

TABLE NO. V—CONTINUED.

County	Place	Date Commencing Investigation
Polk	Walnut Township	January 22
	Des Moines	February 2
	Des Moines	February 17
	Des Moines	April 10
	Des Moines	May 5
	Des Moines	May 11
	Des Moines	May 12
	Des Moines	May 16
	Des Moines	May 26
	Des Moines	May 31
	Des Moines	July 20
	Des Moines	July 22
	Des Moines	September 25
	Des Moines	November 1
Des Moines	December 10	
Des Moines	December 17	
Pottawattamie	Council Bluffs	April 7
	Council Bluffs	August 18
	Council Bluffs	September 7
	Boomer Township	November 25
Council Bluffs	November 24	
Sac	Schaller	September 15
	Sac City	September 28
Scott	Davenport—2 fires	April 12
	Davenport	April 13
	Davenport	July 7
	Bettendorf	September 1
Shelby	Greeley Township	April 1
	Portsmouth	November 12 & 17
Tama	Tama	December 20
Taylor	Blocton	November 1
	Gravity—2 fires	December 8
	Sharpsburg	December 8
	Maloy	December 10
Union	Creston	March 20
Van Buren	Bentonsport	June 9
Wapello	Ottumwa	January 11
	Ottumwa	October 4
	Near Ottumwa	October 6
	Kirkville	December 8
Washington	Near Washington	April 14
	Riverside	November 8
Wayne	Humeston	September 14
Winnebago	Forest City	December 27
Woodbury	Sioux City	January 15
	Sioux City—2 fires	August 5
	Sioux City—3 fires	October 21
	Sioux City	October 29

STATE OF IOWA

1916

REPORT OF THE

STATE FIRE MARSHAL

FOR THE YEAR 1916

OLE O. ROE
State Fire Marshal

PUBLISHED BY
THE STATE OF IOWA
DES MOINES

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 Stenographer	Laura M. Pedersen.....	Des Moines.....	Illnois

LETTER OF TRANSMITTAL

Des Moines, February 1, 1917.

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 sixth annual report of my official acts and of the affairs of this office, covering the period beginning January 1, 1916, and ending December 31, 1916, both dates included.

Ole O. Roe

State Fire Marshal.

SIXTH ANNUAL REPORT STATE FIRE MARSHAL

For the year 1916, 4,471 fires were reported to this office involving a loss of \$5,991,242. The property involved in these fires was valued at \$22,916,172. Of the loss thus reported, property to the value of 4,241,546 was covered by insurance, leaving an excess of loss over insurance amounting to \$1,749,696, and involving 1,487 properties. Included in this excess are 554 properties involving a loss of \$296,568 upon which no insurance was carried.

The total fire loss of 1916 was less than that of 1915 by \$15,672, and less by \$301,403 than that of 1913 which year experienced the largest loss since the establishment of the office.

The average daily fire loss of the year amounted to \$16,369 and the average loss in each fire was \$1,340.

The per capita fire loss in the state of Iowa during 1916 was \$2.54. During the year six fires occurred in each of which the loss exceeded \$100,000 and two in each of which the loss was more than \$90,000 as follows:

January 11, Ottumwa.....	\$ 246,977
January 15, Muscatine.....	98,050
February 10, Dubuque.....	349,561
April 21, Iowa City.....	103,345
July 15, Newhall.....	90,050
December 8, Cedar Rapids.....	160,345
December 15, Creston.....	146,900
December 15, Oskaloosa.....	105,495
Total	\$1,300,723

The loss sustained in these eight fires exceeds 21.7 per cent of the total fire loss of the state.

The number of dwellings burned was 2,222, and the loss on buildings was \$859,892 and on contents \$348,243.

The sound value of these dwellings was reported at \$4,670,640 and that of their contents at \$1,115,964.

The number of barns burned was 578, and the loss on buildings was \$478,380, and on the contents \$324,142.

The sound value of the barns was reported at \$543,358, and that of their contents at \$363,839.

The number of stores burned was 367, and the loss on buildings was \$374,584, and on the contents \$1,118,566.

The sound value of the store buildings was reported at \$2,212,145, and that of their contents at \$2,859,565.

The number of factories burned was 48, and the loss on buildings was \$115,661, and on the contents \$419,672.

The sound value of the factory buildings damaged was reported at \$711,700, and that of their contents at \$1,475,750.

Ninety-five (95) deaths were reported as the direct result of fire; this number was 11 less than that reported for 1915. Of this number 43 were women and 23 children. In 47 cases fatal to life gasoline or coal oil was involved. Twelve (12) children were fatally burned as the result of playing with matches or fire or being in close proximity to a bonfire.

Inspections of buildings and premises to the number of 612 were made in 137 different cities and towns in the state, upon the basis of which there were issued 113 orders to remove buildings, 62 to repair buildings, 126 to change, 53 to clean-up and repair, and 157 to clean up inflammable conditions.

Two hundred twenty-three (223) suspicious fires were investigated in 120 different places in 65 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, 35 arrests and prosecutions were had during 1916. Of the cases that came to trial 4 resulted in convictions and sentences to the penitentiary or reformatory, 1 was paroled by the court after a plea of guilty, 2 sentenced to the industrial school for boys, 2 sentenced to the hospitals for the insane, 1 sentenced to the hospital for inebriates, 1 to the institution for feeble minded children at Glenwood, 2 were tried and acquitted, 7 were fined and given jail sentences, three of which were paroled after paying fines, 5 who had made written confessions to setting fire were paroled by the court, 7 indictments are still pending, and 3 are under arrest awaiting final action by the grand jury.

Appended hereto as a part of this report are five 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 the 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 when such investigations were commenced.

STATISTICAL WORK.

The present report contains statistical information more nearly complete than any of its predecessors. It is no small task to keep in touch with and secure reports of fires from more than 2,500 different reporting officials. While some fires which occurred still remain unreported, this number is so small and the fires of such comparative insignificance that they would not materially change the total.

Until the establishment of the state fire marshal's office and the provision for the collection and publication of certain data pertaining to fire losses by that department, there had been no office or other agency in this state concerned in securing this information except the insurance companies and associations, 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 at once conclude that the only 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 investigates the fire and makes the report to the fire marshal.

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 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 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 engaged with pursuing.

EDUCATIONAL WORK.

The law requires teachers in all schools occupying buildings of more than one story in height to have fire drills at least once a month, and the teachers in all public schools are also required to give instruction to their pupils in the causes and dangers of fires as often as once each term.

The duty of preparing and furnishing a bulletin outlining lessons upon fire causes and fire dangers for the use of the teachers has been discharged by me to the best of my ability. Three editions of this bulletin have been prepared and published in sufficient numbers to supply every teacher.

During the past year as well as during previous years I have urged upon county and city superintendents the importance of this subject. I have, however, no means of definitely ascertaining how faithfully and well the law is carried out in this respect. Complaints have not infrequently reached me during the year that fire

drills are neglected and that the giving of instruction in fire causes and fire dangers in our public schools are wholly ignored.

While I have reason to believe that the provision for fire drills is fairly well carried out, I fear that in too many schools there is little or no attention paid to the subjects outlined in the bulletin and required by the law.

In a previous report I recommended that provision be made in the reports of school officers to county superintendents, and by those officials to the superintendent of public instruction, for a statement as to whether or not this as well as every other legal requirement is complied with.

The requirement for the giving of instruction in fire causes and fire dangers is not burdensome. It is in line with the "Greater Care" or "Safety First" movement now sweeping the country. It is instruction of an eminently practical nature and should not be neglected. I have faith in the efficiency of our public schools and in the enduring effects of sound common sense lessons early inculcated in the minds of the children and youth who attend the same, and it is my purpose to continue to urge this work upon the attention of superintendents and teachers; and, when I find willful or persistent neglect in complying with the legal requirements, to invoke the statutory penalty.

FARM FIRE PROTECTION.

By far the larger part of the wealth of our state is found upon our farms. Not only are the farm buildings annually improving in appearance but their contents now possess a value that seemed fabulous a few years ago. The destruction of a modern farm barn with its precious contents is no longer a matter involving hundreds but thousand of dollars.

From the very nature of his location, the farmer cannot enjoy the fire protection either to his home or to his out buildings that is afforded to his neighbor in the city or town where they have an organized fire department, and for these reasons a rigid observance of the principles and rules of Fire Prevention is his only safety. Many of these principles are well known but will nevertheless bear repetition:

- (1) Extra care in the building of the chimneys as well as in the placing of the furnace or other heating plants and the frequent inspection of both.
- (2) Avoid patent lighting systems unless the generator and supply tank are located outside the house.

- (3) Never keep gasoline in the house or barn, and keep the automobile in a building by itself.
- (4) A good lightning rod well grounded is a reasonably safe device against lightning, and if possible every barn should be supplied with one.
- (5) Hanging lanterns, smoking or scattering matches in barns have caused many fires. Such practices should be absolutely prohibited.
- (6) Hay should not be packed into barns until well cured and then ventilation should always be provided.
- (7) NEVER under any circumstances should fire be kindled with the aid of kerosene or gasoline.
- (8) If possible, provide your house and barn with chemical fire extinguishers.
- (9) Impress upon your renter and hired help the importance of observing these safety rules.
- (10) Insurance associations, granges, rural community congresses, women's clubs, commercial clubs, and the teachers in our public schools should advocate and inculcate these principles.

SPECIAL LIGHTING SYSTEMS.

In my third annual report to the Governor, I called attention to some special devices for generating illuminating gases which were being placed upon the market in many portions of our state.

As a rule they are sold by agents or solicitors who are either ignorant of their possible danger or purposely conceal the same.

I suggested then to all who might contemplate the installation of special lighting systems that they thoroughly investigate the safety as well as the serviceability of the proposed system. I urged that the generator as well as the material of which the gas is made be kept outside the buildings lighted.

In my fourth and fifth annual reports I recommended a law for the inspection of gasoline and carbide lighting systems. Since then and during the latter portion of the year 1916, two tragedies have occurred in one neighborhood in Audubon County as the result of the explosion of carbide lighting systems:

In the first explosion, one death resulted and another party injured. In the second explosion, five deaths resulted and twelve others were seriously injured.

An explosion in a similar plant occurred in Des Moines County resulting in the death of one person, and another in Hardin County of a carbide gas tank resulting in the death of one.

An explosion also occurred in a like plant near Glidden, Carroll County, about the same time the Audubon County explosions occurred, but fortunately no lives were lost.

It is high time some legislation was enacted providing for the safety of life by designating some supervisory power over such devices.

FIRE PROTECTION.

As a rule there has been the most cordial cooperation between this department and the various Fire Protection agencies of the state. Much improvement has been made along the line of securing better apparatus, especially in motorizing many of the fire departments. Many of the smaller towns have also voted bonds to install water works and equip fire departments.

In all of the matters which go toward making for efficiency in the fire-fighting force, we have endeavored to be helpful but not to supersede the fire chief in the work of Fire Protection which is properly his.

There is still needed, especially in the smaller cities and towns where volunteer departments are maintained, a better system of giving fire alarms, more frequent drills of the men who constitute the various departments, and the frequent testing of hydrants.

The modern fire chief realizes as never before that he must be an advocate of Fire Prevention as well as the leader in Fire Protection, and to this end he favors the most thorough inspection possible, especially of the business portion of his city or town, and the removal or remedying of those conditions which constitute special fire hazards.

FIRE PREVENTION.

At the present time the state fire marshal's office is the only agency in the state which is devoted wholly and solely to the work of Fire Prevention.

In our complex civilization and as a necessary part of our social progress, the agencies which cause fires are continually multiplying. Each of the more than 200,000 licensed automobiles in this state with their attendant gasoline supply is a fire producing factor which was unknown a few years ago. The general introduction and use of electricity not only as a mode of lighting but of heat and power is another agency which has largely increased the fire hazard.

Notwithstanding this and notwithstanding the fact that the per cent of increase in property values subject to destruction by fire from 1913 to 1917 amounts to at least 20 per cent, there has been

no increase in fire destruction, but rather an actual decrease from 1913 to 1916, inclusive, of \$301,000 or a reduction of 4.7 per cent.

During the same period the average cost of insurance, according to the report of the commissioner of insurance of the state, has been reduced from \$11.67 a thousand in 1912 to \$9.87 a thousand in 1915.

However, the work of Fire Prevention education has only begun. The actuarial bureau of the National Board of Fire Underwriters has made a careful analysis of the fire causes in Iowa and their relative loss for the year 1915. As their figures are not only valuable but highly instructive they are submitted herewith:

Strictly Preventable Causes:	Per Cent
Chimneys and flues	5.4
Fireworks	0.1
Gas	0.8
Ashes and coals	0.2
Matches	1.5
Open fires	0.1
Open lights	0.5
Petroleum, etc.	1.7
Rubbish, etc.	0.9
Smoking	5.2
Steam pipes, etc.	1.9
Stoves, etc.	5.2
Total	26.5
Partly Preventable Causes:	
Electricity	8.1
Explosions	1.3
Exposure	11.9
Incendiarism	1.2
Lightning	7.8
Miscellaneous	4.3
Sparks—From fires	2.7
Sparks—From machinery	0.8
Spontaneous combustion	7.2
Total	45.2
Unknown	28.4

From the foregoing it will be seen that 26.5% of the fire loss is strictly preventable, and that 45.2% is partially preventable, making a total of 71.7% which is wholly or partially preventable by the exercise of proper care.

The inspection of buildings and fire hazardous conditions therein and the resultant orders issued by this department (set out in the

beginning of this report) represent only a small fraction of the work that the department has set in motion.

In many of the larger cities they have local fire marshals or fire inspectors working in harmony with this office whose duty it is to inspect buildings and building conditions. Not only this, but in an increasing number of the smaller cities and towns, acting upon the suggestion or recommendation from this office local inspections have been started either under the direction of the fire department or by some thereunto specially designated individual.

In addition to our inspection of buildings, we frequently inspect fire departments and fire apparatus, 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. In all of these matters we have invariably had the cooperation of fire chiefs and others interested in Fire Protection.

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

ARRESTS AND PROSECUTIONS

WEBSTER TOWNSHIP, HAMILTON COUNTY.

On July 3, 1915, a fire took place which destroyed a dwelling and contents belonging to John T. Baker. After a thorough investigation by this department one Ol Bricker was indicted at the February term, 1916, on a charge of arson and for breaking and entering for the purpose of committing larceny. At the May term, 1916, Bricker was tried and convicted on the charge of breaking and entering. The case was appealed to the supreme court who reversed the judgment on the ground of insufficient evidence.

FLORIS, DAVIS COUNTY.

On November 27, 1915, about 3:30 A. M., a fire occurred which destroyed the residence occupied by R. L. Wilson. After an investigation by this department, Wilson was indicted by the grand jury on a charge of setting fire to injure the insurer. Wilson was tried at the May term, 1916, which resulted in a verdict for the defendant.

DES MOINES, POLK COUNTY.

On December 16, 1915, about 7 P. M., a fire broke out in the general store of Harry Mitchnick. After an investigation by this department Mitchnick was indicted at the January term, 1916, charged with arson. He was tried at the October term, 1916, the trial lasting several days. The jury was out twenty-four hours and disagreed. The case was again set for trial at the December term, 1916, at which time the defendant withdrew his plea of not guilty and entered a plea of guilty of setting the fire with intent to burn and was fined \$200.00 and sentenced to six months in jail. On the payment of the fine the defendant was paroled to Mr. Welstock.

JEFFERSON, GREENE COUNTY.

On December 28, 1915, about 2 A. M., a fire broke out which destroyed a furniture store belonging to Ross Potter. After a thorough investigation made by this department, Potter made a confession on February 1, 1916, that he set the fire himself for the purpose of collecting the insurance money. On April 3, 1916, Potter entered a plea of guilty and was sentenced to the Anamosa Reformatory for a period of not to exceed ten years.

UNION TOWNSHIP, BLACK HAWK COUNTY.

On January 14, 1916, about 10 A. M., a fire occurred which destroyed the house occupied by W. H. Angell. After an investigation by this department Angell made a written confession on January 18, 1916, that he set the fire himself for the purpose of collecting the insurance money. On May 25, 1916, Angell entered a plea of guilty in open court and was sentenced to thirty years in the penitentiary, after which an order of court was made withholding commitment for thirty days in order that an application could be made to the board of parole for clemency. On the showing made, the defendant was paroled under certain conditions.

LENOX, TAYLOR COUNTY.

On February 6, 1916, about 8 P. M., a fire broke out destroying a barn and contents owned and occupied by A. L. Page. A thorough investigation disclosed the fact that Mrs. A. L. Page had hired one Dee Hewitt to burn the barn for a consideration of \$100.00. Hewitt then hired one Hal Johnson to help set the fire. At the March term, 1916, indictments were returned against all three of the parties and on March 5, 1916, Mrs. A. L. Page entered a plea of guilty to the charge of procuring the burning and was fined \$1000 and sentenced to one year in jail, the jail sentence being suspended during good behavior. At the same time Dee Hewitt entered a plea of guilty to the charge of setting the fire and was fined \$750 and sentenced to one year in jail, the jail sentence being suspended during good behavior. Hal Johnson also entered a plea of guilty and was paroled during good behavior.

NEW HAMPTON, CHICKASAW COUNTY.

On February 20, 1916, a fire broke out in an opera house building. After an investigation by this department and the local officers Mrs. Catherine Nugent, aged 85 years, and her grandson, Al. Winters, aged 15 years, made confessions to the local officers that they set the fire to cover up the larceny of certain goods that were in storage in the building, and on March 13, 1916, both Mrs. Nugent and Al. Winters entered a plea of guilty and were each sentenced to the reformatory at Anamosa for a period of five years. Later the sentence was changed and Mrs. Nugent was sent to jail for six months and Winters was sent to the reformatory until he should attain his majority.

CENTER TOWNSHIP, WAPELLO COUNTY.

On the night of March 30, 1916, a fire occurred which destroyed the house and contents owned and occupied by Abraham Hatchett. After an investigation by this department Hatchett was indicted at the April term, 1916, and tried May 19, 1916, which trial resulted in a verdict for the defendant.

SPRING VALLEY TOWNSHIP, DALLAS COUNTY.

On the night of April 26, 1916, a fire occurred which destroyed a barn and contents owned and occupied by Thomas Scott. An early investigation by this department disclosed the fact that of the nine head of horses in the barn at the time of the fire only the carcasses of seven remained and two were missing. During the investigation by this department and the local officers one Lee Lair was arrested on a charge of having stolen the two missing horses and setting the fire to cover up his crime. Lair entered a plea of guilty to stealing the horses and was sentenced to the Anamosa reformatory for a term of ten years.

CLINTON TOWNSHIP, WAYNE COUNTY.

One of the most far reaching cases of conspiracy to defraud brought to the attention of the department since its creation was unearthed in the above named location. The investigation disclosed the fact that persons under various aliases and operating in various locations since 1909 up to June, 1916, had frequently secured from insurance companies large sums of money by means of fraudulent claims on alleged livestock losses.

Their plan of operation was to locate in some out-of-the-way place and let it be known that they expected to buy a ranch and engage in the horse business. Soon after locating, they would purchase some good horses, take out insurance on several head with a \$150 clause on each; a few days after the first electrical storm in the neighborhood several horses were reported to have been killed by lightning; the horses would be found under a tree to which had been nailed a wire fence; the tree would have a quantity of bark scratched therefrom making it have the appearance of having been struck by lightning. After the animals had lain a few days, neighbors would be called in to appraise their value. By that time

the horses were bloated and otherwise in such a condition that it was impossible to make a close examination but upon representation by the assured, appraisement notices were prepared and readily signed, and which they were sent to the insurance company who paid the losses.

The dead horses were usually old, discarded plugs that had been led to the slaughter and killed in the place of the good horses that were insured.

After the money had been collected, the parties would change location as well as name, go through the same process in the new locality until they were closed in on by this department. This occurred after they had filed a claim for \$600 on account of four horses that were supposed to have been killed by lightning in June, 1916.

During the investigation, photographs were taken of the tree supposed to have been struck by lightning, the jaws and feet of the horses were removed, the services of an expert veterinary surgeon were called in who testified that the horses ranged from 15 to 30 years, or past the guessing age, instead of being horses 5 or 6 years of age as claimed by the assured.

At the close of the investigation which extended over weeks, we called the attention of Hon. Claude R. Porter, U. S. district attorney for the Southern District of Iowa, to the evidence and an information was filed in the Federal court for conspiracy to use the mails for the purpose of defrauding an insurance company.

As a result of this action Grant Napier alias J. D. Lewis, Mrs. Grant Napier alias Lilly Lewis, Anna Napier alias Ann Morgan and Oscar Napier alias O. K. Wilson were indicted by the federal grand jury.

Mrs. Lilly Napier alias Lilly Lewis was apprehended by the government officials, entered a plea of guilty and was sentenced to the Federal penitentiary in Kansas for a term of two years. The others mentioned are fugitives from justice and have not as yet been apprehended.

In this particular case we feel that the department has been instrumental in breaking up the operations of one of the most dangerous gangs in the Middle West.

HEDRICK, KEOKUK COUNTY.

On June 5, 1916, about one A. M., a fire broke out in the garage of E. O. Thorne. Investigation was made by this department and the local officers which resulted in the arrest of one John Shaffer. At the preliminary hearing Shaffer was held to the grand jury. Shaffer was indicted on a charge of breaking and entering, also for arson. Previous to this fire Shaffer had been arrested and charged with breaking and entering the same garage. On this charge he was tried at the October term, 1916, and was convicted and sentenced to Anamosa for a period of ten years. The two indictments for the alleged crime committed on June 5, 1916, are still pending.

DES MOINES, POLK COUNTY.

On June 9, 1916, a fire occurred in a residence at 31st and Center Streets. Soon after the fire George Jackson, 15 years old, made a confession to

City Detective McDonald that he, Jackson, set the fire. On June 24, 1916, young Jackson was sent to the industrial school for boys at Eldora.

SIOUX CITY, WOODBURY COUNTY.

On the night of July 2, 1916, a fire broke out in the grocery store of Sam Manfio. After an investigation, Manfio was arrested charged with setting the fire and was held to the grand jury. This case is still pending.

SANBORN, O'BRIEN COUNTY.

During the months of July, August and September, 1916, a series of 16 fires occurred in Sanborn which aroused great concern, so that this department was appealed to for help. After a thorough investigation Ralph Benham, Donald Irving, Dick Hoffman, Louis Bernier and John Falkenkamp, boys ranging in ages from 7 to 13 years, made written confessions to a representative of this office to the effect that they set the fires in question. Information was filed against the boys and they were held to appear before the judge of the juvenile court at the November term at which time they were paroled. No suspicious fires have since been reported from that locality.

EAGLE GROVE, WRIGHT COUNTY.

In July and August, 1916, a series of fires occurred in the business district of Eagle Grove. An investigation was being made by a representative of this office in connection with the local officers which resulted in a written confession being made by Rue Codner to the chief of police at Eagle Grove to the effect that he, Codner, set the fires. On October 9, 1916, Codner was indicted and entered a plea of guilty and was fined \$300 and sentenced to four months in jail. One of the peculiar circumstances in connection with this case is that Codner was a member of the fire company at the time the fires were set.

VILLISCA, MONTGOMERY COUNTY.

On August 13, 1916, about 9:15 P. M., a fire occurred which destroyed a dwelling house and contents owned and occupied by Alva Patton. After an investigation by this department, Patton made a written confession that he set the fire for the purpose of collecting the insurance. Patton was indicted and entered a plea of guilty and was fined \$150 and sentenced to jail for a period of six months.

CEDAR RAPIDS, LINN COUNTY.

During the month of August, 1916, a series of 15 fires occurred at Cedar Rapids which proved to be the work of a boy named Clarence Wiese, who in 1914 was sent to Eldora on a charge of arson and who at the time these fires occurred was out on parole. After the fires of August, 1916, Wiese was sent to the institution for feeble minded children at Glenwood.

MAHASKA COUNTY.

During the months of August and September, 1916, a series of barn fires occurred in Mahaska, Keokuk and Washington counties. A thorough

Investigation was being made by this department and on October 14, 1916, one Jesse Montgomery of White Oak township, Mahaska county, was arraigned before the commissioners of insanity of Mahaska county, who on October 16, 1916, committed him to the insane hospital at Mt. Pleasant. Montgomery had been mentally deranged for several years and there were some very strong circumstances which tended to show that Montgomery was responsible for some of these fires. In any event no suspicious fires have been reported from that neighborhood since his detention.

KEOKUK, LEE COUNTY.

On September 6, 1916, about 12:30 A. M., a fire occurred which partly destroyed the dwelling house and contents occupied by H. DeWays Smith. After an investigation by a representative of this office Smith was arrested and arraigned before the Superior Court but was released on the ground of insufficient evidence.

SIOUX CITY, WOODBURY COUNTY.

On the night of October 2, 1916, a fire occurred in a motion picture show operated by J. Waters and George Ammerman which resulted in the arrest of both Waters and Ammerman for setting the fire. Both Waters and Ammerman are under indictment.

PERRY, DALLAS COUNTY.

On October 13, 1916, about one A. M., a fire destroyed a barn occupied by Mrs. A. Woodard. An investigation was made by a representative of this department, who took the statement of one Albert Little, who admitted that he had been prowling around these premises in the middle of the night and was also under the influence of liquor. Previously Little had been committed to the hospital for inebriates at Knoxville on a plea of guilty of having set fires to barns in Perry, and at the time of the fire in question Little was out on parole. At the close of this investigation Little was returned to the hospital for inebriates for the remainder of his term, which will expire July 23, 1917.

CASS TOWNSHIP, HARRISON COUNTY.

During the fall of 1916 a series of barn fires occurred in the vicinity of Persia. The farmers organized and guarded their property and their vigilance resulted in the arrest of John Coffman, 23 years old, who confessed to the local officers to the setting of part of the fires in question. Coffman was adjudged insane and committed to the insane hospital at Osceola November 1, 1916.

DIAMOND LAKE TOWNSHIP, DICKINSON COUNTY.

On December 18, 1916, about one A. M., a fire occurred in the residence of one Ld. Dierks which entirely destroyed the building and contents. At first Dierks claimed that when he arrived home that night someone shot him in the arm. Dierks then went to the neighbors and called the doctor,

claiming that previous to the fire he had received blackhand letters demanding money. The sheriff of Dickinson county became suspicious and very active, as a result of which a confession was made by Dierks on January 1, 1917, that he had shot himself in the arm after having set the house on fire by the use of kerosene which he had poured over some old clothes. On January 2, 1917, Dierks pleaded guilty to a charge of setting fire with intent to burn and was fined \$500 and sentenced to one day in jail. Dierks also signed a waiver on \$3,000 insurance on building and contents.

Not only were more convictions secured in 1916 than in any previous year, but the percentage of such convictions, based upon the prosecutions instituted, was much greater than during any similar period since the creation of the department.

Much of this result was due to the experience and skill of my deputy and assistants in gathering evidence and securing confessions from many of the guilty parties.

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 1916 were as follows:

Month.	No. of Fires.	Loss.
January	435	\$ 918,269
February	463	852,341
March	510	403,458
April	318	375,954
May	268	276,580
June	182	238,321
July	326	383,105
August	345	384,171
September	355	540,282
October	309	267,503
November	358	368,030
December	622	983,328
Total	4,471	\$5,951,242

The large fire loss for the month of January is accounted for by the two fires which occurred at Ottumwa and Muscatine involving losses aggregating \$345,027.

The large fire loss during the month of February is accounted for by a fire at Dubuque which destroyed property to the value of \$349,561.

The excessive fire loss during the month of December is accounted for by three fires occurring in Cedar Rapids, Creston and Oskaloosa in which there was an aggregate loss of \$412,740.

The total loss sustained during the months of January, February and December amounted to almost 46% of the entire fire loss of the state.

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	2,222	\$1,208,135
Barns	578	802,522
Stores	367	1,493,150
Shops	101	100,028
Sheds	93	9,821
Garages	86	128,082
Offices and office buildings.....	69	207,300
Restaurants and cafes	67	73,184
Automobiles	65	15,551
Schoolhouses	52	85,096
Total	3,700	\$4,122,878

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 1915, we note the following:

There was an increase of 411 in the number of dwellings destroyed or damaged and the aggregate loss is \$184,733 greater than in 1915.

The number of barns destroyed or damaged was 83 greater, and the damage thereto \$222,732 greater than 1915.

The increase in the number of fires affecting dwellings and barns and also in the increased damage thereto is largely accounted for by the fact that while the summer of 1915 was quite wet that of a great portion of 1916 was dry.

There was a most encouraging reduction in the damage resulting from store fires as compared with that of 1915. While there was an increase of 9 in the number of store fires reported, the

damage to buildings and contents during the last year was \$495,604 less than in 1915.

While there was an increase of 9 in the number of schoolhouses destroyed or damaged, there was a decrease of \$12,754 in the amount of damage to buildings and contents.

There was also an increase of 21 in the number of churches destroyed or damaged, and an increase in the damage to buildings and contents of this character amounting to \$63,774.

One of the causes which contributes to church and schoolhouse fires is the indifferent and sometimes poor janitor service which too often prevails in these buildings. An added danger to the larger school buildings is the general introduction of domestic science and industrial training. These added dangers should be carefully safeguarded against.

TABLE III.

This table contains a summary of the causes 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	901	\$2,456,260
Sparks from flue	824	233,696
Adjoining fires	435	913,869
Defective flues	348	345,801
Lightning	177	290,294
Spontaneous combustion	153	209,153
Incendiary and probably incendiary.....	133	247,263
Children and matches	97	24,156
Smoker's carelessness	75	34,718
Match carelessness	71	21,853
Total	3,214	\$4,777,063

RECOMMENDATIONS.

Based upon experience during my incumbency of the present office in dealing with fire hazardous conditions, I would most respectfully urge the need of legislation along the following lines:

1. Provision for the 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.

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 providing that no shingle roofs be permitted hereafter upon buildings in cities of a certain class.

The old fashioned shingle roof is not only a constant fire menace but experience has shown that it is a most potent force in promoting conflagrations of which there were several in the United States during the past year.

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

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

6. Inasmuch as fully 90% of the fire alarms in all 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. 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.

CONCLUSION.

The problems that press for solution in our state and nation are social and economic rather than political.

The need of the administrative arm of our government is *efficiency*, and the highest efficiency is attained only through specialization.

We are spending hundreds of millions in preparing for a possible foe three thousand miles away. Should we begrudge a few thou-

sand to fight the "Red Plague" which by day and by night is threatening the property and the lives of our people?

I desire to acknowledge the hearty co-operation and support accorded the office by chiefs of fire departments and others with whom we have come into official relationship.

The fire marshal law is not a failure. The fact that notwithstanding the introduction of many fire producing agencies into our mode of living, there has been an actual reduction in Iowa's fire loss during the past four years while during the same period the aggregate fire loss of the country has increased gives me encouragement and hope for the future.

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
Bal. Scott Co....	20	46,500	35,746	24,145	9	18,230	3	7,950
Sbelby	21	60,440	29,470	32,652	8	12,463	2	1,095
Sioux	21	82,354	40,644	35,740	13	20,047	2	4,890
Story	55	173,281	43,258	94,845	18	15,179	14	4,651
Tama	28	134,430	44,575	50,020	13	16,410	6	30
Taylor	17	35,700	17,700	25,600	10	7,473	4	100
Union	36	298,777	197,141	165,250	22	191,900	4	1,810
Van Buren	11	16,875	11,213	10,775	5	2,892	1	100
Wapello—Ottumwa..	95	859,064	323,003	605,922	4	1,830	1	100
Bal. Wapello Co. .	21	27,880	10,657	21,071	13	7,900	2	2,500
Warren	48	113,221	60,222	60,220	30	18,421	4	2,300
Washington	18	30,700	21,873	21,640	10	8,420	4	1,700
Wayne	17	39,725	7,780	29,500	5	2,880	4	1,050
Webster	37	286,204	73,077	177,100	17	12,154	1	1,300
Ft. Dodge	24	90,602	76,963	48,119	18	34,424	3	5,300
Bal. Webster Co. .	15	30,005	25,300	19,280	8	11,485	3	4,120
Winneshiek	13	42,100	19,514	24,780	6	7,500	2	1,000
Woodbury	223	1,300,005	134,305	878,425	53	27,812	27	1,900
Sioux City	13	23,880	8,300	15,800	5	6,075	4	500
Bal. Woodbury Co. .	6	26,710	10,956	13,800	8	3,700	2	1,000
Worth	37	45,422	18,846	30,028	10	7,500	7	1,300
Wright	1	471,174	222,926,173	5,900,905	189	1,740,969	18	29,928
Totals	1,471	8,222,926,173	2,590,905	13,700,918	383	1,740,969	189	29,928

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.

	No. of fires	Buildings		Contents		Character of Buildings Affected						
		Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Loss on Buildings Total	Loss on Contents Total		
Amphitheaters	1	2,300	2,300	0	0	0	0	0	1	1	0	0
Automobiles	60	17,000	25,000	11,500	8,300	0	0	0	10	56	0	0
Banks	7	103,800	1,000	102,000	222	0	0	0	1	0	0	0
Barns	573	545,378	478,380	303,830	284,142	573	3	2	448	125	372	114
Boats	0	3,000	0	3,300	1,485	0	0	0	1	4	1	4
Boats houses	0	19,000	0	3,300	24,000	0	0	1	1	2	1	2
Booths	15	5,700	4,775	5,300	5,300	15	0	0	1	1	1	1
Brickyards, kilns and the factories.....	13	30,000	12,400	11,600	11,100	13	0	0	10	9	2	11
Bridges	1	1,300	0	6,000	1,500	0	0	0	0	0	0	0
Car barn	1	1,000	0	6,000	1,500	0	0	0	1	1	1	1
Car barns	1	1,000	0	6,000	1,500	0	0	0	0	0	0	0
Carriage houses	1	1,000	0	6,000	1,500	0	0	0	0	0	0	0
City and township halls.....	41	439,000	100,001	41,675	1,380	41	0	0	0	0	0	0
Cleaning and dyeing establishments.....	14	65,500	50	28,475	2,177	14	0	0	0	0	0	0
Coal bins and storage	1	25,100	11,143	11,000	11,000	1	0	0	0	0	0	0
Coal sheds	1	175,000	52,415	66,720	6,100	1	0	0	0	0	0	0
Colleges and college dormitories.....	1	12,300	10,230	10,200	9,700	1	0	0	0	0	0	0
Crescentaries	1	12,300	10,230	10,200	9,700	1	0	0	0	0	0	0

TABLE No. II—Continued

	No. of fires	Buildings		Contents		Character of Buildings Affected		Loss on Contents
		Value	Damage	Value	Damage	Wood	Brick	
Typists.....	1	12,827	2,580	1,860	621			28
Dressing machines.....	1	8,000	8,000	6,000	6,000			1
Shavers.....	1	36,830	42,023	50,284	47,138			1
Barbers.....	1	1,000	1,000	1,000	1,000			1
Engine houses.....	4	6,281	4,420	5,600	5,600			1
Factories—Auto parts factory.....	1	2,000	1,500	11,000	5,000			1
.....	1	20,000	50	10,000	1,000			1
.....	1	10,000	1,000	10,000	1,000			1
.....	1	9,500	50	12,500	1,252			1
.....	1	5,000	50	5,000	500			1
.....	1	12,000	10	15,000	1,000			1
.....	1	42,000	10	14,120	4,570			1
.....	1	7,000	100	4,500	554			1
.....	1	8,000	6,300	25,000	7,000			1
.....	1	20,000	20	30,000	15			1
.....	1	10,000	7,100	60,000	60,000			1
.....	1	7,000	2,000	126,000	4,200			1
.....	1	10,000	3,000	61,000	30,000			1
.....	1	1,000	1,000	7,000	7,000			1
.....	1	8,000	15	9,000	25			1
.....	1	8,000	1,525	25,000	1,820			1
.....	1	10,000	30	7,200	500			1
.....	1	10,000	100	50,000	400			1
.....	1	35,000	2,672	25,000	22,000			1
.....	1	30,000	500	125,000	5,070			1
.....	1	25,000	300	150,000	60			1
.....	1	10,000	300	50,000	1,000			1
.....	1	15,000	225	75,000	3,000			1
.....	1	77,000	77,000	227,000	272,960			1

Phone.....	1	15,000	30	40,000	10			1
Freight house.....	1	94,100	7,420	90,000	8,000			1
Gas plants.....	1	128,965	41,171	242,750	96,911			1
Greenhouses.....	1	7,282	6,200	7,200	6,400			1
.....	1	1,500	900	1,600	1,000			1
.....	1	2,000	2,500	1,000	1,000			1
.....	1	1,000	1,000	6,000	5,000			1
.....	1	6,155	2,765	295	255			1
.....	1	2,070	5,070	1,911	1,911			1
.....	1	48,000	133,260	100	100			1
.....	1	42,220	15,672	101,750	11,713			1
.....	1	4,070,640	850,902	2,400	1,335			1
.....	1	10,000	420	1,115,964	248,242			1
.....	1	10,000	2,300	2,300	100			1
.....	1	300,250	8,225	25,500	2,000			1
.....	1	1,300	1,025	1,300	1,145			1
.....	1	7,500	2,770	6,000	790			1
.....	1	6,000	1,500	1,500	600			1
.....	1	92,200	200	500	500			1
.....	1	49,200	5,220	80,000	4,244			1
.....	1	8,500	5,050	16,000	8,060			1
.....	1	111,700	27,100	40,000	25,110			1
.....	1	300	67,100	60,000	20,000			1
.....	1	1,000	400	150	35			1
.....	1	55,000	24,100	27,000	10,257			1
.....	1	1,185	1,185	16,700	30,420			1
.....	1	31,000	24,000	27,000	24,300			1
.....	1	1,000	10,225	2,000	8,710			1
.....	1	41,000	2,000	2,000	1,420			1
.....	1	400,800	127,100	272,000	74,180			1
.....	1	2,415	410	2,700	400			1
.....	1	5,000	1,000	10,000	10,000			1
.....	1	55,000	30	50,000	50,000			1

	No. of fires	Buildings		Contents		Character of Buildings Affected		Loss on Contents
		Value	Damage	Value	Damage	Wood	Brick	
Washing machine factory.....	1	15,000	30	40,000	10			1
Kennel.....	1	84,100	7,420	90,000	8,000			1
Boarding house.....	1	13,000	1,000	1,000	1,000			1
.....	1	128,965	41,171	242,750	96,911			1
.....	1	7,282	6,200	7,200	6,400			1
.....	1	1,500	900	1,600	1,000			1
.....	1	2,000	2,500	1,000	1,000			1
.....	1	1,000	1,000	6,000	5,000			1
.....	1	6,155	2,765	295	255			1
.....	1	2,070	5,070	1,911	1,911			1
.....	1	48,000	133,260	100	100			1
.....	1	42,220	15,672	101,750	11,713			1
.....	1	4,070,640	850,902	2,400	1,335			1
.....	1	10,000	420	1,115,964	248,242			1
.....	1	10,000	2,300	2,300	100			1
.....	1	300,250	8,225	25,500	2,000			1
.....	1	1,300	1,025	1,300	1,145			1
.....	1	7,500	2,770	6,000	790			1
.....	1	6,000	1,500	1,500	600			1
.....	1	92,200	200	500	500			1
.....	1	49,200	5,220	80,000	4,244			1
.....	1	8,500	5,050	16,000	8,060			1
.....	1	111,700	27,100	40,000	25,110			1
.....	1	300	67,100	60,000	20,000			1
.....	1	1,000	400	150	35			1
.....	1	55,000	24,100	27,000	10,257			1
.....	1	1,185	1,185	16,700	30,420			1
.....	1	31,000	24,000	27,000	24,300			1
.....	1	1,000	10,225	2,000	8,710			1
.....	1	41,000	2,000	2,000	1,420			1
.....	1	400,800	127,100	272,000	74,180			1
.....	1	2,415	410	2,700	400			1
.....	1	5,000	1,000	10,000	10,000			1
.....	1	55,000	30	50,000	50,000			1

TABLE No. II--Continued

No. of Items	Buildings		Contents		Character of Buildings Affected			
	Value	Damage	Value	Damage	Wood	Brick	Concrete	Loss on Contents
					Total	Partial	Total	Partial
Photograph galleries.....	5,600	5,500	8,900	5,300				
Pool halls and bowling alleys.....	45,000	600	8,400	1,200				
Post offices.....	98,450	10,000	4,800	1,200	10			
Printing and publishing plants.....	4,500	4,500	52,500	12,512	10			
Printing shops.....	9,600	5,000	7,000	2,500	10			
Pump houses.....	1,125	215	1,400	80				
Fueling station.....	1,000	100	536	682	4			
Railroad tin cooper shop.....	40,000	100	10,675	10,000	41	17	41	16
Restaurants and cafes.....	290,700	34,144	10,304	10,000				
Retail houses.....	1,000	200	800	100				
Salvation Army hall.....	50	50	75	100				
Shed.....	35	35						
Shed house.....	100	100	37,012	11,148	10			
Scale house.....	86,305	75,150	850	35	10	15	15	15
School houses.....	1,800	1,800	5,725	2,652	10	15	41	28
Shed house.....	12,250	6,458	1,000	1,000	10	15	15	14
Shed.....	1,000	1,000	1,000	1,000				
Shops--Auto repair shops.....	7,485	7,485	27,400	4,352	10	15	15	15
Shops--Auto and motorcycle shops.....	12,700	855	7,000	1,148	10	15	15	15
Blacksmith shops.....	14,000	8,567	16,000	9,489	10	15	15	15
Carpenter shops.....	4,000	2,325	5,075	4,020	10	15	15	15
Cobbler shops.....	500	500	1,000	500				
Coal sheds.....	200	150	500	500				
Harness shops.....	6,000	5,500	16,000	14,671	10	15	15	15
Junk shops.....	2,000	1,800	25,000	10,700				
Machin shops.....	1,000	1,000	10,000	5,000				
Machine shops.....	1,000	1,000	10,000	5,000				
Paint shop.....	25,500	25,500	850	850				
Framing shops.....	1,000	1,000	7,000	7,000				
Tractor shops.....	95,000	200	20,500	6,200				

Tin shops.....	1,010	1,010	5,500	1,980				
Trunk repair shop.....	1,000	50	1,000	1,000				
Warehouses.....	4,000	4,000	2,000	6				
Woodworking shop.....	9,000	7,000	3,000	3,000				
Skating rinks.....	2,175	175	1,200	1,200				
Slaughter houses.....	5,100	462	272	272				
Stock yards.....	15,659	15,659	85,389	22,000				
Storage houses.....	10,000	5,000	12,500	3,303				
Stores.....	35,175	32,545	90,000	16,000				
Auto stores.....	8,000	500	35,500	13,607				
Barbers' supplies.....	25,005	465	9,100	6,674				
Candy stores.....	200,300	12,900	216,150	80,125				
Clothing stores.....	100,000	70,000	14,000	17,000				
Dental supply house.....	200,000	100,000	600,000	300,000				
Drapery stores.....	30,430	70,000	620,280	222,400				
Electrical supply stores.....	9,900	5,957	18,800	5,848				
Flour and feed stores.....	3,000	900	15,800	15,687				
Fruit stores.....	3,000	900	2,300	1,153				
Furniture stores.....	305,500	85,102	525,700	271,818				
General merchandise stores.....	84,450	57,000	238,000	81,677				
Grocery stores.....	5,114	5,114	5,595	5,115				
Hardware stores.....	33,355	5,100	54,100	34,285				
Implement stores.....	2,612	2,612	10,500	28,697				
Jewelry stores.....	1,000	5	10,000	10,000				
Kerosene burner demonstration.....	41,000	10	35,000	30,278				
Leather binding stores.....	1,000	10	10	10				
Marble and monument stores.....	90,000	11,500	92,475	12,100				
Meat markets.....	30,000	1,100	22,000	2,528				
Men's furnishing stores.....	12,000	1,200	15,300	9,700				
Musical stores.....	25,000	2,625	32,000	12,875				
Notion stores.....	12,000	580	2,500	2,500				
Paper-wholesale stores.....	12,000	580	2,500	2,500				
Paint and paper stores.....	12,000	580	2,500	2,500				
Photo stores.....	75,000	1,200	6,000	5,871				
Poultry, butter and eggs.....	2,775	1,980	6,700	700				

TABLE No. II--(Continued)

	No. of fires		Buildings		Contents		Character of Buildings Affected		Loss on Contents			
	Value	Damage	Value	Damage	Value	Damage	Wood	Other	Loss on Buildings			
									Total	Partial	Total	Partial
Kind stores	15,000	46	8,000	15								
Shops	25,000	2,072	132,500	53,361								
Ten and coffee stores	25,000	20	2,000	250								
Ten east stores	60,000	11,273	67,000	11,800								
Vacant store buildings	54,700	1,072										
Telephone offices	6,700	1,110	2,100	750								
Telephone and telegraph poles			1,500	500								
Telephone table and equipment			400	400								
Temp new partition	21,000	72	600	250								
Ten and awnings	75	72	400	250								
Theaters	350	105	305	95								
Threshing machines	61,000	19,675	22,000	10,723								
Undertaking parlors	2,200	1,100	1,200	1,200								
Warehouses and tools	11,300	1,928	8,000	2,113								
Warehouses	1,165	165	60,125	18,000								
Warehouse	4,150	6,025										
Total	6,421	\$14,460,300	\$ 2,082,365	\$ 8,419,950	\$ 3,019,027		3,700	675	58	2,785	990	1,904

CITY.

TABLE NO. III

Origin	Number of fires	
	Total	Loss
Acetylene explosion	4	\$ 90
Acetylene pipe leak	1	5,000
Asbestos fires	435	913,900
Alcohol stove	3	93
Ashes against wood	18	7,070
Ashes in basement	3	1,010
Ashes in wooden receptacle	3	50
Automobile or motorcycle backfire	53	8,132
Automobile wreck	1	400
Bed too near stove	1	300
Blacksmith forge	4	970
Blow torch	11	6,007
Boder too near wood	1	45,000
Bopfires	37	9,977
Burning brush and leaves	4	423
Burning insects in hen house	3	343
Burning meadows or grass	9	1,580
Burning rubbish	18	15,372
Candle carelessness	6	1,960
Charcoal fire	2	1,700
Chemical explosion	1	875
Children and matches	1	60
Children playing with fire	97	24,176
Christmas trees and decorations	6	7,400
Clothing near gas or gasoline stove	4	214
Clothing on steam radiator	1	30
Clothing, rags or bedding near stove or pipe	1	50
Coffee urn in restaurant	39	12,450
Curtains blowing into flame	2	304
	11	1,615
Defective boiler	3	2,804
Defective electric wiring	70	236,400
Defective electric wiring in street car	7	820
Defective fireplace	25	4,000
Defective flues	348	345,801
Defective furnace	16	19,100
Defective gas heater	2	115
Defective gas stove	2	135
Defective gasoline engine	1	1,300
Defective gasoline lighting system	3	200
Defective gasoline soldering pot	1	15
Defective hot air pipes	6	927
Defective oil or gasoline stoves	17	1,793
Defective oven in bakery	1	400
Defective pressure tank kerosene burner	1	305
Defective radiator in auto	1	1,688
Defective stove	18	7,615
Defective stovepipe	11	5,790
Drunkard's carelessness	2	250
Electric heater carelessness	2	300
Electric iron carelessness	19	47,800
Exposing kerosene spot on floor by burning	1	10
Explosion of benzine	1	10
Explosion of dust in paint factory	1	27,000
Explosion of dust in shredding machine	1	2,000
Explosion of engine in light plant	1	2,900
Explosion of gas generator	1	50
Explosion of gas stove	2	170
Explosion of gasoline engine	2	5,300
Explosion of gasoline peanut roaster	1	2,400
Explosion of gasoline soldering plot	1	6,000
Explosion of gasoline torch	1	714
Explosion of gasoline stove	27	12,008

TABLE No. III--Continued

Origin	Number of fires	Loss
Explosion of hot water coils in range	1	207
Explosion of kerosene oil heater	1	26
Explosion of kerosene oil stove	30	7,980
Filling auto gasoline tank by lantern light	3	2,450
Fire smoldering in wall from previous day	1	33
Fireworks	10	2,272
Friction of machinery	4	17,665
Fumigation	6	6,359
Furnace explosion	1	16,280
Furnace or pipes too near wood	16	12,960
Fuse plug blow out	1	98
Gas explosion	1	2,010
Gas or electric heater near woodwork	1	1,425
Gas or gasoline jet flame	1	120
Gas iron carelessness	4	2,139
Gas leak	4	362
Gasoline carelessness	3	1,495
Gasoline--cleaning with	3	304
Gasoline engine backfire	4	14,685
Gasoline explosion	21	2,770
Gasoline iron explosion	1	100
Gasoline lamp explosion	1	125
Gasoline leak	2	1,850
Gasoline or oil stove carelessness	33	14,261
Grease on stove	3	2,265
Heating beeswax and turpentine on stove	1	30
Heating linseed oil on stove	1	8
Heating paint on stove	1	60
Heating tar on stove	2	1,415
Heating varnish on stove	2	251
Hot iron against wood	3	429
Hot pulley in hay loader	1	1,140
Incendary and probably incendary	123	247,392
Incubator	7	938
Jack-o'-lantern	2	652
Kerosene in auto radiator	1	30
Kindling or wood near stove or furnace	12	12,613
Lamp or lantern carelessness	9	2,175
Lamp or lantern explosion	22	27,724
Lamp or lantern upset	7	2,273
Leaky joint in automobile	3	205
Lighted match or torch near gasoline	3	9,230
Lightning	171	290,784
Lightning running in on wiring	1	30
Live coal carelessness	2	2,968
Live coals dropping from grate or stove	10	5,430
Live coals dropping from locomotive	1	2,427
Live wire	1	1,260
Looking for gas leak with light	3	22
Match carelessness	71	21,822
Matches ignited by sun's rays through window	1	30
Motion picture films	5	1,261
Oil heating stove carelessness	16	2,420
Oil rag carelessness	12	14,112
Oil spilled near stove or furnace	2	215
Oil stove near wall or woodwork	11	61
Overheated boiler	1	31
Overheated cupola	2	427
Overheated electric motor	6	27

TABLE No. III--Continued

Origin	Number of fires	Loss
Overheated engine in auto	1	850
Overheated exhaust pipe in auto	1	200
Overheated feed cooker	1	7,141
Overheated fire	15	30,128
Overheated furnace	40	21,543
Overheated gas plate	1	22
Overheated hot air pipes	12	4,261
Overheated japanning furnace	1	100
Overheated kiln	1	9,265
Overheated shaft bearing in elevator	1	25
Overheated gas plate	1	6,200
Overheated steam pipes and radiators	1	6,429
Overheated stove	26	26,212
Overheated stovepipe	33	12,112
Overheated sugar dryer	1	600
Overheated tire furnace in carriage works	1	1,000
Paint vat boiling over in factory	1	75
Papers or rags in fire hole	6	628
Papers on stove	1	510
Photographic flash light	1	10
Railway wreck	2	1,120
Return steam pipe through coal bin	1	12,000
Rubbish in basement	13	2,000
Rubbish in or near building	3	1,928
Rubbish near stove	1	400
Short circuit in automobile	17	2,247
Short circuit in electric motor	3	1,027
Short circuit in gasoline engine	1	2,500
Suicide house fire	3	5,701
Smoker's carelessness	75	34,718
Smoking out bees	3	165
Sparks from cupola	4	189
Sparks from dust fan in laundry	1	209
Sparks from electric motor	2	8,520
Sparks from engine filling silo	2	1,840
Sparks from feed cooker	1	1,300
Sparks from flue	224	282,400
Sparks from flue hole in chimney	1	5,865
Sparks from furnace	1	10
Sparks from gasoline engine	5	11,995
Sparks from locomotive	45	22,997
Sparks from piece metal	1	7
Sparks from stove	3	206
Sparks from traction engine	11	5,265
Sparrow's nest near chimney	2	4,486
Spontaneous combustion	118	290,108
Starting fire with coal oil	13	6,822
Starting fire with gasoline instead of coal oil	2	120
Stove blow out	4	4,262
Stove too near unprotected wood	43	16,431
Stovepipe too near unprotected wood	14	11,298
Stove upset	5	756
Stovepipe through wall or roof	37	26,275
Supposed mice and matches	9	5,425
Sweeping compound in hot air pipe	1	11
Tar kettle boiling over	1	10
Telephone wires crossed by high voltage trolley wires	1	5
Thawing frozen water pipes	23	2,710
Toys carelessness	4	5,459
Tramps	30	26,280
Unknown	901	2,456,290
Vulcanizing machine	7	25,940
Totals	6,471	8,501,202

TABLE NO. IV.

Giving the Cities and Towns in Which Inspections of Dilapidated Buildings and Inflammable Conditions Have Been Made During the Year 1916, 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
Ackley	March 10	46	1	11	3	8	13
Ackley	Nov. 20	1					1
Akron	Aug. 14	1	1		1		
Albia	Jan. 25	1	1				
Albia	April 20	1					
Algona	April 11	3			3		1
Ames	Aug. 14	1					1
Andrew	June 8	1			1		
Artope	Feb. 8	1			1		1
Atiles	April 4	2			1		
Bedford	Feb. 16	2					1
Bedford	Aug. 18	2		1			1
Bloomfield	March 21	1		1			
Boone	May 25	1	1				
Boone	Sept. 27	3		1			1
Brooklyn	July 23	1	1				
Buffalo Center	June 14	1		1			1
Hurlington	Jan. 5	2		1			
Calmar	June 25	2					2
Cedar Rapids	Dec. 18	22	11		2	1	
Centerville	Feb. 18	2					
Chariton	Jan. 25	13	3	25	4		6
Chariton	May 10	1	1				
Chariton	Nov. 17	2				1	
Chariton	Dec. 1	1			1		
Charles City	Aug. 29	3	1	1	1		
Cincinnati	Aug. 17	5	2			1	
Clarinda	April 19	1		1			
Clinton	June 14	1					
Colfax	Jan. 15	1					
Corning	Oct. 13	12	1	1	2	3	6
Council Bluffs	June 2	1	1				
Cresco	June 22	8			6		2
Creston	Sept. 22	1	1				
Cumbersland	May 10	5	1	2		1	1
Cushing	May 1	1			1		
Davenport	June 9	16			13		
Davenport	Oct. 18	1				1	
Davis City	Aug. 18	7		6	1		
Devarah	Oct. 6	1					1
Devarah	June 22	1	1				
Denver	May 25	3	2				
Des Moines	Jan. 1	1					
Des Moines	Feb. 8	2			1		
Des Moines	April 24	1					2
Des Moines	May 8	5	4				
Des Moines	May 9	1		1			
Des Moines	May 18	2	2				
Des Moines	June 9	1	1				
Des Moines	June 15	1				1	
Des Moines	July 7	1				1	
Des Moines	July 14	4				3	
Des Moines	Aug. 7	1					1
Des Moines	Aug. 15	1	1				
Des Moines	Aug. 18	1					
Des Moines	Aug. 20	2					2

TABLE No. IV--Continued

CITY	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Des Moines	Sept. 13	2					
Des Moines	Sept. 25	1					1
Des Moines	Oct. 10	1	1				
Des Moines	Oct. 14	1		1			
Des Moines	Dec. 7	1		1			
Des Moines	Dec. 8	1					
Des Moines	Dec. 9	1					
De Witt	June 28	1			1		
Dundee	March 18	1					
Dunlap	Jan. 28	1	1				
Eagle Grove	April 11	6		1	1		2
Echman	July 11	15				4	10
Earling	Dec. 20	1					
Elira	April 1	1		1			
Forest City	April 11	1					
Fort Dodge	Jan. 20	1		1			
Fort Dodge	May 10	1					
Fort Dodge	Sept. 27	3	1	1			1
Gladbrook	April 1	6	1	1			2
Gladbrook	Dec. 2	2				1	
Hampton	Nov. 4	4	2		1		
Hartley	Nov. 21	2			1	1	
Hartwick	Oct. 21	1			1		
Bedrick	June 7	2			1		
Bedrick	July 11	2			1		
Bedrick	Dec. 12	2			1		
Humboldt	Oct. 7	5		1			1
Ira Grove	Sept. 7	9	3	1	4		
Iowa Falls	Jan. 1	1	1				
Iowa Falls	Feb. 25	10	1				2
Jefferson	Feb. 2	65	3	1	9	1	14
Jefferson	March 28	3					3
Knoxville	June 21	2					
Ladona	Sept. 22	20					
Lake City	April 7	5		2	4		6
Lake City	Nov. 16	1				1	1
Lake Mills	June 15	5	2	1	1		
LaPorte City	June 22	2					
Le Claire	Oct. 18	2	1				
Le Claire	Oct. 11	6					6
Leone Tree	July 12	1					6
Lucas	Feb. 16	3	1				
Lucas	Dec. 13	1					
Lunenburg	March 25	1	1				
Melrose	June 21	2			2		
Madrid	July 12	2	1				
Madrid (near)	Nov. 4	1					
Malvern	Aug. 2	1					
Malvern	Oct. 30	1			1		
Manchester	June 18	1					1
Manilla	June 20	2					
Manson	May 18	1					
Manson	March 29	2					1
Manson	Jan. 19	1	1				
Masonston	March 29	2	1				
Marygrove	Jan. 27	1					
Marygrove	March 16	5	4	1			
Marion	Dec. 18	1	1				
Marion	June 27	1			1		

TABLE No. IV--Continued

CITY	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Mason City	Feb. 24	5	3	1			
Mason City	Sept. 14	1					
Mingo	Dec. 27	1	1		1		
Missouri Valley	Aug. 22	1	1				
Mondamin	Nov. 9	1	1				
Monroe	Jan. 30	5			4	1	
Moorhead	March 10	1			1		
New Hampton	June 23	3					
New Hartford	May 9						1
New Market	Feb. 21				1		
Newton	Feb. 2	2	1				
Newton	March 10				1		
Northwood	April 26	3	1	1	1		1
Odebolt	Sept. 7	6		1			
Onawa	June 2	4	2				
Oskaloosa	Oct. 12	2					
Oskaloosa	Dec. 22	9	6	1	1		1
Ossian	Aug. 17	1	1				
Ottumwa	Jan. 13	1		1			
Ottumwa	Jan. 30	1			1		
Ottumwa	April 20	2	1				
Ottumwa	May 9	1	1				
Ottosen	Oct. 10	1					
Pella	March 10	3			1		
Pringhar	Sept. 20	1				1	
Randall	July 18						1
Redfield	Dec. 22			1			
Red Oak	April 13	3	3				
Renwick	April 23			1			
Ripley	July 22	2		1	1	1	
Rock Rapids	Oct. 10	3					1
Rockwell	Feb. 15					1	
Sac City	Aug. 15				10		
Sanborn	Sept. 14	3					1
Searsboro	March 22	1	2		1		
Sheldon	Oct. 10	5	2				2
Sibley	Oct. 10	4	2				2
Sigourney	June 22	2		2			
Sigourney	Oct. 13						
Sigourney	Dec. 14	1	1				
Sigourney	June 2	5	2			3	
Slater	May 5	3	1	1		1	
Spencer	Jan. 19	1		1			
Spencer	April 21	1					
St. Ansgar	Aug. 29	2				1	
Stanwood	June 28	2	1		1		
State Center	March 1	7		2	2	1	1
Story City	March 1	1					1
Stratford	Jan. 30	6		2			
Sully	March 22	2				1	1
Sumner	March 2	2					
Storm Lake	June 14	2	4				1
Tama	July 12						1
Tiffin	June 30	1	1				
Tooleboro	April 19	1				1	
Truesdale	Jan. 19	1				1	
Unionville	April 5	1				1	
Valley Junction	March 21	1	1				
Van Wert	June 27	1				1	

TABLE No. IV--Continued

CITY	Date	Number Inspections	Remove	Repair	Change	Cleanup and repair	Cleanup
Villica	April 13	8	3			2	3
Vinton	Jan. 14	5	1	2			1
Vinton	May 17	7				1	1
Viola	June 7		1				2
Walnut	Sept. 9	3					
Wapello	April 19	4				5	
Washington	Feb. 10	10	2	1	2	1	1
Waterloo	Feb. 11	1	1				
Waterloo	March 21	1	1				
Waterloo	April 18	9					6
Waterloo	June 29	1					
Waukon	June 22	4				1	
Waukon	Dec. 5	1					1
Webster City	Oct. 4	4		2	1		
Webster City	Oct. 24	5			1	1	
What Cheer	April 20	1	1				
Whiting	Feb. 20	2			2		
Totals		612	113	62	136	22	127

TABLE NO. V.

Giving Places at Which Investigations of Fires of Suspicious Origin Have Been Made During the Year 1916, and the Date When Such Investigation Began.

County	Place	Date Commencing Investigation
Adair	Adair	February 14
	Near Orient	October 24
Adams	Prescott	February 9
Appanoose	Centerville	February 17
	Centerville	February 18
	Centerville	April 4
	Centerville	October 11
	Near Centerville	December 6
	Jenasa	February 19
	Moulton	April 4
	Moulton	May 10
	Norva	November 15
	Near Unionville	March 20
Benton	Mystic	November 14
	Blainstowp	January 25
Black Hawk	LaPorte City	February 11
	LaPorte City	August 30
	Near Cedar Falls	February 10
	Waterloo—3 fires	April 17
	Waterloo	August 28
	Waterloo	August 29
	Waterloo	August 30
Bremer	Waterloo—4 fires	November 28
	Summer	March 8
Buena Vista	Waverly	October 5
	Storm Lake	August 9
Calhoun	Manson	March 20
Carroll	Manning—2 fires	March 28
	Near Templeton—2 fires	October 25
Cass	Griswold	April 23
Cerro Gordo	Cartersville	February 24
	Mason City	January 11
	Mason City	February 22
Cherokee	Cherokee	January 25
	Cherokee	November 21
Chickasaw	Fredericksburg	October 3
	New Hampton	February 22
Clay	Spencer	January 18
	Spencer	April 20
Clayton	McGregor	July 18
Crawford	Asplivall	August 29
	Dow City	November 14
Dallas	Perry (near)	April 27
	Perry	July 9
	Perry	October 16
Davis	Paris (near)	August 17
DeWatur	Davis City	November 16

TABLE No. V--Continued

County	Place	Date Commencing Investigation
DeBoer	Avenarius	December 6
Fayette	Randalla	March 9
Ford	Charles City	August 29
Franklin	Alexander	February 23
	Hampton	November 30
Fremont	Thorman (near)	September 18
Genoa	Churlan	March 8
	Jefferson	February 1
	Jefferson (near)	February 1
Grundy	Washington Township—2 fires	September 6
	Guthrie Center (near)	May 11
Harrison	Guthrie Center (near)—2 fires	November 27
	Stratford	May 2
Haskell	Webster Township	January 28
	Hayfield	September 4
Hardt	Iowa Falls	April 11
	Iowa Falls	November 2
	Wilke	October 6
Harrison	Missouri Valley (near)	November 10
	Petola (near)—3 fires	October 18
Henry	Salem	January 4
	Trenton	November 21
Jackson	Wayland	May 1
	Zwingle	October 31
Jasper	Kellogg Township	September 19
	Minro	December 27
	Newton	January 5
	Newton	April 24
Johnson	Newton	September 5
	Cou Falls (near)	October 31
Keokuk	Iowa City	May 3
	Harper (near)	September 19
Keokuk	Hedrick	June 7
	Hedrick	December 12
	Richland Township	September 6
	Sigourney	August 16
	Sigourney	September 20
	Talleyrand (near)	September 19
Lee	Keokuk	January 27
	Keokuk	September 7
Linn	Cedar Rapids	March 1
	Cedar Rapids (near)	October 30
	Cedar Rapids	December 18
	Cedar Rapids	December 20
	Genwood Park	June 27
Loda	Marion	December 21
	Columbus City	May 18
Lura	Charlton	August 24
	Charlton	December 26
	Derby	October 10

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TABLE No. V--Continued

County	Place	Date Commencing Investigation
Lyon	George	January 29
Mahaska	Oskaloosa	March 9
	Rose Hill (near)	September 21
Marion	Hamilton	December 30
	Swan (near)	March 14
Marshall	Clemons (near)	July 3
Monona	Moorhead	March 9
	Whiting	February 26
Monroe	Albia (near)	April 3
	Buxton	December 28
	Dixton (near)	June 26
	Riverside	August 9
	Riversville	August 8
Montgomery	Village	August 14
O'Brien	Sanborn	April 6
	Sanborn--26 fires	September 21
	Sanborn	November 22
Plymouth	Craig	January 17
	Liberty Township	November 9
Pocahontas	Havelock	March 1
Polk	Altoona (near)	March 13
	Carney	April 24
	Des Moines	March 13
	Des Moines	June 22
	Des Moines	July 17
	Des Moines	August 9
	Des Moines	September 21
	Des Moines	October 3
	Des Moines	October 20
	Des Moines	October 18
	Des Moines	December 2
	Des Moines	December 2
	Des Moines	December 15
Valley Junction	January 24	
Pottawattami	Council Bluffs	January 6
	Council Bluffs	January 27
	Council Bluffs--4 fires	March 17
	Council Bluffs	June 2
	Dunfries	April 6
	Hancock--2 fires	July 6
Lewis Township	March 16	
Scott	Davenport	January 4
	Elbridge (near)	November 1
Sioux	Carnes	February 24
Story	Maxwell	April 11
	Nevada	March 6
	Slater	December 27
Taylor	Blackton	April 26
	Lenox	February 12
Union	Afton--2 fires	April 4
	Arigo	February 8
	Spaulding	August 19
Wapello	Cedar Township	April 2
	Ottumwa--8 fires	January 13
	Ottumwa	January 11

STATE FIRE MARSHAL

TABLE No. V--Continued

County	Place	Date Commencing Investigation
Washington	Kalona	February 10
	Seventy-six Township	August 10
	Seventy-six Township	November 1
	Riverside (near)	October 23
Webster	Washington (near)	April 18
	Fort Dodge	September 30
Winnebago	Lehigh	May 9
	Forest City	April 12
Woodbury	Salk	January 13
	Sioux City--2 fires	January 11
	Sioux City--6 fires	January 14
	Sioux City--6 fires	February 22
	Sioux City--4 fires	June 2
Worth	Sioux City--4 fires	November 6
	Grafton	May 16
Wright	Eagle Grove--5 fires	September 3