CHARLES MORRIS

THE SAN FRANCISCO CALAMITY BY EARTHQUAKE AND FIRE

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PREFACE

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Earthquake and famine, fire and sudden death—these are the destroyers that men fear when they come singly; but upon the unhappy people of California they came together, a hideous quartette, to slay human beings, to blot from existence the wealth that represented prolonged and strenuous effort, to bring hunger and speechless misery to three hundred thousand homeless and terror-stricken people.

The full measure of the catastrophe can probably never be taken. The summary cannot be made amid the panic, the confusion, the removal of ancient landmarks, the complete subversion of the ordinary machinery of society. When chaos comes, as it did in San Francisco, and all the channels of familiar life are closed, and human anguish grows to be intolerable, compilation of statistics is impossible, even if it were not repugnant to the feelings. And when order is once more restored, after the lapse of many weeks, months and perhaps years, the details of the calamity have merged into one undecipherable mass of misery which defies the analyst and the historian. It is the purpose of this book faithfully to record the story of these awful days when years were lived in a moment and to preserve an accurate chronicle of them, not only for the people whose hearts yearn in sympathy to-day, but for their posterity.

Other frightful catastrophes the world has known. The earthquake which dropped Lisbon into the sea in 1755, and in a moment swallowed up twenty-five thousand people, was perhaps more awful than the convulsion which has brought woe to San Francisco. When Krakatoa Mountain, in the Straits of Sunda, in 1883, split asunder and poured

across the land a mighty wave, in which thirty-six thousand human beings perished, the results also were more terrible.

The whirlwind of fire which consumed St. Pierre, in the Island of Martinique, and the devastation wrought by Vesuvius a few days previous to that at San Francisco, need not be used for comparison with the latter tragedy, but they may be referred to, that we may recall the fact that this land of ours is not the only one which has suffered.

But since the western hemisphere was discovered there has been in this quarter of the globe no violence of natural forces at all comparable in destructive fury with that which was manifested upon the Pacific coast. The only other calamity at all equalling it, or surpassing it, was the Civil War, and that was the work of the evil passions of man inciting him to slay his brother, while Nature would have had him live in peace.

The earthquake in San Francisco, which crumbled strong buildings as if they were made of paper, would have been terrible enough; but afterward came the horror of fire and of imprisoned men and women burned alive, and now to it was added the suffering of multitudes from hunger and exposure.

Public attention is fixed on the great city; but smaller cities had their days and nights of destruction, horror and misery. Some were almost destroyed. Others were partly ruined, and beyond their borders, over a wide area, the trembling of the earth toppled houses, annihilated property and transformed riches into poverty. The cost in life can be reckoned. The money loss will never be computed, for the appraised value of the wrecked property conveys no notion of the consequences of the almost complete paralysis, for a time, of the commercial operations by means of which men and women earn their bread.

When the weakness and the folly and the sin of men bring woe upon other men, there are plenty of texts for the preacher and no scarcity of earnest preachers. But here is a vast and awful catastrophe that befell from an act of Nature apparently no more extraordinary than the shrinkage of hot metal in the process of cooling. The consequences are terrifying in this case because they involve the habitations of half a million people; but, no doubt, the process goes on somewhere within the earth almost continuously, and it no more involves the theory of malignant Nature than that of an angry God.

If we contemplate it, possibly we may be helped to a profitable estimate of our own relative insignificance. We think, with some notion of our importance, of the thousand million men who live upon the earth; but they are a mere handful of animate atoms in comparison with the surface, to say nothing of the solid contents, of the globe itself.

We are fond of boasting in this latter day of man’s marvelous success in subduing the forces of Nature; and, while we are in the midst of exultation over our victories, Nature tumbles the rocks about somewhere within the bowels of the earth, and we have to learn the old lesson that our triumphs have not penetrated farther than to the very outermost rim of the realms of Nature.

A few weak, almost helpless, creatures, we millions of men stand upon the deck of a great ship, which goes rolling through space that is itself incomprehensible, and usually we are so busy with our paltry ambitions, our transgressions, our righteous labors, our prides and hopes and entanglements that we forget where we are and what is our destiny. A direct interposition from a Superior Power, even if it be hurtful to the body, might be required to persuade us to stop and consider and take anew our bearings, so that we may comprehend in some larger degree our precise relations to things. The wisest men have

been the most ready to recognize the beneficence of the discipline of affliction. If there were no sorrow, we should be likely to find the school of life unprofitable.

For one thing, the school wherein sorrow is a part of the discipline is that in which is developed human sympathy, one of the finest and most ennobling manifestations of the Love which is, in its essence, divine. In human life there is much that is ignoble, and the race has almost contemptible weakness and insignificance in comparison with the physical forces of the universe.

But man is superior to all these forces in his possession of the power of affection; and in almost the lowest and basest of the race this power, if latent and half lost, may be found and evoked by the spectacle of the suffering of a fellow-creature.

The human family looks on with pity while the homeless and hungry and impoverished Californians endure pangs. Wherever the news went, by the swift processes of electricity, there men and women, some of them, perhaps, hardly knowing where California is, were sorry and willing and eager to help. There are quarrels within the family sometimes, when nation wars with nation, and all love seems to have vanished; but the world is, in truth, akin. “God hath made of one blood all the nations of the earth,” and the blood “tells” when suffering comes.

THE PUBLISHERS.

THE SAN FRANCISCO CALAMITY BY EARTHQUAKE AND FIRE

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CHAPTER I.

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San Francisco and Its Terrific Earthquake.

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On the splendid Bay of San Francisco, one of the noblest harbors on the whole vast range of the Pacific Ocean, long has stood, like a Queen of the West on its seven hills, the beautiful city of San Francisco, the youngest and in its own way one of the most beautiful and attractive of the large cities of the United States. Born less than sixty years ago, it has grown with the healthy rapidity of a young giant, outvieing many cities of much earlier origin, until it has won rank as the eighth city of the United States, and as the unquestioned metropolis of our far Western States.

It is on this great and rich city that the dark demon of destruction has now descended, as it fell on the next younger of our cities, Chicago, in 1872. It was the rage of the fire-fiend that desolated the metropolis of the lakes. Upon the Queen City of the West the twin terrors of earthquake and conflagration have descended at once, careening through its thronged streets, its marts of trade, and its abodes alike of poverty and wealth, and with the red hand of devastation sweeping one of the noblest centres of human industry and enterprise from the face of the earth. It is this story of almost irremediable ruin which it is our unwelcome duty to chronicle. But before entering upon this sorrowful task some description of the city that has fallen a prey to two of the earth’s chief agents of destruction must be given.

San Francisco is built on the end of a peninsula or tongue of land lying between the Pacific Ocean and the broad San Francisco Bay, a noble body of inland water extending southward for about forty miles and with a width varying from six to twelve miles. Northward this splendid body of water is connected with San Pablo Bay, ten miles long, and the latter with Suisun Bay, eight miles long, the whole forming a grand range of navigable waters only surpassed by the great northern inlet of Puget Sound. The Golden Gate, a channel five miles long, connects this great harbor with the sea, the whole giving San Francisco the greatest commercial advantages to be found on the Pacific coast.

THE EARLY DAYS OF SAN FRANCISCO.

The original site of the city was a grant made by the King of Spain of four square leagues of land. Congress afterwards confirmed this grant. It was an uninviting region, with its two lofty hills and its various lower ones, a barren expanse of shifting sand dunes extending from their feet. The population in 1830 was about 200 souls, about equal to that of Chicago at the same date. It was not much larger in 1848, when California fell into American hands and the discovery of gold set in train the famous rush of treasure seekers to that far land. When 1849 dawned the town contained about 2,000 people. They had increased to 20,000 before the year ended. The place, with its steep and barren hills and its sandy stretches, was not inviting, but its ease of access to the sea and its sheltered harbor were important features, and people settled there, making it a depot of mining supplies and a point of departure for the mines.

The place grew rapidly and has continued to grow. At first a city of flimsy frame buildings, it became early a prey to the flames, fire sweeping through it three times in 1850 and taking toll of the young city to the value of $7,500,000. These conflagrations swept away most of the wooden houses, and business men began to build more substantially

of brick, stone and iron. Yet to-day, for climatic reasons, most of the residences continue to be built of wood. But the slow-burning redwood of the California hillsides is used instead of the inflammable pine, the result being that since 1850 the loss by fire in the residence section of the city has been remarkably small. In 1900 the city contained 50,494 frame and only 3,881 stone and brick buildings, though the tendency to use more durable materials was then growing rapidly.

Before describing the terrible calamity which fell upon this beautiful city on that dread morning of April 18, 1906, some account of the character of the place is very desirable, that readers may know what San Francisco was before the rage of earthquake and fire reduced it to what it is to-day.

THE CHARACTER OF THE CITY.

The site of the city of San Francisco is very uneven, embracing a series of hills, of which the highest ones, known as the Twin Peaks, reach to an elevation of 925 feet, and form the crown of an amphitheatre of lower altitudes. Several of the latter are covered with handsome residences, and afford a magnificent view of the surrounding country, with its bordering bay and ocean, and the noble Golden Gate channel, a river-like passage from ocean to bay of five miles in length and one in width. This waterway is very deep except on the bar at its mouth, where the depth of water is thirty feet.

Since its early days the growth of the city has been very rapid. In 1900 it held 342,782 people, and the census estimate made from figures of the city directory in 1904 gave it then a population of 485,000, probably a considerable exaggeration. In it are mingled inhabitants from most of the nations of the earth, and it may claim the unenviable honor of possessing the largest population of Chinese outside of China itself, the colony numbering over 20,000.

Of the pioneer San Francisco few traces remain, the old buildings having nearly all disappeared. Large and costly business houses and splendid residences have taken their place in the central portion of the city, marble, granite, terra-cotta, iron and steel being largely used as building material. The great prevalence of frame buildings in the residence sections is largely due to the popular belief that they are safer in a locality subject to earthquakes, while the frequent occurrence of earth tremors long restrained the inclination to erect lofty buildings. Not until 1890 was a high structure built, and few skyscrapers had invaded the city up to its day of ruin. They will probably be introduced more frequently in the future, recent experience having demonstrated that they are in considerable measure earthquake proof.

The city before the fire contained numerous handsome structures, including the famous old Palace Hotel, built at a cost of $3,000,000 and with accommodations for 1,200 guests; the nearly finished and splendid Fairmount Hotel; the City Hall, with its lofty dome, on which $7,000,000 is said to have been spent, much of it, doubtless, political plunder; a costly United States Mint and Post Office, an Academy of Science, and many churches, colleges, libraries and other public edifices. The city had 220 miles of paved streets, 180 miles of electric and 77 of cable railway, 62 hotels, 16 theatres, 4 large libraries, 5 daily newspapers, etc., together with 28 public parks.

Sitting, like Rome of old, on its seven hills, San Francisco has long been noted for its beautiful site, clasped in, as it is, between the Pacific Ocean and its own splendid bay, on a peninsula of some five miles in width. Where this juts into the bay at its northernmost point rises a great promontory known as Telegraph Hill, from whose height homeless thousands have recently gazed on the smoke rising from their ruined homes. In the early days of golden promise a

watchman was stationed on this hill to look out for coming ships entering the Golden Gate from their long voyage around the Horn and signal the welcome news to the town below. From this came its name.

Cliffs rise on either side of the Golden Gate, and on one is perched the Cliff House, long a famous hostelry. This stands so low that in storms the surf is flung over its lower porticos, though its force is broken by the Seal Rocks. A chief attraction to this house was to see the seals play on these rocks, their favorite place of resort. The Cliff House was at first said to have been swept bodily by the earthquake into the sea, but it proved to be very little injured, and stands erect in its old picturesque location.

In the vicinity of Telegraph Hill are Russian and Nob Hills, the latter getting its peculiar title from the fact that the wealthy “nobs,” or mining magnates, of bonanza days built their homes on its summit level. Farther to the east are Mount Olympus and Strawberry Hill, and beyond these the Twin Peaks, which really embrace three hills, the third being named Bernal Heights. Farther to the south and east is Rincan Hill, the last in the half moon crescent of hills, within which is a spread of flat ground extending to the bay. Behind the hills on the Pacific side stretches a vast sweep of sand, at some places level, but often gathered into great round dunes. Part of this has been transformed into the beautiful Golden Gate Park, a splendid expanse of green verdure which has long been one of San Francisco’s chief attractions.

Beneath the whole of San Francisco is a rock formation, but everywhere on top of this extends the sand, the gift of the winds. This is of such a character that a hole dug in the street anywhere, even if only to the depth of a few feet, must be shored up with planking or it will fill as fast as it is excavated, the sand running as dry as the contents of an hour glass. When there is an earthquake—or a “temblor,” to

use the Spanish name—it is the rock foundation that is disturbed, not the sand, which, indeed, serves to lessen the effect of the earth tremor.

THE FOUNDATIONS OF THE CITY.

Leaving the region of the hills and descending from their crescent-shaped expanse, we find a broad extent of low ground, sloping gently toward the bay. On this low-lying flat was built all of San Francisco's business houses, all its principal hotels and a large part of its tenements and poorer dwellings. It was here that the earthquake was felt most severely and that the fire started which laid waste the city.

Rarely has a city been built on such doubtful foundations. The greater part of the low ground was a bay in 1849, but it has since been filled in by the drifting sands blown from the ocean side by the prevailing west winds and by earth dumped into it. Much of this land was "made ground." Forty-niners still alive say that when they first saw San Francisco the waters of the bay came up to Montgomery Street. The Palace Hotel was in Montgomery Street, and from there to the ferry docks—a long walk for any man—the water had been driven back by a "filling-in" process.

This is the district that especially suffered, that south of Market and east of Montgomery Streets. Nearly all the large buildings in this section are either built on piles driven into the sand and mud or were raised upon wooden foundations. It is on such ground as this that the costly Post Office building was erected, despite the protests of nearly the entire community, who asserted that the ground was nothing but a filled-in bog.

In none of the earthquakes that San Francisco has had was any serious damage except to houses in this filled-in territory, and to houses built along the line of some of the many streams which ran from the hills down to the bay, and which were filled in as the town grew—for instance, the

Grand Opera House was built over the bed of St. Anne's Creek. A bog, slough and marsh, known as the Pipeville Slough, was the ground on which the City Hall was built, and which was originally a burying ground. Sand from the western shore had blown over and drifted into the marsh and hardened its surface.

When the final grading scheme of the city was adopted in 1853, and work went on, the water front of the city was where Clay Street now is, between Montgomery and Sansome Streets. The present level area of San Francisco of about three thousand acres is an average of nine feet above or below the natural surface of the ground and the changes made necessitated the transfer of 21,000,000 cubic yards from hills to hollows. Houses to the number of thousands were raised or lowered, street floors became subcellars or third stories and the whole natural face of the ground was altered.

Through this infirm material all the pipes of the water and sewer system of San Francisco in its business districts and in most of the region south of Market street were laid. When the earthquake came, the filled-in ground shook like the jelly it is. The only firm and rigid material in its millions of cubic yards of surface area and depth were the iron pipes. Naturally they broke, as they would not bend, and San Francisco's water system was therefore instantly disabled, with the result that the fire became complete master of the situation and raged uncontrolled for three days and nights.

Although the earthquake wrecked the business and residential portions of the city alike, on the hills the land did not sink. All "made ground" sank in consequence of the quaking, but on the high ground the upper parts of the buildings were about the only portions of the structures wrecked. Most of the damage on the hills was done by falling chimneys. On Montgomery Street, half a block from the main office of the Western Union Company, the middle

of the street was cracked and blown up, but during the shocks which struck the Western Union building only the top stories were cracked. Similar phenomena were experienced in other localities, and the bulk of the disaster, so far as the earthquake was concerned, was confined to the low-lying region above described.

THE BANE OF THE EARTHQUAKE.

From the origin of San Francisco the earthquake has been its bane. During the past fifty years fully 250 shocks have been recorded, while all California has been subject to them. But frequency rather than violence of shocks has been the characteristic of the seismic history of the State, there having been few shocks that caused serious damage, and none since 1872 that led to loss of life.

There was a violent shock in 1856, when the city was only a mining town of small frame buildings. Several shanties were overthrown and a few persons killed by falling walls and chimneys. There was a severe shock also in 1865, in which many buildings were shattered. Next in violence was the shock of 1872, which cracked the walls of some of the public buildings and caused a panic. There was no great loss of life. In April, 1898, just before midnight, there was a lively shakeup which caused the tall buildings to shake like the snapping of a whip and drove the tourists out of the hotels into the streets in their nightclothes. Three or four old houses fell, and the Benicia Navy Yard, which is on made ground across the bay, was damaged to the extent of about $100,000. The last severe shock was in January, 1900, when the St. Nicholas Hotel was badly damaged.

These were the heaviest shocks. On the other hand, light shocks, as above said, have been frequent. Probably the sensible quakes have averaged three or four a year. These are usually tremblings lasting from ten seconds to a minute and just heavy enough to wake light sleepers or to shake dishes about on the shelves. Tourists and newcomers are

generally alarmed by these phenomena, but old Californians have learned to take them philosophically. To one who is not afraid of them, the sensation of one of these little tremblers is rather pleasant than otherwise, and the inhabitants grew so accustomed to them as rarely to let them disturb their equanimity.

After 1900 the forces beneath the earth seemed to fall asleep. As it proved, they were only biding their time. The era was at hand when they were to declare themselves in all their mighty power and fall upon the devoted city with ruin in their grasp. But all this lay hidden in the secret casket of time, and the city kept up to its record as one of the liveliest and in many respects the most reckless and pleasure-loving on the continent, its people squandering their money with thoughtless improvidence and enjoying to the full all the good that life held out to them.

On the 17th of April, 1906, the city was, as usual, gay, careless, busy, its people attending to business or pleasure with their ordinary vim as inclination led them, and not a soul dreaming of the horrors that lay in wait. They were as heedless of coming peril and death as the inhabitants of Sodom and Gomorrah before the rain of fire from heaven descended upon their devoted heads. This is not to say that they were doomed by God to destruction like these “cities of the plains.” We should more wisely say that the forces of ruin within the earth take no heed of persons or places. They come and go as the conditions of nature demand, and if man has built one of his cities across their destined track, its doom comes from its situation, not from the moral state of its inhabitants.

THE GREAT DISASTER OF 1906.

That night the people went, with their wonted equanimity, to their beds, rich and poor, sick and well alike. Did any of them dream of disaster in the air? It may be so, for often, as the poet tells us, “Coming events cast their shadows

before.” But, forewarned by dreams or not, doubtless not a soul in the great city was prepared for the terrible event so near at hand, when, at thirteen minutes past five o’clock on the dread morning of the 18th, they felt their beds lifted beneath them as if by a Titan hand, heard the crash of falling walls and ceilings, and saw everything in their rooms tossed madly about, while through their windows came the roar of an awful disaster from the city without.

It was a matter not of minutes, but of seconds, yet on all that coast, long the prey of the earthquake, no shock like it had ever been felt, no such sudden terror awakened, no such terrible loss occasioned as in those few fearful seconds. Again and again the trembling of the earth passed by, three quickly repeated shocks, and the work of the demon of ruin was done. People woke with a start to find themselves flung from their beds to the floor, many of them covered with the fragments of broken ceilings, many lost among the ruins of falling floors and walls, many pinned in agonizing suffering under the ruins of their houses, which had been utterly wrecked in those fatal seconds. Many there were, indeed, who had been flung to quick if not to instant death under their ruined homes.

Those seconds of the reign of the elemental forces had turned the gayest, most careless city on the continent into a wreck which no words can fitly describe. Those able to move stumbled in wild panic across the floors of their heaving houses, regardless of clothing, of treasures, of everything but the mad instinct for safety, and rushed headlong into the streets, to find that the earth itself had yielded to the energy of its frightful interior forces and had in places been torn and rent like the houses themselves. New terrors assailed the fugitives as fresh tremors shook the solid ground, some of them strong enough to bring down shattered walls and chimneys, and bring back much of the mad terror of the first fearful quake. The heaviest of these

came at eight o’clock. While less forcible than that which had caused the work of destruction, it added immensely to the panic and dread of the people and put many of the wanderers to flight, some toward the ferry, the great mass in the direction of the sand dunes and Golden Gate Park.

The spectacle of the entire population of a great city thus roused suddenly from slumber by a fierce earthquake shock and sent flying into the streets in utter panic, where not buried under falling walls or tumbling debris, is one that can scarcely be pictured in words, and can be given in any approach to exact realization only in the narratives of those who passed through its horrors and experienced the sensations to which it gave rise. Some of the more vivid of these personal accounts will be presented later, but at present we must confine ourselves to a general statement of the succession of events.

The earthquake proved but the beginning and much the least destructive part of the disaster. In many of the buildings there were fires, banked for the night, but ready to kindle the inflammable material hurled down upon them by the shock. In others were live electric wires which the shock brought in contact with woodwork. The terror-stricken fugitives saw, here and there, in all directions around them, the alarming vision of red flames curling upward and outward, in gleaming contrast to the white light of dawn just showing in the eastern sky. Those lurid gleams climbed upward in devouring haste, and before the sun had fairly risen a dozen or more conflagrations were visible in all sections of the business part of the city, and in places great buildings broke with startling suddenness into flame, which shot hotly high into the air.

While the mass of the people were stunned by the awful suddenness of the disaster and stood rooted to the ground or wandered helplessly about in blank dismay, there were many alert and self-possessed among them who roused

themselves quickly from their dismay and put their energies to useful work. Some of these gave themselves to the work of rescue, seeking to save the injured from their perilous situation and draw the bodies of the dead from the ruins under which they lay. Those base wretches to whom plunder is always the first thought were as quickly engaged in seeking for spoil in edifices laid open to their plundering hands by the shock. Meanwhile the glare of the flames brought the fire-fighters out in hot haste with their engines, and up from the military station at the Presidio, on the Golden Gate side of the city, came at double quick a force of soldiers, under the efficient command of General Funston, of Cuban and Philippine fame. These trained troops were at once put on guard over the city, with directions to keep the best order possible, and with strict command to shoot all looters at sight. Funston recognized at the start the necessity of keeping the lawless element under control in such an exigency as that which he had to face. Later in the day the First Regiment of California National Guards was called out and put on duty, with similar orders.

RESCUERS AND FIRE-FIGHTERS.

The work of fighting the fire was the first and greatest duty to be performed, but from the start it proved a very difficult, almost a hopeless, task. With fierce fires burning at once in a dozen or more separate places, the fire department of the city would have been inadequate to cope with the demon of flame even under the best of circumstances. As it was, they found themselves handicapped at the start by a nearly total lack of water. The earthquake had disarranged and broken the water mains and there was scarcely a drop of water to be had, so that the engines proved next to useless. Water might be drawn from the bay, but the centre of the conflagration was a mile or more away, and this great body of water was rendered useless in the stringent exigency.

The only hope that remained to the authorities was to endeavor to check the progress of the flames by the use of dynamite, blowing up buildings in the line of progress of the conflagration. This was put in practice without loss of time, and soon the thunder-like roar of the explosions began, blasts being heard every few minutes, each signifying that some building had been blown to atoms. But over the gaps thus made the flames leaped, and though the brave fellows worked with a desperation and energy of the most heroic type, it seemed as if all their labors were to be without avail, the terrible fire marching on as steadily as if a colony of ants had sought to stay its devastating progress.

THE HORROR OF THE PEOPLE.

It was with grief and horror that the mass of the people gazed on this steady march of the army of ruin. They were seemingly half dazed by the magnitude of the disaster, strangely passive in the face of the ruin that surrounded them, as if stunned by despair and not yet awakened to a realization of the horrors of the situation. Among these was the possibility of famine. No city at any time carries more than a few days' supply of provisions, and with the wholesale districts and warehouse regions invaded by the flames the shortage of food made itself apparent from the start. Water was even more difficult to obtain, the supply being nearly all cut off. Those who possessed supplies of food and liquids of any kind in many cases took advantage of the opportunity to advance their prices. Thus an Associated Press man was obliged to pay twenty-five cents for a small glass of mineral water, the only kind of drink that at first was to be had, while food went up at the same rate, bakers frequently charging as much as a dollar for a loaf. As for the expressmen and cabmen, their charges were often practically prohibitory, as much as fifty dollars being asked for the conveyance of a passenger to the ferry. Policemen were early stationed at some of the retail shops, regulating

the sale and the price of food, and permitting only a small portion to be sold to each purchaser, so as to prevent a few persons from exhausting the supply.

The fire, the swaying and tottering walls, the frequent dynamite explosions, each followed by a crashing shower of stones and bricks, rendered the streets very unsafe for pedestrians, and all day long the flight of residents from the city went on, growing quickly to the dimensions of a panic. The ferryboats were crowded with those who wished to leave the city, and a constant stream of the homeless, carrying such articles as they had rescued from their homes, was kept up all day long, seeking the sand dunes, the parks and every place uninvaded by the flames. Before night Golden Gate Park and the unbuilt districts adjoining on the ocean side presented the appearance of a tented city, shelter of many kinds being improvised from bedding and blankets, and the people settling into such sparse comfort as these inadequate means provided.

A strange feature of the disaster was a rush to the banks by people who wished to get their money and flee from the seemingly doomed city. The fire front was yet distant from these institutions, which were destined to fall a prey to the flames, and all that morning lines of dishevelled and half-frantic men stood before the banks on Montgomery and Sansome Streets, braving in their thirst for money the smoke and falling embers and beating in wild anxiety upon the doors. Their effort was vain; the doors remained closed; finally the police drove these people away, and the banks went on with the work of saving their valuables. As for the people who wildly fled toward the ferries, in spite of the fact that ten blocks of fire, as the day went on, stopped all egress in that direction, it became necessary for them to be driven back by the police and the troops, and they were finally forced to seek safety in the sands. And thus, with

incident manifold, went on that fatal Wednesday, the first day of the dread disaster.

OFFICIAL RECORD OF THE EARTHQUAKE.

It is important here to give the official record of the earthquake shocks, as given by the scientists. Professor George Davidson, of the University of California, says of them:

“The earthquake came from north to south, and the only description I am able to give of its effect is that it seemed like a terrier shaking a rat. I was in bed, but was awakened by the first shock. I began to count the seconds as I went towards the table where my watch was, being able through much practice closely to approximate the time in that manner. The shock came at 5.12 o’clock. The first sixty seconds were the most severe. From that time on it decreased gradually for about thirty seconds. There was then the slightest perceptible lull. Then the shock continued for sixty seconds longer, being slighter in degree in this minute than in any part of the preceding minute and a half. There were two slight shocks afterwards which I did not time. At 8.14 o’clock I recorded a shock of five seconds’ duration, and one at 4.15 of two seconds. There were slight shocks which I did not record at 5.17 and at 5.27. At 6.50 P. M. there was a sharp shock of several seconds.”

Professor A. O. Louschner, of the students’ observatory of the University of California, thus records his observations:

“The principal part of the earthquake came in two sections, the first series of vibrations lasting about forty seconds. The vibrations diminished gradually during the following ten seconds, and then occurred with renewed vigor for about twenty-five seconds more. But even at noon the disturbance had not subsided, as slight shocks are recorded at frequent intervals on the seismograph. The motion was from south-southeast to north-northwest.

“The remarkable feature of this earthquake, aside from its intensity, was its rotary motion. As seen from the print, the sum total of all displacements represents a very regular ellipse, and some of the lines representing the earth’s motion can be traced along the whole circumference. The result of observation indicates that our heaviest shocks are in the direction south-southeast to north-northwest. In that respect the records of the three heaviest earthquakes agree entirely. But they have several other features in common. One of these is that while the displacements are very large the vibration period is comparatively slow, amounting to about one second in the last two big earthquakes.”

If we seek to discover the actual damage done by the earthquake, the fact stands out that the fire followed so close upon it that the traces of its ravages were in many cases obliterated. So many buildings in the territory of the severest shock fell a prey to the flames or to dynamite that the actual work of the earth forces was made difficult and in many places impossible to discover. This fact is likely to lead to considerable dispute and delay when the question of insurance adjustment comes up, many of the insurance companies confining their risk to fire damage and claiming exemption from liability in the case of damage due to earthquake.

Among the chief victims of the earth-shake was the costly and showy City Hall, with its picturesque dome standing loftily above the structure. This dome was left still erect, but only as a skeleton might stand, with its flesh gone and its bare ribs exposed to the searching air. Its roof, its smaller towers came tumbling down in frightful disarray, and the once proud edifice is to-day a miserable wreck, fire having aided earthquake in its ruin. The new Post Office, a handsome government building, also suffered severely from the shock, its walls being badly cracked and injury done by

earthquake and fire that it is estimated will need half a million dollars to repair.

FREAKS OF THE EARTHQUAKE.

One observer states that the earthquake appeared to be very irregular in its course. He tells us that “there are gas reservoirs with frames all twisted and big factories thrown to the ground, while a few yards away are miserable shanties with not a board out of place. Wooden, steel and brick structures hardly felt the earthquake in some parts of the city, while in other places all were wrecked.

“Skirting the shore northwest from the big ferry building—which was so seriously injured that it will have to be rebuilt—the first thing observed was the extraordinary irregularity of the earthquake’s course. Pier No. 5, for instance, is nothing but a mass of ruins, while Pier No. 3, on one side of it and Pier No. 7, on the other side, similar in size and construction, are undamaged. Farther on, the Kosmos Line pier is a complete wreck.”

The big forts at the entrance to the Golden Gate also suffered seriously from the great shake-up, and the emplacements of the big guns were cracked and damaged. The same is the case with the fortifications back of Old Fort Point, the great guns in these being for the present rendered useless. It will take much time and labor to restore their delicate adjustment upon their carriages.

The buildings that collapsed in the city were all flimsy wooden buildings and old brick structures, the steel frame buildings, even the score or more in course of construction, escaping injury from the earthquake shock. Of the former, one of the most complete wrecks was the Valencia Hotel, a four-story wooden building, which collapsed into a heap of ruins, pinning many persons under its splintered timbers.

SKYSCRAPERS EARTHQUAKE PROOF.

In fact, as the reports of damage wrought by the earthquake came in, the conviction grew that one of the safest places during the earthquake shock was on one of the upper floors of the skyscraper office buildings or hotels. As a matter of fact, not a single person, so far as can be learned, lost his or her life or was seriously injured in any of the tall, steel frame structures in the city, although they rocked during the quake like a ship in a gale.

The loss of life was caused in almost every case by the collapse of frame structures, which the native San Franciscan believed was the safest of all in an earthquake, or by the shaking down of portions of brick or stone buildings which did not possess an iron framework. The manner in which the tall steel structures withstood the shock is a complete vindication of the strongest claims yet made for them, and it is made doubly interesting from the fact that this is the first occasion on which the effect of an earthquake of any proportions on a tall steel structure could be studied.

The St. Francis Hotel, a sixteen-story structure, can be repaired at an expenditure of about $400,000, its damage being almost wholly by fire. The steel shell and the floors are intact. Although the building rocked like a ship in a gale while the quake lasted, its foundations are undamaged. Other steel buildings which are so little damaged as to admit of repairs more or less extensive are the James Flood, the Union Trust, the CALL building, the Mutual Savings Bank, the Crocker-Woolworth building and the Postal building. All of these are modern buildings of steel construction, from sixteen to twenty stories.

A peculiar feature of the effect of the earthquake on structures of this kind is reported in the case of the Fairmount Hotel, a fourteen-story structure. The first two stories of the Fairmount are found to be so seriously