

TABLE NO. III—Continued

Origin	Number	Damage to build-ings and contents
Spark from locomotive .....	37	50,650.00
Spark from gas engine .....	1	4,500.00
Spark from flue .....	70	37,368.00
Spark from stationary engine .....	8	6,105.00
Spark from nail .....	1	415.00
Spontaneous combustion .....	44	44,107.00
Steam pipe against woodwork .....	2	60.00
Stove near woodwork .....	7	14,689.00
Stovepipe near woodwork .....	2	28.00
Stove explosion .....	2	2,370.00
Tar heated on gas stove .....	1	1,000.00
Thawing out water pipes .....	4	351.00
Thawing out gasoline engine .....	1	75.00
Torch carelessness .....	1	700.00
Tramps .....	6	2,500.00
Unknown .....	329	743,720.00
Wood in cellar .....	1	137.00
	<b>1224</b>	<b>\$ 1,882,552.00</b>

## SECOND ANNUAL REPORT

OF

## STATE FIRE MARSHAL

TO THE

GOVERNOR OF IOWA

OLE O. ROE  
State Fire Marshal

DES MOINES  
ROBERT HENDERSON, STATE PRINTER  
1913

## Second Annual Report

STATE OF IOWA,  
Office of State Fire Marshal,  
Des Moines, February 1, 1913.

Hon. George W. Clarke,  
Governor of Iowa.

Sir:

In compliance with the provisions of Section 14, Chapter 128, Acts of the Thirty-fourth General Assembly, I have the honor to submit herewith my second annual report of my official acts and of the affairs of this office, covering the period beginning January 1, 1912, and ending December 31, 1912, both dates included.

During the year 1912, 2,801 fires were reported to this office, involving property valued at \$18,737,035.00 and resulting in a loss of \$4,942,000.00.

Of the loss thus reported property to the value of \$3,816,715.00 was covered by insurance, leaving an excess of loss over insurance in the sum of \$1,125,285.00 and involving 848 properties.

Fortunately the state was spared from any large conflagration. The most destructive fire, so far as loss was concerned, occurred at Sioux City on Jan. 30, 1912, and resulted in loss to the amount of \$275,000.00.

There were forty-two deaths reported to the office which were the direct result of fire. Of these eighteen were women and sixteen were children. In the case of eighteen of the deaths reported the careless use of gasoline or other inflammable oils was responsible.

Three hundred eighty-seven inspections of buildings and premises were made in 56 different cities and towns in the state, resulting in the issuing of 106 clean-up orders, 49 repair orders, 64 orders of change, 99 orders to remove buildings and 37 orders to clean up and repair, or a total of 355 orders.

One hundred thirty-nine suspicious fires were investigated in 48 different counties of the state.

Of prosecutions instituted, three resulted in convictions and sentences to the penitentiary, one in a jail sentence, one in a sentence to the boys' industrial school, four in sentences to the hospital for inebriates, and ten indictments are now pending.

Seventeen public addresses on fire prevention were made in various cities of the state.

Appended hereto as a part of this report are several tables which set out in detail the reports of the fires and the work of inspection and investigation done by this office.

Table I shows the number of fires reported, by counties, the value of buildings and contents involved, the damage to buildings and contents, the total insurance on buildings and contents, the number of fires partially covered by insurance, the amount of excess of loss over insurance, the number of fires affecting property without any insurance and the total loss upon property not covered by insurance.

Table II shows the nature and character of the buildings destroyed or damaged, the value of each, the amount of damage thereto, the value of the contents of each and the damage thereto, the kind of material of which each was constructed and whether the loss was total or partial.

Table III contains a summary of the origin and cause of the various fires reported, the number of each and the damage to the buildings and contents, specified by causes.

Table IV contains a list of the cities and towns in which inspections of dilapidated buildings and inflammable conditions were made, the number of places inspected at each point and the number and kind of orders issued, based upon such inspections.

Table V gives a list of the places at which investigations of fires of suspicious origin were made and the date of such investigation.

### REPORTS OF FIRES.

Under the law it is incumbent upon the chief of the fire department of every city, town or village in which a fire department is established, and the mayor of every incorporated town or village in which no fire department exists, and the township clerk of every organized township outside the limits of any organized city, town or village, to investigate the cause, origin and circumstances

of every fire occurring within their several jurisdictions and to forthwith notify the state fire marshal of the occurrence of such fire and within one week of the occurrence thereof to furnish a written report of the same upon blanks provided for that purpose.

As these officials number more than 2,500 and are located in every city, town or township of the state, it will be readily understood that to secure prompt and full reports of all fires which occur is a task of considerable magnitude.

While I have used great diligence in getting and keeping in touch with these various officials and in encouraging them to give prompt attention to the reporting of fires which may occur within their various towns or townships, I realize that we do not as yet receive reports of all the fires that take place, nor are many of the reports received as full and complete as the state is entitled to obtain.

The chiefs of fire departments, where an organized fire department exists, have been reasonably prompt in reporting, but the greatest difficulty is experienced with mayors of small towns, and with township clerks. Many of these do not have occasion to report any fires for six months or a year, and possibly longer, and when a fire does occur the blanks have been mislaid or forgotten and the fire is not reported. Some few complain that the compensation for making the investigation and reporting to this office is not adequate, and there is some ground for this complaint.

I have reason to believe, however, that the fires of greater magnitude which have occurred in the state have been faithfully and fully reported and that the statistical information furnished in the subjoined tables is as full and complete as it is possible to obtain the same after so short a period of trial of the law.

I am trying hard to perfect the system of reports, not only as to fullness and accuracy, but as to promptness, and I feel certain that there will be improvement along this line in the future.

In this connection, I desire to repeat the recommendation made by me in my first annual report to the governor; namely, that every person who is by law required to make a report of fires to this office should have a small compensation for each investigation and report, provided the same is made within the time prescribed by law.

I would also recommend that Section 5 of the State Fire Marshal Law be so amended as to provide a penalty for failure or refusal of any officer, required to make reports of fires, to make the same.

## STATE FIRE MARSHAL

### EDUCATIONAL WORK.

The law makes it the duty of the state fire marshal and his deputies 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. It furthermore requires the state fire marshal to prepare a bulletin upon the causes and dangers of fires, arranged in not less than four divisions or chapters, and to publish and deliver the same to the public schools throughout the state, and the teachers thereof are required to instruct their pupils in at least one lesson each quarter of the school year with reference to the causes and dangers of fires.

During the year 1911 I prepared a bulletin upon the causes and dangers of fires, suitable for use in all grades of the public schools. By direction of the executive council 30,000 copies of this bulletin were printed, and in the month of November, 1911, I caused same to be distributed to the public schools of the state through the several county superintendents.

This distribution was accompanied by a letter calling the attention of the county superintendents to the provisions of the law and urging that they use their best efforts to see that the same was complied with by the teachers under their charge.

While quite a number of the county superintendents responded promptly and encouragingly, and I have reason to believe used their best endeavors to secure attention to the subject upon the part of their teachers, a number failed to show much interest or enthusiasm in the matter and some of the county superintendents conceived the idea that their relations with the city schools were such that they were not especially charged with the duty of looking after the matter in these schools.

In view of this condition, I secured the publication of a second edition of the bulletin and took the matter up direct with the superintendents of the various city and town schools throughout the state, sending to each a supply of bulletins sufficient for the needs of their teachers and accompanying this supply with the following circular letter:

*"To the Superintendent of the City Schools:*

"As you undoubtedly know, the Thirty-fourth General Assembly passed what is known as the State Fire Marshal Law, Sec. 11 of which reads as follows:

"It shall be the duty of the state fire marshal and his deputies 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. 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 and the teachers thereof shall be required to instruct their pupils in at least one lesson each quarter of the school year with reference to the causes and dangers of fires. Any teachers failing to comply with the provisions of this section shall be guilty of a misdemeanor and shall be punishable by a fine of not to exceed ten dollars (\$10.00) for each offense.'

"In accordance with the provisions of this law, I prepared Bulletin No. 1, and in the month of November, 1911, caused a supply of these bulletins to be sent to your county superintendent with request that he distribute the same among the teachers of his county. I find, however, upon inquiry that a number of the city and town schools, either through a misunderstanding or because of failure in delivery, have not received their supply of bulletins.

"Being especially desirous that this subject should be taken up in the graded schools in the state and given the attention that the law requires, I am forwarding to you by prepaid express a sufficient number of copies of Bulletin No. 1 to supply all of the teachers and principals of your schools, and I would ask that you kindly see to it that they are distributed and that your teachers give due attention to fire drills and to instruction in the causes and dangers of fires, as contemplated by law.

"Trusting that I may be favored with your co-operation in this work, and thanking you in advance for an acknowledgment of the supply of bulletins sent you, I am,

"Very truly yours,

"(Signed) OLE O. ROE,  
"State Fire Marshal."

I am pleased to report that this communication met with a hearty response from most of the superintendents to whom it was addressed. The following extracts from letters received at this office indicate the general tenor of these responses:

Supt. W. O. Riddell of Des Moines writes:

"I am pleased to inform you that the Des Moines public schools are endeavoring to comply with the provisions of the law concerning fire drills. I believe that every school in the city, except possibly the small schools located in one-story buildings, has the required fire drills. All printed matter sent to us has, I believe, been distributed to the schools, and we shall be glad to co-operate with you further in every way possible."

Supt. J. H. Beveridge of Council Bluffs writes:

"I thank you most cordially for sending me Bulletin Number One. It is an excellent bulletin. I have sent one to every teacher in the city.

We shall observe the day. I think that a little fire we had here last Saturday night will make it an opportune time for us to do good work."

Supt. James H. Harris of Dubuque writes:

"I beg to acknowledge receipt of copies of Bulletin No. One, and to report that they have been distributed among the various schools of the city as per your request.

"Wednesday, October 9, will be observed as fire prevention day in our public schools, and the teachers have been requested to set aside the language period for oral exercises and written compositions on the subject of fire prevention."

Supt. M. G. Clark of Sioux City writes:

"I have your letter of October 4th, and some weeks ago I sent out circulars calling attention of the principals and teachers to the law with reference to fire drills, and also to the special observance of fire prevention day. All these things have been taken care of and the principals have all been supplied with copies of the bulletin which you sent me last spring. I think that this matter is progressing well, and that all parties are doing their best to co-operate with you in the important work which you have on hand."

Frank L. Smart, superintendent of schools at Davenport, writes:

"I am in receipt of a package of Bulletin No. 1 sent out from your office. I will see that they are properly placed in the hands of our teachers without delay."

Supt. A. Palmer of Marshalltown writes:

"I wish to acknowledge the receipt of fire circulars which came to my office a few days ago. I have distributed these among the different schools throughout the city, with instructions to make October 9th a day of reference to fire prevention and protection.

"I am enclosing one of our general circulars on fire matters, which we send out to the schools each year."

The circular referred to by Supt. Palmer reads as follows:

#### FIRE DRILL CIRCULAR.

Marshalltown, Iowa, Sept. 18, 1912.

#### CIRCULAR TO PRINCIPALS AND TEACHERS.

First. Janitors and teachers should see that exits are open before giving the alarm and the order for the children to go. Older boys may be entrusted to open the main exits.

Second. Teachers should accompany their pupils, especially in the case of children from five to twelve years of age.

Third. Children should be cautioned and trained to move with haste, but not to rush; and the older children should be induced to feel a responsibility to look to the safety of the smaller and weaker ones.

Fourth. All janitors and teachers should be so possessed of their minds that they may see situations in times of danger and excitement and act promptly and imperatively. In accident and in danger the valuable person is the one who sees what to do and does it.

#### SUGGESTIONS.

In the Marshalltown school buildings exits are constructed properly. The fire drills show that all buildings can be emptied in less than two minutes. This being true, there need be no fear from fire except from the unexpected at the time of a fire; or in case of the failure of teachers and pupils to keep their presence of mind.

With the above suggestions in mind let the fire drills be given at least twice a month.

Very truly yours,

A. PALMER,  
*Superintendent.*

Supt. W. L. Hanson of Burlington writes:

Your circular letter of the 4th, regarding observance of the state fire prevention day, has been received. In reply I will say that we have your bulletins and a copy has been sent to each teacher, with instructions to use them in the exercises to be held on the 9th.

Supt. Chas. E. Blodgett of Atlantic writes:

I acknowledge the receipt of copies of Bulletin No. 1, Causes and Dangers of Fires. These have been distributed one to each teacher, with instruction to make as complete use of them as is possible. We are making a special feature of that work today and will continue to use it at times throughout the year.

I feel that they will do good.

Supt. F. W. Else of Oskaloosa writes:

Your supply of bulletins came duly to hand and are welcome. I had quite a supply sent me last year, so it was not necessary to use any of the last consignment. Doubtless, however, we shall have occasion to make use of them in the future. I consider them helpful and very practical.

It is my purpose during the coming year to see to it that this feature of the law, which, in my opinion, is the most valuable as well as the most enduring, is, as far as possible, carried out by the teachers and superintendents, and to that end I intend to take up the matter with the newly elected county superintendents and urge upon them a general revival of interest in this matter.

Realizing that it is not only necessary to educate the children in the causes and dangers and the prevention of fires, but that it is also of the utmost importance that public opinion is aroused,

the subject of fire prevention was given special attention in this state Oct. 9, 1912, which day was set apart by Governor B. F. Carroll as Fire Prevention Day in the following proclamation:

#### A PROCLAMATION.

During the past few years public attention has been properly directed to the enormous fire loss which annually takes place in the United States, and as a result a strong sentiment has developed in favor of better fire protection, as well as more efficient means of fire prevention. Many states have made provision by law for the office of state fire marshal, whose duty it is to investigate the cause and origin of fires and to encourage, by educational and other means, their prevention. In several states a day known as fire prevention day, has annually been set apart either by law or by executive proclamation.

While no portion of our country was visited by any great conflagration during the year 1911, the loss by fire in the United States during said year nevertheless exceeded \$217,000,000.00. Our own good state contributed about \$5,500,000.00 to this loss.

When it is remembered that this represents property absolutely annihilated, the economic loss to our state and country becomes the more apparent.

That a large percentage of the fires which annually occur in this country may be prevented is conclusively shown by the fact that while the per capita fire loss in the United States in 1911 was about \$2.33, during the same time it was 81 cents in France, 53 cents in England, and 21 cents in Germany.

In the light of these figures, the question of fire prevention becomes one of the important economic problems of our times, and any movement having for its object the lessening of the large and unnecessary fire waste which annually takes place in the United States should have the hearty support of all good citizens.

For the reasons herein set forth I have deemed it proper to set apart a day to be devoted to the inspection of property and the education of the public in the causes, dangers and prevention of fires, and I therefore hereby proclaim

WEDNESDAY, OCTOBER 9, 1912,

as State Fire Prevention Day, and I would earnestly recommend that upon that day the teachers in our public and private schools and educational institutions give special attention to the causes, dangers and prevention of fires; that the mayors and councilmen of the various cities and towns give attention to the matter of better building regulations, better fire protection and better fire prevention, and that they see to it that all public buildings which are not properly equipped with fire escapes be so equipped; that there be a general cleaning up of dilapidated buildings which are especially liable to fire, and that the owners of property give personal attention to the removal of all rubbish and debris from their premises and to the setting of their heating appliances and chimneys in proper condition for winter use.

In testimony whereof, I have hereunto set my hand and caused to be affixed an impression of the great seal of the state of Iowa, this 9th day of September, A. D. 1912.

B. F. CARROLL,  
Governor.

A short time prior to July fourth I issued and caused to be published in the leading papers of the state the following:

#### FOURTH OF JULY WARNING.

The Glorious Fourth is near at hand.

Inasmuch as its celebration is always attended with the use of some form of fireworks, I deem a word of caution in order.

More than 200 persons die; the fingers or eyes of more than 2,000 children are destroyed, and more than 600 buildings are burned annually in the United States as the result of the careless use of fireworks on the Fourth.

The small firecracker burns more houses than any other form of fireworks, and the paper balloon is a most dangerous fire producer.

The common sky rocket will set fire to any inflammable matter into which it may fall.

More incendiary fires occur on the Fourth than on any other day.

The Fourth is the fireman's busiest day.

*The remedy is care.*

Never allow firecrackers or other kinds of fireworks to be exploded or thrown in the back part of the yard, in back alleys, in or near barns or close to buildings containing inflammable matter.

Do not let young children handle fireworks; impress the older children with the danger of it.

Remember that all fireworks contain dangerous explosives and should be handled with the greatest care.

Remove all rubbish and all dry grass and other inflammable substances from your premises before the Fourth.

Be patriotic, but let your patriotism be tempered with caution and common sense.

Make it a "Safe and Sane" Fourth.

In addition to speaking before several schools and teachers' normal institutes on fire prevention, I have delivered public addresses on the same subject in the following cities and towns:

Des Moines, Boone, Algona, Sioux City, Clarinda, Clinton, Corning, Shenandoah and Cedar Rapids.

#### INSPECTIONS OF BUILDINGS AND BUILDING CONDITIONS.

During the past year inspections of dilapidated buildings and extra fire hazards were made in fifty-six different cities and towns in the state, a detailed statement of which inspections are found in Table No. IV appended hereto.

Three hundred eighty-seven buildings and premises were inspected, and, based upon these inspections, orders were issued as follows:

Orders to clean up.....	106
Orders to repair.....	49
Orders to make changes.....	64
Orders to remove buildings.....	99
Orders to clean up and repair.....	37

I am pleased to report that the requirements of this office, as to repairs, cleaning up and removals of buildings have, as a rule, been promptly complied with, and at the present time I am not advised of any case where the orders of the department relative to removals of buildings or change of conditions is being contested.

It is more than ever my firm conviction, based upon experience, that the office may be of great value in lessening fires if the work of inspecting buildings and extra fire hazards could be extended to every city and town in the state. Owing to the limited force at my command, we have not undertaken a general inspection but have confined our work only to those cities and towns from which we have received complaints or requests either from the chief of the fire department, city officials or interested property holders.

I have endeavored in every way possible to impress upon municipal officers, especially in the larger cities, the importance of selecting at least one man to be known as city fire marshal, who should give his entire time to this work.

Waterloo has for at least two years had a man who devotes his entire time to inspection work, and it is the judgment of the chief of the fire department of that city, which I believe is fully warranted, that this man has prevented many a fire by his timely clean-up orders.

On November 1st, 1912, Sioux City also designated an officer of the police department to act as city fire marshal, and he has already, in my opinion, rendered valuable service in the line of fire prevention in that city.

Quite a number of the other cities of the state detail one or more men from the fire department to do periodical inspection work, and where this is done systematically and by the right person, good invariably results.

However, I know of no city in the state where the firemen are too many in number. In most cases they are rather too few for the needs of the city, and as these men must be ready night and day to respond to calls when fire breaks out, it is my judgment that every city having a population of 10,000 or over should have some one official who, acting under the direction of the fire department, could give his entire time and attention to looking after buildings and building conditions, as the same are related to fire hazards, making a specialty of inspecting furnaces, heating apparatus, chimneys, electric wiring, the storage and handling of gasoline and other inflammable oils, and especially the conditions in and about business buildings and houses as to cleanliness.

For the guidance of officials of cities and towns who may not have a suitable ordinance governing the matter of buildings inspections, I submit the following text of a suggested ordinance adopted by the National Board of Fire Underwriters and the National Fire Protection Association.

In my opinion this ordinance is so comprehensive that it is readily adaptable to the needs not only of the cities but of the larger incorporated towns as well.

#### AN ORDINANCE.

Providing for the care and inspection of premises by the fire department to safeguard the public and property against fire.

Be it ordained by the..... of the city of.....

Section 1. It shall be the duty of the chief of the fire department to inspect or cause to be inspected by fire department officers or members, as often as may be necessary, but not less than twice a year in outlying districts and four times a year in the closely built portions of the city, all buildings, premises and public thoroughfares, except the interiors of private dwellings, for the purpose of ascertaining and causing to be corrected, any conditions liable to cause fire, or any violations of the provisions or intent of any ordinance of the city affecting the fire hazard.

Whenever the chief of the fire department or any officer or member thereof shall find any building or other structure which for want of repairs, or by reason of age or dilapidated condition or for any other cause, is especially liable to fire, and which is so situated as to endanger other property, or whenever any officer or member shall find in any building or upon any premises or other place, combustible or explosive matter or dangerous accumulations of rubbish, or unnecessary accumulations of waste paper, boxes, shavings or any other highly inflammable materials, especially liable to fire, and which is so situated as to endanger property, or shall find obstructions to or on fire escapes, stairs, passageways, doors, windows, etc., liable to interfere with the operations of the

fire department, or egress of occupants, in case of fire, he or they shall order the same to be removed or remedied and such order shall forthwith be complied with by the owner or occupant of such premises or buildings, subject to appeal within twenty-four hours to the mayor, who shall within ten days review such order and file his decision thereon, and unless the order is revoked or modified, it shall remain in full force and be obeyed by such owner or occupant.

Any owner or occupant failing to comply with such order within ten days after said appeal shall have been determined, or, if no appeal is taken, then within ten days after the service of the said order, shall be liable to a penalty as hereinafter stated.

The service of any such order shall be made upon the occupant of the premises to whom it is directed by either delivering a true copy of same to such occupant personally or by delivering the same to and leaving it with any person in charge of the premises, or in case no such person is found upon the premises, by affixing a copy thereof in a conspicuous place on the door to the entrance of the said premises; whenever it may be necessary to serve such an order upon the owner of premises, such order may be served either by delivering to and leaving with the said person a true copy of the said order, or, if such owner is absent from the jurisdiction of the officer making the order, by mailing such copy to the owner's last known postoffice address.

Sec. 2. Any person, firm or corporation desiring to manufacture, transport, sell, use, care for, keep or give away high explosives, or inflammables, or other substances of like nature, or any materials, compounds, combinations or things whatsoever which may tend to increase fire hazard, or to conduct any hazardous business or operation, or to perform any service of like dangerous character, within the limits of this city, shall make application in writing to the chief of the fire department, and it will be illegal to proceed with such manufacture, transportation, sale or use of such high explosives, etc., until a license or permit shall have been issued by the chief of fire department.

Sec. 3. No person shall kindle, maintain or assist in maintaining any bonfire or other exposed fire within the city, excepting under written permit from the chief of fire department, when such burning shall be done in metallic receptacles approved by him and under such proper safeguards as he may direct as to time and weather conditions, and on condition that such permit carries an obligation on the part of the grantee to keep a sufficient safe control of said fire, and to be responsible for all damages therefrom, and that all resultant embers shall be extinguished and the hot ashes removed or wet down at close of said fire.

Sec. 4. Any person or persons, firm or corporation violating any of the provisions of this ordinance or any of its sections, or the provisions of any permit issued in conformity herewith, shall, upon conviction, forfeit and pay a fine of not more than twenty-five (\$25) dollars for each offense, and not more than twenty-five (\$25) dollars for every day thereafter so long as the said violation exists, and a fine of not more than one hundred (\$100) dollars for subsequent violations.

Sec. 5. All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

Sec. 6. This ordinance shall take effect immediately.

For the guidance of officials who may be charged with the duty of making inspections and investigations and reporting thereon, I submit the following inspection report and blank recommended by the National Fire Protection Association:

#### FIRE DEPARTMENT INSPECTION.

##### Report on Hazardous Conditions.

Note:—Inspectors should report below, all dangerous conditions found in any building or locality, which in their judgment ought to be removed.

Date ..... 191.....  
 City .....  
 State .....  
 Street .....  
 Kind of construction .....  
 Occupancy .....  
 Kind of roofing .....  
 Number of stories and height .....  
 Parapet walls and height above roof .....  
 Can roof or any floors be reached from roofs of adjacent building? .....  
 Condition of floors .....  
 ACCESSIBILITY. From what sides can building be reached? .....  
 RUBBISH. Is there any in or near elevator-shafts or on or around premises? Where? .....  
 ASHES. Kind of receptacles, where deposited? .....  
 WASTE PAPER OR OILY RAGS. Where? .....  
 EXPLOSIVES. Volatile oils, acids or highly inflammable materials, location and amount of .....  
 OBSTRUCTIONS to basements, windows, stairways or passageways, indicate where .....  
 GASOLINE. Amount .....  
 Where and how stored? .....  
 SIDEWALK OR GRATING. Condition of .....  
 SKYLIGHTS. Size lantern or flat .....  
 Protection to same .....  
 LIGHTING. Swinging gas jets or other open lights or lamps exposing surroundings, or defective electric wiring. Where? .....  
 STOVES, FURNACES AND FLUES. Kind of .....  
 Safety of .....  
 SHOW WINDOWS. Are they overcrowded with inflammable material? .....  
 How lighted? .....  
 CHIMNEY. Condition .....

FIRE SHUTTERS. Where installed? .....  
 How opened? .....  
 STAIRWAYS. Enclosed or open? .....  
 Condition .....  
 ELEVATORS. Number and location .....  
 Open, enclosed in brick, tile, plaster or wood shafts. ....  
 Are there fire doors at every floor? .....  
 PIPE HOLES, SHAFT HOLES, ETC. Are there any in divisions or party walls? .....  
 WELL HOLES. Number and location ..... Sizes .....  
 How many floors pierced? .....  
 Any traps or other protection? .....  
 ELECTRIC WIRES. Do they obstruct access to building? .....  
 Where do wires enter? .....  
 FIRE DOORS. Are they placed where necessary? .....  
 Iron or tin clad wooden doors ..... self-closing .....  
 In good repair, and closed nights and holidays. ....  
 FIRE PAILS AND OTHER EXTINGUISHERS. ....  
 How many ..... Condition .....  
 STAND PIPES AND HOSE. Inside .....  
 Outside ..... Condition .....  
 Water supply .....  
 Location of outside connection. ....  
 FIRE ESCAPES. Kind ..... Number .....  
 Location and condition .....  
 AUTOMATIC SPRINKLERS. .... Yes or no .....  
 Location of outside connection .....  
 REMARKS AND RECOMMENDATIONS. ....  
 Signed .....  
 Inspector.

I desire again to urge the importance of a thorough examination of the building ordinances upon the part of the mayor and councilmen of cities and incorporated towns to the end that where such ordinances are found inadequate or defective, they may be strengthened and improved.

It is gratifying to be able to report that in the matter of the erection of buildings in our cities and towns the sentiment in favor of using brick, stone, iron, cement and other non-inflammable material is making commendable progress, and it would seem that the legislature might well at this time still further enlarge the powers of cities in the matter of regulating the construction of buildings.



## INVESTIGATIONS OF SUSPICIOUS FIRES.

Table V appended hereto contains a list of the places where suspicious fires were investigated during the period covered by this report, together with the dates when such investigations were begun.

In brief, this table shows that investigations were made of 139 separate and distinct fires located at 95 different places in the state.

The law makes it the duty of the state fire marshal, when, in his opinion, further investigation than that made by the local officer reporting to him is necessary, to make, by himself or his deputy, a personal investigation of such fire and to take or cause to be taken the testimony under oath of all persons supposed to have knowledge of any facts or who have means of knowledge in relation to the matter in which an examination is required to be made.

It is unnecessary to say that this is one of the most important duties with which the office is charged, and the effectiveness and value of this work depends in a large measure upon how promptly and thoroughly it can be attended to.

I have endeavored at all times to give every suspicious fire reported as demanding an investigation, as prompt attention as possible, but owing to the fact that the number of men at my disposal is limited, there being only two persons whose time can be given almost wholly to field work, I have been unable in all cases to give every fire either the immediate attention or the full and thorough investigation that it perhaps demanded.

To the end that this important branch of the work may be made more thorough and effective, it is necessary that the field force be at least doubled. This will not only enable me to more promptly and thoroughly investigate fires than I have been able to do in the past, but will also give the department more time for inspections of buildings and other necessary fire prevention work.

## ARRESTS AND PROSECUTIONS.

## MOULTON, APPANOOSE COUNTY.

At one o'clock a. m., August 18, 1911, a fire destroyed the elevator of the A. C. Croft Seed Co., at Moulton, Appanoose county. An investigation was begun by this department soon

thereafter and a mass of evidence obtained, from which it appeared that the elevator in question together with its contents had been insured for \$16,500.00 and that a short time prior to the fire practically everything the building contained in the way of grain and seed had been taken out, some of it having been sold at other towns and a part stored in a barn belonging to the Hendon brothers.

The evidence secured was submitted to the grand jury of Appanoose county and that body in the fall of 1911 returned an indictment against A. C. Croft, president and manager of the A. C. Croft Seed Co., and also against James and William Hendon, charging these persons with having set fire to the elevator with intent to injure the insurer. In January, 1912, a second indictment was returned against the same parties charging them with conspiracy to burn.

In the middle of February, 1912, the case against the two Hendons was brought on for trial at Centerville. After the testimony of some sixty or seventy witnesses for the state had been heard and a like number on behalf of the defendants, and after the trial had been in progress for fourteen days, the defendants, James and William Hendon, offered to plead guilty to the charge of conspiracy to burn, which plea was accepted by the court and they were sentenced to the penitentiary at Ft. Madison for a term of three years.

A week thereafter A. C. Croft, whose case was still pending, also pleaded guilty to the charge of conspiracy and was given a like sentence to the penitentiary at Ft. Madison.

The successful outcome of this case, probably the most interesting and important of the kind ever tried in the state, was due largely to the efforts of Deputy State Fire Marshal J. A. Tracy, whose tireless energy and skill in securing evidence made it possible to bring the guilty parties to justice. Much credit is also due Mr. Lee M. Dowis, sheriff of Appanoose county, for his valuable assistance, and to County Attorney R. W. Smith and his assistants, Mr. H. E. Valentine and Mr. T. G. Fee, for the able manner in which they conducted the trial of the Hendon case.

During the trial of the Hendon case one John Smith of Moulton testified in relation to certain transactions which took place after the elevator fire and pertaining thereto. Later evidence brought to light the fact that Smith's testimony was false and made for

the purpose of shielding the Hendons. The evidence bearing on this matter was submitted to the grand jury during the spring of 1912, and John Smith was indicted for perjury, which indictment is now pending in Appanoose county district court.

#### DES MOINES, POLK COUNTY.

In October, 1911, a fire burned a barn in Des Moines in which was a horse belonging to one Joe Schatz. The horse was so badly injured that it had to be killed. When this department made an investigation of the fire it was found that the hay and other materials in the barn, as well as the horse, had been liberally saturated with coal oil. Schatz was indicted by the grand jury, charged with setting fire with intent to injure the insurer. Jan. 17, 1912, he pleaded guilty to the charge and was sentenced to serve one year in jail.

#### MITCHELLVILLE, POLK COUNTY.

Feb. 4, 1912, a fire occurred at Mitchellville, Polk county, in a building belonging to one Mrs. Mitchell. The blaze was extinguished before any damage was done, but the circumstances indicating incendiarism, this department was immediately notified and an investigation was begun the next day. The evidence obtained showed that one Edwin S. Mitchell, a young man and the son of the owner of the building, had set the fire while under the influence of liquor. It further appeared that this man Mitchell was an habitual drunkard, had been an inmate of the inebriate hospital at Knoxville and was at this time out on parole. The evidence in the case was submitted to the grand jury which indicted Mitchell for arson. He was placed under arrest but later was returned to the hospital for inebriates at Knoxville, where he is now confined.

#### OLDS, HENRY COUNTY.

In November, 1911, a fire destroyed the barn and contents of one C. A. Swanson, a farmer residing near Olds, Henry county. An investigation made by this department revealed evidence indicating that the fire had probably been set by Ernest Sharp, a fourteen-year-old grandson of Swanson. January 2, 1912, young Sharp confessed to a representative of this department that he had set the fire in question. The case was submitted to the county attorney of Henry county with the result that on February 12, 1912, Ernest Sharp was sent to the industrial school for boys at Eldora, by the judge of the district court.

#### STATE FIRE MARSHAL

#### PERRY, DALLAS COUNTY.

In the spring of 1912, a series of mysterious fires, evidently of incendiary origin, took place in the city of Perry, Dallas county. On the evening of May 26th three fires occurred in the town within a period of less than an hour. This department was notified, and on May 28th began an investigation, in the course of which certain evidence was discovered implicating one Albert Little, a young fellow living in Perry. When confronted with the evidence, Little confessed to having set fire to one of the buildings involved in the fires of May 26th, but denied having any knowledge of the other fires. He further stated that he was under the influence of cocaine at the time he committed the crime. Little was placed under arrest and confined in jail to await the action of the grand jury. Before his case was acted on by that body, however, the authorities decided that his condition was such that he should be sent to the hospital for inebriates at Knoxville, in which institution he is now confined.

#### SIoux CITY, WOODBURY COUNTY.

On June 28, 1912, at 2:28 a. m., a fire occurred in a building in Sioux City, occupied by one J. Seskovsky as a restaurant. During the investigation, made soon after its occurrence, it developed that this fire started with a violent explosion and when the firemen later entered the building they found several gas burners connected with a gas stove in the restaurant wide open and the gas pouring out. It was further found that the proprietor had left his place of business only a few minutes before the fire, thoughtfully omitting to extinguish a small gas jet under the coffee urn. The evidence in the case was submitted to the grand jury and Seskovsky was indicted, charged with setting fire with intent to injure the insurer. The case is now pending in the Woodbury county district court.

#### DAVENPORT, SCOTT COUNTY.

July 11, 1912, at 11:50 p. m., one Frank Libby, who was residing with his sister, Mrs. Waldon, at Davenport, came home drunk, and, finding the door locked and his sister unwilling to let him into the house in his drunken condition, he secured a supply of gasoline, saturated a portion of his sister's house therewith and applied a match. An alarm was turned in at once and Libby was apprehended by the chief of the fire department. He was later sentenced to the hospital for inebriates at Knoxville, where he is now confined.

## . CRESTON, UNION COUNTY.

A fire occurred Aug. 20, 1912, in Creston, partially destroying the residence and contents of one James Saling. An investigation was made by this department shortly thereafter during which a sufficient amount of evidence was unearthed to warrant the grand jury's returning an indictment against James Saling and also against Earl Madden and Everett Emerson, charging the trio with conspiracy to burn the Saling property for the purpose of injuring the insurer. Further investigation brought to light evidence tending to show that Saling and Madden in the summer of 1911 had conspired together to burn certain property belonging to Madden at Cromwell in order to obtain insurance money. Later, evidence was discovered tending to connect Everett Emerson and Earl Madden with a fire which destroyed property belonging to the former, located at Corning. All of this evidence being presented to the grand jury, a new indictment was returned against these three persons charging them with conspiracy to burn all three properties. An indictment was also returned against Madden alone for arson, he being charged with setting the fire to the Saling property at Creston in the night time. These indictments are now pending.

Note.—On the 8th day of February, 1913, after a trial lasting four days, the jury found Earl Madden guilty of conspiracy to burn.

## COUNCIL BLUFFS, POTTAWATTAMIE COUNTY.

In September, 1911, a hotel operated by one Mrs. M. A. Gallagher at Council Bluffs, Iowa, was partially destroyed by fire. An investigation by this department brought to light evidence which led to Mrs. Gallagher's indictment by the grand jury on the charge of setting fire with intent to injure the insurer. Her case was brought to trial in the spring of 1912, but owing to a defect in the indictment, a motion to direct a verdict for the defendant was sustained by the court. Mrs. Gallagher was later reindicted on the charge of conspiracy to burn and this case is now pending in the Pottawattamie county district court.

## SIOUX CITY, WOODBURY COUNTY.

At 2 a. m., October 2, 1912, a fire occurred in a building at Sioux City, occupied by one Bloomberg as a storage place for tents, fire works and carnival goods. When the fire department arrived at the place they found a man running away from the

building. This person was apprehended and placed under arrest. He gave his name as Loren Sisk and stated that he was an employe of Bloomberg and had been in the building for the purpose of getting some goods. The grand jury returned an indictment against Sisk, charging him with arson, and the case is now pending in the Woodbury County district court.

## ROYAL, CLAY COUNTY.

October 17, 1912, a fire destroyed a livery barn at Royal, Clay county. A few days later one H. T. Lohse was admitted from Royal to the Hospital for Inebriates at Knoxville. He made a written statement in which he confessed to having been in a barn where he set fire to some straw. His statement was rather disjointed, his mind appearing to be clouded owing to his having been under the influence of liquor, but taken in connection with statements of other persons at Royal, it appears that Mr. Lohse was responsible for the livery barn fire. This man is at the present time confined in the inebriate hospital.

There are two other indictments for unlawful burning now pending in the state, but by reason of the fact that the accused have not as yet been apprehended, the names and locations cannot at this time be disclosed.

## DEATH RECORD.

During the period covered by this report the following persons lost their lives by fire:

RALPH E. ELLSON, three-year-old son of Lon Ellson, Truro, Madison county, died January 3, as a result of burns received when his clothing caught fire as he was playing in front of the stove.

MRS. LISSETTE PFISTERER, West Amana, Iowa county, died January 4, as a result of burns received when her clothing caught fire as she was warming herself in front of the fire.

MRS. DELIA N. DENNEY, Council Bluffs, Pottawattamie county, died January 9, from burns received when her clothing caught fire as she was starting a fire in a heater.

ALBERT BRUNNER, Sumner, Bremer county, died January 12 as a result of burns received when a five-gallon gasoline can exploded as he was thawing out a gasoline engine with a torch.

JAMES FRANCIS MURPHY, Knoxville, Marion county, died January 18, from burns received as a result of an explosion of coal oil while he was starting a fire in a stove.

HANNAH ANGUS, Malvern, Mills county, died January 20, from burns received as a result of an explosion of gasoline which she had used in cleaning a hair switch.

MYRTLE SEDDON, four-year-old daughter of Sam Seddon, Hiteman, Monroe county, burned to death January 30 while alone in the house. Circumstances connected with occurrence unknown.

FRANCIS I. MERSCH, two-year-old son of Peter Mersch, LeMars, Plymouth county, burned to death January 30, when his clothing caught fire from an overheated stove.

HAZEL EDNA ROWE, Grandview, Louisa county, burned to death February 2, as a result of her clothing's catching fire from a pan of hot ashes which she was carrying out.

RONALD ARTHUR COLLINS, one-year-old son of E. W. Collins, Council Bluffs, Pottawattamie county, died February 3 as a result of burns received when the child upset an oil lamp which set fire to its clothing.

MRS. WILLIAM ANGUS, Malvern, Mills county, died February 9 from burns received while trying to put out fire in her daughter's clothing.

CURTIS SMITH, LEON HICKMAN, GAYLORD HICKMAN and ELSIE HICKMAN, aged 10, 1, 4 and 3 years, respectively, were burned to death February 9 in Collins township, near Maxwell, Story county, presumably as a result of trying to start a fire with gasoline, the children being alone in the house at the time.

ROSS MERVIN COVEY, Charles City, Floyd county, died February 12, from burns received in an explosion of gasoline with which he was trying to start a fire.

MRS. THOS. MCGOWAN, Des Moines, Polk county, died March 2, from burns resulting from her clothing catching fire from a range.

MARTHA JANE DAVIS, Exira, Audubon county, died as a result of burns received March 14, when her clothing caught fire from a stove.

WALTER WADE, of Potomac, Ill., enroute to North Dakota, was burned to death at Charles City, Floyd county, March 20, in a freight car which took fire as a result of a collision.

MRS. LIZZIE BETTIS, Corydon, Wayne county, insane, set fire to her bed March 22 and was burned to death.

MRS. HAZEL KAIN, Percy, Marion county, Iowa, was burned to death March 25, when her clothing caught fire from a stove.

MRS. C. C. MILLER, Davenport, Scott county, burned to death April 15, as a result of the explosion of a leaky gasoline stove.

MRS. CLARA JOHNSON and her three-months old son, Harold Johnson, were burned to death April 19, when the woman started fire with coal oil and the can exploded.

WILLIAM WATT, Des Moines, was killed by an explosion which set fire to a building April 25.

HOWARD HITCHCOCK, Clarinda, Page county, was burned to death April 29, when he tried to start a fire with gasoline, mistaking same for coal oil.

MRS. S. SCHNIEBER, Davenport, Scott county, Iowa, was burned to death May 3, her clothing catching fire from hair comings and paper which she was burning.

ESTHER BECKMAN, five-year-old daughter of John Beckman, near Hewarden, Sioux county, was burned to death June 24, when the house in which she was asleep caught fire as a result of defective flue.

MRS. JAMES SCOTT, Knoxville, Marion county, trying to quicken fire with kerosene was burned so severely June 29, when the kerosene can exploded that she died the same day.

MERRIL TAYLOR, seven-year-old son of Dr. F. W. Taylor, Maxwell, Story county, died June 30 as a result of being burned when his shirtwaist caught fire from fire-crackers.

FOUR-MONTHS-OLD child of Mrs. Kate Aldrich, Waterloo, Black Hawk county, was burned to death July 4 as a result of lamp explosion.

GLADYS HOFMAN, Oskaloosa, Mahaska county, died July 17 as a result of burns received from the ignition of gasoline with which she was cleaning gloves.

ESTHER JOHNSON, four-year-old daughter of Martin Johnson, Des Moines, Polk county, played with matches July 25, and her clothing caught fire, resulting in her being so severely burned that she died the following evening.

MRS. MARGARET MURRAY, Maxwell, Story county, burned to death July 28 as a result of the upsetting of a lamp which she was carrying down stairs.

MRS. FRED RIGBY, Keosauqua, Van Buren county, started fire with coal oil August 15. Can exploded, setting fire to her clothing. She was so badly burned that she died the same day.

CHARLES BROWN AND CATHERINE BROWN, aged five and three years, respectively, children of A. M. Brown near Ida Grove, Ida county, were burned to death September 23, when their father's barn caught fire, presumably as a result of the children's playing with matches.

MRS. D. D. MEYERS, Whiting, Monona county, burned to death September 25 as a result of trying to start a fire with gasoline.

JACOB WASHINGTON, colored, burned to death in a barn fire at Council Bluffs, Pottawattamie county, October 5. The man was drunk and is supposed to have set the barn on fire by accident.

RICHARD HARTMAN, a six-year-old boy at Des Moines, Polk county, was burned to death November 18, while at play, the leaves about him in some way catching fire.

FRANK KEOZCHECK was burned to death near Oxford, Johnson county, December 6, when the dwelling house in which he was asleep was totally destroyed by fire of unknown origin.

FRANCES HILTON, Waterloo, Black Hawk county, burned to death December 29, while trying to rescue her mother, whose clothing had caught fire when she tried to start a fire with coal oil.

Of the forty-two persons mentioned above who came to their deaths as a result of being burned, eighteen were women and sixteen were children. In eight cases of fire fatal to life the careless use of gasoline was responsible. In ten cases the person who was burned to death tried to start or quicken a fire by the use of oil.

### STATISTICAL INFORMATION.

As a part of this report, I have appended hereto five tables as follows:

TABLE NO. I.

The footings of this table have been briefly set out in the introductory portions of this report. By months the fire losses reported to this office for the year 1912 were as follows:

January .....	\$ 880,155.00
February .....	405,600.00
March .....	339,711.00
April .....	274,491.00
May .....	371,411.00
June .....	163,492.00
July .....	271,002.00
August .....	303,136.00
September .....	259,058.00
October .....	621,819.00
November .....	355,719.00
December .....	696,406.00
Total .....	\$4,942,000.00

TABLE NO. II.

Table No. II contains a list of the kinds of structures destroyed or damaged, the value of the buildings, the damage thereto, the value of the contents, the damage thereto, and the character of the buildings.

Classified by use the ten highest classes of property affected by fires come in the following order:

Dwellings .....	1343
Barns .....	428
Stores .....	292
Sheds .....	61
Restaurants .....	52
School houses .....	36

Hotels .....	35
Factories .....	34
Storage houses .....	32
Grain and hay stacks .....	32

### BARN FIRES.

During the latter half of the year 1912 an unusually large number of farm barns were destroyed by fire. Of the 428 barns reported to this office as having been destroyed or damaged during the period covered by this report only 115 were thus affected during the first half of the year and 313 were destroyed or damaged during the last half of the year.

The origin of most of these fires was reported as unknown. Some of them of mysterious and probably incendiary origin. We endeavored to investigate all the cases which were reported to us as probably incendiary, but with the exception of a comparatively few cases where we found evidence tending very strongly to show that the fire was the result of design, most of the cases of mysterious origin of fire could not be accounted for except upon the theory of spontaneous combustion and possibly the careless use of matches, cigars or lanterns in and about the buildings.

It is well known that hay, especially certain kinds, packed together before it is perfectly cured will generate heat to such an extent as to create combustion.

Upon this subject I quote from the July, 1912, number of Fire Alarm, as follows:

"The sweating of newly mown hay is an important cause of this loss because it is liable to take fire spontaneously, and it draws lightning. The scientific facts in regard to the heating and sweating of cut grass in a mow are interesting.

"The cells in the grass continue to live and breathe for some time after it is cut, and they alone, in a close mow heat in the center to a temperature of 132° F. Added to this is the heat from the microscopic spores of fungi which continue to grow on the blades during the time it is undergoing fermentation, the heat created by the development of the hay seeds, which goes on for a time, and the heat of the sun upon the roof.

"These causes acting together may heat hay that is well packed in a mow, without ventilation to make a current of air to carry off the heat, to a temperature of 212° F.—that at which water boils. Then the hay begins to char; the charcoal so formed absorbs oxygen and that makes the mass still hotter. If the heat reaches 265° F. the mass blazes. Barn fires from heating hay often are reported, 'Cause unknown, the whole barn seemed ablaze at once.'"

In view of these facts, I would urge upon farmers and others the importance of exercising the very greatest care in not storing hay before the same becomes thoroughly cured. More attention should also be given to the ventilation of these barns.

Of course, the greatest care should be exercised with lanterns, matches, cigars and pipes in and about the barn. The smoker and his cigar have no business where there is hay or other inflammable substances.

TABLE NO. III.

This table contains a summary of the causes of the fires reported, with the number of properties destroyed or damaged from each cause and the amount of the damage to the buildings and contents. Classified in their order by number, the ten highest classes are as follows:

Cause.	Number	Amount.
Unknown .....	692	\$2,338,792.00
Sparks from flue .....	417	193,776.00
Defective chimneys .....	319	385,521.00
Adjoining fires .....	194	501,567.00
Lightning .....	163	396,015.00
Overheated stove or furnace .....	144	125,226.00
Incendiary and probably incendiary .....	87	132,181.00
Spontaneous combustion .....	83	100,782.00
Children and matches .....	82	37,250.00
Oil or gasoline stove explosion .....	82	51,682.00
Total .....	2263	\$4,262,792.00

It will be observed that the fires reported as unknown continue in an exceedingly large number, being almost one-fourth of the total number of fires but representing loss to the amount of almost one-half of the total fire loss. The reason that the proportion of the loss reported under this cause is greater compared with the total loss than the number of unknown fires compared with the total number of fires, is that where there is only a partial loss, some clue to the cause or origin is generally left, while in the case of the total destruction of the property it is usually difficult, if not impossible, to determine the cause.

Owing to the fact that this is the first report submitted by this office which covers the period of an entire calendar year, no comparison can be made with the entire year of 1911, as the last annual report made, covered only the work from July 5, 1911, until December 31, 1911, or a little less than six months.

The fires reported as of incendiary or probably incendiary origin during the last six months of 1911 aggregated 50 or a little more than four per cent of the total number of fires reported, and the loss from said cause during the same period was \$194,819.00, or more than ten per cent of the total loss then reported.

During the entire year 1912 there were reported 87 fires of incendiary or probably incendiary origin, or three and one-tenth per cent of the total number of fires reported, while the loss from said cause during the year aggregates \$132,181.00, or about two and two-thirds per cent of the total fire loss of the state.

## GENERAL REMARKS.

## Fire Protection.

While, as I conceive it, the great work of the state fire marshal's office is fire prevention, it must not be inferred that I underestimate the need of fire protection. The fire fiend never sleeps but is ready at every opportunity to get control, and his control means destruction and death. Every city and town, therefore, should be prepared with the best and most modern equipment for fighting fire that it can secure.

During the past year I have formed many acquaintances with chiefs of fire departments in the various cities and towns of the state and have invariably found these men possessed of the highest character and courage. Indeed there is no discount on American courage, but many of these courageous men are handicapped by lack of proper water systems and suitable apparatus. In too many instances the policy of the municipality towards its fire department has been one of inexcusable indifference and neglect. I have, however, reason to believe that in the matter of better fire protection, as well as in the work of fire prevention, there is an awakening among the people to the real importance, both of prevention and protection, to the end that life and property may be made more safe.

I have dwelt at considerable length upon the importance of fire prevention by educational means, by proper ordinances relating to the construction of buildings and the installation of heating and lighting systems, by periodical inspections of basements and other portions of buildings and by an impartial en-

forcement of all laws and ordinances relating to cleanliness, which is next to godliness, not only as a preventive of disease but as a safeguard against fire.

There is an erroneous view of the real object and purpose of fire prevention too frequently taken by many people; that is, that the sole beneficiaries are the fire insurance companies or associations.

Those who hold this view forget that when property is destroyed by fire the loss is absolute and cannot be replaced except by the expenditure of labor, money and new material. If the property is not insured the loss is individual and often falls with crushing force upon a person who can ill afford to bear it. If insurance is carried upon the property the loss is collective, or a community loss, but nevertheless a loss.

When we consider the fact, as shown by the reports to this office, that of the property burned during the past year, buildings and contents to the value of \$1,125,285.00 was not covered by insurance and hence was an individual loss, the hardship upon the individual property-owner is at once apparent.

The work which the fire insurance companies and their agents do to foster and encourage the reduction of the fire waste of the state is with them the natural result of self-interest and hence a matter of self-preservation, but in a matter so vital to the welfare of our people the state has also a duty, and this duty it is aiming to discharge by the creation and support of the state fire marshal's office.

At the present time nearly all of the mine operators and the owners of factories carry liability insurance. Yet the state provides mine inspectors and factory inspectors.

To the superficial observer the same thought might readily occur that the principal work of these inspectors would be to reduce the liability to accidents and hence to that extent help the liability companies. But the thought of the state in providing for these inspectors was, and must be, higher and broader than this. Their work is in the interest of and for the preservation of human life, and incidentally, for the protection and safety of property, and no one in this enlightened age would for a moment advocate the abolition of the inspection of these important branches of industry, no matter how fully the employes may be insured or how comprehensive a compensation act may be passed.

The policy which the state has adopted and the policy which it ought to follow is to so safeguard the occupations that are especially hazardous that the loss of life and limb may be decreased, and if those who insure against liabilities of this kind are benefited, society is still more benefited.

In many respects the work of fire prevention and that of the prevention of loss of life through accident in factories and mines and upon the railroads must be carried on along the same lines. The work is largely educational. The key-word is "care." If the present and future employer becomes thoroughly imbued with the value of human life and the importance of exercising the highest degree of care in making the place where the employe works perfectly safe, and if the employe becomes thoroughly imbued with the value of care in everything he does, there will be a great reduction in personal accidents. Even so there will be a great reduction in the fires which annually occur in this state if care and cleanliness become the motto of every property holder.

During the year 1911 England's per capita fire loss was 53 cents, Ireland's 58 cents, Scotland's 56 cents, Italy's 31 cents, Germany's 21 cents and that of the United States \$2.31. Iowa's per capita loss during 1912 was \$2.22. During the next few years there ought to be a material reduction in this enormous waste, and with such reduction must and will come a reduction in insurance rates.

#### RECOMMENDATIONS.

I have already referred to the importance of better building construction. To that end I would urge upon the mayors and councilmen of cities and towns the necessity of carefully revising their present building ordinances with a view to the strengthening of the same where they may be found to be deficient.

If it be found that the powers possessed by cities and towns under our present statutes to regulate the construction of buildings are not sufficiently broad, additional powers should be granted by the legislature.

In this connection, I am very decidedly of the opinion that in the future no hotel, opera hall or other place of public entertainment should be erected in any city unless the same be built of brick, stone, iron, cement or other non-combustible material.

I am furthermore clearly of the opinion that school districts should be prohibited from erecting public school buildings more than two stories in height.

I am further convinced that from the standpoint of fire safety, the erection of sky scrapers which goes merrily on in many of our larger cities in this country ought to be limited, and I believe that the larger cities of Iowa should take early action looking to the limitation by ordinance of the height of business buildings.

Greater safeguards should be placed around the storage and handling of gasoline and other highly inflammable and explosive oils in cities and towns.

As a breeder of fire the parlor match is a veritable criminal, and its place cannot too soon be taken by the safety match.

Building inspection ordinances similar to the one set out in this report should be adopted in every city, and its provisions should be rigidly enforced.

The efficiency of the department is hindered by the lack of sufficient funds to employ the necessary men, both for investigation and for inspection work, and I sincerely trust that the present general assembly will recognize and supply this need.

ACKNOWLEDGMENT.

To the press of the state, which has most generously supported the work of this office; to my deputy, Mr. J. A. Tracy, my assistant, Capt. Amos W. Brandt, and to my clerk and stenographer, Mr. C. Christopherson, who with unfailing loyalty and efficiency have discharged their various duties, I desire to express my hearty appreciation.

Respectfully submitted,

*Oh O. Roe*

State Fire Marshal.

TABLE NO. I.

SHOWING NUMBER OF FIRES REPORTED BY COUNTIES, VALUE OF BUILDINGS AND CONTENTS INVOLVED, DAMAGE TO BUILDINGS AND CONTENTS, TOTAL INSURANCE ON BUILDINGS AND CONTENTS, NUMBER OF FIRES PARTIALLY COVERED BY INSURANCE, AMOUNT OF EXCESS OF LOSS OVER INSURANCE, NUMBER OF FIRES AFFECTING PROPERTY WITHOUT ANY INSURANCE AND TOTAL LOSS UPON PROPERTY NOT COVERED BY INSURANCE.

COUNTIES	No. of fires	Value of buildings and contents	Damage to buildings and contents	Total insurance on buildings and contents	No. of fires partially covered by insurance	Excess of loss over insurance	No. of fires without insurance	Loss
Adair	19	\$ 52,213	\$ 28,785	\$ 34,890	8	\$ 7,068	2	\$ 1,435
Adams	15	38,720	12,878	23,832	5	2,588		
Allamakee	13	19,650	12,392	9,280	6	6,875	4	1,295
Appanoose	40	69,538	43,385	42,284	20	18,185	6	2,219
Audubon	7	11,370	9,270	6,867	6	3,003		
Benton	21	87,870	55,981	33,324	7	29,586	7	535
Black Hawk	73	886,006	216,844	250,450	10	77,801	6	11,395
Boone	39	116,550	16,003	75,853	5	3,637	3	1,002
Bremer	21	56,841	32,756	40,600	8	9,000	6	2,056
Buchanan	17	33,696	19,685	15,585	11	6,535	1	125
Buena Vista	9	33,300	20,513	22,050	6	4,825		
Butler	19	106,200	49,128	76,850	9	11,425	1	925
Calhoun	16	34,407	16,267	21,090	9	4,512	2	265
Carroll	10	23,428	8,388	10,350			2	1,103
Cass	69	255,150	119,312	133,068	22	29,235	14	4,120
Cedar	9	20,260	7,381	13,545	4	2,965		
Cerro Gordo	32	249,666	82,597	128,076	13	43,224	1	30
Cherokee	6	14,300	10,710	5,150	1	2,100	2	4,650
Chickasaw	12	59,291	11,465	38,625	2	1,325	1	800
Clarke	13	30,345	26,569	17,232	7	3,873	2	6,700
Clay	9	18,635	10,361	13,350	4	1,385		
Clayton	19	70,560	22,025	40,052	9	7,343	4	1,395
Clinton	30	111,560	22,585	39,850	5	9,040	3	115
Crawford	17	18,245	13,065	6,532	13	5,553	3	2,005
Dallas	32	137,909	67,299	53,725	19	27,559	5	3,950
Davis	22	47,050	35,899	31,727	12	8,870	2	480
Decatur	26	51,630	48,585	33,955	16	7,025	5	6,270
Delaware	14	26,123	16,688	12,945	6	6,493	3	1,855
Des Moines	32	206,350	15,904	197,770	4	3,150	1	500
Dickinson	17	62,747	37,774	28,725	9	19,162	3	552
Dubuque	72	687,270	119,341	371,606	17	27,242	7	3,082
Emmet	9	15,139	14,464	5,630	6	8,578	2	750
Fayette	20	50,383	17,521	23,692	8	7,283	3	1,085
Floyd	33	214,460	49,863	61,955	9	3,848	7	14,546
Franklin	9	45,248	25,610	27,350	2	6,250	3	290
Fremont	17	33,050	14,532	16,500	7	2,950	2	2,050
Greene	12	34,160	23,441	26,579	4	2,031	2	2,825
Grundy	10	27,500	11,375	19,883	5	5,617		
Guthrie	25	106,700	78,816	39,296	11	46,172	3	325
Hamilton	15	46,660	16,701	15,277	10	5,717		
Hancock	4	7,450	5,300	3,775	3	2,125		
Hardin	18	76,543	49,915	42,000	6	10,843	2	1,525
Harrison	35	81,860	31,290	40,755	11	7,550	6	4,505
Henry	11	24,710	20,785	13,755	8	6,135	1	825
Howard	13	17,850	6,475	13,293	10	6,910		
Humboldt	13	26,365	17,810	14,280	5	2,230	3	2,775
Ida	11	34,900	24,205	38,332	6	8,348	1	600
Iowa	12	24,782	17,037	13,450	6	7,445	2	657
Jackson	10	11,507	5,927	6,925	4	2,052	1	400
Jasper	35	91,350	32,893	54,875	15	13,335	4	565
Jefferson	22	80,525	56,555	45,712	11	20,638	1	225
Johnson	44	268,033	115,834	138,375	18	27,920	4	450
Jones	9	27,805	15,856	9,750	6	6,355	2	3,150
Keokuk	21	61,435	35,072	37,115	11	8,395	3	1,750



TABLE NO. I Continued.

COUNTIES	No. of fires	Value of buildings and contents	Damage to buildings and contents	Total insurance on buildings and contents	No. of fires partially covered by insurance	Excess of loss over insurance	No. of fires without insurance	Loss
Kossuth	5	12,020	3,730	7,025	3	1,820	1	50
Lee	111	867,313	99,771	554,770	15	8,560	3	897
Linn	57	400,492	60,076	237,710	9	11,967	1	1,000
Louisa	11	7,549	5,674	3,762	5	1,887	4	770
Lucas	16	31,865	16,817	15,560	6	3,260	3	315
Lyon	11	16,625	10,975	9,250	6	3,625	1	50
Madison	14	29,750	10,585	15,025	6	2,225	5	3,035
Mahaska	22	120,202	66,625	89,875	13	10,337		
Marion	37	63,270	44,395	33,710	19	15,990	8	6,930
Marshall	29	88,455	16,840	44,095	8	3,260	6	1,800
Mills	8	14,825	8,375	9,780	3	2,320	3	1,075
Mitchell	12	51,950	9,331	13,065	3	4,700		
Monona	9	24,027	17,402	20,300	4	4,600		
Monroe	32	90,673	57,622	58,899	23	18,399	1	25
Montgomery	18	133,635	99,860	74,790	9	23,385	2	9,035
Muscatine	31	330,772	277,238	302,816	12	26,075	1	200
O'Brien	8	16,965	6,068	6,615	4	2,050	1	1,800
Osceola	3	4,450	4,255	1,266	2	1,984	1	1,005
Page	24	139,845	57,478	68,805	6	10,645	9	4,587
Palo Alto	6	18,285	15,654	10,800	4	5,054		
Plymouth	14	23,708	9,983	14,200	2	1,150	7	2,933
Pocahontas	9	20,050	14,988	12,100	6	3,847		
Polk	344	4,170,415	441,322	2,300,277	23	39,126	33	13,636
Pottawattamie	112	688,833	115,029	368,072	18	13,862	17	1,216
Poweshiek	17	104,800	18,134	57,910	4	3,615	2	1,900
Ringgold	15	49,900	21,197	37,810	10	7,345		
Sac	13	52,730	28,385	22,750	7	13,610	1	50
Scott	129	881,230	52,050	584,953	19	8,357	12	1,083
Shelby	15	25,150	13,816	15,750	5	3,750	2	1,100
Sioux	10	19,205	9,280	12,465	6	2,450		
Story	41	230,660	88,299	83,297	11	15,238	6	1,025
Tama	24	87,463	31,803	48,963	7	10,760	5	1,535
Taylor	20	64,862	56,069	30,234	8	17,960	3	1,470
Union	23	59,480	15,610	26,650	7	3,200	9	2,160
Van Buren	26	59,915	42,345	31,429	14	13,101	3	1,630
Wapello	98	375,545	204,954	291,455	12	38,067	6	1,240
Warren	11	55,055	26,639	24,660	7	7,875		
Washington	19	61,785	21,850	36,070	4	6,650	6	3,035
Wayne	24	67,425	32,906	38,421	10	10,325	3	425
Webster	60	417,878	225,246	310,550	31	49,212	7	6,550
Winnebago	12	35,085	27,018	16,475	4	9,650	1	425
Winnesiek	15	35,115	20,661	18,880	7	6,585	6	1,560
Woodbury	141	3,093,105	171,375	2,150,008	14	62,730	12	1,520
Worth	3	4,850	4,365	1,150	1	600	2	2,615
Wright	14	41,421	16,364	34,033	6	3,451	1	25
Total	2,801	\$18,737,035	\$ 4,942,000	\$10,688,711	848	\$ 1,125,285	343	\$ 177,813

TABLE NO. II.

SHOWING THE NATURE AND CHARACTER OF THE BUILDINGS DESTROYED OR DAMAGED, THE VALUE OF EACH, THE DAMAGE THEREO, THE VALUE OF THE CONTENTS OF EACH AND THE DAMAGE THEREO, THE KIND OF MATERIAL OF WHICH EACH WAS CONSTRUCTED AND WHETHER THE LOSS WAS TOTAL OR PARTIAL.

	No. fires	Value of buildings	Damage to buildings	Value of Contents	Damage to contents	Character of Buildings Affected								
						Wood	Brick	Total loss on buildings	Partial loss on buildings	Total loss on contents	Partial loss on contents			
Apartment houses	11	\$	6,900	\$	737	4	7	7	7	7	7	7	7	7
Automobiles	10				1,618	10	10	10	10	10	10	10	10	10
Baggage cars	2	8,000	1,200	14,400	1,618	2	2	2	2	2	2	2	2	2
Bakeries	10	40,500	6,457	12,150	3,825	6	4	4	4	4	4	4	4	4
Banks	10	65,200	8,169	11,500	3,177	6	5	5	5	5	5	5	5	5
Barber shops	18	100,800	7,728	12,235	4,419	13	5	5	5	5	5	5	5	5
Barns	428	390,080	344,390	341,162	251,865	427	1	333	80	283	93	6	6	6
Blacksmith shops	15	12,400	4,770	9,050	5,935	15	8	9	6	7	6	7	6	6
Boarding houses	23	118,100	16,964	26,950	6,237	15	3	20	2	2	14	2	14	2
Boiler rooms	3	1,800	1,025	1,250	340	3	3	3	3	3	3	3	3	3
Bottling works	4	7,800	1,065	9,500	2,473	1	3	2	2	2	2	2	2	2
Box cars	1	46,000	1,20	35,000	132	1	1	1	1	1	1	1	1	1
Bunk cars	5	2,765	1,970	270	270	5	4	4	4	4	4	4	4	4
Carpenter shops	5	1,500	1,012	540	540	5	5	5	5	5	5	5	5	5
City halls	3	5,800	3,830	5,800	2,900	3	2	3	2	3	2	3	2	3
Churches	24	15,000	945	700	700	14	2	10	10	11	5	11	5	11
Cleaning establishments	16	292,950	81,153	55,150	13,475	14	10	10	10	10	10	10	10	10
Coal mines	1	45,000	4,000	39,100	4,136	1	9	2	1	1	1	1	1	1
Creameries	9	55,060	26,869	100,107	37,371	6	3	8	8	8	8	8	8	8
Depots	3	33,000	1,710	10,500	275	1	1	1	1	1	1	1	1	1
Dining cars	1	800	800	4,000	150	1	1	1	1	1	1	1	1	1
Dry kilns	1,343	2,579,130	597,895	814,497	241,179	1,283	60	924	924	163	653	1	1	1
Dwellings	19	75,700	67,520	48,302	44,179	19	3	16	16	16	16	16	16	16
Elevators	34	359,725	56,522	510,431	263,573	50	14	8	24	8	18	18	18	18
Factories	300	300	912	7,000	65	2	6	1	1	1	1	1	1	1
Flagman's cabins	8	234,500	4,841	44,650	3,766	4	5	1	1	1	1	1	1	1
Flats	9	94,350	4,841	44,650	3,766	4	5	1	1	1	1	1	1	1
Foundries	9	94,350	4,841	44,650	3,766	4	5	1	1	1	1	1	1	1
Freight houses	7	27,100	9,725	11,400	5,560	5	2	5	5	5	5	5	5	5

TABLE NO. II—Continued.

	No. fires	Value of buildings	Damage to buildings	Value of contents	Damage to contents	Character of Buildings Affected					
						Wood	Brick	Total loss on bldgs.	Partial loss on bldgs.	Total loss on contents	Partial loss on contents
Freight cars	2	13,000	12,005	3,600	3,000	2		1	1	1	
Garages	23	46,225	7,844	94,600	15,531	16	7	6	14	6	12
Granaries	3	2,100	1,900	4,750	4,000	3		2	1	1	1
Grain and hay stacks	32			4,061	3,871					30	12
Gymnasiums	1	60,000	359	4,000			1		1		
Hedges	2			69	69	2				12	
Hen houses	12	3,820	2,608	3,205	2,560	12		4	8	5	4
Hog houses	4	1,800	1,800	1,200	1,200	4		4		4	
Home for Aged	1	27,000	27,000	3,500	1,000	1		1			1
Hospitals	2	22,000	1,501	6,000	298	1	1		2		
Hotels	35	612,000	111,634	144,753	68,993	21	14	9	24	7	22
Ice houses	5	16,900	11,650	18,600	7,600	5		2	3	2	2
Laundries	12	34,815	6,083	48,500	4,463	8	4		11		10
Livery stables	16	46,300	27,279	33,475	14,910	14	2	10	6	6	8
Lodge Halls	6	17,300	14,950	2,700	2,700	4	2	4	1	3	
Lumber yards	9	20,156	9,656	100,346	19,672	8	1	3	4	2	6
Mills	4	79,618	58,000	79,061	61,462	3	1	2	2	2	2
Moving picture shows	4	13,500	4,950	5,900	2,260	1	3	1	2	1	2
Offices	17	326,900	33,538	59,450	8,018	9	8	3	9	1	8
Opera houses	12	190,099	40,523	5,750	2,294	6	6	3	9	1	6
Orphans' home	1	20,000	50				1		1		
Paint shops	4	4,400	750	700	144	2	2		4		1
Photo galleries	1	3,500	500	5,700	1,900	1			1		1
Planing mills	2	4,000	3,500	14,000	8,500	2		1	1		2
Plumbing shops	1	15,000	25	15,000			1		1		
Pool halls and bowling alleys	14	44,800	8,621	13,275	7,540	8	6	4	8	3	9
Postoffices	4	6,700	2,200	4,200	2,300	4		3	1	2	2
Power houses	14	208,800	25,218	1,124,950	61,756	8	6	6	7	3	8
Printing offices	9	184,500	4,044	298,300	28,912	2	7		7		8
Restaurants	62	233,380	24,787	65,128	23,794	37	15	17	33	11	31
Round houses	1	8,000	15	5,000			1		1		1
Saloons	6	68,700	5,815	13,950	2,425	3	3	1	5	1	4
Sanitariums	1	5,000	1,000				1		1		
School houses	36	298,000	150,342	37,190	24,340	25	11	14	20	13	8
Sheds	61	106,438	9,293	8,545	6,468	59	2	29	30	24	12

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Shooting galleries	1	2,000	275			1			1		
Skating Rinks	2	17,500	16,800	7,700	3,048	2		1	1	1	1
Stock yards	2	1,380	785			2		1	1		
Stone crushers	1	15,000	15,000	7,000	7,000	1				1	
Storage houses	32	44,236	21,251	241,314	216,838	26	6	13	18	15	15
Stores	292	2,374,307	367,212	3,415,941	912,038	180	112	87	132	64	183
Street cars	1	5,000	227						1		
Tailor shops	3	53,000	625	12,850	1,055		3		3		3
Threshing machines	7	26,650	8,896	2,000	500	7		6	1		1
Telephone exchanges	2	22,700	825	60,600	300	1	1	1	1		2
Tool houses	3	285	285	750	350	3		3		1	1
Warehouses	10	111,110	39,581	600,300	214,982	9	7	3	12	2	13
Water tanks	1	100	25			1			1		
<b>Total</b>	<b>2,801</b>	<b>\$ 10,016,888</b>	<b>\$ 2,384,602</b>	<b>\$ 8,720,147</b>	<b>\$ 2,607,398</b>	<b>2,387</b>	<b>381</b>	<b>895</b>	<b>1,538</b>	<b>718</b>	<b>1,279</b>

STATE FIRE MARSHAL

TABLE NO. III.

CONTAINING A SUMMARY OF THE ORIGIN AND CAUSE OF THE VARIOUS FIRES REPORTED, THE NUMBER OF EACH, AND THE DAMAGE TO THE BUILDINGS AND CONTENTS SPECIFIED BY CAUSES.

Origin	Number	Damage to buildings and contents
Adjoining fires	194	\$ 501,567
Ashes against wood	14	13,063
Automobile backfire	6	1,053
Blow torch	2	57
Bonfire	28	9,636
Breaking electric wires	3	13,300
Children and matches	82	37,252
Defective chimneys	319	385,521
Defective wiring	37	153,435
Electric iron, carelessness	5	1,858
Fireworks	16	4,635
Gas, explosion of	12	4,144
Gas jet near woodwork	12	32.79
Gasoline, cleaning with	15	5,997
Gasoline, explosions of	60	38,179
Incendiary or probably incendiary	87	132,181
Lamp or lantern, explosion of	20	15,110
Lamp or lantern, upset	27	17,709
Lightning	163	396,015
Match carelessness	58	97,208
Mice and matches	14	11,311
Oil or gasoline stove explosion	82	51,682
Overheated boxing	3	23,522
Overheated stove or furnace	144	125,226
Rubbish near stove	25	53,341
Smokers' carelessness	33	40,407
Smoke house	2	87
Soldering iron	2	5,520
Sparks from flue	417	193,776
Spark from gasoline engine	7	16,295
Spark from locomotive	32	18,903
Spark from traction engine	11	10,652
Spontaneous combustion	83	100,782
Starting fire with oil	4	6,200
Stovepipe against wood	53	28,323
Thawing water pipes	20	49,132
Tramps	17	36,856
Unknown	692	2,338,792
<b>Total</b>	<b>2801</b>	<b>\$4,942,000</b>

TABLE NO. IV.

GIVING THE CITIES AND TOWNS IN WHICH INSPECTIONS OF DILAPIDATED BUILDINGS AND INFLAMMABLE CONDITIONS HAVE BEEN MADE DURING THE YEAR 1912. THE NUMBER OF PLACES INSPECTED AT EACH POINT AND THE NUMBER AND KIND OF ORDERS ISSUED IN CONNECTION THEREWITH.

CITY	Date	Number of inspections	Clean-up	Repair	Change	Removal	Clean and repair
Algona	May 16	42	7	5	10	18	2
Albia	Nov. 25	3		1	1		
Anamosa	Dec. 12	6			4	1	1
Battle Creek	Nov. 14	7	1			2	4
Brighton	Aug. 19	1			1		
Britt	Dec. 14	12					12
Corning	May 8	10	7	2		1	
Centerville	Aug. 28	1			1		
Cherokee	Dec. 18	4	2	1	1		
Charles City	Oct. 10	16	15				1
Colfax	May 7						
	Dec. 12	5	2	1			
Clarinda	April 25	5	1			3	1
Creston	Feb. 13						
	Oct. 29	8	4	1	3		
Correctionville	May 31	3				2	
Denison	June 6	9	2		6	1	
Decatur City	April 23	3			1	1	
Des Moines	Various dates	12	7	1		4	
Decorah	May 17	11	7		3		
Eddyville	Aug. 19	2					
Fayette	April 13	7	6	1			
Floyd	July 24	2		1		1	
Farmington	Sep. 20	1			1		
Ft. Dodge	Dec. 18	1			1		
Glidden	Sep. 3	7		1	2	4	
Glenwood	May 1	1					
Grinnell	Aug. 14	1			1		
Garner	Dec. 13	4	1	1			2
Grundy Center	Nov. 8	1			1		
Hornick	Nov. 8	3		1	1	1	
Independence	May 2	2			1		1
Iowa City	Oct. 17	4		1		3	
Iowa Falls	May 14						
	Oct. 9	16		1	4	2	
Lamoni	April 22	3				3	
La Porte City	Dec. 13	8	1	2	2	3	
Lone Tree	Jan. 12	13	4	1	1	5	1
Marengo	Aug. 14	5		2		1	2
Macksburg	Nov. 7	6	1	2		3	
Nashua	Oct. 10	7	3	2		2	
Pilot Mound	April 8	1				1	
Persia	June 13	6		4		1	
Prairie City	Mar. 13	2			2		
Rock Rapids	Sep. 7	12	2		3	1	
Red Oak	Jan. 5	3		1	1	1	
Rolfe	Oct. 25	3				1	2
Stuart	April 29	1		1			
Shenandoah	May 8	2				1	1

TABLE NO. IV—Continued.

CITY	Date	Number of Inspections	Clean-up	Repair	Change	Removal	Clean and repair
Slater	April 4	2	1		1		
Sioux City	*Jan. 8	54	18	2	5	17	5
Toledo	Oct. 3	12	1	2	2	7	
Tama	July 1	1		1			
Vinton	Mar. 19	4	1	1		2	
Villisca	Oct. 29	17	6	8	1	1	1
Waverly	Oct. 10	8	5		1		
Washington	July 20	1				1	
Waterloo	Oct. 17	5		1	2	2	
West Bend	Oct. 25	1					1
Total		387	106	49	64	99	37

\*And various other dates.

TABLE NO. V.

GIVING PLACES AT WHICH INVESTIGATIONS OF FIRES OF SUSPICIOUS ORIGIN HAVE BEEN MADE DURING THE YEAR 1912, AND THE DATE OF SUCH INVESTIGATION.

County.	Place.	Date of Investigation.
Adair	Stuart	April 15.
Adams	Grant township	July 24.
	Union township	October 24
	Corning	October 26
	Prescott township	November 18
	Emerson	November 29
Appanoose	Bellair township	June 26
	Mystic	July 29
	Johns township	November 26
Black Hawk	Barclay township	June 19
	Cedar township	August 1
	Cedar township	August 2
	Near Waterloo	August 3
	Waterloo	October 16
	Waterloo	November 18
Buchanan	Independence	September 12
	Independence	October 9
Calhoun	Yetter	October 25
Carroll	Glidden	August 3
Cass	Atlantic	October 28
	(Five fires investigated)	
Cerro Gordo	Clear Lake	May 8
Crawford	Vail	November 11
Dallas	Perry	May 28
Davis	Bunch	April 10
	Marion Township	November 13
Decatur	Lamoni	December 6
Delaware	Edgewood	October 12
Dubuque	Dubuque	December 4
Floyd	Charles City	March 25
Fremont	Sidney	April 26
	Imogene	June 5
Grundy	Fairfield Township	September 27
	Palermo Township	December 5
Harrison	Raglan Township	March 15
	Dunlap	September 25
Henry	Wayne Township	January 2
Humboldt	Bode	January 16
Jasper	Valeria	March 2
	Mound Prairie	October 23
	Colfax	December 11
Johnson	Solon	December 18
	(Three fires investigated)	
Keokuk	Hedrick	August 21
	Jackson Township	November 29
	Delta	December 11
Kossuth	Wesley	January 3
Linn	Jackson Township	June 24
	Coggon	June 24
Louisa	Jefferson Township	January 10
Lucas	Pleasant Township	April 26

TABLE NO. V—Continued.

County.	Place.	Date of Invest- igation.	
Madison	Union Township	August 27	
Mahaska	Cedar Township	April 4	
	Oskaloosa	August 15	
	Oskaloosa	October 4	
	Lakota	December 30	
Marion	Swan	January 25	
	Marshalltown	June 11	
Marshall Mills	Henderson	September 14	
	Glenwood	May 2	
Monroe	Troy Township	May 23	
	Buxton	July 30	
	Bluff Creek Township	September 17	
	Union Township	September 18	
	Hynes	November 11	
Page	Lovilia	December 26	
	Shenandoah	December 13	
Palo Alto	Ruthven	April 16	
	Des Moines	October 7	
Polk	Des Moines	January 20	
	Mitchellville	February 5	
	Des Moines	February 15	
	Enterprise	April 18	
	Des Moines	May 1	
	Des Moines	June 10	
	Des Moines	July 2	
	Des Moines	July 16	
	Clive	August 8	
	Des Moines	August 10	
	Des Moines	September 10	
	Des Moines	September 11	
	Des Moines	September 11	
	Cambridge	November 9	
	Des Moines	November 16	
	Des Moines	December 27	
	Pottawattamie	Council Bluffs	April 18
		Council Bluffs	June 7
		Council Bluffs	July 5
		Council Bluffs	October 18
Poweshiek	Grinnell	April 3	
	Barnes City	December 19	
Sac	Near Schaller	October 16	
Story	Lincoln Township	November 12	
	Zearing	November 12	
Taylor	Lenox	May 17	
	Blockton	June 11	
Union	Abelstan	June 14	
	Creston	May 16	
	Creston	June 8	
	Creston	October 25	
	Creston	October 25	
	Creston	October 31	

TABLE NO. V—Continued

County	Date of Investi- gation	Place
Van Buren	Winchester	July 19
	Vernon Township	September 18
	Farmington	September 20
Wapello	Village Township	October 2
	Blakesburg	February 13
	Near Blakesburg	February 15
Wayne	Ottumwa	July 19
	Ottumwa	August 19
	Sewal	June 27
	Seymour	July 5
Webster	Bethlehem	December 5
	Fort Dodge	January 3
	Lehigh	May 21
Woodbury	Badger	July 13
	Sioux City	February 28
	Sioux City	March 1
	Sioux City	March 2
	Sioux City	March 3
	Sioux City	March 4
	Sioux City	April 23
	Sioux City	April 24
	Sioux City	May 21
	Sioux City	May 21
	Sioux City	May 24
	Sioux City	May 24
	Sioux City	June 3
	Sioux City	July 31
	Sioux City	July 31
Sioux City	October 5	
Sioux City	October 8	
Hornick	November 3	
Sioux City	November 4	
Sioux City	November 5	
Sioux City	December 23	