

A NEW ERA IN THE CONSTRUCTION OF GREAT BUILDINGS

THE EYES OF THE WORLD ARE WATCHING THE GIGANTIC TEST WHICH IS BEING GIVEN REINFORCED CONCRETE BY NEW SAN FRANCISCO

THE PACIFIC BUILDING ON MARKET STREET AT FOURTH

By Heratio F. Stoll

IN the reconstruction of San Francisco the thought which seems to be uppermost in the minds of most property owners is to build for posterity, to be able to hand down to future generations structures that will defy earthquake and fire. This is the prime reason why reinforced concrete construction has been so largely adopted in the rebuilding of Greater San Francisco. The practical indestructibility of reinforced concrete, its increase of strength with age, its remarkable fireproof qualities tested so severely and with such satisfaction in the Baltimore conflagration, its possibilities of rapid construction, its economy of construction under normal labor conditions, and its tendency to reduce greatly the rate of insurance—all these important features have made a strong appeal to the level headed San Francisco businessman.

rock, which is very clean and free from dirt. The weekly payroll of this particular firm, by the way, is \$38,940, and it uses \$95,000 worth of building material each week.

Many Concrete Buildings

Despite conditions, a good entering wedge has been made by reinforced concrete builders. This is apparent to the stranger from the moment he passes through the ferry building, the tower of which was reconstructed with reinforced concrete. If he stops to watch both methods of construction he will most likely conclude that the steel structures are going up more rapidly than the concrete buildings. This is not only in actual erection of the frame. He probably will not take into consideration the fact that in the case of the steel buildings the work is suspended a long time after the foundations are laid before the steel work is begun. Take, for example, the Moore building at the southeast corner of Market and Second streets. The excavating has been going on all winter and for several months there was a practical cessation of operations. Within a month the steel work has arrived and now the frame is rising with incredible rapidity. In the case of the concrete buildings, on the contrary, the structures rise as soon as the excavations are made, and there is no cessation of work until the buildings are completed and ready for occupancy.

Briefly the difference in the construction is this: For the steel building, after the preliminary sketches are approved by the owner, several weeks or months are required to produce careful working drawings and framing plans, with all the dimensions of every member in exact figures before the steel can be ordered. After these are prepared it requires from five to seven months' time to get delivery of the steel in San Francisco. When the steel is delivered the skeleton frame goes up rapidly, and the public is impressed with its rapid climb skyward, not taking into consideration that the ironing of the columns and girders and the tie floor joists and plumbing pipes and wire conduits installed before it is in fair comparison with reinforced concrete.

On the other hand, when the owner has approved the preliminary sketches for a concrete building, the steel rods forming the shew of the structure can be ordered at once, without waiting for the completion of working drawings, and can be delivered in San Francisco from the Pittsburg mills in five weeks after the order is placed. It goes directly to the buildings from the cars, requiring no shop work, and is all placed in position by unskilled labor. As the structure rises it is completely ready for plastering and all plumbing and heating pipes and electric conduits in place. Each concrete floor slab forms a good roof so that the finishing of the lower stories for the first two or three stories can be completed, while the structural part of the upper stories is being erected.

At the corner of California and Drumm streets the visitor encounters the first strange looking piles, with their fronts and sides hidden beneath a ragged covering of false work, and their top walls bristling with iron strips that stand out sharp against the blue sky. These are the Boyd estate and Santa Marina buildings, which will be ready for occupancy this fall.

The Boyd building is eight stories in height and is to be fitted up for offices for shipping and marine agencies. It will represent an outlay of \$1,000,000. The major portion of the false work has been removed and the building presents a solid, substantial appearance, which seems to justify the claims of the reinforced concrete experts that it will take a greater shock than California has experienced since the coming of the padres to produce in these carefully constructed buildings any sign of failure.



THE ODD CONSTRUCTION OF THE BOYD BUILDING ON MISSION STREET

ornate exterior. The roof is already completed and the four large exterior concrete columns, molded in sections, are now being put in place. A half block above, at the intersection of Market, Kearny and Geary streets, is the glaring white Flannery building, which enjoys the distinction of being the first reinforced concrete office building to be finished and occupied. It is five stories in height and very substantial, being strengthened by a light steel skeleton framework. Much of the ornamentation is molded plaster work, which makes a good appearance, but is really only a flimsy veneer.

Notable Pacific Building

This is by far the most notable reinforced concrete building in San Francisco, or, in fact, in the United States. It will be nine stories high, will cost \$800,000, or 2½ cents a cubic foot, and in equipment and finish will excel anything which San Francisco possessed before the fire. The building has a frontage in Market street of 195 feet and in Fourth 175 feet. Its exterior for the first two stories will be veneered with ceramic tile in rich patterns. Above the second story the entire front will be faced with cream colored glazed terra cotta in rich detail. The corridors and lobbies will be finished in imported marbles and six electric, high speed elevators will be installed. All the offices and stores will be trimmed in mahogany. A law library will be put in for the use of the attorneys who may be tenants. The building will have a complete heating, lighting and power plant sufficient to provide for the needs of all the neighboring buildings.

One striking feature of the Pacific building will be the fact that nine stories are made possible within the limit of the height to which concrete buildings are restricted by the city ordinance—102 feet. The first story will be 20 feet high; the second 12; and the other stories, 10 feet each. By an ingenious arrangement of the structure, the fact that the roof is of concrete makes it possible to dispense entirely with an attic story.

Directly opposite, on the corner of Market and Ellis streets, a large gang of men is putting in the foundation of the West bank building, which is to be one of the handsomest edifices of new San Francisco. The triangular lot has a frontage of 160 feet on Market street and 130 feet on Ellis street, and covers 6,000 square feet. The building will be eight stories high, of pure English gothic architecture, with an ornamental tower at the extremity of its gable. The exterior will be finished in ivory white enameled terra cotta. The cost of the building will be \$220,000, or about 30 cents a cubic foot, in its complete equipment.

Two blocks farther up, on the north side of Market street near Mason, Mrs. Elsie Drexler is erecting a 7 story and basement reinforced concrete building, which will be occupied about October 1 by Brittain & Co., retail dealers in hardware, general household and sporting goods. They have taken a 10 years' lease of the premises at a total rental of about \$50,000.



THE ODD CONSTRUCTION OF THE BOYD BUILDING ON MISSION STREET

Nearly opposite the Bellevue hotel, Mrs. Nellie P. Moulton will build an 8 story, high class apartment house (28x62-6). The various stories will be divided into suites of two or three rooms, so arranged that a whole floor can be put at the disposal of a family.

Another notable reinforced concrete apartment house, on the edge of the burden district, is the Clark building on Turk street between Polk and Larkin, from which, it will be remembered, so many strike sympathizers hurled bricks and iron at the strike breakers on that memorable first day when they attempted to run the cars. The Clark building started out to be a class A building, but after the walls and two stories of the interior floors were up either the funds gave out or material and labor proved too high or difficult to obtain, so wooden floors and partitions were used. As a result the building will land somewhere in the class B or C category. It has a pressed brick and terra cotta frontage and will cost about \$200,000.

Near by, at Golden Gate and Leavenworth, the Coast Realty company is to put up a three story and basement building.

Novel Apartment House

W. T. Albertson is building an apartment house or hotel structure on Ellis, near Leavenworth, which is novel in many respects. Walls, girders, plaster and curtain walls are of the most modern style of strongly reinforced concrete, while subpartitions and floors are of heavy frame construction, properly fireproofed. The building is designed to eventually carry six stories, but at present will be stopped at three for economic and financial reasons. The construction of the frame floors to the concrete is such that should a severe fire gut the



GLADCRAFT METHOD OF ANCHORING THE MASSIVE CORNICE OF THE HOPKINS BUILDING

the handsome Santa Marina estate building (32x137-6). It is of the Italian Renaissance type, with large windows. The first floor and basement, will be occupied by the California fruit canners' association and the upper floors will contain 225 large, well lighted offices equipped with every modern convenience and reached by three elevators. All the elevator shafts and staircases will be inclosed with solid walls and the openings into them will be fitted with automatically closed fire doors with wire plate glass to be used in case of fire. All the floors will be mosaic.

Over at the southwest corner of Front and Clay the Portuguese-American bank is building an absolutely fireproof home. The walls, the columns, the floors, etc., will all be of reinforced concrete with not a particle of wood or other inflammable material entering into their construction.

Sansone street will also have a number of notable reinforced concrete buildings. The Scatena estate is putting up a six story concrete building at the northwest corner of Clay and Sansone. It will be an office building and high speed passenger and freight elevators will be installed. All window frames and outside finish will be in metal and the windows will be glazed with wire plate glass.

At the southeast corner of Sansone and Bush streets, opposite the First national bank, another handsome structure is going up on property 97 feet square. It is designed for a seven story building, but at the present time only three, or possibly five stories, will be erected. One important feature of its design as well as construction is that, although it will go up as a loft building, it can be turned into an office building whenever the owner desires to do so, as the framing of the girders for the building has been arranged accordingly, and plugs are being left in the floors wherever future piping calls for outlets. The two fronts of the building will be of Colusa sandstone pressed brick. The former will be secured to the concrete by bolts imbedded in the concrete, the latter by wire. There are no concrete walls to

contention of the concrete enthusiasts that any design that can be modeled in wax or clay can be duplicated in cement. The lower story is adorned with 10 stately cement Doric columns, and the elaborate cornice which tops the building is not only beautiful but a remarkable bit of skillful engineering work. It projects several feet over the edge of the building, and, owing to its great weight, had to be strongly anchored to the roof to prevent it from cracking and toppling off into the street below.

The Hopkins building, which will cost \$125,000, has many other interesting features. The floors are to be of marble mosaics and not an inch of wood will be used in the entire building. The Union Ice company, West Coast Life company, Woodruff & Co. and the San Francisco hearing house will occupy the building.

Just a block away, in California street, near Sansone, adjoining the old Bank of California site, is the Halsey building (45-1x124), which is to be four stories high and will cost \$80,000. The front is Tudor-gothic in treatment and practically all of the reinforced cement work of the building is now completed. The ground floor will be occupied by the banking office. The counters will be marble, with bronze grillwork, and covered with milk plate glass.

There is also to be a three story concrete bank building (60x80) at the corner of California and Front streets, which will cost \$55,000. At Drumm and California streets is

this building, as the owner desired to use about 200,000 bricks which had been left on the lot after the fire to fill up the panels between the columns. The Hooker estate company's four story and basement building, in Battery and Sansone streets, is being erected by the same contractor. It is of cast cement blocks, allowing an artistic treatment. It is now nearing completion and was designed so as to admit of the maximum window space.

A half block away, at the northwest corner of Battery and Pine, the Boyd estate is putting up another reinforced concrete office building. The fifth floor has already been reached and three more are to be added.

At the northeast corner of Battery and Washington the Jennings building is nearing completion. It is three stories and basement and will cost in the neighborhood of \$100,000. It will be completed about the first of August and will be occupied by N. Van Bergen, the pioneer liquor firm. Great care was taken in putting the cement in the forms, and as a result the exterior of the building presents a very smooth surface, which will need no further work on it.

Along Kearny Street Kearny street already boasts of two reinforced concrete structures—the compact little three story L. Lowenberg building, 23 by 54, between Market and Post, which is nearing completion and is to have a very prettily ornamented front, and the Macdonough estate office building, 35 by 38, on Kearny near Pine.

At Sacramento and Montgomery the Security investment company is to put up a three story building. It is possible that the owners will run it up to eight stories, as they have not come to a definite decision yet.

South of Market street there are nearly a dozen interesting reinforced concrete buildings under way. The E. B. Pond loft building (65x187 feet), Mission and New Anthony streets, adjoining the Wells, Fargo & Co. building, is making excellent progress. It is to be five stories and basement. The facade will have a massive treatment suggesting the great strength of the interior.

In Mission near Second is the freakish looking Bothin building, which has been leased by the Owl drug company. Constructors and architects are agreed that the building, when it is completed, will be a solid affair, but many of them contend that the iron lath fine work overdone and that the unnecessary labor and material used in placing the metal reinforcing will bring the cost up to almost a class A steel frame building. In its present condition it resembles a vast trellised arch.

Half a block farther up in Mission street is the McLaughlin six-story building which is being constructed as a warehouse for W. & J. Stone & company. It is a very massive building and is designed to carry 800 pounds to the square foot. It has already reached the second story, and when completed will cost \$110,000. The exterior will be adorned with some very fine cast cement ornamentation.

The five story Heuter-Bass building in Mission between Fourth and Fifth, which will have a striking glazed tile and glaze terra cotta front, and the Martin estate three story structure at the northeast corner of Mission and Fremont, are two other reinforced concrete edifices that will add to the attractiveness of Mission street. The latter (112x123-6 feet) has been leased to E. C. Horton for a term of ten years at a total rental of \$130,000.

One of the first concrete buildings to be completed after the fire was the Schilling tea plant at Second and Eason. Between Fifth and Sixth, in Folsom street, another handsome structure is going up on property 97 feet square. It is designed for a seven story building, but at the present time only three, or possibly five stories, will be erected. One important feature of its design as well as construction is that, although it will go up as a loft building, it can be turned into an office building whenever the owner desires to do so, as the framing of the girders for the building has been arranged accordingly, and plugs are being left in the floors wherever future piping calls for outlets. The two fronts of the building will be of Colusa sandstone pressed brick. The former will be secured to the concrete by bolts imbedded in the concrete, the latter by wire. There are no concrete walls to

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