

FOR BUTTER AND CHEESE. Makers of butter and cheese have work. These are commercial starters of the Michigan station tells how every one may make their own start-

bulletin says: "Some of the commercial starter whole milk and allowed to develop there for twenty-four hours at a faworable temperature. For ease in manipulation the milk is sterilized in a quart bottle plugged with cotton. On the second day a portion of this milk is transferred to another bottle of sterile milk to continue the growth of the organisms, and the remainder is poured into a can of recently pasteurized skim milk. The latter is again kept for twenty-four hears at a temperature favorable to the growth of the organisms, and is then used as a starter for sweet cream. At the same time a portion of the second bottle of innoculated sterile milk in which the organisms have been growing for twenty-four hours is transferred to a third bottle of Sterile milk, and the remainder of the second bottle of inoculated another can of pasteurized skim milk for the use as a starter on the following day. It is claimed that this method of growing bacteria, if properly handled. will maintain a culture that will give uniform results for an indeffnite period.

"The starter can be kept for a much longer period, thus saving one-half or more of the cost of pure cultures. "The milk is always ready for inoculation and the mother starter can be

transferred each day when in the best condition and kept vigorous. "In case a starter is not needed every day the mother starter can be carried along conveniently without

trouble of sterilizing milk. "After a thorough trial we have adopted the method for our daily use. We find it no great task to sterilize the bottles of milk once or twice a month, and the little extra labor thus occasioned is more than offset by the convenience and sureness of the meth-

SENSITIVENESS OF MILK.

Milk responds readily to sanitary care and handling. In fact, it is extremely sensitive to exposure to contamination and its usual condition as sold in the large cities indicates that certified milk is cheap at a big advance over the prevailing

Monthly counts for six years of supply of Rochester, New York, showed the presence of about 100,000 bacteria per cubic centimeter in winter and five times that number in summer. When the milk was handled intelligently the average of one-hundred tests showed the presence of less than 4,000 per centimeter.

The contamination of milk can be in a large degree, avoided by carefulness in milking and cleanliness of the vessels in which the milk is kept. immediately after emptying the cans they should be thoroughly washed in hot water and ucalded, then thoroughly dried and capped with a cheesecloth strainer and metal cover. When the cans are needed for use they are therefore practically free from bacteria and by removing the metal covers the milk can be poured through the cheese-cloth strainer into the can and the strainer removed. The metal caps may then be replaced and the milk cooled by placing the can immediately in ice water. The whole operation is very simple and inexpensive and its adoption by farmers and dairymen would do much to assist in keeping the milk sweet and fresh and in the production of the highest grades of cream and butter.-Epito-

HORSES FOR FARMERS TO GROW.

As a rule there may be some exceptions-but as a rule the profitable horses to grow on the farm are the big drafters. The Drovers' Journal says that draft horses bred now are of greater weight than they were a decade ago, as the trend of demand is for horses of weight to move ponderous loads at a moderate pace. A enough for an expresser, while the of extreme weight drafters will haul a load of six to eight tons and are more economical of maintenance than two pairs of lighter horses that would be required to perform the same work.

The general farmer wants a horse of docile disposition, adapted to work bad condition that announcement has on the farm and easily marketed at | a delightful sound, says the New York a good price. With so many heavy agricultural machines on the farm the draft horse can be utilized to bet pots of mignonette are set files will ter advantage in general field work not linger. "Instead of placing those than can any other class.

Draft horses are free sellers at good prices from weanlings to mature classes. Their superb qualities have been acquired by centuries of methhave achieved a permanent place in the commerce of nations. Prices may fluctuate with the times, but good draft horses will always return the farmer a reasonable profit on the cost

HICKORY DISAPPEARING Automobile and carriage manufacfound large advantage in using bac turers, along with the men of the alteria cultures as starters in their lied vehicle industries, are giving very serious consideration to the question on the market, but a recent bulletin of the future supply of hickory timber. For automobile and carriage wheels, where strength, toughness and ers, and they are inexpensive. The resiliency are essential qualities, no other wood has been found in this country that will take the place of usually employed is put into sterilized hickory. Manufacturers say that no steel or wire spoke has yet been found that will withstand the wear and tear of the hickory spoke, and for this reason the welfare of the vehicle industry seems dependent upon the conserva tion of the hickory supply. In a report of the tests made by H. B. Holroyd, forest assistant, and H. S. Betts, engineer in the timber tests, of the Forest Service, the fact is brought out that there is an error of over 50 per cent, in the grading of vehicle stock, due largely to the prejudice of the manufacturers against the use of red hickory. It is shown that in clear stock, weight for weight, the red hickory is as strong as the white. By bringing this fact to the attention of the manufacturers it is hoped that much of the hickory which was formerly left as waste in the woods will be ultilized by the trade, and thus prolong the rapidly disappearing supply of hickory. American hickory users will be obliged to conserve the present supply and take steps to guarantee a future supply by encouraging private planting of the tree, whose wood

is becoming more precious each year. GOOD CLOVER SEED.

When it comes to paying from \$10 to \$12 a bushel for clover or alfalfa seed one should be able to judge something of the quality of the stuff he buys. A first rate quality of red clover seed should be of fair size, purple and yellow colors predominating, and always with a lustre. If a sample is small, with many shrivelled, brown seeds in it, it should be rejected without hunting for impurities. Many ask how to tell red clover from mammoth, It is impossible to distinguish the seed. The buyer must depend upon the honesty of the seller.

Alfalfa seed has a light, olive greencolor. It is about the same size as red clover seed. It has various forms, but is quite easily distinguished. The dead and worthless seeds are the brown colored ones. Any sample which contains brown seed should be rejected. Shrivelled seed indicates that the crop was not mature when it was harvested; brown seeds indtcate old seed-that is, when either alfalfa or clover seed contains a large the bacterfal contents of the milk percentage of very dark seed it is safe to assume that the seed is too old to give good results. A 50-cent tripod lens will be an immense help fu determining the quality of any seed which may be offered for sale.-L. C.

HAVE IT FIT.

No one appreciates a shoe that does not fit. It hurts and there is sure to be great relief when it has been fitted to the foot. The same thing applies to 'the horse's collar. Never compel a horse to wear a collar that does not fit him.

COMFORTABLE COWS.

Keep your cows in such a manner as to make them always comfortable. A comfortable cow is generally a profitable cow and it is the profitable cow that we are all after.

FARM ITEMS,

Have plenty of fresh air from cellar to garret at all times. Do not keep any part of the house shut up so it becomes foul; let the air and sun-

Imagine, if you can, your good housekeeping grandmother buying canned hash or mincemeat.

All skim milk hauled from creameries to the farm should be pasteur-We have no objection to the man

'with an ax to grind," provided he shows the ax and pays for the serv-

Mighty offensive! A fight over a line fence handed down as a legacy from father to son. Every hundred pounds additional

weight in the case of a heavy draft horse is worth from 25 to 50 cents 1400-pound horse is hardly large more per hundredweight when making a sale. A farmer is in position to industrial draft horse weighs 1600 feed as cheaply as any professional pounds to upward of a ton. A pair feeder. To sell well on the market horses must be fat, sleek and well groomed. The buyers demand fat.

Flower Better Than Fly Paper, Mignonette a substitute for fly paper! Surely, of any remedy for any Press. A woman living in the country asserts that in a room where annoving sticky sheets of paper about the room," says an experienced woman, "or undergoing exhausting exercise of driving the pests out of the place through windows, the blessodical selection and breeding and they ed plant just seems to blow them out on a wave of what you and I would call its fragrance."-Buffalo

> An express engine consumes on anaverage 19 gallons of water a mile.

CANAL ZONE MOSQUITOES

LARVÆ OF MANY SPECIES COLLECTED BY ENTOMOLOGIST

Ninety Separate Kinds of Mosquitoes Now Known to Exist Along the Canal Route-The Yellow Fever Mosquito Nearly Exterminated—Method of Warfare Adopted.

B-8-0-0-0-0-0-0-0-U-0-0-0-

down on the isthmus of Panama collecting mosquitoes in the Canal Zone. er, to whom the man wrote, and in He secured larvae of eighty-three species, of which thirty species were new to science. With seven additional species already known, this con- days and nights had been chasing. stitutes the largest number record ed from any one locality on earth. Anybody who is interested may see | Cod Pay, and near White Island in the mosquitoes for himself in the National Museum, Washington, where they have been deposited. August given up when nearly dead in East Busck is the name of this scientific collector who now holds the mosquito record. He spent three months on the Isthmus during the mosquitobreeding time, covering the end of running for a month." the dry season and the early part of the rainy season.

It has cost, and is costing, a lot of money to protect the lives of the gunners remember any such perform men working in the Canal Zone from | ance as this one.-From Forest and the ninety separate species of mosquitoes now known to exist along the route of the waterway. Mosquitoes do not fly very far from the place where they are born. They that affect the inhabitants of a town or camp normally do not come from a distance greater than two hundred Low, referring to his former place yards. It is this fact that renders of abode. the sanitary work of the Canal Commission possible.

The land about every settlement is cleared by the removal of all brush, undergrowth and grass; only shade and fruit trees are left, and these are thinned out to admit sunlight and and free ventilation. When practicable, swamps and low lands are filled in with some of the immense supply of material taken from the Culebra cut. Then the whole area is drained so that the surface water will run off. Ditches and slow-flowing streams are kept clear of mosquitoes by drippings of oil or of copper sulphate. Swamps and pools are oiled at least once a week. Water barrels, buckets and pails must be screened or oiled, and all tin cans must be buried. Even the old cast-off machines, brushcovered relics of French occupation, are drained of their puddles of water. If many insects infect a camp or each finished pair of shoes. town, it is fumigated. By carrying out these methods of general extermihave already been obtained.

One important feat has already been accomplished. The yellow-fever spreading this infection, scientifically called stegomyla, is very scarce. It is possible to live for weeks on the line of the capal without seeing a single specimen. This mosquito is away from man, It breeds only in water coolers, bottles, tin cans, etc., in and around human habitations. Knowing this, it is well within the power of the authorities to eliminate absolutely this dangerous insect and render a yellow fever epidemic impossible on account of the total absence of the only agent which spreads

The malaria carrying varieties, included under the general name of anopheles, are also subject to rigorous attack. Usually the species of, this group deposit larvae along the edges of slow-flowing streams and stagnant pools, but specimens were also secured from the bottom of an old boat, from an abandoned dump car; from holes in trees and in similar out-of-the-way spots. It has not yet been determined whether all of these are instrumental in carrying malaria, and therefore they may furnish a fertile field for investigation. Certain genera, technically called megarhinus, psorophora, and lutzia, were found, which, instead of spreading any disease hostile to men, wage war on their weaker cousins and at times even on their brothers and sisters. They are cannibals of their sort .- New York Post.

HOUND'S LONG CHASE.

collowed a Fox for Five Days and

Nights Over Cape Cod Sands. Following close on the heels of a big gray fox, running for five days and nights, covering a distance of probably 200 miles through the woods and along the sandy sheres of Cape Cod, only to have the fox escape by wearing him out, is the record of a hound 4 years old, one of three valuable dogs that a party of hunters recently took with them to hunt foxes in the woods at Wellfleet.

The dog chased the fox, or perhaps several foxes--for it may have bities before it if given sufficient enswitched off from one to another in couragement. It will gridiron the its travels-and did not show up af. State, and the time has come to give ter starting the fox, After waiting it the power to purchase its own for hours for the dog to return the roadbed, thus keeping it off the pubhunters went back to the village ex- lic highways as much as possible

chase. Night came on and they became alarmed fearing the dog had been lost.

A local gunner who accompanied the fox hunters into the woods said he would find the dog and ship him home the next day. Inquiries were made through the villages, but no one had seen the dog and it appeared at if he must have been drowned in crossing the swamps on the thin ice. At the end of five days a dog was seen following a big gray fox through the village of East Wareham.

The man who saw the fox as it limped through his back yard rushed into the house for his gun. As he came out he saw a hound limping along and vainly trying to bark; the fox had disappeared and the dog, which could hardly stand, dropped in its tracks nearly dead from exhaustion. The man gave the gog food and drink in small quantities and in a few A government bug-hunter has been days it seemed to be all right, On the collar was the name of the owna few days he came after it. It was then learned that the dog started the fox in Wellfleet and for five

He had been seen chasing the fox at Ellisville, on the chores of Cape the cranberry district; he had crossed the harbors and rivers and had Wareham, sixty miles from where the hunt was started. It was said, "The dog was a mere skeleton and the fox seemed as if he had been

There are instances on Cape Cod where dogs have followed foxes for days at a time, but none of the old

A Misunderstanding.

His name was George Arnold, and he was arraigned in the police court keep close to their food supply. Those on the charge of stealing a ride on a train to Dagupan. "Where were you?" asked Judge

"In Manila," was the reply, "I was

waiting." "Waiting for whom?"

"Just waiting."

"What were you walling for?" "To get my money." "Who from?"

"The man I was waiting for." "What did he owe it to you for?" "For waiting."

"How did you start in waiting? "By beginning to wait." "What do you mean. Explain yourself."

"I though you knew I was waiting in a restaurant." "Oh!" gasped the Judge.-Philippines Gossip.

Pumping in the Squeak.

Small automatic pumps, very he geniously contrived, spirited air in between the layers of the solis of

"That beats me," said the visitor, "I pever saw air put in shoe soles nation exceptionally thorough results | before. Pneumatic like that; are they springy?"

"No, they're noisy," answered the foreman of the Lynn factory. "These mosquito, the only kind in America shoes are for the export trade. They go to Africa. A native African judges the white man's shoes by their squeak. The louder they squeak the finer the article. In fact, the native won't wear a non-squeaking, silent a strictly domestic insect, never found shoe. It is wind between the soles that makes shoes squeak, Put in artificial receptacles, such as barrels, enough and your footwear will be as noisy as two pigs under a fence. We, by adding this cheap wind to our product increase its value more than handsewing throughout would.

His "Kick."

"Say, there's a mistake in this bili you sent me the other day." "What's wrong with it? Is it too big?"

"No. but---" "Any mistake in the figures?"

"No; it's not that. It's--" "Don't you think that bill has been running long enough?"

"I reckon so, but--" "Then what are you kicking about?" "That's what I'm trying to tell you. There's a mistake in the name. You sent it to the wrong man, confound you. I don't owe you a cent, and never did!"

"O!"-Chicago Tribune.

In French History So far as France is concerned it is the number fourteen that has played a conspicuous and portentous part in her history. On May 14, 1554, the Rue de la Ferronniere was enlarged by order of Henri II, and four times fourteen years later Henri IV was assassinated there by Ravaillac, name ly, on May 14, 1610. Henri had lived four times fourteen years, four-cen weeks and four times fourteen days ie., fifty-six years and five months. Then Henri's son, Louis XIII, died May 14, 1643 (the same day and month as his father). And 1643 added to gether equals fourteen; just as 1553 (the year of the birth of Henri VI) equals fourteen. Louis XIV ascended the throne 1653, which, added together, equals fourteen, and similarly the year of his death (1715) equals fourteen .-- From P. T. O.

The Philadelphia Inquirer thinks the electric road has vast opportuChe HOME

WEDDING CUSTOMS OF THE AGES | GERMAN EMPRESS The little customs that have come to be part of the marriage ceremony have had diverse and interesting origins. The ring has played an important part.

With the coming in of Christianity it was no longer placed on the right forefinger, but on the left third finger. The priest, or in some cases the bridegroom, first put it on the thumb saying, "In the name of the Father" on the forefinger, adding, "In the name of the Son;" on the second finger, continuing, "In the name of the Holy Ghost," and then on the third finger with "Amen"-and there it remained

The bridal veil originated in Bible times, and was worn until all the public ceremonies were over, so it can readily be understood how Jacob was deceived into marrying Leah instead of her sister Rachel. In the Anglo-Saxon wedding ceremony a square piece of veiling was held over the head of the bride to conceal her embarrassment.

In the later Bible days, during the period between the betrothal and the wedding, the bride remained with her friends and could only communicate with her affianced through "the friend of the bridegroom," as mentioned in John III, 29, who also performed other services for the bridegroom.

Throwing shoes originated in the old Jewish custom of handing to the purchaser of land an old shoe as a taken of surrender or renunciation (see Ruth iv., 7). The bride's father gave a shoe to the husband of the bride or threw it after him to signify that they surrendered to him all authority over their daughter.

Throwing rice symbolized fruitfulness and plenty, from its general distribution over the world.

Taking the husband's name originated in Roman times, though the date is unknown. When Julia married Pompey her name became Julia of Pompey. Modern woman omit the "of" in the name.-Washington Post.

QUALITIES MEN ADMIRE.

"My wife must be a home loving woman." This somewhat trite remark, speaker in the latest congress of the was addressed not long ago by a young man to a matron who had been his confidante ever since the days when he wore knee breeches.

"My dear boy," was the reply, "I've no doubt when you say that you think you're speaking the truth, but you're just like other men-the qualities you believe and say you like in women are just the opposite of those you ers to investigate the Chicago packreally do like. All men profess to ing-houses. admire the domesticated woman, when the fact of the matter is they can't USE OF PERFUME IS SPREADING. bear her. At the bottom of their hearts they know quite well that no woman is ever domestic who can be anything else and that when you find one dining at home every night and going to bed at 10 o'clock it simply means that she has failed so completely in the struggle for popularity that there's no one to take her to supper at D-'s or S--'s. The world is crowded with domesticated women, but although men may laud their virtues to the skies they have naver given any very convincing evidence of the genuineness of their ad-

miration. "Another quality men tell you they admire in women is common sense. Nothing, of course, bores them quite so much when they find it, and every woman knows that to be described as 'really sensible' is about as fatal a blow to her popularity as could befall. Nobody understands better than a man the value of a little foolishness to a woman, but it pleases him to think he likes sense, as it pleases him to think he likes persistent amiability. Male contradictoriness is truly bewildering and makes the art of pleasing an extremely complicated subject for women. I know you don't agree with me, Jack, but you may depend upon it, your wife will be some wise woman who assumes the possession of just enough amiability and sense and domesticity to keep up your cherished delusions without endangering her own enjoyment of life." -New York Tribune.

THEATRE HAT PROBLEM SOLVED.

discovered one solution of the theatre-hat problem which is original, even though it is not likely to be universally adopted. A gentleman sitting in a stall behind her groaned at | News. the presence of her headgear, others who sympathized with him joined in the protest and soon a chorus of varied sounds went up around her, in all of the dressy coat models, much to the annoyance of the lady. Suddenly she came to a determination and deliberately taking off her hat she placed the "picture thing" on the groaner's knees behind her. His breath, it may be supposed, was knot. taken away by the lady's deliberate action, as he grouned no more, and attentively nursed the sacred trust con finds some new way of using this on his knees till the first act was over, when the lady took back her hat with

THE ANGRY GIRL. She loses her sense of humor; of ten also the other sense she has goes with it. If getting angry ever did any good there would be more reason in it. The surest way to weaken a good cause is by a bad temper. The girl who is easily angered pays There is always some way out of the piper in broken friendships. a difficulty, and a lady has suddenly A hot temper rarely finds a happy home big enough to hold it. The angry girl forgets that the penitence which follows her folly is not pleasant company. - Indianapolis

FASHION NOTES. The high waist effect still prevails Sleeves are generally perfectly plain at the top and not a gather betrays the joining with the waist. There is a tendency in hair dressing toward the once popular Grecian

Ribbon work still holds its own for decorative purposes, and each sea-

most effective embroidery. There is something satisfactory in thanks and put it on. At the open- the buckles and bows of straw in ing of the second act she was about self color which trim some of the

to hand her headgear to the man be smarter tailored hats. hind her, as she had done in the It looks from every standpoint now first, but he was gone. One act had as though the short sleeves would be been enough for him,-London Tele- pretty well out of the run for everything but dressy costumes.

ed fad it is her love for horses. Her private stables are filled with handsome and well-trained horses. She always insists that they should be well trained and taught to behave at the roll of drums or military music and the sound of guns. The empress is fond of high spirited horses and is a daring rider. She is fond of her cuirassier uniform, which she wears on all great occasions when mounted

If the German empress has a decid-

LOVES HORSES.

One of her smaller fads is the keeping of a diary. In this interesting diary are recorded many of her daily experiences since the time when she was a small girl. The empress carefully guards this book and keeps it in a little cabinet in her own room under lock and key.

on a horse

The devotion of the empress to children is well known, and much of her large private fortune is spent for the benefit of poor children, principally in founding schools, sanitariums and hospitals for the unfortunate .-Washington Star.

WAX CANDLE HOBBY. The Archduchess Friedrich of Austria has a hobby of making scented wax candies. The particular kind she takes pride in making is an invention of her own. Her announcement recently criticising a time-honored custom of the Austrian palaces that a candle once extinguished must not be lighted again, raised a flurry of discussion. The archduchess characterized the custom as silly extravagance, and this brought down upon her head a shower of protest. The Emperor Francis Joseph, who greatly admires her cleverness, stood by her during this storm of controversy, and he ordered, especially where the handlework of the archduchess was concerned, that the custom should be abandoned.-Washington Star.

THE ONLY SPEAKER. Miss Annie M. Reynolds, of North Haven, Conn., was the only woman Congregational church, Miss Reycolds has been world's secretary to the Young Women's Christian Association and is now one of the most active members of her church in North Haven, where her father was pastor for many years. Her brother, James B. Reynolds, was one of President Roosevelt's special commission-

Doctors' recommendations have contributed to the popularity of certain scents. The use of scent is becoming really widespread, asserts a dealer in perfumes. "The doctors have pronounced in its favor." this man says, "and have recommended those of their patients who are particularly prone to catching such complaints as influenza to use scent copiously, principally by means of the spray. The odor that is most in demand is appropriately that of wood violets, springlike and refreshing." - New York Press

GIRLS TAUGHT LIFE-SAVING.

A course in life-saving has been instituted among the women students of Columbia University for the purpose of making them as adept as men in rescuing drowning persons. They receive the regular life-saving drill, in eluding the grips and breaks, towing to shore and artificial respiration. A fully-dressed girl is thrown into the water at one end of the swimming tank and other girls are obliged to rescue her from the opposite end and take her back, which is already done in fifty-seven seconds. According to Popular Mechanics this new departure has become immensely pop-