FIRE BLIGHT

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Judging from the inquiries and specimens sent to the department of botany this past summer, no disease of apple or pear is more common than fire blight. Every pear or apple orchard visited showed cankers caused by this disease. It is too often the case that fruit growers do not recognize symptoms of this disease and it is notorious that many make no attempt to combat it.

The Signs.

The first thing necessary in fighting this disease is to know its symptoms or signs.

Fire blight on either apple or pear usually starts in the blossoms. It can also start in growing twigs—water shoots ("suckers") especially, and it has been shown that the fruit bark borer is very active in spreading the blight. Once inside the twig, the advance of the disease is rapid. The twig is killed, the bark becomes water-soaked and finally black. The leaves, dead and curled, cling to the tips. In the apple, this twig blight is the most common form, but in the

Controlling Agents and Tools.

pear, in addition to the killing of the twigs, limb and trunk blight occurs.

The canker of fire blight is nothing more nor less than the dead spot or strip. These cankers usually can be traced to the dead twig or an insect puncture—the entrance point.

As soon as the bark and growing layers are killed, the dead parts dry out and take on a sunken appearance. If one digs into one of these spots, he finds the tissue dry and brown while healthy tissue is full of sap and green. The surrounding bark grows and pulls away from these canker areas. Thus the canker becomes marked out by a sharp line.

Were these canker areas small and if they did not increase in size, the loss would not be so great, but many times these cankers increase in size, sometimes extending down the limb several feet. The great majority of these cankers, in the end, completely girdle the limb. This limb may be one of the largest on the tree and at once the bearing power of the tree is cut in two.

From the larger limbs and from the water shoots ("suckers") the blight cankers on the trunk may start—commonly called body blight. This body blight frequently kills the whole tree.

The Cause.

Fire blight is caused by bacteria. It is therefore a disease comparable to tuberculosis, the one being a disease of plants and the other a disease of animals, but each caused by a definite organism or germ, belonging to the group called bacteria.

The bacteria which cause fire blight lives over in many of the old cankers. In the spring, from these old cankers, the germs ooze out in gummy, sticky drops and each drop contains millions of the organisms. Bees and other insects visit these drops and thus carry the germs to the flowers. In the nectar of the flowers the germs multiply enormously and bees passing from flower to flower, dipping into the nectar, spread the germs throughout the trees in the orchard.

The Cure.

Success in controlling fire blight depends on three things. First, recognition of the symptoms of the disease; second, constant vigilance; third, frequent inspection of the apple and pear orchard. The work necessary can be done most quickly and profitably with the tools and solutions shown in the cut. The plan is as follows: With a carpenter's gouge, clean out all cankered spots on limbs and trunk, cutting out the diseased

Limb Cankers.

tissue and exposing the healthy wood. Disinfect the cut surface with corrosive sublimate, one tablet to a pint of water. Carry this solution in a pail and soak a sponge with it and swab the wound out. This wounded surface should be painted over with a good lead paint or tar. It will then heal in the course of a few years. Do this in the fall or winter. In the spring, when the blossoms begin to fall, inspect the orchard frequently. Clip out all cases of twig blight. A sponge attached to the pruner should be wet with the disinfectant, and the twig which is cut off should be touched with the wet sponge. Break off all water sprouts from the roots and trunk, thus getting rid of the chief source of limb and trunk cankers.

A twig with black leaves clinging to it should be a banner of the enemy, inviting attack.

Each canker on the tree is a menace to the rest of the tree.

The control of fire blight is a business proposition. Each large limb of the tree will bear a certain amount of fruit—a bushel, two bushels—not for one year alone but for many years. To save a limb will take ten or fifteen minutes' time—twenty to fifty bushels of pears for ten minutes' work is good pay.

The department of botany will examine specimens of diseased plants free of charge, and give such advice as is necessary for the control of these diseases. Address the Department of Botany, East Lansing, Mich.

SELF-CLEANING CISTERN

By R. J. BALDWIN
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Cleaning the cistern has always been a disagreeable task. Much trouble can be avoided by building of brick and cement with a tight cover over the jug-shaped top. This will keep out all dirt such as leaves, frogs, mosquito larvae, sticks, etc., but still there will be a sediment of soot, dead insects and other things collect in the bottom. If the cistern is built as shown in the diagram the overflow water will carry away all filth from the bottom and the cistern will be kept clean without the attention of anyone. As the water raises above the middle of the bottom, thus carry-

Self-Cleaning Cistern.

ing away the stale water and sediment which have accumulated below.

The intake should be made of heavy galvanized iron pipe and should be well cemented around where it enters the cistern. The drain should be of heavy eaves-trough piping and should take the water from the lowest point on the bottom. The extra expense of such a device is small and when once installed the force of gravity carries the dirt up the drain pipe and relieves us of that disagreeable job every season.

Should Have Droppings Platform.

In order to facilitate cleanliness in the poultry house and to greatly reduce the amount of filth, droppings boards should by all means be used. By using a little precaution in placing the droppings boards so as not to obstruct the light the entire floor space beneath can be utilized for a scratching floor. At least six inches should be allowed between the droppings boards and the roosts, the distance depending entirely upon the arrangement of the roosts. If the platform is made in sections it can be handled much more easily, as it is frequently found desirable to remove them in cleaning. Smooth flooring is the most desirable material to use; when expense is not considered, the cleaning is greatly facilitated if this is covered with tin or sheet iron. The platforms can be cleaned easily with a wide hoe shaped scraper. The droppings can be scraped off the boards into barrels, in which they can be conveniently removed to the land.

Disking Alfalfa Fields.

After alfalfa fields are a year old, and if weeds or grasses have come in, they might be harrowed with a spring-tooth harrow after cutting, and smoothed down with a spike-tooth drag. After the plants become older and tough the field might be gone over in early spring with the disk harrow, taking care not to set it at too great an angle, and then this should be followed by the spike-tooth drag.

Pigeon Raising.

One of the most successful pigeon raisers we know feeds his birds nothing but whole corn.

French pigeon fanciers feed millet with a slight mixture of hemp seed, and also very small peas soaked in water. The feeding is done by hand in many cases.

Although flying about and apparently of mature age, birds may be distinguished as squabs by the squealing noise they make, which is always the call of the squab.

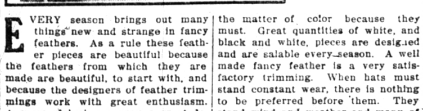
Picturesque Manchuria.

Wheat comes into the mills and to the rivers and railways of Manchuria from almost incredible distances. In the winter, when the rough, ungraded roads are frozen hard and smooth, the natives haul wheat for 200 miles, in some cases by means of a heavy, two wheeled cart drawn by four to eight mules. Long trains of these carts traveling together for protection and companionship at night, can be seen on the main highways all winter and are the most picturesque feature of Manchurian life.

Even the Cooks Were Surprised.

The chef at Mr. Simmonico's was selecting over the unique dinner he cooked recently for James Easton Tower, the editor of Good Housekeeping, his staff and a lot of friends, and figuring on whether he could serve a dinner for 500 banqueters with paper bag cooking as promptly as he had 50. It is said that some of the under cooks were strongly prejudiced against upsetting the traditions of their craft by cooking in paper bags, even for once, and were surprised and delighted at the results obtained.

Fancy Feathers



EVERY season brings out many things new and strange in fancy feathers. As a rule these feather pieces are beautiful because the feathers from which they are made are beautiful, to start with, and because the designers of feather trimmings work with great enthusiasm. A successful piece means a great demand, which spells profit for the manufacturer. Then, the variety and beauty of the markings in natural feathers, and the wonderful changes which can be made in them by processes of bleaching, dyeing and piecing make possible an inexhaustible variety of design.

Makers of fancy feathers govern themselves, in a measure, by the hat shapes which prove to be popular. They follow the lead of fashion in the matter of color because they must. Great quantities of white, and black and white, pieces are designed and are salable every season. A well made fancy feather is a very satisfactory trimming. When hats must stand constant wear, there is nothing to be preferred before them. They stand wind and weather and many of them may even be successfully cleaned with soap and water.

The making of feather pieces is a great industry. All domestic fowls and many wild ones contribute plumage for this purpose. Feathers are so changed by clipping, bleaching, dyeing and by combination with other feathers that only the expert can tell what the original "raw" feathers came from.

JULIA BOTTOMLEY.

WINTER COSTUME

Of lettuce-green cloth and black velvet braided self color; green straw hat with black velvet brim and ostrich feather.

For Chapped Hands.

A remedy for chapped hands taken from an old country doctor's notebook calls for one ounce each of glycerine and aqua rosa, with six drops of carbolic acid.

WHITE HAVING GREAT VOGUE

Striking Novelties Shown in This Most Approved of All Colors for the Winter.

Among the most striking novelties of the season are the gowns and tailored costumes of white corduroy, cloth or serge. While corduroy suits are made with little trimming other than buttons and clever manipulations of the material itself. Little panels in which the thick ribs run horizontally make surprisingly effective decorations. On the cloth costumes corduroy is often seen in collars, cuffs and buttons. Among the more unusual white cloth suits is one with bands of wide black silk braid running straight around the skirt and sleeves and adorning the large collar and revers. One of the handsomest of the white cloth gowns has a plain skirt, with a row of buttons of the same material down the left side. Although the lines of the skirt are of the straightest and it has the appearance in front of being almost extremely narrow, there is a single big pleat in the back that gives it considerable actual width. The waist of the gown is of a coarse hand-made lace, with a wide collar and cuffs of the cloth. There is a rather wide, shaped, stitched cloth belt, which is broken in front by the lace of the waist coming over it. A little satin vest and a stock, cascade and undersleeves of fine creamy lace complete the dress.

Modish Heads Dressed Low.

All modish Parisian heads are dressed low in these days. In fact, little curls are getting nearer the neck all the time. Heads are quite flat all around, the hair well drawn over the ears in tresses merely suggestive of the wave, for the Marcel has passed out long ago in Paris. Plumes, too, are less worn on the head than formerly. Now it is the small cabochon of pearls or colored stones or round knot of mousseline, the best coiffeurs declaring that the hair should be its own garnish.

GIVE THEM DEATH OR STYLE

Merely to Be Clothed Does Not Come Near to Satisfying Ordinary Woman.

But the variety and constant change in the shops, the known extent of the dressmaking business, and the plies of good clothes offered by the second-hand dealers and at the "rummage" sales prove the point to the least careful observer that merely to be clothed does not satisfy many of the feminine contingent. Not to be in the fashion doubtless seems to them a sort of living death. Of course it is all a great mistake.

We are glad to pass along the Republican's stringent rebuke that this yielding to decrees of a few people who make it their concern to create business for the tradespeople and patronage for themselves "is slavery of a sort which commands the respect of nobobdy and the contempt of many," and to forward the plea that "to change this order of things and to cut the bo- that are escapable is a work worthy of the best feminine effort. Many of the modern organizations of women have been groping after a mission, and here is one of the largest importance, which only they can handle effectively. The reform of this tyranny in styles is worthy of the best effort of every woman of sense."

Women must do the thinking and acting for themselves, but the need for it in this direction is plain.

Proper Way to Fit Blouse.

Always begin at the shoulders in fitting a blouse. If the shoulders fit in the proper manner, you need have no fear about the rest of the bodice. Always cut the center front of a bodice on the straight of the material. If necessary, it may be taken in very slightly at the waist when being fitted. But if you slope it much the set of the blouse will be wrong, and this is true even when it is to fit a very stout figure.

Nothing can move the hand of God like the cry of a soul that seeks his help.

JUDGED BY THEIR CLOTHES

Smart Cigar Store Clerk Ready With Apology That by No Means Mended Situation.

Herman Fellner tells this story on himself, according to the New York correspondent of the Cincinnati Times Star. He was in Washington on business recently and met three or four friends on the street. After a moment's chat he beckoned them to come with him. "I'm off the stuff," said he, "but I want to buy you each a cigar."

They happened to be in front of a combination cigar and news stand at the moment. Led by Mr. Fellner, they all trooped in. The clerk hurried to the cigar case to wait upon them. Before Mr. Fellner could indicate his wishes the clerk had slapped a box on the glass case. "Here y' are," said he. "Best dime smoker in town."

Mr. Fellner is sort of fussy about his smokes. He looked at the cigar then shoved the box away. "Have you no other price?" he asked.

The clerk shoved the box in the case. "Sure thing," said he. "My mistake and your treat."

Having pulled off this time-worn witticism, he addressed Mr. Fellner confidentially. "Your clothes sort of fooled me," said he. "You fellers are a pretty well-dressed lot, you know." Then he put another box on the counter. "Here," said he, "is the best nickel smoker in the village."

ECZEMA DISFIGURED BABY

"Our little boy Gilbert was troubled with eczema when but a few weeks old. His little face was covered with sores even to back of his ears. The poor little fellow suffered very much. The sores began as pimples, his little face was disfigured very much. We hardly knew what he looked like. The face looked like raw meat. We tied little bags of cloth over his hands to prevent him from scratching. He was very restless at night, his little face itched.

"We consulted two doctors at Chicago, where we resided at that time. After trying all the medicine of the two doctors without any result, we read of the Cuticura Remedies, and at once bought Cuticura Soap and Ointment. Following the directions carefully and promptly we saw the result, and after four weeks, the dear child's face was as fine and clean as any little baby's face. Every one who saw Gilbert after using the Cuticura Remedies was surprised. He has a head of hair which is a pride for any boy of his age, three years. We can only recommend the Cuticura Remedies to everybody." (Signed) Mrs. H. Albrecht, Box 883, West Point, Neb., Oct. 26, 1910. Although Cuticura Soap and Ointment are sold by druggists and dealers everywhere, a sample of each, with 32-page book, will be mailed free on application to "Cuticura," Dept. 14 L, Boston.

Read It Differently.

A man was charged with stealing a sheep belonging to Sir Garnett Fitz-Maurice.

"I found the poor creature strayin' on the road, me lord, an' was just drivin' it home," pleaded the accused.

"Can you read?" asked his lordship.

"A little, me lord."

"You could not have been ignorant, then, that the sheep belonged to your landlord, Sir Garnett Fitz-Maurice, as his brand, 'G. F. M.,' was on the animal."

"True for ye, me lord, but sure I thought the letters meant 'Good Fat Mutton!'"

Modern Methods?

Moliere had written many plays to ridicule doctors and medicine. Louis XIV heard that the author had, however, a doctor at his service since he became famous and well-to-do, so the King one day called upon Moliere and said to him:

"I have heard, Moliere, that you have a physician. What is he doing to you?"

"Sire," answered the author of the Malade Imaginaire, "we chat together, he writes prescriptions for me, I don't take them and I am cured!"—Life.

Important to Mothers

Examine carefully every bottle of CASTORIA, a safe and sure remedy for infants and children, and see that it

Bears the Signature of *Chas. H. Fletcher*

In Use For Over 30 Years.

Children Cry for Fletcher's Castoria

A girl can get more by pouting during courtship than she can by shouting after marriage.

Tightness across the chest means a cold on the lungs. That's the danger signal. Cure that cold with Hamlins Wizard Oil before it runs into Consumption or Pneumonia.

A man can get his wife's attention by talking in his sleep.

Pleasant, Refreshing, Beneficial,

Gentle and Effective,

NOTE THE NAME

CALIFORNIA FIG SYRUP CO.
in the Circle,
on every Package of the Genuine.

DO NOT LET ANY DEALER DECEIVE YOU.

MINIATURE PICTURE OF PACKAGE.

SYRUP OF FIGS AND ELIXIR OF SENNA HAS GIVEN UNIVERSAL SATISFACTION FOR MORE THAN THIRTY YEARS PAST, AND ITS WONDERFUL SUCCESS HAS LED UNSCRUPULOUS MANUFACTURERS OF IMITATIONS TO OFFER INFERIOR PREPARATIONS UNDER SIMILAR NAMES AND COSTING THE DEALER LESS; THEREFORE, WHEN BUYING,

Note the Full Name of the Company

CALIFORNIA FIG SYRUP CO.

PRINTED STRAIGHT ACROSS, NEAR THE BOTTOM, AND IN THE CIRCLE, NEAR THE TOP OF EVERY PACKAGE, OF THE GENUINE. REGULAR PRICE 50c PER BOTTLE; ONE SIZE ONLY. FOR SALE BY ALL LEADING DRUGGISTS.

SYRUP OF FIGS AND ELIXIR OF SENNA IS THE MOST PLEASANT, WHOLESOME AND EFFECTIVE REMEDY FOR STOMACH TROUBLES, HEADACHES AND BILIOUSNESS DUE TO CONSTIPATION, AND TO GET ITS BENEFICIAL EFFECTS IT IS NECESSARY TO BUY THE ORIGINAL AND ONLY GENUINE, WHICH IS MANUFACTURED BY THE

CALIFORNIA FIG SYRUP CO.

Rayo Lamps and Lanterns

Scientifically constructed to give most light for the oil they burn.
Easy to light, clean and rewick.
In numerous finishes and styles, each the best of its kind.
Ask your dealer to show you his line of Rayo Lamps and Lanterns, or write for illustrated booklets direct to any agency of the

Standard Oil Company
(Incorporated)

It Was No Porterhouse.

"How did you find your steak, sir?" inquired the expectant waiter, as he held out his hand to receive a tip.

"Only by dogged perseverance," replied the guest. "The chef hid it under a Brussels sprout to keep it hot."—Youth's Companion.

The defeated candidate is surprised at the number of misguided men who failed to vote for him.

Dr. Pierce's Pleasant Pellets regulate and invigorate stomach, liver and bowels. Sugar-coated, tiny granules, easy to take. Do not gripe.

The easiest thing we do is to convince ourselves that we are overworked—but the family is skeptical!

Mrs. Winslow's Soothing Syrup for Children teething, softens the gums, reduces inflammation, allays pain, cures wind colic, 25c a bottle.

As a man grows older he sees something in himself every day that is calculated to make him a little less conceited.

Make the Liver Do its Duty

Nine times in ten when the liver is right the stomach and bowels are right.

CARTER'S LITTLE LIVER PILLS

gently but firmly compel a lazy liver to do its duty.

Cure Constipation, Indigestion, Sick Headache, and Distress After Eating.

SMALL PILL. SMALL DOSE. SMALL PRICE.

Genuine must bear Signature

Brent Good

Readers of this paper desiring to buy anything advertised in its columns should insist upon having what they ask for, refusing all substitutes or imitations.

W. N. U., DETROIT, NO. 51–1911.

Housework Drudgery

Housework is drudgery for the weak woman. She brushes, dusts and scrubs, or is on her feet all day attending to the many details of the household, her back aching, her temples throbbing, nerves quivering under the stress of pain, possibly dizzy feelings. Sometimes rest in bed is not refreshing, because the poor tired nerves do not permit of refreshing sleep. The real need of weak, nervous women is satisfied by Dr. Pierce's Favorite Prescription.

It Makes Weak Women Strong and Sick Women Well.

This "Prescription" removes the cause of women's weaknesses, heals inflammation and ulceration, and cures those weaknesses so peculiar to women. It tranquilizes the nerves, encourages the appetite and induces restful sleep.

Dr. Pierce is perfectly willing to let every one know what his "Favorite Prescription" contains, a complete list of ingredients on the bottle-wrapper. Do not let any unscrupulous druggist persuade you that his substitute of unknown composition is "*just as good*" in order that he may make a bigger profit. Just smile and shake your head! Dr. Pierce's Pleasant Pellets cures liver ills.

PERFECTION SMOKELESS OIL HEATER

Always ready for use. Safest and most reliable.
The Perfection Smokeless Oil Heater is just like a portable fireplace.
It gives quick, glowing heat wherever, whenever, you want it.
A necessity in fall and spring, when it is not cold enough for the furnace. Invaluable as an auxiliary heater in midwinter.
Drums of blue enamel or plain steel, with nickel trimmings.
Ask your dealer to show you a Perfection Smokeless Oil Heater, or write to any agency of the

Standard Oil Company
(Incorporated)

Be Wise in Time

You cannot keep well unless the bowels are regular. Neglect of this rule of health invites half the sicknesses from which we suffer. Keep the bowels right; otherwise waste matter and poisons which should pass out of the body, find their way into the blood and sicken the whole system. Don't wait until the bowels are constipated; take

BEECHAM'S PILLS

They are the finest natural laxative in the world—gentle, safe, prompt and thorough. They strengthen the stomach muscles, and will not injure the delicate mucous lining of the bowels. Beecham's Pills have a constitutional action. That is, the longer you take them, the less frequently you need them. They help Nature help herself and

Keep the Bowels Healthy
Bile Active & Stomach Well

In Boxes 10c. and 25c. with full directions

Why Rent a Farm

and be compelled to pay to your landlord most of your hard-earned profits? Own your own farm. Secure a Free Homestead in Manitoba, Saskatchewan or Alberta, or purchase land in one of those districts and make a profit of $10,000 to $12,000 an acre every year.

Free homestead of 160 acres and pre-emption of 160 acres at $3.00 per acre has recently changed hands at $25.00 per acre. The crops grown on these lands warrant the advance. You can

Become Rich

by cattle-raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta.

Free homestead and pre-emption areas, as well as land held by railway and land companies, will provide homes for millions.

An equable coal, healthful climate, splendid schools and churches, railways in every direction. For literature, maps, etc., apply to nearest Canadian Government Agent, or to

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or C. A. Laurier, Marquette, Michigan
Please write to the agent nearest you

PUTNAM FADELESS DYES

Color more goods brighter and faster colors than any other dye. One 10c package colors all fibers. They dye in cold water better than any other dye. You cannot dye any garment without ripping apart. Write for free booklet—How to Dye, Bleach and Mix Colors. MONROE DRUG COMPANY, Quincy, Ill.