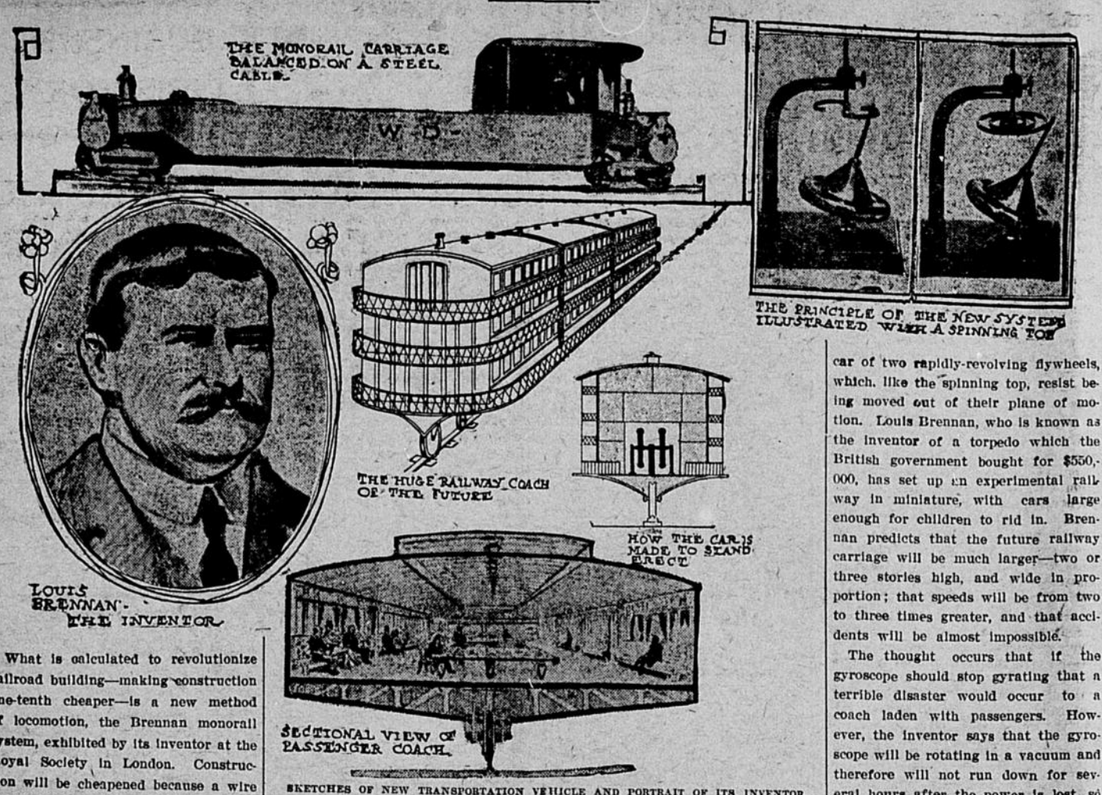
GYROSCOPE MONORAIL CAR DECLARED THE INVENTION OF THE AGE.



SKETCHES OF NEW TRANSPORTATION VEHICLE AND PORTRAIT OF ITS INVENTOR.

What is calculated to revolutionize railroad building—making construction one-tenth cheaper—is a new method of locomotion, the Brennan monorail system, exhibited by its inventor at the Royal Society in London. Construction will be cheapened because a wire cable will serve as a bridge, and but one track need be used.

The cars balance like bicycles. This is rendered possible by the use of the gyroscope. The cars remain erect on the rail, owing to the presence in the car of two rapidly-revolving flywheels, which, like the spinning top, resist being moved out of their plane of motion. Louis Brennan, who is known as the inventor of a torpedo which the British government bought for $550,000, has set up an experimental railway in miniature, with cars large enough for children to rid in. Brennan predicts that the future railway carriage will be much larger—two or three stories high, and wide in proportion; that speeds will be from two to three times greater, and that accidents will be almost impossible.

The thought occurs that if the gyroscope should stop gyrating that a terrible disaster would occur to a coach laden with passengers. However, the inventor says that the gyroscope will be rotating in a vacuum and therefore will not run down for several hours after the power is lost, so there would be plenty of time to seek safety or make repairs.

POWER OF PULLEYS.

Five Blocks Will Enable a Man to Lift Sixteen Hundred Pounds.

If you were commanded to lift 1,600 pounds when your normal lifting strength was equal to only 100 pounds, how would you go about it? How would you increase your strength sixteen times?

It can be done easily. Have you ever studied the effectiveness of pulleys; do you know that the average man may equal a Sampson simply by employing a rope and a few pulley blocks?

As early as the sixteenth centnry methods of augmenting power through pulleys was demonstrated. Since then this wonderful mechanical aid has proved of vast benefit to man.

The man, then, who would rival the feats of Samson must call the humble but powerful pulley to his aid.

Of course, he can do a great deal with the lever, although he may not, as Archimedes believed could be done, loosen old Earth from her moorings. Still, for an example of gradually but powerfully augmented strength he would turn to the pulley.

Suppose that by the use of two pulleys you were able to lift 100 pounds from the floor, and you wished to lift twice the weight. Were you to take a double block and use it above one single block, you could lift 200 pounds.

By the use of two single pulleys the load is supported by only one rope; by the use of a double pulley, thus doubling the rope back on itself, its lifting power, as well as your own, is increased.

If you used two double pulleys, you could increase the lifting capacity to 300 pounds by doubling the lines around the pulleys. In proportion to the number of ropes supporting the load you can increase the weight.

To lift 400 pounds you would merely have to double your blocks. In drawing the rope a man pulls it in an opposite direction from the movement of the weight. Were you to get above the pulleys and pull upward, the weight of the rope—however slight—would figure in the calculations.

No doubt you have often seen men lifting great loads and immense boxes by means of pulleys and wondered how it could be done.

In building, the pulley is one of the most valuable pieces of mechanism. While looking at skyscrapers have you

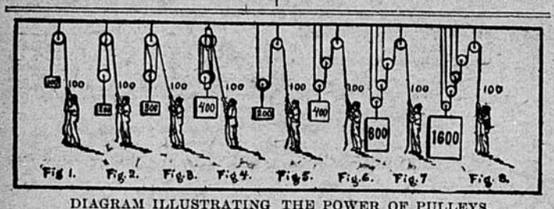


DIAGRAM ILLUSTRATING THE POWER OF PULLEYS.

not wondered how the great iron beams were lifted to the dizzy heights?

Here, again, the pulley has done almost incredible work.

Still another way of using pulleys is to increase the number instead of doubling the winding capacity of single blocks.

By using two pulleys you will lift, possibly, 200 pounds. If you add another single pulley, you will be able to lift 400 pounds, twice the weight, without extra exertion.

By the use of four single pulleys you could lift 800 pounds, and with five pulleys 1,600 pounds.

Of course, the facility of lifting a heavy weight and the ease of increasing it depends upon the bearings of the pulleys. It is important that these be delicately adjusted and well oiled.

From a purely mathematical standpoint the fine elements which enter into the facility of increasing weight without the necessity of additional lifting force are numerous.

A great deal depends upon the elasticity of the rope. With a stiff rope you would find much more difficulty in lifting a weight than with a flexible one.

Even the friction of the rope as it glides over the pulleys must be taken into account.

The use of pulleys was demonstrated by Sevins, a Dutch engineer and physicist, who was born in Bruges in 1548.—Philadelphia North American.

THE MULE WAS CURED.

Drop of Forty Feet Ended His Stubborness.

"It was twenty years ago when I was in the building and contracting business," said the man with two watch chains, "that I took a mule as part payment of a debt. It was soon reported to me from the lumber yard that the animal was the meanest and most cantankerous specimen of his tribe. Hitched to a wagon no one could do anything with him. If yelled at to go he would back up and stand there with his feet braced. We bothered with him for a couple of weeks and then he was labeled 'For Sale. Cheap.'

"It happened that at the time I was building a chimney for a factory. When we had run the brickwork up forty feet high we got out of material and had to lay off for a few days. It was during this interval that a little Irishman in my employ came to me one day and asked:

"'Mr. Blank, do you want that mule cured of his ways?'

"'If it can be done.'

"'Give me leave and I will either kill or cure him.'

"'Go ahead.'

"What he did was to get help and hoist that mule to a platform on top of the chimney. The animal made no objections. When up there he gazed around as if he really enjoyed the landscape. After about five minutes the Irishman calls to him:

"'Gee-up with ye, ye lazy, good-for-nothing son of a gun!'

"The mule laid his ears back and commenced to retire his body to the rear. When he had backed three feet over he went. Those on the ground said he turned about six somersaults before he landed on his back on a soft spot. He lay there a minute and then he got up and began to canter about. When hitched up to the wagon he wanted to pull the whole load, and from that date on he was the most industrious and ambitious mule in the State of Ohio. We had to fairly beg of him not to kill himself with hard work. I don't know how it would work in other cases, but if I was a poor man I'd go into the business of backing perverse mules off the top of forty foot chimneys. Ten dollars a mule, and no cure no pay."—Cincinnati Enquirer.

ALL AFRICANS NOT BRUTAL.

Moundans Bear Farming Tools Instead of Warlike Weapons.

That the native African is not always and invariably a poor, half naked brute has been proved by the reports and photographs brought back to France by the "Moll mission," an expedition sent to the French Congo about eighteen months ago for the purpose of determining some unsettled boundary questions. South of Lake Chad Commandant Moll discovered a peaceful race of agriculturists and shepherds, intelligent and hospitable, ripe for cultivation, living in pastoral simplicity.

Everything about the Moundans is picturesque and interesting. They are a vigorous and handsome race and very brave, but, contrary to the almost universal practice of the Africans in regions where white rule has not been established, they never carry arms. On the contrary the implement oftenest seen in their hands is a hoe.

Nevertheless, they appear to have descended from warlike ancestors and were probably driven southward from their original mountain home by some conquering chief. Reminiscences of this past may be seen in their semi-military architecture, which does not resemble that of any of the neighboring peoples. At a little distance one of their villages looks like a fortified city.

The Moundan village, of which Lere is an excellent type, is inclosed by a series of round towers connected by walls from two to three meters in height. Inside, parallel to the inclosing walls, is a circle of cupolas, each one pierced with a single hole. These are the granaries, the most important buildings of the town.

They are erected on piles supported on great stones, which places them beyond the reach of termites and rodents as well as of dampness, and the only entrance is through the hole in the vaulted roof. Between the outer wall and the granaries are the homes of the people, while the residence of the chief faces the entrance.

Same Thing Here.

Mag—I say, Tom, de Frenchies call a gal's feller her finance.

Tom (gloomily)—Aw, well, ain't dat wot it all comes ter?—Baltimore American.

It is so hard to keep from figuring things from one's own viewpoint. The man who never gives anyone a square deal never expects one himself.

CZARINA AND HEIR TO RUSSIAN THRONE.

THE CZARINA OF RUSSIA AND HER SON THE GRAND DUKE ALEXIS NICHOLAIEVITCH

Russian terrorists, it is stated, are making greater efforts than ever before to carry out their plot to blow up the Czar's palace and kill the royal family. Dissolution of the duma has added to their hatred. The latest pictures of the Czarina and the Czarevitch, who was born Aug. 12, 1904, are shown above. The heir to the throne has four sisters, the eldest 12 years old.

YANKEE KING IN AFRICA.

Rules Over a Settlement with a Population of 400.

A New York capitalist who has recently returned from a trip to the Kongo Free State, where he is interested in the rubber business, told an interesting story of his meeting with an American exile in that far-away country, who is the "boss" of a small Kongo settlement, says the New York Times. After describing a visit to Buma, the capital of the Konko Free State, he continued:

"With my party we took the steamboat and started up the Kongo River toward the center of Africa. The scenery was never monotonous. Now we come to high, white cliffs, now to low, sandy shore. Here were found heavy forests, whose edges ended apparently in the midstream, and there the low bush, which only half hid treacherous swamp land.

"Soon we reached a station on the French shore of the Kongo and landed by way of a giant tree trunk in the midst of a fairy settlement. The first thing to welcome us was a gorilla, who turned three somersaults and then extended a hairy, long-nailed paw. At a swinging gait the well-trained ape led us over a barren hillock to a little settlement called Maar.

"The sight of the place I shall never forget. We walked beneath an avenue of carefully planted trees, and around us we saw signs of civilization not to be witnessed in any other corner of the world. Neither America nor Europe can ever hope to produce such a settlement. Orange trees, heavy with fruit, scented the cool air; a great white fountain, half hidden by clouds of fluttering doves, splashed lazily in an open square. All around were aviaries, walled with wide-meshed wire and filled with fluttering, chirping birds. Occasionally, instead of birds, we found monkeys, apes, a leopard or a snake.

"The settlement had a population of some 400 Kongolese, and you can judge of my surprise when I found that a Yankee was the 'king' of the settlement. He said his name was Alexander Fisher. He had made a collection of the country's birds and animal life, so that we could see them without troubling to hunt.

"The bungalow in which he lived was clean, roomy and well furnished. The well-upholstered furniture was comfortable and dull moments were enlivened by a first-rate graphophone and music boxes.

"Mr. Fisher beamed with hospitable joy. He dined us and showed us all over his settlement. The place is a trading store. Fisher said that business was dull, but he did not sigh from his luxurious exile. He loved his birds and apes and live stock more than he loved Yankeeland and his wish was to be buried beneath the shadow of an orange tree, facing the river, in the center of the open square of his little kingdom.

"He told me he was born in Texas forty-eight years ago. By a few remarks which he dropped I imagined he had got into some serious trouble in Texas and fled the country. It's not likely that Fisher is his real name. He was a man of fine physique and appeared to be well educated. He had complete control over his black subjects and could speak their language perfectly."

The Life Plant.

Visitors to Bermuda often bring back to this country as a souvenir of their trip the leaves of an interesting plant of the house leek family. It is known as the life plant, and when the leaves begin to shrivel and fade they send out little shoots which in turn bear leaves that continue to grow and remain fresh and green for months. The leaves are about four inches long, rich green in color and of a smooth waxen texture. If you take one of the leaves and pin it to the wall indoors, it will begin to sprout within three or four days, be it winter or summer. At first the top portion of the leaf will begin to wither and shrivel up, and this is likely to continue until the upper half has lost its green color. Then tiny white roots will sprout from the edges and in time diminutive green leaves will appear on these. These little offshoots will sometimes grow to be an inch long and contain several pairs of leaves. The limit of their existence seems to depend upon the amount of heat and light they can obtain.—St. Louis Globe-Democrat.

Fooling the Hens.

Yeast—Any of your garden seeds up yet?

Crimsonbeak—No; it's been so cold I guess our neighbor's hens haven't got on to the fact they're planted yet!—Yonkers Statesman.

One pair in the front parlor beats three of a kind.

POLITICS OF THE DAY

Past Panics and Future Ones.

In looking back at our industrial and financial history it is interesting and may be profitable to know that in 1831 there was great prosperity and especially in New York City. The diary of Philips Hone, who was mayor of New York in 1826, describes that prosperity as being beyond all former examples, accompanied by high rents, vessels worth double, good prices for ample crops, in fact general prosperity. Two years later President Jackson was in the midst of his vigorous war against the United States bank monopoly. Nicholas Biddle, the president of that bank, was the great "frenzied financier" of his day, and he not only aimed to control the financial affairs of the country but its politics also, for he attempted to defeat the re-nomination of Gen. Jackson in 1832 and the nomination of Martin Van Buren to be his successor. In 1833, Hone speaks of ill-advised action of the President in removing the government deposits from the United States bank, which he said produced an awful scarcity of money, stocks declined greatly in value, and in December of that year he speaks of a panic prevailing and as times being "gravely hard." Gambling in stocks, he says, "has been carried on by brokers to an extent disgraceful to the character of the city." He speaks of speculators selling stocks to the amount of millions without owning a dollar of the stocks, betting it would fall and then taking pains by every kind of lying and chicanery to injure the reputation of the stock that he may win." The Bears and the Wall street of those days evidently had the bulls by the throat and were making them bellow for the time being.

But in the beginning of 1835 the bulls were on top again and there was renewed prosperity and speculation in progress. Hone speaks of the high prices prevailing for rents and commodities and the increased cost of living. "The rage for speculation in lands in Long Island," he says, "is one of the bubbles of the day." He tells us of Abraham Schermerhorn as having a farm of 170 acres, three miles from Brooklyn, which he had offered for $18,000 four years before and now sold for $102,000. Two years later, in 1837, however, the boom burst and lots which sold at $480 were then worth but $50. That was in April, and on May 10, the New York banks had suspended specie payments.

There is a great similarity between those times and now. Andrew Jackson was somewhat a prototype of Theodore Roosevelt, they are both of the strenuous type and President Roosevelt like Gen. Jackson, is hardly satisfied without having a fight on hand with some one. The parallel is complete enough even to the fact that both were mixed up in a controversy with ladies of great political ambition, for while Gen. Jackson had his Peggy O'Neil, President Roosevelt has had his Maria in the Storer episode, only there is this great difference, for while the chivalrous Jackson stood by the woman in the case, even to the point of disrupting his cabinet, President Roosevelt felt compelled to denounce the political activities of Mrs. Storer.

Like the boom of 1835 we have now the same speculation in stocks, the same land boom and high prices for lots, the same greatly increased cost of living and rents, except that to-day everything is amplified by the enormous increase in population and wealth and the resulting extravagance of the present time.

Will the parallel hold good in the collapse of the boom and a resulting depression in the price of real estate? Will President Roosevelt be able to name his successor to the presidency, as Jackson did with Van Buren, after he had broken down the political machine of his party and created a personal machine that he was able to bequeath to his successor? Will President Roosevelt prevail, as Gen. Jackson did, or will the parallel be incomplete by the stalwart wing of the Republican party controlling the next Republican national convention.

Whether poor crops and tight money will cause a collapse of the present boom is impossible to say until the crop question is settled. We are now doing business on a ten to one basis—that is the banks of the country only hold $1 in cash for every $10 they owe their depositors. It will not take much to upset such an inverted pyramid and a great many more things may happen now-a-days than in Gen. Jackson's time. There are indications that the far-seeing frenzied financiers have sold or are selling their speculative holdings and the retirement from active business of such masters of finance as J. P. Morgan and Rockefeller and Rogers and Stillman looks to be a warning for other people to take heed before the next financial eruption occurs. Of course, when a boom collapses somebody holds the bag and these see their property melt away in falling prices for lack of buyers. Those who are out of debt will weather the storm, if they can pay taxes and get along with reduced incomes for awhile. But those who are in debt when the pinch comes will suffer great losses and many will lose their all.

We do not know that John Biddle brought on the panic of 1833 to injure the prestige of Gen. Jackson, but we can well imagine the present disgruntled frenzied financiers allowing the speculative markets to sag and the Republican machine politicians aiding them to defeat the Democrats as they have done on former occasions. It is comparatively easy to produce a "rich man's panic" to frighten the voters by an appeal to their pockets.

Harvard View of the President.

It is well known that the faculty of Harvard University feel that President Roosevelt is too strenuous and risky a citizen to have hanging around the premises and especially repudiate the idea of his becoming president of Harvard. Dr. Walcott even went so far as to say that Theodore Roosevelt could not be elected to that high position. This criticism has evidently nettled the President, for he sarcastically declares:

"I presume dear old Dr. Walcott thinks that if I became president of Harvard I would ride to the university with a couple of six-shooters in my belt and a bowie knife between my teeth, and that my first official act would be to appoint 'Bat' Masterson dean of the faculty."

Perhaps we shall hear some more from "dear old Dr. Walcott" about the wild and woolly western ways of Teddy and the "undesirable citizens" he has consorted with, of the Harriman type.

Republicans and Trusts.

To reform the tariff so that the trusts would not be protected in charging present high prices for their products, would abolish "the principle of protection" which the last Republican platform declared is "the cardinal policy of the Republican party." We know how the trusts and protected manufacturers successfully protested when the reciprocity treaties with France and other countries were before the Senate for ratification, although those treaties only reduced the tariff 20 per cent on some few articles that were protected by duties averaging 75 per cent.

Will even the most conservative Republican tariff reformer say that 20 per cent reduction will appreciably reduce the prices of the products of the protected trusts, when their present protection is from 50 to over 100 per cent? If so, are the Republican revisionists prepared to revise the tariff still lower, until those trusts that sell cheaper abroad than to our own people, can do so no longer?

The Democratic plan of abolishing trust protection and limiting the rates of duty, "to the needs of the government, economically, effectively, and constitutionally administered," is to invite disaster according to the Republican platform which also declared that: "A democratic tariff has always been followed by business adversity; a Republican tariff by business prosperity." That mendacious statement has been proven so historically untrue that honest Republicans are heartily ashamed of it. The facts are the Republican leaders find themselves confronted with a tariff reform sentiment that is becoming dangerous to their continued supremacy and the question of standing by the tariff protected trusts, or propitiating the people plundered by trust high prices, can no longer be put off with "let well enough alone." The trusts and protected manufacturers furnish the financial backing of the Republican party and most of the Republican members of Congress are under obligations to those interests. As the protection the trusts enjoy allows them to charge large profits, it is absurd to believe they will be willing to allow their protection to be eliminated or even reduced or that the Republican party will forego their campaign contributions. Such happenings would be equal to the phenomena of pigs flying, but they are very unlikely birds.

Wall Street Calls Halt.

The late conference at the White House of the President, cabinet and members of the Interstate Commerce Commission to consider if Mr. Harriman could be successfully prosecuted for conspiracy in restraint of trade, decided that he could be prosecuted under the civil section of the law, but not under the criminal section. This, of course, means that Mr. Harriman will escape prosecution personally and the government will proceed against the railroads known as the Harriman combination, which, it will be claimed, were operated under contracts that were "unreasonable restraints of interstate trade."

This decision of the President and cabinet would seem to hardly justify the declaration of President Roosevelt that Mr. Harriman was such an "undesirable citizen" any more than the head of any other railroad combination.

The upshot of the conference seems to relieve the President of the odium of forcing the prosecution of either Mr. Harriman or his railroad combine and to postpone action by turning the whole matter over to the Interstate Commerce Commission and the Attorney General.

It is hinted that some of the President's advisers were of the opinion that it would be unwise in the face of the disturbed conditions in Wall street and the money market conditions generally to begin proceedings which would necessarily lead to prosecutions against other railroad corporations which had also combined in restraint of trade.

Although present bosses of the Republican party aspire to be known as the real thing in trust and combine busting it is seen how easily they postpone action when Wall street calls a halt. All their bluster has not reduced an unreasonable railroad rate nor compelled a trust to forego its plundering, although the people are more than ever suffering from high railroad rates and the increasing cost of living through trust high prices.

Another Favorite Son.

Many Democrats in the middle States are proposing Governor Folk, of Missouri, as the Democratic candidate for President and coupling Governor Johnson, of Minnesota, as the candidate for Vice President. Governor Folk being the original reformer and prosecutor of grafters makes him generally looked upon by Democrats as a leader of renown and being capable of correcting abuses in his own State gives good reason to believe he would curb the corporation plundering that is the national evil of the day. Geographically he is well situated for getting votes and being a favorite son of one of the Southern States, it is quite possible that the delegates from the South may rally around him in the final wincmfwyp around him in the final round up in the next national convention. Governor Johnson is considered by his friends as Presidential timber and in fact is being strongly urged as a suitable candidate for President, so his friends will hardly care to have him proposed for Vice President, although his nomination for that office may be the final outcome.

The great desire of most of the third-term Republicans is not so much the re-election of President Roosevelt as a continued term for themselves.

At Calcutta a society has been formed for the protection of wild animals

FARM AND GARDEN

The earlier in life that a weed is killed the better, as they rob the soil of moisture and plant food.

The cost of feeding an animal increases with its weight, but not in direct proportion to the weight.

Farm life may be made a burden or a pleasure, according to the management of the home, the farm and the farm work.

One point in favor of goose raising over turkey raising, is, the young do not require so much care and feed; another, any enclosure will restrain them.

Blinds are entirely unnecessary if the colt has been properly broken. They make a horse nervous, because he cannot see what is making a noise behind him.

Land well-cultivated and enriched year after year, by all the manure made upon the farm, supplemented with legume crops, will give maximum yields, under skilled tillage.

Seed peas may be dipped in hot water for a few minutes, or exposed to the gases of bisulphide of carbon, in order to destroy the pea weevil. Late peas are not so subject to attack as those sown early.

For embellishing lawns and half-shady corners nothing exceeds the hydrangea grandiflora. It gives a mass of beautiful large bunches of flowers and is always attractive.

It certainly pays as well to "breed up" a strain of seed corn, as to "breed up" a strain of cattle. Great improvement surely comes through wise selection. The farmer who annually selects the most perfect ears for seed, rapidly climbs the ladder of success.

It seems a pity to dispose of dairy calves almost as soon as dropped. Many are not fit for food and the price they bring is often too small to seriously consider. Some dairymen are now breeding the cows to beef bulls and raising the calves to maturity, which seems to be a feasible plan.

Peas will probably bear deeper planting than other seeds. The crop delights in a cool, moist soil, and deep planting insures these conditions. It has been found, however, that making a furrow 7 or 8 inches deep, filling it with a mixture of soil and a proportion of fertilizer, and planting the peas on this, 2 inches below the surface, produces better results than deeper planting. If the pea roots prefer to go down deeper, they will do so, provided the gardener has prepared the proper conditions. Peas may be planted at any time for a late supply.

How the English Feed Calves.

In England, calf-meals are fed by nearly every stock-grower, and, as a large part of the milk produced in the kingdom is sent to the city for immediate consumption, the calves are put upon a calf-meal ration at as early an age as possible.

Many calf-feeders buy the commercial calf-meals, while some of the most progressive farmers feed meals of their own mixing.

As the ingredients employed in the manufacture of these calf-meals are kept a secret as far as possible, the composition of the most successful milk substitutes is not generally known.

In some cases a chemical analysis has shown them to be composed largely of flax-seed meal and linseed oil-cake meal, with a little fenugreek or fennel seed added to give a characteristic odor.

Following is a formula recommended by one of the agricultural colleges of England. This formula is as follows:

Flour, 16 2-3 pounds.

Flaxseed meal, 33 1-3 pounds.

Linceed oil-cake meal, 50 pounds.

The directions were: "Take 2 1-3 pounds of the meal as a day's allowance for each calf; scald with boiling water, afterward adding more water, so as to make two gallons from the weight of the meal; add a little sugar, and salt before feeding. It should gradually take the place of new milk after the first fortnight.

Soy Beans and Nitrogen.

When the soy bean was first introduced into America it did not form root tubercles. In order to insure the growth of the root tubercles it is necessary to use the seed that has been inoculated, or to inoculate the soil with the proper organism. This last is readily done by applying broadcast a small amount of soil taken from a field where soy beans developing root tubercles have been growing.

At the Maine station no tubercles formed on plants grown in soil that has been inoculated, but they grew abundantly where soil from infested soy bean was applied at the rate of a few barrels to the acre. The beans will grow as well without the root tubercles as with, provided they are liberally fertilized.

Their economical growth depends upon the presence of the root tubercles, as in this way they can be grown with little or no nitrogen in the fertilizer. If they are to be grown on soil containing no root tubercle organisms they require a fairly liberal application of the complete fertilizer.

If grown in good soil where root tubercles may be expected to develop, only phosphoric acid and potash need be applied in the fertilizer. The soil should be prepared as for ordinary beans. It should be made fine, free from clots and lumps, and smooth. A good seed bed is essential to a good growth.

Enemies of Fruit.

The destruction of fungi and those insects that begin work early in the year usually commences before spring opens. Grapevines should be cleared up and the vines thoroughly sprayed, so as to destroy spores on the soil, and a heavy application of lime on the soil should be given for the same purpose. All the preparation for spraying is done early, so as to get to work as soon as possible. The grape rot has been nearly exterminated in those sections where the growers have sprayed thoroughly during the growing season, but there are always spores on the vines, and on the ground, which can be reduced by spraying. It is also important that every twig, branch or limb cut off a tree or vine should be burned, and if this precaution is observed the work will be lessened every year. The winter portion of the work should never be overlooked, as it is the early work that gives the best results. The barnyard may be full of manure, where it is in the way, while the currants and gooseberry patches greatly need it. Put it on liberally, all around the plants, and all over the ground, and work it well into the soil, using a mulch also, and cultivation will be necessary. Fertilizers are beneficial at all seasons, especially phosphates and potash, and may be profitably used, even when manure is plentiful, as the plant foods in fertilizers are soluble and ready for appropriation by the crops.

Commercial Feeding Stuffs.

The feeding stuffs examined under the Connecticut State law by the experiment station included cottonseed feed, linseed meal, rape-seed meal, entire wheat meal, wheat bran, wheat middlings, mixed wheat feed, maize meal, gluten feed, hominy feed, rye feed, ground oats, buckwheat middlings, malt sprouts, dried distillers' grains, dried brewers' grains, miscellaneous mixed and proprietary feeds, special poultry feeds, meat scrap and ground bone, condimental cattle feed, corn silage and corn for ensiling.

As a whole, the results show fewer discrepancies between guaranteed and actual composition than formerly, and the authors state there seems little evidence of any desire on the part of the manufacturers to deceive the public regarding the quality of feed.

"There are, however, a good many feeds offered for sale * * * which could not be sold to feeders who apply a fair knowledge of the art of feeding stock and business methods to the buying of their feed."

The buyer should study the market price and composition of commercial feeds and make his selection accordingly.

"Cotton and linseed meals, the gluten and wheat feeds, distillery and brewers' grains, and a few other standard things supply digestible protein at reasonable prices. They are all that any feeder needs to supplement and balance the hay, silage, stover and cornmeal which his farm produces. They are the only commercial feeds which will supplement them. It is absolutely impossible to balance the feed which the farm produces with bought feed containing less than 15 per cent of protein, which is more than many of these commercial feeds show.

Frog Farming.

For some years the Pennsylvania department of fisheries has been studying various questions pertaining to frog raising, and the present bulletin summarizes data on the subject and may be regarded as a progress report.

According to the author of a recent bulletin, "frog ponds may be in any waste, marshy land, providing water can be flowed through them, or any land whatever into which water can be introduced from a stream or spring, preferably the former, because of a usually higher temperature." For profitable frog culture the author believes at least three acres are required, and this should be divided into about ten ponds. As the ponds are not all needed at the beginning their construction may be scattered over a period of two years. At the outset a small pond is required for hatching eggs and developing the tadpoles, then ponds are needed for the young frogs and for the 2-year-olds and 3-year-olds. The ponds must be fenced to prevent the frogs from escaping.

The principal enemies are birds, snakes, eels, fishes and the larvae of the water beetle, the latter being especially dangerous.

As regards food, tadpoles will eagerly devour any dead animal matter, but prefer fish. About 25 pounds of fish per week is sufficient for the needs of 60,000 tadpoles. Fifteen to 20 pounds of liver would also be sufficient for the same number, but the liver must be fresh. The liver should be fed in small quantities, but the fish may be thrown into the water whole. After the legs develop the quantity of food should be diminished. Fully developed frogs need live food and insects may be attracted to the ponds by placing boards near the edge smeared with masses of honey, and in similar ways.

Other questions regarding the habits of frogs, feeding, rearing, etc. are also discussed.

Failed in Small Things.

There is a certain Congresman who, whatever authority he may hold in the councils of state, is of comparatively minor importance in his own household. Indeed, it has been unkindly intimated that his wife is "the whole thing" in their establishment.

Representative and Mrs. Blank had been to Baltimore one afternoon. When they left the train at Washington, on their return, Mrs. Blank discovered that her umbrella, which had been intrusted to the care of her husband, was missing.

"Where's my umbrella?" she demanded.

"I'm afraid I've forgotten it, my dear," meekly answered the Congressman. "It must still be in the train."

"In the train!" snorted the lady. "And to think that the affairs of the nation are intrusted to a man who doesn't know enough to take care of his wife's umbrella!"—Success.

Economy.

Micky—Ah, summer is the time to love de gells

Jimmy—Give me de winter.

Micky—De winter!

Jimmy—Sure! Hot chocolates don't cost but a nickel an' ice cream sodas cost a dime.—Chicago News.

Not He.

"You seem to wear pretty good clothes for a man who is looking for work, Sam?"

"I's not looking for work, boss. My wife does dat!"—Yonkers Statesman.

Some houses are so prim and orderly they remind one of the systematic arrangement of the tombstones in a well-kept graveyard.