

to a barrel, and if not immediately thrown into the tub, but left standing, active combination of the ingredients occurs which will cause combustion within an hour, especially in a room with a warm temperature. With the fires that did occur from this mixture the heat given off was of such intensity that the water from the sprinklers had no effect upon it, as the test shows that in a given quantity the water is dissociated into gases. In two of these occurrences at different places the occupants disputed the cause given for the fire until it was demonstrated to them by filling a wooden receptacle with two or three of the ingredients (a duplicate of the mixture) and letting it stand for one hour, when it took fire." Mr. McBavitt gave experiments to show how smoke becomes explosive, and how saltpetre and chlorine, subject to great heat, will create fire in substances they are in contact with.

"Four instances occurred in this city of Philadelphia on different drug risks, where explosions occurred among medical tablets composed of chlorate of potash and muriate of ammonia contained in glass jars resting on shelves. The danger in this composition does not occur during the processes of manufacture, but results from chemical change; close combination after long standing developing chloride of nitrogen. The action in each case was attended by heat; in two instances fires occurred from the heated composition being scattered on inflammable surroundings. Fortunately the presence of persons at the time of the explosions prevented a possible fire, and the discovery of the cause was a verification of an established hazard. A mixture of the two gases, chlorine and hydrogen, if confined in glass receptacles and left exposed to the light, will explode with violence; but the place and surroundings here will not allow that demonstration to be made with safety."

The Insurance Institute of this city would do well to secure a paper with experimental illustrations from some chemical expert of a similar nature to the one above named.

### WORK OF THE INSPECTOR.

In his address before the University of Chicago, Mr. A. F. Dean had the following remarks relating to inspectors. While a considerable part of the small value risks written by companies must be accepted or rejected through correspondence, upon the inspection and reports of local agents, the selection of their business depends largely upon the personal inspections of salaried employees, and the success of every company, to a large degree, depends upon the judgment of these "field men" in weeding out untrustworthy agents and objectionable risks, and effecting reforms in physical hazard. A conscientious and capable inspector may save his company thousands of dollars by a single cancellation or by effecting reforms in the physical hazard of risks in which his own and perhaps many other companies are interested. A judicious suggestion to the owner concerning some dangerous feature of his property, of which he, perhaps, is ignorant, may, and often does save a loss amounting to several hundred thousand dollars, and, counting other exposed property, even millions of dollars. Hence it will be seen that the work of the inspector benefits not only all insurance companies, but every property holder. A good inspector is a reformer in the morals of property, and indirectly in the ethics of its owners. It is his duty to study property of all kinds in its relations to the hazard of fire. He should have a pretty fair working knowledge of mechanics, physics, chemistry and electricity, and of the laws of supply and demand in all the leading branches of trade and manufactures. He should be a good judge of values of men, of municipal affairs and their prospects, of building construction, of the safety of heating, lighting, electrical and fire-extinguishing devices, public and

private, as well as of machinery, friction, dangerous chemical combinations, of the explosive and combustible properties of matter in its combined or comminuted forms, and heaven knows how many other things. The universal trend of the business towards economic co-operation is shown by the recent evolution of inspection associations. An inspection bureau exists in this city to which about forty companies belong. This bureau employs only graduates technical schools, who are trained for their specialty and employed in examining the great mercantile and manufacturing establishments of the country. This plan has been found to secure a higher grade of inspection at less expense and save the owners from the annoyance of frequent inspections of the part of the employees of the several companies. The work of inspection is a heavy item in the expense account of fire insurance but it is fruitful saving to the companies and the public, and the tendency is to increase this expense as an investment equally profitable to the business and the community.

## Notes and Items.

### At Home and Abroad.

THE METROPOLITAN FIRE INSURANCE CO. is a new venture being organized in Chicago, with \$100,000 capital.

OTTAWA CLEARING HOUSE, total for week ending June 26, 1902:—Clearings, \$1,596,723; balances, \$360,256.

ORAL AGREEMENTS or notices relating to transfers of policies are not valid in law. A written contract cannot be set aside by word of mouth.

THE PENNSYLVANIA FIRE COMPANIES at close of 1901 showed premium receipts for a year to be \$19,560,851, losses paid, \$11,632,381; risks in force, \$2,852,180,536.

THE GOLD OUTPUT from S. African gold mines is expected to be from 100 to 125 millions of dollars yearly. The royalty will pay interest on a large amount of the war debt. There is a fine field opening for insurance in South Africa.

THE EQUITABLE LIFE ASSURANCE SOCIETY'S circular for June, is very jubilant over the business acquired in that month, which, it is announced, "has outclassed all previous Junes." An urgent appeal is made to the agents to beat the July record.

GOVERNMENT LIFE ASSURANCE in England is a failure. In 1900 the premium receipts of the Post Office insurance department were only \$110,925 against \$155,460,000 of the regular companies. The Government waits for business to be brought to it, the companies go after business; that is the secret of the failure in one case and success in the other.

A SAFETY-TREAD is being made in Boston by which the danger of the foot slipping on stairs, electric car steps and other places is obviated. Considering the frequency of accidents, sometimes fatal, from slipping on a stairway and from street cars, this device is likely to do good service. The tread is an ingenious combination of grooved steel and lead which gives a sure foothold, and is said never to become slippery.

LOUISIANA proposes to abolish the death penalty for arson, and to substitute life, or a long term imprisonment. The death penalty had a long trial in England as a deterrent from crimes ranging from petty, very petty, larceny to murder. It was found when the penalty for minor offences was so excessive that juries would not convict, it was so horrible to send a prisoner to the gallows for an offence that is now punished by a few weeks' imprisonment. The change in Louisiana is wise, and if followed up by more thorough investigation into fires, should have good results in checking incendiarism.