

TA  
7  
.1822  
No.87  
1926

IOWA STATE LIBRARY  
DES MOINES, IOWA

IOWA STATE COLLEGE  
OF AGRICULTURE AND MECHANIC ARTS  
OFFICIAL PUBLICATION

Vol. XXV  
25

October 27, 1926

No. 22

**FIRE HAZARDS IN IOWA COMMUNITY AND  
FIRE DEPARTMENT CO-OPERATION**

By J. A. TRACY

Presented at the Second Short Course for Fire Fighters  
at Ames, Iowa, October 26 to 29, 1926



**WITHDRAWN**  
Bulletin 87

ENGINEERING EXTENSION DEPARTMENT  
IOWA STATE COLLEGE  
AMES, IOWA

Published semi-weekly January to June, weekly July to December, by Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa. Entered as Second-class matter and accepted for mailing at the special rate of postage provided for in Section 429, P. L. & R., Act of August 24, 1912, authorized April 12, 1920.

## FIRE HAZARDS IN IOWA

By J. A. TRACY  
State Fire Marshal  
Des Moines, Iowa

THE IOWA STATE COLLEGE is annually host to the fire fighters of Iowa, in the Short Course for Fire Fighters held under the auspices of the Engineering Extension Department.

The meeting is really a conference of firemen, municipal officials and others interested in fire fighting and fire prevention; a conference at which they can discuss with experts, both from within the state and from other places, the important problems connected with their work. Here, the firemen and representatives from each community can learn new and better ways of meeting their problems through contact with speakers and counselors, many of whom are nationally known in their fields. Practical demonstrations of first aid and fireman training are features of the program.

This publication contains two of the more general papers presented at the 1926 Fire Fighters' Short Course. Several others will be published soon, and can be secured by writing to the Engineering Extension Department of the college.

The lack of a state building code, a state electrical code, a state dry cleaning code, a state rating for premiums collected, a state law compelling insurance companies to inspect property before issuing policies, and a lack of municipal ordinances covering these same points, is no doubt responsible for many fire hazards that now exist. Many cases can be remedied and others may even be prevented from becoming hazards.

The existing building depression makes the present a propitious time to strengthen building regulations and codes safeguarding against fire. It is not my purpose to go into a long string of figures, but I must quote a few in order to impress the necessity of better regulations in the various cities throughout the state.

The greatest number of fires are caused by wooden shingles. From May, 1901, to March 1, 1926, there were 19 conflagrations in the United States which totaled a loss of 89 million dollars. There were in addition innumerable losses near the 100 thousand dollar mark in many of which the fire was spread by wooden shingles.

In Iowa last year there were 2011 fires caused by sparks on roofs, totaling a loss of 885 thousand dollars, and not one occurred on any other than wooden shingles.

Defective heating plants are another great hazard. Last year 460 fires were reported as starting from this source, and totaling a loss of 433 thousand dollars.

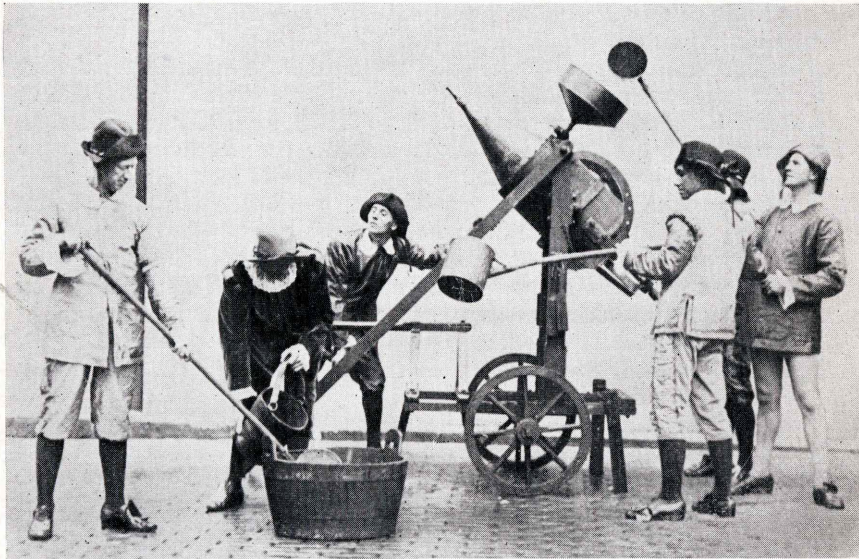
Other causes of fire with their resulting losses, follow:

Defective flues, 399 fires,	loss \$630,000.
Defective electrical wiring, 199 fires,	loss \$411,000.
Bonfires and rubbish, 197 fires,	loss \$66,000.
Children and matches, 93 fires,	loss \$52,000.
Town dwellings, 3063 fires,	} loss \$3,075,000.
Apartment houses, 107 fires,	
Farm houses, 533 fires,	
Stores of various kinds, 254 fires,	loss \$1,795,000.
School houses, 47 fires,	loss \$234,000.
Churches, 34 fires,	loss \$75,000.

House fires, including town dwellings, apartment houses, and farm houses, furnish the largest number of fires and the greatest loss with a total of 3705 fires and a loss of \$3,075,000. This is three-fifths of all the fires, and one-third of all the losses.

The church and school fires, although the losses are not proportionately large, are particularly fraught with danger to the lives of women and children.

It is a well established fact that at least 85% of the fires are caused by carelessness and inattention. The state legislatures have passed laws giving the cities and towns the right to pass and enforce certain ordinances along safety lines. The Fire Departments are in a position to demand certain ordinances. These, if passed and enforced, would cut down our fire loss many thousands of dollars each year. I should urge that when you go home you organize your fire department into a Committee of the Whole to go before the City Council and impress upon them the necessity of extending the fire district limits, of passing a wooden shingle ordinance, a chimney ordinance, an electrical wiring ordinance in harmony with the



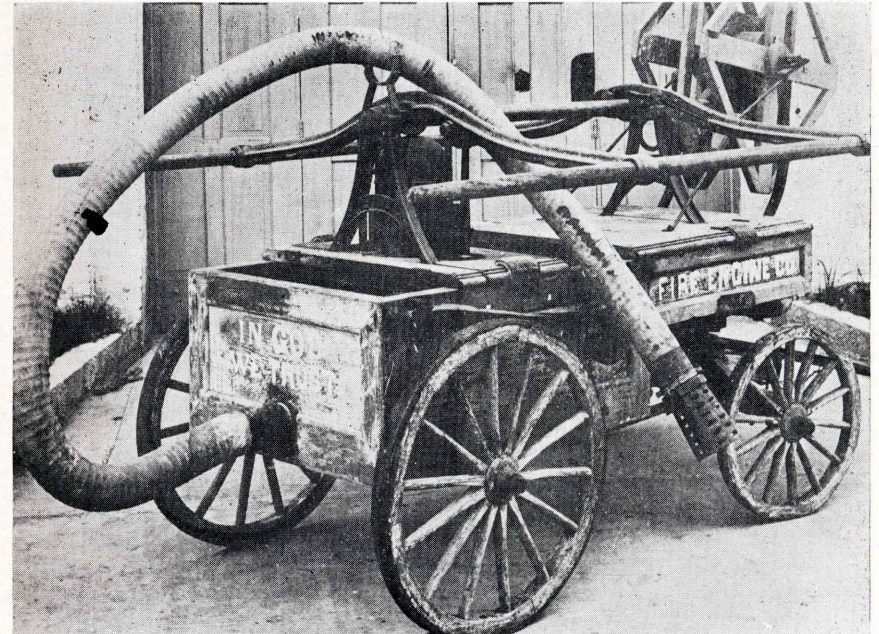
Early English Fire Fighting Equipment.

National Code, and of providing some means for an inspector during the fall at least. The chimneys, heating plants, and basements should be inspected before the cold weather sets in. Two weeks of service by an inspector in a medium sized town should be sufficient to go over the congested district. The money spent in such an inspection is, in my opinion, the most productive the city or town will ever spend; for the losses from fire are something the people, themselves, must bear. The property saved through a program of fire prevention inspections will be of far greater value than the small cost of the actual inspection.

Another common source of store fires is the burning of paper and trash in back alleys without using incinerators. Merchants usually carry their trash out into the alleys and set it on fire. Currents of

air may blow the paper up and down the alleys, and in some cases the burning paper falls into the areaways and may start fires in the basements. And still the owners wonder the cause of the fire.

The oil mops used in stores, churches and schools are a fire hazard. The danger, however, could be eliminated by putting these mops in an iron receptacle after using. As an illustration, if a mop is saturated in linseed oil and set out on the floor it will combust in a very short time by reason of the exposure of all parts of the mop to the air, whereas if it were put in a bucket there would be only a small



Early English Hand Fire Pumps.

part of the mop exposed, and it would not combust as quickly as if the entire mop were exposed to the air.

Children with matches are the cause of many fires. The influence is surprising that members of the fire department can have in frequent visits to the schools, where they talk to the children on the causes and dangers of fires. The school children have more respect for a fireman in uniform than any other person that I know of. There is something about fires and firemen that really attracts the children.

Think what a fire might mean to you, your friends or relatives or to the future lives of your children? Shall we continue to pay this toll? As I said before, the remedy is available. It is to eliminate carelessness, and to pass and enforce better regulations which will prevent a large per cent of the fires that now occur.

## COMMUNITY AND FIRE DEPARTMENT CO-OPERATION

By J. A. TRACY  
State Fire Marshal

Co-operation means to work together for a common object. The sagacious fire chief recognizes the value of community co-operation in the work of his department, and strives to gain the good will and support of those whose lives and property he is charged with protecting against fire.

As a rule citizens are prone to criticise public servants, firemen included. An especial effort is therefore necessary to overcome this prejudice and win the support of the community.

When convinced of the merit of the Department thru its continued good work, the citizens will gladly express their confidence and appreciation by voting bonds or giving any other support needed to carry on the fire fighting and fire prevention work.

The first step in securing co-operation from the community is to create favorable public sentiment toward the Fire Departments. It was Abraham Lincoln who said:

"In this and like communities, public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed. Consequently, he who moulds public sentiment goes deeper than he who enacts statutes and pronounces decisions."

I want to quote from Governor Hammill's address at a dinner given for the Iowa Vigilantes by the Iowa Bankers' Association:

"Wherever there is lax law enforcement, the citizens, not the public officials, are at fault. The public is prone to criticise and complain, but few citizens are willing to co-operate. They think they want the laws enforced, but they don't want to help for fear of injuring their business."

Following the advice of President Lincoln and Governor Hammill, you can see how necessary it is for the firemen to show a spirit of fairness and energy in order to create this favorable public sentiment, which can aid so materially in the protection of both life and property.

When a fire breaks out, one over-officious, sarcastic fireman can do more to destroy the good-will of the people toward the fire department than all of the other members can do to build it up. During a fire there is a tendency toward excitement, both among the bystanders and firemen. For this reason care should be exercised in selecting the members of the Fire Department. The department must follow the Chief's orders carefully. If this be done it will foster a spirit of cordial public approval, and will bring from the community an ever-ready willingness to co-operate; a willingness which is so much needed to build up a good Fire Department.

The Fire Department having done its part, the community can and will acknowledge with thanks the sacrifices made by the fire boys. The community will be glad to praise and encourage the Fire Department, knowing that the firemen are self-sacrificing, public-spirited men, willing to help the people of the community when no other power can do them any good.

The Chambers of Commerce and various Clubs in each community should join together in a "City Beautiful" campaign, which I believe every one imbued with civic pride will enter into heartily. Among other things this campaign should call for systematic inspections and removal of fire hazards. The inspections can best be made by firemen, the benefit being two-fold: First, it will enable the firemen to get thoroughly familiar with the entrance and exit of both basement and attic; second, it will result in the careful observation of the real fire hazards and cause their removal.

People become used to their own surroundings. They dislike very much to be criticised about the hazards found in their homes or places of business. For this reason it behooves the inspector to point out these hazards in a gentlemanly way and explain the purpose of the inspection. The co-operation of the entire community in the hopes of cutting down the fire losses will, eventually, cut down the insurance rates. As the public sentiment of the entire town is often moulded during these inspection campaigns, it can be seen how necessary it is to sell your work, thus making boosters rather than knockers.

It is the duty of the community to assist in every movement made by the Fire Department to get adequate equipment so that they may cope with any fire which may start in the community. Without adequate equipment the firemen are handicapped to such an extent that they often become discouraged. A loss in efficiency naturally results. If the department and community act in harmony at all times, co-operation will not be lacking in solving the problems of adequate fire protection.



## THE COLLEGE

The Iowa State College of Agriculture and Mechanic Arts conducts work along five major lines:

**AGRICULTURE**  
**ENGINEERING**  
**HOME ECONOMICS**  
**INDUSTRIAL SCIENCE**  
**VETERINARY MEDICINE**

The Graduate College conducts advanced research and instruction in all these five lines.

Four, five and six-year collegiate courses are offered in different divisions of the College. Non-collegiate courses are offered in agriculture, home economics and trades and industries. Summer sessions include graduate, collegiate and non-collegiate work. Short courses are offered in the winter.

Extension courses are conducted at various points throughout the state.

Research work is conducted in the Agricultural and Engineering Experiment Stations and in the Veterinary Research Laboratory.

Special announcements of the different branches of the work are supplied, free of charge, on application. The general bulletin will be sent on request.

Address, The Registrar,

IOWA STATE COLLEGE,

Ames, Iowa.