

confidence. It is appalling to think what might occur in any department store thronged with thousands of holiday shoppers should a fire become the cause of panic among the customers. The large department stores usually realize the value of modern fire protective practices, and stand ready to adopt any device or method which will insure less liability from fire, or which will afford any additional means of fire protection.

"First and foremost, no matter what the construction of the department store, there should be an installation of automatic sprinklers well supplied by water works, batteries of pressure tanks and steam pumps. Alarm devices should be installed in the sprinkler systems operating electric gongs in suitable places, and in addition a complete thermostat system under daily test, giving alarm at a central station when there is any undue rise of temperature in any part of the building. A further system of supervisory connections on sprinkler gate valves and other sprinkler system devices insures their being kept in proper order and gives an alarm at a central station if such is not the case. Watchmen are employed and make hourly rounds through the property, ringing in regular stations on a clock or at a central station. The installation of standpipes, roof hydrants and monitor nozzles, hand chemicals and fire pails completes the rather complex and, it may seem, cumbersome protection inside the building.

"The outside protection usually consists of wired glass windows, shutters and open sprinklers co-operating with the public fire department. A fire brigade composed of employees, well drilled and familiar with the various fire-fighting devices, trained to extinguish small fires, allay the fears of customers, prevent unnecessary loss by water from sprinklers and co-operate with the public firemen, is a necessary and valuable aid to fire protection. The value of well-built, self-supporting brick walls, blank and parapet wherever possible must not be overlooked as fire-protective features against both incipient or sweeping conflagration, as well as their effect in limiting fires in the stores themselves. There is nothing equal to or of more value than a good brick wall of this description, and it should be given full prominence in any scheme of fire protection in city buildings."

Notes on Business, Insurance and Finance.

The U. S. Loan to China.

The announcement that negotiations have been practically completed for a loan of \$50,000,000 to the Chinese Government by a group of New York bankers is an important one. The loan is for the purposes of reform of the currency, the promotion of industrial development and for the building of State railroads. The bankers handling it are Messrs. J. P. Morgan & Co., Kuhn, Loeb & Co., the National City Bank and the First National Bank, and the loan will be in the form of 45-year 5 per cent. bonds. This follows upon a railway loan of \$30,000,000 in which United States interests have a quarter share with Great Britain, France and Germany, but is the first large operation of the kind which United States financiers have carried through with China by themselves. As such, it is certainly a triumph for American diplomacy, especially since, as was indicated by our London correspondent a few weeks ago, there is in Europe growing interest in Chinese affairs and desire by financial interests to participate in that country's development. The motive behind these operations—the development of American trade with a market that seems in the course of time likely to become a most important one—is, of course, excellent, but the situation is not without its humorous side, seeing that Europe is vastly concerned at the present time with the prospect of further drafts on its capital for American requirements. The announcement of the Chinese loan was in fact coincident with another

announcement that the Michigan Central had sold \$10,000,000 of one-year notes in Paris. It is hardly surprising that, as the cables inform us, Lombard Street is inclined to chuckle over the affair.

The Minnesota Forest Fires.

From a report on the recent forest fires at Beaudette and Spooner, Minn., now issued by adjusters, it appears that the insurance loss amounts to over \$700,000. The adjusters' task has been an unusually difficult one, records and memoranda having been destroyed in the conflagration. One of the adjusters reports that numerous small fires had occurred in the district during the summer which had never been wholly extinguished, but had been smouldering in bogs and swamps until they were fanned into a great conflagration by a wind-storm from the West on October 7. This gives point to the criticisms made at the time of the fires that the organization of fire rangers in the district is defective, and has been "starved" for want of necessary funds. The lesson that parsimony is not economy in matters of fire protection has been an expensive one to Minnesota. It is to be hoped that the fact is now thoroughly realised.

As the result of a study of the statistics of boiler explosions in the United States, the United Kingdom and Germany, Mr. F. S. Crum finds that the figures indicate clearly gross negligence in the United States of employers, employees and government. Mr. Crum publishes in the Spectator of New York a number of details dealing with these explosions in the respective countries. His statistics—the United States figures being those compiled by the Hartford Steam Boiler Inspection and Insurance Company, and the others, official figures—are summed up in the following:—

	Explosions.	Killed.	Inj'd.	Kild. & Inj'd.
United States (42 years)...	10,570	11,063	16,004	27,067
Annual Average...	251.7	263.4	381	644.4
United Kingdom (27 years)...	1,871	732	1,563	2,295
Annual Average...	69.3	27.1	57.9	85
Germany (33 years)...	518	344	720	1,064
Annual Average...	15.7	10.4	21.8	32.2

The statistics of boiler explosions in Germany, when contrasted with those of the United States, says Mr. Crum, reveal truly remarkable differences. In a thirty-three-year period the largest number of boiler explosions during a single year in Germany was only 35, against 550 as a maximum and 83 as a minimum figure for the United States during the same period (1877-1909). In 1905, and again in 1909, there were only 9 boiler explosions reported in Germany, exclusive of the railroad, army and navy services! In the United Kingdom the contrast is almost equally unfavourable to the United States. The largest number of boiler explosions in the twenty-seven-year period during a single year was 114 in 1895, and the smallest was 41 in 1884. The annual average number of boiler explosions in the United States has been 251.7 for the forty-two-year period, as contrasted with 69.3 in the United Kingdom during a twenty-seven-year period, and only 15.7 in Germany during a thirty-three-year period. If the statistics for the years previous to 1877 are omitted for the United States, and they are admittedly incomplete, the annual average number of boiler explosions in the States during the thirty-three-year period—1877