

HOUSES BUILT ON SAND

Chicago Sky-Scrapers That Are Built on Rafts

Impossible to Reach Bed Rock, A Bed of Clay Over Plastic Mud Supports Them

"Do you know," said a famous architect the other day, "that modern architecture is a huge paradox? The heaviest and tallest buildings are really houses built upon sand—or the mud as the case may be."

"Then how do they stand?" he was asked.

"Oh they are safe enough. Take the Park Row Building in New York. It is the tallest commercial structure in the world, and probably the heaviest also. It weighs over 55,000 tons, which means a pressure of nearly 9,000 pounds on each square foot of the site. It is about a hundred times as heavy a load as a good highway bridge is designed to carry. And yet this enormous load rests upon a bed of fine, wet sand scarcely different from quick sand and a hundred feet deep.

"It is perfectly safe. Nearly 4,000 large piles were driven in it by a 2,000-pound hammer falling 20 feet, which compacted it until even these tremendous blows could force them no further, and they could carry their loads of 32,000 pounds each. Groups of these piles were capped with concrete and pyramidal brick tiers were built on that. Steel beams were laid on the flat tier tops to distribute the loads over the surface of the masonry. Some of the columns carry as much as 3,000,000 pounds each.

"Many of our heaviest buildings are really supported on stilts—that is to say, on foundation piles driven through the sand or mud to the solid rock.

"In other cases heavy buildings are supported on piles which neither reach to hard bottom nor are driven in firm soil. Long piles are driven into very soft mud and silt, into which they sink many feet by their own weight and by light blows of a steam hammer. If they are driven there thirty or fifty feet and left undisturbed a few hours, it is found that the adhesion of the tenacious mud is so great that they can hardly be started again, and may be safely trusted to carry heavy permanent loads, which are really supported by the stickiness of the mud.

"The St. Paul Building in New York is supported on a very deep bed of fine wet sand which was only excavated to a depth of about thirty-two feet. A one-foot layer of concrete was spread over the bottom of the pit, and on this were set the real foundations, consisting of crossed layers of steel beams and girders.

"The Spreckles Building in San Francisco, which weighs over 24,000,000 pounds, rests on dense wet sand, on which a solid platform of steel and artificial stone was laid as a foundation. This building has passed uninjured through the test of a severe earthquake shock.

"In another big building the columns are seated on inverted arches, which distribute their loads over all the space between them. The arches are laid on long, wide concrete footings, which reduce the unit pressure sufficiently for the fine wet sand on which they are built.

"Few if any, tall buildings are on worse soil than those of Chicago. Here, only ten or fifteen feet below the surface, is a crust of clay not more than ten feet thick, which floats on wet plastic mud from sixty to 100 feet deep. Piles more than 100 feet long would be required to reach the hard pan or bed rock, and most of the tall buildings there really stand on great rafts built on the surface of the clay. It has been found that a load of 3,000 pounds per square foot of clay surface will settle slowly for several months. After settling perhaps two inches it will become stationary, and may be considerably increased with safety.

"Very often buildings are deliberately started above grade, and it is reckoned that they will sink so many inches."

"Huge structures built on such foundations are perfectly safe," the architect continued. "Almost any soft soil can be successfully conquered nowadays by an architect who knows his business. We Americans are not the only people who build on the sand. The native architects of India

PE-RU-NA NECESSARY TO THE HOME.

A Letter From Congressman White, of North Carolina.



HON. GEORGE H. WHITE.

Congressman George Henry White, of Tarboro, N.C., writes the following letter to Dr. Hartman in regard to the merits of the great catarrh cure, Peruna:

House of Representatives, Washington, Feb. 4, 1890. Peruna Medicine Co., Columbus, O.: Gentlemen—"I am more than satisfied with Peruna, and find it to be an excellent remedy for the grip and catarrh. I have used it in my family and they all join me in recommending it as an excellent remedy."

Very respectfully, George H. White.

Mrs. Nannie Wallace, Tulare, Cal., President of the Western Baptist Missionary Society, writes: "I consider Peruna an indispensable article in my medicine chest. It is twenty medicines in one, and has so far cured every sickness that has been in my home for five years. I consider it of special value to weakly women, as it builds up the general health, drives out disease and keeps you in the best of health."

Mrs. Nannie Wallace. If you do not derive prompt and satisfactory results from the use of Peruna, write at once to Dr. Hartman, giving a full statement of your case and he will be pleased to give you his valuable advice gratis.

Address Dr. Hartman, President of The Hartman Sanitarium, Columbus, Ohio.

have done so for centuries, sinking deep brick walls into their soft wet, alluvial soil to serve as foundations."

Judge May Construe

(Oregon Law School Journal)

The leading newspapers of this State have been recently interviewing many prominent attorneys and making extended comments upon alleged defects in the taxation laws enacted at the last session of our legislature. It appears from such attorneys interviews that they are nearly unanimous in their opinions that this law from a legal standpoint is susceptible of but one construction. And notwithstanding this fact, as we understand some of these interviews, it is suggested that a suit should be brought in order to obtain a decision of our courts for the reason that they were exceedingly liberal in order to make laws effective when public interests were involved. It may be that such attorneys have been misquoted or in their haste have not given clear expression to thoughts intended to be conveyed for every well-informed lawyer knows that it is beyond the province and power of a judge to enact or change laws. Our government was framed so that one department should enact laws, another should construe, and still another should enforce them. The history of the past taught the framers of our government that the liberties of the people would be trampled down if the power to enact or change laws and the power to construe laws were both vested in the same department. If the legislature has failed to do its duty it is solely responsible to the people, but judicial legislation is never warranted.

Dassonlo.—Wrest once the law to your authority: To do a great right do a little wrong; And curb this cruel devil of his will. Portia.—It must not be; there is no power in Venice Can alter a decree established: 'Twill be recorded for a precedent; And mighty errors, by the same example,

Will rush into the state; it cannot be." The Supreme Court has on many occasions held that it could not supply defects in legislation. Justice Bean, speaking of the power of the court in this regard, in the case of State ex rel. vs. Simon, 20 Or. 365, gist 371, said: "It is our legitimate province to interpret legislation, but not to supply omissions." The Laws of our State declare the same rule. Section 706 of our Code reads as follows: "In the construction of a statute or instrument, the office of the judge is simply to ascertain and declare what is, in terms or in substance, contained therein, not to insert what has been omitted, or to omit what has been inserted," etc.

W.C. T. U. CONVENTION

(Continued from page one.)

garding women's suffrage she said in part:

"Keep the franchise question constantly before the people, and some day the men of Oregon will honor the women with the greatest power a nation can bestow upon its citizens, the elective franchise."

Concerning the value of the W. C. T. U., she said:

"Today we are in demand. The many advances along all pathways of effort, the victories gained, the alarm of the liquor men, the willingness of the world's thinkers to give the temperance cause a place, the large space open to its varied interests by the press, the gain in prohibition area, should give to every one here today, members and others, and all who may hereafter read this address, fresh courage to be and to aid in this work which comes to us.

"For the sake of our sisters, the wage-earners, who struggle for daily bread, let us do our part toward surrounding the home, society, the state, the nation with stronger barriers. Dividing the way between temperate and intemperate, pure and impure, make a safe path for their feet to travel in life's activities. The co-employment of the sexes is here, never to be eliminated." * * *

"I would suggest that we plan for systematic petition work, looking to the establishment of a state industrial school for girls. Through this influence we may save many girls from the need of reformation."

Mrs. Harford urged the establishment of headquarters in Portland for the Lewis and Clark Exposition, along with the other philanthropic societies, and advised sending a worker to Heppner to reorganize the union there, where the principal workers had met death in the recent flood disaster. Concluding her address, she said: "Comrades, you have had your times of rejoicing and discouragement. But, standing here today, on the heights of prophetic vision, we can but exclaim: 'Behold what God hath wrought.' Let our faces be set toward victory. Make plans for thorough organization, send broadcast your best literature, and the world will yet be saved from the curse of drink."

Lecture Tonight.

Miss Lillian B. Phelps, of Canada, will lecture tonight on "St. George and the Dragon." Miss Phelps addressed the students at chapel this morning at Willamette University, and is one of the most brilliant platform speakers in the country, as well as a lady of charming personality. Her lecture tonight, at the auditorium of the First Methodist church, will be the event of the session.

The burning questions at this convention are beginning to sizzle and bubble. They are over the matter of a state paper and location of state headquarters, but there are hopes that these "bete noirs" will be amicably adjusted by the tact and diplomacy of the leading lady politicians of the convention.

Wednesday Proceedings.

The report of the corresponding secretary for Oregon shows a membership of 2000, with 300 honorary members, and 386 members added for the year. There are 200 Union Signals and 275 Searchlights taken. Fifteen Union maintain headquarters, and about as many have free reading rooms. The corresponding secretary pro tem is Henrietta Brown, whose husband was the late Mark B. Brown, for many years editor of the Albany Democrat, and at one time state printer. Another noted pioneer woman present is Mrs. Kern, wife of Capt. J. W. Kern, well known as captain of the tugboat "U. S. Grant." Mrs. L. H. Addison, national organizer and head of department of labor, is also present.

Most Noted Woman.

Probably the most noted woman at the convention is the Marion county president, Mrs. Wm. M. Steele. She was Miss Rebekah Parrish, daughter of the Rev. Edward A. Parrish, whose home, at Parrish gap, was a beacon-light of hospitality to the pioneers of early Oregon, and became Mrs. Samuel E. May, her husband being secretary of state, and for over 20 years she resided in Salem, and took a prominent part in many of the occasions of the official life of the capital. She was humorously referred to by State President Harford, she next became Mrs. J. W. Robb, and is now Mrs. Steele, a woman still in the prime of life, and in full possession of her intellectual powers. Her reminiscences of pioneer life and experience in crossing the plains, especially among the Mormons, make Mrs. Steele a most entertaining narrator of early Oregon history.

Program.

Thursday Morning, October 22. 9:00—Service of song. Devotions.

The "Smoke of Peace."

Cremo

The Cream of the Islands

The one cigar you can depend upon being the same in quality whether you smoke one or a thousand. Always 5 cents, and so good the dealer can't afford to cut the price.

The Largest Selling Brand of Cigars in the World.

The Band is the Smoker's Protection.

9:20—Reading of minutes.
 9:30—"Our Cabinet and Its Contents Presented for Inspection," continued. Mrs. H. D. Harford, Mrs. Mary A. Wright, Mrs. Achah M. Morris, Mrs. Henrietta Brown, Mrs. Sarah M. Kern, Mrs. Eglantine Geer, Mrs. Rachel Webber. Solo. Mrs. Anna Edgington, Mrs. Mary E. Townsend, Mrs. Louise P. Rounds, Mrs. Helen A. Adkins, Mrs. C. A. Gearhart, Mrs. Harvey Bailey.
 10:45—"Munitions of War," finance committee.
 11:10—"A Family Conference." Shall we own a paper? Report of committee on paper. Discussion.
 11:40—Thank offerings, in charge of Mrs. Elizabeth Daigleish. Noontide prayer. The Union Signal.
 Afternoon.
 1:45—Music. Devotions. Reading minutes.
 2:00—Memorial hour. Solo, "Saved by Grace."

Phone: Main 2953.

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Two Points

There are two important points about my work: It is **good** and the service is **quick**. This may be of some moment to you on your next order for printing.

Elliott, the Job Printer.

TO THE LADIES

Of Salem and vicinity, we desire to say a word. Our store is so crowded for space that to make room for regular lines of men's goods we have decided to

Close Out Our Entire Stock of Dress Goods

Cloths which were made in our Salem factory especially for ladies' use. They comprise a fine line of stylish black, brown, tan, blue, navy, oxford and mingled Cheviots and Thibet cloths, and make up so handsomely

FOR SKIRTS, JACKETS, CAPES, CLOAKS, ETC.

These goods are 54 inches wide, and have been selling regularly at \$1.25 a yard, while regular dry goods stores, buying through wholesale houses, have to sell such goods at \$1.50 to \$2.00 a yard. While they last you may now have your choice at

95c Per Yard

While addressing the ladies we desire to call attention to our complete stock of

Woolen Mill BLANKETS Salem Made

All manufacturers of woollens, East and West, admit that Oregon's wool and mountain water are peculiarly adapted to the making of the finest qualities of blankets, in fact, that Oregon produces the **FINEST BLANKETS IN THE WORLD**. Some may not appreciate the fact, as our blankets come right from the looms to our counters, instead of through the roundabout channel of wholesale house and "drummer." We are thus enabled to sell blankets

Cheaper Than Anywhere Else in the United States

Some think a blanket is a blanket—but there's often just as much difference between two blankets of the same color as between a ten and a twenty dollar gold piece. Three points are not to be overlooked in blankets, namely, size, weight and quality. On all these points we challenge the world to meet our blankets at our prices.

FLANNELS
Our own make. Best and Cheapest.

Salem Woolen Mill Store
C. P. BISHOP, PROPRIETOR.

INDIAN ROBES
For buggy robes or couch covers.