

State of Iowa
1921

TENTH ANNUAL REPORT
OF
STATE FIRE MARSHAL
FOR THE YEAR 1920

J. A. TRACY
State Fire Marshal

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Des Moines

LETTER OF TRANSMITTAL.

Des Moines, February 1, 1921.

HON. N. E. KENDALL, *Governor of Iowa.*

SIR: In compliance with the provisions of law I have the honor to submit herewith the tenth annual report of the affairs of this office covering the period beginning January 1, 1920, and ending December 31, 1920, both dates included.

J. A. TRACY, *State Fire Marshal.*

STATE FIRE MARSHAL

Appointed by the Governor. Term, Four Years. Expires July 1, 1923.

Office	Name	Legal Residence	Birthplace
Fire Marshal.....	J. A. Tracy.....	Sioux City.....	Iowa.....
Deputy.....	E. J. Frowick.....	Des Moines.....	Iowa.....
Assistant.....	Lee M. Davis.....	Centerville.....	Missouri.....
Assistant.....	W. C. Rabbitt.....	Des Moines.....	Indiana.....
Secretary.....	Laura M. Pedersen.....	Des Moines.....	Illinois.....

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

TENTH ANNUAL REPORT STATE FIRE MARSHAL.

For the year 1920, 4,539 fires were reported to this office involving a loss of \$9,040,357. The property involved in these fires was valued at \$54,358,557, on which there was \$30,521,779 insurance carried.

Included in this loss there were 528 fires totalling a loss of \$324,691 upon which there was no insurance carried.

The number of fires in 1920 was 582 more than in 1919.

The fire loss in 1920 was \$220,522 greater than in 1919.

The average daily loss of the year 1920 amounted to \$24,768, which is a daily increase of \$604 over the year 1919.

The average loss in each fire of 1920 was \$1,992 which is a decrease in each fire of \$236 over the year 1919.

During the year ten (10) fires occurred in each of which the loss exceeded \$90,000, as follows:

April 5, Cedar Rapids	\$ 90,623
April 25, Webster City.....	401,440
May 13, Hedrick	119,000
May 18, Waterloo	118,849
July 5, Creston	125,700
July 9, Dubuque	279,000
October 4, Dubuque	102,631
October 14, Des Moines	93,000
November 13, Des Moines	103,967
November 26, Des Moines	223,541
Total	\$1,657,751

A BRIEF COMPARISON OF FIRE LOSSES DURING THE PAST FIVE YEARS

In 1916, there were 4,471 fires, totalling a loss of.....	\$5,991,242
In 1917, there were 4,953 fires, totalling a loss of.....	7,216,245
In 1918, there were 4,393 fires, totalling a loss of.....	6,440,771
In 1919, there were 3,957 fires, totalling a loss of.....	8,819,835
In 1920, there were 4,539 fires, totalling a loss of.....	9,040,357

The following tables will give you the loss by months, the kind of structures in which the greatest number of fires occurred and the causes of the greatest number of fires.

LOSS BY MONTHS

January	741	\$ 912,295
February	554	591,881
March	442	904,504
April	324	1,024,835
May	243	488,490
June	261	551,387
July	260	926,096
August	270	692,597
September	285	527,347
October	334	807,660
November	357	853,307
December	468	759,958
Totals	4,539	\$9,040,357

Kind of Structure	Number	Loss
Dwellings	2,466	\$1,881,870
Barns	374	1,082,999
Stores	265	1,890,027
Garages	170	520,727
Automobiles	141	36,514
Shops	112	150,204
Restaurants and Cafes	59	67,049
Sheds	59	24,783
Factories	56	631,822
Schoolhouses	50	328,199
Offices and office buildings	49	51,033
Totals	3,801	\$6,665,227

Cause	Number	Loss
Sparks from flue	1,316	\$ 465,893
Unknown	738	3,881,698
Defective flues	312	474,667
Stoves, boilers, furnaces and fireplaces	321	355,884
Adjoining	272	894,734
Defective electric wiring	177	556,753
Lightning	152	388,599
Spontaneous combustion	147	443,199
Smoker's carelessness	109	169,835
Children and matches	95	50,134
Incendiary and probably incendiary	83	372,290
Totals	3,722	\$8,053,686

By grouping the fires in which gasoline was involved, we find there were 200 fires, totalling a loss of \$445,538.

There were also 127 fires, totalling a loss of \$70,144 in connection with stovepipe carelessness, and also 1,676 fires totalling a loss of \$974,256 in connection with flues, smokepipe and hot air pipes.

DEATHS BY FIRE: In 1920 there were 105 deaths reported as the direct result of fire, of which number 47 were women and 33 were children.

In 42 cases fatal to life, gasoline or coal oil were involved. In 4 cases children were burned to death as the result of bonfire carelessness. In 13 cases women were burned to death as the result of stove carelessness.

Table Numbers I, II, and III in the back of this report will give you detailed information showing the number of fires, loss by counties, kind of structures and causes of the various fires reported.

Table Numbers IV and V will give you the names of the cities and towns in which inspections were made as well as the counties in which suspicious fires were investigated.

The following tables will give you the loss in the 19 largest cities in the state in 1920 as compared with the loss in the same cities in 1919.

The increase in the loss may in a measure be accounted for by the inflated values of both buildings and merchandise, and the fire producing agencies such as gasoline and electric wiring, and last but not least the readjustment period which is undoubtedly responsible for many fires with a tremendous loss.

THE LOSS IN NINETEEN LARGEST CITIES IN IOWA

City	No. Fires	Loss
Boone	42	\$ 18,944
Burlington	52	85,923
Cedar Rapids	129	127,127
Clinton	87	37,789
Council Bluffs	108	109,142
Davenport	275	179,998
Des Moines	664	1,022,635
Dubuque	82	502,813
Ft. Madison	32	21,435
Ft. Dodge	50	222,479
Iowa City	48	74,109
Keokuk	54	23,428
Marshalltown	80	29,214
Mason City	64	153,025
Muscatine	48	43,522
Ottumwa	104	39,548
Oskaloosa	20	11,395
Sloux City	275	190,030
Waterloo	172	218,104

CITIES SHOWING AMOUNT OF INCREASE LOSS IN 1920 OVER 1919

Boone	\$ 5,712
Burlington	39,349
Clinton	43,749
Council Bluffs	57,108
Davenport	137,944
Des Moines	736,877
Dubuque	158,250
Ft. Dodge	154,730
Iowa City	60,694
Mason City	128,313
Muscatine	17,825
Ottumwa	3,685
Waterloo	156,475

CITIES SHOWING AMOUNT OF DECREASE LOSS IN 1920 OVER 1919

Cedar Rapids	\$2,392,902
Ft. Madison	127,173
Keokuk	1,518
Marshalltown	54,160
Oskaloosa	17,830
Sloux City	378,096

INVESTIGATIONS

In 1920, 158 suspicious fires were investigated in 60 different counties in the state which resulted in the arrest of 21 persons charged with setting fire either for revenge or to collect heavy insurance.

In addition to the arrests made, there are many cases still in the hands of the county attorneys for their consideration as a result of the investigations made by this department.

The names of the parties arrested in 1920 will be found under the head of "Arrests and Prosecutions."

The records will show that since the office was established 121 persons have been convicted with many cases still pending, awaiting court action.

In the matter of gathering evidence we have exercised the greatest care that no innocent person should suffer, but when we are satisfied a crime has been committed, we have done everything within our power to bring the guilty ones to justice without fear or favor.

We have also made it a universal practice to not burden the county attorneys with evidence gathered unless there was evidence tending to show that a crime had been committed.

The requests for the investigation of suspicious fires the past four months have been many more than ever before and is causing alarm all over the state.

I desire to call your attention to the great number of fires of UNKNOWN origin in which the loss was more than \$3,800,000. This should awaken the people to the great importance of eliminating gross carelessness, better fire-fighting facilities, and also the great need of a larger department for investigation and inspection purposes especially during the readjustment period.

INSPECTIONS

In 1920, 1,892 inspections were made by this department in 180 different cities and towns resulting in the removal of hundreds of fire hazards. This is in addition to a great many fire hazards that have been eliminated through correspondence based upon complaints of fire chiefs, city officials, insurance companies and others.

Our records will show that 95% or more of the orders issued have been complied with.

Most of these inspections were made en route to and returning from places where investigations were made, thereby adding but little extra expense to the state for inspection purposes.

I am firmly of the opinion that a thorough inspection throughout the state would cut down the fire waste more than a million dollars per year. This opinion is based on the fact that where inspections have been made the fire loss is much smaller than where there have been no inspections made by this department.

Carelessness and indifference are responsible for three-fourths of the fires that occur, and the only way to cut down the enormous fire loss is by inspections and rigid enforcement of the law in the removal of fire hazards.

As a rule the office has had excellent co-operation from most of the fire chiefs in the matter of inspections and fire prevention work.

In a few cases where orders had been issued, it has been necessary to bring suit for the collection of the statutory penalty for failure to comply, but in every case so far, the orders had been complied with before the case came to trial. This was largely due to the co-operation we have had with city officials in the towns where the property was located.

EDUCATIONAL WORK

Under the state fire marshal law, the state fire marshal has prepared bulletins on the Causes and Dangers of Fire for use in the schools, and has endeavored to reach every school in the state, as the law requires the teaching of Fire Prevention in connection with other branches. Teachers neglecting this duty are subject to a penalty.

Fire drills are also required at least once each month in all buildings of more than one story.

Each year the state fire marshal sends out from 50,000 to 75,000 pieces of Fire Prevention literature.

In 1919 there were 36,000 large size posters, containing the Fire Prevention proclamation of the Governor surrounded by photos of fire hazards, sent out for use in the schools and public places.

In 1920 there were 30,000 of the same size posters sent out.

These posters contained the fire prevention proclamation of the Governor, also four pages of reproduced newspaper clip-

pings giving the account of many tragic and horrible deaths of both women and children through carelessness with fire.

I also solicited the co-operation of city and county superintendents of schools in furthering our efforts to reach every schoolhouse and home in the state where there were children in school. Our plan was to hang a Fire Prevention poster in every schoolhouse and furnish every scholar a home inspection blank, which if followed out as per instructions would require a thorough inspection of the scholar's home. The blanks for the purpose would exceed 500,000 in number, and with the exception of one county superintendent I had splendid co-operation.

I want to publicly acknowledge and thank all of the county superintendents for their generous aid in the stupendous undertaking which was the most far-reaching Fire Prevention campaign ever attempted by any state in the union.

I wish to urge upon the city and county superintendents the continuance of these campaigns and the importance of impressing upon the young minds the great need of real Fire Prevention, which will have a tendency to eliminate carelessness and also educate them in the causes and dangers of fires. People of mature age become used to their own surroundings but habits formed by children are hard to overcome. Let us, therefore, constantly impress upon the young minds the greatest dangers that confront the American people of today, as the boys and girls of today will be the men and women of tomorrow.

STATISTICAL WORK

Until the establishment of the state fire marshal's office, and the provisions for the collection and publication by this department of certain data pertaining to fire losses, there had been no office or other agency in the state concerned in securing this information, except the companies and associations doing a fire insurance business. The fire data reported by them to the various departments does not give full information outside of the amount collected from the insurance companies. No account could therefore be taken by them of the losses which were either partially or wholly without insurance, and when we consider that about twenty-five 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 state fire marshal.

It is true that in many cases the values are based on the combined judgment of the owner and the fire chief or the township clerk who inspects the fire and makes the report.

In addition to the loss and damage, our reports cover the material destroyed, the damage to the building and the contents set out separately, also the cause of each fire so far as known.

For more detailed information see Tables Numbered 1, 2 and 3.

FIRE PREVENTION

The method of real Fire Prevention is in its infancy. The foundation of Fire Prevention is thorough inspection followed by good housekeeping which will eliminate gross carelessness.

If we would follow the practice of the foreign countries more closely, we would soon see the fire waste reduced one-half what it is today.

In the United States the yearly loss is about \$2.50 per capita:

In Belgium	\$1.02
In Russia .....	.97
In France .....	.74
In England .....	.64
In Norway .....	.55
In Italy .....	.53
In Japan .....	.51
In Sweden .....	.42
In Austria .....	.32
In Germany .....	.28
In Netherlands .....	.11

What's the reason?

The law of France is: Every person is responsible and liable for any acts of his by which any other person had or may have sustained any loss, damage or injury.

Every person is responsible for any loss, damage or injury caused by his own act, carelessness or negligence.

This means that if a fire starts in any premises through gross carelessness or fault of the owner or tenant, all damage done to neighboring property by that fire must be made good. There is no limit to the liability which may extend to an entire block in case of a conflagration.

In Germany, they even go farther than the owner or tenant, and hold the previous owner or even contractor if the fault lay in the construction or was known to exist by the former owner and sold without knowledge to the owner of the property at the time of fire, unless it can be proven that the present owner had knowledge of the defects. If it can be proven that the owner or tenant had knowledge of defects and they failed to remedy same, they not only forfeit their insurance, but are made to pay the expense of extinguishing the fire and an extra penalty for their neglect.

This same law applies to other foreign countries.

In this county the general practice is to write all the insurance the assured wants, and when a fire occurs the company often rushes in, pays the loss without any question, and frequently advertises the fact of quick settlements to sell more insurance.

Why not hold a person liable for damages if he allows a fire to start through his own carelessness the same as if he injures someone by some other act of carelessness? Make the same law apply to the owners of fire hazards that you do to cities or corporations and you have solved the problem of Fire Prevention.

ARRESTS AND PROSECUTIONS

JEFFERSON, GREENE COUNTY

About 7:30 P. M., December 20, 1919, a fire occurred in a cream station owned by M. Mahoney, the fire being set by the aid of coal oil. On December 29, 1919, Mahoney was arrested charged with setting the fire to injure the insurance company. A preliminary was held January 5, 1920, at which time the defendant was discharged.

On January 26, 1920, the grand jury returned an indictment against the defendant charging him with setting the fire. On May 3, 1920, Mahoney entered a plea of guilty and was sentenced to the penitentiary at Ft. Madison for five years.

MASON CITY, CERRO GORDO COUNTY

On October 10, 1918, a fire occurred in a dwelling owned by John Skarlis and Gregoris Rigos. This dwelling was occupied by Gregoris Rigos. This fire was investigated in February, 1920, and resulted in the indictment of Gregoris Rigos at the April term, 1920. On May 12, 1920, the defendant was tried by jury and acquitted.

DES MOINES, POLK COUNTY

About 4:15 P. M., May 22, 1920, a fire occurred in a dwelling house occupied by Litney Webb. This fire was set by coal oil in several rooms. After an investigation by this department, information was filed against Webb charging him with the setting of the fire to injure the insurance company.

Before the warrant of arrest could be served on Webb, Webb went to Canada. Later Webb was indicted and extradited. He was placed on trial February 17, 1921, and after a very sensational trial he was convicted.

During the trial Webb was arrested charged with attempt to subornate perjury.

CEDAR RAPIDS, LINN COUNTY

About 1:15 and 4:30 A. M., July 14, 1920, fires occurred in a dwelling house owned and occupied by Hadlas Sarah Silverstein and family. These fires were set in about twenty-five places with kindling and coal oil. The house had been stripped of household goods, some shipped out of town and others placed in a junk storage house. There was heavy insurance on both the building and the contents.

After an investigation by this department, Mrs. Hadlas Sarah Silverstein and daughter Sadie Silverstein were arrested and held to await the action of the grand jury which returned indictments against both defendants. A trial lasting from December 1st to 9th, 1920, resulted in the acquittal of both. The attorney for defendants stated they had not made claim nor would they make claim for insurance and could not have defrauded the insurance company as charged in the indictment.

NORWALK, WARREN COUNTY

On the early morning of July 22, 1920, a cheese factory owned and occupied by Leonard Cristiani was destroyed by fire. Cristiani was indicted at the November term, 1920.

On January 19, 1921, Cristiani was tried at Indianola and found guilty of burning the cheese factory to injure the insurance company, and was sentenced to ten years at the Fort Madison penitentiary. Evidence gathered by this department.

FORT MADISON, LEE COUNTY

About 9 P. M., August 6, 1920, a fire occurred in a dwelling owned and occupied by A. D. Moss. After an investigation by this department, Moss was arrested August 9, 1920, and held to the grand jury charged with setting the fire to injure the insurance company. The grand jury at the September term, 1920, ignored indictment.

In this case household goods had been removed previous to the fire and shipped to Parkersburg, West Virginia. The evidence in this case showed that three lighted candles were placed in barrels and shavings. These barrels were located in different places in the house.

WATERLOO, BLACK HAWK COUNTY

About 3 A. M., August 10, 1920, a fire occurred in a residence occupied by C. O. Clay. After an investigation by this department, Clay was arrested August 14th charged with setting the fire to injure the insurance company. On October 20, 1920, Clay was indicted by the grand jury. Case still pending.

WASHINGTON TOWNSHIP, JASPER COUNTY

About 3 A. M., September 16, 1920, an auto was burned in a straw stack, the car having been driven into this straw stack for the purpose of burning to collect the \$1,500.00 insurance on the car.

After an investigation by this department Glenn A. Flick and Pat McAnna were indicted October 15, 1920, charged with arson. Case still pending.

MASSENA, CASS COUNTY

On the night of October 6, 1920, a fire occurred in a school house at Massena. After an investigation by this department, William Byrd, a boy fourteen years of age, made a confession that he set the fire with the aid of coal oil.

On October 23, 1920, Byrd was arraigned before Judge Rockafellow who sentenced him to the Training School for Boys at Eldora. Confession secured by this department.

CONSOL, MONROE COUNTY

About 4 P. M., October 11, 1920, a fire occurred in the residence of Ed. Edenburg. Mrs. Charlotta Roebuck was arrested charged with setting the fire for revenge. Case still pending.

RUTHVEN, PALO ALTO COUNTY

On the evening of October 21, 1920, a fire occurred in a millinery store owned by Lulu M. Littleton. Miss Littleton was indicted at the January term, 1921, charged with setting the fire to injure the insurance company. The defendant was arrested in Ohio and is now being extradited to be placed on trial. Evidence gathered by this department.

NEAR AUDUBON, AUDUBON COUNTY

About midnight, November 3, 1920, an auto owned by Claude S. Smith was destroyed by fire. Smith was indicted December 3, 1920, charged with setting the fire to injure the insurance company and was later arrested under an assumed name. The case came to trial February 17, 1921. After the state's evidence had been introduced, the court directed a verdict for the defendant on the ground of a defective indictment, holding that the insurance policy was invalid at the time of the fire and therefore no fraud shown on the part of the defendant. Smith is an ex-convict, having previously been convicted for larceny.

COUNCIL BLUFFS, POTTAWATTAMIE COUNTY

On November 1, 1920, about 1:50 A. M., a fire destroyed a dwelling house owned and occupied by O. E. Goodreau located at 1325 Nineteenth Avenue. After an investigation by this department, on January 7, 1921, the evidence was presented to the grand jury and resulted in the indictment of O. E. Goodreau and Fred Allen on two charges, one burning to injure the insurance company, and the other on conspiracy. Case still pending.

ALDEN, HARDIN COUNTY

About 11 P. M., December 18, 1920, a fire occurred in the Alden Auto Company, owned by A. C. Werdebaugh and Ernest Anthenat. After an investigation by this department, Werdebaugh, Anthenat and Frank Clark were arrested January 12, 1921, charged with conspiracy to burn. A preliminary hearing was held and Werdebaugh and Anthenat were held to await the action of the grand jury while Clark was discharged. Cases still pending.

HAMBLTON, MARION COUNTY

About 6:30 P. M., December 2, 1920, a fire occurred in a dwelling house occupied by Mrs. Nora Schnack. Oily rags were found and other evidence showing that the fire was set by design. On February 2, 1921, an indictment was returned against Fred A. Schnack charging him with setting the fire with intent to burn. Evidence gathered by this department. Case still pending.

In addition to the foregoing several small boys too young to be prosecuted have been found guilty of setting fires and after lectures by officers were released.

RECOMMENDATIONS

1. A larger department with enough appropriation to make a thorough inspection throughout the state.
2. A law standardizing electric wiring.
3. The installation of non-freezing fire extinguishers in school buildings.
4. State regulations for the handling and storing of gasoline, including filling stations.
5. A state law requiring a standard fireproof booth in which to house the machine for showing the nitro-cellulose motion picture films regardless of whether or not an admission is charged. The law to apply to all buildings.
6. A law requiring the telephone companies to give adequate fire alarm service, and install a fire alarm system at a reasonable rental. The telephone company has a splendid fire alarm ma-

chine and should be compelled to install same on request of the City Councils at a reasonable price.

7. An individual liability law—holding persons personally liable for damages for knowingly allowing a fire hazard to exist which causes a fire to break out and damage the property of another, or for allowing a fire to start through his own gross carelessness damaging the property of another.

CONCLUSION

To my entire office force whose loyal and faithful services to me and the state have been rendered in a most competent and generous manner, I desire to make this public acknowledgment of my appreciation.

The state fire marshal's office is no longer an experiment; its usefulness and influence for good will be more manifest in the future than it has been in the past.

The Fire Marshal's Association extends all over North America and is recognized as a leading factor in convicting persons who set fire for gain, as well as a leader in Fire Prevention activities and should have the support of all law-abiding citizens.

TABLE NO. 1

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 affecting property without any insurance and total loss upon property Not Covered by Insurance, for the Year 1920.

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 without insurance	Loss
Adair	10	\$ 80,645	\$ 45,755	\$ 52,080	1	50
Adair	10	29,790	29,155	14,000	1	25
Albany	13	36,400	36,400	22,650	1	1,150
Appanoose	53	214,020	57,355	114,575	7	6,805
Audubon	10	29,825	25,250	13,915	0	0
Benton	24	28,540	28,078	28,610	4	2,050
Black Hawk	172	2,313,457	23,104	1,590,175	18	1,671
Bal. Black Hawk Co.	23	111,540	62,345	118,733	1	303
Boone-Boone	42	208,537	18,044	169,450	7	4,055
Bal. Boone Co.	18	89,175	28,743	57,451	1	175
Bremer	13	81,315	48,379	31,721	2	465
Buchanan	19	112,750	74,543	55,868	1	75
Buena Vista	23	337,555	77,655	118,733	1	650
Butler	20	94,500	32,692	44,842	3	12,400
Calhoun	36	225,415	134,727	99,486	9	63,108
Carroll	18	106,480	15,159	40,650	6	19,096
Cass	37	348,520	184,773	298,845	5	566
Cedar	21	68,275	45,813	43,790	3	9,800
Cerro Gordo-Mason City	64	1,111,500	153,025	\$90,035	9	729
Bal. Cerro Gordo Co.	22	109,340	50,400	52,695	5	2,985
Cherokee	30	69,765	37,342	24,375	2	1,535
Chickasaw	7	32,660	1,831	13,650	0	5,580
Clarke	8	11,155	7,688	2,444	2	1,300
Clay	7	26,325	19,165	13,750	0	0
Clayton	30	102,550	47,636	54,150	4	335
Clinton-Clinton	87	602,575	37,789	299,350	11	2,075
Bal. Clinton Co.	128	128,182	54,350	54,350	1	1,250
Crawford	19	194,025	52,370	132,141	2	1,350
Dallas	50	357,481	200,882	211,490	10	10,489
Davis	7	14,602	9,202	6,720	1	450
Decorah	10	25,305	8,807	9,973	2	775
Delaware	22	147,450	77,012	58,106	1	1,500
Des Moines-Burlington	52	907,699	85,923	647,470	0	0
Bal. Des Moines Co.	9	35,775	27,500	14,400	0	0
Dickinson	20	126,805	18,034	79,403	0	0
Dubuque-Dubuque	82	1,092,044	503,813	1,353,470	8	1,735
Bal. Dubuque Co.	17	64,600	28,353	3,150	3	1,610
Emmet	18	65,900	21,127	33,550	3	400
Fayette	28	274,050	43,738	184,020	3	1,100
Floyd	21	205,476	27,179	166,718	0	0
Franklin	24	79,520	57,971	55,373	4	890
Freemont	17	61,520	37,696	38,646	3	470
Greene	12	60,025	16,338	30,000	1	1,875
Grundy	15	70,140	55,582	38,931	0	0
Guthrie	36	271,900	50,917	122,610	6	3,800
Hamilton	24	239,320	432,661	191,800	4	15,000
Hancock	16	125,563	52,500	62,250	1	460
Hardin	42	394,513	48,192	104,914	4	895
Harrison	45	148,777	78,577	67,075	9	2,900
Henry	18	61,745	25,368	29,028	2	1,300
Howard	12	82,770	21,810	14,510	2	1,400
Humboldt	13	61,680	25,980	16,690	3	750
Ia	4	25,400	16,046	10,200	0	0
Iowa	16	38,581	27,497	17,241	2	210
Jackson	20	77,297	37,800	20,150	3	865
Jasper	62	381,770	143,104	217,407	7	1,830

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 without insurance	Loss
Jefferson	18	110,867	67,002	48,185	1	6,300
Johnson-Iowa City	48	627,850	74,169	358,500	6	1,900
Bal. Johnson Co.	19	90,880	78,887	34,210	4	1,415
Jones	26	204,215	154,918	90,415	5	3,975
Kookuk	30	190,725	109,785	70,515	3	15,500
Kossuth	32	335,379	21,435	297,660	3	240
Lee-Ft. Madison	54	247,519	23,438	127,175	6	505
Keokuk	7	13,070	6,096	7,120	1	1,000
Bal. Lee Co.	129	2,073,344	127,127	1,409,975	10	1,250
Linn-Cedar Rapids	30	163,275	49,175	80,125	2	2,150
Bal. Linn Co.	14	116,145	69,943	91,701	4	4,250
Louisia	20	52,000	22,500	22,500	3	4,750
Lucas	14	87,173	34,923	21,411	4	500
Lyon	13	41,297	20,142	20,977	2	2,825
Madison	20	91,700	11,386	57,400	0	0
Madaska-Oskaloosa	16	31,421	40,169	45,960	2	430
Bal. Madaska Co.	25	165,240	35,325	77,425	4	215
Marion	80	1,323,009	30,214	890,775	15	401
Marshall-Marshalltown	15	81,650	35,008	36,485	1	700
Bal. Marshall Co.	8	30,675	7,075	6,775	2	4,005
Mills	20	131,165	64,018	62,855	3	1,400
Mitchell	13	103,171	84,521	71,550	1	400
Monona	47	280,280	64,983	131,825	8	2,497
Monroe	17	136,725	82,536	103,800	1	15
Montgomery	48	244,244	43,522	144,490	7	1,690
Muscatine-Muscatine	21	117,800	33,066	47,785	3	600
Bal. Muscatine Co.	25	293,380	52,629	57,600	1	2,350
C'Brien	16	156,473	15,767	64,720	3	850
Oceola	44	265,565	144,825	130,175	5	870
Page	22	104,200	38,297	64,060	2	1,050
Palo Alto	35	538,485	70,705	138,025	5	2,105
Plymouth	11	125,800	93,171	49,235	3	1,100
Pechonika	664	14,058,879	1,022,635	7,097,194	65	12,507
Poik-Des Moines	67	149,725	57,780	71,550	6	2,720
Bal. Polk Co.	108	925,480	109,142	508,550	21	6,745
Pottawattamie-Council Bluffs	39	125,762	105,142	82,567	5	1,225
Bal. Pottawattamie Co.	29	463,672	147,910	195,732	3	230
Poweshiek	23	144,224	101,795	88,298	1	125
Ringgold	21	85,100	35,064	41,000	2	550
Sac	275	6,887,230	170,068	4,539,159	27	9,860
Scott-Davenport	12	91,025	39,442	114,465	2	2,750
Bal. Scott Co.	14	26,941	15,121	31,950	1	550
Shellsburg	67	245,105	129,772	128,485	8	5,700
Sioux	27	265,170	107,583	163,885	8	1,250
Story	29	154,587	78,267	65,359	6	150
Tama	15	84,973	18,294	44,677	1	15
Taylor	43	373,480	290,296	133,665	6	8,225
Union	18	67,915	50,548	29,000	3	1,285
Van Buren	18	61,600	29,266	44,310	1	400
Wapello-Ottumwa	12	35,150	32,641	29,000	0	0
Bal. Wapello Co.	20	72,600	32,493	38,550	2	500
Washington	31	289,300	75,560	125,710	2	1,550
Wayne	50	66,140	38,737	27,370	1	900
Webster-Ft. Dodge	12	708,034	222,497	340,537	1	75
Bal. Webster Co.	13	33,275	21,500	13,600	1	200
Winnebago	13	35,575	8,013	18,880	2	275
Winnechek	275	181,080	39,691	103,516	27	2,825
Woodbury-Sioux City	19	99,775	43,401	53,440	3	900
Bal. Woodbury Co.	13	58,100	25,755	10,100	4	605
Worth	25	173,000	104,753	84,900	1	50
Wright						
Totals	4,529	\$4,358,557	\$ 9,040,357	\$30,521,779	328	\$324,601

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 1920.

	No. of Fires	Buildings		Contents		Character of Buildings Affected				Loss on Buildings		Loss on Contents	
		Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Total	Partial	Total	Partial	
Aeroplane plant	1	\$ 3,000	\$ 0	\$ 6,000	\$ 172	1	0	0	0	0	0	1	0
Airplane storage	1	5,000	1,000	13,000	8,000	0	1	0	0	1	0	1	0
Asylum	1	150,000	150	0	0	0	1	0	0	1	0	1	0
Automobiles	141	151,925	35,520	5,155	594	141	0	0	5	131	1	4	0
Auto storage	4	70,000	3,300	85,000	2,800	0	4	0	0	4	0	3	0
Bakeries	23	304,500	17,887	123,200	22,984	7	15	0	1	17	2	15	0
Banks	7	36,500	850	19,000	250	1	6	0	0	5	0	2	0
Barns—Farm	251	561,885	554,460	469,176	431,144	250	0	1	249	11	200	37	0
Barns—Town	123	101,740	58,105	63,058	20,200	121	0	0	61	59	56	29	0
Beekeeper's supplies	1	50,000	450	0	0	1	0	0	0	1	0	0	0
Beverages, cigars, etc., wholesale	1	100,700	10	0	0	0	1	0	0	1	0	0	0
Billboards	1	100	50	0	0	1	0	0	0	1	0	0	0
Boats	3	2,275	835	0	0	3	0	0	1	2	0	9	0
Boat houses	2	800	750	800	700	2	0	0	1	1	1	1	1
Cars—Box	2	10,139	1,230	581	123	2	0	0	0	6	0	2	0
Bunk	10	3,500	932	463	189	10	0	0	2	8	1	3	0
Chair	1	5,000	1,500	0	0	1	0	0	0	1	0	0	0
Coal	3	5,190	460	0	0	3	0	0	0	3	0	0	0
Passenger	1	10,000	10	0	0	1	0	0	0	1	0	0	0
Pullman	1	7,000	25	0	0	1	0	0	0	1	0	0	0
Refrigerator	5	10,100	575	2,616	125	5	0	0	0	5	0	2	0
Street	3	14,475	247	0	0	3	0	0	0	3	0	0	0
Stock	1	1,795	500	0	0	1	0	0	0	1	0	0	0
Way	2	1,911	711	0	0	2	0	0	0	2	0	0	0
Car barns and repair shop	1	35,000	900	0	0	0	1	0	0	1	0	0	0
Churches	29	548,100	143,433	67,430	26,050	19	7	3	11	18	7	8	0
City and township halls	1	15,000	100	0	0	0	1	0	0	1	0	0	0

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Cleaning and dyeing establishments	10	23,900	1,515	28,300	7,589	3	5	2	1	8	1	7
Coal bins and storage	24	402,101	84,788	58,292	12,673	21	3	0	11	9	6	10
Coal mines	1	1,050	275	0	0	0	0	0	0	0	0	0
Colleges and college dormitories	4	287,500	30,775	65,000	5,130	1	0	0	0	1	0	0
Court houses	0	100,000	18,125	8,300	5,800	8	1	0	22	7	2	3
Creameries	6	23,200	8,675	9,050	3,650	4	1	1	3	3	1	0
Dairies or milk houses	2	20,000	20	2,000	0	2	0	0	0	2	0	0
Deaconess homes	1	9,500	3,500	10,300	2,200	1	1	0	1	2	1	1
Depots	3	4,200	625	11,700	4,745	3	2	0	1	3	0	4
Electric battery service station	24	194,400	135,563	149,150	110,382	24	0	0	16	8	12	7
Elevators	2	25,150	65	0	0	1	1	0	0	2	0	0
Engine and boiler rooms	2	1,875	1,875	4,200	4,200	2	0	0	2	0	2	0
Engine house	2	1,875	1,875	4,200	4,200	2	0	0	2	0	2	0
Factories—												
Auto parts	1	15,000	496	6,000	671	1	0	0	0	1	0	1
Auto radiator	1	800	50	0	0	0	1	0	0	1	0	0
Brick and tile	4	19,500	475	112,000	200	2	2	0	0	3	0	2
Cabinet	1	300,000	128	0	0	0	1	0	0	1	0	0
Calliope	1	2,800	2,800	25,061	23,462	0	1	0	0	1	0	1
Candy	1	10,000	2,000	34,000	18,000	0	1	0	0	1	0	0
Casket	1	80,000	20	188,000	1,742	0	1	0	0	1	0	0
Cedar chest	1	65,000	12,917	54,151	24,205	0	1	0	0	1	0	0
Cement	1	2,000	2,000	3,000	3,000	1	0	0	0	1	0	0
Cement blocks	1	2,000	25	0	0	1	0	0	0	1	0	0
Cheese	1	200,000	0	7,000	15	0	1	0	0	0	0	1
Coffee roasting, wholesale	1	9,000	0	30,000	46	0	1	0	0	0	0	1
Electrical supplies, wholesale	1	20,900	25	17,654	48	1	0	0	0	1	0	1
Fertilizer	1	0	0	4,600	24	1	0	0	0	0	0	1
Furniture	1	0	0	446,790	51,209	0	1	0	0	0	0	1
Hat	1	0	0	0	0	0	1	0	0	0	0	1
Hoisting machinery	1	3,000	1,254	8,500	690	0	1	0	0	1	0	1
Horse collar	1	6,000	450	8,950	800	1	0	0	0	1	0	0
Insect exterminator	1	500	500	0	0	0	1	0	0	1	0	0
Kerosene engine	1	325,000	2,325	288,100	20,923	0	1	0	0	1	0	4
Mattress	1	60,000	0	7,500	219	0	1	0	0	0	0	1
Movie picture machine	1	0	0	0	0	0	1	0	0	0	0	1
Neckwear	3	1,400,000	12,150	0	0	0	3	0	0	3	0	3
Oakmeal	3	55,500	4,412	43,081	4,970	0	2	0	0	2	0	1
Paint	1	150,000	50	104,300	3,088	0	1	0	0	1	0	1
Patent medicine	1	5,000	5	70,000	20	0	1	0	0	1	0	0
Penel	1	5,000	50	0	0	0	1	0	0	1	0	0
Photograph	2	15,500	15	0	0	2	0	0	0	2	0	0
Pop and bottling	1	1,000	1,000	4,000	2,000	1	0	0	0	1	0	1
Rendering	1	1,500	30	1,000	25	1	0	0	0	1	0	0
Rug	1	72,340	72,340	325,000	325,000	0	1	0	1	0	1	0
Shoe	1	0	0	0	0	0	0	0	0	0	0	0

STATE FIRE MARSHAL

TABLE NO. II—Continued

	No. of Fires	Buildings		Contents		Character of Buildings Affected					Loss on Buildings		Loss on Contents	
		Value	Damage	Value	Damage	Wood	Brick	Cement or Stone	Total	Partial	Total	Partial	Total	Partial
Shoe polish	1	20,000	0	12,000	15	0	1	0	0	0	0	0	1	0
Soda products	1	25,000	700	0	0	1	0	0	1	0	1	0	0	0
Sorghum	1	150	150	400	400	1	0	0	1	0	1	0	1	0
Step ladder	1	2,000	100	4,000	130	0	1	0	0	1	0	1	0	1
Swing	1	4,000	2,635	14,408	14,408	1	0	0	0	1	1	1	0	1
Tanks, water troughs, etc.	1	125,000	0	125,000	40	0	1	0	0	0	0	0	1	0
Tent and awning	2	0	0	4,500	850	0	2	0	0	0	0	0	2	0
Tractor	1	13,000	100	0	0	0	0	1	0	1	0	0	0	0
Trunks and leather goods	1	50,000	2,650	45,000	5,211	0	1	0	0	1	0	1	0	1
Washing machines and farm imp.	1	45,000	50	45,000	50	1	0	0	0	1	0	1	0	1
Water tower	1	2,000	150	0	0	0	1	0	0	1	0	1	0	1
Wood working	1	2,000	2,000	2,700	2,700	1	0	0	1	0	1	0	1	0
Fair ground building	1	12,288	9,000	1,200	1,200	Tile			0	0	1	1	0	0
Fence	1	50	10	0	0	1	0	0	0	0	1	0	0	0
Flagman's or operator's station	1	300	85	12	0	0	0	0	0	1	2	0	0	0
Foundries	14	880,019	47,388	429,133	0	0	8	0	0	10	3	5	0	0
Freight house	14	2,000	384	0	0	1	0	0	0	1	0	0	0	0
Garages—Private	99	56,050	28,766	96,130	60,563	86	12	1	45	46	37	37	48	48
Public	71	585,350	134,878	1,308,145	287,520	39	7	12	85	11	29	1	1	1
Gas plants	2	77,325	31,803	118,842	38,922	2	0	0	0	2	0	1	0	1
Granaries and corn cribs	19	24,400	22,300	26,923	22,528	19	0	0	14	5	12	6	1	1
Greenhouses	2	6,000	1,030	6,500	25	2	0	0	0	2	0	1	0	1
Hay, grain and straw stacks	23	0	0	5,400	5,300	0	0	0	0	0	22	1	0	0
Hay storage	2	750	533	950	960	2	0	0	1	1	2	0	0	0
Heating plants	5	160,200	1,450	14,000	2,600	2	1	2	0	4	1	1	1	1
Hen houses	25	3,490	2,792	1,040	943	24	1	0	15	9	8	2	2	2
Hide houses	1	5,000	75	25,000	40	1	0	0	1	0	1	0	1	0
Hog houses	10	19,900	18,985	24,600	23,750	9	0	1	8	2	7	1	0	0
Home for aged	1	7,000	81	0	0	1	0	0	0	1	0	0	0	0
Hospitals	3	112,000	300	20,000	150	1	2	0	0	3	0	2	0	0
Hotels	41	8,575,500	76,079	1,230,080	35,902	16	24	1	4	34	2	28	0	0

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Houses—														
Apartment	48	509,000	19,677	140,750	20,587	16	39	2	39	2	36	0	36	0
Boarding and rooming	30	171,100	7,750	22,500	4,140	26	4	0	0	29	1	1	0	1
Cook	2	200	100	250	140	2	0	0	0	2	0	0	0	0
Dwellings—Farm	375	960,675	717,709	347,471	215,480	371	1	23	374	86	119	186	731	731
Dwellings—Town	2,091	7,337,575	713,350	1,475,655	248,331	1,979	1	0	0	1	0	0	0	0
Summer cottages	1	1,800	15	0	0	1	0	0	0	1	0	0	0	0
Summer kitchens	13	2,725	1,959	2,365	1,634	13	0	0	0	7	5	0	0	0
Ice houses	4	4,000	905	50	30	4	0	5	2	2	0	1	0	0
Jails and council rooms	1	400	400	0	0	1	0	0	1	0	0	0	0	0
Laboratories	1	25,000	585	3,500	24	0	1	0	0	1	0	0	0	0
Laundries	8	37,010	3,044	89,050	7,660	4	4	0	0	4	0	6	5	5
Light and power plants	17	434,125	19,325	155,807	47,863	3	12	2	2	14	1	0	0	0
Livery, feed and sales barns	6	14,050	3,532	1,765	1,765	5	0	1	4	4	0	12	0	0
Lodge halls and clubhouses	24	200,600	44,324	100,200	25,200	8	16	0	0	24	6	2	0	0
Lumber, pile of	2	0	0	5,100	425	2	0	0	2	6	2	0	0	0
Lumber yards	9	344,019	28,585	729,440	69,376	9	0	0	0	2	0	0	0	0
Machine sheds	5	2,290	1,525	5,915	1,765	5	0	0	1	3	2	2	0	0
Maternity and rescue homes	2	12,000	20	3,000	0	1	1	0	0	2	0	0	0	0
Mills—														
Exelsior	1	2,500	75	8,500	400	1	0	0	0	1	0	0	0	0
Feed	1	1,000	1,000	2,000	2,000	1	0	0	0	1	0	0	0	0
Flour	1	75,000	10	625	0	1	0	0	0	3	0	2	0	0
Planing and saw	3	33,000	14,550	48,000	14,000	2	1	0	3	12	4	14	0	0
Motion picture theaters	19	179,500	35,035	55,000	21,615	3	15	1	3	12	4	1	0	0
News stand	1	150	150	40	40	1	0	0	1	0	1	0	0	0
Nurse's homes	6	39,500	3,747	1,500	200	5	1	0	0	6	0	1	0	0
Offices and office buildings	49	1,608,670	31,487	476,708	19,546	13	38	0	3	50	5	35	0	0
Oil houses	3	2,100	450	1,325	1,325	3	0	0	1	2	2	0	0	0
Oil stations	9	26,700	9,235	30,885	13,099	2	0	0	0	1	0	1	0	0
Oil trucks	1	6,000	10	84	45	1	0	0	0	1	0	0	0	0
Orphanages	2	7,000	30	0	0	2	0	0	0	2	0	1	0	0
Outhouses	7	540	485	10	10	7	6	0	6	1	1	0	0	0
Packing plant	3	106,000	765	304,000	1,433	0	2	1	0	3	0	2	0	0
Panatorium	2	800	490	300	300	2	0	0	1	1	1	0	0	0
Photograph galleries	6	11,500	2,450	14,500	5,309	4	2	0	4	15	3	5	0	0
Pool halls and bowling alleys	19	338,000	35,066	47,300	13,829	9	10	0	1	0	1	0	0	0
Poor house	1	6,000	6,000	0	0	1	0	0	0	1	0	0	0	0
Poultry and cold storage	10	133,000	796	303,349	45,553	2	5	0	3	2	1	2	0	0
Printing and publishing plants	1	1,800	380	5,425	1,730	5	0	0	0	0	0	0	0	0
Pump or tank houses	5													

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TABLE NO. II—Continued

	Buildings		Contents		Character of Buildings Affected						
	Value	Damage	Value	Damage	Wood	Brick	Content or Stone	Loss on Buildings		Total	Partial
								Total	Partial		
Rabbitry	300	300	700	700	1	0	0	1	0	1	0
Railroad ties	0	0	2,540	455	1	0	0	0	0	0	1
Restaurants and cafes	483,450	33,783	140,460	33,296	29	29	1	10	43	9	33
Scale house	750	510	350	350	2	0	0	0	1	1	1
Schoolhouses	1,120,500	275,514	103,300	52,355	31	19	0	27	21	21	1
Sheds	13,530	8,732	17,343	16,031	58	1	0	59	29	15	14
Shops											
Auto repair	0	0	5,328	2,493	0	1	0	0	0	0	0
Barber	70,820	10,176	90,460	35,122	11	2	0	1	16	1	12
Blacksmith	19,650	2,131	7,450	2,682	11	2	0	0	12	1	7
Blacksmith	21,460	6,260	21,100	7,900	17	0	0	5	11	2	7
Carpenter	0	0	5,000	100	1	0	0	0	0	0	1
Carpenter	11,360	6,896	1,800	1,800	1	0	0	0	0	0	1
Cobbler	100	350	1,500	450	1	0	0	0	1	0	0
Cooper	1,000	150	0	0	1	0	0	0	0	0	0
Croquet ground	7,500	500	2,600	1,400	0	2	0	0	1	0	0
Haberdashery	0	0	25,000	13,533	0	1	0	0	0	0	1
Hair dressing	0	0	5,000	0	1	0	0	0	0	0	0
Harness	25,500	11,344	24,800	10,358	9	4	0	9	11	2	6
Jeans	6,820	2,125	3,900	1,475	3	0	0	0	0	0	3
Machine	6,000	745	13,965	11,701	4	1	0	3	3	2	3
Marble	0	0	0	0	0	0	0	0	0	0	0
Mitten	2,000	285	1,300	575	1	0	0	0	1	0	1
Paint	7,500	1,110	1,500	750	1	0	0	1	1	0	1
Pattern	1,185	330	5,000	2,000	2	0	0	0	2	0	2
Pattern and beading	25,000	6,211	10,076	4,750	2	0	0	0	7	0	7
Repair	70,000	3,350	29,000	13,000	0	0	0	0	0	0	0
Shoe repair	5,000	0	3,500	50	0	1	0	0	0	0	1
Shoe repair	2,000	25	15,300	9,162	0	1	0	0	0	1	0
Shoe repair	28,000	6,627	10,300	5,000	1	5	0	0	4	1	3
Tin	1,200	5	0	0	0	0	0	0	0	0	0
Wagoner house	0	0	0	0	1	0	0	0	1	0	0

Smoke houses
Sausage makers
State railroad
Stock yards
Storage houses
Stores—
 Auto accessories
 Auto substores
 Book stores
 Food, supplies and paper, whole
 Butter and egg
 Cheese
 Clear and tobacco
 Confectionery and ice cream
 Department
 Drug and medical supplies
 Five and ten cent
 Flour and feed, wholesale
 Fruit and food, wholesale
 Fruit, wholesale
 Furniture
 General merchandise
 Grocery, wholesale
 Hardware
 Household goods
 Jewelry
 Ladies' furnishings
 Meat market
 Men's furnishings
 Millinery
 Music
 Paper, paper and glass
 Picture frames
 Poultry and produce
 Second hand
 Sewing goods
 Syrup, wholesale and retail
 Tea and coffee
 Telephone
 Toys and novelties
 Tot's toggery
 Vacuum

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	
Telephone apparatus	1	0	0	60,000	1,850	0	1	0	0	0	0	0	1
Telephone exchanges	2	8,800	1,300	1,300	1,300	0	1	0	1	1	0	0	2
Tents and awnings	4	90,850	390	15,254	567	1	Canvas	0	1	1	0	0	1
Theaters	4	181,500	105,750	24,200	10,975	1	4	0	1	4	1	0	6
Trucks	5	7,900	6,500	800	0	0	0	0	0	5	1	0	6
Trussing machines	6	7,900	0	800	0	0	0	0	0	2	2	0	4
Tool and section houses	4	2,000	272	16,700	465	4	0	0	0	0	0	0	4
Undertaking parlors	3	25,000	280	12,200	4,200	0	3	0	0	2	1	2	5
Viaduct	1	100,000	95	0	0	0	Steel	0	0	1	0	0	1
Warehouses	1	85	45	50	50	1	0	0	0	1	1	0	3
Warehouses	25	175,000	20,300	188,100	60,203	14	8	1	5	13	4	13	37
Water tanks	1	1,500	100	0	0	1	0	0	0	0	0	0	1
Totals	4,576	\$ 96,125,177	\$ 4,492,194	\$ 14,233,582	\$ 4,548,813	7,741	984	79	1,058	3,184	741	1,767	57

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, for th Year 1920.

Causes	Number Fires		Loss
Acetylene tank explosion	2	\$	6,900
Adjoining	273		894,734
Alcohol explosion	1		115
Ashes in or near wood	46		15,025
Automobile or motorcycle backfire	44		37,767
Automobile wreck	1		205
Blow torch	10		34,124
Bonfires	33		12,362
Burning corn-stalks and stubble	4		1,250
Burning meadows or grass	4		2,925
Burning rubbish	10		10,772
Candle	9		788
Children and matches	165		50,134
Christmas trees and decorations	3		221
Children playing with fire	4		1,960
Clothing, bedding or rags near stove or stovepipe	28		10,295
Coffee urn	7		7,775
Curtains blowing into flame	1		25
Defective boiler near wood	1		5,100
Defective candle	177		556,753
Defective electric wiring	17		24,541
Defective fireplace	312		474,667
Defective flues	4		3,462
Defective furnace	9		18,874
Defective gasoline tank	3		1,716
Defective gas stove connection	2		3,015
Defective gas pipe	3		2,750
Defective hot air pipes or registers	4		4,125
Defective oil heater	25		7,810
Defective oil or gasoline stoves	2		210
Defective oven in bakery	1		1,250
Defective ventilator for stovepipe	1		1,300
Defective water heater	15		28,431
Defective stove	6		4,651
Defective stovepipe	1		250
Electric hair curler	23		25,364
Electric iron	1		25
Electric toaster	1		128
Explosion of dust in mill	1		23,825
Explosion of gasoline engine	8		3,100
Explosion of gasoline stove	42		23,557
Explosion of kerosene stove	1		3,378
Explosion of naphtha	4		2,137
Explosion of oil heater	5		2,277
Explosion of oil lamp or lantern	9		116
Explosion of plumber's torch	1		10,000
Explosion of water heater	1		20
Feed cooker	2		375
Filling kerosene stove while burning	1		300
Filling lamp while burning	15		2,897
Fireworks	7		6,038
Friction	7		772
Fumigation	2		1,255
Furnace explosion or blow out	4		12,230
Furnace or furnace pipes too near wood	1		400
Fuse blow out	1		8,392
Gas or gasoline iron carelessness	5		565
Gas or gasoline jet flame	8		135
Gas plate too near wood	8		7,854
Gas stove explosion or carelessness	5		570
Gasoline carelessness	10		11,665
Gasoline—cleaning with			

TABLE NO. III—Continued

Causes	Number Fires	Loss
Gasoline engine backfire.....	10	30,276
Gasoline explosion.....	15	68,533
Gasoline drawn by lamp or lantern light.....	2	565
Gasoline in auto tank by lantern light.....	1	650
Gasoline and lighted match, torch or lantern.....	17	53,491
Gasoline and sparks from pipe or cigarette.....	1	3,500
Gasoline lamp explosion.....	1	1
Gasoline leak.....	1	145
Gasoline or oil stove carelessness.....	5	4,332
Gasoline soldering pot explosion.....	1	500
Glue pot boiling over.....	1	25
Grease on stove.....	12	17,365
Heating cement or pitch in kettle on stove.....	3	8,590
Heating varnish on stove.....	1	10,000
High voltage wires.....	4	1,175
Hot box in wheel in dust room.....	1	4,550
Hot bricks or irons in bed.....	1	71
Incendiary or probably incendiary.....	81	372,250
Incubator.....	6	685
Kindling or wood near stove or furnace.....	13	6,839
Lamp or lantern carelessness.....	12	12,041
Lamp or lantern explosion.....	6	3,537
Leaky gas tank in automobile.....	5	1,420
Lightning, no rods.....	141	312,200
Lightning, rods.....	9	29,279
Lightning running in on wiring.....	9	1,119
Live coals dropping from grate or stove.....	6	4,750
Live coals dropping from locomotive.....	2	1,619
Looking for gas leak with matches or torch.....	1	35
Match carelessness.....	69	18,172
Motion picture films.....	12	10,290
Oil heating stove carelessness.....	31	12,121
Oil stove near wall or woodwork.....	8	2,513
Overheated auto engine.....	3	28,735
Overheated bake oven.....	6	10,877
Overheated clothes dryer.....	1	700
Overheated or defective exhaust.....	3	1,100
Overheated dry kiln.....	1	50
Overheated electric fan.....	1	700
Overheated electric motor or dynamo.....	6	49,281
Overheated flues and stacks.....	14	30,718
Overheated furnace or boiler.....	48	97,737
Overheated gasoline engine.....	1	30
Overheated hot air pipes.....	4	2,908
Overheated oats conveyor.....	2	12,100
Overheated peanut roaster.....	1	5
Overheated stove.....	64	51,919
Overheated stovepipe.....	10	12,652
Paper covered fire hole.....	2	25
Papers on or near stove or stovepipe.....	4	570
Rubbish in or near buildings.....	11	9,900
Rubbish near stove or furnace.....	3	1,103
Shavings in boiler room.....	1	12,000
Smoker's carelessness.....	100	169,835
Smoking meat.....	15	4,578
Smokestack against wood.....	1	2,500
Soldering gasoline tank.....	1	91,000
Sparks from anvil in tank of oil.....	1	1,167
Sparks from anvil.....	4	250
Sparks from electric motor.....	4	5,109
Sparks from exhaust pipe.....	2	160
Sparks from flue.....	1136	145,885
Sparks from fire hole.....	2	110
Sparks from gasoline or kerosene engine.....	1	19,430
Sparks from holating engine.....	1	10
Sparks from hot iron.....	1	15
Sparks from lantern.....	1	249
Sparks from locomotive.....	24	40,107
Sparks from metal hose nozzle in filling gas tank.....	1	20
Sparks from smokestacks.....	5	165
Sparks from steam shovel.....	4	5,052
Sparks from stove or furnace.....	17	28,779
Sparks from traction engine.....	8	16,385

TABLE NO. III—Continued

Causes	Number Fires	Loss
Spontaneous Combustion in.....		
Ash pile.....	1	285
Baled paper.....	1	50
Celluloid goods.....	1	30,200
Coal.....	27	137,042
Excelsior.....	3	2,210
Dust.....	5	11,388
Feathers, grease and gasoline.....	1	673
Hay or oats.....	40	120,616
Janitor's supplies.....	1	20
Manure.....	2	2,650
Oil mop.....	2	535
Only rags or clothing.....	29	51,904
Rubbish and rags.....	20	32,936
Sawdust.....	3	1,362
Sweeping compound in waste paper.....	1	2,106
Starting fire with coal oil.....	11	17,222
Starting fire with gasoline instead of coal oil.....	1	2,650
Static electricity.....	1	7,927
Stove explosion or blow out.....	9	15,146
Stove or stovepipe too near unprotected wood or wall.....	42	30,234
Stove upset.....	7	4,535
Stovepipe falling down.....	2	1,500
Stovepipe through ceiling or roof.....	25	8,941
Sun's rays through window.....	1	500
Supposed mice and matches.....	11	9,080
Tar kettle boiling over.....	5	4,770
Thawing frozen water pipes.....	9	870
Thawing gasoline engine with fire.....	1	10
Torch carelessness.....	10	4,770
Tramps or thieves.....	4	825
Unknown.....	5	6,765
Varnish too close to stove or furnace.....	738	3,881,408
Vulcanizing machine.....	1	172
Welding gasoline tank.....	1	14,000
Totals.....	4,539	\$ 6,940,337

TABLE NO. IV

Giving the Cities and Towns in Which 1,882 Inspections Were Made of Dilapidated Buildings and Inflammable Conditions During the Year 1920.

Ackley.	Fort Dodge.	Odeboit.
Albia.	Fort Madison.	Oelwein.
Albia.	Fremont.	Olmitz.
Algona.	Garber.	Omaha.
Albion.	Garden City.	Osage.
Alton.	Gibbs.	Oscar.
Anamosa.	Goldfield.	Oskaloosa.
Ankeny.	Gowrie.	Ossian.
Anthon.	Grand Mound.	Ottosen.
Archer.	Granville.	Owasa.
Arion.	Grinnell.	Parkersburg.
Arnold's Park.	Guthrie Center.	Persia.
Atlantic.	Hampton.	Perry.
Aurelia.	Harper.	Postville.
Bagley.	Hartford.	Red Oak.
Barnes City.	Havoclock.	Ribland.
Barnum.	Hedrick.	Ridgeway.
Bayard.	Herdon.	Rock Valley.
Belmont.	Hull.	Rockwell City.
Beaumont.	Ida Grove.	Rose Hill.
Belle Plaine.	Indianola.	Sac City.
Berkley.	Iowa Falls.	Saint Ansgar.
Blairsburg.	Iowa City.	Shelby.
Boone.	Ira.	Sheldon.
Boyd.	Jefferson.	Sharpsburg.
Bridgewater.	Keokuk.	Shenandoah.
Brighton.	Keosauqua.	Sibley.
Cambridge.	Keota.	Sidney.
Carlisle.	Kiron.	Sioux City.
Carroll.	Knoxville.	Sioux Rapids.
Cass.	Lake City.	Spirit Lake.
Cedar.	Lake Park.	Stratford.
Cedar Rapids.	Lamoni.	Storm Lake.
Centerville.	Lanesboro.	Sutherland.
Chariton.	Lamont.	Tama.
Cherokee.	Laporte City.	Thompson.
Clayton.	Laurens.	Thornton.
Clear Lake.	Le Claire.	Tipton.
Clinton.	Linn Grove.	Troy Mills.
Colfax.	Lost Nation.	Union.
Columbus Junction.	Lovilia.	Valley Junction.
Correctionville.	Low Moor.	Varna.
Cornell Bluffs.	Manning.	Victor.
Creston.	Marengo.	Village.
Curlow.	Marion.	Walker.
Davenport.	Marengo.	Wall Lake.
Decorah.	Maquoketa.	Washington.
Des Moines.	Marshalltown.	Waterloo.
Diagonal.	Manchester.	Webster City.
Demont.	Mason City.	West Bend.
Eagle Grove.	Mechanicsville.	West Liberty.
East Pleasant Plain.	Mandan.	West Union.
Elkhart.	Monroe.	Wheatland.
Everly.	Monticello.	Mount Ayr.
Fairfax.	Mount Pleasant.	Williams.
Fairfield.	Muscatine.	Williamsburg.
Fonda.	Newton.	Winfield.
Fontanelle.	Nichols.	Woodward.
Forest City.	Norwalk.	
Fort Atkinson.		

TABLE NO. V

Giving Places at Which Investigations of Fires of Suspicious Origin Have Been Made During the Year 1920, and the Date When Such Investigation Began.

COUNTY	PLACE	DATE COMMENCING INVESTIGATION
Adair	Fontanelle	January 5.
Adair	Stuart	June 3.
Allamakee	French Lick Township	November 20.
Allamakee	Lansing	November 19.
Allamakee	Postville (near)	November 5.
Appanoose	Centerville	January 7.
Appanoose	Audubon (near)	November 6.
Black Hawk	Waterloo	February 9.
Black Hawk	Waterloo	August 13.
Black Hawk	Waterloo	October 8.
Black Hawk	Waterloo	October 20.
Boone	Berkley (near)	July 30.
Boone	Boone	January 17.
Boone	Boone	July 28.
Boone	Madrid (near)	January 13.
Buchanan	Buffalo Township	March 30.
Buchanan	Parkersburg	May 3.
Calhoun	Lake City (3 fires)	September 8.
Cass	Mascha	October 21.
Cedar	Center Township	October 15.
Cedar	Fairfield Township (2 fires)	November 16.
Cedar	Mechanicsville	November 17.
Cedar	Red Oak Township	November 17.
Cerro Gordo	Clear Lake	February 15.
Cerro Gordo	Mason City (near)	January 19.
Cerro Gordo	Mason City	February 14.
Cherokee	Meriden (near)	September 14.
Cherokee	Meriden (near)	September 17.
Clayton	Farmerburg (2 fires)	December 11.
Clinton	Volga Township	April 2.
Clinton	Wilton	June 12.
Clinton	Wilton (near)	June 14.
Crawford	Charter Oak (near)	January 16.
Crawford	Denison	April 17.
Dallas	Adel	April 30.
Dallas	De Soto	November 12.
Dallas	Perry	January 23.
Dallas	Perry	April 17.
Dallas	Perry	December 11.
Dallas	Perry	December 18.
Dallas	Van Meter	May 21.
Dickinson	Diamond Lake Twp. (2 fires)	August 27.
Dickinson	Lake Park	February 13.
Dickinson	Greely Township	December 19.
Delaware	North Dubuque (2 fires)	February 3.
Delaware	Fayette	January 9.
Delaware	Windsor Township (2 fires)	January 9.
Franklin	Lee Township (3 fires)	December 15.
Fremont	McPaul	September 30.
Guthrie	Menio (near)	October 30.
Guthrie	Stuart	September 7.
Guthrie	Adel	December 22.
Hardin	Union Township	October 19.
Iowa	Marengo Township	October 14.
Jasper	Newburg	November 9.
Jasper	Newton	March 12.
Jasper	Newton (near) (3 fires)	July 27.
Jasper	Washington Township	September 17.

TABLE NO. V—Continued

COUNTY	PLACE	DATE COMMENCING INVESTIGATION
Johnson	Lone Tree	December 16.
Keokuk	Delta	October 11.
	Keota (near)	October 12.
Kossuth	Alcona	February 14.
Lee	Ft. Madison	February 15.
	Ft. Madison	August 7.
Linn	Cedar Rapids	March 12.
	Cedar Rapids	July 14.
Louisia	Jakville	July 22.
Lucas	Chariton	November 9.
Mahaska	Barnes City	January 22.
Marion	Hamilton	December 8.
Marshall	Marshalltown	January 13.
	Marshalltown	January 14.
Mitchell	Osage	November 17.
Monona	Tieonle	December 2.
		April 14.
Monroe	Avery	October 20.
	Wayne	October 21.
Montgomery	Village	August 30.
Muscatine	Fruitland Township	April 14.
	Muscatine	July 11.
O'Brien	Archer	December 18.
Palo Alto	Rutliff	November 22.
	West Bend	December 22.
Pocahontas	Varina	August 5.
Polk	Crocket Township	January 16.
	Des Moines	February 14.
	Des Moines	February 23.
	Des Moines	May 22.
	Des Moines	July 7.
	Des Moines	August 2.
	Des Moines	August 12.
	Des Moines	September 3.
	Des Moines	August 29.
	Des Moines	September 22.
	Des Moines	October 29.
	Des Moines	November 22.
	Des Moines	November 30.
	Des Moines	December 20.
Pottawattamie	Walnut Township	July 28.
	Council Bluffs	July 11.
	Council Bluffs (2 fires)	December 2.
	Council Bluffs	December 3.
	McClelland	November 29.
	Treppner (near)	January 15.
	Waveland Township	October 20.
	Wright Township	October 20.
Poweshiek	Grinnell	July 1.
Ringgold	Jefferson Township	July 30.
	Jefferson Township	September 1.
	Mount Ayr (2 fires)	July 31.
Scott	New Liberty (near)	October 16.
Shelby	Harlan (near)	January 14.
Sioux	Alton (near)	December 14.
	Fjord Township	December 16.
	Sioux Center	December 17.
Tama	Tama	September 9.
Taylor	Sharpsburg (2 fires)	November 23.
Union	Creston	August 31.
	Thayer (2 fires)	September 13.
Warren	Norwalk	July 30.
	Summerset	November 12.
Washington	Washington (4 fires)	March 1.
Webster	Fort Dodge	July 8.
Winnebago	Decorah (8 fires)	September 16.
Woodbury	Sioux City	February 9.
	Sioux City	February 11.
	Sioux City	March 20.
	Sioux City	July 14.
	Sioux City (2 fires)	November 29.
	Sioux City (3 fires)	December 2.