

A Bank Greenhouse. Where the "lay" of the land is favorable, a very convenient greenhouse or forcing house can be constructed after the plan shown in the accompanyiny illustration. The basement is carried into the bank only far enough to give room for a heating apparatus and the storing of necessary fuel. The greenhouse floor is partly below the surface. the walls here, as well as in the case of the basement, being laid up with



rough field stones. The entrance is at the further end, steps down from the doorway to the greenhouse floor being provided. Such a building will be exceedingly warm in winter, not only because of the earth bank, but because heat can be generated and sent to a floor above much more readily than it can be generated upon and diffused over a single floor.-American Agriculturist.

#### Farm Economy,

Profits on the farm are much greater when the averages for several years are compared, as each year must bear its proportion of expense, and a failure to secure a profit this year may not be a loss, because there may be a corresponding reduction of expense next year. Nor must we overlook the advantage of the opportunity offered the farmer of selling his own labor in the form of some product. Where a farmer makes only a small profit, but has derived a fair sum for the labor he personally bestowed, his gain is greater than the actual profit. The farm has increased in value as the labor or manure or other accretion has failed to vield a reasonable cash profit. On the farm the item of labor must be considered according to its actual cost as an expenditure. Though the labor of the farmer himself is an item of cost, and must be paid for, yet he pays it to himself, and it really is profit because of the employment secured by him on the farm. For that reason a small farm, or a small flock or herd, will always pay more, in proportion to expense incurred.

than larger areas or an increase of

the salt is the brine, that is a solvent of mineral matters in the soil, and thus helps the quince tree.

# Feeding the Work Horse.

In feding the working horse I would feed corn and oats, equal parts, either no ground or whole, and if convenient change from marsh hay to clover. Corn meal should not be fed without some dilutent. The bran of oats is sufficient to prevent it becoming a pasty mass in the stomaci. If meal is not mixed with ground oats or with bran, it should be fed with dampened cut hay or cut sheaf oats. With a ration of corn, oats and timothy hay or marsh hay, either bran or oil meal or sprouts should be added, say six pounds of bran a day, or if oil meal two pounds a day, or three to five pounds of sprouts. If fed in the ear, corn may be fed three times a day, with oats and bran added at noon and night, with less corn. A good day's feed for a 1.200-pound horse is 14 pounds of hay, 10 pounds of corn meal, 6 pounds of oats and 6 of bran. In place of bran one may use two pounds of oil meal. If he feeds clover hay he does not need either bran or oil meal. Corn should never be omitted from the ration of a horse at hard work, just as meat is essential in the food for laboring men. I once knew a teamster hauling gravel to say that ten ears of corn at a feed (thirty ears a day) did not keep his horses up. He was told to quit counting corn, and feed with a scoop shovel. This he did, and stopped losing flesh. This was, of course, in the severest kind of work, long continued.-Rural New Yorker.

#### Lime the Land.

Lime is not used as much as formerly, and yet it is one of the most essential substances entering into the composition of plants. It is not only plant food, but it exerts a chemical effect on the soil, which brings into use other materials which are beyond the capacity of plants to reduce. When green food is turned under, lime will be found a valuable adjunct, as it combines with them. It is a heavy substance and has a tendency to go down, hence, if broadcasted on the surface of a field, it will sooner or later be within the reach of plants. Some lime that has been airslacked until it is fine is better than any other form, and that from the gas works (mostly sulphites and sulphides) should not be procured. Every farm should be limed occasionally, as the benefit is sure to be much more than the cost and no harm can result.

#### Cures a Horse's Rheumatism.

Horses troubled with rheumatism have been treated successfully with Turkish baths. Trainer Patterson gave Hamburg one a few weeks ago and the king of 2-year-olds came out of the bath as supple as a youngster. The



rheumatism had disappeared. He subsequently led his field under the w

# DEFECTS IN ELEVATORS.

An Air Cushion the Latest Scheme te Prevent Injury If the Car Fails. The elevator is a labor and time sav-

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ing device in such common use that consideration should stand in the way of reducing to element of danger. Yet accidents occur so frequently that It would seem as it' progress to ward safety had stopped. cases does a car "drop." This could happen only if all car "runs away," or gets beyond the control of the operator, and nothing can prevent disaster but an automatic device which will stop the car gradually. No such device which can be absolutely depended upon is now in

> use. M a n u facturers are unanimous in declaring the aver-'age "elevator man" or "boy" is incapaon FOR ble of properly ope-

AIR CUS ELEVATORS. rating an elevator. No elevator is simple. The passenger

does not see and could not understand the complicated mechanism necessary to its working. Yet these delicate machines are often placed in charge of ignorant boys or men whose qualifications are limited to a superficial understanding of the working power and safety devices.

The engineer of a locomotive must pass a severe examination and serve an apprenticeship before he is intrusted with the lives of passengers, and even gripmen and motormen operate their cars for a long time under the eye of an experienced man. A 16-year-old engineer or motorman would never be employed. It is suggested that cars should be placed in charge only of men who are old enough to be clear-headed. who have passed a suitable examination as to knowledge and general fit-

A scheme which is in use in a few buildings and has given good satisfaction is an air cushion in the bottom of the shaft. The lower part of the shaft for a distance of several feet is made air tight. When a falling car drops into this "tube" the air below it acts as a cushion, and the stop is made gradual by the escape of the air around the

sides of the car. For experiment a car has been dropped repeatedly 125 feet into one of these cushions, and stoppage was not of sufficient abruptness to break eggs on the car floor.

THREE NOW USED.

The Intercollegiate, the Gaelic and the Association Footballs.

used in the Gaelic game is almost a

## Three kinds of footballs are used by foot-ball players. The official intercollegiate foot-ball is an ellipse. That

ALLED

### To Still the Ocean's Waves. A scheme to increase the efficiency

of oil to still the waves of the ocean in a storm has been thought out by William Guthrie, of Chicago. His notion is based on the argument that if oil has a pacifying effect when distributed on the water in the immediate neighborminimum the hood of the ship in trouble, its effect would be magnified if the oil could be applied at a distance all about the ship, thus creating a calm circle, in which the ship could ride in safety until the storm had spent its fury. His proposition is to shoot saturated sponges or cot-Only in very rare ton from a pneumatic gun, that being preferable to a powder gun, as there would be no danger of igniting the oilsoaked sponge. Some people interested the cables support- in shipping have been impressed with ing it should part. the idea and application is to be made In the great major- to congress for an appropriation to test ity of accidents the its efficiency.

In the publication of the Berlin Academy of Sciences, Professor Roentgen has an article in which he confirms the observation of Dr. Brandes that it is possible to make the X-rays visible to the eye.

### KNOCKED OUT.

It knocks out all calculations of attending to business in the right way for a day when we wake up in the morning sore and stiff. The disappointment lies in going to

bed all right and waking up all wrong. There is a short and sure way out of it. Go There is a short and sure way out of it. Go to bed after a good rub with St. Jacobs Oil and you wake up all right; soreness and stiffness all gone. So sure is this, that men much exposed in changeful weather keep a bottle of it on the mantel for use at night to make sure of going to work in good nx.

A floral curiosity is on exhibition in the Temple Gardens, London. It is a \$5,000 orchid from Venezuela. It has a white flower which in shape resembles a sea-gull with outspread wings.

THE PURSUIT OF HAPPINESS.

When the Declaration of Independence as-serted man's right to this, it enumerated an immortal truth. The billous sufferer is on the road to happiness when he begins to take Hea-tetter's Bilters, the most efficacious regulator of the liver in existence. Equally reliable is it in chills and fever, constipation, dyspepsia, rheumatism, kidney trouble and nervousness. Use it regularly and not at odd intervals.

If you look at the map you will find that the mountain chains of the Old World lie east and west, while those of the New World lie north and south.

# AN OPEN LETTER TO MOTHERS.

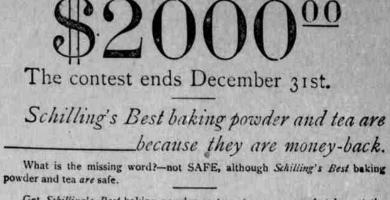
We are asserting in the courts our right to the exclusive use of the word "CASTORIA," and "PITCHER'S CASTORIA," as our Trade Mark. I, Dr. Samuel Pitcher, of Hyannis, Massachusetts, was the originator of "PITCHER'SCASTORIA." e same that has borne and does now bear the fac-simile signature of CHAS. H. FLETCHER on every wrapper. This is the original "PITCHER'S CASTORIA" which has been used in the homes of the mothers of America for over thirty years. Look Carefully at the wrapper and see that it is the kind you have always bought, and has the signature of CHAS. H. FLETCHER on the wrapper. No one has authority from me to use my name except The Centaur Company of which Chas. H. Fletcher is President.

March 8, 1897. SAMUEL PITCHER, M.D. Benjamin Bissell, who lives near Ballston Spa., N. Y., says he has voted for eighteen presidential candidates,

HOME PRODUCTS AND PURE FOOD.

not one of whom was elected.

All Eastern Syrup, so-called, usually very light colored and of heavy body, is made from fucose. "Tat Garden brass" is made from sugar Cane and is strictly pure. It is for sale by first-class grocers, in cans only. Manufac-tured by the Pacific Coast Syncr Co. All gen-nine "Tra Garden Drips" have the manufac-turer's name lithographed on every can.



Get Schilling's Best baking powder or tea at your grocers'; take out the ticket (brown ticket in every package of baking powder; yellow ticket in the tea); send a ticket with each word to address below before December tist.

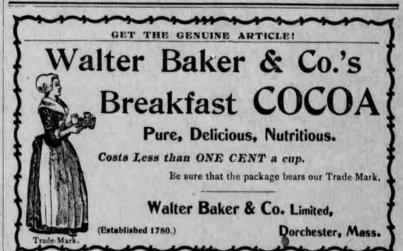
Until October 15th two words allowed for every ticket; after that only one word for every ticket.

If only one person finds the word, that person gets \$2000.00; if several find it, \$2000.00 will be equally divided among them.

Every one sending a brown or yellow ticket will receive a set of cardboard creeping babies at the end of the contest. Those sending three or more in one envelope will receive an 1898 pocket calendar-no advertising on it. These creeping babies and pocket calendars will be different from the ones offered in the last contest.

Better cut these rules out.

## Address: MONEY-BACK, SAN FRANCISCO.





make you money. Hercules Engines are the cheapest power known. Burn Gasoline or Distillate Oil; no smoke, fire, or dirt. For pumping, running dairy or farm machinery, they have no equal. Automatic in action, perfectly safe and reliable. Send for illustrated catalog.

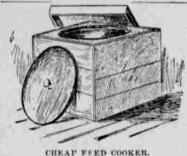
> Hercules Gas Engine Works

Bay St., San Francisco, Cal.

stock.-Grange Homes

## A Winter Feed Cooker.

Warm mashes are desirable for fowls and hogs in winter. To cook the food with but little labor, take half a barrel and set it in a grocery box, filling in about it with chaff. Make two covers, one to fit inside the barrel, the other to shut tightly down over the box. Put in the meal and wet it soft with one or more palls of boiling water. Do this at night and close tightly. The mass will cook all night long and be nice and



warm for feeding in the morning.-Orange Judd Farmer.

#### Sparrows Destroying Grapes.

It is becoming extremely difficult near cities to grow and ripen grapes, because of the attacks of sparrows on this fruit so soon as it begins to color. Fortunately this pest does not go far from cities and large villages, where it finds pleaty of feed scattered in the streets, and where the warmth from city houses affords it partial shelter. But we have learned enough about the habits of the sparrow to know that it is a pest that should be destroyed wherever seen. In England thousands of boys are employed to watch grain fields and drive the sparrows away. But even after all this care millions of dollars' worth of grain is destroyed by them every year.-Exchange,

#### Barreling Pork.

When the time for putting up pork approaches the barrels for that purpose should be got out of the cellar and thoroughly scalded. No beef barrel should ever be used for pork, for no matter how thorough the scalding it gets, some germs will remain and taint the pork. Where pork has been kept in good condition the brine is often used a second time, after thoroughly boiling it and skimming off the refuse so long as any appears. But it is perhaps better to use the pork brine as a fertilizer for quince trees, putting one or two quarts only around each tree. There is much nutrition taken from lean pork by the brine when the pork is salted, and this is ex-

## Salt for Apple Orchards. While it is well understood that sait

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

# Beef and Butter Breeds.

If a beef breed of cattle is preferred make beef production a specialty, and not look upon cows of such breeds to be perfect as producers of milk and butter. There may be a few good butter cows among the beef-producing breeds, but where a certain article is desired it should be the prime object. If milk and butter are specialties the breeds used should be those that excel in those products. Too many good points cannot be had in cows. Each cow will excel in one line only, and should be made to do duty where the most profitable.

## Clover Meal.

Clover hay is now on the market in the form of clover meal. It is scalded and used for calves, but finds more favor with those who feed pigs, it being found excellent as an addition to skim milk. The clover meal, if scalded, becomes soft and swells and has been found very wholesome and nutritious, stock.

## No Alderneys,

Farmers and dairymen are not as particular in making known their, goods in a manner to impress the fact that they thoroughly understand their calling. "Alderney milk" is a frequent sign on milk wagons, says the Philadelphia Record, yet there is no such article, as there is not an Alderney cow in the United States, "Durham" cattle is used for designating the shorthorns, although the term is one that does not now apply to any particular breed.

### High Priced Rams,

A merino ram sold for \$8,000 at Sydney, and at other points in Australia from \$2,000 to \$6,000 have been paid for rams. These prices are high, but the sheep breeders did not make any considerable profit until they began to cellent fertilizer for the quince. As for buy the best rams in other countries. making the weather-vane.



THESE CAUSE LOTS OF TROUBLE.

perfect globe and the association football is perfectly round. The intercollegiate foot-ball is the only one which can be picked up and carried.

#### The Jack Rabbit.

Kansas dealers in hides have at length awakened to the fact that jack be guided rabbit hides, known in commerce as American hare pelts, are in great demand in the Eastern market, and notices similar to the following are appearing in many papers throughout the State:

"We will buy nicely handled cased as well as highly relished by young jack rabbit skins at 3 cents each; open- needs mothed or damaged, half price; culls and erly advice, pleces 3 cents a pound; cottontails at ask her to ad-

> dry and free of meat." The skins of the jack rabbits are

> are made from fur, and the fur has heretofore been obtained from Australia, where the rabbits are successfully disputing the possession of the country with the human inhabitants.

### The Rait Spider.

What is known as the raft spider is the largest of the British species. It receives its name from the fact that it constructs a raft of dried leaves and rubbish united by threads of silk, and thus pursues its prey on the water.

The wind has a great deal to do with

Piso's Cure for Consumption is the only tough medicine used in my house.-D Albright, Muninburg, Pa., Dec. 11, '95.

#### fry Schilling's Best tes and baking powder.

Diamonds have been discovered, in rare instances, in the meteoric stones which have fallen to the earth.

"King Solomon's Treasure." only Aphrodisiacal Tonic known. (See Dictionary.) 5.00 a box, 3 weeks' treatment. Mason Chemical Co., P. O. Box 147, Philadelphia, Pa.

In every mile of railway there are seven feet four inches not covered by the rails, the space left for expansion.

The number of stars pictured on the latest English and German photographic atlasses is about 68,000,000.

There are no rats, mice or cats in Santa Fe, N. M. The air there is too rarified for them to exist.

# YOUNG WOMANHOOD.

Sweet young girls | How often they develop into worn, listless, and hopeless women because mother has not impressed upon them the importance of attending to physical development. No woman is exempt from physical

weakness and periodical pain, and young girls just,

budding into womanhood should physically as well as morally. If you know of any young lady who is

sick and

51/2 cents a pound. Must be perfectly dress Mrs. Pinkham at Lynn, Mass., and tell every detail of used for making hats. The best qual- her symptoms, surroundings and occu ity of hats, says the New York Times, pation. She will get advice from a source that has no rival in experience of wo-

men's ills. Tell her to keep nothing back. Her story will be told to a wo man, not to a man. She need not hesitate in stating details that she may not wish to mention, but which are essential to a full understanding of her case, and if she is frank, help is certain to come!



# DEAFNESS CANNOT BE CURED

(2% actual horsepower)

Hercules Special

Price, only \$185.

By local applications as they cannot reach the diseased portion of the car. There is only one way to cure dealness, and that is by constitu-tional remedies. Deafness is caused by an in-famed condition of the mucous lining of the Eustachian Tabe. When this tube is inflamed you have a rumbling round or imperfect hear-ing, and when it is entirely closed, deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; mine eases out of ten are caused by Catasrh, which is nothing but as inflamed condition of the mucous surfaces.

Which is howing but an innance condition of the nuccous surfaces. We will give One Hundred Dollars for any case of deafness, (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for cir-culars; free. F. J. CHENEY & CO., Toledo, O.

Sold by druggists, 75c. Hall's Family Pills are the best.

### Persons Who Are Magnetized.

Recent French experiments have developed the curious and unexpected fact that certain persons possess a magnetic polarity-that is, they act as magnets, having north and south poles. Such a person, when completely undressed and placed near a sensitive galvanometer, will, when turned on a vertical axis, cause a deflection first in one direction and then in the opposite, just as a magnet would. All persons do not possess this polarity. Professor Murani, an Italian, upon whom the experiment was tried, exhibited this phenomenon, and it is was found that his breast corresponded to a north pole and his back to a south pole.

A fat men's club has been instituted in Paris, with the novel aim of increasing the weight of the members, the rules enjoining all the comrades to sleep, eat and drink as much as possible.

# OUR LIVER Set it Wrong? Moore's Revealed Remedy willdoit. Three doses will make you feel better. Get it from

your druggist or any wholesale drug house, from Stewart & Holmes Drug Co., Seattle.

WHEAT Make money by successful speculation in Chicago. We buy and sell wheat on mar-unes. Write for full particulars. Heat of res-erence given. Several years' experience on the Chicago Board of Trade, and a thorough know-ledge of the business. Seud for our free refer-gence book. DOWNING, HOPKINS & Co., Chicago Board of Trade Brokers. Offices in Portland, Oregon and Seattle, Wash.

CHILDREN TEETHING Max. What one showing it souther the child, a most for children techning. It southers the child, a end the gums, slingy all pain, curse wind colle, as the best remedy for diarriors. Twenty five cor-the best remedy for diarriors.



For men who have wasted their vigor and youthful energy, who feel slow, stupid and weak. For youth men, middle-aged and old men who would like to be stronger. Dr. Sanden offers free a book that is worth \$1,000 to any weak man. It tells and proves by hundreds of grateful letters how DR. SANDEN'S ELECTRIC RELT restores the old snap, the vim, the vigor. Call or send for it. It is FREE. Hy mail or at the offse.

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