thereto there shall be paid to township clerks mileage at the rate of ten cents per mile for each mile traveled to and from the place of fire. Said allowances shall be paid by the state fire marshal out of any funds appropriated for the use of the office of said state fire marshal.

1655. Annual appropriation for expenses and fees. There is hereby appropriated out of any money in the state treasury not otherwise appropriated the sum of seven thousand five hundred dollars annually, or so much thereof as may be necessary for the purpose of paying the expenses and fees authorized by this chapter. The said fire marshal shall keep on file in the office an itemized statement of all expenses incurred by his department.

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State of Iowa 1929

### EIGHTEENTH ANNUAL REPORT

OF

# STATE FIRE MARSHAL FOR THE YEAR 1928

JOHN W. STROHM State Fire Marshal

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Published by THE STATE OF IOWA Des Moines

### LETTER OF TRANSMITTAL

Des Moines, Iowa, January 31, 1929.

### HON. JOHN HAMMILL, Governor of Iowa.

SIR: In compliance with the provisions of law I have the honor to submit herewith the Eighteenth Annual Report of the affairs of this office covering the period beginning January 1, 1928, and ending December 31, 1928, both dates included.

> JOHN W. STROHM, State Fire Marshal.

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#### FIRE PREVENTION WEEK PROCLAMATION

#### To the People of Iowa:

From year to year many lives and much property are lost by fires. During the year of 1927, the Nation's loss was \$478,245,-620.00; Iowa, with 5,197 fires, contributed \$7,211,831.00 to this great total. This makes a loss of wealth to the state and nation that cannot be replaced or restored. In the past fifty years, America's population has increased 150 per cent but her relative fire loss has increased 686 per cent; probably three-fifths of this great loss can be attributed solely to carelessness and never should have been sustained. To effect a saving and protection of lives and property fire prevention practice and education are unquestionably necessary. Although the National Ash Heap is constantly increasing in size it has received a most noticeable reduction in practically every locality where fire prevention has been persistently practiced.

Believing, therefore, that every week must be a fire prevention period, that this appointed week should be a time for greater zeal and endeavor,—the outstanding frugal and patriotic duty of every citizen, I do hereby proclaim

OCTOBER 7TH TO 13TH AS FIRE PREVENTION WEEK and I recommend and most earnestly urge that this week be universally observed by public officials, civic organizations, educational institutions and private individuals, to the end that life may be protected and property conserved for the rightful use of mankind. I also request that a portion of the day, Friday, October 12th, be devoted to fire prevention educational exercises, especially in schools.

Realizing the splendid power of appeal and confidence endowed in the school, pulpit, press and radio, I particularly ask their full support in advancing the purpose for which the day and week are designated.

(SEAL)

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Iowa.

Done at Des Moines, this 12th day of July, A. D. 1928. By the Governor

JOHN HAMMILL, Governor.

ED. M. SMITH, Secretary of State.

### FIRE PREVENTION WEEK PROCLAMATION

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#### STATE FIRE MARSHAL

Appointed by the Governor. Term, Four Years. Expires July 1, 1931.

Office	Name	Legal Residence	Birthplace
Fire Marshal Deputy Assistant Deputy Assistant Deputy Stenographer and Clerk.	Sam R. Starr	Dubuque Sigourney	Illinois Illinois Iowa

The entire expense of the State Fire Marshal's office is paid out of the general revenues of the state.

Dome at Dis Molnes, this 12th day of July, A. D. 1928.

JOHN HAMMALL (FOUNDAMOR

### ANNUAL REPORT OF STATE FIRE MARSHAL

FOR YEAR 1928

NUMBER OF FIRES REPORTED 5,232, TOTALING A LOSS OF \$6,141,522; A REDUCTION OF \$1,030,309 OVER THE YEAR 1927 ALTHOUGH THERE WERE 35 MORE FIRES REPORTED DURING 1928 THAN THERE WERE DURING THE PREVIOUS YEAR. DURING 1926 THERE WERE 5,665 FIRES REPORTED WITH A LOSS OF \$7,984,007.

Education in fire prevention and greater efficiency in fire fighting no doubt were the chief factors entering into the decided reduction of fire losses for 1928. There were fewer real large fires.

In the eighteen largest cities there were 2,731 fires or 112 more than in 1927, while the total loss was \$1,497,163 or \$487,526 less than in the previous year. While the 1928 increase in fires was more than contributed by the cities, yet these same eighteen cities are credited with nearly one-half of the state's fire reduction.

The heaviest fire loss for 1928 was \$500,000, which was sustained in a fire that occurred at Belmond, Wright county.

Cities showing greatest decrease in fire losses over 1927 were: Cedar Rapids, Keokuk, Mason City and Sioux City. Council Bluffs, Clinton, Dubuque, Fort Madison, Fort Dodge, Oskaloosa, Ottumwa and Waterloo also had very substantial decreases.

While Des Moines reported 13 more fires than in 1927 the loss increase was \$242,965. This increase was the result of three large fires totaling \$273,984 or \$31,019 more than the total increase over the preceding year.

In the eighteen largest cities during 1926 the average loss on each fire reported was \$1,000.17; in 1927, \$757.80, while during 1928 it was only \$548.22. With 443 fires Sioux City had a low average of \$133.56.

Table No. III shows two fires caused by spontaneous combustion in sugar causing a lost of \$500,303.

Again sparks from flues lead in the origin of fires with a total of 1,711 and a loss of \$723,818 as compared with 1,683 and a loss of \$806,798 in 1927. The greatest loss of property was in farm dwellings at \$1,355,609 compared with \$1,403,078 last year. The loss to town dwellings was \$907,669 against \$1,331,875 in 1927. 318 fires were caused by defective flues with a loss of \$489,807.

During 1928 match carelessness, smokers' carelessness and children with matches caused 352 fires with a loss of \$102,135. More fires than in 1927 but with a considerable smaller loss.

Farm losses were again high during the past year. The largest were dwellings \$1,355,609, barns \$652,616, corn cribs and granaries \$46,058. Spontaneous combustion in hay and straw totaled a loss of \$102,292.

There was considerable of an increase both in the number of fires and losses by lightning—123 fires with a loss of \$256,917. Only 8 of these fires were on rodded buildings.

Again during 1928 there was an average of fourteen fires for every day during the year causing an average daily loss of \$1,682 throughout the state. During 1927 the average daily loss was \$1,978, thus this invisible tax was very materially reduced.

Fire either damaged or destroyed 2,684 town dwellings at a loss of \$907,669. During the year previous the number was 2,698 and the loss \$1,331,875, which accounts for \$424,206 or 40% of the decrease in losses.

Notwithstanding all that has been said about electric irons with current left on there were seven more such fires than last year with an increased loss of \$10,647.

We desire that you read this report very carefully, especially Tables II and III.

### STRUCTURES IN WHICH THE MOST DISASTROUS FIRES

OCCURRED		
	Fires	Loss
Dwellings-Farm	498	\$ 1,355,609
Dwellings-Town	2,684	907,669
Stores	268	828,974
Darus—rarm	249	652,616
Warehouses and storage	58	643,028
Factories	50	200,287
Houses, apartments	97	176,229
Elevators and seed houses.	15	151,209
Foundries	5 0 50	97,606
Chicken brooders and poultry houses	95	87.297
Garages-Private	176	86,579
Garages—Public	51	80,392
Hotels	39	77,495
Shops, various kinds	77	76,983
Office and office buildings	42	73,625
Churches	18	68,025
Barns-Town	96	65,730
Restaurants	56	51,311
survey attended. Consideral all corrections offer rear and	201 322	

wellings at \$1,355,000 compared with \$1,401.078 last re-

#### STATE FIRE MARSHAL

#### CAUSES SHOWING THE GREATEST LOSS BY FIRES

	Fires	Loss
Unknown	862	\$ 2,330,073
Sparks from flues		723,818
Combustion-sugar	2	500,303
Defective flues	318	489,807
Defective and overheated heating plants	180	368,553
Adjoining	169	293,459
Lightning—not rodded	115	242,647
Defective electric wiring	155	222,284
Combustion-hay	47	102,292
Incendiary	42	96,641
Combustion-rags and rubbish	81	64,209
Defective oil burners, domestic	23	56,088

LARGEST FIRES OCCURRING DURING 1928, LOSS \$50,000 OR OVER

Belmond-December .	1.65								 																	\$500,000
Des Moines-October			1.1	4.	2				 	ι.	1.	2.														104,039
Marshalltown-January	9			a.	• •	*	241		 						en.									 -	1.5	92,350
Des Moines-January					• •	• •	•	• •	 • •	* 1				• •					. •	•	1					91,92
February																										12 Ch 10 Ch 1
Marshalltown-January																										
Jewell-August		• •			• •						• *			*.*		* *			1		1	*		* 1		57,50
Humboldt-January .	1.0				4.9		5.0	6.6	÷ •			6.1	. 6		Èx.	• }	16	*	69	-	• •		• •			03,004

#### DEATHS FROM FIRES IN IOWA

During 1928 there were 82 deaths reported as a direct result of fire. Of this number 26 were men, 23 were women and 33 were children. The Registrar of Vital Statistics of the State Board of Health rendered very valuable assistance in compiling this list.

A COMPARISON OF FIRE LOSSES BY MONTHS FOR 1927 AND 1928 1927 1928

	No.		No.	
	Fires	Loss	Fires	Loss
January	768	\$ 978,753	754	\$ 1,095,070
February	600	775.341	584	542,072
March	509	710,692	680	572,462
April	342	431.034	561	495,283
May	000	439,932	470	409,531
June	218	315,278	215	329,085
July	364	496,427	224	275,292
August	284	743,214	258	296,842
September	275	404,920	298	444,144
October	324	396,706	326	396,716
November	435	409,206	341	290,786
December	750	1,110,328	521	994,239
Totals	5,197	\$ 7,211,831	5,232	\$ 6,141,522

A COMPARISON OF THE LOSSES IN EIGHTEEN LARGEST CITIES IN IOWA IN 1927 AND 1928

	1927						
Burlington Cedar Rapids Clinton	No. Fires 59 144 122	\$	Loss 17,613 313,663 43,866	No. Fires 47 141 155	\$	Loss 119,045 93,961 34,498	

Council Bluffs	211	142,332	212	110,816
Davenport	186	92,534	224	101.874
Des Moines	599	255,592	612	498,557
Dubuque	100	43,448	114	28,593
Fort Madison	44	37,748	42	21,010
Fort Dodge	82	* 41,817	76	26,113
Iowa City	39	18,276	41	26,780
Keokuk	106	91,690	104	23,967
Marshalltown	78	113,141	83	168,209
Mason City	65	308,152	71	59,647
Muscatine	64	15,139	74	13,528
Oskaloosa	17	43,339	24	8,020
Ottumwa	109	81,415	109	41,910
Sloux City	405	227,722	443	59,167
Waterloo	189	97,202	159	61,468
Totals	2,619	\$ 1,984,689	2,731	\$ 1,497,163

#### TEN-YEAR RECORD

During the past ten years there has been 51,975 fires reported to this office carrying a loss of \$84,844,807. A yearly average of 5,197 fires and an annual loss of \$8,484,480. While we had 35 fires more than the average the loss was \$2,342,958 less during 1928.

#### FIREMAN'S SHORT COURSE

Through the whole hearted cooperation of the organized firemen of the state, the Fire Marshal's Office, and the Iowa State College, a short course for Fire Fighters has been conducted at Ames for four consecutive years. It is impossible to estimate the benefit which has accrued to the municipalities of the state in improved fire fighting methods and greater zeal in the prevention of fires.

It is noticeable that the towns and cities having low fire losses, and the best records in handling fires and reducing hazards are those which have recognized the constantly changing conditions and which have taken advantage of the instruction and methods given at the fire school. The exchange of experiences on common fire fighting problems during the course has proved invaluable to the firemen attending. Progressive fire chiefs have taken this occasion to determine the newest and best developments in fighting fires of different kinds. Salvage operations, the best use of fire streams, training needed by firemen, as well as the discussion of individual fire problems form a valuable part of the firemen's short course.

Firemen are realizing that the simple methods of yesterday will not suffice in fighting fires today. With the rapid growth and increased density of our business centers it is evident that fire hazards have multiplied many times as have the difficulties of controlling fires. New chemical, electrical, and mechanical hazards, together with the use of powerful automotive apparatus, modern equipment,

#### STATE FIRE MARSHAL

and chemical extinguishers put a premium on the fireman who keeps abreast of present day methods. It is becoming more essential every year that Iowa firemen know and study methods of fighting fires under complicated modern conditions.

The Fireman's Short Course is one of the most valuable agencies by which Iowa firemen may keep abreast of present-day development. Every city and town in the state should see that its firemen have the opportunity to attend the fire school to the end that the department may be more able and effective in protecting against fire loss. The 1929 Fireman's Short Course will be held at the Iowa State College, Ames, on May 21, 22, 23 and 24. At least one alderman and as many firemen as possible should be sent to the school from each municipality.

#### IOWA STATE FIRE PREVENTION ASSOCIATION

Again during 1928 the Iowa State Fire Prevention Association worked diligently and with great and far-reaching effect. The benefits of their efforts are both immediate and lasting and will be a source of conservation extending far into the future. Fire prevention is the work and object of the Association and they are always on the job—not merely in the cities mentioned in the following report but by their activities throughout the state by the individual members.

Town LeMars Shenandoah Clarinda Manchester Dubuque	No. Inspections 177 183 158 141 494	No. Defects 167 173 142 139 432	No. Recom- mendations 825 678 617 717 2,132	People Addressed 260 1,000 110 106 6,808
Totals	1,153	1,053	4,969	8,284

Of the 1,153 places inspected over 91 per cent were found to be defective, requiring a total of 4,969 recommendations. During these inspections ten radio talks were broadcasted: One at LeMars, six at Shenandoah over KMA and KFNF and three at Clarinda over KSO.

Besides the people reached at the above inspections 2,319 were addressed during Fire Prevention Week by the Association.

When we consider the large number of others reached through the press, pulpit, radio and schools, together with the thousands reached during the Iowa State Fair, some idea of the magnitude of fire prevention in Iowa may be gained. We wish to assure all that we very heartily appreciate the wonderful cooperation extended in

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this magnificent work, not only during fire prevention week but during the entire year.

#### FIRE PREVENTION SCHOOL MANUAL

During the past year Bulletin No. 3, a Fire Prevention Manual outlining the causes and dangers of fires for use in the various grades of all Iowa schools, public and private, was issued by the State Fire Marshal.

This foreword was given to superintendents and teachers:

This manual is issued in compliance with the state law to assist in instructing pupils in the causes and dangers of fires, together with proper methods of averting them.

Carefulness is the most effective weapon in all fire prevention activities—carelessness destroys what wise men build. The teaching of fire prevention in our schools, thus conducting a campaign of education with our future citizens and property owners, is certain to make the theory of fire prevention an actual practice. If children grow up with fire prevention knowledge, fires will be decreased. The more of this knowledge the children have today, the more knowledge the coming generation will have. When every person practices carefulness all accidents, most especially fires, will be reduced to a minimum.

Two sections of the State Fire Marshal law, Sec. 1651 and Sec. 1652, read as follows:

Sec. 1561. Fire drills in public schools—exits unlocked. It shall be the duty of the state fire marshal and his deputy to require teachers of public and private schools, in all buildings of more than one story, to have at least one fire drill each month, and to require all teachers of such schools, whether occupying buildings of one or more stories, to keep all doors and exits of their respective rooms and buildings unlocked during school hours.

Sec. 1652. Bulletin. The state fire marshal shall prepare a bulletin upon the causes and dangers of fires, arranged in not less than four divisions or chapters, and under the direction of the executive council shall publish and deliver the same to the public schools throughout the state.

In addition to these requirements teachers should instruct their pupils in at least one lesson each month as to the dangers and causes of fires and general fire prevention.

Regular and efficient instruction in our schools will be a great factor in reducing our fire loss to a minimum.

I most earnestly ask your cooperation in this noble and patriotic work.

Miss Agnes Samuelson, Superintendent of Public Instruction, gave this foreword to Iowa teachers:

Every year fire destroys much property in the United States. Not only is this true, but fires endanger human life; the number of lives lost in one year through fire is appalling. Since most fires are caused by carelessness, the facts of fire prevention should be a part of the citizenship instruction in every schoolroom. Children should learn the causes and dangers of fires, their prevention, and the first aid for burns.

#### STATE FIRE MARSHAL

It is with these thoughts in mind that this special bulletin has been prepared for use in the grades.

#### FIRE PREVENTION BOOTH AT STATE FAIR

This department maintained a booth at the last Iowa State Fair exemplifying the needs and benefits of fire prevention, paying particular attention to the effects of lightning, a common cause of farm fires. Over 50,000 pieces of literature were distributed dealing with the various phases of fire prevention, a large portion going to school teachers and pupils. Thousands of people viewed this exhibit with profound interest and the thought and idea of fire prevention was undoubtedly carried away by many, many persons which was destined to produce very beneficial and noticeable results.

#### FIRE PREVENTION IN SCHOOLS AND ELSEWHERE

Fire drills should be held in each school at least twice each month. Pupils should not be permitted to stop for hats, books or other articles when the fire gong has sounded, but should be instructed to leave the building in a quiet, orderly manner; never sacrifice order for haste, panic is just as dangerous as fire. Teachers should be required to call the roll from the daily attendance list when the pupils have arrived at the designated safe position from the school; the fire alarm should be distinctive in character and never used for any other purpose; the alarm should be identical in each school; the alarm should be examined each day. The purpose of the fire drill is two fold; first to teach the child how to leave the school house in such an orderly manner as to avoid injuries that might occur due to haste, and to teach the pupils to be calm in the event of panics which may occur at any time in their after life. The drill is just as essential to the pupil's education as is grammar or arithmetic.

The attention of pupils shall be directed at least once each month to Fire Prevention. They should be informed as to the various causes of fire, and how to avoid fires, as for instance roof fires. These fires are the most frequent and are usually caused by dirty, neglected flues, a cold night, a dry shingle roof. A dirty flue and a hot stove are a pretty sure combination for a roof fire. PRE-VENTION: If the flues and pipes are cleaned out before starting the fire in the fall, and a little salt, an automobile tire, or the plates from a discarded battery is burned once in a while it will have a tendency to keep the flues clean and free from soot, and it is well to remember that a clean chimney permits the heating apparatus to function more efficiently and economically.

Paints, oils, varnish, and oil fillers contain linseed oil which will oxidize heat and finally ignite rags which have been used for rubbing or wiping up these materials. Rags should be destroyed after having been used for this purpose, as the time that elapses between use and ignition is usually seven hours. Many homes and stores have been destroyed from this cause.

The electric iron and the curling iron in the home are frequent

causes of fire. They should be kept upon an iron stand at least two inches high, and should also be provided with a pilot light, so that when the pilot light is burning it will be evidence that the electric current is passing through the iron. When the iron is not in use it should be immediately disconnected. A hot electric iron and a telephone call have often caused the destruction of the home. Thirty homes are destroyed by fire every day.

Electric wires should never be hung on nails, hooks or wires. This will frequently cause a short in the circuit, which should blow the fuse, the safety valve of the electric system; should the fuse fail to blow, the wires turn to an intense white heat and ignite anything combustible within reach, and it is in this way that many destructive fires started. All electric wires should be rigidly supported every four and one-half feet, staples and wooden cleats should be replaced; no naked wire should be permitted; all joints should be soldered and taped. Wires should not be allowed close to pipes or other wires, two and one-half inch clearance should be the minimum.

A match drawn up into a vacuum cleaner started a fire in a closet; the home was completely destroyed.

Rays of sunlight passing through a fish bowl burned a hole in a rug which smouldered, flared into flame and started another home fire.

Sifted hot ashes thrown back into a coal bin cost another home owner many times the cost of the coal he tried to save.

Eight out of every ten fires could be prevented by promptly correcting hazardous conditions, such as disorder and accumulation of rubbish and litter. A clean home is a safe home.

The electric light is infinitely safer than any other form of lighting when the equipment is installed in conformity with the proper rules and regulations. Faulty installations, often installed by the home owner or a novice, should have the attention at once of a competent electrician.

Every member of the family should know the location of the nearest fire alarm box, and know how to turn in an alarm. When you pull an alarm at a street box, stay there until the fire department arrives and is directed by you to the location of the fire. If there is no alarm system in your community, learn the number to call and the manner of reporting a fire by telephone. Never leave the telephone until you know that the alarm and the location of the fire have been carefully received by the fire department.

#### WHEN CONFRONTED BY FIRE

Keep cool, and act quickly, before the fire can spread.

Make your plans in advance as to what you would do in case of fire.

Have one or more hand fire extinguishers within easy reach, and be sure that every one in the house knows where they are and how to use them.

#### STATE FIRE MARSHAL

Do not aim at the flames but at the place where the flames start. If you use water, it is generally best to throw it on in small quantities.

Small fires can sometimes be beaten out with a broom or coat.

Never go to bed without knowing the quickest, safest way to leave the house.

Keep the halls, stairs, doors, and fire escapes free from obstruction.

Give the alarm promptly by calling "Fire"—unless in a crowded room.

In a crowded room, give the alarm quietly and keep the people calm.

Know where to find the nearest fire-alarm box, and study the directions in advance.

Wait by the box, if it is outside of the burning building, so as to direct the firemen when they appear.

If you send a telephone alarm, call the operator, and say, "I wish to report a fire," and be sure to give the address. Know the telephone number of your fire department.

If your door is closed, put your foot behind it, and open it cautiously. Slam it shut if the fire threatens to rush in.

If there is smoke, but no flames, in the hallway, tie a wet cloth around your mouth and nose, and crawl on your hands and knees if the smoke is dense.

Close all doors that you pass, in order to keep the fire from spreading.

Do not jump from a window unless it is absolutely necessary. It is better to tear a sheet into strips, tie the strips together into a rope, fasten one end of the rope securely and slide to the ground.

If you have to jump, throw out a mattress and bedding to break your fall.

Always save life before property. In saving property take out the most valuable things first.

Don't throw breakable things from the windows.

Always keep your head.

### ONE CAUSE OF AMERICA'S RECKLESSNESS

Consider the fires of your own home town, and talk with your fire chief, and you will find that most of the fires were due to triffing causes, dangerous conditions neglected, and small acts of carelessness.

If a close inquest should follow every fire to ascertain its cause,

and the premises placarded announcing the cause of the fire, that all who read may profit, the cause would be impressed lastingly on others in the community.

The average human watching a fire inquires as to the insurance and consoles himself with the delusion, that the insurance companies pay the loss, when as a matter of fact, the people pay for all losses.

This fallacy is one of the chief causes of America's recklessness and indifference with fire.

#### DEATHS OCCUR MOSTLY IN ONES AND TWOS

Fire causes more than 10 per cent of all the accidental deaths in the United States. The great majority of these deaths-probably 90 per cent or more-do not occur in spectacular conflagrations like the Iroquois theatre and Triangle Waist Company fires; they occur by ones and twos in cities, towns and villages all over the country, from playing with matches or from careless handling of gasoline or from any of the common causes so well known to firemen. In many of these fires the property loss is insignificant. These fatalities are not preventable by the building of fire escapes or the provision of fire extinguishers; often they are not preventable by anything the fire department can do after the fire has started; they are preventable only by preventing the fire itself. Therefore, it is clear that from the standpoint of saving human life-entirely aside from the tremendous property waste caused by fire-every safety man is vitally interested in fire prevention, and fire prevention is one of the most important parts of the safety movement.

## HELP CATCH THE FIREBUG

Do you know the arson and incendiary fires occurring in Iowa annually greatly increase the total amount of fire losses. What . can be done?

To fire chiefs and firemen who are always first at a fire, the sheriffs and police officers whose duty it is to suppress crime and citizens of Iowa who have the losses to pay:

Firemen when arriving at a fire should observe the origin, the odor of oil, bottles, lamps, cans. Any high polished surfaces should not be handled but preserved and guarded for securing finger prints. If tracks are discovered same should also be preserved by covering and a plaster of paris cast made of same. Obtain information regarding removal of stock or goods prior to the fire; learn who was the last person on the premises before the fire, amount

#### STATE FIRE MARSHAL

of insurance carried comparing same with value of property, learn by whom alarm was given. Plants, such as candles and devices used for starting fires, should be sought. Actual measurements should be made of all finds by two or more persons present and records made of same.

#### DO NOT IGNORE FIRE HAZARDS

The ignoring of fire hazards never adds to the safety of either life or property, neither does it help in safeguarding property values; therefore, constant and regular inspection work, with the removal of all fire dangers found, inaugurated will be well worth while, and no time should be lost in putting the same into practice where it has not already been done. It requires but little work but pays handsomely since the cost of all fires is distributed among all the people, those who are directly connected with the loss and those who are not—everyone helps to pay the bill, no one escapes the cost of fire waste. The fewer the fires the less the cost.

#### ALL COULD HAVE BEEN PREVENTED

Most of these fires could have been prevented easily, and many of the fires and conflagrations were due to little things, too small to notice, by an indifferent individual.

The great Chicago fire started from an overturned lantern.

The forty million Baltimore fire was due to a careless smoker.

The five million dollar Berkeley fire came from burning brush.

A small boy's carelessness started the million dollar Nashville fire. The three million dollar "Burlington" fire in Chicago came from spontaneous combustion.

The Collinwood schoolhouse fire, in which 173 children and two teachers lost their lives, was caused by a steam pipe in contact with a wood floor.

The Peabody schoolhouse fire, in which twenty-one young dren lost their lives, started in rubbish.

The Cleveland, South Carolina, school fire, in which seventy-six persons perished, was due to a falling lamp, insecurely fastened.

The school fire at Babb's Switch, Oklahoma, in which thirty-six persons lost their lives, was caused by Christmas tree candles.

#### STATISTICAL WORK

It is the duty of the State Fire Marshal's office to secure and publish certain data regarding fires and fire losses.

One hundred and fourteen investigations were made during 1928. Of these sixteen have culminated in successful prosecution

and conclusion involving twenty-nine persons. Some of these, guilty of arson, are in prison or awaiting trial, some feeble-minded are being treated in state hospitals for the insane, some are in the boys' reformatory, while others are paroled. There are still seven who are fugitives from justice, in jail awaiting trial or at liberty on bond. There are eleven indictments still pending against six persons. Besides these cases, evidence of criminal nature has been filed with various county attorneys which they will present to grand juries.

During 1928 this department made a large number of inspections which resulted in either correcting or totally eliminating many fire hazards. Many cities and towns have been very materially benefited by these inspections. Besides the actual and material effect of these inspections and investigations there is also a moral effect the actual benefit of which cannot be estimated although always very noticeable.

#### ARRESTS AND PROSECUTIONS

ALLAMAKEE COUNTY—On February 3 a fire occurred in Franklin township, Allamakee county, whereby a residence belonging to Mrs. C. A. Perkins and occupied by Otto Mielke and family was totally destroyed by fire under very suspicious circumstances. After an investigation Mr. Mielke was arrested and held to the grand jury. Five indictments were returned against Mr. Mielke and three against Mrs. Mielke. At the September term of district court Mielke was tried on the charge of arson to defraud the insurer. After a several days' hard trial he was acquitted. The remaining indictments against Mr. Mielke and those against Mrs. Mielke will probably be tried later.

ALLAMAKEE COUNTY—An investigation was conducted in Allamakee county of a fire which destroyed two of five large stacks of hay. These were set by means of a blasting fuse connecting all the stacks, and on one end of which was a shot gun shell filled with some substance to cause a flash. While this department and the sheriff's office were checking some details an agreement was entered into between the insurance company, the county attorney and the owner of the land whereby there was to be no prosecution if the renter would sign a waiver for his insurance claim amounting to about \$180.00 and also cancel the amount of rent—\$200.00—due from the renter for the hay land. This agreement was suggested by the doctor of accused as he was in poor health physically and mentally. The investigation was dropped although neither this office nor the sheriff's office sanctioned the agreement not to prosecute.

DECATUR COUNTY—On April 28 fire destroyed a cottage about one and a half miles north of Lamoni which had been occupied by Virgil Blake, formerly of Missouri, for about three weeks. Strong evidence of arson was secured against Blake and he was later indicted by the grand jury together with his uncle, Mart Blake. Both reside in Missouri but as yet no effort has been made to extradite them.

JEFFERSON COUNTY—On June 16 à barn on the J. I. Glotfelty farm, eight miles southwest of Fairfield occupied by Edd Gire and family was totally destroyed by fire. This fire followed and preceded a number of diversified depredations committed on the farm and against the Gires. An investigation was made through the sheriff's office assisted by State Agent E. C. McPherson, Evidence pointed to Miss Delcena McCleery, of unsound mind, aged twenty-one years, a neighbor living just a short distance from the Glotfelty farm. She was brought before the county commission of insanity and committed to the hospital for the insane at Mt. Pleasant for care and treatment.

JOHNSON COUNTY—On August 8 the residence of Mr. and Mrs. Geo. Rock in Iowa City was partially destroyed by fire. Mrs. Rock later signed a full confession of having started the fire by throwing gasoline about the kitchen and lighting this with a match. She later appeared in district court in Iowa City and plead guilty to a county attorney's information. Three years prior she had been examined at the state psychopathic hospital and given quite a low rating. The judge again ordered her to this same hospital for observation. The doctor's report on her condition, as presented to the court, stated that her physical and mental condition was such that she was not responsible for her act. When she was later brought into court the judge dismissed the case, holding that she was not responsible for having set the fire and ordered her to the State University Hospital for medical treatment.

JOHNSON COUNTY AND ILLINOIS-On June 15 a new Nash sedan belonging to J. E. Kennard of Iowa City was burned on the public highway east of Silvis, Illinois, this being the second new auto belonging to Kennard which had burned within a few weeks. Kennard claims to have parked the car on an Iowa City street the night of the 15th and that it had been stolen. The investigation, however, seemed to show that Kennard was with the car himself in Illinois that night and apparently a strong case was available against him. He was indicted in Rock Island county, Illinois, on a charge of burning to defraud the insurer. The case came to trial at Rock Island in October but no representative of the insurance company or the finance company could be induced to appear in court to testify and show that Kennard had an insurance interest in the auto so the judge directed a verdict in favor of the defendant. It might be added that this investigation was made at the request of the insurance company. State Agent Ray Scott assisted in this investigation.

LINN COUNTY—An investigation was made of a fire which occurred September 4 about 2:30 p. m. at 523 So. 5th Street, Cedar Rapids. Clarence Leroy Clark and wife occupied this place as a rooming house. Clark and a roomer, Frank Borst, confessed to having set this house on fire to collect the insurance. Borst was to get \$300 if the fire was successful as \$1,500 insurance was carried on the household goods which were valued at about \$600. The Clark's needed money and adopted this method of getting funds. Both Clark and Borst plead guilty in district court and were given jail sentences. No charge was filed against Mrs. Clark on account of her family of small children.

LYON COUNTY—An investigation was made on January 30 of a fire which occurred on a farm located on Section 12, Township 99, Range 48, owned by Mr. Holly of Larchwood. The evidence secured was turned over to the county attorney, which together with additional facts was submitted to the grand jury and an indictment was returned against George Van Den Hazel.

MONROE COUNTY—On August 22 a fire occurred in the house of Ralph Gutch at Bucknell which was extinguished before much damage was done. Later it was discovered that a radio had been stolen from the home before the fire. This was afterwards found hidden under a house recently occupied and still controlled by Wilbur Webb and his mother—negroes. Webb had previously served a term of several months at the Training School for Boys at Eldora and since being paroled there had been a couple of rather suspicious fires in the Webb home. Webb was arrested and kept in jail for several days, later being released after a preliminary hearing. As soon as he was released he left the state, going it is thought to Missouri, and has not since returned.

Counties and Cities of 10,000 and Over	No. of Fires	Loss
Bal. Johnson County	0	9,584
Jones	10	37,620
Keokuk	25 21	35,710
Kossuth	42	35,664
Lee-Ft. Madison	104	21,010
Keokuk	14	23,967
Bal. Lee County	141	40,147 93,961
Linn-Cedar Rapids	29	59,866
Bal. Linn County	21	43,155
	26	91,405
	21	36,540
Lyon	17	41,123
Mahaska—Oskaloosa	24	8,020
Bal. Mahaska County	29	74,441
Marion	31	36,881
Marshall-Marshalltown	83	168,209
Bal. Marshall County	23	47,328
Mills	15	22,575
Mitchell	23 29	30,153 17,275
Monona	25	48,029
Monroe	50	54,473
Montgomery	74	13,528
Muscatine—Muscatine	20	28,277
	46	81,843
O'Brien	16	. 8,515
Page	73	87,781
Palo Alto	. 7	8,300
Plymouth	. 29	87,220
Pocahontas	$\begin{array}{c} 14\\ 612\end{array}$	10,052 498,557
Polk—Des Moines	. 014	52,513
Bal. Polk County Pluffe	040	110,816
Pottawattamie—Council Bluffs Bal. Pottawattamie County	0.5	40,563
Poweshiek	5.9	54,909
Ringgold		22,974
Scott-Davenport	. 224	101,874
Bal. Scott County	. 9	21,100
Sac	. 40	76,818 29,277
Shelby		53,373
Sioux	. 0.4	31,865
Story	0.0	91,186
Tama Taylor	00	22,570
	. 40	61,797
Union	. 10	30,120
Wapello-Ottumwa	. 109	41,910
Bal. Wapello County	. 24	43,322 48,991
Warren	. 28 . 19	41,590
Washington		10,890
Wayne	76	26,113
Webster-Ft. Dodge	13	32,839
Bal. Webster County	12	81.740
Winnebago	95	46,876
Woodbury-Sioux City	443	59,169 30,291
Bal. Woodbury County	., 20	4,726
Worth	10	507,035
Wright		ALL
Total	5,232	\$ 6,141,522

### STATE FIRE MARSHAL

#### TABLE II

Showing the kind of property destroyed. Damage to buildings and contents set out separately.

contents set out separately.	No. of	Damage to Buildings	Damage to Contents
and a state of the	Fires 10	\$ 10.930	\$ 29,728
Auto tops and tire shops		20,560	1,355
Autos and trucks	- 24	5,967	12,963
Bakeries	6	864	189
Banks	245	480,847	171,769
Barns-Farms	96	44,471	21,259
Town	30	3,417	8,242
Battery stations	19	10,176	14,105
Railway box cars, etc houses	95	30,786	56,511
Chicken brooders and poultry houses	18	62,370	5,655
Churches	22	7,076	7,203
Cleaning and dyeing	25	25,095	20,963
Corn cribs and granaries	2	4,250	1,195
Dance halls	3	550	0
Depots and freight houses	498	1,036,801	318,808
Dwellings-Farm	2,684	675,400	232,269
Town	the second se	87,763	63,446
Engine and boiler rooms	3	975	900
Factories, various kinds	50	52,094	148,193
Filling stations and oil storage		3,573	1,612
Filling stations and on storage	nin. Serie	41,794	55,812
Foundries	3	1,535	1,125
Garages-Private	176	37,513	49,066
Public		38,229	42,163
Hog houses	11	3,750	2,505
Hospital	9	6,295	2,547
Hotels	. 39	61,366	16,129
Houses, apartments	. 97	137,242	38,987
Ice houses	. 8	1,528	90
Junk yards	. 6	4,366	4,207
Laundries	. 8	1,794	2,320
Tadam halls	· · · · · ·	13,929	2,492
T stand h own which the Cl	a	16,467	34.348 5,060
Mills, feed, flour, planing, etc	. 6	5,470	70
O'd peoples' homes,	These States of Local States	191	24,611
Office and office buildings	. 14	49,014	4,690
Packing plants and stock yards	. 8	1.821	974
Dool halls	* 2	3,912	2,125
Dost offices		21,475	9,656
Printing plants		9,713 25,749	25,562
Restaurants		18,120	7.199
Schools	, 40	3,513	1.176
Sheds-Coal and Wood	(a) (b, d)	17,137	13,908
Machino	a	34,185	42,798
Shops, various kinds		000 001	536,473
Stores		1,075	574
Summer kitchens	16	9,569	17.856
Theatres		94,618	548,406
Warehouses and storage		8,469	5,923
Miscellaneous			
Total	5,232	\$ 3,526,305	\$ 2,615,217 3,526,305

\$ 6,141,522

#### TABLE NO. III

Containing a summary of the origin of the various fires reported, the number of each, and the total damage to the buildings and contents, for the year 1928.

Causes	No. of Fires	Loss
	. 169 \$	293,459
Adjoining	. 50	14,207
Automobile	. 54	14,648
Blow and oil torches	. 29	28,472
Bonfires and rubbish	. 135	42,685
Brooder lamps and stoves	the second se	22,334
Candle, lamp and lantern carelessness	. 40	33,689
Children playing with matches	. 99	36,908
Cleaning with gasoline	. 14	11,118
Clothing and bedding near stoves and pipes	. 17	5,033
Curtains blowing into flames	- 9	448
Défective auto wiring	. 126	21,250
Defective electric wiring Defective electric appliances	. 155	222,284
Defective electric appliances	. 38	19,766
Defective fireplaces	. 14	1,186
Defective flues	. 318	489,807
Defective and overheated heating plants		368,553
Defective oil burners (domestic)		45,521
Defective oil and gasoline stoves		56.088
Defective pipes to stoves		22,230
Electric iron with current left on	1	14.414
Films		889
Fireworks		4.510
Friction		2,246
Fumigation	62	796
Gasoline and volatile oil explosion	. 92	32,488
		57.614
Grease, paint, tar, boiling over		$6,079 \\ 96,641$
Incendiary	The second s	242.647
Lightning—Not rodded		14,270
Rodded Lightning running in on radio wires		40
Match carelessness		26.507
Smokers' carelessness	T117	38.720
Smoking meat		8,421
Sparks from engine and locomotives		47.284
Sparks from flues on wooden shingles		723.818
Spontaneous combustion:		
Coal, dust, etc	28	34,437
Hay and straw	47	102,292
Rags and rubbish	81	64,269
Shavings and sawdust	3	219
Sugar	2	500,303
Static electricity	8	2,550
Thawing water pipes	13	7,177
Unknown	862	2,330,073
Using gasoline and kerosene to start fires	6	8,058
Miscellaneous		25,074
CONTRACTOR OF THE OWNER O	and the state	
Total	5,232 \$	6,141,522

