

CALIFORNIA INSTITUTE OF TECHNOLOGY

CENTER FOR RESEARCH ON
THE PREVENTION OF NATURAL DISASTERS

EARTHQUAKE ENGINEERING RESEARCH LABORATORY

ON INSURANCE SETTLEMENTS INCIDENT TO THE 1906 SAN FRANCISCO FIRE

by
Albert W. Whitney

DRC-72-01
Pasadena, California
August 1972

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Published by

The Center for Research on the Prevention of Natural Disasters

Division of Engineering and Applied Science

California Institute of Technology

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Foreward

The San Francisco earthquake of April 18, 1906 caused widespread destruction and severe social disruption. This event provides a unique source of data for those concerned with preventing and controlling natural disasters. It is the only instance, in the United States, of a great earthquake striking a large city; and, hence, it is the only great U. S. disaster resulting from an earthquake. The fact that the destruction was caused by the combined action of earthquake and fire makes this disaster of special interest. Unfortunately, the knowledge of earthquakes and conflagrations, and disasters in general, was still in a relatively undeveloped state in 1906 and, therefore, information about the event is not as complete as would now be wished. Furthermore, the publications issued following the earthquake were not given wide distribution so that they are now not readily available for study.

The 1906 San Francisco disaster had a major impact on the field of insurance and, in this regard, was unique in that both earthquake damage and fire damage were extensively involved^{*}; and this raised questions as to the relative liability of fire insurance and earthquake insurance. The magnitude of the insurance problem is indicated by the total loss of about \$2,500,000,000 (in 1970 dollars^{**}), of which an estimated \$1,500,000,000 of damage was caused by fire. There was an estimated \$1,200,000,000 of insurance covering property in the burned district (1970 dollars). Because it struck a large city, the 1906 San Francisco earthquake caused damage losses approximately six times greater than did the 1964 Alaska earthquake, although the

^{*}In 1923 a similar, and even greater, earthquake-fire disaster struck Tokyo, Japan.

^{**}The total loss in 1906 dollars was estimated at \$500,000,000.

Alaska event was considerably larger in physical terms.

Following the earthquake, the San Francisco Chamber of Commerce asked Professor Albert W. Whitney of the University of California to prepare a report on the fire insurance situation. His report was submitted on 10 November 1906 and was approved by the Chamber on 13 November 1906. Presumably it was published shortly after that date^{*}. The report is now a very scarce item; the copy in the files of the Caltech Disaster Research Center is one of the very few extant. It was, therefore, decided to republish it so as to make its information available to those concerned with natural disasters. The body of Whitney's report is presented verbatim from the original copy. The only change made in the republished version was to insert a new Table of Contents in place of the original Index. The original index has been reproduced in the Appendix to exhibit what were thought to be the most important features of the report at that time.^{**}

Publication of this report has been sponsored in part by the National Science Foundation and by the Earthquake Research Affiliates of the California Institute of Technology.

G. W. Housner

* It was published in the form of a 56-page paperback brochure (15 x 25 cm).

** Several photographs and a map have also been added at the beginning of the report.



Figure 1. San Francisco, 18 April 1906, after the earthquake.
The fire has started but has not yet spread widely.

DRC-CIT photo.



Figure 2. The San Francisco conflagration at its height.
DRC-CIT photo.



Figure 3. San Francisco, the burned area after the conflagration.

DRC-CIT photo.

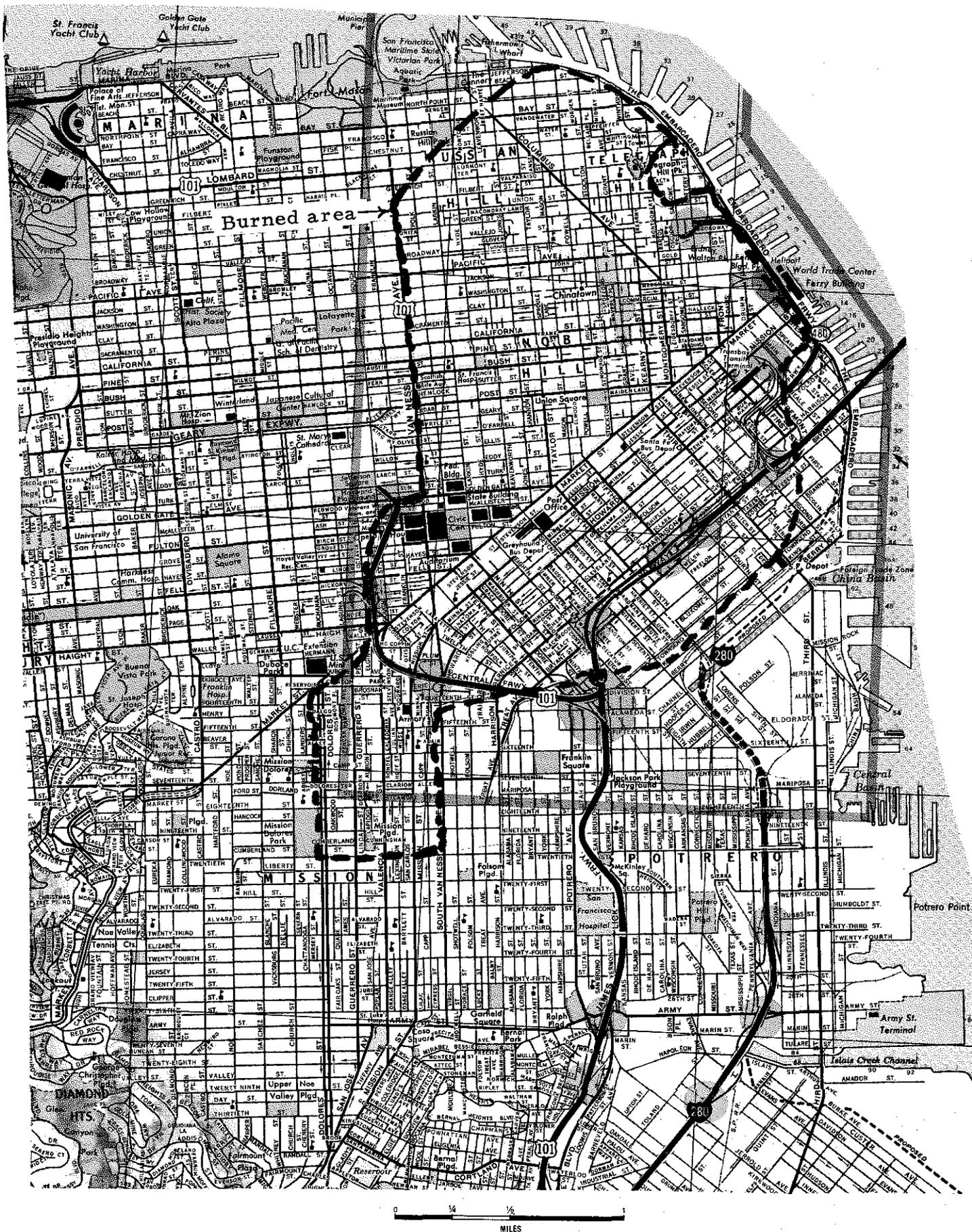


Figure 4. The area burned in 1906 is indicated by the dotted lines on a modern map of San Francisco.

REPORT
OF THE SPECIAL COMMITTEE
OF THE
Board of Trustees
OF THE
Chamber of Commerce
OF
SAN FRANCISCO

On Insurance Settlements Incident to the
San Francisco Fire

Approved at a Meeting of the Board of Trustees

November 13, 1906

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REPORT OF SPECIAL COMMITTEE

San Francisco, November 13, 1906.

To the Honorable President and Board of Trustees of the
Chamber of Commerce of San Francisco:

Sirs:

Your Committee appointed to investigate insurance settlements incident to the late conflagration respectfully submits the report of Professor A. W. Whitney who was engaged to prepare the report under the general supervision of the Committee.

We have been peculiarly fortunate in having the assistance of such an able investigator, with technical experience in insurance matters, and we accordingly take this opportunity for expressing our appreciation of his untiring efforts and for thanking Mr. Benjamin Ide Wheeler, President of the University of California, through whose consideration it became possible for us to secure his services.

We have been fortunate too in having our trustee, Mr. Geo. E. Butler as a member of our Committee. His long experience and prominence in insurance circles have been of the greatest value in the investigation.

Thanks are also due to the Savings Banks which have given exact information as to the thousands of adjustments made on losses in which the banks were concerned; to the Press of San Francisco; to the representatives of many of the insurance companies who have for the most part received our inquiries with great courtesy; and in general to the many merchants and attorneys who have freely given desired information.

In the preparation of this report we have kept in view its purposes as outlined in the original plan, to wit:

1. The moral effect upon the insurance companies involved once they knew that the Chamber of Commerce proposed to make a reliable report giving due credit to those companies which are fairly meeting their obligations.

2. Supplying information on application of our members relating to adjustments being made by companies with which said members might hold policies.

3. Sending general information to Commercial Organizations throughout the country relating to the insurance conditions in our city.

4. In the light of such information, venturing some suggestions that will tend to the betterment of the fire insurance business both for the insurer and the insured.

The appreciative expressions already received prompt us to believe that the first two purposes have been accomplished in a degree far beyond our expectations. It is hoped that the latter two purposes will be accomplished in the publication of Professor Whitney's report which is the result of most careful work on his part assisted by frequent conference with your Committee.

Yours respectfully,

Chas. H. Bentley,
Geo. E. Butler,
Geo. D. Gray,

Committee.

To the Special Committee of the Chamber of Commerce
of San Francisco:

Gentlemen:

I have the honor to submit to you the following report on the
Fire Insurance situation following the San Francisco conflagration.

Yours respectfully,

Albert W. Whitney

San Francisco, November 10, 1906.

2. THE EARTHQUAKE

The San Francisco earthquake occurred at about a quarter past five o'clock in the morning of April 18, 1906. The shock lasted about one minute. The seismographic record at the Lick Observatory on Mt. Hamilton, fifty miles away, but in a region where the disturbance was considerable, showed the oscillations to have taken place in all directions with a maximum amplitude of about an inch.

Although the city of San Francisco was, because of its size, the largest sufferer, the destructiveness of the earthquake was probably greatest at Santa Rosa, fifty miles north. San Jose and Stanford University were also severely shaken.

The damage done by the earthquake in San Francisco depended very largely upon the nature of the ground at the point in question. The city may be divided into four districts or sets of districts. There are, first, the rocky hills and other more level land closely underlaid by rock. There are, second, the intervening valleys where a natural deposit has occurred. There is, third, a region where sand dunes cover the rock to a depth of many feet. There is, fourth, the filled ground along the shore line and along the courses of old creeks; there are about 250 acres of this in the burnt district, extending in its greatest width from the Ferry to Sansome Street, a distance of about half a mile. A large part of the wholesale district lay in this fourth region.

The first region, characterized by rock-formations near the surface, suffered least from the shaking. The damage was confined mostly to the shaking to pieces of chimneys above the roof, the falling of some plaster and loosely attached architectural ornaments and the destruction, more or

less complete, of some notably badly constructed buildings.

In the sand dune country, and in the valleys the damage was somewhat greater.

The damage on the made land, however, was much the most severe. Here there was not only a more destructive form of oscillation, but the settling of the land in some cases caused serious structural damage.

Just how severe the earthquake damage was in the business part of the city will never be exactly known because of the fire that immediately obliterated its effects. There was, however, a very general shaking to pieces of chimney-tops all over the city, in fact, throughout the whole region; there was to a much less extent general damage to plastering; in probably about one house in two or three was the damage to plastering so severe as to require repair. There were numerous cases of collapse of notably badly constructed buildings, old frame buildings with defective underpinning, brick buildings made with weak lime mortar and unwet bricks and unbonded stone-veneered buildings.

Some few spectacular examples of buildings of this character, such as the Valencia Street Hotel (a frame lodging house) and the City Hall (of stone and brick upon a steel frame), together with a certain amount of fallen cornices and scattering examples of walls partly fallen or cracked, constituted the main visible earthquake damage.

The structural damage was probably on the whole not large. In steel frame buildings it was almost nothing as for instance in the City Building; in well built brick buildings it was almost nothing as for instance in the walls of the Palace Hotel which stand today as a mute example of what good brickwork can be; in well built frame buildings the structural damage was nothing. The earthquake damage in San Francisco stands as a monument

almost entirely to cheap, dishonest and insincerely ostentatious construction.

Coming back, however, to actual conditions, it is undoubtedly true that the business of the city could have gone on with very little interruption if there had been no fire, as it did in fact in the unburned part of the city and in those buildings which, though in the burned district, were spared by the fire, such for example as the Mint, the Post-Office, the Appraiser's Store and the Montgomery Block. The earthquake damage in such unburned buildings was in general not severe.

3. REPORT OF THE NATIONAL BOARD OF FIRE UNDERWRITERS

Mr. S. A. Reed, consulting engineer, in his report to the National Board of Fire Underwriters on the San Francisco conflagration, has the following to say concerning the extent of the earthquake damage:

"The actual damage, though appalling to those who experienced the shock, was not, as a general rule, structurally serious as far as appearance went. Apart from buildings having ponderous architectural attachments, particularly the City Hall, where the damage was great and spectacular, the apparent structural injury was mainly to tall chimneys, church towers and unbraced brick gables, copings and projections. Interior plaster, tiling and adhesively applied decoration were quite generally wrecked. House chimneys above roofs fell extensively. Actual collapses were mainly confined to flimsy, frame structures. Observation of the unburned Western Addition and also of photographs taken between the earthquake and the fire make it clear that San Francisco was far from being destroyed by the earthquake and that outside of small districts in the flats it was the exception that a building was rendered uninhabitable. The effect on fireproof buildings was especially important, as the steel frame type had never before been seriously tested in an earthquake. It may be said, generally speaking, that these buildings had no apparent structural injury. The steel frames appeared plumb and true, and, contrary to the early account, neither the sides nor the floors had dropped out. Cracks appeared in many instances, especially X cracks in pilasters built around exterior columns. The early accounts, stating that side walls had dropped out, probably arose from the fact that there were several tall and conspicuous steel frames in course of construction which had not yet received their side walls. Furthermore, at the City

Hall a lofty architectural mass of cast iron and stone was grouped around a steel frame dome, and the fall of the general mass left the steel frame of the dome exposed. Non-apparent injury to steel frames and their exterior walls occurred to a considerable extent, due to straining. In wooden frame buildings, it was noted that where each story was framed to that below unless diagonally braced, the damage was greater than where the verticals were continuous, as in the balloon frame of less repute. In fact, immunity from effects of the earthquake seemed to be a characteristic of buildings having vertical continuity, as distinguished from vertical discontinuity. In steel frames where each column is spliced to that below, column tiers are practically continuous. Buildings depending mainly upon gravity for their stability experienced the maximum injury. The ordinary brick wall has slight continuity apart from gravity aided by the bracing effects of the beams, unless the brick is properly laid in cement and properly bonded and the walls of more than usual thickness. Such walls as the latter were rare in San Francisco. Still, even in the case of weak walls, the interior bracing reduced structural damage where there was no actual ground displacement. There were, however, a large number of structural injuries, not apparent to the eye, but such as would have required expensive repairs had there been no fire."

4. THE FIRE

The earthquake was followed by fires that broke out almost immediately at a number of points, in fact, there are said to have been as many as thirty of these, most of them in the region south of Market Street. The city was supplied with water by three large pipes, each of which was broken where it crossed marshy ground outside the city. During the second and third days of the fire some water was made available in the western part of the city by repairs; this water was instrumental in checking the fire at Van Ness Avenue.

The efficient head of the Fire Department, Chief Sullivan, to whose efforts had largely been due to the freedom of San Francisco in the past from disastrous fires, was fatally injured by the falling of a chimney. It is a sad coincidence that in the Baltimore, the Toronto and the San Francisco conflagrations the Fire Chief was unable, through personal injury, to direct the work of the Department.

There was an almost entire absence of strong wind during the fire, so that ignition and combustion went on slowly and there was no occasion for the frantic efforts to escape that characterized the Chicago fire. The contrast was most painful between the inferno in the city and the smiling serenity of nature across the bay. For three days a pillar of smoke stood over the city.

Some of the original fires were extinguished; the others coalesced during the first day. Many new fires originated, however, most of them by sparks or dynamiting, but some in the general confusion quite independently of the fires already started. Two of these independent fires spread and consumed many blocks of property in the heart of the city. One was the

Hayes Valley or "Ham and Eggs" fire at Hayes and Gough Streets on the morning of the 18th, said to have been started by a woman in getting breakfast. The other was the Alcazar Theater fire, said to have been started by the overturning of a lamp by soldiers.

The water supply failing, dynamite was resorted to for blowing up buildings in the hope of thus stopping the progress of the fire. In some cases this was successful, but the dynamite being largely handled by those who were unfamiliar with its use, on the whole little good was accomplished and in many cases the fire was actually spread by its use.

The fire was brought under control on the third day by a desperate stand at Van Ness Avenue, a north and south street, 125 feet wide and about one and a half miles from the Ferry. The intelligent use of dynamite, a line of hose to the bay, some water from the mains, a favorable wind and a desperate hand to hand fight together made this successful, although at some points the fire crossed the avenue and burned a few blocks beyond.

The total area burned was about 3000 acres, or about 4.7 square miles, containing 520 blocks and about 25,000 buildings; about one-half of these were residences.

5. THE INSURANCE SITUATION

The amount of insurance covering property in the burned district was approximately \$235,000,000 (estimated). All of this had been written by companies authorized to do business in the state, except about \$6,000,000 which had been placed outside of the state in some 100 companies. The value of buildings and contents destroyed in the fire must have been about \$350,000,000, basing an estimate upon the insurance liability, the known general ratio of insurance to value (about 70 percent) and a guess that there was about 5 percent of property that carried no insurance.

There follows a list of the authorized companies with their capital and surplus and their San Francisco premiums in 1905; membership in the Board of Fire Underwriters of the Pacific is also indicated. It was hoped that it would be possible to give the liabilities of the separate companies but the data obtainable are not complete, and for that reason are not published.

Table I

DOMESTIC COMPANIES

	Paid in Capital Dec. 31, 1905	Surplus Dec. 31, 1905	†S. F. Pre- miums 1905.
*Aetna, Hartford, Conn.	\$4, 000, 000	\$7, 036, 011	\$44, 789
*Agricultural, Watertown, N. Y.	500, 000	857, 262	16, 343
*Alliance, Philadelphia, Pa.	500, 000	462, 181	15, 801
American, Boston, Mass.	300, 000	92, 062	12, 348
*American, Newark, N. J.	600, 000	2, 430, 459	18, 962
*American Fire, Philadelphia, Pa.	500, 000	253, 891	27, 559
*American Central, St. Louis, Mo.	1, 000, 000	1, 431, 518	19, 881
*Assurance Co. of Amer., New York, N. Y.	400, 000	228, 988
*Atlanta-Birmingham, Atlanta, Ga.	250, 000	80, 725	6, 289
Austin Fire, Austin, Texas.	318, 975	57, 791	4, 337
*British-American, New York, N. Y.	200, 000	118, 727	3, 013
Buffalo-German, Buffalo, N. Y.	200, 000	1, 640, 774
*Caledonian-American, New York, N. Y.	200, 000	91, 778	8, 836
*California, San Francisco, Cal.	240, 000	144, 110	22, 585
*Calumet, Chicago, Ill.	200, 000	255, 441	13, 824
*Citizens Fire, St. Louis, Mo.	200, 000	232, 182	17, 588
*Commercial Union Fire, N. Y., N. Y.	200, 000	130, 124	4, 110
*Concordia Fire, Milwaukee, Wis.	200, 000	234, 958	6, 345
*Connecticut Fire, Hartford, Conn.	1, 000, 000	1, 729, 173	34, 197
Continental, New York, N. Y.	1, 000, 000	8, 424, 225	33, 936
*Delaware, Philadelphia, Pa.	702, 875	193, 493	12, 551
Dutchess, Poughkeepsie, N. Y.	200, 000	175, 519	14, 167
Eagle Fire, New York, N. Y.	300, 000	376, 072	11, 968
*Equitable Fire and Marine, Provi- dence, R. I.	400, 000	215, 276	5, 817
Federal, Jersey City, N. J.	500, 000	856, 685
*Fire Association, Philadelphia, Pa.	500, 000	1, 552, 603	33, 239
*Fireman's Fund, San Francisco, Ca.	1, 000, 000	2, 718, 144	91, 363
*Franklin Fire, Philadelphia, Pa.	400, 000	996, 672	20, 919

†Taken from Coast Review Chart.

	Paid in Capital Dec.31, 1905	Surplus Dec.31, 1905	†S. F. Pre- miums 1905.
German, Freeport, Ill.	200,000	1,952,065	52,802
German, Peoria, Ill.	200,000	126,444	14,752
*German Alliance, New York, N. Y.	400,000	629,132	7,384
*German American, New York, N. Y.	1,500,000	6,442,675	44,589
Germania Fire, New York, N. Y.	1,000,000	2,889,660	46,552
German National, Chicago, Ill.	200,000	154,347	15,706
Girard Fire and Marine, Phila., Pa.	300,000	697,864	13,747
Glens Falls, Glens Falls, N. Y.	200,000	2,594,065	17,657
*Globe & Rutgers, New York, N. Y.	400,000	1,256,147	16,028
*Hanover Fire, New York, N. Y.	1,000,000	925,516	23,167
*Hartford Fire, Hartford, Conn.	1,250,000	5,150,696	145,788
Home, New York, N. Y.	3,000,000	8,720,501	39,779
*Home Fire and Marine, San Fran- cisco, Cal.	300,000	503,695	37,980
*Indemnity Fire, New York, N. Y.	200,000	94,785	4,781
*Insurance Co. of No. America, Phila- delphia, Pa.	3,000,000	3,604,807	53,399
*Mercantile Fire and Marine, Boston, Mass.	400,000	101,793	13,020
*Michigan Fire and Marine, Detroit, Mich.	400,000	282,687	7,935
Milwaukee Mechanics, Milwaukee, Wis.	200,000	1,409,831	34,269
Nassau Fire, Brooklyn, N. Y.	200,000	251,458	7,391
*National Fire, Hartford, Conn.	1,000,000	2,314,305	42,446
National Union, Pittsburg, Pa.	750,000	360,399	20,936
New Brunswick, New Brunswick, N. J.	200,000	144,522
*New Hampshire Fire, Manchester, N.H.	1,000,000	1,254,267	8,928
New York Fire, New York, N. Y.	200,000	61,682	6,903
*Niagara Fire, New York, N. Y.	500,000	1,810,455	33,126
*North German Fire, New York, N. Y. .	200,000	93,806	11,627
North River, New York, N. Y.	350,000	440,895	9,030
Northwestern Fire and Marine, Minneapolis, Minn.	200,000	173,370

	Paid in Capital Dec.31, 1905	Surplus Dec.31, 1905	†S. F. Pre- miums 1905.
Northwestern National, Milwaukee,			
Wis.....	600,000	1,235,882	11,039
*Orient, Hartford, Conn.....	500,000	821,958	14,373
*Pelican, New York, N. Y.....	200,000	119,803	7,253
*Pennsylvania Fire, Philadelphia, Pa..	400,000	3,004,552	55,189
*Phoenix, Brooklyn, N. Y.....	1,000,000	2,236,779	61,844
*Phoenix, Hartford, Conn.....	2,000,000	2,382,271	28,049
*Providence-Washington, Providence,			
R. I.....	500,000	668,039	15,756
*Queen, New York, N. Y.....	1,000,000	2,722,650	24,054
*Queen City Fire, Sioux Falls, S. D....	300,000	37,385	1,992
*Rochester German, Rochester, N. Y..	200,000	493,216	10,701
Security Fire, New Haven, Conn....	500,000	385,129	6,151
*Security Fire, Baltimore, Md.....	200,000	61,006	7,817
*Springfield Fire and Marine,			
Springfield, Mass.....	2,000,000	2,024,000	26,160
*Spring Garden, Philadelphia, Pa.....	400,000	290,485	9,519
*St. Paul Fire and Marine, St. Paul,			
Minn.....	500,000	1,363,633	18,705
*Teutonia, New Orleans, La.....	250,000	136,624	5,315
*Traders, Chicago, Ill.....	500,000	1,376,031	58,096
*Union, Philadelphia, Pa.....	200,000	151,334	8,729
*United Firemen's, Philadelphia, Pa....	300,000	233,891	11,045
*Victoria Fire, New York, N. Y.....	200,000	69,774	1,831
Westchester Fire, New York, N. Y...	300,000	1,678,128	17,573
Williamsburg City Fire, Brooklyn, N.Y.	250,000	1,492,093	15,862

*Member of the Board of Fire Underwriters of the Pacific.

Table II

FOREIGN COMPANIES

	† Surplus and paid in cap- ital Dec. 31, 1904.	San Francisco premiums, 1905.
*Aachen and Munich, Aix la Chapelle, Germany	\$ 2, 370, 284	\$ 49, 421
*Alliance, London, England.....	8, 984, 275	43, 749
*Atlas, London, England.....	**3, 509, 710	39, 792
*Austrian Phoenix, Vienna, Austria.....	1, 496, 087	30, 558
*British-America, Toronto, Canada.....	**1, 040, 015	13, 333
*Caledonian, Edinburgh, Scotland..	**2, 625, 695	47, 325
*Commercial Union, London, England.....	**12, 250, 000	49, 002
*Hamburg-Bremen, Hamburg, Germany.....	**841, 811	56, 180
*Helvetia-Swiss.....
*Law Union and Crown, London, England.....	3, 049, 305	28, 030
*Liverpool and London and Globe, Liverpool, Eng.	11, 875, 895	56, 878
*London, London, England.....	7, 670, 720	87, 719
*London and Lancashire, Liverpool, England..	**8, 776, 170	68, 558
*New Zealand, Auckland, N. Z.....	\$1, 222, 555	29, 299
*North British and Mercantile, London, England	16, 160, 288	44, 569
*North German Fire, Hamburg, Germany.....	473, 993	58, 946
*Northern, London, England.....	**8, 757, 080	53, 690
*Norwich Union Fire, Norwich, England.....	5, 154, 661	30, 395
*Palatine, London, England.....	875, 745	34, 209
*Phoenix, London, England.....	6, 463, 795	53, 830
Prussian National, Stettin, Germany.....	1, 399, 005	17, 934
*Rhine and Moselle, Strasburg, Germany....	1, 112, 672	59, 649
*Royal, Liverpool, England.....	**14, 179, 675	83, 601
*Royal Exchange, London, England.....	7, 240, 505	56, 529
*Scottish Union and National, Edinburgh, Scot.	3, 292, 395	21, 916
*State Fire, Liverpool, England.....	900, 405	15, 491
*Sun, London, England.....	9, 769, 715	40, 019
*Svea Fire, Gothenburg, Sweden.....	2, 000, 270	25, 955

	† Surplus and paid in cap- ital Dec. 31, 1904.	San Francisco premiums, 1905.
*Transatlantic Fire, Hamburg, Germany..	647,750	73,947
*Union, London, England.....	3,089,190	42,302
*Western, Toronto, Canada	1,919,838	17,458

**Statement as of Dec. 31, 1905.

†Statement as of Nov. 30, 1905.

†Taken from Best's Reports.

*Member of the Board of Fire Underwriters of the Pacific.

Representatives of these companies, except the Helvetia-Swiss, which was not involved, without respect to the question of whether Board or non-Board, met on April 21st in Oakland and formed an organization for facilitating adjustments and for securing uniformity of procedure. There were associated with these companies in the adjusting bureau also the following underwriting agencies: Colonial Underwriters, English-American Underwriters, European Underwriters, Individual Underwriters, New York Underwriters, Pacific Underwriters, Philadelphia Underwriters, Protector Underwriters, Scotch Underwriters, Western Underwriters, also the Camden, a reinsuring company, the Manchester, whose risks had been insured in the Atlas, and the Kings County, a company which had withdrawn from the state, but still had outstanding insurance. Meetings of this organization were held daily up to May 16th and almost as frequently thereafter for at least another month.

A general committee of fifteen on adjustments was appointed whose principal work was the assigning to sub-committees of three of losses on which six or more companies were involved. Losses on which there were less than six companies, were privately adjusted by the companies involved and did not come before the Bureau.

The situation that the companies had before them on the 21st of April was the most difficult in the whole history of fire insurance. In the first place the conflagration itself was the largest that there had ever been; secondly, it was not an ordinary conflagration but had been preceded by an earthquake for whose direct effects the companies were not liable and yet the evidence of which had been largely obliterated by the fire; third, as to some extent in all conflagrations or large fires but here particularly, there was a large destruction not only of policies but of records of all kinds

among the insured; fourth, San Francisco being the city from which all the Pacific Coast business was managed, there was a large destruction of the records of the companies, some companies for instance, which sent no details to their home offices but whose accounts were audited here, losing their records in toto. These had to be reproduced as best they might from agents' and brokers' records and from maps in cases where these had fortunately been saved.

The situation would have been complicated enough if there had been relations between only the companies and the insured, but there was in addition a vast mass of reinsurance not only among the companies directly involved but with other companies. Some of these foreign treaty companies soon after the fire united in publishing a letter to the reinsured companies warning them that the reinsurance companies would not follow them in their settlements beyond the point of strict liability. The most perplexing feature of the early situation was probably the fact that the companies were at a loss to know how much of their reinsurance they could collect.

The great desirability of arriving at some common method of procedure in the settlement of losses, particularly in the case of committee losses and in the case of losses in which there was reinsurance, was felt so strongly that the adjusting bureau was for many days concerned with finding a basis on which common adjustments might be carried on rather than in working out the details of the adjustments themselves.

The companies had naturally been in close communication with their home offices and in many or even most cases officials of the companies had visited the Coast themselves. It was then with an intimate knowledge of the situation that a meeting of some twenty or more of the companies most heavily involved was held in New York City on May 31st and an agreement was arrived at concerning general rules of procedure. The "New York agreement" is as follows:

PREAMBLE AND RESOLUTIONS ADOPTED BY THE MEETING OF
AMERICAN COMPANIES HELD IN NEW YORK, MAY 31, 1906.

Whereas, On the 18th day of April, 1906, a great earthquake occurred in the city of San Francisco, California, which destroyed property to the value of millions of dollars, and was followed by a conflagration made unprecedented in extent and damage by conditions induced by and following said earthquake;

Whereas, The problems arising in connection with the settlement of such losses are complex and intricate to an extent never before equaled in the history of underwriting by reason of the following and other factors, namely:

- (a) The difficulty of clearly segregating losses for which companies are liable from those from which they are exempt;
- (b) The existence of many varying forms of policy contract;
- (c) The loss of essential records, both by insurance companies and by the assured;

Whereas, It is highly desirable that all losses for which insurance companies are legally liable should be promptly settled with equity and fairness to all concerned; and

Whereas, It is expedient that a statement as to the legal and moral liability of companies in regard to claims arising from the catastrophe at San Francisco should be made, the sub-joined is adopted as a fair statement of such liability, suitable to be used as the basis for adjusting losses;

First - Where policies covered buildings (and, or their contents), which had certainly fallen before the fire, or which had been so damaged as to avoid the insurance under the express terms of the contract, claims under such policies should not be paid.

Second — Where policies covered buildings (and, or their contents), which may have been damaged or destroyed by the authorities, civil and, or military, subsequent to the conflagration, claims under such policies should not be paid, until the facts have been definitely ascertained.

Third — (a) Where policies covered buildings (and, or their contents), which were probably, but not certainly, so damaged by earthquake as to be brought under the provisions of the fallen building clause; or

(b) Where policies covered buildings (and, or their contents), which had suffered from shock of earthquake but not to such an extent as to bring them within the provisions of the fallen building clause; or

(c) Where policies covered buildings (and, or their contents) which had been damaged or destroyed by the authorities, civil and, or military, before fire had reached them; or

(d) Where policies covered property whose owners, by reason of the destruction of their books and records, are unable to supply the proofs of value required by the conditions of their insurance policies, in all such cases, claims should be settled by a reasonable compromise.

Fourth — Where policies covered contents of buildings which are certainly not affected by the exemption conditions of the policy, claims under such policies should be paid, as soon as adjusted, subject to such deduction, if any, as may fairly be made on account of the salvage resulting from the removal of portable property from building before fire had reached them.

RESOLVED, That all the insurance companies interested in this disaster, both domestic and foreign, be, and they hereby are, cordially invited to unite in the carrying out of this plan of operations.

It had been evident from the first that there was an entire lack of unanimity regarding the place of compromise settlements. This had come to the surface as soon as the nature of committee adjustments had been considered. A minority of the companies had stood for complete adjustments, that is, showing not only sound value but the finally adjusted claim, the same to be binding upon the companies; a majority of the companies, however, would not hear of this but insisted that it should be left to the companies individually to arrive with the insured at the amount of the adjusted claim, leaving, therefore, the matter of earthquake damage, both direct and indirect, to be appraised by each company separately. Finally a compromise was reached by which the sub-committees were to report upon sound value and loss, leaving the final adjustment to the companies themselves. This averted the disruption of the Bureau.

However the same general difference in attitude again appeared in the discussion of the New York agreement. While there was a general acceptance of the agreement there were those who felt that a step further might be taken. They said: "An earthquake started the fire; an earthquake, by breaking the water-mains, made it impossible to put the fire out. Neither of these contingencies was contemplated in the premium; furthermore there was widespread earthquake damage whose exact effect has been obliterated by the fire; the insured, under these circumstances, should bear part of the loss. Let him then bear part of the loss and because of the uncertainty as to where there was and where there was not earthquake damage, let there be a general compromise at, say, 75 percent of the face value of the policy. In this way there will be immediate settlements and justice done in the aggregate." A vote was taken as to the sense of the companies upon the advisability of such a procedure, the vote being

understood to be only an expression of opinion and not committing those voting to action one way or the other.

Next morning an account of this and the names of the companies voting on either side appeared in one of the San Francisco papers, in spite of the fact that this, as all other actions of this body, were taken in executive session. It may be said at this point that naturally no attempt would be made in this report to give an account of the deliberations of this body had not the matter been made public and thus, and particularly in view of later developments, become an important part of the history of the situation.

The companies reported to have voted against this proposed horizontal cut are:

Aetna	London & Lancashire
American Central	London Assurance
Atlas	Manchester
California	Mercantile
Citizens	New Hampshire
Connecticut	New York Underwriters
Continental	New Zealand
English-American Underwriters	North British & Mercantile
Hartford	Northern
Home	Orient
Individual Underwriters	Pelican
Kings County	Phoenix of London
Liverpool & London & Globe	Queen
Springfield	Royal
State	Sun
St. Paul	Teutonia

The companies reported to have voted in favor of the horizontal cut are:

Aachen & Munich	Hamburg-Bremen
Agricultural	Hanover

Alliance of Philadelphia	Home Fire & Marine
American of Boston	Insurance Co. of North America
American of Newark	Michigan
American of Philadelphia	Milwaukee Mechanics
Atlanta-Birmingham	Nassau
Austrian Phoenix	National
British-America	National Union
Buffalo German	New Brunswick
British-American	New York
Caledonian of Edinburgh	Niagara
Calumet	North German of New York'
Camden	North River
Caledonian-American	Northwestern National
Colonial Underwriters	Pacific Underwriters
Concordia	Pennsylvania
Delaware of Philadelphia	Phoenix of Brooklyn
Dutchess	Philadelphia Underwriters
Eagle	Providence-Washington
Equitable	Prussian National
Federal	Queen City
Fire Assn. of Philadelphia	Rochester German
Fireman's Fund	Scotch Underwriters
Franklin	Security of New Haven
German of Freeport	Security of Baltimore
German of Peoria	Spring Garden
German National	Svea
Germania	Traders
Girard	Transatlantic
Glens Falls	Union of Philadelphia
Globe & Rutgers	United Firemen's
Victoria	Western
Westchester	Western Underwriters

The companies reported to have been absent or excused from voting are:

Alliance of London

North German of Hamburg

Assurance Co. of America
Austin of Texas
Commercial Union of London
Commercial Union of New York
European Underwriters
German Alliance
German American
Indemnity
Law Union and Crown
Williamsburg City,

Northwestern Fire & Marine
Norwich Union
Palatine
Phoenix of Hartford
Protector Underwriters
Rhine & Moselle
Royal Exchange
Scottish Union & National
Union Assurance

Within a few days five companies, which had voted for the horizontal cut, on advice from their home offices, announced their change to the other class.

Alliance of Philadelphia
American of Newark
Michigan.

Insurance Co. of North America
Niagara

It is possible that if the discussion of the question had continued that some common principle of procedure might have been evolved, but the publicity that the vote had received prevented this; those voting for the resolution were considered to have put themselves on final record as favoring a straight horizontal cut of 25 percent; they were thereupon known as the "six-bit" companies. The companies voting against the resolution were immediately held in high esteem and called the "dollar for dollar" companies.

It had been evident from the first that there was a lack of harmony among the insurance companies, but this inadvertent publicity at this time had the effect of making any further attempts at reaching a common ground of action impossible. It drove closer together the companies in the first class. They did not withdraw from the adjusting bureau but appointed a

committee of five from their own number to complete the adjustments as they came from the committee of fifteen. As a matter of fact some of the "thirty-five" companies individually reopened adjustments on such claims after they had come from the committee of five. The effect of this publicity upon the companies in the second class was, however, disrupting; each company proceeded to make adjustments and settlements in its own particular way.

A word may be said as to the composition of the two classes. The first class was largely made up of old, substantial companies with a reputation for honorable, straightforward methods. They had had large losses but they had also large surpluses to cover their losses. There was every reason why such companies should proceed to settle their losses in the old recognized way, adjusting each loss upon its individual merits.

The second class, on the other hand, was less homogeneous. It included first some companies so "hard hit" as to be unable, at the time at least, to contemplate payment in full, second, some companies that were quite willing to take any opportunity to escape as easily as possible, and third, some companies which sincerely enough thought the plan a fair one and favorable for the insured, and were at least willing to put themselves on record in favor of it on a test vote.

As a matter of fact when it came to actual settlement some of the "six-bit" companies settled their claims quite as favorably as the "dollar for dollar" companies.

The difficulty of establishing claims where policies or the companies' records were destroyed, and particularly in the case where both were lost, was one of the elements of the early situation. Many of the companies did everything in their power to help the insured in this matter, others apparently

tried to make as much trouble as possible. It was the same with the filing of proofs of loss. Some of the companies aided the insured by furnishing blank forms and by actual assistance in filling in the information; other companies on the other hand did everything to prevent the filing of proofs of loss. Proofs of loss were refused, were thrown into the faces of claimants without being opened and were even refused when sent by registered mail.

Reports of such gross incivilities very naturally found their way into the newspapers; as did likewise reports of many of the early settlements which as a matter of fact were much lower on the average than they were later; some of the companies which began paying early offering only forty and fifty percent, while others definitely denied liability altogether. The result of this behavior by a part of the companies, followed as it was very soon by the "six-bit" split, led to a wave of popular indignation. The newspapers were largely responsible for this, but the blame for its inception unquestionably lies with those companies which began by using thoroughly disgraceful methods in dealing with their claimants.

Such a state of feeling between the insurers and the insured was most unfortunate. On the one hand the timid — poor people for the most part, whose insurance was all they had — were frightened in thousands of cases into settling their claims at a much lower figure than was right; on the other hand whatever natural instincts the insured may have had for telling the truth about their losses and for treating the representatives of the insurance companies as well meaning gentlemen received a hard shock.

There were undoubtedly many cases of fraud on the part of the insured; it is doubtful if on the other hand there has ever been an insurance situation in which there has been such disgraceful intimidation and

discourtesy. Discourtesy was even recognized as worth a definite amount in salvage.

It cannot be said too emphatically, however, that this does not apply to all the companies, nor even to most of them. Apparently the trouble was principally due to adjusters from the outside who came prejudiced and impressed with the necessity of making drastic compromises. And this was quite natural after all. The early newspaper accounts of the calamity represented San Francisco as destroyed by an earthquake, the fire having simply burned the ruins. Nearly every person who came here from the East during the first few weeks came with this impression. It was weeks before a true understanding of the situation thoroughly affected the insurance companies, and some have not been affected yet.

The companies which are most to be praised are those which, using as nearly as possible the methods of ordinary times, made careful but fair adjustments. Such companies have no serious complaint to make of the insured, and difficult as the situation was, their experience proves that the attempt to adjust each loss on its merits was the only satisfactory method.

On their own initiative many of the companies published their willingness to have claimants clear their property and to extend the time for filing proofs of loss as well as to waive notice of loss. Following a suggestion of Governor Pardee, however, Mr. E. Myron Wolf, Insurance Commissioner of California, addressed a letter to each of the companies requesting a definite waiving of notice of loss and an extension of the time for filing proofs of loss to August 17th.

Eighty-eight companies granted this extension of time. The companies which did not grant the extension of time gave as their reason the fear that this action would invalidate their reinsurance. As a matter

of fact no such difficulty ever materialized.

One of the laws passed at the special session of the legislature early in June was as follows:

An act to amend the Political Code by adding a new section thereto, to be numbered section five hundred and ninety-seven a, relating to statements to be furnished to the insurance commissioner by insurance companies.

[Approved June 3, 1906.]

The people of the State of California, represented in senate and assembly, do enact as follows:

SECTION 1. A new section, to be known as section five hundred and ninety-seven a, is hereby added to the Political Code to read as follows:

597a. The commissioner had power to, and whenever he deems necessary may, in writing, require any company engaged in insurance business in the State of California, to furnish the commissioner, as of a date, past or present, to be designated by the commissioner, a full and complete list of all its policies of insurance on property or risks located within that portion of the State of California included within the territory described by the commissioner, and which policies had not by the terms thereof expired on the date designated by the commissioner. Such list must show the number of the policy, the name in which the policy was issued, the amount for which it was issued, the nature and description of the property on which the policy was written or the nature of the risk assumed by the company, the location of the property and the residence of the insured, and the form or class of such policy as designated on the policy by the company. The commissioner shall require such list to be

accompanied by the several forms of policies so designated and classified by the company, and the forms of riders, if any, attached to each particular form of policy. Any company which fails or neglects to furnish such lists and forms for the period of ten days from the date of the commissioner's request, shall forfeit its right to do business in this state, and the commissioner shall thereupon revoke, in the manner provided in section six hundred of this code, the certificate previously granted such company to do business in this state, and said company shall also be liable to a penalty in the sum of two thousand dollars, for the payment of which penalty suits may be instituted by the commissioner in the name of the people of the State of California, in a court of competent jurisdiction, to recover such penalty or accumulated penalties. Said company shall be liable for said penalty or penalties upon the bond filed by said company, pursuant to section six hundred and twenty-three of the Political Code.

SEC. 2. This act shall take effect immediately.

Accordingly, Commissioner Wolf on June 7th sent a letter to the companies which had not agreed to the extension of the time for filing proofs of loss calling for a list of policies and policy holders. Some of these companies thereupon decided to extend the time for filing proofs of loss while some sixteen filed lists of policy holders. The companies which neither granted an extension of time nor filed a list of policy holders were the following:

American of Boston	North German of New York
American of Philadelphia	Spring Garden
Delaware	Security of Baltimore
Dutchess	Traders
Germania	Westchester
New York.	

Punitive action with regard to these companies is still in abeyance.

The first committee loss to be adjusted was reported back to the committee of fifteen early in June. It had been the intention of the Bureau to call a meeting of the companies concerned on each loss, at which the report would be read and explained and agreed to. This, however, turned out to be entirely impracticable as the meetings were not attended. Thereupon reports were sent directly to the companies with the understanding that after one week payment might be demanded.

The Bureau practically finished its work in September. On November 1st, 1140 claims had been adjusted, on which the sound value was \$128,059,023.38, the insurance \$88,018,123.61, and the visible salvage \$10,683,728.62, showing therefore a 68.7 percent ratio of insurance to value and an 8.35 percent salvage. There had been 1337 claims altogether; 175 of these had been cancelled; on November 1st, 22 claims were still unsettled.

The co-insurance clause was very little used in San Francisco. If it had been otherwise the loss to the companies would have been immensely larger. It is interesting to notice that while ordinarily the insured is too likely to look at co-insurance as entirely to the advantage of the insurer, here is a case where manifestly it would have been very greatly to the advantage of the insured.

On account of the great number of losses and on account of the lack of evidence in a great number of cases as to the nature and extent of the damage done, adjustments on the whole could not be made with as great care as usual. The companies generally insisted, following the New York agreement, upon a ten percent reduction in the case of lack of books to

prove the loss on stocks of merchandise, and in general this was thought to be reasonable, it being evident that a failure to prove a loss satisfactory opened a proper field for compromise.

The matter of earthquake damage was handled by the companies in very different ways. Some of the companies counted the earthquake damage if any against the sound value along with depreciation. This seldom brought the claim below the face of the policy particularly as there was very general under-insurance. Other companies, while making no claim for earthquake damage where no evidence existed in case of proved earthquake damage settled by a compromise on the face of the policy, the reason for compromise being the possible voiding of the policy under the fallen building clause. Other companies claimed a general concession from each policyholder on account of general conditions. There was no serious attempt made in general to escape paying for damage done by dynamiting. The companies which made large discounts could hardly have been said to have made adjustments; their process of settlement being nothing more in reality than the buying of policies.

There are some amusing stories of the result of this method of handling claims. One policy holder with a partial loss of only thirty percent, when he tried to explain the matter, was not even listened to but told that the company would pay no more than sixty percent of the face of the policy, whatever the circumstances, and he was paid off at this rate and sent away.

6. SETTLEMENTS MADE BY THE COMPANIES

The account of settlements made by the various companies which is given hereafter has a double purpose. There has been general interest throughout the country in the way in which the insurance companies were meeting the situation; to meet this demand it seemed only fair that some impartial account should be given, based on carefully collected information. Secondly, it will be a pity if the San Francisco conflagration passes out of remembrance without serving to point the way to some needed changes in fire insurance; first, in the actual conduct of the business by the companies themselves, second, in legislation, and third, in the attitude of the insured. The practically most important thing to know for this purpose is just what, in this crisis, the companies have done.

The account given herewith is based on the tabulation of some 10,000 settlements. Information concerning these has been furnished by the insured, partly upon blank forms distributed by the Chamber of Commerce and partly on coupons printed in newspapers. Reports on a large number of settlements have been received from the Savings Banks. This information was supplemented in some cases by personal statements from the companies themselves, a circular letter having been sent to all the companies inviting them to make statements if they so desired.

It was natural to suppose that claimants who would respond to solicitation of this kind would be mainly those who had complaints to make and that the information would thus not fairly represent the facts. This did not appear to be the case. A large number of responses were from persons who not merely had no complaints to make but took occasion to express their appreciation of the courtesy and fair dealing they had experienced; a woman

for instance, having to take her baby with her to an insurance office, was told that the business would be concluded at her home; others told of the pains that the companies had taken to help them prove their claims.

Nor were all the good things said of the companies that were paying their obligations in full. Some companies while paying most of their large claims at a discount, paid some of their small claims in full to poor people who were suffering for the money. Another company, that has not made settlements in full, paid a widow with several children a policy that had clearly been forfeited.

In the following account of settlements no attempt has been made in general to go back of the actual bare facts. Behind the figures there are a thousand circumstances which have a bearing upon the case, but even if they were all known it would not be best to publish them. The companies have made their settlements and there the case must rest.

To tell of the brave facing of the situation by some companies, the payment uncomplainingly of large assessments by the stockholders, the suffering caused among the poorer holders of stock, the weakness of spirit, in the case of other companies, of those who could best afford to pay, would be nearly as difficult as to tell the story of the individual settlements among the insured.

Neither has any attempt been made to go back of adjustments. As a matter of fact some companies which paid their adjusted claims in full undoubtedly made very close and tricky adjustments. Furthermore some companies which are credited with having paid their claims in full, less a cash discount, were unquestionably not above asking occasionally larger arbitrary discounts, but it has seemed impossible to express this fact with the requisite briefness without seeming to do an injustice to their

otherwise excellent records.

Payments at first, in general, were on far less favorable terms than later. This was not altogether unreasonable since it was impossible to give the early claims as careful consideration as the later ones. The reason however, is unfortunately much more easily explained by the fact that the first payments were largely to poor people who were in no position to insist upon anything better while the same companies later, particularly on committee losses, found themselves unable to refuse more liberal payments.

A few of the companies paid their claims with no discount for cash; most of the companies, however, took a cash discount of one or usually two percent and sometimes more, if called upon to pay before the end of sixty days. Two percent was generally recognized to be, under the circumstances, entirely reasonable, and companies paying at this rate were held in practically as high esteem as those that paid in full at once. As a matter of fact, to pay a claim two months before it was due was worth all of two percent; first, because of the difficulty of realizing quickly on securities but secondly, quite as much because it often happened that during the sixty days additional evidence was obtained upon the claim.

In the following list percentages usually refer to claims adjusted; in case of large discounts, however, the percentages refer to the faces of the policies.

Payments were not due till sixty days after adjustment; payments "in full" or "in full with a cash discount", mean immediate payments, it being understood that in these cases the claim would have been paid in full on maturity.

In some cases figures have been given that have been submitted by the companies. These, however, because of the fact that they have not been made up by the companies in any uniform way do not seem very valuable for comparison.

No attempt has been made to include in this list other companies than those represented in the adjusting bureau, and as a matter of fact several of the Underwriting Agencies, for lack of information, are not reported upon. Nor are reinsurance settlements explicitly considered. Many of the companies which did not pay their direct claims in full paid their reinsurance claims in full, and very properly; the average of all their settlements is thus larger than the average of their direct settlements.

The list follows:

Aachen & Munich, settled most of its claims at 75 percent, but paid 80 to 90 percent on many claims, particularly committee-losses.

Aetna, settled its claims at 100 percent.

Agricultural, began by discounting at 75 percent but later paid mostly in full, less 2 percent for cash.

Alliance of Philadelphia, paid its claims in full, less 2 percent for cash.

Alliance of London, same policy and settlements as Commercial Union.

American of Boston, settled its claims at 40 percent.

American of Newark, began by discounting but later paid in full, less 2 percent for cash.

American Central, paid mostly in full with from 2 to 5 percent discount for cash.

American of Philadelphia, settled its claims at 50 percent.

Assurance Company of America, settled its claims in general at 75 percent.

Atlanta-Birmingham. The representatives of this company left the state in May. Nothing has been paid up to the present time, although offers of 25 percent cash and 15 percent in notes have been recently received.

Atlas, settled its claim in full, and less 1 and 2 percent for cash.

Austin Fire, settled its claims at from 65 to 85 percent, largely at about 75.

Austrian Phoenix, denied liability and withdrew from the state, having paid no claims.

British America of Toronto, paid some claims at 85 and 90 percent, but largely at one-third cash, one-third in 6 months, one-third in 12 months.

British American of New York, same settlements as the British America.

Buffalo German, settled its claims in general at from 75 to 90 percent.

Caledonian of Edinburgh, settled claims at from 75 percent up to 98 percent, but largely at about 90 percent.

Caledonian-American, same settlements as Caledonian of Edinburgh.

California, settled its claims at 100 percent.

Calumet. Certain stockholders subscribed special fund of \$500,000 upon the agreement of a majority of the claimants to accept this settlement, releasing thereby the plant and already existing assets of the company from further claims. The surplus to policy holders at the time was \$375,000.

Camden, involved in San Francisco conflagration only as a reinsurer.

Citizens, settled its claims in full, less 2 percent for cash.

Colonial Underwriters, same settlements as National of Hartford.

Commercial Union of London, policy contains earthquake clause. Settled its claims at 50 and 75 percent, according to location. Paid claims of \$500 or less in full and at least \$500 on claims of \$500 or more.

Commercial Union of New York, same policy and same settlements as Commercial Union of London.

Concordia, settled its claims at 75 to 90 percent.

Connecticut, settled its claims in full, and less 1 and 2 percent for cash.

Continental, settled its claims at 100 percent.

Delaware, settled its claims at from 60 to 80 percent, largely at 75 percent.

Dutchess, settled its claims at 30 percent.

Eagle, settled its claims mostly at 75 percent.

English-American Underwriters, same settlements as the London and Lancashire.

Equitable, involved in the San Francisco conflagration only as a reinsurer.

Federal, settled its claims at from 85 percent up, but largely above 90 percent.

Fire Association of Philadelphia, settled its claims at from 75 to 95 percent; its early claims largely at 75 percent, its later claims largely at 90 percent.

Fireman's Fund, has paid 20 percent on claims; has offered to pay 30 percent more in cash and remaining 50 percent in stock of company. Claimants have generally accepted this offer.

Franklin, settled claims at from 75 percent up, largely about 90 percent.

*German of Freeport, settled its claims mostly at 60 percent.

German of Peoria, settled its claims at 50 percent.

German Alliance, policy contained earthquake clause which was not taken advantage of. Settled its claims in full, less 2 percent for cash.

German American, policy contained earthquake clause which was not taken advantage of. Settled its claims mostly in full, less 2 percent for cash.

*German National, settled its claims at 60 percent.

Germania, settled its claims at from 75 to 95 percent, largely at about 85 percent.

Girard, settled its claims at from 75 to 90 percent, mostly at 75 and 80 percent.

Glens Falls, settled its claims at from 90 percent up, but mostly in full, less 2 percent for cash.

Globe & Rutgers, settled its claims mostly at 75 percent; a few at 90 percent.

Hamburg-Bremen, settled its claims at 75 percent.

Hanover, settled its claims at 75 percent up, largely at about 90 percent.

Hartford, settled its claims in full, less 2 percent for cash.

* Later: in the hands of a receiver.

Home, settled its claims in full, and less 1 and 2 percent for cash.

Home Fire and Marine, same settlements as Fireman's Fund.

Indemnity, same policy and settlements as Norwich Union.

Insurance Company of North America, settled its claims in full, and less 2 percent for cash.

Kings County, involved in San Francisco conflagration only as a reinsurer.

Law Union & Crown, settled its claims in full, less 2 percent for cash.

Liverpool & London & Globe, settled its claims at 100 percent.

London & Lancashire, began by paying its small claims in full, less 2 percent for cash; in June dropped to payments of largely about 90 percent, coming back finally to 98 and 100 percent. The company states that its payments have averaged about 93 percent of the amount of its claims.

London Assurance Corporation, settled its claims in full, less 2 percent for cash.

Manchester, settled its claims in full less 2 percent for cash; all policies had been reinsured in the Atlas.

Mercantile Fire & Marine, settled its claims mostly in full, less 2 to 5 percent for cash.

Michigan Fire & Marine, settled its claims in full, less 2 percent for cash.

Milwaukee Mechanics, settled its claims at 70 percent, having taken advantage of the Wisconsin Safety Fund Law.

Nassau, settled its claims at from 70 to 90 percent, mostly at 75 percent.

National of Hartford, began by discounting at 75 percent, later settled nearly all its claims at upwards of 90 percent. The company states that its payments have averaged 94 percent of the face of the policy.

National Union, settled its claims at 75 percent up, largely at about 90 percent.

New Brunswick, settled its claims largely at about 75 percent.

New Hampshire, policy contained earthquake clause which was not taken advantage of. Settled its claims in full, and less 1 percent for cash.

New York, settled its claims at 40 percent.

New York Underwriters, same settlements as the Hartford.

New Zealand, settled its claims in full, less 2 percent for cash. About one-fifth of the entire number of outstanding policies contained an earthquake clause; company settled such claims at from 75 to 90 percent.

Niagara, settled its claims in full, less 2 percent for cash.

North British & Mercantile, settled its claims in full, less 2 percent for cash.

North German of New York, has paid nothing; company in hands of a receiver.

North German of Hamburg, company has denied liability and retired from the state, having paid no claims.

North River, settled its claims mostly at 75 percent; in a few cases at 90 percent.

Northern of London, settled its claims in full, less 1 percent for cash.

Northwestern Fire & Marine, settled its claims in general at from 75 to 85 percent.

Northwestern National, settled its claims largely in full, less 2 percent for cash.

Norwich Union, policy contains earthquake clause. Settled its claims at 50 and 75 percent according to location. Claims of \$500 or less paid in full, and at least \$500 on claims of \$500 or over.

Orient, same settlements as London & Lancashire.

Pacific Underwriters, same settlements as Fireman's Fund.

Palatine, same policy and settlements as Commercial Union.

Pelican, settled its claims in full, less 2 to 5 percent for cash.

Pennsylvania, settled its claims in full, less from 2 to 5 percent for cash.

Phoenix of Brooklyn, began by discounting claims at 75 percent; later settled claims in general at from 85 percent up to 100 percent; data furnished by the company indicate that about 75 percent of the company's liability will have been settled at an average of 98 percent of the amount of the claims.

Philadelphia Underwriters, settled its claims at from 90 percent up.

Phoenix of Hartford, policy contained an earthquake clause, which led to settlement of early claims at 75 percent. The bulk of its claims

were, however, settled without reference to the earthquake clause, mostly in full, less 2 percent for cash.

Phoenix of London, settled its claims in full, and less 2 percent for cash.

Protector Underwriters, same policy and settlements as Phoenix of Hartford.

Providence-Washington, settled its claims in general at from 90 percent up, but largely in full less 2 to 5 percent for cash.

Prussian National, settled its claims at 75 percent.

Queen, settled its claims at 100 percent.

Queen City, began by setting claims at 75 percent; later settled claims in full, giving notes in some cases; the company states that payments on earlier claims have been brought up to the same standard.

Rhine & Moselle, policy contains earthquake clause. Denied liability and withdrew from the state. Claims of \$500 or less have been paid at 50 percent.

Rochester-German, settled its claims largely at from 90 percent up.

Royal, settled its claims at 100 percent.

Royal Exchange, settled its claims at from 75 percent up, but largely at 85 to 95 percent.

Scotch Underwriters, same settlements as Caledonian.

Scottish Union & National, settled its claims in full, less 2 percent for cash.

Security of New Haven, settled its claims largely in full, less from 2 to 5 percent for cash.

Security of Baltimore, in the hands of a receiver.

Springfield, settled its claims in full, and less 1 percent for cash.

Spring Garden, settled its claims in general at 70 percent.

State of Liverpool, settled its claims mostly in full less from 2 to 5 percent for cash.

St. Paul Fire & Marine, settled its claims mostly in full, less 2 to 5 percent for cash.

Sun, settled its claims in full, less 2 percent for cash.

Svea, settled its claims at from 75 percent up.

Teutonia, settled its claims in full, less 2 to 5 percent for cash.

Traders, in the hands of a receiver.

Transatlantic, denied liability and withdrew from the state; no claims paid.

Union of Philadelphia, involved in the San Francisco conflagration only as a reinsurer.

Union Assurance, settled its claims in full, less 2 percent for cash.

United Firemen's, settled its claims at from 75 percent up, but in general at about 90 percent.

Victoria, settled its claims in full, less 2 percent.

Westchester, settled some claims at 75 and 80 percent, but later paid largely in full, less from 2 to 5 percent for cash.

Western of Toronto, same settlements as British America.

Williamsburg City, most of its policies contain earthquake clause. Settled claims on these at 50 to 75 percent, according to location. On such policies paid claims of \$500 or less in full and at least \$500 on claims of \$500 or more. Settled claims on policies that did not contain earthquake clause largely at 95 percent.

7. THE SAN FRANCISCO COMPANIES

There are two classes of companies which may be given special attention, one, the San Francisco companies, the other, the so-called earthquake companies. The San Francisco companies suffered triply. In the first place in their own home city they naturally had a particularly large amount at risk, secondly, their San Francisco securities were adversely affected, third, their stockholders were largely sufferers by the fire and thereby lost to that extent the ability to come to their rescue. There were but three of these companies, the Fireman's Fund, the Home Fire and Marine, owned by the Fireman's Fund, and the California.

The California was a new company, less than a year old. Its losses were several times its capital and surplus. In starting the company the stockholders had paid at the rate of \$65 per share; after the fire they assessed themselves \$240 per share, therefore nearly four times the value of their stock, paid their losses out of this fund in full, leaving the original capital and surplus intact.

The Fireman's Fund found itself in a very serious position. It not only had a large liability of its own but also a large liability through its agency, the Pacific Underwriters, and through its ownership of the Home Fire and Marine. It seemed at first as though the company would be able to meet its obligations and while thinking itself to be able so to do, a new company, the Firemen's Fund Corporation, was organized in which the business of the old company was reinsured. This was done to save its plant in case of a possible stampede and to set free a part of its reinsurance reserve for the payment of losses. The situation became steadily darker, however, until it became apparent that the company's assets were not more than fifty or sixty

percent of its liabilities. The plant of the Home Fire and Marine was thereupon abandoned, the Fireman's Fund, as owner, becoming responsible for its liabilities. The Home Fire and Marine being known to be insolvent, no attempt was made to reinsure its outstanding risks.

A material element of the situation was the remarkable degree to which the Fireman's Fund possessed the confidence and, as a matter of fact, the loyalty of the people of San Francisco, and it found in this critical situation a great forbearance and a sincere belief in the desire of the company to do what was right. The plan that was evolved is a novel one. The plan, and it has been accepted by nearly all the claimants, provides for the payment of 50 percent in cash and 50 percent in stock of the company; the old stockholders have been assessed \$300 per share; this should provide funds sufficient to set the company upon its feet and to place \$100 behind every \$500 of the new stock issued to claimants; that is the stock, while it represents actually only \$100 of money subscribed, is issued to the claimants at \$500. It is planned to merge the new Firemen's Fund Corporation with its capital of \$1,000,000 into the old company. The issuance of the stock at this anticipated valuation is of course equivalent to deferred payment since under the best of circumstances it will doubtless be some years before the value of the stock together with the dividends paid are the equivalent of the nominal valuation. A syndicate has been formed, entirely independent of the company itself, to take the stock of those who desire to dispose of it.

8. EARTHQUAKE CLAUSES

The so-called "earthquake clauses" found in the policies used in San Francisco are as follows:

(1) "This Company shall not be liable for loss caused directly or indirectly by invasion, insurrection, riot, civil war or commotion, or military or usurped power, or by order of any civil authority; or for loss or damage occasioned by or through any volcano, earthquake, or hurricane, or other eruption, convulsion, or disturbance, or by theft; or by neglect of the insured to use all reasonable means to save and preserve the property at and after a fire or when the property is endangered by fire in neighboring premises; or (unless fire ensues, and, in that event, for the damage by fire only) by explosion of any kind, or lightning; but liability for direct damage by lightning may be assumed by specific agreement hereon. "

(2) "This Company shall not be liable for loss caused directly or indirectly by invasion, earthquake, insurrection, riot, civil war or commotion, or military or usurped power, or by order of any civil authority; or by theft; or by neglect of the insured to use all reasonable means to save and preserve the property at and after a fire or when the property is endangered by fire in neighboring premises; or (unless fire ensues, and, in that event, for the damage by fire only) by explosion of any kind, or lightning; but liability for direct damage by lightning may be assumed by specific agreement hereon. "

(3) "This Company shall not be liable for loss caused directly or indirectly by invasion, insurrection, riot, civil war or commotion, or military or usurped power, or by order of any civil authority or for any loss

or damage occasioned by earthquakes, hurricanes or volcanic eruptions, or from the burning of forests or the clearing of lands; or by theft; or by neglect of the insured to use all reasonable means to save and preserve the property at and after a fire or when the property is endangered by fire in neighboring premises; or (unless fire ensues, and, in that event, for the damage by fire only) by explosion of any kind. "

(4) (On the face of the policy) "—— does insure —— against all direct loss or damage by fire, except caused directly or indirectly by invasion, earthquake, insurrection, riot, civil war or commotion, or military or usurped power, or by order of any civil authority, and except as hereinafter provided. "

Any one of these clauses evidently made the liability of the company questionable. There was, beside these clauses, a clause which in various forms contained a reference to earthquake, but instead of tending to release the insurer its effect is apparently to fix the responsibility more definitely. This is (all the forms being much alike):

(5) "This Company shall not be liable for loss caused directly or indirectly by invasion, insurrection, riot, labor strike, civil war, or commotion, or military or usurped power, or by order of any civil authority, to prevent the spread of fire, whether such order be legal or not, nor in consequence of any neglect of, or deviation from police or municipal laws, rules or ordinances where such exist; or by theft at or after a fire; or by neglect of the insured to use all reasonable means to save and preserve the property at and after a fire or when the property is endangered by fire in neighboring premises, or (unless fire ensues, and, in that event, for the damage by fire only) by explosion of any kind or from any cause, or the bursting of a boiler, or earthquake, or hurricane, or lightning; but liability for direct damage

by lightning may be assumed by specific agreement hereon. "

The fallen building clause, which in one form or another is contained in all policies, is given herewith:

(6) "If a building or any part thereof fall, except as the result of fire, all insurance by this Policy on such building or its contents shall immediately cease. "

In some cases this clause legitimately released the company from liability and in other cases was the basis of compromise.

It may be interesting in this connection to quote the earthquake clause used in Valparaiso by some of the companies having an earthquake clause in their San Francisco policies.

(7) "This policy does not cover loss or damage by fire occasioned by or happening through or during the existence of any earthquake, hurricane or volcanic eruption unless proof be made to the satisfaction of the Company that such loss or damage was not occasioned by, or through, or connected with, but occurred from a cause or causes independent of any such contingency. "

9. THE "EARTHQUAKE CLAUSE" COMPANIES

The companies whose policies contained an earthquake clause are given herewith and the particular clause used is referred to by number as given above:

Norwich Union,
Providence-Washington, (20 policies) } (1)
Williamsburg City.

Alliance of London,
Commercial Union of London, } (2)
Commercial Union of New York, } A few building policies
Palatine. } contain (4).

Rhine and Moselle, clause same as (2) as regards reference to earthquake.

New Zealand (300 old policies (2); company adopted New York Standard from two years ago).

German Alliance,
German American, } (3)
New Hampshire,
Phoenix of Hartford.

One group of companies whose policies contained an earthquake clause, the German Alliance, German American, New Hampshire and Phoenix of Hartford waived the clause altogether.

The policies of the North German of Hamburg and the North German of New York both contain clause number 5. In spite of the fact that the clause apparently distinctly limits the liability of the company so as to include damage by fire resulting from earthquake, the North German of Hamburg has based a denial of liability upon this clause.

The Williamsburg City at first denied liability altogether. The Alliance, Commercial Union of London, Commercial Union of New York, Indemnity, Norwich Union and Palatine neither affirmed nor denied liability.

They with the Williamsburg City were advised by counsel that they were not liable to their policy holders and that their stockholders could hold them legally responsible for any payments except in the case of compromise; they were advised that a basis for compromise could be found in the uncertainty attendant upon all litigation, in the expense that would accompany suits and in the disturbance of their business relations, both in this state and abroad. Engineers had been employed to make a survey of the city; on the basis of this an arbitrary line was drawn so as to include all buildings supposed to have been destroyed by fires caused directly by the earthquake. In this region the companies compromised claims at 50 percent. The destruction of buildings in the remaining district, although acknowledged not to have been due entirely to fires caused directly by the earthquake, is claimed to have been due indirectly to the earthquake by the breaking of the water mains. In this region the companies compromised claims at 75 percent.

10. ORGANIZATIONS OF POLICY HOLDERS

Many organizations were formed, mostly private, for the purpose of facilitating the collection of insurance. These were concerned mostly with bringing suits in this country and abroad against the companies which denied liability. Representatives of these organizations are now in Germany. The companies which denied liability are the Austrian Phoenix, the North German of Hamburg, the Rhine & Moselle and the Transatlantic.

One organization in particular deserves notice. This, the Policy Holders' League, was formed late in June at a mass meeting called by the commercial bodies of San Francisco. The organization was of a public character, membership being open to anyone. The league had the backing of the best, most conservative business men of San Francisco. Its purpose was a broad and generous one, to promote in all ways possible the best interests of the insured of San Francisco. In particular it was planned to make collections at actual cost. The league was organized too late, however, to be of any great service in this respect, and this feature was abandoned. The league has continued though to act publicly in an advisory capacity, for instance, with regard to the Fireman's Fund and Calumet settlements.

11. WHAT THE EARTHQUAKE AND FIRE HAVE TAUGHT

There are many lessons to be learned from the earthquake and conflagration. In the first place it has been demonstrated that thoroughly well constructed buildings on a good foundation are not materially damaged by such earthquake shocks as that of April 18th. There is a great mass of evidence upon the effects of fire and earthquake upon various building materials and types of construction, there is no evidence at all upon the use of water in fighting conflagrations, there is a large amount of evidence upon the use of dynamite in stopping fire, there is nothing to be learned with regard to the niceties of adjusting, there is much evidence of the evils of the reinsurance system as used in San Francisco, there is much to be learned with regard to the organization and handling of a situation of this kind on the side of both the insurers and insured.

We owe to the conflagration the fact that the status of the reinsurance reserve in the case of insolvent companies has been brought into question and that we are likely to have judicial decisions thereupon, that we are more definitely to ascertain the position that foreign insurance companies may occupy in our country and that thereto we are to test the standing of the insured in foreign courts, that we are to have judicial decisions as to liability under the earthquake clause.

The lesson that the insured will take most to heart is that insurance will not take care of itself, nor will his broker take care of it for him without some watching. The insurance interests of a business house are immensely important and should be looked after by a trained person. The conflagration has shown, as has the recent life insurance investigation, the need of popular education in insurance.

12. THE CONFLAGRATION HAZARD

It did not need this fire to call to the attention of insurance men the importance of the subject of the conflagration hazard; it was a vital question already, in fact, it had been only a few months before that an elaborate report on the conflagration hazard of San Francisco had been issued by the National Board of Fire Underwriters, being one of a series on the large cities of the country. But to the insured the conflagration hazard was a very vague idea, not definite enough to prevent him from grumbling at paying premiums that were larger than what were needed barely to pay ordinary losses. It seems an opportune time to discuss the subject of the conflagration hazard — what the companies may reasonably do, and what the insured may do to safeguard his rights.

The rate in fire insurance is designed to cover, first, the fire hazard, second, the expense of doing the business, and third, the profit. The fire hazard is of two kinds, first, the hazard of ordinary fires in which one or a few buildings are burned, second, the conflagration hazard. The two things are practically distinct in spite of the difficulty of drawing the line between them. If the conflagration hazard were eliminated not only would a large part of the premium be cut out, but the business of fire insurance would be one of great steadiness. For with a multitude of risks the fluctuations would be relatively small and would be due mainly to general conditions that affect all business in much the same way. It would then be unnecessary for companies to hold large surpluses. Such for instance would be the condition of a company which wrote business only in the country.

In spite of the fact that fire insurance is usually a private enterprise there is no more fundamental fact than that the companies stand simply as

agents of the insured. That is, instead of the company insuring its policy holders, the policy holders really insure each other and the company simply manages the details of the transaction. In insurance there are no values created, they are only distributed, and whatever the company distributes must be collected.

There could be no insurance if there were not a large number of the insured. There must be a large enough number of the insured to furnish an average that will be free from large fluctuations year by year. For ordinary fires this may be obtained in a small section of the country and even in a single city. For instance if there were no danger of sweeping fires a company might very safely write business in San Francisco alone.

So much for the ordinary hazard, but the conflagration hazard is of an entirely different character. Here the inhabitants of no one city could constitute the insurers, for a conflagration might sweep them all down. The insurers must be taken to be the inhabitants of many cities, as many in fact as can be found for which the conflagration hazard is nearly the same. But still the average is not obtained, for even in all the large cities of the country together, conflagrations do not occur in any regular way year by year. It is necessary therefore, to take not any one year but a long series of years in order to obtain the necessary average without which there can be no real insurance. But even then the average is far from stable; the San Francisco conflagration in three days did more damage than all the other large conflagrations in this country for the last forty years. The only conclusion then is that it is impossible to have any such perfect insurance against conflagrations as against ordinary fires. Insurance is a wonderful institution, but there are limitations to its usefulness.

These considerations have a practical bearing. The part of the premium that is collected to meet the hazard of ordinary fires is expended during the year, the year being in general sufficient to furnish an average, the company being required to hold as a liability the part of the premium that is still unearned. The part of the premium, however, that is designed to meet the conflagration hazard will not in general be expended during a single year, but must be kept perhaps for many years till the occasion arises for its use. This fund is called the surplus, but very fortunately; it should be called the conflagration reserve and should be treated as a liability, just as is the re-insurance reserve. Surplus is something "over"; this is not "over", it is held for a definite purpose and hence is a strict liability. This is not a quibble over names, it is an attempt to demonstrate the accountability of a company as regards its surplus, the surplus being in reality contributions of the policy holders against conflagration.

Admitted then to be a liability; what should be its amount? There are two methods conceivable for its determination, the retrospective and the prospective method, just as in life insurance. The retrospective method analyzes the premiums into a charge for ordinary fires and a charge for conflagrations; this would be very good in order to ascertain what the annual increase of the surplus should be. But the prospective method gives the real criterion of its size. The "average" failing to exist in any reasonable time, the size of the conflagration reserve cannot be based upon what is necessary to meet the "average" conflagration, but instead must be based on what is necessary reasonably to meet a "worst" conflagration, that is, the size of the required surplus shall be determined by the amount of the aggregate risks that are exposed to a single conflagration.

To summarize then, surplus should be treated as a liability and its amount determined by a reference to the aggregate risks exposed to a single

conflagration. A company's business then in a single city must be limited not necessarily to exactly the amount of its surplus, for practically there is not enough insurance to be had to make this possible, but it should have some definite ratio to its surplus. But how is a new company to get a surplus? In either of two ways, start small and grow big, or else put up the surplus in the beginning. And here is the function of the stock company rather than the mutual company. The insurance principle proper breaks down when it comes to dealing with the conflagration hazard and requires a boost from something else, namely, private capital that is willing to assume risk for the sake of gain. Pure insurance, only where there is a proper average, may be entirely mutual as life insurance and fire insurance in the case of well scattered risks.

A new company then which desires to write business exposed to a conflagration hazard must put up a surplus. As the business develops and the surplus grows the company may take on a growing amount of city business. If the company should desire to write less city business at any time or to retire altogether, part or all of the surplus would be freed from its character as a liability and would be at the disposal of the company.

The result arrived at is no strange thing. It is nothing but what has occurred to every thoughtful person who has known the insurance situation following a conflagration. It is simply an insistence upon some commensurateness between the resources of a company and the amount at risk in a region subject to a single conflagration, an attempt therefore to prevent companies with a capital and surplus of \$250,000 but with an energetic agent, from assuming the conflagration risk that belongs to a company of ten times that size; namely, in this case the companies that are now able to pay only 30 to 60 percent. Notice in the table the great range in value of

the ratio of premium income to available assets.

You may say, leave such companies to perish of their own egregious intemperateness; that would do very well if it were the company only that suffered, but the greatest sufferers are the policy holders. There is, to be sure, the eventual action of the law of the survival of the fit, and if insurers were intelligent enough and well-informed enough this would be better than legislation.

Before you go into a theater it would be well if you were able yourself to examine into the safety of the building; since that is out of the question the next best thing is a building law.

It is almost equally difficult personally to know the fitness of an insurance company to assume a risk. In view of the impracticability of doing this, the next best thing is a law regarding liability. There is a law regarding liability for the unearned current premium, there ought to be a law regarding liability for unearned conflagration accumulations.

Now it is only fair when funds to meet a potential liability have been provided in a prescribed manner that this measure of the potential liability should be taken after the loss has occurred as a measure of the actual liability. That is, if a company has maintained its conflagration reserve, its liability in case a conflagration has occurred should be limited to this amount. This being a part of the contract introduces no element of unfairness; the insured instead of buying insurance with theoretically unlimited liability but practically most decidedly limited because of the well known expense and delay of litigation and the undesirableness of receiverships, buys insurance in which liability is definitely and legally limited; but the protection is standardized.

This again is not a matter of far-away theoretical interest; it is vitally connected with the actual situation in San Francisco. No fact has been more striking than that practically the liability of the companies has been limited. In spite of the fact that companies could be brought into the courts and compelled to pay their claims in full or be driven into acknowledged insolvency, in spite of the fact that there is a state law regarding stockholders' unlimited liability, it is a most notable fact that three companies are in the hands of receivers, that more than half the companies have been able to settle their claims at less than their face value with few lawsuits, that companies which have paid but fifty and sixty percent are likely to be able to close out their claims and yet preserve their plants. This is a state of actually limited liability. Which is the better, theoretically unlimited liability with such an attendant host of disagreeable features as we have had in San Francisco, amounting as a matter of fact to limited liability, or a legally limited liability with standardized protection?

Nothing is gained by taking the pound of flesh. To drive a company into insolvency and thereby destroy its plant is to kill the goose that laid the golden eggs. Set a reasonable standard of protection against conflagration, then if this has been observed absolve the company from further liability. The company will then have saved its plant and may immediately go on in business on whatever scale its remaining funds or funds to be put up by its stockholders will warrant.

The details of such a plan can manifestly not be given here, but it is perfectly possible to work them out in an entirely practically consistent way. To sum up, however, the advantages of such a plan are, first, no company could write an inordinate amount of business and so nullify its capacity to

indemnity; second, there would be better, and not only better, but standardized, protection against conflagration; third, the business of fire insurance with this element of uncertainty removed would be far more attractive to capital and would appeal to a better class of investors.

This, by the way, might apparently seem to be dictated by a thought of what would be best for the companies. Not so at all. The fundamentally mutual character of insurance is so dominant that the company is almost lost sight of. As a matter of fact what is best for the insured and what is best for the company are in any large matters identical.

One point more; it may be said that a law of the kind proposed would work a hardship upon the small company. No great hardship; a small company may do as much country business as it pleases, and it may take a share of city business proportionate to its size. To attempt to minimize the advantage of size in fire insurance is ridiculous. Nowhere else is it more true that "to him that hath shall be given"; it reads: "to him that hath a large surplus shall be given much city business and from him that hath not shall be taken away (by reinsuring it, if a company can be found to take it) most of that which an over-energetic agent has written."

And now let us come back to the immediately practical business as it is today. Massachusetts, which has always been the leader in intelligent insurance legislation, had a law a few years ago limiting the amount of risks that a company might assume in any one of certain districts in Boston. The law was repealed. It was presumably found that with the law in operation it was impossible to obtain enough insurance, the reason of course being that, while the legally prescribed limit would have yielded as much insurance as before, as a matter of fact the conservative companies would not write up to

the limit allowed. There was therefore a deficiency of, to be sure, a very poor type of insurance, namely, one that gave practically no protection against conflagrations but nevertheless it gave fairly good protection in the case of ordinary losses, and for this purpose, in the lack of anything better, could not be spared.

This, then, apparently disposes of the practical possibility of placing a limit upon city-risk. Yes, absolutely, in large cities if the supply of insurance is to be always limited to what is available now. But the one hope of bettering insurance protection against conflagrations is the enlistment of more insurance capital, and the one way of doing this is to make the business more attractive. A limited liability law would do this. As a matter of fact the safety-fund laws of various states, New York among the number, are exactly of this nature but if the liability is to be limited the simplest, most natural limit seems to be had by a reference to the aggregate amount exposed to a single conflagration as outlined above.

Still as a matter of fact whether liability should be limited to the surplus, the surplus and capital, or to the surplus, capital and the excess of the unearned premium reserve over the actual cost of reinsuring the outstanding risks is a matter of detail; the important thing is to grant some form of limited liability in case of conflagration that will save the plant; but it should be granted only if there is the proper commensurateness between the conflagration-risk and the company's assets.

It is worthwhile to think of conflagrations or do they come so seldom that we may go on in sweet oblivion? Is the insurance business to be organized with the possibility of a conflagration clearly recognized or is it to be based on ordinary loss, and Heaven help us if we have a conflagration? A conflagration may be a theory in New York but it is a fact in San Francisco.

The conflagration hazard, basing it upon the three large conflagrations of the last fifty years, excluding the San Francisco conflagration, and spreading it over the twenty largest cities of the United States, can be demonstrated to have been (on the assumption that the rates have been adequate), on mercantile stocks half as large as the ordinary hazard, and on so-called fireproof buildings several times as great as the ordinary hazard. This does not appear to be a hazard that should be neglected.

13. INSURANCE LEGISLATION

Nothing is more certain than that there ought to be more money invested in the fire insurance business than there is today, or than there has ever been, if there is to be adequate insurance protection for large cities. To this end as has been said, it is desirable that the business of fire insurance should be made as attractive to capital as may be consistent with the good of the insured.

A long step in this direction may be taken by applying intelligence and fair-mindedness to the subject of insurance legislation; in fact intelligent legislation would have the effect of improving conditions for both the insurer and the insured, for inevitably any restriction upon the insurer is immediately shifted to the shoulders of the insured. But in our present condition in California the thing we least need now is more legislation. Publicity is better than legislation, and for some years fire insurance will continue to be a matter of public interest. There is no more inexorable economic fact than that unwise legislation will do one of two things, either raise the rates or drive companies out of business. The best thing that could possibly be done for the insured is to remove all unnecessary restrictions from the companies and to encourage the formation of organizations for properly adjusting rates and preserving stable conditions.

Such organizations seem to have the character of trusts, but in reality their nature is entirely different. Of course any organization may be used in such a way as to prevent competition and doubtless Boards may be and have been used for this purpose; but there is nothing in the fundamental nature of a Board as rate-maker that tends to restrict competition; quite the opposite; for this information regarding rates must of necessity become

largely public property, and is to that extent generally available for whoever will to use. There will always be non-Board companies and rates will always be kept down by competition.

14. A STANDARD FORM OF POLICY

There is one matter that will almost surely be brought up at the coming meeting of the legislature of this state, and that is the adoption of a standard fire insurance policy. The more simple and uniform the contracts in an insured community, the better all around. There are some very strong reasons for adopting the New York standard form of policy.

1st, it is the best existing form. It was made carefully by a committee from the insurance companies and the state superintendent of insurance.

2nd, the creation of a new form would be a work that should require far more time and thought than could possibly be given to it now.

3rd, the New York standard form has been adopted by a number of states and, in the twenty years it has been in use, has received a large number of legal interpretations. This is unquestionably the point of greatest importance, since a policy has no surely ascertained meaning till it has received the interpretation of the courts.

The policy, to be sure, does not impress one with its simplicity nor its fairness to the insured; it is not an ideal policy; but its faults are lessened by the interpretations of the courts. At any rate this is no time to experiment. San Francisco now needs more than ever all the insurance that it can get and it is not expedient, to say the least, to run the chance of driving companies away that are already not oversure that they wish to stay.

If a standard form of policy is adopted there should be some prescribed method of adding qualifying clauses, as for instance in red ink. There are some companies that will not do business on this coast without an earthquake clause. They should be allowed to offer their goods for sale, provided the goods are properly marked.

15. A DEPOSIT LAW

The state platform of one of the political parties contains a recommendation in favor of a state deposit law. This must surely have been adopted under a misapprehension, perhaps because of the feeling that if a deposit is to be made, the more closely at home it is made, the better. In reality a law requiring a company to make a deposit of any adequateness in the state, if adopted by all states, would drive foreign insurance companies from the country. If "foreign" means American companies that are non-Californian, then such a law even if passed by California alone would kill the California companies, because of the retaliatory laws of other states, which would require the California companies to make the same deposit in every state in which there was such a law. Policyholders would be sufficiently protected if the law provided for funds anywhere in the United States for the benefit of United States policyholders.

16. THE STOCKHOLDERS' LIABILITY LAW

One of the most remarkable features of this present insurance situation, as has been said before, has been the remarkably small number of appeals that have been made to the courts. The companies that have found difficulty in making compromise settlements have not been the companies which were "hard hit" or "down and out", but the companies which were able to pay. In spite of the fact that California has a stockholders' individual liability law, there is actually* likely to be no test made of it. This is certainly as critical a situation as is likely to occur and if the law in this case is shown not to correspond to a popular want it should by all means be repealed, at least so far as it applies to insurance companies, for its presence acts only to keep careful companies out of the state.

* Later, suits have been begun in Chicago.

17. UNDERWRITING AGENCIES

It is hard, at least for a layman, to understand how the existence of underwriters' agencies can be for the best good of legitimate underwriting. They possess no assets and are not recognized by the Insurance Commissioner. In a time such as the present, their effect is to interject an irresponsible element between the insured and the real insurer. The only reason for the existence of such underwriting fictions is apparently that a company and a fiction can do more business than a company alone, but the question is, can not any company through its ordinary channels do as much business as it legitimately should.

18. FIRE WASTE

The most discouraging feature of the Fire Insurance situation in the United States is the indifference of the American people to the enormous annual fire-loss, due principally to flimsy and meretricious construction. It is generally known that the average rate in the United States is over twelve times as large as the average rate in Great Britain and twenty-eight times as large as the average rate in Spain?

It is to be feared that cheap construction is such an ingrained national fault that it is almost hopeless to combat it. But San Francisco with its monumental lesson from earthquake and fire should think of these things seriously. The insurance companies are exerting an influence for better things by penalizing bad construction and making allowances for good construction in their rates and they should have the support and interest of every good citizen. There is one sure way of preventing conflagrations, and that is by giving fire nothing to burn.

19. SELF-INSURANCE

One of the questions that has been raised by this situation is with regard to self-insurance. Under what conditions is self-insurance desirable and good protection? In the first place there must be enough risks to yield a good average, second, these risks must be scattered in such a way as not to be subject to a single conflagration. Self-insurance in San Francisco, even if the risks were large in number, would not be safe.

There are evidently some who suppose that carrying no insurance is in itself self-insurance; not in the least, it is simply not being insured, not even by oneself. Insurance is a plan for averting the severe incidence of a loss by dividing its effects among all those who are exposed to a like hazard. In self-insurance the contributors are the whole of the risks, but their contributions must not be held in abeyance and then called upon when a loss comes, but they must be placed in a fund. The difference is just this: if the contributions are not actually segregated they are likely to be so tied up in the properties involved that when called upon suddenly the setting of them free is as disastrous as the unshared loss itself.

The contributions of the various properties should instead be collected into a fund and invested in easily convertible securities. In some conceivable cases the investment might be made in the very class of property insured; in such cases no insurance and self-insurance would be the same thing, as for instance in the case where a man owns a large number of rented dwelling-houses. The loss of one of these does not come as a shock to the whole property.

On the other hand, suppose a property consisting of detached buildings of a manufacturing plant. When the paint shop burns it is a distinct loss and

must be individually replaced; and yet the blacksmith's shop cannot be sold to pay for it, nor the office building; they are all needed and indemnity cannot be furnished from any of these sources. If a wise course has been pursued the premiums that would have been paid to an insurance company have been invested, not in the business itself, but in securities which have no connection with the business.

No properties should enter upon self-insurance until an insurance fund has been collected. The entrance, therefore, should be gradual; year by year, as the fund grows, insurance in companies may be discarded. What the size of this fund should be depends upon the nature of the properties and the number of separate risks.

20. FIRE INSURANCE PROFITS

In connection with this conflagration it is interesting to draw attention to the profit account in fire insurance. The underwriting profit has averaged lately, that is for the last ten or twenty years before the San Francisco fire, about 3 percent of the gross premium receipts. It is probable, however, that the loss in this fire will sweep out all such profit for the last fifty years. For if, off hand, we take the premium receipts in the United States during that time to have been six billion dollars, which is probably more rather than less than the true amount, the profit must have been somewhere near \$180,000,000. The amount that will finally be paid in San Francisco is probably at least as much as this, thus leaving no underwriting profit during this time.

This does not mean, however, that the business has been conducted at a loss, for the principal source of profit is the interest on securities. As the assets of a company, which consist of the unearned premium fund, the surplus and the capital should be several times the capital, interest on these at, say, 4 percent would give an excellent return upon the capital. When, however, one considers that the surplus is often largely made up of contributions by the stockholders and that not unfrequently they have been called upon to subscribe new funds to carry on the business, the return does not seem too large for the risk that is assumed.

21. CONCLUSION

A few things remain to be said in conclusion. In the first place, unquestionably, taken all in all, the companies have done remarkably well. An immense sum of money has been paid into this city, a far larger sum than companies have ever been called upon to pay at one time before. In spite of the earthquake, in spite of the nearness in time of the Baltimore and Toronto conflagrations, the companies will finally have paid undoubtedly in the neighborhood of 80 percent of the amount of insurance involved. At Chicago there was 50 percent paid, at Baltimore 90 percent. The remarkable difference between the showing made by the companies at San Francisco and at Chicago where there were 46 that failed shows the great progress that has been made in 35 years in legitimate underwriting. And yet the San Francisco experience clearly points the way to needed improvements.

The people of San Francisco owe a particular debt of gratitude to the companies which made the fight for the old methods, for adjustment of claims on their merits and for payment of just claims in full.

It must be evident that such a report as this is entirely inadequate to express the situation in any vivid way. It has been a trying time that most people will be glad to forget. So much money in controversy has caused an overstrain on human nature on both sides.

Unfortunately also most of the figures as to loss and liability are only estimates.

A very great deal of time has been spent upon the collection and tabulation of the data upon which the account of settlements has been made; these figures are believed to be correct; if any injustice has been done it

has certainly not been from a lack of careful consideration.

May there never be another such fire!

APPENDIX

(This reproduces the Index which appeared in the original report)

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