

WORK ON CEMENT PLANT TO BEGIN

Big Enterprise at Oswego Will Be Under Way in November.

SAMPLE TESTS ARE MADE

Material Available for Factory to Be Erected by Strong Company Is Not Exceeded in Entire World.

Advises have just reached Portland from S. B. Newberry, the eminent cement expert, that samples of raw material from which the Portland Cement Company will manufacture cement at its plant at Oswego have stood a tensile strength of 300 pounds when only seven days old. At the age of 28 days, the same product has tested 750 pounds. An inch cube briquette, consisting of one-fourth cement and three-fourths sand, tested 200 pounds in seven days and 520 pounds in four weeks. These tests are regarded remarkable from the fact that no cement in the world, not excepting the foreign manufactured product, will exceed this record. The same samples also withstood the steam boiling test which is the most severe test that can be made.

The Portland Cement Company, which consists of Portland, Salt Lake, Ogden and Los Angeles capitalists, next month will begin the construction of its 1500-barrel plant at Oswego. It is expected that the plant will be completed in its operation in about fifteen months. Its cost, completed, will be approximately \$1,000,000.

Officers of the Company.

The officers of the Portland Cement Company are: President and general manager, Aman Moore; first vice president, Theodore B. Wilcox; second vice president, J. N. Teal; third vice president, C. W. Nibley; secretary-treasurer, Alex. Nibley. Among the stockholders of the company are: L. A. Lewis, Allen & Lewis; Theodore B. Wilcox, president Portland Flouring Mills; A. C. Miller, president First National Bank; J. C. Alshworth, president United States National Bank; Charles E. Ladd, president Ladd Estate Company; E. L. Thompson, Hartman & Thompson; Dr. Andrew C. Smith, president Hibernia Savings Bank; W. F. Burdell, president Burrill Investment Company; J. N. Teal, attorney and director Security Savings & Loan Company; George Lawrence, manager Lawrence Harbison Company; Tom Richardson, manager Portland Commercial Club; W. A. Gordon, president W. A. Gordon Company; W. W. Cotton, attorney; W. H. Minor, attorney; Paul C. Bates, manager Aetna Life Insurance Company; T. W. Sullivan, chief engineer Portland Railway Light & Power Company; Dr. H. Hegele, all of Portland; Alex. Moore, ex-general manager Colorado Portland Cement Company, of Denver, and ex-manager Union Portland Cement Company, of Ogden, Utah; C. W. Nibley, president Union Portland Cement Company, Ogden; C. Leonard, president Southwestern Portland Cement Company, Los Angeles; J. S. Schirm, president Grand Canyon Land & Cement Company, Los Angeles; Alex. Nibley, ex-treasurer Grand Round Lumber Company, Perry, Or.; Joseph F. Nibley, of J. F. & M. Nibley, lumber dealers, Salt Lake City; John C. Cutler, ex-Governor of Utah; Thomas R. Cutler, president Utah-Idaho Sugar Company, Salt Lake City; John Pingree, cashier First National Bank, Ogden; H. G. Whitney, manager Deseret News, Salt Lake City; A. Woodruff and W. A. Rossett, directors Zion's Savings Bank & Trust Company, Salt Lake City; George Romney, vice president Deseret Savings Bank, Salt Lake City; Charles E. Ladd, cashier Bank of Utah, Salt Lake City; O. C. Beebe, cashier Zion's Savings & Trust Company, Salt Lake City; Joseph Geoghegan, sales agent for the Sugar Company, Salt Lake City; E. Stenger, general superintendent Ray Consolidated Copper Company, Kelso, Ariz.; and George F. Ball, ex-manager Cache Mercantile Company, Logan, Utah.

Experienced Men at Head.

Mr. Moore, president of the company, and the other officers of the corporation, are men experienced in the cement manufacturing business. Mr. Moore has been prominently identified with the business for over 20 years. In 1888 he became connected with the Buckeye Cement Company in Ohio. At that time there were only three cement manufacturing plants in this country with a combined output of about 20,000 barrels annually. Mr. Moore engineered and built the plant for the Colorado Portland Cement Company near Pueblo, Colo., and for six years served as manager for the company. In 1905 he resigned that position and went to Los Angeles where he assisted in the organization of the Southwestern Portland Cement Company and as president of the Cement Engineering Company of Ogden, Utah, where a plant with a daily capacity of 300 barrels has been in operation for two years. For many years, Mr. Nibley has been connected with some of the largest business enterprises of Oregon as well as Utah. He is one of the founders of the Oregon Lumber Company which has operated mills at Hood River, Baker City and various other points in Eastern and Central Oregon. He is also one of the builders of the Sumpter Valley Railroad, Payette Valley Railroad, and other transportation lines in Oregon and Idaho. He is also one of the founders of the Utah Construction Company, which is now building the Western Pacific Railroad.

Texas Plant Duplicated.

Among the Los Angeles capitalists who are interested in the Portland Cement plant at Oswego is one of the pioneers in reinforced concrete construction, having built most of the large buildings in Los Angeles, including the Hawaiian, Huntington and Security buildings, and the Grand Hotel at Santiago. Mr. Leonard is president of the Southwestern Portland Cement Company which is just completing a large factory at El Paso, Texas. This plant will be duplicated at Oswego by the Portland Cement Company. Mr. Leonard is also interested with Mr. Moore in several additional cement factories throughout the West, including factories in Colorado, Utah, Montana and Washington.

cement is a very complicated one. The materials at the quarries, consisting of limestone, cement rock, shale or clay are usually blasted out in an open quarry. It is then scooped up by a large steam shovel into the automatic dump-cars, by which it is transported to the factory. The material from these cars is discharged into a large crusher. From this crusher, the material discharges into smaller crushers where it is reduced to one-inch size or less.

Separate bins are provided for the different classes of material, viz: limestone, cement and shale. These materials are automatically sampled as they discharge into the bins and, after the average analysis of material has been determined, it is thrown out and passed over automatic scales, where the chemist has determined the average proportions of each separate material. These samples are then discharged into different materials in batches into a larger mixer where the materials are thoroughly mixed. This mixture then passes on to the blending and correcting bins where any variation in the chemical composition are corrected to within less than one-half of one per cent of the uniform mixture.

Passes Through Cylinder.

After the mixture is corrected, it passes through a long revolving cylinder six feet in diameter and 40 feet long. At the discharge end of this cylinder, heat is applied to remove all of the moisture from the rock. When the moisture has been removed, the material passes on to the large ball mill where armor plates and pebbles are provided so that in revolving, the cylinder steel cannon balls are dropped from shelf to shelf, reducing the

constructed today in all the modern cities of the world. At the present time several of these large structures are under way in the city of Portland. They are not only proof from the elements, but also withstand fire and earthquakes. Any modern city where a large number of reinforced concrete buildings have been constructed cannot be swept by great conflagrations, such as destroyed San Francisco a few years ago.

The wizard, Edison, has adopted this construction to the ordinary cottage of the workman. Metal molds are used, and after the same are in place the concrete slurry can be poured into the molds. After standing a day or two the molds are removed and the cottage completed, with the washbasin, roof and all parts of the house complete. Predictions as to the future growth of the consumption is hard to estimate. Some of the greatest architects and builders throughout the country have ventured to predict that within the next decade the consumption of Portland cement will increase more than ten-fold, and that with the destruction of our forests and increased price of lumber it is only a matter of time until all structures, including business blocks, factories, residences and cottages will be built with armored, or reinforced, concrete.

Oregon Is Virgin Field.

The field for establishing a Portland cement plant at Portland is without question the best one that is still undeveloped in America, where the factories have increased from two or three small plants 25 years ago to more than 100 factories now with an average capacity each of over 1500 barrels a day. The vast empire,

RATE MAKING IS STUPENDOUS TASK

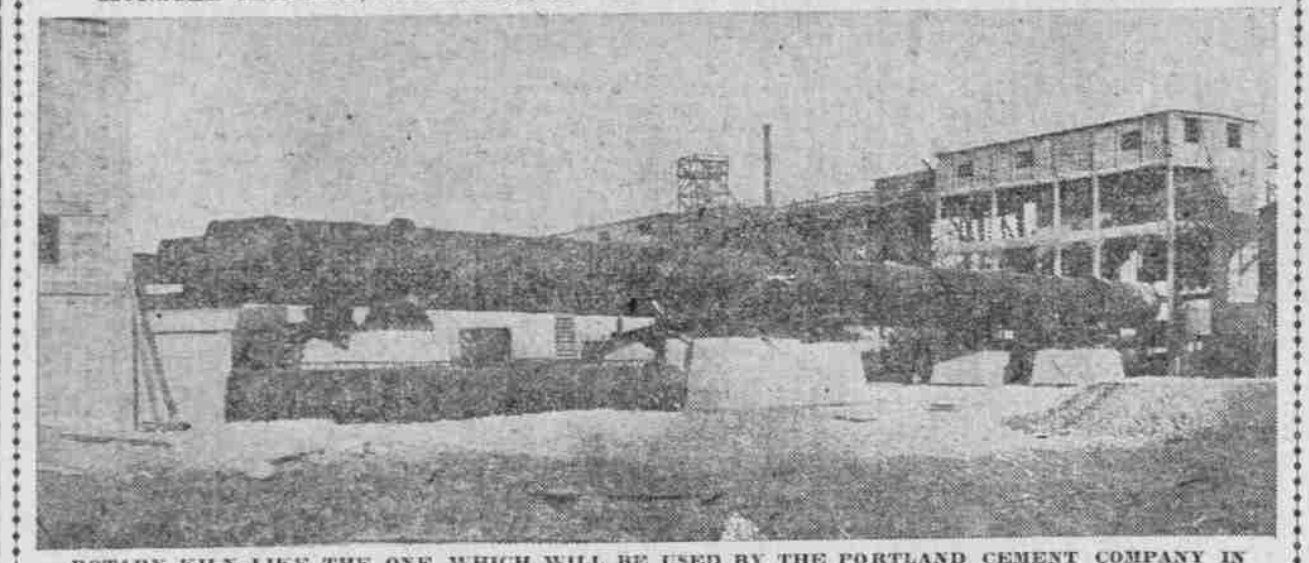
Coast Cities Prepare Mass of Complex Evidence in Freight Fight.

MANY CONDITIONS MET

Railroads Make Answer That Costly Construction in Mountain Regions Make Rates Higher Than in Prairie States of East.

BY R. G. CALLVERT.
SEATTLE, Oct. 10.—(Staff Correspondence.)—The voluminous work undertaken by the three Northwestern cities, Port-

MONSTER MACHINE, DUPLICATE OF WHICH WILL BE USED IN OSWEGO PLANT.



ROTARY KILN LIKE THIS ONE WHICH WILL BE USED BY THE PORTLAND CEMENT COMPANY IN THE MANUFACTURE OF CEMENT AT ITS PROPOSED PLANT.

This is one of the largest pieces of machinery employed for manufacturing purposes in the world. It is 10 feet in diameter and 150 feet in length. It is lined with nine-inch firebrick and, when revolving and under operation, weighs over 300 tons.

crushed rock to a pulp of 30 mesh or less. Following this preliminary pulverizing, the material then passes into a huge cylinder 7 feet in diameter and 34 feet long, which is filled with small pebbles. In revolving this cylinder, each pebble acts as a mill stone, with the result that the powder is reduced to an impalpable pulp that will pass through a 100-mesh screen.

The raw material now being finished, is passed on to the huge rotary kiln, which forms the largest piece of machinery in the world. These cylinders are 10 feet in diameter and 150 feet long and lined with 9-inch fire brick. The raw material, passing in at one end of the kiln, gradually flows to the discharge end of the kiln, where it is discharged into a black clinker cooler resembling a large cylinder, acting as a cooler. A spray of water is added to the white-hot clinkers to assist in the cooling process. When the clinker is cooled it becomes a dark, black clinker somewhat resembling slate. This clinker is then stored in huge bins. From these bins it is transported by automatic conveying devices to the cement-grinding machinery, where the same process of crushing and pulverizing is again applied as in reducing the raw materials.

The finished cement is transported to a huge storehouse, where 20,000 barrels or more of storage capacity is provided. From the storage house the cement is transferred to automatic packers, where the cement is finally packed in bags containing 95 pounds each, when it is prepared for shipment to market.

Will Make Lime Also.

The company, in addition to manufacturing Portland cement, will also make lime for market. It already has a large kiln on its ground near Roseburg. The present consumption of lime in Portland and vicinity is approximately 100,000 barrels a year. This supply is received chiefly from the San Juan Islands, in Puget Sound, and from Eastern Oregon. The company's limestone will produce an extremely white lime of the highest quality. To the ordinary layman the origin of the name "Portland cement" is often attributed as originating from Portland, Or. The name, however, is derived from the fact that when the original discoverer of Portland cement in England found that by mixing clay from the Thames River with chalk from the famous chalk cliffs along the English Channel and vitrifying such mixture into a clinker and pulverizing the clinker the powder produced, when mixed with water, would harden into a rock resembling Portland building stone found near London in the Portland quarries, and which was largely used in the City of London for building stone.

However, it is a strange coincidence that one of the first Portland cement factories established in America was operated near Portland, Or., at Oregon City, where, more than 25 years ago, a small rotary kiln was put in operation, and, although not a commercial success, some concrete construction work is still in place in the vicinity, showing the reinforcing capability of the Portland. The process of cement manufacturing at that time was still in an experimental stage, as only two or three other small plants were then operating in America. The statistics of the United States Government have shown the wonderful development of the cement business since that time, when the total output was less than a quarter of a million barrels, while the output in the United States in 1908 was \$1,972,012 barrels.

Cement Age Beginning.

There are recorded in history the stone age, the bronze age, and various other ages in the advancement of architecture. During the past decade there has been the steel age, and the cement age is now just beginning. The corrosion of iron by exposure to the elements renders steel construction worthless in a short period of time. By the imbedding of the steel in a mass of concrete it becomes indestructible, as is witnessed in Egypt, Athens, Rome and other ancient cities where cement mortars from rudely constructed concrete works have stood for thousands of years. It is not necessary to go outside of the City of Portland to see the massive buildings such as are being

including all of Southern Washington, Southern Idaho, and the entire state of Oregon has not one factory within its domain, the present supply being chiefly imported from Europe and California. The present price paid for Portland cement in this territory is much higher than throughout other parts of the United States, so that every building constructed necessarily costs an appreciably larger amount. It is only natural to assume that with a local plant producing cement, the present prices will be greatly reduced, and every one desiring to construct a residence, business block, or other construction work of that nature, will be benefited by the establishment of this local plant.

In addition to the ordinary commercial cement, the company has secured deposits from which it will be able to manufacture the high grade marine cement. It has been discovered within the past few years that the ordinary Portland cement when subjected to long exposure in sea water is endangered by disintegration of the concrete mass, because of the action of sea water dissolving the alumina that is contained in the ordinary Portland cement, but a substitution of iron in the manufacturing process and the reduction of the alumina contained in the kiln are passed through a long, rotary cylinder, acting as a cooler. A spray of water is added to the white-hot clinkers to assist in the cooling process. When the clinker is cooled it becomes a dark, black clinker somewhat resembling slate. This clinker is then stored in huge bins. From these bins it is transported by automatic conveying devices to the cement-grinding machinery, where the same process of crushing and pulverizing is again applied as in reducing the raw materials.

Heavy Demand on Coast.

The demand for Portland cement in Western Oregon and Washington approximates 2,000,000 barrels annually. This supply is now imported from Europe or shipped here from plants in Northern Washington, Northern California, and Eastern Oregon. The retail price for this material ranges from \$3 to \$2.35 a barrel. By manufacturing this product near Portland, a saving in this expense can be saved to consumers.

Will Make Lime Also.

With the addition of 15 per cent Roseburg stone, each cubic yard of Marquand stone will make eight barrels of cement, or a total of 120,000 barrels of cement, therefore, will be sufficient to supply a plant producing 1500 barrels a day, or 500,000 barrels a year. The Portland Cement Company has a capital stock of \$2,000,000, of which amount \$900,000 is 7 per cent cumulative preferred stock, while the remaining \$1,100,000 consists of common stock. The present stockholders of the company have taken the preferred stock. A bonding firm of Los Angeles and Chicago has undertaken to place \$500,000 of the company's 6 per cent bonds. One hundred per cent of the common stock of the company will accompany the bonds to the investors therein. These securities will state where the cement will be marketed. The remaining securities will be placed in the East. The bonds are now being lithographed and will be delivered about November 10.

PAPER MONEY SUPPLIED

Eugene Bank Prepares to Meet Demands of Patrons.

EUGENE, Or., Oct. 10.—(Special.)—The First National Bank of Eugene will soon put into circulation \$25,000 worth of its bank notes in 50-cent denomination. On account of the influx of Eastern people here, who have been in the habit of handling paper money and who prefer it to the gold, the bank has planned to meet the demand.

The exchange requires the signature of T. G. Hendricks, president, and F. E. Snodgrass, cashier of the bank, to each note, and the bankers are now busy with the \$500 signatures that the must make before the notes can be put into circulation.

Harris Trunk Co. for trunks and bags.

land, Seattle and Tacoma, in the attempt to secure lower distributive rates in the interests of manufacturers and jobbers, was revealed here in the submission of the tables, schedules, maps and diagrams especially prepared for evidence before the Interstate Commerce Commission.

The complainants submitted in all 42 exhibits, 21 of which were particularly germane to the Seattle-Tacoma case and 21 applicable to the Portland case.

Rates Are Compared.

For the purpose of showing the distributive rates out of Portland one table gives the class rates beginning at a point 107 miles east of Portland and other rates to points at intervals of 50 to 100 miles for a total distance of 781 miles east. Against this are exhibited separate similar tables showing the distributive rates on the Union Pacific west from Kansas City; Union Pacific west from Omaha; Chicago & Northwestern west from Omaha; Northern Pacific west from St. Paul; Great Northern west from Minneapolis; Canadian Pacific west from Winnipeg; C. B. & Q. west from Omaha; the Rock Island southwest from Kansas City, and the San Francisco system south from Kansas City.

Other tables show the density of traffic on the same railroads, traffic and tonnage statistics, capital stock and revenues, and class rates in effect during different periods.

Rates East Jump Upward.

On the Portland diagram a marked jump is shown at the Idaho eastern boundary line. The fourth-class rate at a point 107 miles east of Portland is shown to be 82 cents per 100 pounds, but the rate rises rapidly from that point until at 500 miles it is \$1.15, the heaviest distributive movement of goods under a fourth-class rating.

So voluminous and complicated are these statistics that only in the oral arguments and submitted briefs will the significance be explained to the Commission.

Generally speaking the comparative tables of distributive rates show that the general average rates for a distance equal to that across the State of Washington is more than 100 per cent higher from the coast cities eastward than it is from St. Paul westward.

Conditions Differ Widely.

Whether these tables, in view of the differences in topography of country, cost of operation, density of traffic, etc., form a fair comparison is a matter for argument that will probably be gone into extensively by the railroads.

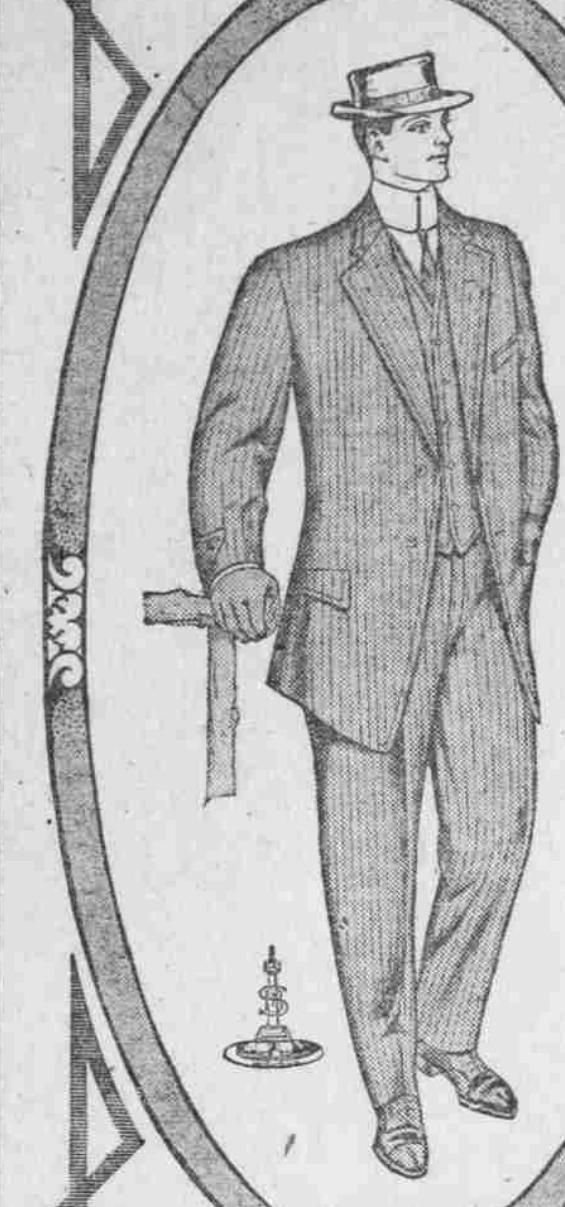
The position of the railroads is that in view of the range of mountains that must be crossed soon after leaving Puget Sound eastbound, the comparison with the rates on prairie-built railroads is not a fair one. It is insisted that the West coast country traversed is not so thickly settled as the Middle West territory and that cost of construction and operation are widely different.

As to the railroads' water grade eastbound the comparison, it is admitted, is not so unfair.

State Control Conflicts.

With the railroads one complaint is that their rates are subject to the con-

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being the work of many tailors, each an adept in one thing alone, attain a cumulative excellence—a united harmony of balance and proportion totally beyond the reach of the average tailor as well as of the clothes manufacturer lacking our great equipment and organization.

"HIGH ART CLOTHES" interpret the fashions of the day and often forestall them. The fabrics and patterns are "under our thumb," pledging to the wearer a treasured exclusiveness. In mode, material and making they are indisputably the finest ready-for-use clothes in America.

Ask your dealer for "HIGH ART CLOTHES"—if he hasn't them, ask us for the name of a "HIGH ART" shop in your town or nearby.

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Control of any one of three commissions in Washington and Oregon.

For instance if the Oregon Commission enforces a rate between Portland and territory into which the Northern Pacific enters as a competitor, the Northern Pacific, although not directly controlled by the Oregon Commission must meet the O. R. & N. reduction in order to hold its business. The Washington Commission has a similar indirect control over Oregon rates while the Interstate Commerce Commission may directly control interstate traffic rates.

What effect improvement of road beds and equipment should have on rates is another matter in issue. On behalf of the complainants it is asserted that the railroads by increasing car and locomotive capacity and by maintaining heavier rails and better road beds have been able to increase the tonnage carrying capacity of their trains. They have increased their earnings by maintaining the old rates and decreasing operating and maintenance expenses.

By the railroads, however, it is insisted that the price of labor has advanced to such an extent that even with the improvements mentioned the operating expenses of the railroads have not decreased in the last ten years.

Jobbers Will Show Figures.

When the Commission opens its session in Portland Tuesday, manufacturers and jobbers will first be called to give testimony in support of their case. In behalf of Seattle and Tacoma, showing the restricted district that they serve because of the competition admitted from the Middle West by what are insisted to be discriminatory rates.

Following this the O. R. & N. will go extensively into its earnings capacity, cost of operation and construction and maintenance, in the effort to show that the distributive rates eastward are not unreasonable.

In this case as in others, the railroads, however, are avoiding any statement as to what is a reasonable rate in any class or commodity. Franklin K. Lane, of the Commission, pronounced the question in Seattle as he has in other places, and received the reply that the question could not be answered. Railroad rate making, it was declared by one witness, is governed by competitive and other conditions. In brief the rate fixed is "what the railroads can get." In Portland, competitive conditions by rail and water will likely be shown for what they are worth by the O. R. & N.

All the members of the Commission will not sit in any one hearing again on the Pacific coast during the present tour. Commissioner Prouty has already left.

Removes Poisons of Catarrh and Rheumatism from the Blood

For catarrh of the head use a teaspoonful of salt and a quarter teaspoonful of borax dissolved in a pint of warm water. Snuff this mixture through the nostrils twice daily and immediate relief is experienced. To cure, a constitutional blood remedy must be used. Catarrh and rheumatism are both due to accumulated poisons in the system. These poisons must be eliminated.

The following simple home mixture effectively acts on the kidneys, the bowels and the skin, causing them to resume their functions quickly and properly:

Get one-half ounce fluid extract Buchu, one ounce compound fluid Balmwort, and two ounces syrup Sarsaparilla compound. Mix and take a teaspoonful after each meal and one at retiring. Many cases of catarrh, rheumatism and kidney trouble have already benefited by this treatment.

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Insist and your grocer will supply you. Send us your grocer's name and we will mail you FREE, thirty-six original, tested recipes of delicious dishes easily and economically prepared. You will get new ideas from this FREE book. JOSEPH BURNETT COMPANY, 36 E. 1st St., Seattle.

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