

State fire Marshall

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State of Iowa

1918

Annual REPORT OF THE

Iowa (STATE) FIRE MARSHAL

FOR THE YEAR 1918

OLE O. ROE
STATE FIRE MARSHAL

Published by
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Des Moines

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STATE FIRE MARSHAL.

Appointed by the Governor. Term, Four Years. Expires July 1, 1919.

Office	Name	Legal Residence	Birthplace
Fire Marshal.....	Ole O. Roe.....	Des Moines.....	Norway
Deputy	J. A. Tracy.....	Sioux City.....	Iowa
Assistant	E. J. Frowick.....	Des Moines.....	Iowa
Assistant	H. G. Zimmerman.....	Dows.....	Iowa
Chief Clerk and Stenogr'r	Laura M. Pedersen.....	Des Moines.....	Illinois

Unknown

LETTER OF TRANSMITTAL.

Des Moines, February 1, 1919.

HON. W. L. HARDING, *Governor of Iowa.*

SIR: In compliance with the provisions of Section 2468-n, Supplement to the Code, 1913, I have the honor to submit herewith my eighth annual report of my official acts and of the affairs of this office, covering the period beginning January 1, 1918, and ending December 31, 1918, both dates included.

Ole O. Roe
State Fire Marshal.

EIGHTH ANNUAL REPORT STATE FIRE MARSHAL

For the year 1918, 4,393 fires were reported to this office, involving a loss of \$6,440,771. The property involved in these fires was valued at \$27,015,791. Of the total loss thus reported, property to the value of \$4,189,034 was covered by insurance, leaving an excess of loss over insurance amounting to \$2,251,737. Included in this excess are 640 properties involving a loss of \$354,405 upon which no insurance was carried.

THE TOTAL NUMBER OF FIRES REPORTED FOR 1918 WAS 560 LESS THAN THAT REPORTED FOR 1917.

THE FIRE LOSS OF 1918 WAS LESS BY \$775,474 THAN THAT OF 1917.

The average daily fire loss of the year amounted to \$17,645 and the average loss in each fire was \$1,466.

The per capita fire loss in the state of Iowa during the year 1918 was \$2.73.

During the year six (6) fires occurred in each of which the loss exceeded \$100,000, as follows:

March 18, Washta	\$126,447
May 16, Webster county, near Fort Dodge.....	125,000
July 2, Woodbury county, near Sergeants Bluff.....	113,784
Aug. 6, Independence.....	135,000
Sept. 28, Des Moines.....	274,147
Oct. 18, Des Moines.....	110,000
Total	<u>\$884,378</u>

The number of dwellings burned was 2,089 and the loss on buildings was \$1,025,334, and on contents \$363,789.

The sound value of these dwellings was reported at \$4,914,608 and that of their contents at \$1,114,044.

The number of barns burned was 605 and the loss on buildings was \$626,179 and on contents \$490,975.

The sound value of the barns was reported at \$674,685 and their contents at \$563,666.

The number of stores burned was 253 and the loss on buildings was \$356,736 and on contents \$917,811.

The sound value of the store buildings was reported at \$1,853,700 and that of the contents at \$2,710,911.

The number of factories burned was 61 and the loss on buildings was \$143,738 and on contents \$284,131.

The sound value of the factory buildings damage was reported at \$741,518 and that of their contents at \$1,495,621.

Ninety-six (96) deaths were reported as the direct result of fire. Of this number 42 were women and 34 were children. In 49 cases fatal to life, gasoline or coal oil was involved.

Inspections of buildings and premises by myself and regular deputies to the number of 684 were made in 124 different cities and towns in the state, upon the basis of which there were issued 174 orders to remove buildings, 54 to repair buildings, 77 to change, 55 to clean up and repair, and 159 to clean up inflammable rubbish.

In addition to the foregoing, 1,946 inspections of grain elevators, mills and food storage plants were made by 69 inspectors who were duly appointed by me with the approval of the executive council of the state. These inspections were made in 951 different cities and towns in 93 different counties of the state.

Upon the basis of these inspections, reports of which were made to us, 433 orders were issued by this department.

One hundred sixty-five (165) suspicious fires were investigated in 113 different places in 63 different counties of the state.

In addition to the number of indictments pending from previous years, mention of which was made in my last report, eighteen (18) arrests and prosecutions were had during the year 1918. Of the cases that were tried or in which pleas of guilty were entered, thirteen (13) resulted in convictions, six (6) of which were sentenced to the penitentiary or reformatory, two (2) were committed to the industrial school at Eldora, four (4) to hospitals for the insane, one (1) to the institution for feeble-minded, and two (2) were paroled by the court after sentence.

Of the other prosecutions, one person indicted died before his case came to trial, one was tried and acquitted and one indictment is still pending.

Appended hereto as a part of this report are five tables which set out in detail not only the reports of fires, but the work of inspection and investigation done by this office.

GENERAL REVIEW.

In making this, my eighth and last annual report of my official acts and of the affairs of my office, I trust I may be pardoned if I speak at length concerning the creation and history of the office of state fire marshal as well as of the various lines of activity pursued during these years that I have been charged with the duty of directing the work.

The state fire marshal law was enacted by the Thirty-fourth General Assembly and was known as Chapter 128.

The bill for the act was originally introduced in the house by Hon. W. L. Harding, our present governor, who was then a member from Woodbury county.

After passing the house, it was, in some respects, amended in the senate, the main changes being in cutting the annual appropriation in two and in reducing the salary of the state fire marshal.

This law was not the result of any hasty impulse, but its enactment had frequently been urged by persons who were acquainted with the enormous fire waste of our country and state, which at the present time exceeds \$2.50 per capita per annum as against an annual per capita fire loss in the civilized nations of Europe ranging from 19 cents to 35 cents.

The present Iowa law is fashioned very largely, if not entirely, after that of Ohio, where an independent fire marshal's department similar to ours has been in operation for over eighteen years.

At the present time there are thirty-three (33) states in which there is a fire marshal's office or department. There is a fire marshal's department in the island of Hawaii as well as in the District of Columbia, also similar departments in four of the provinces of Canada.

Immediately upon my appointment to the present office, of which I took charge on July 4, 1911, it became my duty to outline the various activities along which the law intended that I should operate; to formulate blanks both for reports and for inspection work; to prepare an educational bulletin for use in the public schools of the state, containing outlines of instruction in the

causes and dangers of fire, as well as giving general directions for the conducting of fire drills; to prepare blank books for the records required by law to be kept in the office; to formulate and direct the methods to be pursued in the investigation of suspicious fires and in the securing of evidence relating to their origin.

A fourfold duty is placed by law upon the fire marshal and the work growing out of this duty may be briefly designated under the following heads:

THE STATISTICAL WORK.

Until the establishment of the state fire marshal's office and the provision for the collection and publication by that department of certain data pertaining to fire losses there had been no office or other agency in this state concerned in securing this information except the companies and associations doing a fire insurance business, and the fire data reported by them to the various departments consisted only of three items, to wit: risks written and carried, premiums received, and losses incurred and paid.

No account was or could be taken by them of the losses which were either partially or wholly without insurance.

When we consider that about twenty-five (25%) per cent of the total annual fire loss in this state is not covered by insurance, we must at once conclude that the only approximately complete and accurate statistical information relative to these matters is obtained by the fire marshal.

Furthermore, the reports received by the fire marshal as to values and loss or damage are invariably the result of the combined judgment of the owner and the local fire chief, mayor or township clerk who inspects the fire and makes the report. The other reports as to losses and damage come from the insurance companies or associations entirely.

In addition to the loss and damage reported, our reports cover the material of which the destroyed or damaged buildings are made, the damage to buildings and contents set out separately, also the nature of the occupancies of the various buildings destroyed or damaged. Furthermore, the cause of each fire, so far as the same is ascertainable, according to the best judgment of the inspector and the owner, is set out.

While old line level premium life insurance has been reduced to an exact science because their premiums are based upon certain

mortality tables formulated as the result of observation and experience covering many years, fire insurance has been largely a game of chance.

THIS CONDITION OUGHT TO BE REMEDIED, BUT IT NEVER WILL BE REMEDIED UNTIL THE VARIOUS HAZARDS ARE MORE FULLY UNDERSTOOD AND MORE ACCURATELY AND SCIENTIFICALLY CALCULATED THAN THEY ARE AT THE PRESENT TIME, AND THE VERY BASIS OF THIS CALCULATION IS THE GATHERING OF THE FIRE DATA WHICH THE LAW PLACES UPON THIS DEPARTMENT. THIS IS NEW AND ORIGINAL RESEARCH AND ONE THAT NO OTHER DEPARTMENT IN THE STATE IS CHARGED WITH PURSUING.

INSPECTION WORK.

Section 2468-j, Supplement to the Code, is one of the most important as well as one of the most sweeping of all of the many provisions contained therein.

From a careful reading of this section it will be seen that in the matter of making inspections of buildings and premises and issuing orders based thereon, the state fire marshal has both original and appellate jurisdiction, but that chiefs of local fire departments and township clerks of the territory outside the incorporated cities and towns have as much power as is possessed by this office in the premises.

Under this provision of the law this office has, during a period of seven and one-half (7½) years made 4,203 inspections, based upon which it has issued 971 orders to remove buildings, 504 orders to repair buildings, 617 orders to change, 315 orders to clean up and repair, and 1,154 orders to clean up inflammable conditions. In addition to these, 3,605 inspections were made by special conservation inspectors during 1917 and 1918.

In the discharge of this duty, the department has aimed to be diligent and still just, having due regard for the property interests and rights of the people, and at the same time keeping in mind the danger to adjoining property which a special fire hazard or fire trap presents.

As a rule the office has secured excellent co-operation in this work upon the part of most of the fire chiefs. Ready compliances have been made in perhaps ninety per cent of the cases where orders have been issued. In a few cases it has become necessary to institute proceedings or threaten to do so, but up to the present time there is no record that in any cases have our orders been set aside by the courts.

This is largely due to the fact that the office has had the hearty co-operation of many of the city officials as well as of the better lawyers in the cities and towns where removal or clean-up orders have been rendered necessary.

However, the work of issuing orders direct only represents a small fraction of the work that the department has actually set in motion, for in many of our larger cities they have local fire marshals or fire inspectors working in harmony with this office, who make it their duty to inspect buildings and building conditions.

When especially difficult problems have presented themselves, particularly in the smaller cities and towns, such as the removal of buildings or a material change in conditions, the local fire department has usually called upon the state fire marshal for assistance, and to this call we have invariably responded.

Under the provisions of the section cited, we have held, and I believe rightly, that we as well as the fire chief are authorized to remedy all especially fire hazardous conditions. In this we have included,

The storing and handling of gasoline and other inflammable and explosive oils in business buildings and residences;

The improper placing of furnaces, stoves or other heating plants;

The permitting of smoke stacks, chimneys or flues to become out of order so as to cause a fire;

The improper installation of electric and other lighting systems, and the improper or incorrect wiring of buildings;

The maintenance of uncleanness in basements, back rooms, attics and near buildings such as would easily start a fire;

Improperly constructed booths, inadequate exits, and other fire hazardous conditions in motion picture shows and other places of amusement.

Attention to these matters are of the utmost importance, not only to the safety of property, but to life.

In addition, our inspections have covered fire departments and fire apparatus wherever we have gone, and we have tried to be helpful in securing better fire protection and more efficient attention to the care of the fire apparatus, and in many places better water pressure.

We have given much attention to the securing of better building ordinances in cities and incorporated towns and the better enforcement of the ordinances already in effect. This is the first step and a most important step in reducing the fire waste.

INVESTIGATIONS AND PROSECUTIONS.

The law makes it the duty of the state fire marshal when in his opinion further investigation than that made by the officer reporting the fire to him is necessary

"to take or cause to be taken the testimony under oath of all persons supposed to have knowledge of any facts, or to have means of knowledge in relation to the matter in which an examination is herein required to be made, and shall cause the same to be reduced to writing. If the state fire marshal shall be of the opinion that there is evidence sufficient to charge any person with the crime of arson, or with the attempt to commit the crime of arson, or of conspiracy to defraud, or criminal conduct in connection with such fire, he shall cause such persons to be arrested and charged with the offense, or either of them, and shall furnish to the proper prosecuting attorney all such evidence, together with the names of witnesses and all of the information obtained by same, including a copy of all matter and testimony taken in the case."

It is unnecessary for me to emphasize the importance and indeed the difficulty of the duty with which the office is here charged.

During the seven and one-half years ending January 1, 1919, 1,282 fires were investigated by representatives of this office. These investigations were made either at the request of the chiefs of fire departments, mayors, township clerks or interested property holders.

As a result of these investigations, 176 prosecutions were instituted resulting in 110 convictions and 44 acquittals.

While we have succeeded in apprehending and securing the punishment of a number of the criminals of this class, we confess that many guilty have escaped. Some of this is due to a lack

of men and means to obtain evidence, but much of it, indeed the greater portion of it, to helpless law enforcement which exists in too many localities of our state, and the cumbersome method of criminal procedure which is still a part of our jurisprudence.

After a case has been investigated and evidence of guilt which is almost overwhelming has been secured, the case is placed before the county attorney. Here our first skirmish begins. Too often this official is inexperienced; sometimes he is timid, and it is frequently quite a task to convince him that it is his duty under the evidence to have the matter investigated by the grand jury of his county.

Granting, however, that we successfully pass the first barrier, we next come to the grand jury. This body invariably listens with patience and interest to cases of this kind, but too often are loathe to indict where the charge is "burning to injure the insurer." Sometimes the men on the grand jury want somebody to guarantee a conviction, otherwise they say that the prosecution will incur a needlessly heavy expense to the county and therefore they fail to indict.

Suppose the second stage is passed and the indictment is returned in due form, the accused is apprehended, secures a lawyer, and if he has money or means, he usually gets the best lawyer in the county or in the adjoining county and prepares for battle. Usually his first move is for a continuance, for delay in going to trial invariably inures to the benefit of the accused.

In the meantime he and his friends are busy interviewing the witnesses for the state and if possible creating a sentiment in his favor. Finally, after a long delay, the case comes to trial; some of the witnesses have gone away, others have been seen and as a result the state is unable to present as strong a case as it would if it were tried immediately after the indictment was returned.

In the matter of instituting prosecutions, we have exercised the greatest care to the end that no innocent person should suffer, but where we have become satisfied of the guilt of the party we have done everything we could to bring him to justice without fear or favor.

In not a few cases investigated by this department we have found that there was no evidence whatever of incendiarism, and when we have so found, we have invariably set matters right so

far as we were able. But in a number of other cases investigated, while we were morally certain of the guilt of the party, the legal evidence obtainable was not sufficient to warrant a prosecution because such prosecution would undoubtedly result in acquittal.

Nevertheless, we have felt and been assured by people in a great many localities that these investigations did good, for in many cases they got so close to the guilty party that they not only stopped him from having further fires but also created a sentiment in the locality that there is an agency in the state looking especially after such matters.

EDUCATIONAL WORK.

In the scheme of fire prevention I mention last but by no means as the least, the educational work required by law to be carried on by the state fire marshal's office.

Not only the children, but the adults need to be reached by education. To this end I have made it my business to get in close touch with chiefs of fire departments, mayors, township clerks, and others especially charged with looking after fires to see to it that greater fire preventive measures are taken and enforced in their various localities.

I have also delivered a great many addresses on fire prevention in various parts of the state before conventions of business men and others, also before commercial clubs, teachers' institutes, and other gatherings.

I have made use of fire prevention day and the proclamations issued by the governor to stir up and keep alive fire prevention sentiment.

In the line of school work I have endeavored to faithfully carry out the provision of law requiring fire drills and the teaching of the causes and dangers of fires by having prepared and issued a bulletin which has just passed through the fourth revised edition and been forwarded to the various teachers and superintendents of the public schools of the state.

At least once a year I have made it a business to circularize the superintendents and principals and urge upon them the duty and indeed the necessity of giving strict attention to the carrying out of this law.

The instruction given in the bulletin which I have prepared is,

in my opinion as well as in the opinion of prominent school men to whom it has been submitted, of an eminently practical nature.

I have great faith in the effectiveness of our public schools and in the enduring effects of sound common sense thoroughly inculcated in the minds of the children who attend the same.

Not a few school buildings burn during each year. Some of these fires started while the children were in the building. I have had reports from several such cases and they were invariably to the effect that when smoke, indicating fire, was first discovered, the fire drill bell was sounded and the children marched out to safety in an orderly manner.

Not only are fire drills valuable because they enable the pupils to save their lives from impending fire, but are if possible of more value because they have a tendency to fix a habit of coolness and orderly conduct in the face of danger.

As a part of the educational scheme of the office, both with respect to children and adults, I have invariably placed the safety of life above that of property and the state is to be congratulated that during recent years there have been no holocausts or great destruction of life by fire.

FIRE PROTECTION AND FIRE PREVENTION.

FIRE PROTECTION.

In the popular mind these two terms are either considered synonymous or else confused with each other. As a matter of fact they are as separate and distinct as the maintenance of a disciplined army and the education of our people in the principles of true patriotism.

Fire protection finds its tangible expression in an organized and well equipped and well disciplined fire department with ample water supply, prompt and efficient alarm service, and sufficient pressure to apply the extinguishing stream with effect to any fire, great or small.

As fires are bound to occur even with the exercise of the greatest care, such a department is made absolutely necessary and is usually provided for in every city, town and even in some of the villages.

While only in the larger cities are there the so-called paid fire departments whose organization and equipment are usually of a

superior character, many of the smaller towns and even villages have volunteer organizations whose effectiveness deserve the highest praise

Eight years ago, before the organization of this department, it is safe to say that there was not a motor truck in use in a single department in the state. Now, these are in general use in all of the larger cities and even in some of the smaller towns, having supplanted not only the horse but have also taken the place of the men who in former days used to pull the hose cart and other fire-fighting apparatus.

During these past eight years there have also been numerous smaller towns and villages that have established fire departments by first securing ample water supply, mains, and afterwards hose and other necessary accoutrements.

As the efficiency of an army depends very much upon its general, so the efficiency of a fire department is largely dependent upon its chief. If he is a clear-headed and courageous leader, one who has not only the confidence but the goodwill of his men, the department will be efficient. If, on the other hand, he is timid or hesitating—especially if he is fearful of giving offense in the discharge of his duties to politicians or property owners, his service to the people of his city will be of an inferior quality.

It has been my pleasure to meet personally many, and by correspondence many others of the fire chiefs of this state during my term of office, and in most instances I have found them to be men who not only knew what to do in fighting fires, but persons who were or did become actively interested in fire prevention, and I desire here and now to acknowledge the uniform courtesy and support of the chiefs of the fire departments of this state which have been accorded to this office, and without which support and co-operation much of the good that we have been able to do would have failed of accomplishment.

FIRE PREVENTION.

Important and necessary as is fire protection, fire prevention is of equal importance. Someone has aptly said that a child's education should begin a hundred years before he is born. Paradoxically it might be stated that the best time to put out a fire is a year before it starts.

The basic principle underlying fire prevention is better buildings. Iowa has passed out of the pioneer stage and its days of building wooden shacks and shanties ought to be forever past.

The problem of sheltering comfortably the future generations must in my opinion be solved by getting building material out of the ground and light and heat out of the air.

Under the laws of Iowa as at present constituted, cities and incorporated towns have ample power to provide a building code. They also have power to provide by general ordinance for a fire limit district and also to prescribe of what material the buildings in that district should be erected, not only as regards external construction but also as regards internal arrangement.

The inspection of old dilapidated buildings made by this office has been referred to in another part of this report. Inasmuch as a picture tells much better than words can describe the appearance of some of the buildings and building conditions with which we have had to deal, I deem it proper to submit several cuts of some of the old and dilapidated buildings against which removal orders have been issued.

This department has been diligent in impressing upon municipal authorities their duties in respect to providing better building ordinances, and especially in enforcing rigidly those already in existence, but I confess it has been a very tedious task to secure general attention to this important subject.

In connection with the erection of buildings there should be the most rigid inspection by a duly constituted municipal officer of the construction of all chimneys, the installation of the heating plant, and also of the electric wiring where electricity is installed.

Next in importance to properly constructed buildings is the question of care and cleanliness. Experience has demonstrated that the average business man or housekeeper is quite generally careful as to the condition of his show window and his front room, but exceedingly careless and indifferent as to the condition of his basement, attic or storeroom.

When we consider that from seventy-five to eighty per cent of the fires originate on the inside of a building and usually in the basement—sometimes in the attic, it becomes of the utmost importance that regular periodical and rigid inspections of every

place of business should be made by one having authority to do so, and where inflammable conditions are found to exist, the same should be ordered removed or remedied.

In addition to the matter of properly installing electric wires and making such wires of sufficient size to carry a current with safety, the question of the proper storage and handling of gasoline and other highly inflammable oils which are used to a greater or less extent in nearly every family, becomes a most vital one.

These two hazards, the unsafe installation of electricity for light and power, and the careless handling and storage of gasoline and other inflammable substances, have greatly increased the fire hazard, not only in our cities and towns, but also upon the farms.

Elevators, mills and farm barns are especially subject to the lightning hazard which hazard may be very largely reduced, if not entirely prevented, by the installation of a properly constructed lightning rod. Every well equipped elevator, mill and barn should have water barrels and buckets and chemical extinguishers for use on gasoline and electric fires, a fire axe and ladder, an electric lantern, a number of good brooms, a small fireproof room for storing odds and ends, extra fuses where electricity is used for light or power, and above all, a careful manager who keeps everything clean.

The automobile should not be stored in the barn, nor should the gasoline supply be placed therein.



Fire Hazard, Vail.



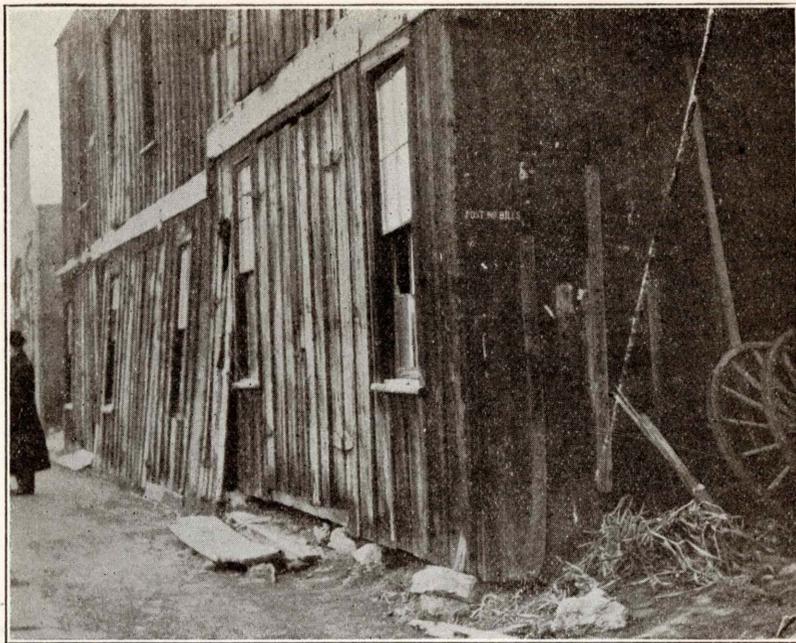
Store Building, Anamosa.



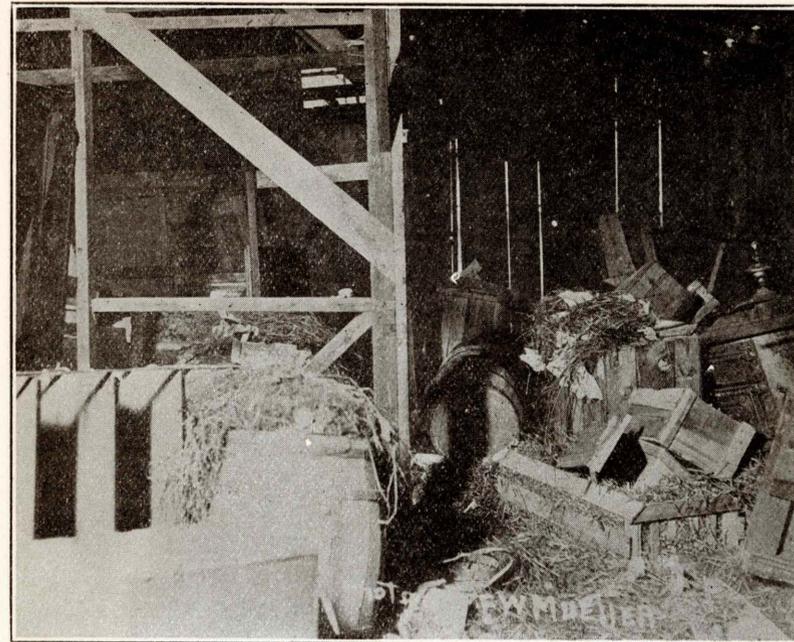
Store Building, Cedar Rapids.



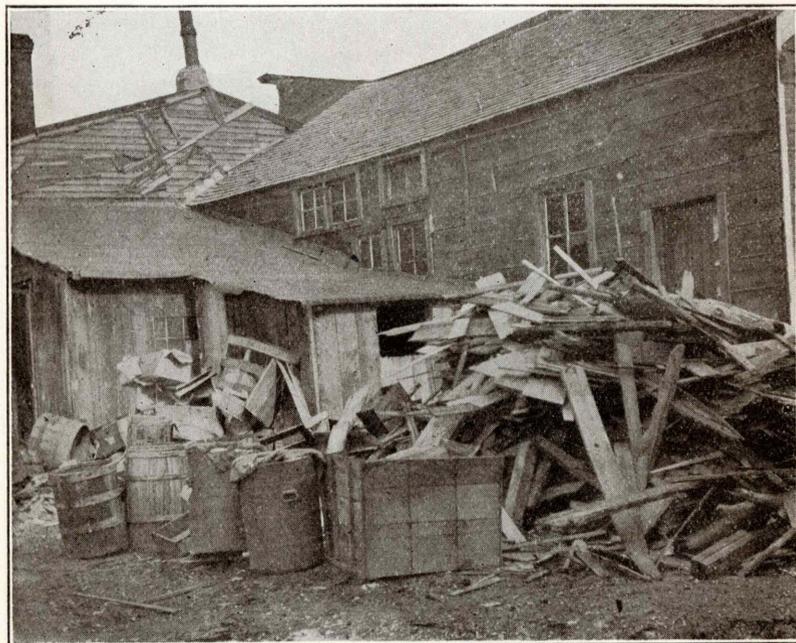
Store Building, Lucas.



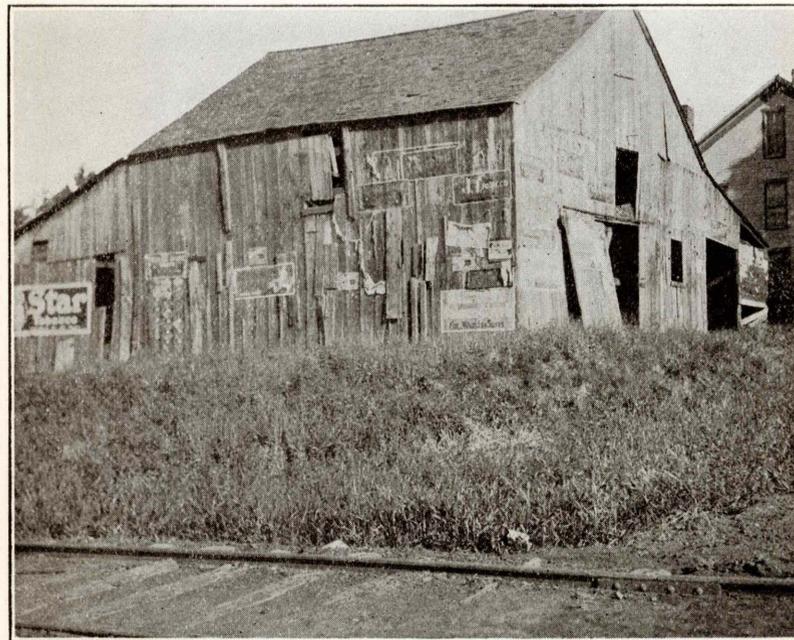
Barn, Centerville.



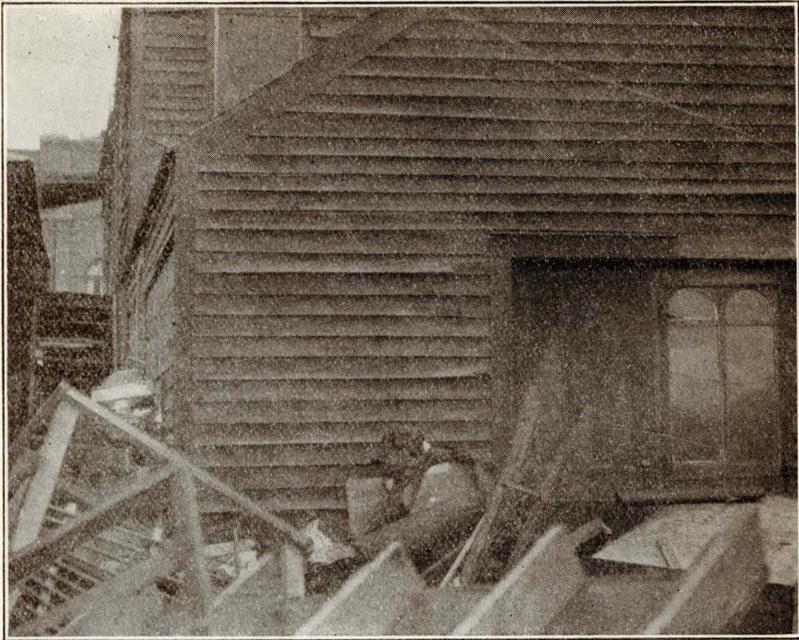
Fire Hazard, Waverly.



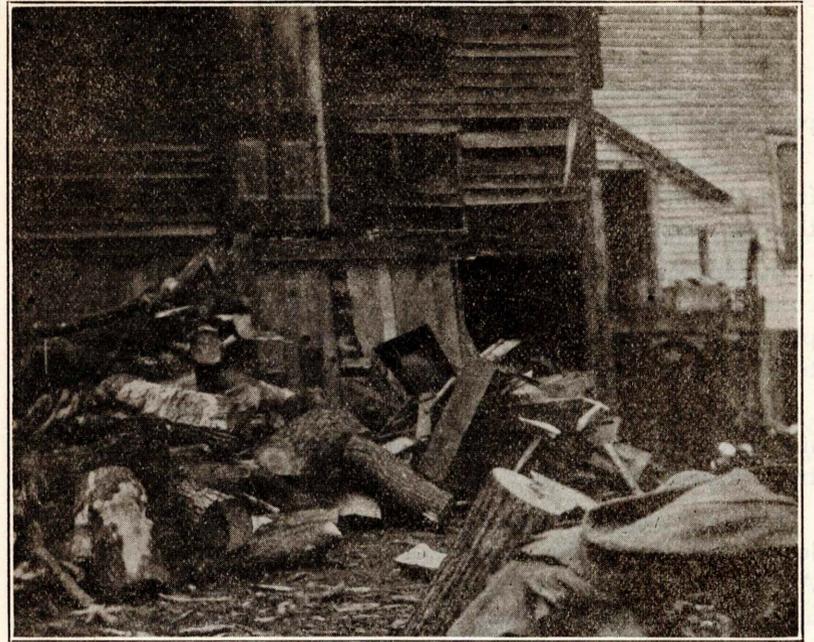
Fire Hazard, Olin.



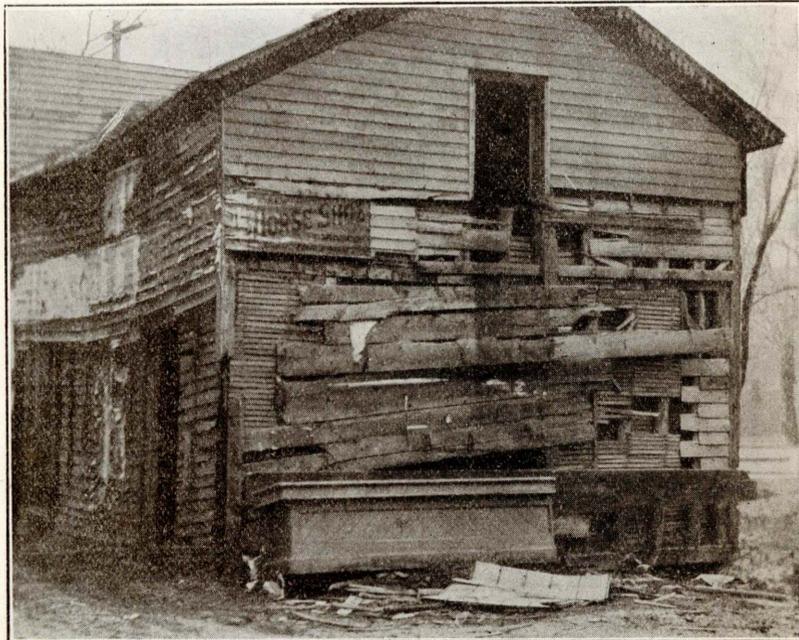
Livery Barn, Delta.



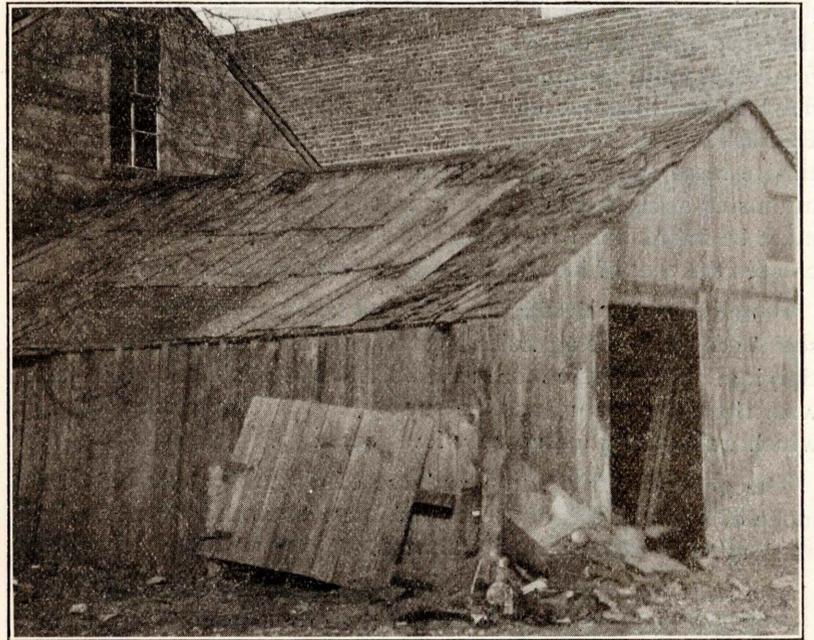
Fire Hazard, Estherville.



Fire Hazard, Coin.



Old Store Building, Mason City.



Warehouse, Anthon.

FIRE PREVENTION AND INSURANCE.

That fire insurance has become an economic necessity to every property holder is so self-evident that it needs no argument.

The business of fire insurance is simply that of collecting money from the many policy holders and distributing the same among the few who may have sustained losses.

In addition to the loss paid, the cost of insurance includes the commission to the agent who solicits the business, the expense of placing and keeping the risk on the books, the charges incident to adjustments, and the taxes of various kinds.

Owing to the excessive fire loss in the United States, exceeding in some years \$2.75 per capita, the insurance cost in this country is exceedingly high.

The only way to reduce this excessive cost is to reduce the losses, and this is the purpose of the fire prevention movement. At the present time the state fire marshal's office is the only agency in the state which is devoted wholly and solely to fire prevention.

While in a sense there is a close relationship between the business of fire insurance and the work of the fire marshal's office, and that insofar as the office may have been successful in reducing our fire losses or in stemming their increase, its work has been beneficial to the business of insurance, but IT HAS ALSO BEEN BENEFICIAL TO EVERY PROPERTY HOLDER, as the ultimate result will and must be a reduction in the insurance premiums or assessments paid, for, in the end, the cost of insurance must be based upon the liability to loss, and as this liability decreases the cost of insurance must necessarily decrease.

In our complex civilization and as a necessary part of our rapid social progress, the agencies which cause fire are continually multiplying. Each of the more than 300,000 automobiles in this state, with their attendant gasoline supply, is a fire producing agency which was wholly unknown a few years ago.

The general introduction and use of electricity, not only as a mode of lighting, but of power and heat, is another agency which has largely increased the fire hazard.

The state has delegated the work of regulating these and other special fire hazards which threaten the property and lives of our people, to the fire marshal who is and should be the servant of all

the people whether insured or not, for this office must continue to be, as it has been, one of broad, social and economic service and not one designed to promote the financial gain of some particular line of business.

BETTER HOUSING.

I am pleased to note that the idea of better housing has gained such headway that a movement for legislation along this line is now on foot in our state.

In my report to the governor under date of February 1, 1915, I made, among others, the following recommendation:

"A law prohibiting the leasing of a building as a human habitation unless it measures up to a certain standard both as respects sanitation and safety from fire."

Again, my report to the governor dated February 1, 1917, contains the following recommendation:

"I renew the recommendation made in my Fourth Annual Report that there is need of a law prohibiting the leasing of a building for human occupancy unless it measures up to a certain standard both as respects sanitation and safety from fire.

"Our inspection work has afforded us opportunities to see much of the life of the poor in our cities and towns. While it might be a hardship to compel a man who owns the modest cabin or shack he occupies to give up its use, there is no excuse for permitting the well-to-do landlord to lease a building to others unless the same is reasonably fit for human habitation."

I sincerely hope that comprehensive and effective legislation may be enacted relative to this important matter.

THE WAR FIRE HAZARDS.

To every officer engaged in law enforcement, the entry of the United States into the world war became a period of added responsibility and duty. This was especially true of the fire marshal's office.

The moment war was declared I foresaw the probability of increasing fire dangers, and I immediately set about to counteract them by putting fire chiefs, city officials and others on their guard, first against possible alien enemy activities, and secondly, against increasing carelessness.

While in some states there were undoubtedly many fires started by paid agents of the German government and their sympathizers

or by others who were opposed to any and all forms of organized government; and while undoubtedly a few of the fires occurring in this state during this period were the result of design upon the part of alien enemies, these were, thanks to the loyalty of our splendid citizenship, so few that they made but a small part of the total.

In a few localities buildings were also undoubtedly burned or their destruction attempted because of ill feelings engendered by reason of differences concerning our entry into the war, or because of disloyal conduct or rank pro-German sympathies expressed by certain persons.

Fortunately, however, these cases were isolated, and now that the great conflict is over, it is to be hoped that neighborhoods will again settle down to dwell in peaceful harmony. For, if the war settled any one thing it is that in America all must be Americans with no divided allegiance or sympathy.

In addition to the war hazards just alluded to, there was a third which served perhaps more than the other two to increase the fire danger.

The needs of our country called to the colors more than 100,000 of our best and most competent young men. These came from the farm, the factory, the store, the shop and the office. Many of them left businesses requiring special care and skill. These positions had to be filled by inexperienced and less skillful workers which undoubtedly increased the carelessness which was already too great.

But even as war produced its peculiar and difficult questions, so does peace. In and as a result of the reconstruction following the war prices and values which have been and are abnormally high, will in many cases be lower. This will involve losses to some businesses and as business losses are always a temptation to fires upon the part of some, the greatest watchfulness and care should continue to be exercised by both insurers and others against fire.

Conceal it as we may the fact remains that too many buildings or contents or both are annually sold to insurance companies through the agency of a fire, the origin of which is sometimes ascertained, but more frequently "UNKNOWN." This whole business of burning to injure the insurer is always a contemptible fraud, but when it results in the destruction of the building and

contents of a neighbor who has perhaps little or no insurance, or injures or destroys life as is sometimes the case, it becomes a crime that cannot be dealt with too severely

ARRESTS AND PROSECUTIONS

KINGSLEY, PLYMOUTH COUNTY.

On May 22, 1917, about two a. m., a fire destroyed the pool hall of Darrel Kindig.

During an investigation by this department an alarm clock and wires were found in the ruins. Other evidence was also secured showing the fire was set by Kindig for the purpose of collecting heavy insurance.

Kindig was confronted with the evidence and made a written confession to setting the fire by means of an electrical device which he had made in connection with an alarm clock and electric light wires.

Kindig was indicted and the case continued from time to time up to April 4, 1918, when he entered a plea of guilty to a charge of arson. He was sentenced to five years at the Anamosa reformatory but paroled to Sheriff Maxwell during good behavior.

ALGONA, KOSSUTH COUNTY.

On the afternoon of July 23, 1917, several fires occurred in the residence occupied by Andrew Benson. After an investigation by this department, Howard Kanouff, eleven years old, confessed to the setting of the fires.

The boy was taken into custody and the case continued from time to time up to December 16, 1918, at which time the evidence was presented to the court and the boy was adjudged guilty as charged. The boy being a minor was paroled to his father pending further action by the court.

COUNCIL BLUFFS, POTTAWATTAMIE COUNTY.

On the morning of February 3, 1918, a vacant dwelling belonging to John Haile was destroyed by fire. During the investigation by this department, Mary Haile, a daughter of John Haile, made a confession that she set the fire at her father's request.

Both Haile and his daughter, Mary, were indicted and plead guilty. Haile was committed to the insane ward of the Anamosa reformatory for the criminal insane. Mary Haile was committed to the reformatory for women at Rockwell City.

The motive for the burning was to collect heavy insurance. Since commitment to the reformatory for the criminal insane, Haile has died.

NEAR KNOXVILLE, MARION COUNTY.

About midnight, February 21, 1918, a fire destroyed a barn and its contents belonging to A. R. Rowland. During the investigation, one Bob Davidson was suspected of setting the fire. Later Davidson was arrested

at Des Moines, taken back to Knoxville, and after having been examined by the commissioners of insanity, was committed to the hospital for the insane at Mt. Pleasant.

KEOKUK, LEE COUNTY.

On the morning of March 17, 1918, a fire destroyed a shed belonging to Cora Holt (colored). One Ed South was arrested and waived to the grand jury. South was indicted and tried on May 6, 1918, at which time a verdict of "not guilty" was returned.

NEOLA, POTTAWATTAMIE COUNTY.

On the night of March 19, 1918, a fire occurred in a barn belonging to the Hunter estate. During the investigation by this department, Carl Hummel, twelve years ago, confessed to setting the fire. In April, 1918, Hummel was committed to the Industrial School for Boys at Eldora.

SIGOURNEY, KEOKUK COUNTY.

About 11:30 p. m., June 16, 1918, a fire broke out in the furniture store of Sam S. Schatz. Schatz was indicted at a special session of the grand jury and charged with setting the fire for the purpose of injuring the insurance company. Schatz died before final action was taken.

OTTUMWA, WAPELLO COUNTY.

On the evening of June 18, 1918, three fires occurred in the alleys in the business district of Ottumwa.

On June 19, 1918, a business house was broken into and one Richard Montgomery, a colored boy thirteen years old, was accused of "breaking and entering," and during the interview with the officers he confessed to setting the three fires referred to. The boy was sent to the Industrial School for Boys at Eldora.

DES MOINES, POLK COUNTY.

On July 18, 1918, Mrs. Mildred Harvey shot and killed her husband and then with the use of kerosene set the body and house on fire. Mrs. Harvey was sentenced to the Women's Reformatory at Rockwell City on November 19, 1918, for a term of eight years on a charge of "manslaughter."

SHELBY COUNTY.

About two a. m., August 1, 1918, two barns, a granary, crib, hog house and machinery house, together with machinery, hay, grain and stock were destroyed by fire which had been set out by the use of oily rags by Henry Bueck, the demented son of the owner and occupant, Adolph Bueck.

The son after setting the fires took his leave but was later apprehended and returned to the Clarinda State Hospital where he (Bueck) had previously been confined and discharged on August 14, 1916. Bueck began to show signs of insanity sometime previous to setting his father's property on fire.

RED ROCK TOWNSHIP, MARION COUNTY.

On the night of August 7, 1918, a dwelling house belonging to Laban Hodgson and some sawmill equipment belonging to Andy French were destroyed by fire. During the investigation by this department, the evidence disclosed the fact that one Harve McNeeley had set fire to the sawmill equipment for revenge and this fire communicated to the dwelling.

McNeeley was indicted October 4, 1918, and on December 10, 1918, entered a plea of guilty and was sentenced to the penitentiary at Fort Madison for a period of five years.

UNION TOWNSHIP, FAYETTE COUNTY.

About 10:00 p. m., August 19, 1918, some grain stacks belonging to A. R. Crain were destroyed by fire. The investigation disclosed the fact that Mrs. Mary J. Crain, mother of A. R. Crain, and Mrs. Anna Lockwood, a sister of A. R. Crain, set the fire.

On August 21, 1918, both of the women were taken before the commissioners of insanity at West Union where they were adjudged insane and committed to the insane ward of the county farm.

BARNEY, MADISON COUNTY.

On the night of August 26, 1918, a fire destroyed a blacksmith shop owned and occupied by Corvin Vandewater. After an investigation by this department Vandewater was indicted on October 3, 1918, charged with burning the shop for the purpose of collecting heavy over-insurance. The case has not yet come to trial.

COUNCIL BLUFFS, POTTAWATTAMIE COUNTY.

About 12:30 a. m., October 9, 1918, a dwelling house and store building belonging to Mrs. Nancy Graves were destroyed by fire.

After an investigation by this department, one Charles Robinson made a confession to setting the fires which was done for revenge. On October 16, 1918, Robinson was arraigned in superior court and waived to the grand jury. Robinson was indicted on October 19, 1918, entered a plea of guilty and was sentenced to the penitentiary at Fort Madison for a period of twenty years.

DAVENPORT, SCOTT COUNTY.

During the fall of 1918, a series of fires occurred in the same vicinity in the city of Davenport. On October 10, 1918, one Vernon Henderson, a mentally deficient youth of twenty years, was taken into custody and admitted to setting nine fires. The only reason the boy would give for setting the fires was that he wanted to see the big red motor trucks go to the fire.

On October 11, 1918, the boy was taken before Judge Letts and was by him committed to the Institution for Feeble Minded at Glenwood.

VERNON TOWNSHIP, PALO ALTO COUNTY.

On October 25, 1918, a dwelling house owned by John Jackman, and occupied by Fred Miller, was destroyed by fire. Miller is a drinking man and

while under the influence of liquor is mean and quarrelsome. On the day of this fire Miller drove his family out of the house and then set fire to the building. Miller was arrested on November 2, 1918, and sentenced to fifteen days in jail for drunkenness. Later he was indicted and on November 20, 1918, entered a plea of guilty and was sentenced to the penitentiary at Fort Madison for a period of fifteen years.

RECORD OF ARRESTS AND PROSECUTIONS FOR ARSON SINCE THE STATE FIRE MARSHAL'S LAW WENT INTO EFFECT, July 4, 1911.

	Last six months of 1911	1912	1913	1914	1915	1916	1917	1918	Totals
Confessions on which grand jury failed to indict			2			5			7
Committed to—									
Industrial School, Eldora		1		2	6	2	1	2	14
Hospital for Inebriates		4				1			5
Hospitals for the Insane	1		2	4	3	3	1	4	18
Institution for Feeble Minded						1		1	2
Deported			1						1
Fined	1					3			4
Paroled by court after sentence			1	2	4	3	1	2	13
Sentenced to—									
Jail	1	1	1	2		2	1		8
Penitentiary	3	3	5	6	4	4	7	4	36
Women's Reformatory								2	2
Totals	6	9	12	16	17	24	11	15	110
Acquitted, defective indictment			1	1	1				3
Arrested, held to grand jury, no indictment			3			3			6
Died in jail before final action					1			1	2
Dismissed by county attorney after indictment	1	3	3	6	2	1			17
Indicted, tried and acquitted	2		1	1	9	3	2	1	19
Indicted, cases still pending		1		2	5	5	3	1	17
Totals	3	4	8	10	21	12	5	9	72

STATISTICAL INFORMATION.

TABLE I.

The footings of this table have been briefly set out in the introductory portion of this report. By months the fire losses and the number of fires reported to this office for the year 1918 were as follows:

Months.	No. Fires.	Loss.
January	688	\$ 617,324
February	370	394,959
March	621	750,341
April	463	572,676
May	358	671,250
June	229	309,413
July	273	509,858
August	338	690,976
September	267	607,045
October	277	491,641
November	268	476,664
December	241	348,624
Totals	4,393	\$6,440,771

While the loss represented by the above figures is large, entirely too large for much of it could have been prevented, there is some encouragement in the observation that while the total fire loss of the United States for the year 1918 exceeded that of the year 1917 by nearly fifty million (\$50,000,000) dollars, the Iowa fire loss during the same period shows a decrease of more than \$775,000.

Prior to 1917, the highest fire loss experienced in this state since the creation of the fire marshal's office was that of 1913, during which year we had a loss of \$6,292,645. When, however, it is borne in mind that the prices and values of property subject to destruction by fire were, in 1917 and 1918, at least double what they were in 1913, it is a logical deduction that had there not been a decided stemming of the destructive fire tide which rose to its height in 1913, the fire losses of 1917 and 1918, measured by the same yardstick, would have been at least twelve million dollars annually instead of the figures given.

TABLE II.

This table 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 destroyed or damaged.

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

Kind of Structure.	Number.	Loss.
Dwellings	2,089	\$1,389,113
Barns	605	1,117,154
Stores	253	1,274,547
Garages	120	176,718
Sheds	104	8,073
Shops	97	91,036
Automobiles	78	10,520
Restaurants and cafes.....	62	77,939
Factories	61	427,869
Offices and office buildings.....	58	35,337
Totals	3,527	\$4,608,306

Comparing some of the figures in the above table with those pertaining to the same classes of property set out in the report for the year 1917, we observe the following:

There was a decrease of 499 in the number of dwellings destroyed or damaged and the aggregate loss was \$174,732 less than in 1917.

The number of barns destroyed or damaged was 140 greater and the damage thereto \$230,993 greater than in 1917. Of the barns destroyed, 395 were farm barns resulting in a loss to buildings and contents of \$993,000, and 210 were city or town barns wherein the loss to buildings and contents was only \$124,154.

The number of stores destroyed or damaged was 132 less and the loss to buildings and contents was \$375,426 less than in 1917.

Fourteen (14) more automobile garages burned in 1918 than in 1917, but the aggregate loss was \$18,263 less.

There were 19 fewer schoolhouses burned and the loss or damage resulting was \$50,852 less than in the previous year.

There were ten (10) more factories damaged in 1918 than during 1917, but the resultant loss was \$45,368 less.

The same number of grain elevators, to wit, nineteen (19), were destroyed in each of the last two years, but the loss on buildings and contents was less by \$35,368 in 1918.

TABLE III.

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

Cause.	Number.	Loss.
Unknown	924	\$2,712,588
Sparks from flue.....	850	278,910
Adjoining fires.....	319	820,194
Defective flues.....	309	408,722
Lightning	214	405,077
Spontaneous combustion.....	144	367,285
Smoker's carelessness.....	94	42,620
Children and matches.....	80	35,637
Incendiary and probably incendiary.....	79	162,254
Defective electric wiring.....	78	176,223
Totals	3,091	\$5,409,510

The fires due to defective flues were 147 less and the resultant damage \$163,480 less than in 1917. These fires are wholly preventable and ought to be greatly reduced.

Sparks from flues produced 244 less fires and \$113,709 less damage than in the previous year.

Fires caused by defective electric wiring were five (5) less and the damage \$85,784 less than in 1917.

The number of lightning fires were increased by 42 and the damage by \$124,144.

The fires resulting from spontaneous combustion were 14 more and the damage \$197,033 more than in 1917.

All of these last named fires are to say the least partially preventable.

The fires reported as incendiary or probably incendiary were nine (9) less and the loss therefrom \$4,917 less in 1918 than in 1917. It is an encouraging fact that the number of fires concerning the origin of which there has been any substantial evidence that they were the result of design has been materially lessened during the past two years. Some of this is undoubtedly due to the investigation of many fires, and the annual conviction of a number of persons of setting fires.

RECOMMENDATIONS.

I renew the recommendations heretofore made for legislation along the following lines:

1. Provision for inspection, both state and local, of electric wiring. This is made necessary by reason of the constantly increasing use of electricity, not only for light but for heat and

power, and the increasing losses resulting from defective electric wiring.

Because its uses are relatively in their infancy the general public has not learned the danger of electricity. When it shall realize that it is fully as dangerous to over-fuse an electrical current as it is to tie down the safety valve on a boiler, or to fry eggs on a gasoline stove set in a hay pile, more attention and care will be given to this matter.

2. The almost universal use of gasoline and the consequent menace both to property and to life resulting from such use, necessitates the enactment of a gasoline storage law, or a law making it mandatory upon municipalities to make provision by ordinance for such storage.

3. Standardization of chimneys, flues and roofs in cities and towns, and a law providing that no shingle roofs be permitted hereafter upon buildings in cities of a certain class.

4. A law regulating theaters and moving picture shows, specifying the construction of the booth, the number of exits, width of aisles, mode of seating, etc.

5. Provision for the inspection of gasoline and carbide lighting systems.

6. Inasmuch as fully ninety per cent of the fire alarms in our cities and towns are given by telephone, there is need of a law prescribing the duties and responsibility of telephone companies and operators in the matter of receiving and promptly turning in fire alarms.

7. This office has been conducted with the most rigid economy. The employees are underpaid and the traveling and other expenses to which each one is subject have materially increased during the past year. Under these circumstances the small force that we have now employed cannot be maintained on the present appropriation, which should at least be increased to fifteen thousand (\$15,000.00) annually, and I would most earnestly urge that this be done by the present general assembly.

CONCLUSION.

On July 1st, next, my services as state fire marshal will end. While all of the work has been interesting, many of the duties discharged have been arduous. The war, with its many fire dan-

gers, has added new responsibilities and new duties, but in and through it all I have enjoyed the good will and support of the people of Iowa.

It has been my privilege to serve under three different chief executives and I desire here and now to express my heartfelt appreciation of the many courtesies and the generous support extended to me by Governors Carroll, Clarke and Harding.

To my deputy, Mr. J. A. Tracy, and assistants, Messrs. E. J. Frowick and H. G. Zimmerman, and to my chief clerk and stenographer, Miss Laura M. Pedersen, whose loyal and faithful services to me and to the state have been rendered without stint, I desire to make this public acknowledgment of appreciation.

The state fire marshal's office is no longer an experiment. If supported by the state as it deserves to be, its usefulness and influence for good will be more manifest in the future than it has been in the past.

The office came to me unsolicited and unsought. In my conception, public office is neither a "plum" nor a "snap," but a call to high patriotic service. To such service my best endeavors have been dedicated. I shall lay aside my official duties at the end of my present term with confidence in the future efficiency of the office and the kindest personal feeling toward all.

TABLE NO. I.

Showing Number of Fires Reported by Counties and Cities of More Than 10,000, 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 for the Year 1918.

Counties and Cities of 10,000 and Over	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	26	\$ 119,500	\$ 47,175	\$ 70,700	13	20,575	4	\$ 2,200
Adams	15	33,125	27,668	18,450	11	10,975	1	300
Allamakee	15	73,255	36,510	49,950	10	24,580	2	12,425
Appanoose	42	166,159	46,693	99,810	15	16,784	10	5,150
Audubon	21	109,815	72,265	38,145	12	41,845	5	14,710
Benton	16	54,650	12,464	33,500	6	5,680	3	1,680
Black Hawk								
Waterloo	77	625,555	92,102	379,290	13	19,300	7	1,730
Bal. Black Hawk Co.	31	108,172	15,959	60,958	10	5,143	4	358
Boone—Boone	51	306,845	49,489	159,650	7	19,206	14	17,649
Bal. Boone Co.	25	119,785	83,431	72,400	14	29,660	1	760
Bremer	15	27,165	10,020	17,780	4	2,990	2	15
Buchanan	21	185,775	174,032	120,779	15	60,201	2	8,275
Buena Vista	42	157,810	82,192	79,185	17	39,925	7	8,275
Butler	20	40,022	17,937	19,527	12	8,755	1	1,200
Calhoun	20	57,145	18,020	23,779	4	14,881	3	1,920
Carroll	22	119,773	49,710	49,205	13	22,211	1	5,000
Cass	34	152,792	53,688	97,132	16	15,325	9	4,625
Cedar	11	33,925	15,680	21,150	5	6,225	1	825
Cerro Gordo								
Mason City	58	1,990,725	91,418	1,870,260	10	1,740	4	270
Bal. Cerro Gordo Co.	13	27,805	3,883	17,050	2	1,480	5	705
Cherokee	53	232,105	139,805	127,325	36	52,385	9	7,600
Chickasaw	18	46,250	18,750	26,545	9	6,300	2	30
Clarke	13	27,612	19,637	12,050	8	12,887	3	2,075
Clay	8	32,390	7,025	18,355	4	3,185	1	190
Clayton	43	130,050	67,202	62,340	26	31,665	4	2,210
Clinton—Clinton	59	437,100	20,984	354,050	5	2,485	4	1,110
Bal. Clinton Co.	9	29,510	16,777	19,278	6	5,357	1	1,520
Crawford	32	120,605	29,657	59,950	10	12,325	6	1,840
Dallas	42	185,399	108,515	74,064	17	49,325	12	6,195
Davis	26	59,335	23,660	36,176	11	17,745	11	10
Decatur	22	150,725	23,266	63,350	14	8,975	1	590
Delaware	11	44,145	24,500	27,540	4	4,480	3	50
Des Moines								
Burlington	37	353,700	30,734	204,794	4	790	1	50
Bal. Des Moines Co.	8	22,475	16,905	9,700	4	9,825	1	4,000
Dickinson	11	12,418	6,390	8,403	6	2,779	1	225
Dubuque—Dubuque	75	535,664	86,716	312,154	15	14,440	12	6,005
Bal. Dubuque Co.	19	57,890	51,529	29,625	14	28,985	1	1,900
Emmet	26	202,070	83,520	131,650	13	21,300	1	350
Fayette	56	148,070	57,247	73,540	22	29,830	8	2,075
Floyd	23	137,650	7,881	101,860	1	1,925	4	1,425
Franklin	21	85,100	41,425	49,700	9	13,500	1	100
Fremont	18	69,895	52,585	38,650	11	27,145	3	2,770
Greene	29	61,403	29,858	28,201	12	14,992	6	585
Grundy	31	110,095	60,448	62,300	12	27,820	6	8,235
Guthrie	39	215,477	116,368	90,750	20	54,007	6	2,780
Hamilton	25	124,222	49,122	56,842	13	24,330	3	6,900
Hancock	9	35,877	31,802	11,577	7	20,225	1	25
Hardin	29	87,220	43,917	47,410	14	15,934	7	1,460
Harrison	49	140,962	51,504	70,237	17	20,807	11	6,097
Henry	18	65,737	12,273	30,450	7	4,639	1	200

TABLE NO. 1—Continued

Counties and Cities of 10,000 and Over	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
Howard	15	27,955	13,743	7,700	5	7,848	8	1,108
Humboldt	17	98,051	30,969	49,675	7	12,627	4	1,427
Ida	13	61,010	13,663	19,060	8	6,775	1	1,000
Iowa	18	70,393	43,553	29,450	8	20,480	6	1,440
Jackson	30	74,610	35,954	38,600	11	20,255	9	9,785
Jasper	52	190,052	70,851	91,541	27	31,986	3	950
Jefferson	17	110,350	47,415	50,920	7	15,280	3	330
Johnson								
Iowa City	42	724,650	29,724	246,850	4	4,390	5	1,290
Bal. Johnson Co.	20	57,775	39,109	27,015	12	19,967	4	960
Jones	12	38,650	20,830	17,980	6	11,020	1	50
Keokuk	17	74,095	30,792	40,315	5	16,430	1	2,761
Kossuth	37	136,985	62,042	62,010	16	32,631	8	1,430
Lee—Ft. Madison	20	185,830	15,023	148,700	4	1,307	2	490
Keokuk	60	342,295	18,202	203,340	12	2,812	6	1,949
Bal. Lee Co.	8	14,360	13,025	7,785	7	5,475	1	-----
Linn								
Cedar Rapids	120	1,372,610	103,322	1,012,600	18	4,640	-----	-----
Bal. Linn Co.	23	56,350	24,735	18,263	8	12,380	6	805
Louisa	24	96,729	60,637	36,755	15	37,824	3	17,995
Lucas	29	69,777	37,487	43,450	13	14,432	4	1,480
Lyon	15	26,095	19,510	12,115	11	8,985	3	375
Madison	22	37,965	23,408	21,805	11	9,395	2	85
Mahaska								
Oskaloosa	15	112,800	42,667	58,600	4	10,500	1	500
Bal. Mahaska Co.	26	80,220	63,980	32,130	18	37,465	4	4,505
Marion	42	88,532	52,156	38,915	25	26,487	7	4,585
Marshall								
Marshalltown	52	303,322	36,757	179,973	5	5,278	11	1,822
Bal. Marshall Co.	10	26,350	10,747	16,799	4	2,751	1	200
Mills	22	53,355	23,907	27,600	14	11,155	5	3,675
Mitchell	20	120,337	36,219	37,485	10	12,737	2	802
Monona	24	79,015	57,780	49,920	13	20,827	5	8,810
Monroe	47	102,227	54,656	58,015	23	21,171	8	860
Montgomery	45	125,970	39,344	71,745	12	14,091	7	5,305
Muscatine								
Muscatine	52	269,789	69,385	152,543	10	12,390	7	1,372
Bal. Muscatine Co.	6	9,175	8,575	4,370	4	4,605	1	875
O'Brien	21	108,149	72,179	58,453	11	28,353	2	7,000
Osceola	8	18,482	10,507	6,425	5	5,175	2	400
Page	31	95,720	29,038	53,250	14	12,706	7	3,650
Palo Alto	19	53,550	24,550	30,155	9	9,120	6	3,700
Plymouth	45	194,209	60,975	107,565	17	21,976	11	3,920
Pocahontas	21	54,990	45,558	29,865	18	20,385	-----	-----
Polk—Des Moines	506	5,399,334	761,904	3,733,879	49	52,026	76	7,725
Bal. Polk Co.	48	169,689	63,785	89,625	16	30,000	12	3,435
Pottawattamie								
Council Bluffs	121	713,325	128,486	426,651	32	19,925	22	3,770
Bal. Pottawattamie Co.	38	111,906	81,810	64,417	25	33,281	6	4,130
Poweshiek	28	87,433	32,000	44,775	8	11,477	5	866
Ringgold	22	50,872	34,807	26,835	16	16,102	1	700
Sac	22	81,595	36,624	32,652	11	17,943	4	2,100
Scott—Davenport	251	1,449,255	47,755	989,675	14	5,641	25	1,499
Bal. Scott Co.	14	50,466	21,835	19,385	6	14,300	1	75
Shelby	15	27,410	13,868	12,965	7	7,280	3	2,210
Sioux	32	100,035	59,129	54,164	19	28,891	3	1,800
Story	34	99,740	43,611	59,090	13	16,585	5	1,635
Tama	24	93,013	31,599	40,895	9	15,668	4	4,465
Taylor	22	27,235	16,607	13,475	9	7,800	6	575
Union	56	194,098	45,762	111,623	14	21,826	11	11,420
Van Buren	23	60,615	23,228	29,325	13	11,670	4	3,520
Wapello—Ottumwa	55	296,250	36,087	222,125	3	2,780	5	1,730
Bal. Wapello Co.	28	136,965	77,965	93,387	17	21,153	5	3,380
Warren	17	98,701	39,419	63,600	11	18,710	1	500
Washington	19	97,340	57,725	34,550	10	34,230	4	2,825
Wayne	31	98,515	54,337	46,850	17	31,411	7	15,646
Webster—Ft. Dodge	42	214,243	65,650	119,521	11	26,313	3	240
Bal. Webster Co.	27	376,617	287,423	135,700	8	160,605	3	6,582

TABLE NO. 1—Continued

Counties and Cities of 10,000 and Over	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
Winnebago-----	17	70,758	33,631	37,370	8	14,188	5	3,175
Winnebuck-----	16	55,670	23,283	29,440	10	7,535	1	135
Woodbury-----	272	2,305,730	281,407	1,402,166	24	21,784	30	65,550
Stonx City-----	32	194,129	100,346	82,895	13	98,784	4	3,125
Bal. Woodbury Co.	10	24,070	4,223	10,235	5	7,105	1	700
Worth-----	20	97,140	30,623	46,825	8	14,725	6	7,250
Wright-----								
Totals-----	4,393	\$27,015,791	\$ 6,440,771	\$16,801,213	1,407	\$2,251,737	640	\$334,405

TABLE NO. II.

Showing the Nature and Character of the Buildings or Properties Destroyed or Damaged, the Value of Each, the 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, for the year 1918.

	No. of Fires	Buildings		Contents		Character of Buildings Affected							
		Value	Damage	Value	Damage	Wood	Brick	Cement or stone	Loss on Buildings		Loss on Contents		
									Total	Partial	Total	Partial	
Armories-----	1	\$ 18,000	\$ 75				1			1			
Automobiles-----	78	78,100	10,430	1,250	90	78			2				3
Bakeries-----	19	100,700	4,037	29,600	4,436	8	10	1	1	17	1		9
Banks-----	5	28,000	16,500	205,700	4,975		5		1	3	1		3
Barns—Farm-----	395	560,435	554,846	488,746	438,154	393	2		381	13	312		69
Barns—Town-----	210	114,250	71,333	74,920	52,821	208	1	1	123	87	87		53
Boats-----	4	1,215	440	6,100	5,325	4			1	2			2
Boat houses-----	3	3,200	1,415	5,030	5,010	3			1	2	1		1
Bottling works-----	2	6,000	110							2			
Brickyards, kilns and tile factories-----	7	184,938	139,938	248,516	134,904	3	2		4	2	3		4
Bridges-----	6	51,700	3,270			6				6			
Bridge construction building-----	1	7,000	5,000			1				1			
Cars—Box cars-----	13	35,432	1,807	9,350	1,450	13				12	1		2
Bunk cars-----	6	3,240	460	55	55	6			1	5	2		
Coal cars-----	3	2,300	170	550	200	3				2			2
Dining cars-----	1	20,000	3,500			1				1			
Flat cars-----	2	12,000	5,010			2				2			
Freight cars-----	3	6,900	4,700			3			2	1			
Passenger cars-----	3	21,000	13,100	500	50	3			1	2			1
Refrigerator cars-----	4	5,300	640	3,340	505	4				3			3
Street cars and interurbans-----	12	47,600	5,100			12				12			
Way cars-----	1	800	12			1				1			
Churches-----	21	289,350	52,411	29,100	5,671	11	8	2	5	16	3		4
City and township halls-----	1	1,500	20			1				1			
Cleaning and dyeing establishment-----	12	18,775	1,201	29,975	3,385	3	7	2		6	2		10
Coal bins and storage-----	17	11,650	3,615	16,745	4,235	10	1	1	3	6	3		11
Coal mines-----	2	50	50	1,150	1,150	2				2			
Colleges and college dormitories-----	5	276,000	10,355	8,000	5,120	1	4		1	3	2		1
Convents-----	3	30,000	269	1,500	25	1	2			3			1
Court houses-----	1	30,000	35			1				1			2
Creamery-----	7	18,750	7,080	9,500	7,815	5	2		4	3	3		2
Dairies or milk houses-----	5	15,075	228	3,025	1,367	3	2		1	4	1		3
Depots-----	19	257,775	13,828	9,245	8,270	16	3		7	12	7		1

TABLE NO. II—Continued

	No. of Fires	Buildings		Contents		Character of Buildings Affected							
		Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Loss on Buildings		Loss on Contents		
									Total	Partial	Total	Partial	
Distillery—Unused	1	1,000	1,000										
Dock	1	500	50			1			1				
Electric battery service station	1			7,300	313					1			
Electric meter box	1	35	25				1						1
Elevators	19	173,300	80,212	116,013	65,217	1				1			
Engine and boiler rooms	7	8,850	2,560	11,225	825	18	1		10	9		4	12
Engine house	1	100	100	1,200		6	1		1	6		1	2
Express office	1	6,000	1,000	3,600	800	1			1			1	
Factories—Button factory	8	31,900	6,932	119,638	55,893		1			1			1
Canning factory	3	30,750	25,225	31,000	26,000	4	4		1	7		1	5
Cedar chest factory	1	4,000	900	12,000	3,750	2		1	1	2			1
Cement block plant	2	7,000	608	25,500	507		2		1	1			1
Cigar factory	2	9,200	500	650	450		1		1	1			2
Clay products factory	1	10,000	8,500	20,000	17,000	1	1		1	1		1	1
Coffee and peanut roaster factory	1	15,000	1,968	19,205	8,438					1			1
Coffin factory	1	14,000	1,500	10,000	7,000		1			1			1
Cooking utensils factory	1	15,000	1,200	3,000	3,000			1		1			1
Egg case and chicken coop	1	1,500	50	300	50		1			1		1	
Ford assembling plant	1			600	200		1			1			1
Fountain pen factory	1	72,000	1,770	47,520	1,780					1			1
Furniture factory	1			225,000	430		1						1
Gate factory	1	20,000	10				1			1			1
Gasoline engine and tractor factory	1			5,000	75			1					1
Hog tank factory	1	4,500	4,500	18,000	9,000	1			1				1
Ice cream factory	1	2,000	2,000	1,500	1,500				1			1	
Lawn mower factory	1	2,500	25	2,500	125	1	1						1
Mattress factory	2	10,000	50	8,500	230	1				1			1
Mining tools factory	1	8,000	250				1			1			2
Novelty factory	1			20,000	20		1			1			
Oatmeal factory	4	125,000	150	275,000	275		4			2			1
Oil refinery	1	5,000	2,000	12,000	10,000		1			1			2
Paint and oil factory	1	4,000	300	9,000	200		1			1			1
Paper box factory	1	9,500	226	25,000	64		1			1			1
Paste factory	1	15	10				1			1			1
Pickle and vinegar factory	1	25,000	25,000	54,061	48,547	1			1	1			1
Pop factory	1	400	25				1			1			1
Register factory	1	3,000	3,000	28,000	23,000	1				1			1
Rendering plant	2	7,700	550	3,000	150	1			1				1

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Retarder factory	1	10,000	50	25,000	150			1		1			1
Saddlery works	1	50,000	200	225,000	1,000		1			1			1
Sash and door factory	2	74,333	21,434	100,000	2,730		2			1			1
Serum manufacture	1	17,500	50				1			1			1
Stamping novelty factory	1	20,000	4,000	50,000	5,563		1			1			1
Starch works	2	50,000	500	5,000	25	1	1			1			1
Steel works	1	285	285	8,200		1			1				1
Tire factory	3	29,500	110	19,000	5,065	2	1			2			3
Trunk factory	1	35,000	14,860	49,447	17,699		1			1			1
Wagon factory	1	9,800	8,000	26,000	24,000		1			1			1
Well driller factory	1	8,000	7,000	14,000	10,000			1		1			1
Fence	3	60	25			3			1	2			
Flagman's or operator's station	6	2,760	672	75	75	6			1	5		1	2
Foundries	7	78,750	6,380	6,700	3,650	3	2	2	2	35		26	30
Garage—Private	74	24,025	12,957	51,960	24,959	68	3	3	30	26		5	34
Garage—Public	46	214,300	40,970	329,725	97,832	19	20	7	9	26			
Garbage incinerator	1	20,000	20				1			1			1
Gas plants	2	7,500	1,600	10,000	4,000		1	1		2			1
Granaries and corn cribs	26	16,865	16,616	40,945	37,895	26			23	3		17	8
Greenhouses	4	12,700	4,950	500	500	4			2	2			
Harness and fly nets	1			20	20								
Hay, grain and straw stacks	36			9,767	9,322							31	5
Hay storage	5	10,650	925	10,905	4,780	4	1			4		1	4
Hen houses	24	7,045	1,607	5,069	675	22	2		14	9		7	6
Hog houses	8	2,925	2,630	2,965	1,965	8			7	1		2	1
Home for Aged	1	40,000	15				1			1			
Hose house	1	2,500	25			1				1			
Hospitals	9	246,800	9,390	31,750	2,965	1	8			7		1	5
Hotels	35	362,800	40,509	129,750	10,942	15	20		4	25		2	23
Houses—Apartment	26	653,200	33,179	94,100	16,690	6	20			17		2	18
Boarding	2	4,000	650	1,200	500	2				1			1
Children's playhouse	1	25	10							1			
Dwellings—Farm	382	678,550	532,857	272,438	187,512	379	1	2	294	83		130	192
Dwellings—Town	1,707	4,236,058	492,477	841,606	176,267	1,632	66	9	125	1,516		70	715
Flats	19	161,700	7,548	13,400	1,120		12	1		17			10
Rooming houses	32	140,500	6,263	28,350	3,827		5		1	28			22
Summer cottages	16	18,375	17,520	3,800	3,100	15		1	14	5		12	4
Summer kitchens	15	2,465	1,500	2,375	1,600	15			5	9		7	4
Ice houses	16	48,450	20,209	29,600	11,943	16			8	8			7
Jails	1	200	100				1			1			
Laundries	12	55,400	4,950	33,200	5,521	6	6			10			5
Light and power plants	5	67,600	1,615	40,000	700			2		5			5
Livery and feed barns	21	55,300	48,413	33,903	17,018	21	3		15	5		12	7
Lodge halls and clubhouses	19	65,250	9,577	16,150	5,040	8			1	14		3	5
Lumber—Pile of	4	3,000	100			1	11			1			
Lumber yards	4	21,600	4,083	61,500	11,331	2			2	1			2
Machine sheds	9	4,900	4,900	11,950	10,749	9			9				2
Meadows, grass and pastures	3			420	420							3	
Mills—Feed	3	25,000	8,000	26,000	11,000	3			2	1			1

TABLE NO. II—Continued

	No. of Fires	Buildings		Contents		Character of Buildings Affected							
		Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Loss on Buildings		Loss on Contents		
									Total	Partial	Total	Partial	
Flour	1	7,500	300	8,500		1				1			
Planing and saw	2	7,900	2,600	9,700	8,850	1	1		1	1	1	1	1
Plaster	1	100,000	100,000	25,000	25,000	1			1				
Motion picture theaters	19	145,600	14,541	48,200	15,079	4	15		1	12	1	17	
Motorcycles	4	635	112							4			
Motorhome	1	400	15			1				1			
Music conservatories	3	35,000	248	31,600	3,600		3			1	2	1	
Nurse's homes	1	6,000	5			1				1			
Offices and office buildings	58	1,016,050	11,751	95,900	23,586	11	45	2	4	31	4	34	
Oil filling stations	3	5,950	840	7,200	1,865	2	1		1	2		3	
Oil houses	11	6,587	5,531	6,965	5,570	9			5	5	5	4	
Oil warehouse	1	1,000	50			1				1			
Orchard	1			1,075	1,075						1		
Outhouses	8	225	196			8			5	3			
Packing plants	7	672,750	12,120	980,500	23,575	2	4	1		5		6	
Packing for nursery stock	1			500	100							1	
Photograph galleries	4	4,500	50	13,200	1,690	1	3			1		4	
Pool halls and bowling alleys	15	91,900	12,820	21,147	12,407	8	7		5	9	3	8	
Pop corn wagon	1	150	10							1			
Postoffices	3	4,400	2,500	2,500	1,000	1	2		2	1	1	2	
Printing and publishing plants	12	179,300	5,652	218,764	21,611	4	8		2	8		11	
Pumping stations	7	14,300	1,600	3,200	1,576	6	1		2	5	1	3	
Restaurants and cafes	62	472,900	36,851	136,070	41,088	40	22		13	43	8	42	
Round houses	3	15,000	2,150	140,750	975	1	2		1	2	1	2	
Salvation Army home	1	10,000	1,500	2,000	500		1			1		1	
Sand house	1	150	15			1				1			
School houses	34	746,165	128,008	75,550	19,949	22	12		16	18	11	8	
Serum laboratory	1	3,000	1,000	6,000	5,246	1				1		1	
Sheds	104	18,180	6,059	3,594	2,014	104			48	52	26	17	
Shops—Auto repair	5	11,300	775	4,300	1,075	2	3		1	3	1	2	
Barber	20	106,700	5,456	15,125	4,530	13	7		2	15		14	
Blacksmith	14	17,200	11,187	12,200	7,327	13	1		9	5	6	6	
Carpenter	6	7,800	3,612	6,050	5,660	5	1		1	6	1	3	
Cobbler	8	100	5	9,350	2,386	4	4			1		7	
Dressmaking	3	10,000	10	3,600	1,250		3			1		3	
Harness	4	4,800	1,003	8,800	3,900	2	2			2	1	2	
Junk	5	14,800	6,240	5,400	3,975	3	1	1	3	2	1	3	

Machine	2	2,750	1,250	6,250	3,250	2			1	1	1	1	1
Paint	4	1,500	1,125	6,300	4,300	3	1		2	1	2	2	2
Plumbing	8	57,100	3,412	26,900	4,260	4	4			6		6	
Tailor	14	36,200	3,085	22,200	6,510	6	8		1	9	1	12	
Tin	4	15,700	2,278	27,000	3,175	1	2	1		4		4	
Smoke houses	18	22,510	922	5,535	1,613	12	6		11	6	8	8	
Stock yards	2	14,000	13,000	6,000	300	2			1	1		1	
Stone crusher	1	1,500	1,000	3,000	2,000	1				1		1	
Storage houses	43	99,001	17,720	69,594	21,084	35	7	1	18	25	11	15	
Stores—Auto accessories	4	34,500	14,470	73,000	17,290	3	1			3		3	
Auto salesroom	7	112,500	30,721	113,500	33,673		7			4		4	
Book	1	3,500	3,500	4,000	3,000	1			1			1	
Cigar	3	50,000	27,000	23,400	17,300		3			2	1	2	
Clothing	11	169,000	3,902	265,564	53,147	1	9	1		7		5	
Confectionery	5	38,000	2,370	22,100	6,096		5			3		5	
Drug	17	109,800	14,713	140,500	26,504	7	10		2	13	3	14	
Dry goods	10	200,000	1,644	275,225	28,470		10			8		8	
Electrical supply	6	41,500	365	20,800	3,173	1	5			2	1	5	
Flour and feed	3	4,000	200	16,000	2,275	1	1	1		1		3	
Fruit	1			1,500	225	1				1		1	
Furniture	8	70,800	4,795	70,000	12,475	3	5		1	5		7	
General merchandise	35	96,600	60,510	265,578	143,342	25	8	2	22	11	14	18	
Grocery	52	406,900	49,811	221,627	69,427	25	26	1	4	40	5	38	
Grocery—Wholesale	3	75,000	30,500	266,500	170,146		3			1		3	
Gun	1		2,500	500		1						1	
Hardware	16	158,300	27,159	171,000	46,557	10	6		5	11	3	12	
Hat	1			10,000	4,000		1					1	
Implement	9	17,200	8,945	67,700	22,255	7	2		3	5	2	5	
Jewelry	5	11,900	5,985	18,500	3,515	3	2		3	2	1	3	
Ladies' furnishing	2	10,000	50	9,450	1,450		2			1		2	
Marble and monument	1	1,600	400	2,000	400	1				1		1	
Meat markets	14	39,600	10,133	27,650	12,208	8	5	1	4	10	3	9	
Millinery	6	800	200	1,000	500	1				1		1	
Music	2	4,800	761			2				2		0	
Notions	4	8,600	3,606	29,400	8,373		1	1	2	1	1	3	
Paint and glass	3	5,800	1,138	142,800	1,000	1	2	0	0	2	0	3	
Poultry and produce	3	30,700	19,200	25,817	24,960	2	1		2	1	1	2	
Second hand	2	3,500	472	2,500	1,172	1	1			2		1	
Seed	2	21,000	15,020	123,500	120,025	1	1		1	1	1	9	
Shoe	10	56,600	13,538	246,700	73,266	3	7		2	7	1	9	
Stationery	1		4,100	19			1					1	
Tea and coffee	1			11,000	2,091		1					1	
Ten cent	1	18,000	133	20,000	4,584		1			1		1	
Typewriter sales	1			3,500	225		1					1	
Wallpaper	2	27,000	200	12,500	4,168		2			1		2	
Vacant	5	33,200	5,295			3	2		3	2			
Student barracks	2	42,000		4,000	1,800	1	1			2		1	
Telephone cables and wire	2			1,535	1,535	Wire	Wire	Wire				2	
Telephone and telegraph poles	5			1,780	1,255	5						3	

TABLE NO. II—Continued

	No. of Fires		Buildings		Contents		Character of Buildings Affected						
	Total	Partial	Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Loss on Buildings		Loss on Contents	
										Total	Partial	Total	Partial
Temp bar	1		1,000	1,000	1,800	1,140	1	Canvas					1
Tents and awnings	2		550	25	1,600	1,050	2	Canvas			2		2
Theaters	4		158,500	1,613	2,100	60	2	2			3		1
Threshing machines	2		2,100	2,083	1,900	1,720	13				8		3
Tool buses	13		1,610	250	20,000	3,400		1			2		1
Transfer station	1		4,000	150	2,500	2,500		1			2		3
Undertaking parlors	2		41,500	5,150	237,273	169,420	2	1			3		1
Vulcanizing plant	2		20,300	5,052	19,000	250	9	1			4		4
Warehouses	15		151,450	301	25,000	5	4				1		10
Water tanks	4		1,540		10	10	1				3		2
Wood pile of	1		122,000	501	19,000	250	1				1		1
Y. M. C. A.	3		85,000	50	25,000	5					1		2
Y. W. C. A.	1										1		1
Totals	4,393		\$16,953,044	\$ 3,344,433	\$10,062,747	\$ 3,096,338	3,674	697	54	1,359	2,704	936	1,822

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, for the Year 1918.

Causes	No. Fires	Loss
Adjoining fires	319	\$ 820,194
Alcohol lamp	1	1,149
Ashes against wood	33	4,944
Ashes in basement	5	1,973
Ashes in wooden receptacle	1	500
Ashes near oil house	1	82,858
Automobile or motorcycle backfire	27	4,819
Automobile wreck	2	1,764
Bed too near stove	2	405
Blow torch	10	10,940
Boiler explosion	2	70
Bonfires	40	16,462
Burning brush and leaves	6	6,844
Burning corn stalks and stubble	6	3,068
Burning insects in hen house	1	75
Burning meadows or grass	28	9,030
Burning out carbon in auto cylinders	1	25
Burning rubbish	55	22,478
Burning tree stumps	2	1,280
Candle carelessness	4	1,643
Canvas under hood of engine	1	20
Charcoal fire	1	880
Children and matches	80	35,637
Children playing with fire	5	3,100
Children tampering with oil burner furnace	1	908
Christmas trees and decorations	1	146
Clothing near gas or gasoline stove	2	160
Clothing, rags or bedding near stove or stovepipe	26	5,419
Coffee urn in restaurant	6	4,184
Collapse of building	14	24,695
Current left on electric auto	1	1,700
Curtain blowing into flame	8	1,704
Defective electric wiring	78	176,223
Defective electric wiring in street car	6	115
Defective fireplace	16	10,700
Defective flues	309	408,722
Defective flue stop	1	187
Defective furnace	5	1,727
Defective gasoline lighting system	1	941
Defective hot air pipes	5	667
Defective oil heater	3	666
Defective oil or gasoline stove	25	9,935
Defective oven in bakery	6	2,382
Defective stove	3	445
Defective stovepipe	9	7,450
Electric fan carelessness	1	500
Electric heater carelessness	1	314
Electric iron carelessness	22	41,317
Electric washer carelessness	1	20
Explosion of clothes dryer	1	1,500
Explosion of dust in mill	1	75
Explosion of gas heater	1	180
Explosion of gas stove	1	237
Explosion of gasoline soldering pot	1	130
Explosion of gasoline stove	14	5,386
Explosion of kerosene oil stove	15	2,737
Explosion of oil heater	13	8,241
Feed cooker	5	7,350
Filling auto gasoline tank by lantern light	5	4,485
Filling auto gasoline tank with motor running	4	292
Fireworks	13	1,764
Forest fire	12	8,395
Friction of machinery	2	500
Fumigation	8	1,225
Furnace explosion or blow out	1	65
Furnace or furnace pipes too near wood	10	7,332
Gas explosion	2	50
Gas or gasoline jet flame	4	185

TABLE NO. III—Continued

Causes	No. Fires	Loss
Gas or gasoline iron carelessness	1	475
Gas leak	4	575
Gas stove carelessness	1	60
Gasoline carelessness	3	2,814
Gasoline—cleaning with	9	536
Gasoline engine backfire	4	13,635
Gasoline explosion	7	8,633
Gasoline lamp explosion	1	500
Gasoline leak	1	206
Grease or oil stove carelessness	42	55,549
Grease in ventilator	1	1,069
Grease on stove	2	150
Heating coal oil on stove	1	70
Heating linseed oil on fire	2	556
Heating paint on stove	2	3,518
High voltage wires	2	8,250
Hot irons in bed	1	44
Incendiary and probably incendiary	79	162,254
Incubator	11	10,195
Jack-o'-lantern	1	500
Kindling or wood near stove or furnace	11	4,108
Lamp or lantern carelessness	7	6,602
Lamp or lantern explosion	11	5,898
Lamp or lantern upset	6	3,794
Leaky gas tank in auto	4	245
Lighted match or torch near gasoline	14	35,317
Lightning	214	405,077
Lightning running in on wiring	6	335
Live coal carelessness	1	8
Live coals dropping from grate or stove	7	2,739
Live wire	3	9,000
Looking for gas leak with matches or torch	4	1,216
Match carelessness	64	57,641
Motion picture films	12	10,040
Oil heating stove carelessness	23	5,560
Oily rag or mop carelessness	9	5,426
Oil stove near wall or woodwork	4	815
Overheated cupola	2	4,078
Overheated dryer	1	96
Overheated dry kiln	1	4,650
Overheated electric motor or dynamo	9	456
Overheated exhaust	4	2,201
Overheated flue	21	15,800
Overheated furnace	26	52,279
Overheated hot air pipes	9	22,062
Overheated machine bearings	1	250
Overheated oven in foundry	1	27
Overheated pulleys	2	16,465
Overheated radiator and steam pipes	2	517
Overheated sterilizer	1	50
Overheated stove	45	37,875
Overheated stovepipe	12	2,679
Overheated tabbing compound in press room	1	62
Paper covered flue hole	3	83
Papers on or near stove	2	769
Peace celebration	3	275
Rubber covering over auto engine	1	14
Rubbish in basement	5	2,293
Rubbish in or near building	3	1,254
Rubbish near stove or furnace	2	4,739
Scaffold near smoke stack	1	200
Short circuit in auto wiring	17	1,529
Smoker's carelessness	94	42,620
Smoking meat	32	31,448
Smoking out bees	1	568
Smoking out ground hog and skunk	2	165
Sparks from cupola	1	20
Sparks from drive chain	1	25
Sparks from electric motor	1	24,000
Sparks from fireplace	2	1,275

TABLE NO. III—Continued

Causes	No. Fires	Loss
Sparks from flue	850	278,910
Sparks from flue hole	4	393
Sparks from gasoline engine	4	5,155
Sparks from locomotive	68	43,931
Sparks from nail in shoe when boy jumped on steel tank containing gasoline	1	2,600
Sparks from pipe igniting gasoline	1	637
Sparks from storage battery	1	10
Sparks from stove or furnace	9	30,229
Sparks from traction engine	23	21,455
Sparrow's nest near chimney	1	45
Spontaneous combustion in:		
Cobs on damp sawdust	1	5,500
Coal	53	69,676
Corn fodder	2	4,400
Clothes chute	1	15,000
Dust	2	150
Excelsior around water pipe	1	800
Hay	25	60,702
Kindling in damp basement	1	300
Lime in hog house	1	125
Manure	2	2,642
Oil and paint	2	365
Oily rags and clothing	27	43,549
Retarder factory	1	200
Rubbish and rags	19	14,791
Sawdust in ice house	2	2,510
Seed house	1	135,000
Starch works	1	25
Sweeping compound	2	11,550
Starting fire with coal oil	10	4,865
Starting fire with gasoline instead of coal oil	3	355
Static electricity	5	1,100
Stove explosion or blow out	7	22,600
Stove too near unprotected wood or wall	46	9,167
Stove in barn	1	5,000
Stove upset	3	46
Stovepipe through wall or roof	45	28,300
Stovepipe too near unprotected wood	9	1,215
Sun's rays through window	3	475
Supposed mice and matches	10	7,695
Tank heater	2	7,004
Tar kettle boiling over	1	25
Thawing frozen barrel	1	65
Thawing frozen water pipes	24	1,719
Thieves stealing brass fixtures	1	200
Torch carelessness	4	770
Tornado	1	1,500
Train wreck	2	9,200
Tramps	1	400
Unknown	924	2,712,588
Vulcanizing machine	1	29
Warming auto engine with fire	2	55
Totals	4,393	\$ 6,440,771

TABLE NO. IV.

Giving the Cities and Towns in Which Inspections of Dilapidated Buildings and Inflammable Conditions Have Been Made During the Year 1918, the Number of Places Inspected at Each Point and the Number and Kind of Orders Issued in Connection Therewith.

City	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Adel	Aug. 21	1				1	
Ames	Aug. 3	3					3
Anamosa	July 18	1	1				
Anthon	March 27	2	2				
Aurelia	Oct. 3	1	1				
Barnes City	Feb. 14	1		1			
Battle Creek	Dec. 20	1				1	
Berkley	Jan. 30	2					
Bertram	March 21	1			1		
Bloomfield	Nov. 22	4	2				1
Boone	April 23	10	5				3
Bristow	July 18	2		1			
Buffalo Center	July 15	2				2	
Burlington	March 19	2	2				
Burlington	Oct. 17	2					
Cantril	July 5	1			1		
Carson	March 2	1		1			
Carson	Oct. 24	1				1	
Casey	Sept. 2	1					1
Cedar Rapids	March 21	4	1	1			1
Cedar Rapids	Aug. 2	3	1		2		
Centerville	April 22	17	4	1			5
Centerville	July 10	10	7			1	2
Chariton	Jan. 16	4					4
Chariton	May 8	9	7			1	
Chariton	July 11	1					1
Charles City	Feb. 15	3		1	1		1
Churdan	Aug. 14	1			1		1
Cincinnati	Nov. 1	1	1				
Clarence	Nov. 12	10	6	2			2
Clarinda	Oct. 29	15	5		1		5
Cleghorn	Dec. 20	8		1	1	2	
Coon Rapids	Jan. 16	3					
Coon Rapids	March 7	2		1			
Correctionville	March 26	2	1		1		1
Correctionville	July 3	2	1				1
Council Bluffs	March 5	2	1	1	1		1
Council Bluffs	March 8	2		1			1
Council Bluffs	April 12	3					
Council Bluffs	Aug. 9	4	4				
Council Bluffs	Oct. 16	2					1
Creston	May 9	1					1
Creston	Oct. 29	2					2
Des Moines	Jan. 7	3					3
Des Moines	Jan. 25	1			1		
Des Moines	Feb. 5	1			1		
Des Moines	March 13	1		1			
Des Moines	April 2	1	1				
Des Moines	April 5	1				1	
Des Moines	April 24	1					1
Des Moines	May 14	1		1			
Des Moines	June 7	1				1	
Des Moines	June 11	11		4	1	1	1
Des Moines	June 11	1					
Des Moines	June 12	9		1	3	2	2
Des Moines	June 14	12		5			
Des Moines	July 3	1			1		
Des Moines	July 3	21		1	5	1	5
Des Moines	July 17	1			1		
Des Moines	July 23	4		1			3
Des Moines	Aug. 19	1					1
Des Moines	Aug. 20	7			1		3
Des Moines	Oct. 10	2				2	

TABLE NO. IV—Continued

City	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Des Moines	Nov. 8	11	5			2	3
Des Moines	Dec. 12	1	1				
Des Moines	Dec. 26	2					
Des Moines	Dec. 27	1					
Dodge City	Feb. 19	15			9	1	1
Drakeville	Sept. 12	1			1		
Dubuque	April 2	1					
Dubuque	Oct. 29	1				1	
Dunkerton	April 24	3	3				
Dyersville	June 5	1	1				
Eagle Grove	July 15	4			2	1	1
Eldon	April 22	1	1				
Estherville	Aug. 9	2			1		1
Estherville	Oct. 21	1	1				
Fairfield	March 19	5	1	1	1		1
Fairfield	Nov. 22	3	1				1
Farley	Oct. 28	1	1				
Forest City	July 16	15					5
Fort Madison	Oct. 12	9			1	2	6
Gladbrook	Jan. 22	7			2		2
Grand Junction	Feb. 27	9		3			4
Grand Mound	Nov. 13	6	3			1	1
Granger	March 15	2					
Gravity	May 9	1					
Goldfield	Aug. 31	1	1				
Guttenberg	July 30	2	2				
Harper	March 9	1	1				
Harper	July 2	3		2		1	
Hartford	Sept. 23	1					1
Hartley	Oct. 9	1				1	
Hastings	Oct. 29	5					3
Humboldt	June 19	2	2				
Ida Grove	May 9	12	4				3
Ida Grove	Oct. 9	2	1		1		
Indianola	Feb. 5	3		1	1	1	
Irwin	Oct. 17	1			1		
Jefferson	Jan. 29	1	1				
Jefferson	Oct. 10	8			5		
Kiron	March 13	1			1		
Kiron	Sept. 30	1					1
Lanesboro	March 13	1	1				
Lawler	Nov. 13	4	2			2	
Leon	May 1	8		2		2	5
Lester	May 23	1	1				
Livermore	Sept. 19	10	4		4	2	
Logan	May 7	1					
Luzerne	Feb. 26	2	2				
Lyons	Nov. 13	4	2			2	
Manchester	April 3	11	2				1
Marengo	Dec. 3	1					
Marion	Sept. 28	1	1				
Marion	Nov. 14	3	2			1	
Marshalltown	March 21	1	1				
Mason City	July 17	3	2				
Mason City	Sept. 18	3	1		1		
Menlo	April 3	8	2		1		1
Menlo	Aug. 23	2				1	1
Missouri Valley	Jan. 7	1					1
Mondamin	May 8	5			1	1	3
Montezuma	Feb. 15	20	3	1	1		3
Montezuma	Nov. 20	6		2			
Monticello	Feb. 26	2					2
Mount Vernon	Nov. 13	3			1		2
Murray	Jan. 9	1	1				
Muscatine	March 20	7	2	1		1	2
Muscatine	Nov. 21	3	1	1	1		

TABLE NO. IV—Continued

City	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Neola	March 29	12	4	2		1	5
Oakland	June 20	2		1	1		
Ocheyedan	Nov. 1	1				1	
Oelwein	Aug. 22	6	1				1
Oelwein	Sept. 28	1			1		
Osage	Feb. 11	1					
Osage	Dec. 11	3	1				1
Osage	Dec. 13	2	1				
Osceola	Jan. 18	2			1		
Osceola	July 8	11	5		2		4
Oskaloosa	Sept. 23	1				1	
Ottumwa	Oct. 12	1		1			
Packwood	Nov. 23	2	1				1
Parnell	April 23	3	3				
Paton	July 18	1	1				
Pella	Jan. 29	5	5				
Persia	May 13	1					1
Pomeroy	Feb. 18	1	1				
Portsmouth	June 19	2	1			1	
Prescott	July 10	3	1				
Ryan	Nov. 20	1			1		
Sac City	Feb. 28	1				1	
Shelby	June 20	3					
Sheldon	July 1	16	1	3	1	1	8
Shellsburg	July 1	1				1	
Shiopley	Oct. 17	1					1
Sioux City	March 26	1	1				
Sioux City	Sept. 7	3	1				1
Sioux City	Nov. 5	1					
Slater	Oct. 4	1	1				
Smithland	March 27	3	3				
Soldier	May 14	1		1			
Soldier	June 27	1					1
Spencer	Aug. 17	1	1				
State Center	Aug. 3	6	2	1		2	1
Storm Lake	Nov. 4	16	5			4	2
Story City	July 16	2					2
Story City	Oct. 15	4			1		3
Superior	Dec. 28	1			1		
Tennant	Oct. 30	1			1		
Titonka	Jan. 16	1					
Troy Mills	Aug. 26	10			1	1	4
Union	Jan. 28	1		1			
Ute	June 12	1					1
Valley Junction	Feb. 21	1			1		
Valley Junction	Aug. 7	1					1
Van Wert	May 6	1					1
Van Wert	May 9	2			1		1
Vinton	Oct. 8	9	5	2			2
Walker	May 28	3	2			1	
Washington	Nov. 21	5	5				
West Liberty	April 24	17	6	4			3
West Liberty	Aug. 2	8			1		2
West Liberty	Sept. 28	1			1		
Wyoming	Feb. 26	4		1	1		2
Totals		684	174	54	77	55	159

TABLE NO. V.

Giving Places at Which Investigations of Fires of Suspicious Origin Have Been Made During the Year 1918, and the Date When Such Investigation Began.

County	Place	Date Commencing Investigation
Adair	Greenfield	August 14.
	Greenfield (near)	September 17.
Appanoose	Exline	July 10.
	Exline (near)	July 10.
Audubon	Audubon	June 18.
	Douglas Township	April 3.
	Exira Township	May 28.
	Exira Township	December 17.
	Larland	August 23.
	Melville Township	November 20.
Boone	Angus	November 8.
Buena Vista	Sioux Rapids	January 29.
Calhoun	Lavinia (near)	January 4.
	Pomeroy	February 8.
Cass	Anita (2 fires)	October 21.
	Marne	February 15.
Cedar	Iowa Township	January 25.
Cerro Gordo	Mason City	January 18.
	Mason City	September 17.
Cherokee	Washta	March 27.
Chickasaw	Nashua	August 8.
Clarke	Osceola	August 15.
	Woodburn (near)	July 9.
Clayton	Mederville	October 29.
	Volga Township	March 30.
Crawford	Charter Oak Township	April 4.
Dallas	Adel Township	November 20.
	Des Moines Township	March 15.
	Linden (near) (2 fires)	September 25.
	Minburn (near)	October 4.
	Perry	July 16.
	Van Meter	December 11.
Davis	Carbon (near)	July 25.
Decatur	Lamoni	January 8.
Des Moines	Oakville (near)	June 13.
Dubuque	Dubuque	April 2.
	Farley	October 28.
Emmet	Huntington	August 8.
Fayette	West Union (near)	August 22.
Fremont	Thurman	August 8.
Greene	Grand Junction	February 26.
	Jefferson	April 3.
Grundy	Conrad	January 23.
	Grundy Center	April 24.

TABLE NO. V—Continued

County	Place	Date Commencing Investigation
Guthrie	Guthrie Center	August 22.
	Monteith (near)	August 22.
Hancock	Goodell (near)	November 26.
Hardin	Union (near)	September 30.
Harrison	Logan	May 6.
	Logan (near) (2 fires)	May 6.
	Union Township	February 14.
	Woodbine (near)	May 7.
Iowa	Conroy	July 15.
	Conroy	December 3.
	Marengo	July 24.
	Marengo	December 9.
Jasper	Sully	October 17.
Johnson	Iowa City	January 22.
Keokuk	Sigourney	June 10.
Kossuth	Bancroft	January 15.
Lee	Keokuk (2 fires)	March 28.
	Keokuk	July 23.
Linn	Toddville (near)	May 28.
Louisa	Morning Sun Township	March 21.
Lucas	Chariton	January 15.
	Chariton	January 18.
	Chariton	July 9.
	Chariton	July 22.
	Gunwald	January 17.
	Olmitz	January 16.
Madison	Barney	September 9.
Mahaska	Peoria (2 fires)	June 17.
Marion	Knoxville	March 20.
	Knoxville Township	October 14.
	Pella	January 28.
	Red Rock Township	September 17.
Marshall	Marshalltown (6 fires)	August 27.
Mitchell	Osage (2 fires)	December 11.
	Toeterville (near)	April 22.
Monona	Mapleton	May 8.
Montgomery	Elliott	July 8.
	Red Oak	June 17.
	Villisca	August 15.
Muscatine	Muscatine	November 21.
O'Brien	Paullina	November 6.
	Sheldon	July 1.
	Sutherland	August 16.
	Sutherland (near)	August 16.
Page	Clarinda	April 23.
	Northboro	September 5.
Palo Alto	Vernon Township	November 1.
Plymouth	Hungerford Township	May 23.
Polk	Allen Township	July 8.

TABLE NO. V—Continued

County	Place	Date Commencing Investigation
	Des Moines	January 8.
	Des Moines	January 24.
	Des Moines	February 13.
	Des Moines	March 25.
	Des Moines	April 11.
	Des Moines	April 18.
	Des Moines	July 5.
	Des Moines	July 6.
	Des Moines	August 12.
	Des Moines	August 29.
	Des Moines	October 7.
	Des Moines	October 16.
	Des Moines	December 3.
	Des Moines (near)	December 13.
	Herrold	January 18.
	Valley Junction	April 29.
	Valley Junction	October 28.
Pottawattamie	Council Bluffs	March 6.
	Council Bluffs	May 27.
	Council Bluffs	August 7.
	Council Bluffs (2 fires)	October 14.
	Council Bluffs	October 16.
	Honey Creek	March 13.
	McClelland (near) (2 fires)	September 6.
	Neola	March 28.
	Neola (4 fires)	March 29.
Ringgold	Kellerton (near)	September 4.
Scott	Davenport (6 fires)	October 10.
Shelby	Defiance (near)	June 19.
	Irwin	October 17.
Sioux	Granville (near)	January 29.
	Hawarden	February 26.
	Holland Township	May 22.
	Lynn Township	May 22.
	Orange City	January 29.
Taylor	Gravity	February 8.
Union	Afton	March 26.
	Lorimor	October 2.
	Lorimor (near)	April 30.
Wapello	Eldon	December 20.
Warren	Norwalk (near) (2 fires)	February 4.
Webster	Elkhorn Township	May 24.
	Yell Township	August 13.
Winnebago	Forest City	July 16.
Woodbury	Sioux City	January 31.
	Sioux City	February 21.
	Sioux City	March 25.
	Sioux City	April 5.
Worth	Grafton (near)	July 17.

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