THE COLT KINDERGARTEN.

How the Young Horses Which Support the Great Stanford University Are Prepared For the Track.

BY MARY GAY HUMPHREYS.

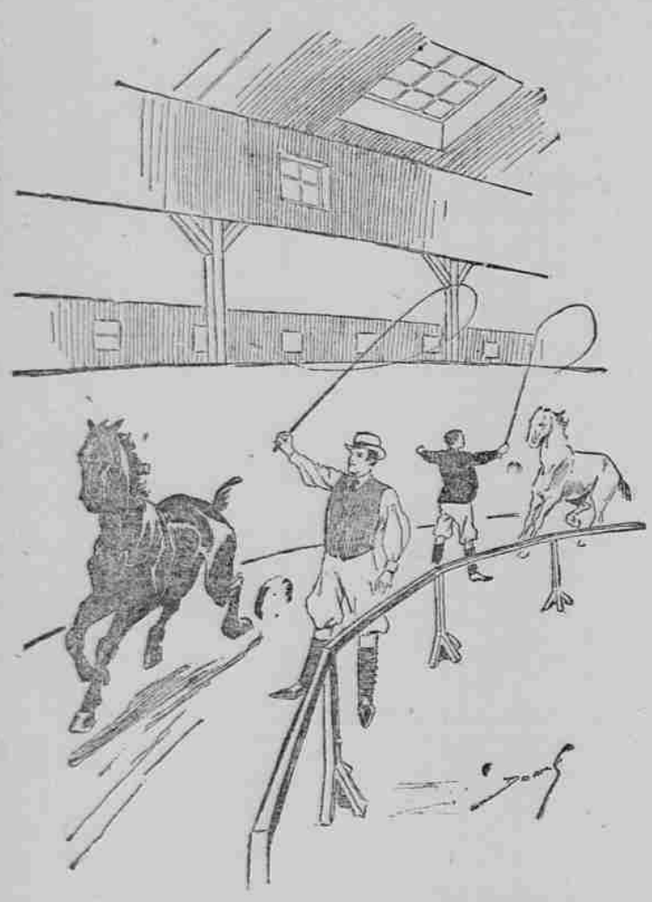
The Leland Stanford, jr., university, it is facetiously called, is run by horse power and brandy. The allegation is directly true. The university endowment, in addition to a couple and a half of millions, consists of the Palo Alto estate of 8,400 acres, and the Vina estate of 59,000 acres, in addition to another estate of 22,000 acres.

The Vina acres produce the brandy, the Palo Alto estate the horses.

On the latter estate the university is situated, its low yellow Spanish buildings flanked on the one side by the trotting stables and track, and on the other by the thoroughbreds.

The situation from every point of view is unique. The architecture, which repeats the motives of the old Spanish missions, is so unlike the lofty pretensions of most colleges of learning that the visitor to the trotting farm not unnaturally asks if "that is the stables." The barns of the trotting farm are indeed in more accord with the university idea than the low yellow group sheltered under red tiles and connected by an inner arcade, a pillared and arched aisle whose extent and beauty delights the eye and kindles the imagination. This arcade incloses a vast quadrangle, asphalted and pierced by six ovals filled with tropical plants. Young men and maids skim across its surface on wheels; bicycles are everywhere. One might, indeed, fancy it an "academy" for wheelmen.

But the trotting farm has the advantage in situation. Both are approached through the palm bordered paths of the campus, glimpsing the little gray marble temple, where Governor Stanford and his boy sleep amid flowers and a fountain's melancholy flash, and by the big yellow museum, where the other half of the Cesnola collection is now installed.



Interior of the Colt Kindergarten of Leland Stanford University.

WHERE THE YOUNG HORSES ARE TRAINED.

The way to the farm lies by the girls' dormitory and gymnasium, down a tree sheltered lane. The university is in a treeless line. The trotting form is in a park of live oaks, superb trees, of which the birds have made a vast aviary. Going up to the group of tall barns in a quadrangle of stables and offices, yearlings and colts looked over their paddocks, making friendly overtures with their moist noses, but the silence of noon was unbroken, except by the choruses, the conventions, the congresses and domestic doings in the tree tops overhead.

"Billy Gileein, Billy Gileein! O, Billy Gileein!" Billy is one of the old employees. He was here in the palmy days of the governor.

We were leaning over the open kindergarten track with a marquee sheltering dome seats in the center.

"Here's wher the governor used to sit with his visitors watching the young ones. The governor was a great man. He didn't think anything of spending $50,000 on an experiment and then write a book about it," the last claise evidently representinw to Billy a mark of the governor's ability which mere dollars could not do.

"Mrs. Stanford looks after things now, but you see this isn't work for a lady."

Things are certainly well looked after. The order, cleanliness and attractiveness of the place is a pleasure to the eye. In the center of the group of five oaks is a mound which encloses the famous dead. Chief of these is Electioneer.

HORSE THAT "MADE" THE RANCH.

"Electioneer made this ranch," says Billy. Didn't you ever see the list of his "thirties?" We strolled on to the long row of low white brick stables, where the famous stallions are housed to look at Azmoor, who resembles most of all his famous father. Each horse has a large room to himself with an antechamber where his toilet articles, boots and wardrobe hang. Successively we visit Azmoor, Advertiser, Dexter Prince, the half brother of Dexter, Woodnut, Manoca and "Adbell."

"A yearling that holds the world's record of 2:23, Irsi Advertiser, dam Beautiful Bells," continued Billy, whose conversation contains tracts which can only be compared to the chapters of "begots" in the Old Testament, and takes up again the famous story of Electioneer, the father of Arion, 2:07¾, of Sunol 2:08¼, of Palo Alto, 2:08¾, whose roll of honor contains 11 in the 2:15 list, of 32 in the 2:20 list, of 47 in the 2:25 list and of 73 in the 2:30 list, and grandfather of Azote, son of Whips, with a record of 2:04¾. With the exception of Verbootschick, the white Russian stallion wearing the emperor's crown on his side to denote his imperial breed, all the stallions are Electioneer's descendants, and their doings fill a book.

But all the honors of the Palo Alto farm are not Electioneer's. eBautiful Bells is 29 years old. She has brought into the world 15 boys and girls, and incidentally contributed to the advancement in knowledge of the boys and girls of Leland Stanford jr., university $200,000. One of her sons, Bell Boy, was sold for $51,000, and shortly after was burned to death in the Clark stables at Lexington, Ky. Beautiful Bells has a baby by her side. It was kicking its heels in one of the small paddocks for the colts—a slender, dark brown young thing, curious and friendly, as all these creatures are, speaking for their kind treatment in this manner.

There are numbers of these little paddocks, in which the colts are put in couples, girls after their kind and boys after their kind. Here, while kicking up their heels and playing together, they are under observation as to action and other possibilities which contribute to the data necessary for their future education.

IN THE COLT KINDERGARTEN.

The colt kindergarten in use was a covered track, so that training may go on in all weathers. This track is an oval of about an eighth of a mile, heaped up at the turn, and kept soft for the tender young feet. Governor Stanford's experiments in breeding that have added most to the development of the trotting horse was the introduction of an eighth or more thorough blood to give spirit and action to his trotters. As soon as a colt is weaned its education begins. It is brought into the kindergarten—this term is not facetious, but technical—and exercised for but a few minutes at first, and never over 20 minutes.

While these matters were being explained we seated ourselves under the rafters through which the warm sun sent its beams, and the trainer and his assistant led in a yearling, and let it go. After frisking around awhile it broke into a trot. Now business begins. Each with a whip, which is only cracked, endeavors to keep the pace sustained and even for several rounds. The colt is then stopped and sent around the other way, lest it become dizzy.

SPEEDING THE TROTTERS.

There was the greatest difference in the young creatures who successively took their turns. Some caught on immediately. Others thought the whip meant more speed and would break into a run. When checked, would stop and look over the rail, asking plainly, "What do you want me to do? I'm trying to please you."

Meanwhile the trainers and Riley were commenting on their action and intelligence with enthusiasm.

"There ,there; she's getting nervous! eLt her stop!" when some high-strung young thing failed to get th eides.

The peculiarity of the training here when the colt is promoted to the larger tracks is to speed it for an eighth or a quarter of a mile, then to stop absolutely, without tapering off. Thus the colt knows what is desired when put on the track and, this done, that the sinews, muscles and members may have perfect relaxation.

There are two of these tracks, the inner, a three-quarter track. These are moistened every night and harrowed every morning. The morning is given to the stallions and mares for exercise, and for these are sulkies, bikes and road wagons of every sort.

Nothing could surpass the equipment of the place. It raises all its own fodder, the food of the colts being always steamed and given warm. There is a complete system of hydrants and hose in case of fire. The stablemen have comfortable quarters, Chinese cooks, bath rooms, barber and reading room, dazzling ower beds, and all, as I have said, in a beautiful park of live oaks, kept orderly and clean as a good wife's kitchen.

"We are getting a better income out of the thoroughbreds nowadays," said the professor, as we strolled on the other flank of the university buildings, up to the thoroughbred stables, to rub the nose of Flambeau, put out in friendly recognition over the half door.

Flambeau's neighbor on one side is Racine, and on the other, Loyalist, all three proud parents of runners, at the moment many of them off at different tracks earning money for the spread of the classics , the sciences and the arts among young Californians.

THE SCHOOL DEPENDS ON THE WINNINGS.

There have been some disappointments. School was not in session two years ago when Crescenda ran second to Regulal in the Futurity, or there would not have been much added to the sum of human learning on that day. There were some disappointments east, I remember, on the failure of the Palo Alto filly to come in first, but that was nothin gto the woe on the Pacific coast.

It is a pretty relation, that of the horses to the humans, at Leland Stanford, Jr., University. Nor is it the colt indergarten less interesting than the class rooms on the great quadrangle.

POSTOFFICE CLERKS.

National Organization to Better Their Condition.

Pittsburg, Nov. 28.—Delegates representing the first and second class postoffice clerks of the country met in convention here today and formed a permanent organization with the object in view of bettering the condition of this branch of postal employees. A bill was framed looking to this end, which will be submitted to congress at the coming session. The following officers were elected: President, Joseph P. Healy of New York; vice president, W. T. Shaw of Baltimore; treasurer, S. F. Connelly, Pittsburg; secretary, W. H. Hart of Philadelphia.

UTAH GROUSE CAUSE A ROW.

THIRTY BIRDS SHIPPED FROM PROVO TO ASPEN.

Were Seized by the Game Warden, Who Will Prosecute the Consignee—Utah Law Violated.

Denver Republican: The shipping of 30 grouse from Utah to Colorado is very likely to cause no end of trouble in the near future. The shipping of those little birds, carefully tied in a gunny sack and neatly tagged, will involve people residing in the two states, besides the express company which transported them. Special Game Warden Frank Hayes of Aspen has the matter in charge and has been instructed to prosecute the man to whom the grouse were consigned, and if he can work up a clear case against the express company, to proceed against it for violating the game laws.

The birds in question were shipped yesterday from Provo, Utah, to Samuel Clark, a merchant of Aspen. When the game reached their destination, they were seized by Special Game Warden Hayes of that city. Mr. Clark protested, but it did him no good, as the special game warden was firm. After confiscating the game, Mr. Hayes telegraphed to State Fish and Game Commissioner Swan.

Mr. Swan is out of the city, being in the southern part of the state investigating some game law violations reported to him. Game Warden J. T. McLean was in the office when the above telegram was received at 9:25 o'clock, and replied, advising Mr. Hayes to secure evidence against Clark and the railroad company and give the grouse to a hospital or poor house.

Shortly before 11 o'clock the following telegram was received from Samuel Clark, to whom the grouse in question had been shipped and confiscated by Hayes:

"Aspen, Colo., Nov. 26.—George Swan, State Game Warden: Hayes has confiscated grouse from me that I bought in Utah. I can show invoice and express receipt that they were shipped from Provo City, Utah. Wire me. SAM CLARK."

After reading the above, Mr. McLean wired that Hayes acted according to law.

THE GAME LAWS.

Game Warden McLean looked up the game laws and wrote the following letter to Mr. Hayes:

"Frank Hayes, Esq., Aspen, Colo.—Dear Sir—Your telegram, relative to confiscating 30 grouse, alleged to have been shipped from Utah, was received and answered this morning.

"The game laws of Utah do not permit any one to legally ship game outside of that state, and section 43 of our game law makes it unlawful to have in possession, under control, sell or expose for sale, any bird, animal or fish caught, taken or killed outside of this state, which was caught, taken or killed at a time, in a manner or for a purpose forbidden by the laws of the state, territory or country where the same was caught, taken or killed, or shipped out of the said state, territory or county in violation of the laws thereof.

"In filing your complaint you can make as many counts as there are grouse confiscated, thereby making each and every bird a separate and distinct offense. Look into the railroad part of this matter very carefully, and if you are convinced that they were aware of the contents of the box, file a complaint against them also.

"Let me hear from you soon as possible as to the outcome of the case. Yours truly,

J. S. SWAN, Com., Per M.

Game Warden McLean did not know what express company handled the dead game, as both the Denver & Rio Grande and the Midland run into Aspen.

FATAL AFFRAY AT SEATTLE.

POLICEMAN MURDERED BY AN EX-CONVICT.

Chase After the Assassin Was Exciting, and the Whole Police Force Were Ordered Out.

Seattle, Wash., Nov. 28.—James Wells, a well-known policeman of this city, while acting as city jailor tonight, was cowardly murdered by Charles Phillips, an ex-convict, who was recently released from jail at New Westminster, B. C. Phillips had been arrested on suspicion of being implicated in a recent burglary, and had been taken to the city jail in the patrol wagon. When the wagon reached the jail, Officer Wells met it and told Phillips to get down. Phillips responded by drawing a revolver and shooting Wells through the body.

He then ran across the street. Wells, though mortally wounded, staggered to his feet and fired at Phillips, who returned the fire. Wells then fell to the sidewalk dead.

Phillips then broke and ran, with Officers Barber and Meredith in hot pursuit. Sheriff Moyer, who was passing on a streetcar, hearing the shots and seeing the crowd, alighted, and took a shot at the fleeing Phillips, who finally took refuge under a building at the corner of Fourth and Main streets. Chief of Police Reed ordered out the entire police department and the house was surrounded. Officers Meredith and Barber, with a lantern, crawled in after Phillips, whom they saw sitting under the rear end of the building, with his revolver in hand.

Meredith called out to him to surrender. Phillips drew his revolver to fire, but Meredith and Barber were too quick for him. Their pistols rang out and Phillips fell, wounded through the arm and leg. He then surrendered. When taken to jail he said that he did not intend to kill Wells, but only to injure him.

The shooting caused an immense sensation, as Wells was a very popular officer.

BOILER EXPLOSION.

Man Literally Cooked and Five Others Injured.

Pittsburg, Nov. 28.—One man was killed and five others badly injured this evening, the result of a boiler explosion at the old Moorhead & McClean blast furnace, operated by Laughlin & Co. The victims are: Dead—John Mullen.

Injured—Seaford Armes, fireman; John Pierport, John Karsey, William McCarthy, firemen; colored man, name not known. Mullen died shortly after the accident, after suffering intense agony. His body was literally cooked by the escaping steam. Armes' face, arms and legs are badly scalded. His condition is critical. The others will recover.

AMUSEMENTS.

The next attraction at the Salt Lake theatre will be that perennial success "In Old Kentucky," which will be presented here by the original company and with a complete and new outfit of scenery gotten up by Manager Jacob Litt for this season's tour. The spirited horse race, the brass band and unique dancing of the now famous little pickaninnies, and the many other novel and entertaining features, will be remembered by all who have seen this popular play.

The story of "In Old Kentucky" concerns the fortunes of an interesting group of people representative of the mountain and blue-grass regions of Kentucky. The lonely, half-savage life of the mountaineers, with their strong loves and stronger hates, their bitter feuds, rivalling in vindictiveness the Corsican vendetta, yet elevated above blood-thirstiness by a sense of religious duty, is clearly set forth and seems—it is said—all the more unique and strange in contrast with the peaceful, pastoral characteristics of the blue grass country.

It is described as appropriate and beautiful, representing with rare fidelity genuine Kentucky scenes. No melodrama of recent years has been more generally commended than "In Old Kentucky" nor has any other production of the last four seasons met with such remarkable success.

The engagement is for two nights only, Wednesday and Thursday next. The sale of seats begins this morning.

A strong vaudeville company will open a week's engagement at the Lyceum tonight.

PALACE DISCIPLINE.

Daily Routine Followed By the Young Princes of Germany.

BY GRACE ISABEL COLBRON.

Berlin, Oct. 30.—There is hardly an American boy of the middle or upper class who would not grumble at the simplicity and regularity of the daily life led by the sons of the German emperor in their beautiful palace at Potsdam.

The crown prince and his next eldest brother, Prince Eitel Fritz, have escaped from the home duties, only to submit to the more rigorous regime of the military academy at Ploen. For the Princes Adalbert, August Wilhelm and Oscar, left at home, every hour of the day has its duties, its regulations, which are inforced with the strict military discipline characterizing the court as well as family life of the German imperial family.

Six o'clock is the hour for rising, and just 20 minutes is allowed for dressing. A lesson, lasting until 7:20, begins the day; then comes the breakfast, which is very simple, according to the European custom. Warm milk colored by coffee, bread and butter, and every second day two soft-boiled eggs, make up the princes' morning meal.

Half an hour later they set out for school, the two elder boys on their wheels, little Prince Oscar in a pony carriage, with his governess or tutor. School is held in the pretty little hunting castle of Lindstedt, not far from the palace.

Lessons begin promptly at 8, and continue, with one short rest, until 9:40. Then comes a rest of nearly an hour, during which lunch, consisting of sandwiches and fruit, with a glass of claret and water, is served. The lessons are taken up again until nearly 1 o'clock. According to physician's orders, the princes take a rest of ten minutes after 50 minutes' work, and take some slight exercise after two hours' sitting.

The cavalcade returns to the palace in time to dress for dinner, which is served at 1:30. The meal is very simple, consisting usually of a good nourishing soup, a fish or vegetable course, a roast, with salad or compote, and a dessert of fresh fruit. Claret and water is served with the dinner, except on birthdays, when the princes have a bottle of champagne in honor of the occasion.

Rest and play fill the time until 3 o'clock, when another lesson is given; this time in the palace. At 4 o'clock the carriage calls for the young pupils and takes them to the bathing establishment, half an hour's drive distant. This is the pleasantest part of the day for the princes, who appear to have inherited their imperial father's fondness for water sports, and their visits to the lake are continued as long as the season permits.

An hour and a half is rapidly passed with swimming, rowing or sailing, the princes mount their horses, and start off for an hour's ride through the beautiful game parks surrounding Potsdam. If the weather is inclement they ride directly to the palace. Supper, soup, cold meat, bread and butter and fruit, with claret and water, is served at 7. Rest and play is the order until bedtime, 8:30.

This routine is carried out as long as the imperial family remain at Potsdam, which is the greater part of the year.

During the two winter months in which the court resides in Berlin, the princes go daily to Bellevue palace in the Tiergarten, where their daily life goes on undisturbed by the round of festivities at the castle.

In summer their vacation is spent either at the seashore or in the mountains, with their mother, who never allows the duties of her position to interfere for a moment with her constant and loving care of her children. Both emperor and empress superintend every detail of the daily life of their children, and in Potsdam, the hours of recreation often find the entire family united in the playroom. The two youngest children, Prince Joachim and Princess Victoria, are too little to join in the lessons, but often take part in the play.

Sons of princely or noble families residing in Potsdam are often invited to join the imperial princes in their play, particularly in the out-of-door sports. Little Princess Victoria Louise, the baby, and the only girl among so many boys, reigns supreme, and receives as much petting from her adoring brothers as any girl of 4 can safely stand.

SEA DUST.

Ocean Fogs That Are Full of Fine Particles of a Yellowish Powder.

People laughed at the man who said that the fish he had hooked "kicked up such a dust in the water." Perhaps they will laugh at the heading of this article, but there will be "sea dust" nevertheless.

We have heard of waterspouts, of showers of fish, of salt rain and many other curiosities which present themselves in the atmosphere, but to assert that there is such a thing as sea dust is to transcend all reasonable bounds. The evidence, however, in favor of its existence is exceedingly powerful—indisputable, in fact—and this is the story told by eye witnesses.

They say that in certain parts of the world, notably about the Cape de Verde islands, there are constantly met at sea, several hundred miles away from land, thick, yellowish-red fogs, not unlike London fogs in November. These fogs obscure the atmosphere and are very injurious to navigation, but they have not the baleful odor of their London prototypes, nor do they affect the breathing in the same way.

Whilst sailing through theb, it is found that the ship, sails and rigging are covered with a fine, impalpable powder, which falls as dry rain and covers the surface on which it falls sometimes to the depth of two inches. In color it is a light yellow, and it feels between the teeth like fine grit, such as might be blown into the mouth on a windy day in March.

No place is free from its presence, its fineness giving it power to penetrate everywhere. The sea, while the dust is falling, looks as though it had been peppared and is discolored for some distance down. Sometimes the dust comes in a shower and passes off again. The fogs are nothing but vast quantities of the dust suspended in the air.

It is not only in the vicinity of the Cape de Verde that this wonderful dust is seen. In the Mediterranean, on the northern parts of Africa, in the middle of the Atlantic, it has been reported. It is invariably the same in kind and appearance, and examination under microscopes has proved the identity of, say, Cape de Verde sea dust with Mediterranean sea dust. All this is very remarkable; dust falling in clouds, no land within some hundreds of miles, nothing visible which could possibly account for the curious phenomenon.

Sand spouts there are in sandy deserts, and showers of sand taken originally from spots whereon the carrier wind has left its mark; but here there is no desert frim which the sand can be raft, and the wind, so far from being boisterous or disposed to play whirlwind pranks, is light and steady, blowing ships along at a calm five knots an hour.

It is believed by scientific men that the dust clouds of Central America are, in all probability, closely connected with the phenomenon of sea dust.

NEEDED CHANGE IN UTAH FARMING.

Prof. F. B. Linfield in Orange Judd Farmer: After having traveled over nearly all the agricultural sections of the state I have come to the conclusion that a change of methods is necessary among our farmers. The soil in most of the valleys of Utah has been produced by the disintegration of rocks. For the most part, the mountains are devoid of timber and vegetable growth, and the rainfall is slight. The soil contains a very small amount of decayed vegetation and a large amount of mineral matter. With an abundance of rainfall, the mineral ingredients would be carried down into the soil and would be no detriment, but in this region where rainfall is deficient the salts accumulate in the upper layers, seriously decreasing the productiveness of the land, particularly in the southern counties. This is quite evident in the older settled portions of the state, consequently, in order to make the land more productive, a system of farming should be followed which will result in an addition of vegetable matter to the soil. Unfortunately, the method of cropping by most farmers is exclusive grain growing. Frequently a farm is found on which the same kind of grain has been produced for a number of years in succession. Even when alfalfa is seeded, it is allowed to remain as long as a fair cutting can be obtained. The effect of this system has been to impair the fertility of the land and decrease its productiveness. Where large yields were produced 15 or 20 years ago, only small ones can be obtained now.

But depleting the fertility of the land is not the only result of continuous grain farming. When settlers first came here the land was almost free from weeds, which could be easily kept down while the soil was productive and farm crops grew vigorously. With the reduction of the fertility has come an increased number of noxious weeds, which are flourishing luxuriantly and threaten to make many fields unprofitable.

Of the native weeds, only a few are troublesome, possibly five or six, but a great many have been imported and seem to grow more readily than those which were found here by the first settlers. The 12 or 15 weeds which are the most troublesome are named in the following list: Foxtail, wild oats, dandelion, sunflower, pigweed, milkweed, cocklebur, purslane, mustard, barnyard grass and shepherd's purse. These are at present most generally troublesome, although there are a number of others, apparently just introduced, which may become our worst pets if not suppressed at once. The Canada thistle is present only in a few places, but near Coyoto there is a field of especially thrifty specimens which seed freely. False flax is another bad weed, which is just getting a hold, but it seems to grow well and may become a serious pest. Dodder, called by some love vine, is scattered here and thers, but in some fields is sufficiently abundant to kill out alfalfa. Bindweed, or morning glory, as it is called by some, grows thriftily and is very difficult to eradicate.

Weeds may be divided into three classes, the division being based on the length of time required to mature seed. Annuals are those which grow from seed each year and are easiest to get rid of. Prevent seeding, and by shallow and frequent culture induce the seeds in the ground to germinate. Careful treatment for a year or two will enable the farmer to hold this class in check. Biennials require two years for maturing, and perennials live from year to year, reproduce themselves both from seed and roots, and can be given the same treatment. To get rid of these thorough cultivation, preventing of growth above ground and smothering crops are required.

The question here is how to maintain and improve the fertility of the soil and control weeds by a proper rotation of grain and fodder crops. This can be done to a large extent. Most crops grown here may be divided into two classes according to the kind of seed produced or the substances which the plants require from the soil. Cereal crops, such as wheat, oats, corn, timothy and the like, generally have thin seeds covered with chaff. They get their mineral and nitrogenous matter from the soil directly and hence tend to impoverish it. The other class, such as beans, peas, alfalfa and all clovers, are called legumes and produce seed in a pod. In addition to taking material from the soil they have power to gather nitrogen or flesh, forming a material from the air and of sorting it up in the roots. These plants tend to enrich the soil with just those constituents of which the farms of this state are in many cases deficient. A leguminous plant, while storing a considerable amount of nitrogen in its leaves and stalks, accumulates such a large amount in its roots that the surface soil is richer after the crop is grown than before. Then there are crops which have long roots and feed from the lower layers, while there are others that obtain their mineral matter from near the surface. These should be alternated. Some crops reach maturity early in the season, while with others the period of growth extends well into the autumn. Some are cultivated, while others are not.

If the above characteristics are kept in mind, a rotation can be so arranged that the fertility will be decreased but slightly, and the weeds effectually conquered. The intelligent growth of leguminous crops and the thorough cultivation of the soil will, I believe, maintain indefinitely the fertility of Utah farms, which with good rotation properly handled and thorough cultivation will hold the weeds in subjection. It might occur to some that the increased amount of grain produced by intelligent culture could not be disposed of. Where a state is buying butter, cheese, pork products, poultry, eggs, etc., by the carload from outside, as is Utah, it seems to me that our own barnyards might furnish the market for most of our farm crops. I believe that with improved methods and intelligent rotation, the increasing demand of our own home markets for agricultural produce may be supplied as well as that from our neighbors surrounding, and this, too, without decreasing by one bushel the amount of wheat now exported or increasing the amount of land cultivated.

A New and Valuable Feed.

Orange Judd Farmer: The pulp from the beets after the sugar is extracted, makes an admirable feed for all stock—horses, cattle, sheep, swine and poultry. Yet its value for this purpose is only beginning to be appreciated in this country, though in Europe the farmers would no more think of allowing beet pulp to go to waste than our farmers would think of using hay for fuel.

At the Utah factory, a feeding company has contracted for all the pulp for a series of years, and have erected adjacent to the factory (so as to save all hauling and handling possible) a complete system of sheds and feeding pens. Two thousand head of cattle are fattened here each season for market. They eat the pulp greedily, consuming from 100 to 125 pounds per head each day, besides about 15 pounds of hay. These cattle command a very good market, the meat being very juicy and tender. The cattle fatten quickly under proper conditions, and as the company gets the pomace or pulp for nothing, except the cost of removing it from the factory, the enterprise is a profitable one. The past season over 1,000 sheep were fattened here on pulp.

At the Watsonville, Cal., factory, 1,700 cattle were fed at the creamery silo, and beets that fall from the wagons there are also used as stock feed, whereas it was formerly necessary to dump the pulp in the ocean to get rid of it. Dairymen pay 15c per ton for having the pulp loaded on cars at factory, and 50c to $1 per ton freight, so that it costs them 75c to $1.15 per ton, besides hauling from local depot to farm; at these terms, they consider it the cheapest and best food. More and more of the pulp from the two sugar factories in Nebraska is utilized for feeding purposes. Two schemes for other big factories in Nebraska involve arrangements for feeding a big bunch of cattle on the pulp. Only a little of the pulp from the factory at Eddy, N. M., is fed as yet. Probably all the pulp produced at the new factory at Rome, N. M., this season, will be taken by the farmers for feeding purposes.

The feeding value of beet pomace depends mainly upon the quantities of protein (nitrogenous matter), sugar, starch, fiber and fat it contains, and upon the proportion of these ingredients that is digestible.

The protein contains 16 per cent of actual nitrogen, and the ash is rich in potash and phosphoric acid, as also lime and magnesia. These ingredients are got back in the solid and liquid manure of the stock that consumes the pulp, so that it has an important manurial value. Indeed, in this way, one can return to the soil much that the crop took from it.

It appears that beet pomace that is nine-tenths water is yet worth for stock feed fully half as much as corn silage only 70 per cent water. If the water was dried out of the pulp so it contains only as much as the corn silage, it would be of about equal feeding value, pound for pound. But cattle eat only 30 to 50 pounds daily per head of silage, whereas they will consume fully twice as many pounds of beet pulp, and thus get much more actual nutriment out of the pomace than they do from silage, as both are commonly fed.

For milk cows, beet pulp is excellent, though it should not be fed to excess. Careful tests at the Iowa experiment station show that the sugar beet is very palatable and contains no volatile acid injurious to butter. But whether milk is sold or butter made, we would not advise feeding beet pomace alone any more than silage alone; feed also hay or some dry fodder, with cottonseed or linseed meal, pea meal, or bran. Always begin feeding the pulp to milk cows in small quantities, say five or ten pounds at a meal, gradually increasing it as the cow gets used to it.

Another advantage of beet pulp as feed is that it can be kept for months without loss of quality by storing in silos. Says Professor Jaffa of the California experiment station: "Sugar beet pulp is one of the most adaptable materials for silage that the feeder can procure. One of the difficulties encountered in siloing is the exclusion of air from the mass during the curing process. With corn, clover or any of the fodders used for this purpose, much trouble is at times experienced in properly firming the different layers as they are placed in the silo, in order to leave no air spaces in the mass. The reason for this is, that if much air is present, fermentation will be carried on to such an extent as to spoil a considerable portion of the food. In the case of beet pulp, we do not have to contend with any of the inconveniences just noted. The pulp as it comes from the diffuser in the sugar factory is in the best possible condition for siloing. It is wet, the pieces are exceedingly small and the mass is quite homogenous. Hence, when placed in the silo, it packs itself and fills up every available space without any intervention on the part of the fillers—a behavior that is very different from that of any other food. For this feedstuff, then, a shallow, rectangular or square silo would answer the purpose equally as well as a deep, round one—the style found to yield the best results when corn or clover is siloed. The deeper the silo the greater the pressure, and, therefore, the less air remaining in the silo; the circular shape is adopted so as to do away with corners. It is thus obvious that the expense attending the construction of the silo for beet pulp would be much less than where other fodders are used. In regard to the covering of the material while siloing, the beet pulp has the advantage over corn and clover in that it covers itself, forming a seal which thoroughly excludes the air. Another point which must not be lost sight of it, that when the beet pulp silage is fed, the portions can be removed much easier and with more facility than is the case where we are dealing with corn, etc. Wherever beet pulp silage has been tried it has met with the best success, as the animals greatly relish it.

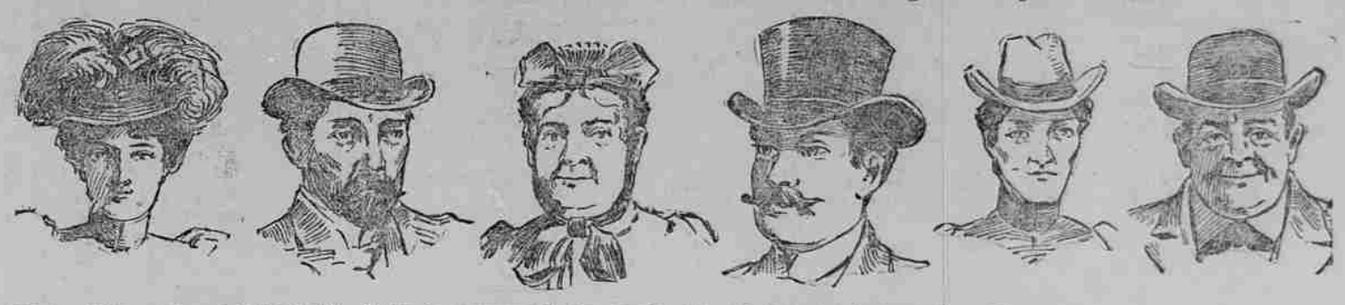
The beet tops and waste beets comprise a considerable tonnage where several acres of beets are raised. This material is also excellent for all stocks, imparting a rare flavor and color to beef or pork, besides making rapid gains in live weight. Feeders about Watsonville are especially enthusiastic over the feeding value of this beet top waste for hogs as well as cattle and milk cows. Similar reports come from Utah and Nebraska, thus finally confirming European experience. These tops will not keep so long as the pulp will, and the sooner they are consumed the better. The tops (leaves), with the neck or upper part of beet that is cut off, constitute about 15 or 20 per cent at least of the gross weight of the crops, so that a yield of 15 gross tons per acre would give about 12 tons of dressed beets and three tons of tops. Many European feeders consider this fodder worth as much as the best hay, pound for pound. There it is packed in silos or pits in the ground.

Fruit For Hogs.

Many orchardists find profit in feeding hogs on refuse fruit, and this means of disposing of it is increasing in favor, as it is found to be profitable. Much fruit taken to the canneries or packing houses is rejected because it is overripe or undersized. This is weighed out and returned to the grower and converted into pork; this brings a profit to the grower as a by-product of his orchard. A prominent orchardist who combines fruit growing and pork raising claims that prunes are worth $10 per ton as hog feed, and that pork fattened on prunes requires no grain for hardening. Pears and apples make good feed, but must be followed with grain in order to harden the meat. Grapes are very commonly used as hog feed in poor seasons and frequently hogs have been turned loose in the vineyards. Prices for grapes this season will not allow this, but it is a fact that fruit-fed pork, especially that fattened on grapes, makes the sweetest meat in the market.

THE STRANGE FACES WE MEET,

Both In Society and On the Street---Why Are Some Attractive and, Alas, Too Many Repulsive.



What a difference there is in the faces of women, and for that matter, of men also, and how strange the effect is. There are faces that attract men and fascinate women, while there are others that seem to repel just as strongly.

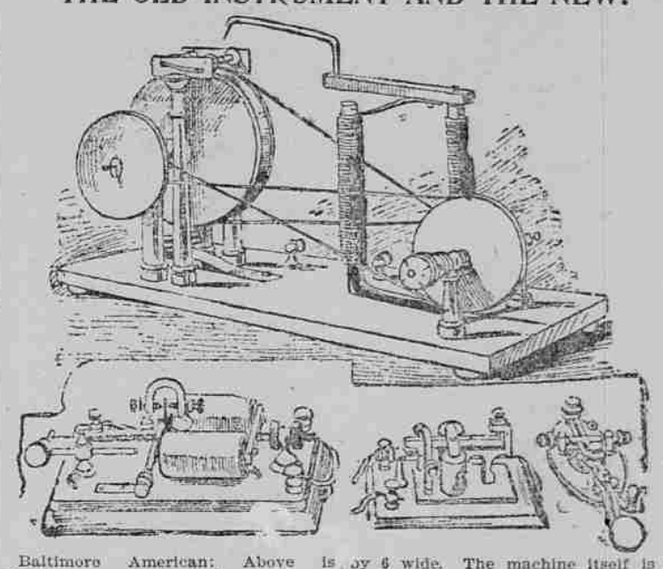
Did you ever study faces. Have you ever paid real close attention to the looks of the men and women you meet in the course of a day? It is a fascinating study. Many of them are unattractive, but some of them have power that is most fascinating. Now, what is the secret of this charm and beauty? There is but one answer, and we will give it.

It can be expressed in two words—"perfect health." No woman can look well when she is made constantly miserable by distressing weaknesses and ailments. These things destroy the complexion, bring gloominess and blues and, in addition to the misery created, render the woman unattractive. No man can appear well, work well, or do well who is not feeling well. Imagine any man or woman trying to be pleasant or attractive when troubled by headaches, tired feelings, and dizzy or bearing down sensations. It is simply impossible.

For more than twenty years the American people, and for that matter, the inhabitants of the entire globe, have heard of a grand discovery that overcomes these troubles as if by magic and makes the person healthy as well as atractive. Its value has been appreciated by vast numbers, as well as by the medical profession, but there are some who do not know what its secret and mysterious power can do for them; but if any reader of these lines wishes to know how these disagreeable and, often deadly symptoms, can be overcome; how health, vigor and happiness can be restored, and how attractiveness may be secured, we answer unhesitatingly and frankly: "Use that great discovery, that proven remedy, Warner's Safe Cure."

It is a common thing to bring proof of the value of health-giving remedies from those who have been restored. Warner's Safe Cure does not require this. It stands prominently upon an eminence of its own, and while there are thousands of people in America alone who have voluntarily acknowledged its vast benefit to them, it does not require their endorsement to prove to any sufferer that it can help, that it can cure, that it can brighten the face, remove the lines of care, and thus render, through the channels of health, that pleasant attractiveness so much desired. A trial of this great remedy will fully prove to you the truth of this assertion.

THE OLD INSTRUMENT AND THE NEW.



Baltimore American: Above is shown a picture of what is supposed to have been the first Morse telegraphic instrument ever built, and which was found among the scientific instruments left by the late Rev. Henry Scheib, pastor emeritus of Zion church. Beneath the picture of the old instrument are shown those used at the present time, illustrating by contrast the evolution in construction.

Professor Richard Ortman, who was instructed by Dr. Scheib to give the instrument to the National museum, brought out the old relic yesterday and brushed off the accumulated dust of many years. The principle in the working of this clumsy appliance is identical with that of the present day. The difference in the mechanical construction of the instrument is as interesting as wonderful. The whole affair occupies a base of cherry, which is 16 inches long by 6 wide. The machine itself is 11 inches high. There is an induction coil shaped somewhat like a horseshoe, 8 inches tall by 4, outside measurement. On top of this is an iron bar, fastened by a strong spring, from the top of which projects a long iron finger, bent at right angles and sharpened at the end. This finger was made to come in contact with a small brass roller, over which a sheet of paper was designed to pass. Motion to the paper came from a small wood drum, which was operated by a series of pulleys and cords, all worked by a crank. This crank was turned by hand, which kept in motion the roll of paper, on which was registered the dots and dashes. The first instrument was made by Joseph Green, the founder of the New York house which now supplies scientific instruments to the United States government.