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COMPENDIUM  
OF  
*History and Biography*  
OF  
THE CITY OF DETROIT AND  
WAYNE COUNTY, MICHIGAN

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"A people that take no pride in the noble achievements of remote ancestors will never achieve anything worthy to be remembered with pride by remote generations."—MACAULAY.

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CHICAGO  
HENRY TAYLOR & CO.  
PUBLISHERS, ENGRAVERS AND BOOK MANUFACTURERS  
1909

**JAMES T. WHITEHEAD.**

In the department of this publication devoted to the representative industrial and commercial enterprises of Detroit and Wayne county is given a description of the Whitehead & Kales Iron Works, of which the subject of this sketch is president and treasurer and of which he was one of the founders. He has risen to prominence as one of the progressive and representative business men of his native county and is well entitled to consideration in this volume.

Mr. Whitehead was born in the village of Wyandotte, Wayne county, Michigan, on the 28th of September, 1864, and is a son of James and Mary (McEvoy) Whitehead, natives respectively of Edinborough, Scotland, and Halifax, Nova Scotia. His parents are now deceased, his father having devoted the major portion of his active business career to merchant tailoring.

James T. Whitehead gained his educational training in the public schools of Wyandotte and Detroit, and in 1879, at the age of fifteen years, he entered the employ of Rathbone, Sard & Company, of Detroit, manufacturers of stoves and ranges. He here gained valuable business experience. In 1888 Mr. Whitehead purchased from John B. Dyar the plant of the Detroit Sheet Metal & Heating Works, and here he continued individually in the business until 1893, when he sold an interest in the enterprise to Henry B. Lewis. Thereupon was formed the firm of Whitehead & Lewis, and this alliance continued until 1897, when Mr. Whitehead retired from the firm and established himself in the same line of business at 42-6 Randolph street, under the title of J. T. Whitehead & Company. In 1899 he admitted to partnership William R. Kales and they continued the business under the firm name of Whitehead & Kales until 1905, when, to meet the exigencies of the constantly increasing demands placed upon the institution, the enterprise was incorporated under its present title of the Whitehead & Kales Iron Works. Mr. Whitehead has been president

and treasurer of the company from the start, and the success which has since continued to mark the same has been in large measure due to his wise executive policy. For further data reference may be made to the previously mentioned resumé of the company's history. Mr. Whitehead is also a member of the directorate of the Michigan Copper & Brass Rolling Mills and is a director of the Peninsular Savings Bank of Detroit. He is president of the Reinke & Shirray Manufacturing Company, manufacturers of stamped-metal novelties, and is a citizen of progressive ideas and much public spirit.

In politics Mr. Whitehead is found arrayed as a stalwart supporter of the cause of the Republican party, and he is identified with the Detroit Board of Commerce, of whose board of directors he became a member in 1907. He holds membership in the Detroit Club, the Country Club and the Detroit Boat Club, and both he and his wife are communicants of St. Paul's church, Protestant Episcopal, in which he is a member of the vestry.

In April, 1885, was solemnized the marriage of Mr. Whitehead to Miss Ida Marie Frazer, daughter of Abram C. Frazer, who was for many years an influential citizen of Detroit and prominently identified with financial affairs in this city. Mr. and Mrs. Whitehead have four children,—James Frazer, Thomas Cram, Mary Elizabeth, and Walter Kellogg.

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**FRED J. SIMMONS.**

Himself numbered among the oldest business men in Detroit, Mr. Simmons has here passed the major portion of his life, being a representative of one of the well known and honored pioneer families of the city and standing high in the confidence and esteem of the people among whom he has so long lived and labored to goodly ends.

Mr. Simmons is a native of the old Empire state of the Union and a scion of families founded in America in the colonial days. He was born at Oriskany Falls, Oneida county,



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HISTORY  
OF  
MICHIGAN

BY  
CHARLES MOORE

ILLUSTRATED

VOLUME III

CHICAGO  
THE LEWIS PUBLISHING COMPANY  
1915

to him for the improvements of local education during the past ten years. Mr Frost is now president of the Western Michigan Round Table, and the Michigan Schoolmasters Club.

**JAMES THOMAS WHITEHEAD.** In the iron and steel business at Detroit one of the prominent figures for a number of years has been James Thomas Whitehead, president of the Whitehead & Kales Iron Works. His relations with the industry have been as an organizer, and manager of large interests, and his presence has proved a stimulating influence not only in this line of manufacturing but in connection with a number of the industrial and financial enterprises of the city. For more than half a century the Whitehead family has been identified with Detroit and vicinity. James Thomas Whitehead is a native of Wayne county, born at Wyandotte, Michigan, September 28, 1864, a son of the late James and Mary (McEvoy) Whitehead. James Whitehead, who was born in Edinburgh, Scotland, in 1831, came to the United States in 1852. From Boston, Massachusetts, where he spent four years, he came to Detroit in 1856, and for several years engaged in the mercantile business in this city. Moving to Wyandotte, he became identified with a similar business in that locality, and so continued until his death in 1873. Mary (McEvoy) Whitehead was born in Halifax, Nova Scotia in 1831, her parents having been natives of the north of Ireland. After her husband's death she brought her family to Detroit, and died in that city in 1908.

At Wyandotte, James T. Whitehead lived until he was about ten years of age, and since that time his home has been in Detroit. His education proceeded partly from the public schools and partly from the Detroit Business University. In 1879, at the age of fifteen Mr. Whitehead began his business career by entering the employ of the firm of Rathbone, Sard & Company of Detroit. Nine years with that firm laid the foundation of experience for his own career. In 1888 Mr. Whitehead began business on his own account at Detroit, and since that time to the present has been identified with the various lines of the steel and iron business. In 1899 Mr. William R. Kales became associated with him under the firm name of Whitehead & Kales.

In 1905 the industry was incorporated under the title of Whitehead & Kales Iron Works, of which corporation Mr. Whitehead became president, the office which he still holds. His interest extends to many other local enterprises. He is a vice president of the Kales-Haskell Company of Detroit, a director in the Michigan Copper & Brass Rolling Mills, a director in the Peninsular State Bank of Detroit, and vice-president and director of the Highland Park State Bank.

The marriage of Mr. Whitehead on April 8, 1885, united him to Miss Ida Marie Frazer, daughter of Abram Carley Frazer of Detroit. Their family of children are James Frazer Whitehead, Thomas Cram Whitehead, Mary Elizabeth Whitehead, and Walter Kellogg Whitehead. Well known in club life, Mr. Whitehead belongs to the Detroit Athletic (new), the Detroit Club, the Detroit Boat Club, and is a member and in 1909-10 was a director of the Detroit Board of Commerce. A member of the Episcopal Church for several years he has been a vestryman of St. Paul's Cathedral.

**EDWARD S. LYMAN.** Though one of the younger members of the Muskegon bar, Edward S. Lyman has quickly taken rank as a leader in his profession, enjoys a good practice, and possesses the confidence of a large circle of acquaintances in his county. Mr. Lyman had to work



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# The City of Detroit Michigan

1701-1922

*C. M. Burton*



VOLUME III

DETROIT—CHICAGO  
THE S. J. CLARKE PUBLISHING COMPANY  
1922



Andrews is a member of the Detroit Athletic Club and of the Board of Commerce, in the affairs of which he takes a warm interest, as he does in all matters intended to advance the welfare of the community in a social or commercial way.

**WILBERT WILGUS REECE.** Throughout practically his entire life Wilbert Wilgus Reece has been engaged in the real estate business, has been active in the development of numerous tracts and has always handled high-class property. He is now president and sales manager of the firm of Will St. John & Company, with offices at 200 Griswold avenue. His birth occurred near Delphos, Ohio, November 18, 1879, his parents being Frank and Sarah (Freeman) Reece, whose family numbered eight children, namely: Clark, Harry, Clayton, Ellis, Cora, Lola, Karry and Wilbert. The father was the owner of a farm near Delphos, which he had taken up as a homestead after the Civil war. He resided thereon and gave his attention to the further development and improvement of the property until his death, which occurred in 1917.

Wilbert Wilgus Reece was reared on his father's farm and worked in the fields until he was twenty-one years of age, when he entered the employ of a man by the name of Snyder, who conducted an implement store at Montpelier, Indiana. There he obtained his first experience as a salesman. Mr. Reece greatly surprised his employer one day by making a sale—his first—of a buggy. He had taken a customer upstairs to show him the stock, and his employer missing him thought he was neglecting his work and was about to censure him for idleness, when Mr. Reece handed him the money covering the sale. He was employed at Montpelier and at Dunkirk, Indiana, for about a year and a half. He next engaged in the livery business in Decatur, Indiana, being proprietor of the establishment for six months. After disposing of his interests in the livery barn he sold magazines throughout Ohio, Illinois and the southern part of Michigan.

It was on the 2d of November, 1904, that Mr. Reece arrived in Detroit, where he became a salesman for the Gerard Stormfeltz-Loveley Company, and after eight months, having clearly demonstrated his ability along the lines of salesmanship, he was promoted to the position of superintendent of salesmen and acted in that capacity for three years. In 1907 he left Detroit and went to Oklahoma City, where he entered into partnership with M. P. A. Compton in the real estate business. After a year and a half, however, the partnership was dissolved and Mr. Reece entered into connection with the S. J. Carpenter Company, in which he had a third interest as a partner of Messrs. Ray and Carpenter. In 1910 he was called back to Detroit by reason of the death of his youngest sister and at that time he became associated with Will St. John in the real estate business, organizing the firm of Will St. John & Company. In 1911 they

began selling Indian village property and in 1912 they incorporated their business with a capital stock of twenty-five thousand dollars. They employed a force of eighty salesmen, which was one of the largest real estate sales forces in the city at that time. They have since handled various important subdivisions, including Habbercorn's Grosse Pointe Park subdivision, Harvard Homes subdivision, Harvard Road subdivision, Grix Home Park out Woodward, Frank Grix, McQuade Heights, Dexter Boulevard and Greenfield Gardens. At the present time they are selling Green Acres on Woodward, having opened up this subdivision in October, 1919. Their home sites have a frontage of from thirty-five to fifty feet and the prices range from one thousand to thirty-five hundred dollars, with all modern city improvements. They develop all their properties and the company has proven a big factor in Detroit's notable real estate activity in the past few years. At the time of the incorporation of the business Mr. Reece was made president and sales manager and as such has directed the activities of the enterprise, which has constituted an important element in real estate activities of the city.

In 1917 Mr. Reece was united in marriage to Miss Elizabeth McIntosh, a native of Michigan. He was reared in the faith of the United Brethren church, of which his parents were devoted members. Mrs. Reece is an Episcopalian, which church Mr. Reece attends. His political allegiance is given the republican party, but he has never sought nor desired office, preferring to concentrate his efforts and his energies upon his business affairs, which have been most wisely and carefully directed and are bringing to him substantial prosperity.

**JAMES THOMAS WHITEHEAD**, iron manufacturer and founder, has been in business since 1889, and is today at the head of the Whitehead & Kales Company, Incorporated, employing more than one thousand people in the fabricating of steel for buildings and bridges with an annual output of thirty thousand tons.

He was born September 28, 1864, in Wyandotte, Michigan, his parents being James and Mary Anna (McEvoy) Whitehead. The father was born in Edinburgh, Scotland, while the mother's birthplace was Halifax, Nova Scotia, and in the late '50s they came to Michigan, locating first in Detroit, and in 1860 the family moved to Wyandotte, which had as promising a future as Detroit at that time. After the death of the senior Whitehead, in 1873, the family moved to Detroit. They were the parents of seven children, five of whom are living.

James T. Whitehead of this review, attended the public schools of Wyandotte and Detroit, and started out in the business world in 1879, when a youth of fifteen years, with the Detroit Branch of Rathbone Sard & Company of Albany, New York, stove manufacturers. He remained with this firm ten years, fill-

ing various positions, gaining experience and knowledge of the business, which fitted him for starting in business on his own account. In 1889 he acquired the sheet metal works established by John B. Dyar, who at the time was organizing the Michigan Radiator Company, now a part of the American Radiator Company. The business of this small shop, employing about thirty men, developed with Detroit, until now it ranks well up to the top with larger shops of the country, in amount of structural tonnage turned out. In 1899 a partnership was formed with William R. Kales, a graduate engineer of the Massachusetts Institute of Technology, the style of firm being Whitehead & Kales. The company then branched out into the bridge and structural steel work, moving its plant from the corner of Randolph and Franklin streets to its present location, Beecher avenue and the Michigan Central Railroad. The company was incorporated in 1905 under the name of Whitehead & Kales Iron Works. In 1916 the company acquired the bridge shops of the Detroit Bridge & Steel Works, with fifteen acres of ground located on South Dearborn avenue and the Michigan Central Railroad, River Rouge, Michigan, to take care of its growing business. The officers of the company, aside from Mr. Whitehead as president, are: William R. Kales, vice president and engineer; Thomas C. Whitehead, vice president; James T. Warner, treasurer; Seth E. Roberts, secretary. Mr. Whitehead is also vice president of the Kales Stamping Company, vice president of the Michigan Copper & Brass Rolling Mills Company, vice president of the Bank of Detroit, president of the Highland Park State Bank and a director of the Security Trust Company of Detroit. In 1909, with Henry Ford, James Couzens and John H. Johnson he organized the Highland Park State Bank of Highland Park, Michigan, with a paid in capital of forty thousand dollars. This bank now has a capital of one million dollars and a surplus of over nine hundred thousand dollars, and holds a prominent place among Detroit's financial institutions. He served as a director of the Board of Commerce, and was one of the organizers of the present organization. His business interests are thus of the most extensive and important character, placing him among the leading men of the industrial and financial circles of the city.

On the 8th of April, 1885, Mr. Whitehead was united in marriage to Miss Ida Marie Frazer of Detroit, daughter of Abram C. and Mary (Moross) Frazer. To this marriage have been born the following named: James Frazer, who was born in 1890 and attended the public schools of the city and graduated from Cornell University with the class of 1913, is the secretary and treasurer of the Kales Stamping Company of Detroit. He is married and has one child, Frances Elizabeth, born in 1914; the second son, Thomas Cram Whitehead, born in 1893 and also a graduate of Cornell University in the class of 1916, is one of the vice presidents of the Whitehead & Kales Company; Eliza-

beth, born in 1897, graduated from Miss Liggett's school of Detroit, and Miss Porter's school of Farmington, Connecticut, and is now the wife of Harry Lynn Pearson, Jr.; Walter Kellogg, born in 1902, is attending the University of Michigan. Mr. Whitehead's family residence is one of the finest homes in Detroit. It stands on spacious grounds at No. 1782 Seminole avenue, is of the most beautiful architecture and attractive furnishings, and is one of the visible evidences of the life of notable thrift and industry which Mr. Whitehead has led.

Politically Mr. Whitehead is an earnest republican. Fraternally he is connected with the Masons and his religious faith is manifest in the fact that for many years he has been a vestryman of St. Paul's cathedral and is now its senior warden. He belongs to the Detroit Club, Bloomfield Hills Country Club, the Detroit Golf Club, the Detroit Country Club and the Detroit Athletic Club. He served two years on the city plan commission of Detroit, is now a member of the public lighting commission, and has manifested interest in all that has to do with the city's welfare, progress and upbuilding, staunchly supporting all those activities which are a matter of civic virtue and pride.

JOSEPH ELMER TORRENCE, vice president of the White Star Refining Company, was born in Waveland, Indiana, April 25, 1876, a son of the Rev. Joseph William and Eliza Jane (Bartholomew) Torrence, both of whom were natives of Pennsylvania but in early life removed to Indiana. The father was a Presbyterian preacher who labored untiringly in various fields in different parts of the country. Both he and his wife have been called to their final rest. Their family numbered seven children, two of whom have passed away—William E. and Ella. Those living, in addition to J. E. Torrence of this review, are: Mrs. C. L. Work of Portsmouth, Ohio; Mrs. Mary E. Tompkins of Berkeley, Ohio; Mrs. E. E. Galbraith of Cincinnati, Ohio; and C. M., living in Buffalo, New York.

J. E. Torrence, having attended school in the various places to which his father's pastoral duties called him, studying for a year at Ripley, Ohio, also for a year at Wooster and at Oxford, Ohio, later entered Miami University at Oxford and when he had completed his studies turned his attention to farming, which he followed for several years. Later he engaged in the hardware business at Sylvania, Ohio, for a period of four years and then took up the task of selling supplies for the oil wells in the oil districts of Indiana, Oklahoma and Texas. He continued in active connection with this branch of the oil business until 1911, when he became identified with H. B. Earhart in the White Star Refining Company, later becoming its vice president. The oil is transported from the various oil fields to Woodriver, Illinois, where it is refined. Mr. Torrence was identified with the sales end of the business at the start but now is devoting his attention to official duties as vice presi-



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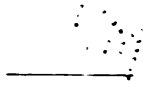
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# **The Michigan Engineer**

**CONTAINING THE**

**Proceedings of The Michigan  
Engineering Society for  
the Year  
1916**



**Published by The Society**

**SAMUEL J. HOEXTER, *Secretary*  
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Attention is called to recent publications, as follows:

Publication 26, Agaricaceae (Fleshy Fungi) of Michigan.

Publication 27, Mineral Resources of Michigan for 1917.

Publication 28, Drainage in Michigan.

Orders for Topographic Sheets (Joint Survey) and inquiries as to what sheets are published will receive prompt attention

**R. C. ALLEN, State Geologist**

**LANSING, MICHIGAN**

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# AMERICAN CONTRACTOR

CONSTRUCTION NEWS

Volume XXXIX  
Tower Bldg. AUGUST 24, 1918  
Chicago

Number 34  
Weekly—  
\$10.00 a Year

CONSTRUCTION RECORD

## Bedford Stone

John A. Rowe  
Cut-Stone Co.

PROMPT  
DELIVERIES

BEDFORD, IND

## Mahan & Company

Chicago Office, Mill and  
Storage Yard:  
2120-2140 South Kedzie Avenue  
CHICAGO

## INDIANA LIMESTONE

The ARISTOCRAT of BUILDING MATERIAL

Quarries and Mills:  
near Clear Creek, Indiana  
Block, Sawed, Planed and Turned Stone

## ILLINOIS ENGINEERING CO.

### Vapor and Vacuum Heating Systems

Manufacturers of  
John Davis Eclipse  
Steam Specialties

30 YEARS THE STANDARD  
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## INDIANA QUARRIES COMPANY

Branch of The Cleveland Stone Co.  
Largest Producers of  
INDIANA LIMESTONE  
Quarries and Mills: Bedford, Indiana  
General Offices 112 W. Adams St., CHICAGO

## J. HOADLEY & SONS CO.

Quarrymen and Manufacturers of  
BLOCKS, SAWED, PLANED  
TURNED AND CUT

## Indiana Limestone

—OR—  
(Bedford Stone)

Delivered to any point in U. S.  
OFFICE and MILLS at  
BLOOMINGTON, INDIANA

Correspondence Solicited  
Estimates Furnished on Application  
Established 1880

## THE BLACKBURN-SMITH SEWAGE EJECTOR SYSTEM

Operated by compressed air  
under electrical control

The Blackburn-Smith Corporation  
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Largest  
Strictly

## Structural Slate

Quarry in the  
United States

We have two large factories and produce  
a greater quantity of Structural Slate than  
any other manufacturer.

Urinals, Shower Stalls,  
Blackboards, Treads,  
and Platforms, etc.

"Capacity more than a carload of Milled Slate daily"

The Phoenix Slate Co., Windgap, Pa.

## THE BLUE MOUNTAIN SLATE CO.

MINERS, MANUFACTURERS AND EXPORTERS

### UNFADING BIG BED ROOFING SLATE

Blackboards--Electrical Slate

CLEAR BLACK Structural Slate

Office, Quarry and Mill - - SLATINGTON, PA.

Manufacturers  
of ROOFING

### "SLATES of QUALITY"

Mottled Green and Purple, Weathering Green, Unfading Green, Mammoth (Vein  
Poultry) Sea Green, Genuine Bangor from Our Celebrated Bangor Union Quarry.  
Blackboards, Structural Slate, Slates' Tools, Machines and Supplies.

We furnish "SLATES of QUALITY" in random widths, graduated thicknesses and in one or varied colors.

THE AULD & CONGER CO. Established 1872 Cleveland, O.

We publish a handy book, "THE SLATE ROOFER."

## HOADLEY STONE COMPANY

### QUICK SHIPPERS

INDIANA LIMESTONE

BLOOMINGTON

INDIANA

## W. McMILLAN & SON

BLOCKS SAWED, TURNED AND PLANED

### INDIANA LIMESTONE

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Quarries and Mills: BEDFORD, IND., BLOOMINGTON, IND.

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27, 28, 30, 33, 36, 39, 42-inch. Any Size You Want

Sanitary, Economical and Permanent

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to the limit and help Win the War

THEY ARE THE BEST AND SAFEST INVESTMENT IN THE WORLD

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Passenger  
and Freight

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ELEVATOR CO.  
WARSAW, N. Y.  
New York Office:  
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Help Win the War  
by specifying open  
back shovels. Your  
Uncle Sam needs the  
plain backs.

Your friends,

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Manufacturers of Conneaut Special  
Shovels, Spades and Scoops  
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FANS and BLOWERS

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## Central Oolitic Stone Co. CUT STONE

Indiana Sawed, Planed  
Limestone and Turned

Chicago Office, 2126 S. Kedzie Ave.  
Mill and Yard at Bloomington, Indiana  
Estimates furnished.  
Plans sent on promptly returned.

## 5000 TONS Structural Material IN STOCK

Send for Stock List

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Contractors

Manufacturers of  
Steel Framed Structures  
of All Kinds

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SHONE EJECTORS  
YEOMANS BROS. CO.  
Chicago



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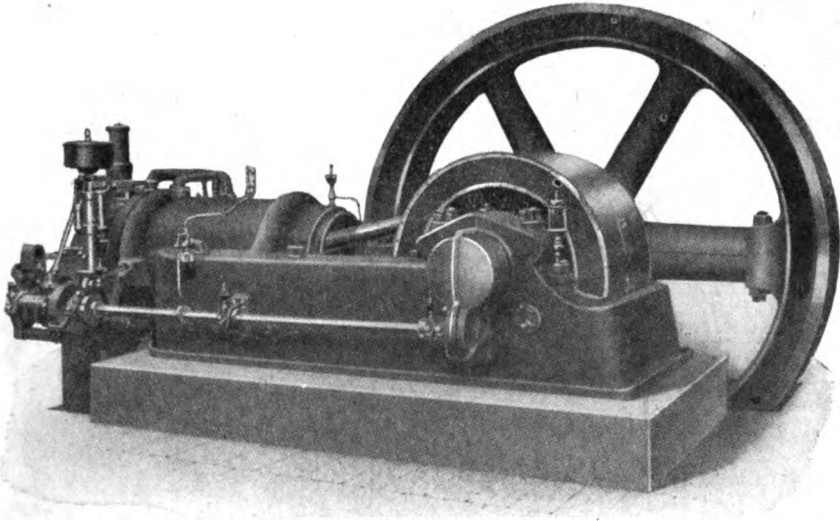
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# THE MICHIGAN TECHNIC



INTERNAL COMBUSTION ENGINE

**MARCH, 1919**

**VOLUME XXXII**

**NUMBER 1**

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**THE OFFICIAL PUBLICATION OF THE ENGINEERING COLLEGE  
UNIVERSITY OF MICHIGAN  
ANN ARBOR, MICH.**

R. W. Lee may be addressed 1212 Harvard St., Washington, D. C.

R. W. Lea, 1212 Harvard St., Washington, D. C., is a draftsman in the Quartermasters Department of the U. S. Army.

Lieut. Moses M. Brundidge was transferred to the Aviation Section of the Signal Corps, Kelly Field, San Antonio, Tex.

#### 1919

Henry Brand, who went across with the First Michigan Ambulance Unit, is still "somewhere in France." He expects to be home this spring.

Alexander Swearingen MacFarlane, Lieutenant, M. C., Canadian Expeditionary Forces, was killed in action September 27, 1918. He won the Military Cross at the Battle of Amiens, in August. A comrade wrote of him: "I have had long experience out here, and have never yet seen anybody more fearless. His men worshipped him and they had every reason, because he would expose himself ten times rather than needlessly expose one of them." His home was in Chatham, Ontario, Canada.

#### 1920

Laurence James Bauer, 2nd Lieutenant, Aviation Corps, United States Army, was killed in an aeroplane accident on the 13th of November, 1918, at Bar le Due, France. He was born on March 29, 1894, at Hastings, Mich. Bauer entered the service of his country on September 15, 1917, as a Cadet at the Aviation School at Champaign, Ill. He won his commission early in May, 1918. His home was in Hastings, Mich.

Elton J. Beaulieu may be addressed at No. 5 Main St., Jeanerette, La.

Ensign Stewart Warner may be addressed: U. S. Naval Battery No. 1, care Postmaster, New York City, American Expeditionary Forces, France.

Bradner D. Wheeler expects to be back in college for the second semester. Bradner was a Lieutenant in the Aviation section of the army during the war.

Ensign George Gilmore, who was commanding officer of the Annapolis Rifle Range during the war, will be back in school to start the second semester.

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"RIVAL"



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FABRICATED AND ERECTED

SEE PAGE XX FOR INDEX OF OUR ADVERTISERS



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H. C. BIGGS  
Manager

1704-23885

# THE ARCHITECT (AND) ENGINEER

OF CALIFORNIA  
Pacific Coast States

MAY, 1908

*San Francisco Two Years After  
the Great Fire*

*The Work of  
T. Paterson Ross, Architect, and  
A. W. Burgren, Engineer*

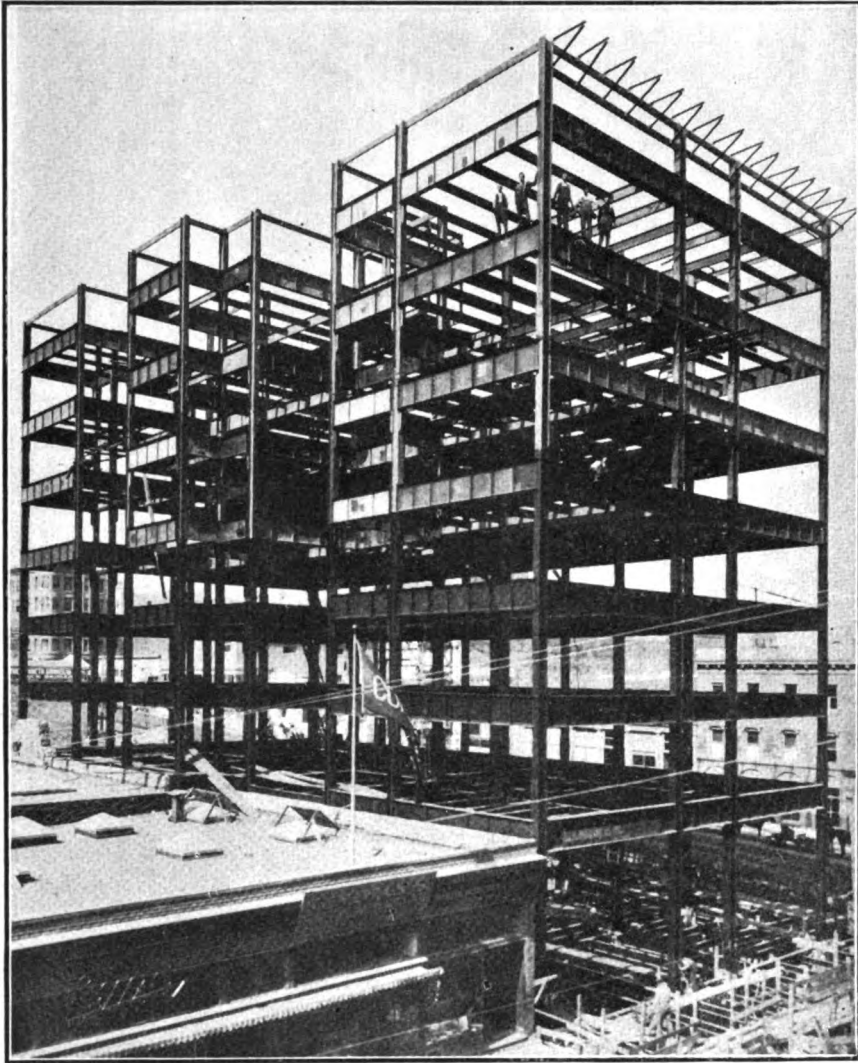
*Plans for the Greater  
University of  
California*



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No. 1.

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Steel Fabricated by Whitehead & Kales Iron Works, San Francisco and Detroit Mich.  
Steel Erection by C. A. Blume*

## Cleaning Paper on Ceilings

While there are some preparations for cleaning wall paper on the market, they are not always readily obtainable in every locality. The simplest way to clean wall or ceiling paper is to make a bag of coarse flannel, in which tie or sew up two quarts of wheat bran, rubbing the same over the paper briskly, all in one direction, taking care not to miss a single spot. Before beginning to rub, however, the walls or ceiling must be carefully dusted.

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FABRICATORS AND ERECTORS OF  
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 of a Special Character

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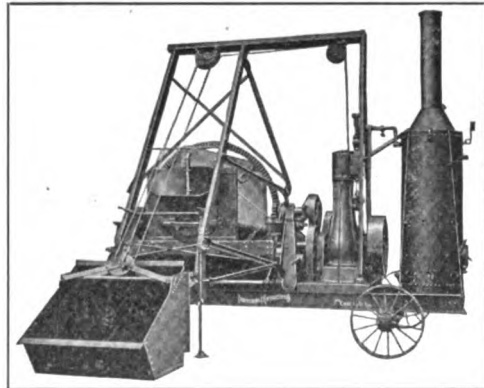
Messrs. Hale Bros, Inc.—Messrs. Reid Bros., Architects  
 Italian-American Bank—Messrs. Howard & Galloway, Architects  
 Hewes Building (15 stories)—Messrs. Reid Bros., Architects  
**Clunie Building**—Messrs. Ross & Burgren, Architects  
 Emma Spreckels Building, Messrs. Reid Bros., Architects  
 Claus Spreckels Annex—Messrs. Reid Bros., Architects

MAIN OFFICE AND WORKS  
**DETROIT, MICHIGAN**

PACIFIC COAST OFFICES  
**604-605 MUTUAL BANK BLDG.**  
**SAN FRANCISCO, CAL.**

## The Chicago Improved Cube Mixer

has no shelves, paddles, or inside disintegrators of any kind. These are resorted to in other shapes of mixers because otherwise rotation would merely cause the batch to slide around on the drum plates. Their effect is to pocket the material instead of keeping it all in one batch during the mixing process. The cube produces a perfect mixture by folding, refolding, and pressing together as a unit a batch of cement, sand and aggregate. **This is the cube principle of mixing**, and to this principle in its perfect development the **Chicago Improved Cube** adds **mechanical perfection, rapid operation, minimum power consumption and large output per man worked.** : : : : : : : : :



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