

## REPORT OF COMMITTEE ON AUTOMATIC HEAT CONTROL

(Transactions, Vol. 24)

The Committee considered the problem of automatic heat control particularly with respect to its effect upon fuel conservation. The Report includes a survey of the different uses and advantages of control in various applications and is summarized by the following conclusions.

### CONCLUSIONS

The installation of automatic temperature regulation, or system for prevention of excess temperature, is a justifiable investment for all heating systems inasmuch as it very positively contributes to:

1. Conservation of fuel.
2. Improvement in health.
3. Gain in personal efficiency.

Those installations in which it is particularly a desirable and wise addition, are:

1. All manufacturing plants in which a temperature of 60 deg. or higher is maintained.
2. All offices.
3. All residences. For the smaller residences the type which has but one thermostat, operating on the heater drafts, gives excellent results.
4. All buildings heated from central stations, and particularly those having steam service. For many of these the single unit type of control is ample.
5. All buildings having mechanical ventilation. The air changes are so rapid and involve such quick temperature fluctuations that automatic temperature regulation is imperative from the comfort standpoint as well as for many other reasons.
6. All service hot water heaters, particularly those having coils which are supplied with steam. The savings to be made are very great. Prevention of scalding is positive. Steam supply to the coils, or the drafts of the coal fired heater, or the supply of the gas fired heater may be controlled by automatic devices limiting the temperature of the water.
7. All manufacturing processes in which the exact control of the moisture contained in the air and the temperature of any of the materials are of importance.
8. All railway, elevated or street cars, particularly those heated by electricity, and used for the transportation of human beings.

## AN ORDINANCE FOR CONSTRUCTION OF CHIMNEYS

Suitable for Use in Cities and Towns of Any Size

RECOMMENDED BY THE NATIONAL BOARD OF FIRE UNDERWRITERS COMMITTEE ON  
CONSTRUCTION OF BUILDINGS, SECOND EDITION, REVISED 1921.

### FOREWORD

THE average annual loss due to defective chimneys in the United States for the years 1916-1919, inclusive, and reported to the Actuarial Bureau of the National Board of Fire Underwriters was \$11,898,000. All losses were not reported and it is conservatively estimated that the complete actual loss was 25 per cent larger, thus making an approximate total loss per year of \$14,872,000. The number of lives sacrificed in the average 23,000 fires which produced this annual property loss is not known, but is unquestionably large.

Since fires from this cause are classed as *strictly preventable*, it should need no further argument to justify the promulgation of this ordinance, which is suitable for adoption by a town of any size, or for enactment as a state law.

Conservation of our national resources is the demand of the hour. It is, therefore, the duty of all state and municipal authorities to use their best endeavors to stop this great needless waste. The enforcement of a law requiring safe, smoke-tight construction of chimneys of ample size and height would be a sure means of accomplishing an immense saving in life and property as well as materially increasing home comforts.

Defective chimney fires would practically disappear if this ordinance were generally enforced, and since the additional cost of the construction herein recommended as compared with ordinary practice would seldom exceed \$10 to \$15 per chimney, the requirement would not be burdensome. The increased expense would be returned many fold due to saving of life and property and the efficient use of fuel.

The following organizations have reviewed this ordinance and approved it as here presented:

AMERICAN INSTITUTE OF ARCHITECTS,  
AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS,  
ASSOCIATED TILE MANUFACTURERS,  
CLAY PRODUCTS ASSOCIATION,  
COMMON BRICK MANUFACTURERS' ASSOCIATION,  
EASTERN CLAY PRODUCTS ASSOCIATION,  
NATIONAL BOILER AND RADIATOR MANUFACTURERS ASSOCIATION,  
NATIONAL BRICK MANUFACTURERS ASSOCIATION,  
NATIONAL FIRE-PROTECTION ASSOCIATION,  
NATIONAL LIME ASSOCIATION—EASTERN BUREAU,  
NATIONAL LUMBER MANUFACTURERS' ASSOCIATION,  
NATIONAL WARM AIR HEATING AND VENTILATING ASSOCIATION,  
Also various independent architects and heating engineers having wide experience in the subject.