FIRE AND WATER ENGINEERING.

Established 1877

Published Every Wednesday at
154 Nassau Street, New York

Subscription Rates, $3.00 a Year. Foreign, $4.50

Representing
The Water Works Associations,
Fire Engineers' Associations,
League of American Municipalities,
International Association of Municipal Electricians.

F. W. SHEPPERD, Owner and Publisher.
JOHN PALMER PRATT, Editor.
VICTOR W. PAGE, M.E., Author "The Modern Gasoline Automobile" } Associate
JOSEPH B. RIDER, C.E., Author of "The Little Engineer." } Editors.

H. R. YATES, Chief Engineer } Contributing
H. W. BRINGHURST, Fire Marshal } Editors.

Communications on all subjects relating to Fire Protection and Water Supply are solicited. The name of the author is necessary as a guarantee of good faith. The publisher does not hold himself responsible for the opinions of correspondents. All advertising copy should be received no later than the previous Thursday to insure insertion in the current number.

Entered at New York as second-class matter.

New York, Wednesday, February 18, 1914

TABLE OF CONTENTS

ANOTHER FIRE CRUSADE BODY.

Formed with the avowed object of carrying out an aggressive campaign for fire protection into all parts of the United States on every practical line, the American Society for Fire Protection, which is incorporated in this state, held its organization meeting last Wednesday in New York. Abram W. Herbst, erstwhile chairman of the Committee on Buildings of the Board of Aldermen and author of a building code now before the Board, was elected director of safety of the new organization. Mr. Herbst will be aided by an advisory board of experts. In a statement setting forth the fire loss in the United States, which is placed at five hundred million dollars a year, ninety per cent. of which is declared unnecessary and easily preventable, it is announced that the society has ample funds, provided by voluntary contributions, to conduct its campaign, and that its services are free to all. The society's charter empowers it to devise and investigate methods to safeguard life and property through the construction of fireproof buildings and the use of safety devices; to promote the enactment and adoption of laws, codes and regulations; to compile and furnish information concerning materials and methods of construction and equipment; to make demonstrations before Legislatures and all public and private bodies; to inspect any building and conduct tests therein; to investigate the cause of any fire and publish its findings, with recommendations; to prosecute negligent public officials and others, and to co-operate with any body or individual in pursuance of its objects.

INFLAMMABLE FABRICS.

Fatalities among children as a result of wearing clothing made of inflammable fabrics are of no less frequency in this country than in Europe. The vital statistics of every large city contain deaths caused by the igniting of children's clothing, and quite often the tragedy includes the destruction of the home, or partially so. And yet this is a species of calamity that does not seem to have sufficiently impressed itself on the community as one that deserves legislative attention. Wearing apparel made of flannelettes is as dangerous as though made of celluloid, and yet these fabrics are manufactured and sold without restriction in this country. In fact, it is only now that England has taken drastic measures to reduce casualties of this character. A new act went into effect on January first in that country which makes it unlawful to sell flannelette, or any other textile fabric, to which is attributed, directly or by inference, the quality of non-flammability, either by wording or marking on the material, on any wrapper or band or in any letterpress or writing referring to the material, or by vebal misrepresentation at the time of the sale, unless such flannelette conforms to the standard of non-flammability presented by the Home Office regulations. The latter require that the material, when tested, shall not ignite, or if ignited shall only burn without a flame, or with a flame which does not spread, but converges and dies out. The test is to be made by taking one square yard of the fabric washed three times with soap and water, dried and ironed and suspended vertically. The flame of a wax taper, from one-eighth to three-sixteenths in diameter, is brought into contact with the fabric one inch above its lower edge and kept in contact for twelve to fifteen seconds.

MUNICIPAL PENSION SYSTEM.

In working out the problem of municipal pensions New York at present is attracting the attention of a great many cities through the country which have in mind the same plan. As an innovation in municipal government it is replete with complications that will require deep study on the part of sound and conservative, as well as judicial minds. To say just how far a city's obligation extends to care for employes who have grown old in its service may never be satisfactorily determined—experiment will at least be necessary to try out the problem. The purpose of New York is to establish a civil pension system which will provide retirement funds for all municipal employes. As it will be necessary to take the matter to the State Legislature, it is doubtful about attaining much headway this year, as that body contemplates adjournment in March. However, that may be the best thing that could happen, as it will give the projectors additional time to work out the scheme, in spite of the contention that the city's efficient conduct in the future is in a measure based on the successful carrying out of the system. Here, as in most cities, members of the fire and police departments have been generally cared for in the matter of pensions, but under the new system all other department employes will be benefited. A civil pension system with such a scope seems just and proper, for what could be devised to encourage and foster loyalty and faithfulness on the part of an employe more than a guarantee that at a certain age he would be retired on an income sufficient to baffle straitened circumstances? The absence of such a guarantee, on the other hand, stimulates negligence, encourages indifference and incites dishonesty. The magnitude of the civil pension propaganda is rich with human interest, and if the promoters live to see the fruition of their efforts it will be a long stride toward the coalescence of employer and employe.

TWO PLATOON IDEA IS GROWING.

In spite of the fact that most of the fire department heads throughout the country are strongly opposed to the two platoon system —at least they have so expressed themselves at some time—the idea appears to be spreading rapidly and is winning favor where once it was scouted. It is one of those innovations that must be given a thorough trial before its adaptability can be demonstrated, and whereas it has been tried and condemned in some cities it has been tried and endorsed in others. We are of the opinion that its success or failure depends to a large degree upon the fire department chief. If he is irrevocably opposed to two platoons he is not likely to give it much substantial personal aid while it is on trial in his department. On the other hand, if he be an enthusiastic devotee of the system, whatever objectionable features it may possess, these will be surmounted, and it will be operated with all the efficiency that can be desired. This is not saying that any chief has been actuated by personal prejudice to exert his influence against the best interests of his city, but it is pointing out that such a course is possible if a chief is disposed to exercise his official prerogative. Those cities which have had this new system in operation for several months appear to be satisfied with it, even though it has added greatly to the municipal expenses. Seattle and Spokane report that the system is working satisfactorily. A two-platoon measure has been introduced in the Legislature of Massachusetts, and preliminary steps have been taken in other states tending to the same idea. The mere fact that it proved a failure when given a trial in New York several years ago, does not necessarily condemn the system, as the time for its introduction might not yet have arrived. There is a proper time for the introduction of these things, and there is a proper way to go about obtaining them. No broad-minded city official will stand in the way of anything that will improve the working hours of firemen, or of any other class of city employes. Our advice to the fire department of every city which wants the two-platoon system is to keep in close touch with those departments where it is now in practice, procure all the data possible which will show its advantages to the city and its benefits to the fire department, place these with every other weighty argument that can be conceived before the authorities—not with a peremptory demand, but with a respectful request that the cause be given due consideration. The first attempt may not succeed, but you will succeed eventually.

CORRESPONDENCE

An Explanation From Lowell

To the Editor:—I have read in the last two issues of your magazine a notice concerning the refusal of the City of Lowell to send help to neighboring towns. In justice to myself and the fire commissioner I wish you would not publish such statements unless you know the real circumstances. At no time has help ever been refused for such reasons as stated. The town of Dracut was refused because the fire was confined to one dwelling house and as it happened to be a night of extraordinary severity (12 degrees below zero) and the Lowell department, weakened by apaparatus out of commission, we deemed it unsafe to send more pieces four miles out of the city. The Tewksbury case was not even a call from the town, but from the owner of a small garage, who requested us to send a steamer, and upon my questioning him, he admitted that there was no water available. Without further explanation one could readily understand why the engine was not sent. The question of pay or return of favors never entered into either case. In case of extreme need and under ordinary conditions Lowell will always do her duty to the neighboring towns, as she has done in the past. With cities, as with individuals, it sometimes happens that the impossible is asked.

Sincerely yours,
E. F. SAUNDERS, Chief.
B. J. M.

Lowell, Mass., February 12, 1914.

Misses Fire and Water Engineering

To the Editor:—Please send me Fire and Water Engineering from January 1, 1914. I was formerly a member of Baltimore City fire department for fifteen years and miss the paper very much. Hoping to hear from you by return mail.

JOHN I. CRANFORD,
Chief Engineer, E. P. P.

Felton, Cuba., February 4, 1914.

Water Tanks in Buenos Ayres

Some time ago the Buenos Aires municipal authorities sanctioned a decree by which various classes of industrial risks were called upon to install fire-extinguishing appliances on their premises. These were to consist, in the case of sawmills, of an elevated tank of 20,000 to 30,000 liters placed at a height of 20 meters from the ground level, together with a sufficient number of hydrants, hose, etc. Such an installation costs from $30,000 to $40,000 m/n. (012,738 to $16,984), and was opposed by owners, especially those whose properties were situated in districts served by the water works. The water works department would never allow any connection for hydrants on private properties to be made with their mains. The municipal authorities, however, have now been enabled to get this decision reversed, and in the future such installations will be connected to the mains. The water works department has given way in this matter in view of the approaching termination of the works for the new water service, which will insure a constant and abundant supply. Perhaps now the department will allow connections to be made to the mains for automatic sprinkler installations.

Fire in Letter Box

Some miscreant a few nights ago dropped a lighted match in a letter box in the hall of a five-story apartment house at 423 Lenox avenue. In a remarkably short time the flames ate their way up through the walls into a small room on the second floor where a quantity of paint and oil was stored. A thick volume of smoke soon began to pour through the corridors and the tenants were driven from their beds. Several policemen rushed in and aided the tenants to evacuate. An invalid, suffering from pneumonia, was carried in blankets onto the roof and passed by the policemen over to the other building. His wife and child were rescued in the same manner. The fire was extinguished by the department with a loss of $500. The weather was hovering around zero.

Scranton Fire Department Trouble

The Scranton, Pa., fire department is in a demoralized state, according to Director Derby of the public safety department. Chief H. F. Ferber places the blame for the discord on the former city administration, but particularly on former Director of Public Safety O'Malley and Assistant Chief Storm. Ferber was twice suspended by O'Malley, but was reinstated both times by the mayor. O'Malley never afterward recognized Ferber as the chief and Assistant Chief Storm ran the department for about three years. The present mayor removed Storm, at the beginning of his administration. The Times of that city, says:

"Chief Ferber has had a long, honorable, and splendid career, in which the public has recognized a capable, efficient and heroic fire fighter. He has suffered physically from the effects of exposure and his strenuous life in behalf of the community, and we should like to see him vindicated of the aspersions of enemies he has created in his office, in the performance of his duties, and we believe Chief Ferber owes it to himself and to the public who has had confidence and faith in him, and who still esteem and value his worth in his office, to clear himself of allegations that have been made, and if he has been neglectful, etc., his accusers should insist, rather that the director of public safety should take action and have an end to the present demoralization. It comes as a shock to the city, in the director pointing out what appears to be inadequate and inefficient fire apparatus and the need of immediate big expenditure in modern apparatus in order to meet possible conflagrations effectively. Such conditions can not afford to be trifled with."

PERSONALS

R. J. Firestone, sales manager for the Firestone Tire and Rubber Company, is making a general tour through the western half of the United States. Practically every important city west of the Mississippi is on his route. He left Akron, January 16 and will not return until the latter part of February. The purpose of the trip is to size up the business situation and prepare for the spring trade. It is his second trip in three months.

Frank C. Stover, who for many years has been connected with the Gamewell Fire Alarm Telegraph Company, on January 1st, became identified with the Star Electric Company of Binghamton, N. Y., with headquarters in Chicago. His son, Frank F. Stover, is associated with him in the conduct of the western agency of the Star Electric Company.

By the will of William Runkle, late president of the Warren Foundry and Machine Company of Phillipsburg, N. J., thirty-four bequests have been made. Among these is the income from $250,000 and the residue of the estate of $500,000 to Harry G. Runkle of Plainfield, N. J., a brother of the deceased. W. William H. Hulick, who has been elected president of the company, receives $50,000 and the remainder of the estate, which is given as $2,000,000, has been given to charity and individuals, including $100,000 to Lafayette College of Easton, Pa.

Dr. Harry Mortimer Archer and Miss Emillie June Walker were married last evening at St. Matthews church, in West Eighty-fourth street, New York, the Rev. Dr. Arthur H. Judge, rector of the church, officiating. The ceremony was followed by a reception at Sherry's. Mrs. D. M. Garber, daughter of Dr. Archer, and Miss Florence Walker acted as matron of honor and maid of honor, respectively. The bridesmaids were Miss Kathryn E. Corcoran, Miss May G. Nolan, Miss Marjorie Looney and Miss Alice J. Marratt. The flower girls were Miss Grace Brooks of Mount Vernon, N. Y., and Miss Mildred Tizley of Brooklyn. The groom had as best man his son-in-law, Daniel M. Garber. The ushers were Former Fire Chief E. F. Croker, Deputy Chief Joseph Crawley, Assistant District Attorney C. F. Bostwick, Harold R. Miller and J. J. O'Reilly. Dr. Archer is honorary surgeon of the New York fire department, and his bride is the daughter of Charles Travers Walker of Brooklyn. There was a large number of invited guests at both the marriage ceremony and the reception at Sherry's.

READERS' QUESTION BOX

Firemen in Theatres

To the Editor:—Does the state law require the presence of firemen in theatres during a performance?

Respectfully yours,
CHEMICAL ENGINE CO., NO. 1.

Olean, N. Y., January 24, 1914.

There is no state law relative to firemen being stationed in theatres during a performance.

The Chimney Spark Problem

To the Editor:—What is the best method for preventing fires caused by sparks from chimneys or flues? I have had several fires at one residence each of which was caused in this way. Thanking you in advance, I am,

Respectfully yours,
E. N. K.

Columbia, Mo., January 24, 1914.

A means quite often employed is the placing of a cap over the chimney, allowing the corners to rest on legs.—Editor.

Technicalities of Fire Fighting

To The Editor:—Will you kindly answer the following questions:

In a building 148 ft. or twelve stories high, located on the opposite side from a fire, the street being 80 ft. wide, the building is equipped with size standpipe required by law, and engine is located at a hydrant 450 ft. distant from the standpipe, and another engine at hydrant 300 ft. from the standpipe with 3-in. hose. You are in command of one of the engine companies and in company operation with the officer in command of the other company are directed to proceed to the roof, siamese the two companies in the best possible manner in order to deliver an effective single stream across the intervening space. Explain in detail what fittings, tools, hose and nozzle you would use to properly carry out this order, and assuming that you required a nozzle pressure of 100 lbs., what pressure would you order on the pumps of the engines?

C. A. T.

New York, January 20, 1914.

The above question calls for these two answers. Pressure to be ordered on pumps, practically all they can give, technically or theoretically, 260 to 275 lbs. Tools required, perfection pipe holder, 1½-in. open nozzle, roof rope, ax, siamese 2-2½-in. into 1-3½-in. with 3½-in. to 3-in. reducer, one length 3-in. hose and two lengths 2½-in. hose. Reason for carrying and manner of using above tools—ax to break locks or doors to get to roof—connect one length 2½-in. hose to top floor standpipe connection and stretch to roof. Connect second length 2½ to roof outlet and both to siamese; put reducer on siamese. Connect 3-in. length, put on nozzle, fasten to perfection holder and tie roof rope so line can't get away.

Now as to pressure: 1½-in. nozzle with 100 lbs. pressure delivers about 670 gallons. Rule—The square of the diameter of nozzle mutiplied by the square root of the pressure and that product by 29.7, equals gallons discharged per minute; that discharge loses by friction in the 50-ft. length of 3-in. about 12 lbs. The loss in the 50-ft. lengths of 2½ is 25 lbs., due to friction and increase in altitude of length from floor below; the loss in standpipe (which in New York is 4-in.) is 25 lbs., added to 65 for altitude, makes 90, and the loss for engines to standpipe is about 36; thus we have 100 plus 12, plus 25, plus 90, plus 36, equals 264. Since all engines are geared to work at not more than 300 lbs., and if they did increase to this amount no more than 5 or 6 lbs. would be added to nozzle pressure, it would be well to order all the water they could give.

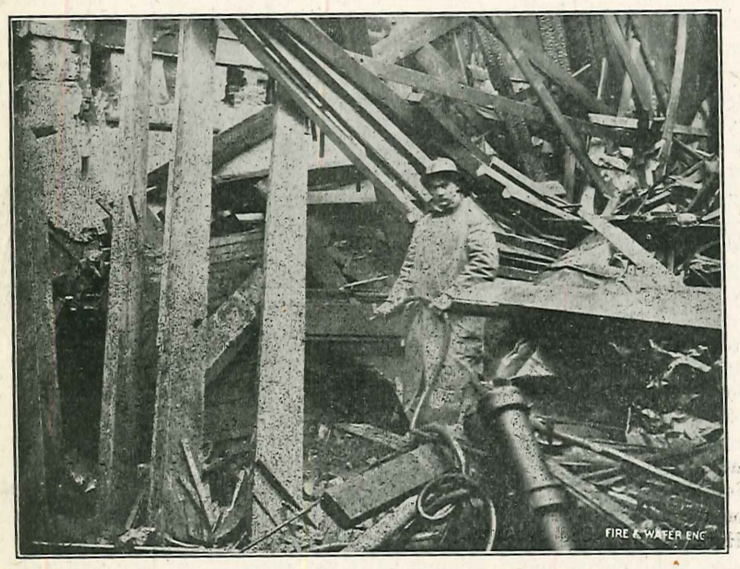
Washington, D. C. Fires

Washington, D. C., has had an unusually large number of extensive fires this winter. One of the principal fires was in the five and ten cent store of the American Company, which was filled with inflammable material. The fire had a good start when the fire department reached it, but by efficient work the building was saved in a gutted condition as shown in the accompanying illustration. The Washington fire department, in command of Chief F. J. Wagner, has performed admirable service at all of these

AMERICAN CO. BUILDING, WASHINGTON, D. C., AFTER FIRE.

fires, which have been illustrated in recent issues of FIRE AND WATER ENGINEERING. The press and public of that city have bestowed upon the department much praise for its efficient work. Five firemen were badly injured at the American Company store fire, by falling walls. They were pinioned until rescued by their comrades at great personal peril.

A bill was introduced Feb. 5 in the New York Legislature to abolish the office of State Fire Marshal. The property of the office is to be turned over to the State Librarian until otherwise disposed of in the event of the bill becoming a law.



WHERE FIVE FIREMEN WERE PINNED DOWN BY FALLING WALL, AMERICAN CO. FIRE, WASHINGTON, D. C.

New England Water Works Association

Following was the attendance at the February 11, 1914, meeting of the New England Water Works Association:

Members—A. F. Ballou, L. M. Bancroft, F. A. Barbour, A. E. Blackmer, J. W. Blackmer, George Bowers, James Burnie, G. A. Carpenter, George Cassell, J. C. Chase, R. D. Chase, R. C. P. Coggeshall, C. H. Eglee, E. D. Eldredge, G. F. Evans, G. H. Finneran, F. F. Forbes, R. V. French, A. D. Fuller, F. L. Fuller, Patrick Gear, Albert S. Glover, Clarence Goldsmith, R. A. Hale, R. K. Hale, F. E. Hall, J. O. Hall, L. M. Hastings, A. R. Hathaway, Allen Hazen, D. J. Higgins, H. R. Johnson, W. S. Johnson, E. W. Kent, Willard Kent, G. A. King, F. F. Longley, F. A. McInnes, Thomas McKenzie, W. E. Maybury, John Mayo, H. A. Miller, William Naylor, T. A. Peirce, L. C. Robinson, P. R. Sanders, A. L. Sawyer, C. W. Sherman, G. A. Stacy, W. F. Sullivan, C. N. Taylor, L. D. Thorpe, E. J. Titcomb, D. N. Tower, C. H. Tuttle, F. E. Tupper, A. H. Tillson, W. H. Vaughn, Percy Warren, F. P. Washburn, R. S. Weston, H. L. Whitney, F. B. Wilkins, F. I. Winslow, G. E. Winslow, I. S. Wood and L. C. Wright.

Associates—Chapman Valve Manufacturing Company, by H. U. Stors and J. F. Mulgrew; Goulds Manufacturing Company, by R. E. Hall; Joseph Dixon Crucible Company, by H. A. Neally; Hersey Manufacturing Company, by Albert S. Glover and W. A. Hersey; Lead Lined Iron Pipe Company, by T. W. Dwyer; H. Mueller Manufacturing Company, by G. A. Caldwell; National Meter Company, by J. G. Lufkin and H. L. Weston; Neptune Meter Company, by H. H. Kinsey; Norwood Engineering Company, by R. B. Weir; Pitometer Company, by E. D. Case; Pittsburgh Meter Company, by J. N. Turner; Pratt & Cady Company, by C. E. Pratt; Rensselaer Valve Company, by C. L. Brown; Standard Cast Iron Pipe & Foundry Company, by W. F. Woodburn; Thomson Meter Company, by E. M. Shedd; Union Water Meter Company, by F. E. Hall; Water Works Equipment Company, by W. H. VanWinkle, Jr.; R. D. Wood & Company, by C. R. Wood; Henry R. Worthington, by Samuel Harrison, E. P. Howard and W. F. Bird.

Guests—C. C. Young, Lawrence, Kansas; Frank F. Street, A. J. Brown, Reading, Mass.; James Kinloch, East Greenwich, R. I.; George W. Bowers, Lowell, Mass.; S. W. Hume, New York; S. L. Hildreth, Manchester, Mass.; C. A. Abbott, Derry, N. H.. Prof. S. C. Prescott, Boston; Joseph Weeks, Bridgewater, Mass.; R. F. Forrest, Randolph, Mass.; E. E. Abercrombie, Beverly, Mass., and E. H. Magoon, Almon L. Fales, Boston, Mass.

Brunswick, Ga. Fire Report

Chief J. H. Harrison of Brunswick, Ga., in his annual report for the year ending December 31, 1913, states that the department answered 134 alarms or nearly twice as many as the year previous. The insurance of property at risk amounted to $1,432,050.30. The loss was $58,130.50. Making a saving of $1,373,919.80. He calls the attention of the City Council to the very unsafe condition of the department headquarters building and urges that steps to remedy this condition be taken immediately also to the general poor condition of the horses, and that several horses will have to be replaced unless the council provides the department with motor apparatus which will at the same time eliminate the necessity to build a sub-station. Also the immediate purchase of 1,000 feet of hose and the installation of two fire alarm boxes. He recommends better fire protection along the water front and a new moving picture ordinance.

Charleston Fire Report

In his annual report to the Board of Fire Masters Chief Louis Behrens, of the Charleston, S. C., fire department, for the year ending Dec. 31, 1913, states that there were 207 alarms of which 124 were telephone and 83 box alarms. There were 19 false alarms, one second and one call from outside of city for assistance. There were 92 fires extinguished by hand chemical extinguishers, 24 by chemical engines, 23 with buckets, 21 with steam fire engines and nine with chemical engines and hydrant streams. Four alarms were sent in by firemen, 51 by policemen and 152 by citizens. The total loss was $87,655.30 in property valued at $1,596,254.72 and insured for $1,350,861. The loss on buildings was $64,194.55 and on contents $23,460.75. Total insurance loss was $86,834.30. The average annual loss for 32 years is $67,655.79. The total loss in 1912 was $38,164.13.

The department consists of eight companies and 96 full paid men. The apparatus in service consists of 9 steam fire engines, one motor engine, one motor tractor combination hose wagon and chemical engine, two combination hose wagons, three hose carriages, one aerial truck equipped with a water tower, one service truck and two automobiles. The cost of maintenance was $82,890.84. The appropriation was $83,600.

CHIEF LOUIS BEHRENS, OF CHARLESTON, S. C.

The largest fire of the year was the Clyde Steamship Company pier on December 15, with a total loss of $50,439.55. The value of property at risk was $420,000. This was the only fire that called for a second alarm. The department was in service 692 hours and 50 minutes, it laid 146 lines of hose, a total of 61,850 feet, used 4,156 feet of ladders, 132 hooks, and 27 tanks of chemical. Six sections of hose burst at fires. The new 80-horsepower Seagrave tractor chemical engine and hose wagon cost $106.39 for maintenance during the year. The horse-drawn apparatus the motor equipment displaced cost in the same length of time $899.81 for maintenance. During the year three tug boats were equipped as fire boats. Chief Behrens recommends the purchase of a motor triple combination motor pumping engine of 750 gallons capacity, a chemical engine and hose wagon to be located at No. 6 station extension of alarm system, red lights for each alarm box, a new motor aerial truck, better building laws and an improved water supply.

J. W. Miles, Again Chief

John W. Miles, formerly chief of the Williamsport, Pa., fire department, has been unanimously re-elected to that position. Chief Miles is a veteran of the department. He was a member of the Washington company in its volunteer days, and was elected chief in 1887. He was out of office in 1900 and 1901, and was succeeded by F. F. Stryker in 1908, whom he now succeeds.

Indiana had forty hotel fires inside of eight months last year. The careless smoker was the chief cause.