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California State Board
of Forestry

Fire Prevention
Day
1914



Class _____

Book _____

CALIFORNIA STATE BOARD OF FORESTRY

THE GOVERNOR HAS PROCLAIMED
APRIL 18, 1914

FIRE PREVENTION DAY

— A LESSON —



WINTER AND SPRING WORK TO PREVENT SUMMER FIRES.

14-31133

APRIL 18



1914

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CALIFORNIA STATE BOARD OF FORESTRY.

HIRAM W. JOHNSON ----- *Governor*
FRANK C. JORDAN ----- *Secretary of State*
U. S. WEBB ----- *Attorney General*
G. M. HOMANS ----- *State Forester*

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ed. c. May 1914

SUGGESTIONS TO TEACHERS.



ARBOR DAY has passed and in observance of its true purpose the school children of California have been impressed with the real value of a tree as an individual and of many trees as a forest. The tree carefully planted in the school yard has been placed there and will be protected for the future. So the spirit of Arbor Day remains. Nature enjoys 365 arbor days each year; but, what is being done to develop and protect the thousands of little trees she so faithfully endeavors to offer? They stand alone remote from cities and towns, born to struggle against many a foe, a humble struggle against wind and storms that the children of to-day may in years to come find shelter and pleasure under their branches; that the homes of years to come may be built of wood as we build our homes to-day.

The greatest enemy of our forests is fire. Many of the forest fires are preventable, but the State has done nothing to insure their prevention. We may delay in a futile attempt to convince ourselves that the situation is not so serious as annual figures of loss indicate; nevertheless, the problem of forest protection is one that actually and logically confronts the State. The spirit of Arbor Day will fail to stand the test of consistency if we neglect our duty of protecting the forests planted by nature. True consistency must find expression in a living endeavor to teach our school children how to use and conserve that with which we must learn to leave them provided, namely, the forests.

The necessity of fire prevention is made obvious by the Governor's proclamation of April 18, 1914, as Fire Prevention Day. One aim of the proclamation is to decrease the fire risk throughout the State by emphasizing the advisability of being careful with fire during the summer months, and of making improvements which will prevent the spread of fires, both in forests and in chaparral and grass.

That the spirit may be carried out to the fullest extent the exercise has been prepared with the hope that each student will be permitted to get the substance of the lesson. Effort has been made to present the most important phases of protective work. Since it is suggested that two consecutive class periods will be devoted to this subject, it might be well to devote the first hour to a study period during which time the students will read the exercise carefully preparatory to questions which the teacher may wish to ask in the following period. A few pupils may be asked to give in their own words what the lesson teaches. The teacher may present to the students the substance of the lesson, with

added suggestions, during the second hour, impressing upon them the importance of fire prevention and its inevitable influence on the preservation of forests and human lives.

A series of prizes is offered by officers of the State Board of Forestry for the best titles for the picture on page 7. The plate represents first, a woodland area typical of many of our valuable pine forests; the second, a forest fire, caused probably by carelessness—nothing is done in California to stop these fires; and the third explains itself, an area fire swept, desolate and of practically no value. Two sets of prizes are offered. Two first prizes of \$5.00; two second prizes of \$3.00; and two third prizes of \$1.00 will be paid. One set of prizes will be awarded for the three best titles from the seventh, eighth and ninth grades; the other set for the three best titles from the tenth, eleventh and twelfth grades. The competition will close April 30th, and all titles should be in the State Forester's office by the afternoon of the same date. The full name, address, school and grade of the student must accompany the title. The word "Title" must appear on the upper left corner of each envelope, and the latter addressed to the State Forester, Sacramento, California. Credit will be given for neatness, handwriting, and letter construction.

STUDENTS' APPEAL FOR PROTECTION OF THEIR FORESTS.

If, after the lesson, certain students feel inclined, they may direct a letter to their respective senators and assemblymen, urging state protection of their forests, streams, hunting grounds, and watersheds. The children should feel that they have a right to expect the forests to be protected for them. The perforated blank sheets in the back of this pamphlet may be used for this purpose.

THE FORESTS OF CALIFORNIA.

Our State extends, in a direct north and south line, approximately 750 miles and from sea level we rise to the highest point in the United States, Mt. Whitney, which is 14,898 feet in elevation. The State is truly a remarkable one, in that there are to be found within its borders so many variations of climate, so many contrasts in scenery from ocean shore to snow-capped mountain peaks. Just as different tribes of people adapt themselves to climate and altitude, so each forest tree finds one climate and one range of elevation best suited to its growth. One kind of tree will prefer the high and steep slopes of the mountains, while another species will not grow well unless it is planted in a wide fertile valley or near the seashore. Because of this there are different types of forests in California. A broad division might be made as follows:

Redwood Forests.

These forests are limited in their extent. The redwood trees, which are cut for lumber, are found only on a narrow strip of land along the California coast from Monterey County to the Oregon line. These forests like the damp ocean air and require quite a bit of rain. Forest

fires do not do very much damage to redwood forests until after logging; then many dead branches are on the ground and become so dry during the summer that fires sweep through them and often kill the little new trees that are coming up to replace those taken away by the lumbermen.

Oak Forests.

There are many different kinds of oak trees in California. One of the most beautiful oaks is the one called Valley Oak. Years ago there were large forests of this species in the two great valleys of the State. Many of the trees have been cut down and now there are comparatively few left, scattered here and there.

Pine and Fir Forests.

These are very large and valuable forests and are found generally in the mountain and foothill regions. Pine forests suffer from fire each year, and some plan must be adopted to reduce the danger of fire destroying the old as well as the young trees. Very often there are many kinds of bushy plants growing under the big trees, and when these catch fire the flames are so hot that the trees themselves are burned. The most valuable tree of our State is the sugar pine, and soon there will be very few of them left. Every summer thousands of little sugar pine trees are killed by fires which might be prevented. If this destruction is allowed to continue, there will be no sugar pines left by the time the children of to-day grow up; there will hardly be any valuable forests left unless we provide for them.

Chaparral Forests.

Thousands of acres of mountain and hill land in the State are covered with "brush." This vegetation consists of many different forms of low growing trees and shrubs. Manzanita, buckthorn, several varieties of sage, scrub oak, lilac, and a great many others go to form what we collectively term chaparral forests.

WHAT OUR FORESTS MEAN TO US.

A country without forests is indeed poor. Forests not only provide us with fuel and lumber, but indirectly they affect every industry. The wild animals find their food and shelter in the woods. Campers would find little pleasure if they were forced to spend their vacation in a country without trees and streams. We all like the woods; there is a charm in the rippling brook and a delight in the music of the wind through the trees. When summer comes these pleasures call us and invite us to become a part of them. What fairy tale is worth telling which has no forest mystery? One of the oldest definitions for a forest was given by Manwood in 1598. He called a forest "a certain territory of woody grounds, fruitful pastures, privileged for wild beasts and fowls of the forest, chase and warren, to rest and abide in, the safe protection of the King for his princely delight and pleasure." Still recognizing the true value of the forests the latest revised *Encyclopædia Britannica* gives the following definition: "A forest is an area which is for the most part set aside for the production of timber and other forest produce, or which is expected to exercise certain climatic effects, or to protect the locality against injurious influences."

THINGS THAT FORESTS GUARD AGAINST.

1. The woods provide grateful shade in summer from the heat of the sun.

2. In winter, when fierce winds and storms come, the forests serve to protect against damage. They act as great wind breaks and provide shelter for the wild animals.

3. When hillsides are bare and without trees the rain often washes great ditches which become so numerous that the land is useless to farmers. This action is called "erosion." Trees and shrubs send their roots into the ground and tend to keep the water back and allow it to sink into the ground instead of rushing off on the surface.

4. In the same manner forests often prevent floods and torrents in winter. The roots act as filters and permit the rain water to pass through the soil slowly. Because of this springs are often regulated and streams flow steadily all through the year. This is much better than to have a rushing muddy torrent during the winter and a dry sandy creek bed all through the summer. A watershed covered with trees will discharge a clearer, and far more regular, stream than one that is unforested.

THE NEED OF PROTECTING OUR FORESTS.

So, as long as men need lumber for building their homes, hill land for their farms, protection against summer heat and winter cold, streams for water power and rivers for navigation, the work of protecting the forests will be a duty of every man, woman and child. Keeping fire from destroying the forests in many cases is keeping it from burning our homes, for many of us live near the woods or have brush and forest trees all around our houses. To prevent fire is by all means the best way to control it. Fire, damaging insects, wasteful use of lumber and logs, neglect and several other agencies are enemies of the forests. Fire is the most dangerous. We can learn to be frugal in our use of the forests, but a forest fire has no conscience.

HOW FOREST FIRES START.

Forest and brush fires may start from a hundred different sources. The main causes are:

RAILROADS.

LIGHTNING.—This is one cause which we can not prevent, but we can prevent the fires from becoming large ones.

INCENDIARY.—These fires are set on purpose and the penalty for lighting such fires is very severe.

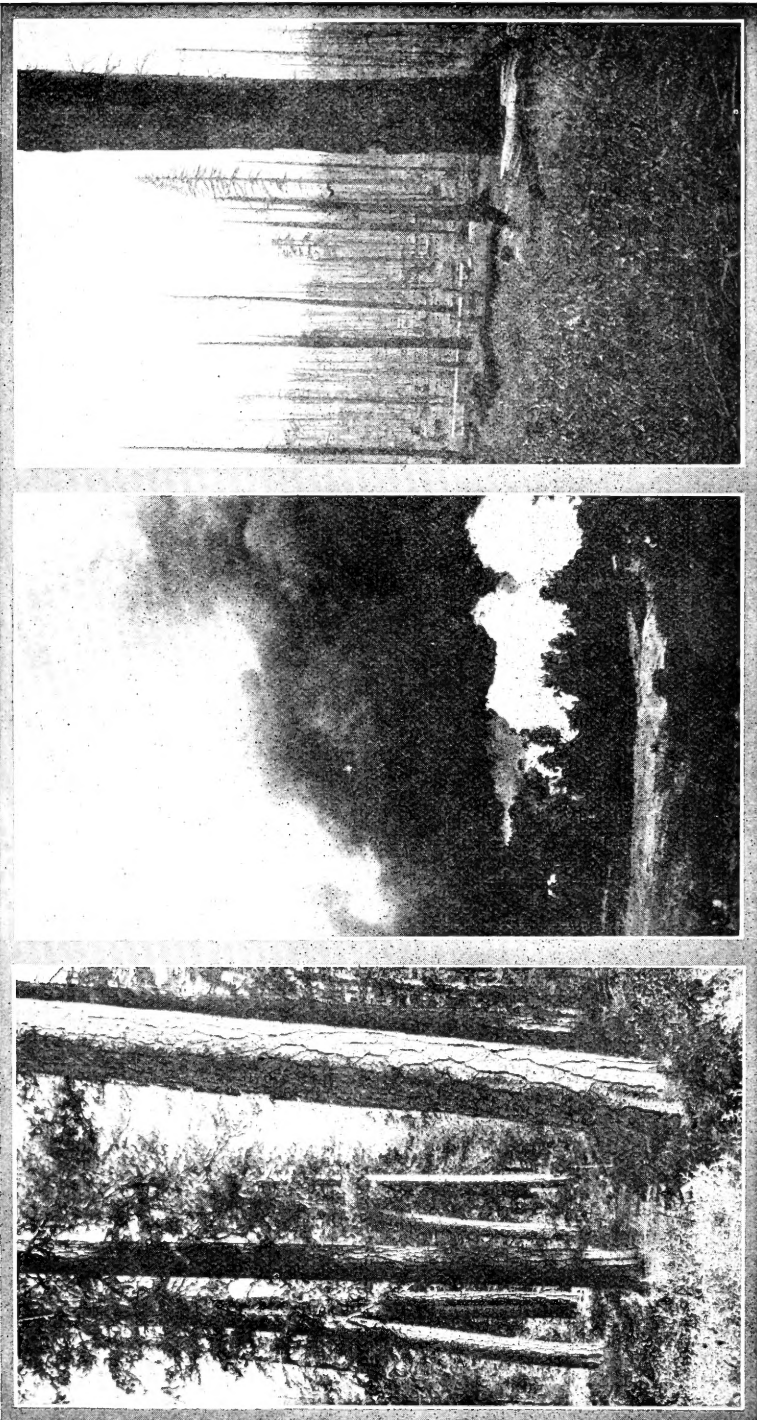
BRUSH BURNING.

CAMPERS AND HUNTERS.—This is a very important class; picnickers are also included.

SAWMILLS.—Sparks from sawmill stacks start fires at times.

UNKNOWN.—Many fires can not be traced to their start and no one knows how they begin.

MISCELLANEOUS.—All sorts of causes not placed under the other headings are included in this class. Fires starting from electric wires, for example, would be classed as "miscellaneous."



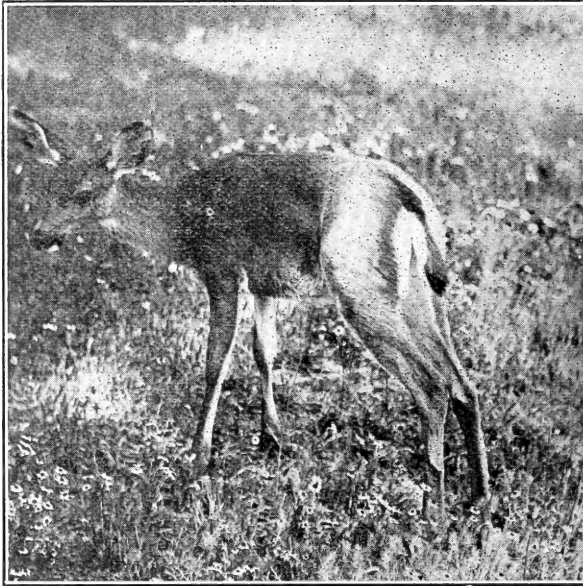
This picture has no title.

Prizes will be given for the best titles. No title must exceed forty-five words. Write plainly in ink. Titles must be in your own words. Ask the teacher about it.

HOW FIRES DO DAMAGE.

When a fire gets away and burns through a forest, even if the big trees are not killed, the little ones are, and often the big ones are injured so that they will always be scarred. A grass fire frequently kills little trees that are in its path by scorching the limbs and stems or by heating the roots to such a point that they fail to take in nourishment any longer. The tender bark at the base of the trees also may be baked—this will result almost always in killing the trees.

Large forest trees are killed by fire when there is sufficient under-



A little care will prevent the burning to death of many of our wild animals. Protecting the forests means also the protection of all sorts of animal and bird life.

brush to make a very hot flame, or when the wind is high and carries the fire up into and through the tops of the trees.

When pasture grass burns, the soil is injured by being baked and also by being robbed of certain chemical elements which nature intends should be returned in some way.

When brush is burned on a whole mountain the slopes are left bare and "erosion" will very likely take place when the next heavy rains come. Quite often wild animals get caught in brush fires, and, not knowing where to run for safety, are burned to death. Many deer and hundreds of rabbits lost their lives during the fires last summer.

When a fire starts no one is able to say just how far it will spread. Last September a little fire started in some brush; few people thought

anything about it, but before it was out hundreds of men were called to fight it. A woman, living in a small house in the woods, saw the fire coming and ran, with her little daughter, into the cellar. The house caught fire and both mother and little girl were burned.

So fires do destroy human lives, forests, homes, fences, little trees (which should be the forests of the future), farms, and many other valuable things. Do you think it is worth while being careful? Is it not worth our time to remember to prevent fires starting?

One careful thought may prevent untold damage and hours of bitter regret.

HOW TO FIGHT FOREST FIRES.

Grass Fires.

These can sometimes be put out by using wet sacks. If the wind is blowing hard it will be difficult to beat the flames out, and the best way, in this case, is to scrape and clear a trail in front of the fire and try to keep the flames from jumping across it. Never back-fire unless it is absolutely necessary. Remember that a back-fire set to save one house may burn up many others if it is poorly planned. Make clearings around your homes before a fire threatens you and you won't regret it. Put a little grass fire out as quickly as possible because it will spread rapidly if neglected and will soon become a raging wall of flames. Hoes, rakes, yard-brooms, wet sacks and green boughs are the best things to use in putting out a grass fire.

Timber Fires.

These can best be fought by preventing them. When a fire is burning through the tops of trees it is very hard to handle. The work of controlling such a fire calls for a large number of men, and firebreaks must be cut some distance in front of the flames. When dead brush and litter is cleared away from under the trees there will be little danger of a timber fire spreading, under ordinary wind conditions. In fighting a timber fire it is sometimes necessary to dynamite the standing snags to prevent their scattering sparks. Axes, saws, brush-hooks and shovels are always useful in fighting a timber fire.

Brush Fires.

Make a firebreak—that is, a cleared trail from 10 to 50 feet wide—through the brush, preferably along a ridge, before a fire threatens you. If a fire does come, guard the firebreak or a road in front of the fire and try to keep the flames back. Quite often a very good back-fire can be started from just such a firebreak. Shovels and brush-hooks are the most valuable tools in the brush, but quite frequently axes, hoes and rakes can also be used to advantage.

Always call a firewarden or some grown men to help you when a fire gets away. Don't wait and wonder whether or not you can put the fire out alone unless you are sure that you can. Do as the fire will do if it gets a chance—**ACT QUICKLY.**



There is a great deal of dead brush and many small dead trees in our forests. Such material burns readily and a fire once started in it is difficult to control; it kills or injures many of the living trees and destroys most of the smaller ones. The picture on the cover shows such material being piled in the open where it will be burned during the wet season.



This picture was taken in a forest where the conditions were similar to those shown above; but here the dead brush and trees have been burned and the live trees are now comparatively safe from fire. A fire lane has been built to keep out fires starting on areas that have not been cleared up.

WHAT EVERY STUDENT SHOULD KNOW.

1. The total acreage of land surface in California is 99,898,880 acres. Texas is the only state larger than California.
2. There are approximately 20,604,000 acres of forest land in California.
3. There are nineteen national forests in the State representing a total area of 12,104,000 acres.
4. There are approximately 12,786,306 acres of merchantable forests in California.
5. There are 8,500,000 acres of these merchantable forests privately owned.
6. California has no state forests; several states have.
7. The forests outside the national reserves are very poorly protected from fire because California has failed to let the people make a law that is necessary.
8. Forest fires result in the loss of human life, public improvements, timber, little trees that would some day be big ones, game, homes, orchards, live stock, forage and plants from which bees get their honey.
9. The length of the fire danger season in California is from May 15th until October 15th. This means that everything is so dry during this period that fires will easily start unless everyone is careful to prevent them.
10. The six rules which should always be remembered are:
 - (1) Be sure your match is out before you throw it away.
 - (2) Knock out your pipe ashes or throw your cigar or cigarette stump where there is nothing to catch fire. Better yet—don't smoke.
 - (3) Don't build a camp fire any larger than is absolutely necessary. Never leave it even for a short time without putting it **out** with water or dirt.
 - (4) Don't build a camp fire against a log or tree. Build a small one where you can scrape away the needles, leaves or grass from all sides of it.
 - (5) Don't build bonfires. The wind may come up at any time and start a fire you can not control. **Never play with matches.**
 - (6) If you discover a fire, get word of it to the nearest State Firewarden or Forest Officer or the land owner as quickly as you possibly can.Learn and remember and practice these rules and you will be a valuable citizen.
11. California has not set aside a single dollar for forest protection. The United States government wants to help us but will not until our State does something to help herself.
12. Every one can help by urging that California as a State adopt a fire protection plan.
13. The State must pass the most suitable kind of forestry laws and provide enough money to work out the laws.
14. It is especially important to keep fire patrols in the woods during the summers.
15. During 1913 in California 61,812 acres of merchantable forests were burned over. This represents a money loss of approximately \$124,059.

16. The total money loss occasioned by forest fires in 1913 in California, including damage done to houses, timber and pastures, amounted to \$511,077. This amount of money is enough to pay for protecting the forests for several years and we have allowed it to go up in smoke.

WHAT WE CAN DO TO PREVENT FIRES.

To-day let us plan some way in which we will make it harder for a fire to start in our community during the coming summer months.

Those of us who live near brush and forests can prevent possible danger by carefully cleaning away the dry grass and inflammable material from around our homes.

When we see campers starting out for their vacation let us not forget to warn them to be careful with their camp fires and matches.

When we go on a picnic let us watch to see that the fire, if one is lit, is safely placed, carefully watched and entirely put out before leaving.

Let us never build a fire to burn brush or rubbish unless there is plenty of open bare land all around the pile that is to be burned.

We should never think of building any bonfire or even a camp fire on a very windy day. If a camp fire is necessary on a windy day let us take all the more care with it and put it entirely out with water before leaving it.

Don't forget that sensible people **never** play with matches.

Boys! Don't "smoke out" bees unless you intend to "stay with it" to put the fire out.

It is dangerous to throw firecrackers into dry grass. Let us leave the fireworks at home when we go camping or on Fourth of July picnics.

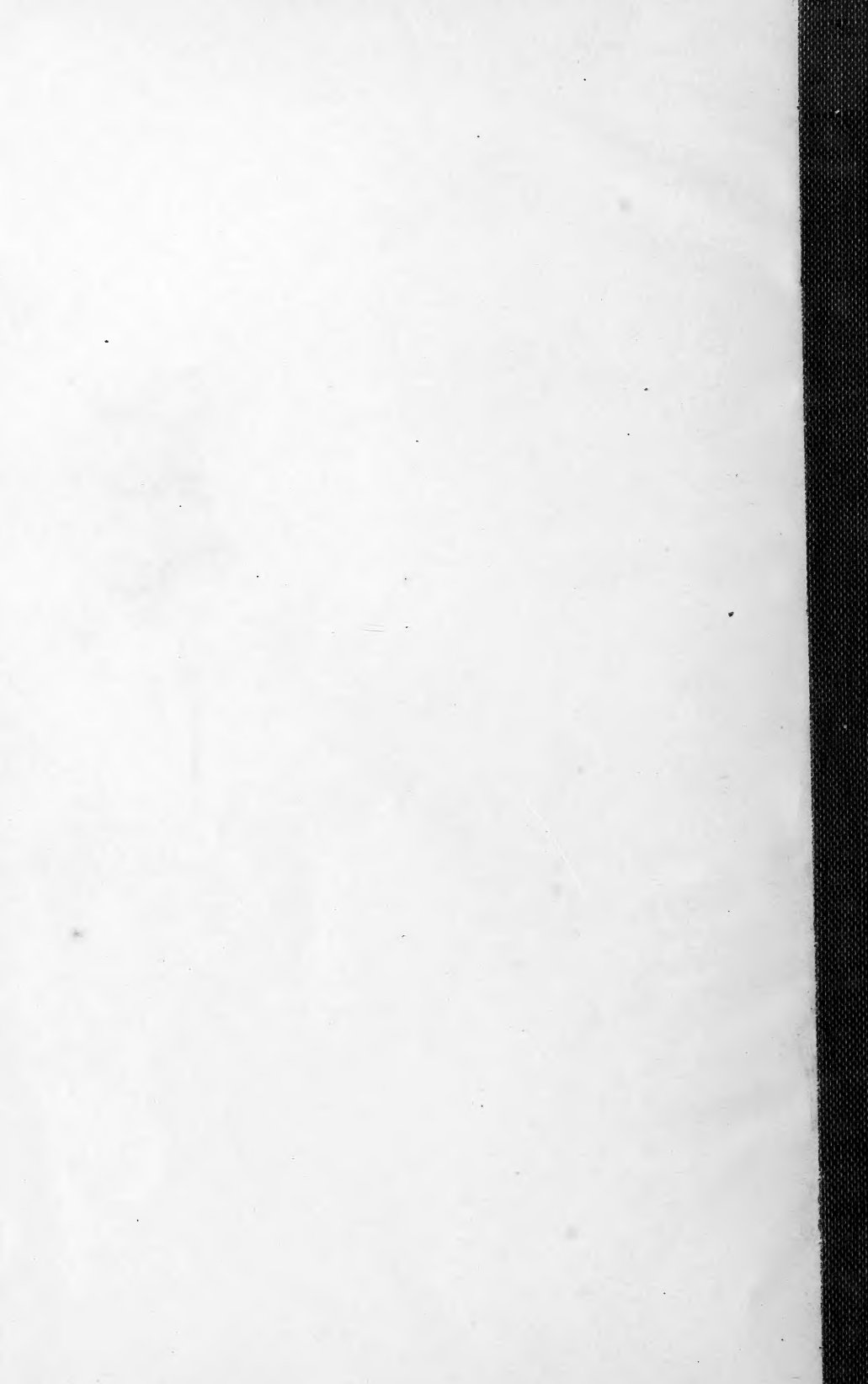
Don't watch a little grass fire because it looks pretty. Put it out.

Take this pamphlet home and show it to your parents and ask them to help too.

Never forget that **big fires will always be prevented if we are always careful with small ones.**







Gaylord Bros.
Makers
Syracuse, N. Y.
PAT. JAN. 21, 1908

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