecting tour over the mountains west from Chihuahua. Out in the wilderness our guides and guards came in conflict with other guides and guards and there was danger of serious trouble. I went among the strangers hoping to make myself understood in explanation, and said to a friend: 'I don't suppose one of these greasers can understand a word of English.'

"Instantly came from the commander of the hostile squad: 'Not a single word, Cap. Not a single word. How do you do?' For a moment I was embarrassed, but I caught a twinkling look of recognition in the eyes of the speaker, and, after a few minutes, placed him as a teamster in our regiment who at Chickamauga drove an ammunition wagon at a gallop to our line of battle, retiring because of empty cartridge boxes.

"His mules were shot in ten minutes, but he distributed the ammunition so rapidly that when the rebels got the wagon there was little in it. When the mules went down Jack took a rifle from his wagon and joined the men in line. He remained with the company all through the siege of Chattanooga, saying that teaming was too durned risky for him, and I came to know him quite well. Here he was now in charge of a pack train loaded with silver, and, as he remarked, too suspicious to see straight. A word from him cleared the atmosphere and our party went on unmolested."

"Speaking of teamsters," said the captain, "did any of the boys of the Fifth Michigan ever tell you of Mike in the Wilderness? Onue day Capt. Blackman received orders to send two wagons to the front for wounded. Mike was the driver of one of the wagons, and he didn't want to go. He reported to Blackman that his mules were very lame, and asked him to send another wagon. Blackman ordered him to hitch up his mules, lame or not lame, and to drive like the devil was after him. Mike went off in a huff and was gone all day. About 10 o'clock at night he drove up to the hospital with his wagon full of wounded, in whose interest he was driving carefully and slowly.

"The captain met him with, 'Well, Mike, how did you get along?' 'Pretty well, sir,' replied Mike, 'only they kept me foolin' about dodgin' bullets most of the day. I thought, sir, I never would get anything to put in the wagon. But as good luck would have it, by hokey, about sundown the rebs went to work in dead earnest and shot me down a load in fifteen minutes, and here the poor boys are, sir. It was slow work wid 'em, sir, gettin' them water and drivin' aisy so as not to jar them, but I got a full load, sir, and may the Doc., there, be as aisy wid 'em as I was in bringin' them in.'"—Chicago Inter Ocean.

Cost of the Civil War.

The official records of the civil war show that 2,778,304 soldiers were mustered into the union service, of which number 105,693 were sailors and marines and 2,672,341 were in the army. Of these 543,393 re-enlisted, which leaves 2,128,948 as the actual number of individual soldiers.

The number of deaths was 359,258 and the number of desertions 117,247, leaving 1,652,173 as the probable number of survivors of the army at the close of the war, deserters not included.

Of the 105,693 sailors and marines there were 21,546 re-enlistments, 4,649 desertions, and 4,588 deaths, which leaves 75,180 as the probable number of sailors and marines alive at the termination of the war.

Thus there were 2,213,365 individuals in both branches of the military service, of whom 1,727,353 survived the horrors of the war, not including deserters.

According to the latest official compilation the whole number of deaths among officers and enlisted men of the federal army during the war of the rebellion, as shown by the official records, was 359,528. The actual number, however, must be somewhat larger, because it is known that many of the records, especially those of southern prisons, are far from complete:

	Officers.	Enlisted men.	Totals.
Killed in action	4,142	62,916	67,058
Died of wounds	2,223	40,789	43,012
Died of disease	6,765	221,791	224,556
Accidental deaths	142	3,972	4,114
Drowned	106	4,838	4,944
Murdered	37	483	520
Killed after capture	14	90	104
Committed suicide	26	265	291
Executed by U. S.	...	267	267
Executed by enemy	4	60	64
Died from sunstroke	5	308	313
Other known causes	62	1,972	2,034
Causes not stated	28	12,093	12,121
Totals	9,584	349,944	359,528

"Other causes known" includes all deaths resulting from quarrels, riots and the like, which are not definitely reported as murder; from being shot for insubordination or by provost guards or sentinels in attempting to escape or pass the lines; from exhaustion or exposure; killed while depredating upon the property of citizens, and all other causes not mentioned in the foregoing table.

The Oldest Naval Veteran.

William Macabee, of the United States Naval Home, Philadelphia, is making preparations to celebrate his one hundredth birthday. He is the oldest naval veteran living, and one of

WM. MACABEE

the survivors of the old frigate Congress, which was forced ashore and wrecked by the Confederate ram Merrimac, early in the civil war.

Mr. Macabee was born in Baltimore, in 1803, seven months before Napoleon was crowned emperor of the French, and when, as a lad of fourteen years, he enlisted in the United States navy, the great Corsican's name was still stirring Europe, although its owner was a prisoner in St. Helena.

The old salt remembers well the time when he served on the Pennsylvania, the wooden forerunner of the great steel cruiser recently launched. He was not able to be present at the launching, although urged to do so. He seldom leaves the home, complaining that the noise of the streets bewilders him. He prefers to wait for the end in the peaceful anchorage of the home.

Daring Exploit of the War.

"By the way," said the major, "do you know that the Twelfth Illinois cavalry was at Harper's Ferry in September, 1862, when the Confederates under Jackson and A. P. Hill made their attack on that place, and that neither the colonel nor his regiment surrendered? On the evening of September 13, Col. B. F. Davis, of the Eighth New York cavalry, and Lieut. Col. Hasbrouck Davis, of the Twelfth Illinois cavalry, in conference with Gen. Julius White, agreed that the calvary force should make an attempt to escape and join McClellan.

"On the evening of the 14th the attempt was made, the cavalry column moving out under the command of Col. Arno Voss, of the Twelfth Illinois, and guided by the two Davises, made its way through the Confederate lines. The command reached McClellan's army without the loss of a man and captured on the way Longstreet's reserve ammunition train of ninety-seven wagons and 600 men guarding it. This was regarded by Longstreet, Walker and other Confederate officers as one of the most daring exploits of the war, but it has not been half as much talked about as Forrest's escape from Fort Donelson."—Chicago Inter Ocean.

Number of Enlisted Men.

In view of the prominence that is likely to be given to the pension question during the coming session of congress many inquiries have been made as to the actual number of men who were in the Northern service during the war from 1861 to its close. The exact number probably will never be known. The various states received credit for 2,859,132 enlistments. This includes, however, everybody for whom allowance was made, many of whom enlisted three, four, possibly five times, and served out their terms of enlistment. The war department has figured out that, reduced to the uniform standard of three years' service, the number was 2,320,272, but this probably is well in excess of the number of individuals who served.

Veterans Form Club.

On the return trip of the Grand Army club of Massachusetts from the San Francisco encampment the comrades who had been associated on the train formed themselves into a permanent organization, to be known as the "California Etna club."