THE CONCRETE AGE

REPRESENTING THE INTERESTS OF MODERN PERMANENT CONSTRUCTION

Entered as second-class matter October 10, 1919, at the Post-office at Dalton, Ga., under the Act of Congress of March 3, 1879.

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Entered as second-class matter October 18, 1905, at the Post-office at Atlanta, Ga., under the Act of Congress of March 3, 1879.

The Editor solicits correspondence from readers on matters pertaining to the concrete industry. Descriptions of concrete work done anywhere that is of general interest accompanied by clear, sharp photographs and going into details as to methods employed will be published and paid for if found acceptable.

TO OUR ADVERTISERS.

Our advertisers are requested to have copy and cuts for changes for advertisements in this office not later than the 10th preceding the month for publication.

We cannot be responsible for changes not made, when copy and cuts are received later, or submit proof.

TABLE OF CONTENTS.

Differing With the Editor.

Oftentimes The Concrete Age and other magazines receive articles which do not accord with our own views. Contractors and others perhaps, sometimes hesitate about writing on that account, nevertheless we want all readers to know that such view as they may hold on any subject are always welcome in the editor's office.

You understand that the editor does not necessarily agree with every contributed article which may happen to come in, for there is always two side to every question and sometimes more, and as we take it, most of the articles therefore are open to debate.

It is our desire to place before our readers different subjects, but each must decide what he will use and determine what is practical and desirable in his business.

A Pointer for the Contractor.

Here is a most excellent suggestion from the pen of Editor Clarence Poe who so ably presides over The Progressive Farmer. This could be well adopted with profit by all contractors and concrete workers. So The Concrete Age takes pleasure in passing it along. It is:

It cannot be too often repeated that "the most useful implement on the farm is a led pencil." Consequently, one of the best New Year resolutions any farmer can make is that he will keep a notebook in his pocket all the time hereafter, jotting down jobs for the future as they occur to him and joyously marking each one off the list as he gets it accomplished. The writer would never be able to ·k after his editorial work or his farm work satisfactorily without such a notebook, and any man who tries to get along without one is unnecessarily lowering his efficiency. On a notebook, too, the farmer, no matter if his hands are dirty, may make temporary entries of financial items, transferring them to the regular account book kept in his desk.

Contractors Announce Wage Cut.

General contractors in Chattanooga, Tenn., have served notice that beginning April 1 wages in all lines would be reduced 20 per cent, and a "day's work for a day's pay" would be demanded.

Would License Georgia Engineers.

After exhaustive consideration of the subject, the Atlanta chapter of the American Association of Engineers has completed the drafting of an act to "regulate the practice of prefessional engineering, architecture and land surveying" in Georgia.

There is a strong sentiment for the proper regulation of the important profession of engineering in Georgia, just as its standards are now being elevated and regulated as a result of legislation action in other states, and the proposed law, when it comes before the legislature for consideration, will have influential friends.

It may be stated, in the beginning, that the Atlanta chapter of the American Association of Engineers is comparatively young, and one of its first (and most important) activities is the drafting of the law just mentioned. H. L. Collier is president and J. R. Bracewell (1408 Citizens & Southern Bank Bldg.) is secretary-treasurer of the chapter.

At a December meeting of the chapter, the discussion of a suitable license law for Georgia was taken up "because of the wide-spread and persistent interest in it, and the passage of such laws in other states. "A committee was appointed to devise the best means of securing the passage of such a law and to draft a law, the committee consisting of H. H. White, chairman; Professor F. C. Snow (of Georgia Tech) and E. V. Young.

The committee went into the matter in a most thorough manner, taking an entire month to make an exhaustive investigation. Extensive data was collected and then the committee framed a bill and submitted it, for suggestion and criticism, to every member of the American Association on engineers, and members of the other national societies, to assist the Atlanta chapter in securing the enactment of a suitable law at the hands of the Georgia legislature.

Letters were written to all states having license laws, and the data thus secured was condensed and tabulated. The law of several of the states were found lacking in a number of very necessary features, and letters received from those states showed the changes that it was proposed to make, to strengthen and perfect the existing law.

The law drafted and favored by the committee from the Atlanta chapter traces rather closely the proposed model law advocated by the Engineering Council (national), which drafted a law after 14 months' careful study of the subject. It is the opinion of the committee "that the law as proposed by the Engineering Council is the most acceptable and will be universal."

New Orleans Entertains General Contractors.

The annual meeting of the Associated General Contractors of America held at New Orleans, La., January 25-27 was without question the most successful convention ever held. Two hundred and forty-four representatives from twenty-seven States, and nearly one hundred ladies were registered. Between four and five hundred covers were laid at both the Smoker, given at the St. Charles Hotel and at the Annual Dinner at the Grunewald, both of which included members and guests. An even larger number made up the gay party which sailed down the Mississippi, abandoning the problems and speeches of the convention for the sights along the levee.

Mere words fail to describe the hospitality with which the General Contractors' Association of New Orleans greeted the convention delegates and entertained them during every spare moment of the entire three-day session. A "smoker" which is at the same time a seven course dinner and a "levee" entertainment, such as only Dixie can provide with darkie quartet and fiddlers, cotton bales and 'lasses barrels straight from the water-front, itself shown in vivid reality in the background; "vaudeville entertainment" for the ladies which begins with theatre seats and continues with supper, singing and dancing till the wee sma' hours; a "boat-ride" which includes not only a charming and unusual water trip but also a continued feast of luncheon dainties and the best jazz band south of Mason and Dixon's line with a cleared and polished deck and the best looking girls in "N'O'leans" (to say nothing of those we took with us); a dinner built around chicken and corn fritters, such as only the South knows how to cook, for 500 guests with favors and individual pound boxes of chocolate for the ladies and "Apollinaris Water" for the gentlemen—well, need we say more?

There are those who tell of special dinner parties here and yacht trip there, of the "Deep Divers Club" with extremely exclusive membership, not to mention side excursions to the races and elsewhere. One of the most remarkable observations made by the visiting contractors, however, was the manner in which our Southern hosts made their visitors feel at home by intermingling some good sturdy Scotch with their charming Southern accent. Needless to say the effect was quite stimulating, according to extracts from a special bulletin issued by the association.

Atlanta Entertains National Builders.

The Atlanta Builders Exchange entertained about 400 visitors, members of the national exchanges, Sunday February 13, with a sure enough Georgia barbecue at Lakewood park. These visitors were passing through Atlanta on their way to Savannah to attend the national convention in that city, report of which appears in another section of this magazine.

News of Street and Road Building Activity in the South Briefly Told

NEVER before in the history of the country has the South seen such active preparations being made and now underway in some parts for permanent road building of all sorts. For years the South has lagged in this respect, but the people are now speaking in no unmistakable terms, through the ballot, that they must have bond issues to carry on the good work.

This magazine is giving as briefly as it can the news of this activity, strictly confining itself to the South, though all states in all parts of the country are waking up.

Road and Street Construction.

Harrisonburg, Va.—Will construct 2.1 mi. bituminous macadam road on State Road No. 17 in Rockingham County between Dayton and Bridgewater; Virginia Project No. 95; bids until Mch. 8; G. P. Coleman, State Highway Commr., 116 S. Third St., Richmond, Va.

Staunton, Va.—Will construct 23 mi. water-bound macadam road in pastures district of Augusta County; bids until Feb. 23. Address Augusta County Supvrs.

Hondo, Tex.—Will construct 10.8 mi. gravel surface road on State Highway No. 2; $200,000; J. R. Noonan, County Judge; Alex. Walton, County Engr.

Kaufman, Tex.—Will construct 125 mi. roads; will let contracts; Bartlett & Ranney, County Engrs.

Marlin, Tex.—Will construct 46 mi. gravel surfaced roads in Precint No. 1 in Fallas County; bids until Mch. 1; G. W. Courier, County Engr. Lately noted.

Paris, Tex.—Will pave South 22nd St. from Texas & Pacific Ry. tracks to city limits. $42,804; J. M. Crook, Mayor; R. G. Tyler, City Engr.

Pecos, Tex.—Will construct portion of Bankhead Highway; D. E. H. Manigault, Engr., El Paso, Tex. Address Reeves County Judge.

Rockdale, Tex.—Will construct 8.8 mi. Sap highway from Rockdale to Hicks; $48.000; O. K. Phillips, County Commr. Road Dist. No. 10; A. F. Mitchell, County Engr., Cameron, Tex.

Danville, Va.—Will pave streets; vitrified brick, durax block, sheet asphalt, asphaltic concrete, concrete bituminous macadam $300,000; bids about April; issue $100,000 bonds; R. K. Linville, City Engr.

East Radford, Va.—Will improve streets; may vote on $200,000 bonds. Address Mayor Gilbert.

Farmville, Va.—Will construct 3.37 mi. soil roads on State Road No. 10 in Prince Edward County between Bush River Bridge and Rice; Virginia Project No. 75A; bids until Mch. 8; G. P. Coleman, Commr. State Highway Comsn., 616 S. Third St., Richmond, Va.

Spotsylvania, Va.—Will construct 5.4 mi. gravel road on State Road No. 7 in Spotsylvania and Orange counties between Chancellorsville and Wilderness Run; Virginia Project N. 92; bids until Mch. 8; C. P. Coleman, State Highway Commr., 116 S. Third St., Richmond, Va. Lately noted rejecting bids.

Beckley, W. Va.—Will vote Mch. 22 on $65,000 bonds. Address The Mayor.

Charleston, W. Va.—Will grade, curb and pave streets; 35,000 sq. yds. paving; bids until Mch. 5; Ernest Bruce, City Engr.

Grafton, W. Va.—Will construct 13 mi. roads; bids until Mch. 30; Frank Bennett, Clk. of Taylor County Court.

Princeton, W. Va.—May resurface and tarvia macadam road between Princeton and Glen Lyn. Address Mercer County Commrs.

Pratt City, Ala.—May pave E. Thomas Rd.; $160,000. Address The Mayor.

Birmingham, Ala.—Awarded paving contracts as follows: Dunn Construction Co., $13,719.80, 11th Afe. South; H. L. Mullarkey, $11,467.91, Bush Blvd., 20th St., etc.; H. S. Ryall, City Clk

Powhatan, Tex.—Will construct 28 mi. gravel and plain concrete road in Walnut Ridge-Alicia Road Improvement Dist., Lawrence County; bids until Feb. 28; Dickinson & Watkins, Engrs., Walnut Ridge, Ark., and Little Rock, Ark.

Arcadia, Fla.—Will construct hard-surfaced roads; may vote on $100,000 bonds. Address De Soto County Commrs.

Iverness, Fla.—Will construct 2000 ft. concrete sidewalks; bids until Feb. 18; S. L. Lloyd, Town Clk.

Jacksonville, Fla.—Will construct 554 sq. yds tile sidewalks and 33 sq. yds. concrete sidewalk; bids until Mch. 4; John S. Bond, Chrmn. City Comsn.

Palatka, Tex.—Will construct sidewalk aprons, consisting of 48 sidewalk aprons of 8 sq. yds. each; bids until Mch. 1; John H. Randolph, supt. Public Works.

St. Petersburg, Fla.—Will grade, curb and pave streets with vitrified brick, including 11th Ave., N. 12th St., Crown Ave. and others; bids until Mch. 7; G. B. Shepard, Director of Finance.

Titusville, Fla.—Will construct road to Ocean Beech; 12½ mi.; road to Orinso, on Merritt Island, etc.; will sell $175.000 bonds; N. T. Froscher, Clk. Brevard County Commrs.

Cedartown, Ga.—Will construct roads; vote Mch. 15 on $400,000 bonds; John K. Davis, Chrmn. Polk County Commrs. Roads and Revenues.

Ringgold, Ga.—Will construct 8¼ mi. chert- surfaced road between Ringgold and Tennessee State line, known as Blue Ford Rd., Section A of Project 71; bids until Mch. 18; L. R. Wiggins, Chrmn. Catoosa County Commissioners. Roads and Revenues.

Sylvester, Ga.—Will grade 14½ mi. 30-ft. road from Sylvester to Colquitt County line on Sylvester and Moultri road; Davis Construction Co., Contr., Macon, Ga.

Covington, Ky.—Will pave streets and sidewalks; bids about Mch. 1; W. W. Stewart, Engr.; Ben Vastine, Commr. Public Works.

Frankfort, Ky.—Will grade and pave streets;

bids about Apr. 1; J. S. Boggs, Commissioner State Highway Comsn.

London, Ky.—Will pave and grade roads in Laurel County; new bids about Mch. 1; J. S. Boggs, Commr. State Highway Comsn., Frankfort, Ky.

Louisville, Ky.—Will construct sidewalks in Glenwood Pl. and North Park; Samuel T. Mann, City Engr.

Paducah, Ky.—Will construct and reconstruct driveway from E. property line of 17th St. to west property line 25th St.; concrete, tarvia, Kentucky rock asphalt; bids until Feb. 28; F. W. Katterjohn, Commr. Public Affairs; W. M. Mitchell, City Eng. Lately noted.

Pineville, Ky.—Will widen streets around courthouse, etc.; $11,500; Davis & Graham, Contrs. Address The Mayor.

Pineville, Ky.—Bell Lodge No. 300, I. O. O. F., will construct 600-ft. water-bound macadam road; John A. Bailey & Co., Contrs.

Whitesburg, Ky.—Will construct highway from Jenkins, through Cumberland Mountain; 10 mi. Address Letcher County Commrs.

Alexandria, La.—Will construct sidewalks and curbing on Levin St.; bids until Mch. 7; rejected previous bids; V. M. Ake, City Secy.

Alexandria, La.—Will pave sidewalks with concrete and construct curbing with cement on east side of 14th St.; sidewalks with concrete on both sides of 7th St.; bids until Mch. 7. Address V. M. Ake, City Secy.

LaFayette, La.—Standard Oil Co. will improve and gravel Ave. B. and 15th St.

Lake Charles, La.—Will pave Clarence St. from Hodges to Common St.; received bid from John Ritchie; J. A. Trotti, Mayor.

Opelousas, La.—Will construct 3.55 mi. Opelousas-Arnaudville Highway; St. Landry Paris; bids until Mch. 2; Frank M. Kerr, Ch. State Highway Engr., Prest. Board State Engineers, 332 Maisonblanche Annex, New Orleans, La.; Durio, Parish Engr., Opelousas, La.

Shreveport, La.—Will pave Herndon Ave. from Coty to Market St.; asphaltic concrete; bids until Feb. 23; J. C. Flanagan, City Secy.-Treas.

Baltimore, Md.—Will pave streets; contract to Waverly Paving Co., 7 Aisquith St., and Baltimore Asphalt Block & Tile Co., 1320 N. Monroe St.

Baltimore, Md.—Will grade, curb and pave streets listed in Contracts 182-OC and 183OA; sheet asphalt on concrete base; bids until Mch. 2; R. Keith Compton, Chrmn. Paving Comsn., 214 E. Lexington St.

Baltimore, Md.—State Roads Comsn., 601 Garrett Bldg., will receive bids until Mch. 1 for oiling five sections State Highway, requiring 620,486 gals. oil, as follows: Div. 1, Dorchester, Wicomico, Somerset and Worcester counties, 290.06 mi., 51,313 gals.; Div. 2, Cecil, Kent, Queen Anne's, Talbot and Caroline counties, 83.77 mi., 162,242 gals.; Div. 3-5, Montgomery, Howard, Carroll and Frederick counties 39.37 mi., 73,544 gals.; Div. 4-7, Baltimore, Harford and Anne Arundel, 64.88 mi., 133,950 gals.; Div. 6, Frederick, Allegany, Garrett and Washington counties, 124.73 mi., 199,437 gals.

Belair, Md.—Will construct 2.25 mi. concrete road from Bethel Church to Black Horse; Harford County, Contract H-25; bids until Mch. 8; L. H. Steuart, Secy. State Roads Comsn., 601 Garrett Bldg., Baltimore.

Cumberland, Md.—Will construct 1.4 mi. concrete road from Morantown to Allegany; Allegany County, Contract A-18; bids until Mch. 8; L. H. Steuart, Secy. State Roads Comsn., 601 Garrett Bldg., Baltimore.

Easton, Md.—Will construct 3 mi. concrete road from end Contract T-11 toward Easton; Talbot County, Contract T-14; bids until Mch. 8; L. H. Steuart, Secy. State Roads Comsn., 601 Garrett Bldg., Baltimore.

Frederick, Md.—Will construct 16 mi. road in Frederick County; will invite bids in Mch. Address John N. Mackall, Chrmn. State Roads Comsn., 601 Garrett Bldg., Baltimore.

Snow Hill, Md.—Will construct 3.6 mi. concrete road from Showell to Delaware State Line; Worcester County, Contract Wo-18; bids until Mch. 8; L. H. Steuart, Secy. State Roads Comsn., 601 Garrett Bldg., Baltimore.

Greenwood, Miss.—Will improve public highway from Catfish bridge, near Sidon, in Dist. No. 5, to Holmes County line will let contract. Address LeFlore County Commrs.

Louisville, Miss.—Will construct roads and bridges; bids until Mch. 7; B. M. McCully, Clk., Winston County Supvrs.

Pensagoula, Miss.—Will construct hard-surfaced road; vote Mch. 11 on $180,000 bonds. Address Jackson County Commrs.

Senatobia, Miss.—Awarded road contracts as follows: T. D. Callahan road from Thyatira to Wyatte; Lee Williams, road from Senatobia. Address Tate County Supervisors, M. T. Thompson, Clk.

Starkville, Miss.—Will complete and improve Osborn and Mahew roads; voted Mch. 8 on $18,000 bonds; E. C. Thomas, Engr.

Bowling Green, Mo.—Will construct 2.5 mi. road, State-aid Project S. 20.21, Pike County; received bids from C. P. O'Reilly, St. Louis; C. T. Land Co., St. Louis, and others. Address State Highway Dept., Jefferson City, Mo.

Galena, Mo.—Has completed plans for improvement of State roads in Stone County; main road 49 mi. long and other road is 7.2 mi. in length; will issue $100,000 bonds; H. P. Moberly, Div. Engr., Springfield, Mo.

Hartville, Mo.—Will improve 7½ mi. Springfield-

Memphis road in Wright County; $37,000; will invite bids; H. P. Moberly, Div. Engr., Springfield, Mo.

Huntsville, Mo.—Will construct 1.66 mi. concrete or brick road; Project No. 22; bids until Feb. 28; changed date from Jan. 20; Carl Haynes, County Engr. Lately noted.

Independence,Mo.—Will improve Daniel Joyce Memorial Road; $50,000. Address Jackson County Commrs.

Linneus, Mo.—Will grade and construct roads, Federal-aid Project 20.24, Linn County; Diemer & Williamson Construction Co., Contractor, Grookfield, Mo.

Shelbyville, Mo.—Will construct roads in Shelbyville and Bethel Special Road Dists.; vote Mch. 3 on $10,000 and $7000 bonds. Address Shelby County Commrs.

Mt. Vernon, Mo.—Will construct roads, Project No. 42; 10.43 mi.; culverts and bridges; bids until Mch. 4; W. R. Shanklin, Engr., Sedalia, Mo.

Neosho, Mo.—Will improve roads; voted $22,000 bonds. Address Newton County Commissioners.

Webster Groves, Mo.—School voted $163,000 school bonds; Fred J. Horst, Member Board of Education.

Warrensburg, Mo.—Will construct roads and bridges; Project No. 10; 1.65 mi.; bids until Feb. 25; J. W. Wilson, County Engr.

Dunn, N. C.—Will improve streets and complete water and sewer systems; issue $50,000 bonds. Address The Mayor.

Hamlet, N. C.—Will pave streets; plan voting on $100,000 monds. Address The Mayor.

Hendersonville, N. C.—Will pave streets; $1,000,000; Davidson-Grennell Co., Contr., West Palm Beach, Fla.; J. Mack Rhodes, Mayor.

Marion, N. C.—Will construct 5½ mi. highway from Cherry Springs in Crook Creek Township, McDowell County to Stone Mountain Church; bids until Mch. 7; Hugh F. Little, Chrmn. McDowell County Highway Comsn.; J. L. Martin, Engr., Bridgewater, N. C.

Monroe, N. C.—Will pave streets; $150,000; invites bids; J. C. Sykes, Mayor; Smith & Kluttz, Engrs., Salisbury, N. C.

Rutherfordton, N. C.—Will pave streets; 2.2 mi.; $100,000; Geer Wilson Co., Contr.; W. W. Phillips, Engr.

Washington, N. C.—Will construct 65,000 sq. yds. vitrified brick with asphalt filler paving; 2.6 mi. storm sewers; $421,176; P. G. Ligon, Contr., 2000 Brookefield Ave., Baltimore; P. A. Painter, City Engr.

Wilkesboro, N. C.—Will construct and improve roads; vote on $130,000 bonds. Address Wilkes County Commrs.

Altus, Okla.—Will construct 1 mi. road in Jackson County; bids until Mch. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Claremore, Okla.—Will resurface streets. Address The Mayor.

Durant, Okla.—Will construct 80 mi. road in Bryan County; bids until Mch. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Newkirk, Okla.—Work has started on 1½ mi. brick surfaced and 1½ mi. concrete road; plans are being made for 2 mi. road from city toward 101 Ranch. Address Kay County Commissioners.

Norman, Okla.—Plans 72 blocks paving during 1921 and several miles cement sidewalks; W. R. Gater, City Mgr.

Pawhuska, Okla.—Will construct 7 mi. road in Osage County; bids until Mch. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Tishomingo, Okla.—Will construct 35 mi. road in Johnston County; bids until Mch. 1; Robert C. Terrell, State Highway Engr., Oklahoma City.

Walters, Okla.—Will pave 55 blocks; construct storm sewers; contract let. Address City Commrs.

Weleetka, Okla.—Will pave streets; bids until Mch. 16; V. V. Long & Co., Engrs., Oklahoma City, Okla.

Charleston, S. C.—Will surface boulevard driveway with oyster shell, clay-gravel, marl-gravel, etc.; bids opened; J. H. Dingle, City Engr.

Gaffney, S. C.—Will pave streets; vote Mch. 4 on $100,000 bonds; J. H. Turner, Mayor.

Coleman, Tex.—Will construct 6.78 mi. gravel road; 2 lower-water concrete bridges; $50,000 available; Burks, Firmin & Hart, Contrs., Comanche, Tex.; W. E. Dickerson, Engr., Coleman.

Jackson, Tenn.—Will construct roads; vote on $300,000 bonds. Address Madison County Commrs.

Jackson, Tenn.—Will construct concrete curb and gutter on Nelson St.; 2080 lin. ft.; $1600 available; Yandell & Conger, Contrs.; Paul M. Wilson, Commr. Streets.

Tiptonville, Tenn.—Have started construction of sidewalks. Address The Mayor.

Union City, Tenn.—Will pave 2½ mi. asphaltic streets. Address Mayor Pittman.

Beaumont, Tex.—Will construct highway beween Nome and Sour Lake, including 2000 ft. roadway, etc.; invites bids. Address Jefferson County Commrs.

Cameron, Tex.—Will construct 8.7 mi. State Highway No. 36 in Milam County; $68.669.06; W. C. Gellis, County Judge; A. F. Mitchell, County Engr.

Dallas, Tex.—Will improve Miller's Ferry Road in Dallas County; bids until Mch. 3; Chas. E. Gross, County Auditor; Nagle-Witt-Rollins Engineering Co., Dist. Engrs.

Eastland, Tex.—Will construct roads; bituminous macadam; $4,500,000; Fleming-Stitzer Road Building Co., Contr.; W. R. Eccles, Engr.

El Paso, Tex.—Will construct pavement on 250 ft. Myrtle Ave.; bids until Feb. 24; Chas. Davis, Mayor.

El Paso, Tex.—Will construct 15.45 mi. concrete paved road on State Highway No. 23, the Alamogorda road; 163,200 sq. yds. pavement; $479,245.81; El Paso Bitulithic Co., Contr.; L. A. White, County Engr.

Fort Worth, Tex.—Will expend $513,000 in paving 18 streets, including Evans, Galveston, College Central Aves. and other streets; D. L. Lewis, City Engr.

Groesbeck, Tex.—Will construct 23.4 mi. State Highway No. 14; $59,400 Federal Aid granted; H. F. Kirby, County Judge; Fred P. Holt, County Engr.

Henderson, Tex.—Will construct roads on State Highway 26 and 43; bids until Feb. 24; Hess & Skinner Engrs., Southwestern Life Bldg., Dallas, Tex.; J. T. Watson, County Judge, Henderson. Lately noted.

New Concrete Products Plants.

Mobile, Ala.—Balwin Petrinite Roof Tile Co., Enos Balwin in charge, Box 1483; has plant for Mfre. of concrete roofing tiles; daily capacity 1800.

Lansdowne, Md.—Maryland Concrete Corp., 700 Equitable Bldg., Baltimore, Md., acquired plant of Maryland Concrete Products Corp. and additional 8 acres; will erect 60x100-ft. plant; daily capacity 1000 concrete blocks and 10,000 concrete brick.

Miami, Fla.—Miami Block Co. incorporated with $100,000 capital stock, to manufacture and deal in cement products, building supplies, etc. Hugh M. Anderson, president; V. J. Riley, vice-president; R. B. Leonard, secretary and treasurer.

Magnolia, Ga.—Cal-Mer Portland Cement Co. (now being organized by Callaway & Merry Development Co., Atlanta, Ga.), will proceed with erection of first unit of $1,000.000 cement plant it is stated; plans are being prepared by Engineer Richard K. Meade, Baltimore, Md.; company has tract of 1,150 acres; first unit to be constructed will have daily output of 1,500 barrels. (Magnolia is on Southern Railway, 31 miles southeast of Macon.)

Engineers Convention at Syracuse

TWO day conclave of engineers and technologists from all sections of the country began at Syracuse, N. Y., Feb. 14, with the announcement by Herbert Hoover, president of the American Engineering Council of the Federated American Engineering Societies, of the appointment of a committee on Elimination of Waste in Industry.

The appointment of this committee, according to Mr. Hoover, marks the beginning of what is officially styled by this council as a great national assay of waste, in which from 100.000 to 200,000 engineers functioning through the council will attempt by studying the nation as a single industry organism to locate the weakness in the country's production system.

A preliminary survey, it is announced, has already been organized and the different elements making for production waste, such as labor conflict, decrease in individual productivity, lack of coordination, and many othe sources of industrial failure will be brought under the close scrutiny of the organized engineers of the nation with the aim of solving pressing economic problems.

The personnel of this committee, as announced by Mr. Hoover follows: J. Parke Channing, mining engineer of New York City, vice-president of the Federated American Engineering Societies, and member of the American Institute of Mining and Metallurgical Engineers chairman; Dr. Ira N. Hollis, president, Worcester Polytechnic Institute, Worcester, Mass., past president of the American Society of Mechanical Engineers; L. W. Wallace of Baltimore, member of the American Society of Mechanical Engineers, member and president of the Society of Industrial Engineers, treasurer of the Federated American Engineering Societies; H. R. V. Scheel, assistant treasurer, Brighton Mills, Passaic, N. J., member American Society of Mechanical Engineers.

L. P. Alford, editor of "Management Engineering," New York, vice-president of the American Society of Mechanical Engineers, director of the Society of Industrial Engineers, and an authority on factory management methods; George D. Babcock, manufacturing executive of Peoria, Ill., and author of "Taylor System in Franklin Management;" F. G. Coburn, Bethlehem Shipbuilding Company, former commander in the Construction Corps, U. S. Navy; Morris L. Cooke, consulting engineer in Management, Philadelphia, member of American Society of Mechanical Engineers, Taylor Society and Society of Industrial Engineers.

Harington Emmerson, consulting engineer of

New York, member of the American Society of Mechanical Engineers, and Society of Industrial Engineers; E. E. Hunt, New York, formerly labor investigator for Clothing Manufacturers' Association, New York City, member of the Taylor Society and writer; C. E. Knoeppel, industrial engineer of New York City, member of the Americai Society of Mechanical Engineers, and the Society of Industrial Engineers; Robert Linton, Montana mining engineer and member of the American Institute of Mining and Metallurgical Engineers; Fred J. Miller, past president of the American Society of Mechanical Engineers; J. H. Williams, engineer of New York City and member of the Taylor Society; Robert B. Wolf, New York engineer, vice-president of the American Society of Mechanical Engineers, and a pioneer in the three-shift system of industry.

Mr. Hoover, who is president of the American Engineering Council, is also a member of the committee of which he is one of the principal sponsors. He will take a leading part in the assay of waste which the committee will conduct for the council. Mr. Hoover is a member of the American Society of Civil Engineers, president of the American Institute of Mining and Metallurgical Engineers and a member of the American Society of Mechanical Engineers.

The committee, it was announced, has already started work and a nation-wide plan, described as the most ambitious movement in the direction of solving economic problems ever undertaken by American engineers, will be put in operation from the New York and Washington headquarters of the council at once. The scope of the undertaking will, it is expected, be outlined tonight by Mr. Hoover which he is to make following the dinner given by the council and which will be attended by prominent engineers from every industrial center, including special delegations from the engineering centers of New York State.

"In selecting the personnel of the committee," it was announced, "care was exercised to secure men of broad experience, of clear concepts, of unbaised attitude toward labor problems and representative of managerial, consultant, educational and editorial activities as well as having widely distributed and varied industrial contacts."

An announcement by the council further said: "The Federated American Engineering Societies, in which the national and local engineering societies of the nation are coalescing, is organized for public service.

"At the initial meeting in Washington, November 19, 1920, it endorsed a plan drawn by President Hoover and authorized him to name a Committee on Elimination of Waste in Industry to make an engineering assay of waste and to propose constructive measures by which industrial standards may be improved.

"Unemployment, intermittent employment, strikes, lock-outs and restrictions of output are waste. Disuse and misues of machinery and equipments and losses of manufacturing materials are likewise waste. Stabilization of industry is a crying need, and also an engineering problem. Labor, capital, management and the consuming public stand to gain if common constructive action can be taken to lessen the idleness of men, idleness of productive equipment and the utilization of material."

It is proposed to organize the engineers of the country on a territorial basis, each having an engineering organization, with the American Engineering Council, the executive organ of all.

Morning and afternoon sessions of the council will deal with numerous social, industrial, political and technical problems, among them betterment of Patent Office conditions in Washington through bringing about the passage of the Nolan Bill, the establishment of a National Department of Public Works, and the general labor situation. Mr. Hoover presides over the meeting of the executive board which represents universities, engineering societies and industries on many states. The vice-presidents of the council are Calvert Townley of New York, W. E. Rolfe of St. Louis, Dean D. S. Kimball of Cornell and J. Parke Channing of New York.

Concrete Institutes Meets.

The seventeenth annual convention of the American Concrete Institute was held in Chicago on February 14, 15 and 16. President H. C. Turner opened the meeting with an address on the "Aims and Activities of the Institute."

Resolutions adopted at the meeting were as follows: That the National Department of Public Works be instituted in Washington, D. C. That Mr. W. K. Hatt, chairman of the Research Committee, be instructed to outline a plan, which will attempt to improve the working efficiency of standard concrete mixers.

Mr. Hatt at the meeting expressed the opinion that about one minute is the practical limit of mixing a batch.

The following officers were elected for the coming year: H. C. Turner, New York, president, reelected; Harvey Whipple, reappointed secretary and elected treasurer, Detroit, Mich.; W. P. Anderson, Cincinnati, O., vice president; director of third district, Ernest Ashton, Allentown, Pa.; director of fourth district, J. C. Pearson, Washington, D. C; director of fifth district, D. A. Abrams, Chicago.

W. K. Hatt, professor of Civil Engineering, Purdue University, and chairman of the Research Committee, gave a report outlining the attractive fields of investigation not now occupied.

Mr. Sanford E. Thompson, consulting engineer,

and chairman of the Wason Medal Committee, presented the Wason medal to Mr. W. A. Hull, of the United States Bureau of Standards, for the most valuable paper of the preceding year's convention, entitled: "Fire Resistance of Concrete Columns."

Mr. Hull later spoke on the topic of "Recommendation for Safeguards Against Unusual Fire Hazards."

On Tuesday morning Mr. Hatt read a paper, "Tests of a Concrete Mixer," followed by Mr. F. M. Balsley, engineer-inspector of the Wisconsin State Highway Department, his subject being "Equipment for Concrete Road Construction."

Mr. C. R. Ege, engineer of the Road Bureau, Portland Cement Association, spoke on "Developments in Construction Plant and Organization in Concrete Road Construction."

Mr. Clifford Older, chief highway engineer, of Illinois, presented the report of the committee on concrete roads.

Mr. Hatt, previously mentioned, spoke on "Tolerance of Coarse Sand Passing the One-quarter Inch Screen as Affecting Specifications for Road Concrete."

In the afternoon session Mr. N. M. Loney, vice-president of the Thompson Starrett, and chairman of the committee on Concrete Floor Finish, gave a report of that committee. Then Mr. J. C. Pearson, of the United States Bureau of Standards, Professor D. A. Abrams, of Lewis Institute, and W. M. Rynerson, Builders' Material Supply Co., of Philadelphia, continued the discussion.

Mr. E. G. Perrot, architect, of Philadelphia, Pa., read a tentative report of the committee on Concrete Houses, of which he is chairman. The report recommends certain changes in the thickness of concrete walls, etc.

On Wednesday morning, Mr. R. F. Havlik, chairman of the Committee on Concrete Products, read the report of this committee, which consists of proposed standard specifications for concrete block, brick, tile and architectural trim stone; proposed recommendations for building regulations to govern the use of concrete block, brick, tile and architectural trim stone, to supersede standards number ten, adopted in 1917.

Mr. J. T. Stewart, Portland Cement Association, spoke on "The Development of Concrete Building Units in England."

Mr. A. B. MacMillan, engineer, Aberthaw Construction Co., read a report of the Committee on Standardization of Units of Design.

Mr. S. C. Hollister, engineer, Philadelphia, gave a report of the Joint Committee on Concrete and Reinforced Concrete.

Mr. F. R. McMillan, engineer, Turner Construction Co., read a paper entitled, "A Study of Column Test Data." This able study attempts to develop a formula for the design of spirally reinforced columns.

American Road Builders Hold Congress

THE eleventh American Good Roads Congress was held February 9-12 at the Coliseum, Chicago, in connection with the eighteenth annual convention of The American Road Builders' Good Roads Show.

The appended list of exhibitors shows for itself the magnitude of the show. Machinery of every type and description used for road making crowded the big Coliseum to capacity. Manufacturers were fairly optimistic as to prospects, the chief ground being the basic consideration that there is between six and seven hundred millian dollars available for highway construction in 1921.

Leads to Road Revolution.

Considering the event of the motor truck as a practical adjunct of the railroads for the handling of short haul broken car lots of freight, it is not surprising that new and better designed machinery for putting down roads which will endure is more and more in evidence. For twelve years, road shows have been held, and no show has gone the magnificent limit this show has. For the interested purchaser of road making machinery the show was a vertiable "mecca" worth a trip across the continent to see. It may be said that the contental trip was taken by many, and there were visitors from without the confines of the United States.

Well Attended.

The eleventh good roads congress was held in the convention hall of the Coliseum, and up there above the subdued roar of a big hall of machinery, experts of road building and of road building policies got down to real constructive exchange of plans.

Without waste of words, M. J. Faherty, President of the Board of Local Improvements of Chicago, and president of the American Road Builders' Association, opened the session. Mr. Faherty pointed out that in the one state of Illinois there is $60,000,000 for good roads. He also told briefly of what had been done. Illinois laid 341 miles of hard surfaced

roads in 1920. Within the past five years, Chicago has paved 1,260 miles of streets.

How to Spend Money.

H. L. Bowlby, Chief, War Materials Division, U. S. Bureau of Public Roads, Washington, D. C., presided at the forenoon session. Mr. Bowlby called attention to the fact that the big question is no longer to argue for good roads but how to spend the money. He introduced Thomas H. MacDonald, Chief, U. S. Bureau of Public Roads, Washington, D. C.

"We want to leave a message of optimism," said Mr. MacDonald at the outset of his remarks. His speech bore out his wish. It is the thought of this man who has so much to do with American road building that we can not expect to solve all the problems of road making preparatory to going ahead and building as best we knew how. Practically no two engineers are agreed on just what the ultimate gool road is. The problems are not static. They develop from year to year, and while we must try to anticipate we should not stagnate in doing so and spend all our time in anticipation.

Now is Time to Move on Big Scale.

Mr. Macdonald places the amount available for road building at $622,000,000 and states, "NOW IS THE TIME TO GO AHEAD AND SPEND ON A LARGE SCALE."

Still, Mr. MacDonald is glad that we have not pushed ahead too rapidly under the conditions existing during the past year. He told his audience that it was a good thing that the powerful brakes of impaired transportation and lack of labor had held back road building.

While the Chief of the U. S. Bureau of Public Roads advises to go ahead and spend the big amount of money now, he has certain strings attashed to his advice which are absolutely vital and perfectly apparent. His advice is that THE EARNING CAPACITY OF ROADS MUST BE DEMONSTRATED. It is time for the sponsors and "pushers" for good roads to show the public convincingly that the DOLLAR PUT INTO ROAD BUILDING IS GOING TO EARN AN INCOME.

To this end, the maintenance of roads must be looked to or the public is not going to support by taxation the putting through of future programs.

Prof. C. J. Tilden, National Director of Highway and Highway Transportation, was the next speaker, and the pertinent part of his address was that there is a grave shortage of competent highway engineers. He told in a very interesting manner what the colleges and universities are planning to do.

The Local and National importance of the Lee Highway was the subject of address by Dr. S. M. Johnson, General Director of the Lee Highway Association. Mr. Johnson spoke also about the road monument shortly to be erected in Washington near the White House.

The Wednesday afternoon session was taken up by an address, "The Highway's Part in the Development of Efficient Transportation," by J. W. Brooks, manager of the Educational Bureau of the Federal Highway Council, Washington, D. C., and by a very interesting talk on the roads of Alaska, by Col. James G. Steese, President of the Alaska Road Commission.

Sub-grade and Road Drainage.

These formed the material of the Thursday forenoon session, and were ably handled by H. G. Shirley, Secretary of the Federal Highway Council, Washington, D. C.; Clifford Older, Chief Highway Engineer of Illinois; F. H. Eno, Professor of Engineering, Ohio State University, and H. S. Mattimore, Testing Engineer, Pennsylvania Highway Department and others. Developments of these topics will be presented in a forthcoming issue of The American Contractor.

Thursday afternoon's program was as follows:

"Types of Pavements," James H. MacDonald, former State Highway Commissioner, New Haven, Conn.

Discussion—C. M. Upham, Chief Engineer, Delaware State Highway Department, Dover, Del.; Julius Adler, Deputy Highway Commissioner, Philadelphia, Pa.

"Highway Researches and What the Results Indicate," A. T. Goldbeck, Chief, Division of Tests, U. S. Bureau of Public Works, Washington, D. C.

Discussion — Anson W. Marston, Dean, Iowa State College, and others.

The congress transformed itself into a big mass meeting at the Medinah Temple and was addressed by William Hale Thompson, Mayor of Chicago, by Hon. P. T. Colgrove, President of the Michigan Good Roads Association, and by M. J. Faherty. Mr. Faherty made the most pertinent and popular hit of the evening when in his remarks he stated that he could prove that cement could be manufactured under present conditions at a cost of fifty-seven cents a barrel. He suggested that it would be a good thing for the State of Illinois to condemn a good cement plant and operate it as a state plant.

The entertainment was a dinner dance at the Congress Hotel.

Spring Meeting of Engineers.

May 23rd through 26th has been set as the date of the Spring Meeting of The American Society of Mechanical Engineers. It will be held in Chicago at the Congress Hotel.

Sessions are planned by the Professional Sections on Aeronautics, Fuels, Management, Material Handling, Machine Shop, Power, Forest Products and Railroads.

How the Ingersoll-Rand Company is Solving Its Housing Problem with Concrete

LIKE many other industrial concerns, the ingersoll-Rand Co. at Phillipsburg, N. J., has for years been confronted with the problem of providing suitable homes for its employes and their families. The Ingersoll-Rand plant is located at the corporate limits of Phillipsburg. In the earlier period of its history, a street car line was constructed from built-up portions of Phillipsburg to the plant site, for the special accommodation of the company's employes.

During the war, rapid and extensive plant expansion caused the housing problem to become acute. The Ingersoll-Rand Co. soon realized that existing facilities and those which might be developed from outside sources were entirely inadequate to meet the emergency thus created. This emergency made evident, more than ever before had been realized, the vital importance of good housing on the moral, dependability, efficiency and good citizenship of labor. The company, therefore, determined not only to provide for an immediate need, but to attempt a solution of the housing problem from the standpoint of all of its fundamental requirements.

The solution of any housing problem to be of a permanent nature must develop in the home owner a sense of pride and satisfaction, evidenced, as in this Valley View house, by his efforts to beautify his grounds.

As a start, a tract of land was acquired east of the plant, and the Phillipsburg Development Corporation was organized, with Paul R. Smith, Architect and Town Planner, in charge, to formulate plans for and handle the entire project. The development which resulted is known as Valley View and presents not a temporary solution of a problem of the moment, but one worked out in minute detail and permanent in character.

In its study, made with a view to developing the plans for this project, the Phillipsburg Development Corporation realized that the employes of a large industrial concern for whom housing accommodations must be provided might naturally be divided into two general classes—first, the heads of departments, foremen and highly skilled mechanics, and second, the semi-skilled and unskilled labor.

It was evident that providing for the first group would not be a serious problem because the employes of the class mentioned constitute but a small fraction of a large plant's total and are usually better able financially to plan and provide homes for themselves in accordance with their tastes or desires; but this does not mean that the latter class was not considered in the Phillipsburg development.

However, employes falling in the second group present a much more difficult problem. Usually they are not financially able to purchase homes costing more than a few thousand dollars. Also, terms of payment must be arranged on the basis of small monthly installments amounting to little more than rent. The period of purchase therefore covers a long term of years. It is obvious that however small monthly payments are, they must be large enough to include cost of maintenance, depreciation and insurance, as well as provide for a reduction of principal. Ultimate economy is paramount; yet because the houses must be the family home for many years, they must also be planned with a view to convenience, comfort and attractiveness. In short, the fundamental requirements of the ideal house for the industrial worker are, lowest possible first cost, comfort, convenience, attractiveness, freedom from maintenance charges, absence of depreciation and security against loss by fire or tornado.

The Phillipsburg Development Corporation realized that freedom from maintenance, absence of depreciation and security against loss from fire or

Home ownership, in a community like Valley View, is the avenue through which come contentment, dependability, efficiency and good citizenship.

obsolescence must be secured through inherent qualities of some construction material. Comfort, convenience and attractiveness are matters of design, setting, location and appointments. Lowest possible first cost, consistent with other requirements, can be realized only through some standardization, that is, by preserving a similarity of size and type of house that will permit of repeated duplication of construction operations.

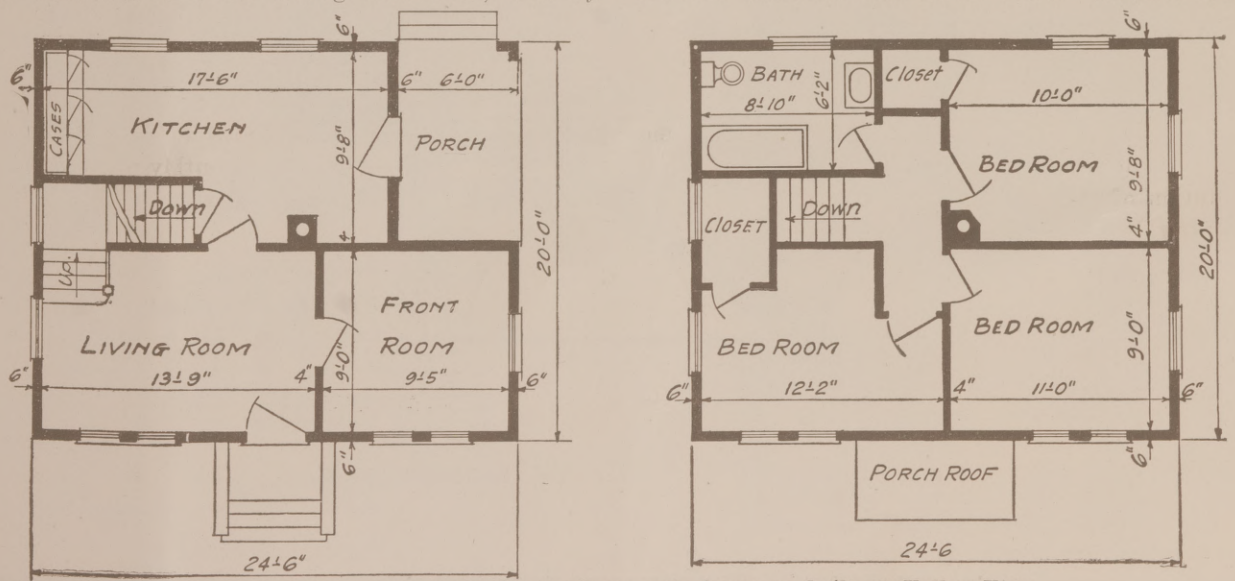
As a study of the corporation's problem progressed, it became evident that concrete was the material having the possibilities of supplying all the fundamental requirements which have been realized at Valley View. Comfort and convenience in these houses have been obtained by a commonsense study of the needs of the prospective occupants and by following well-known requirements of construction. Attractiveness was secured by finishing the house in a variety of pleasing colors, by skillful arrangements and variation of their facing directions, and by giving each house enough grounds to provide for landscaped lawns, shrubbery, etc.

However, the ends attained at Valley View might not have been realized had there not been presented to the Phillipsburg Development Corporation a system of concrete construction that made it possible to reduce building costs to a standardized manufacturing basis. In this way, low first cost was obtained for houses inherently proof against depreciation, loss by fire or material damage from whatever cause.

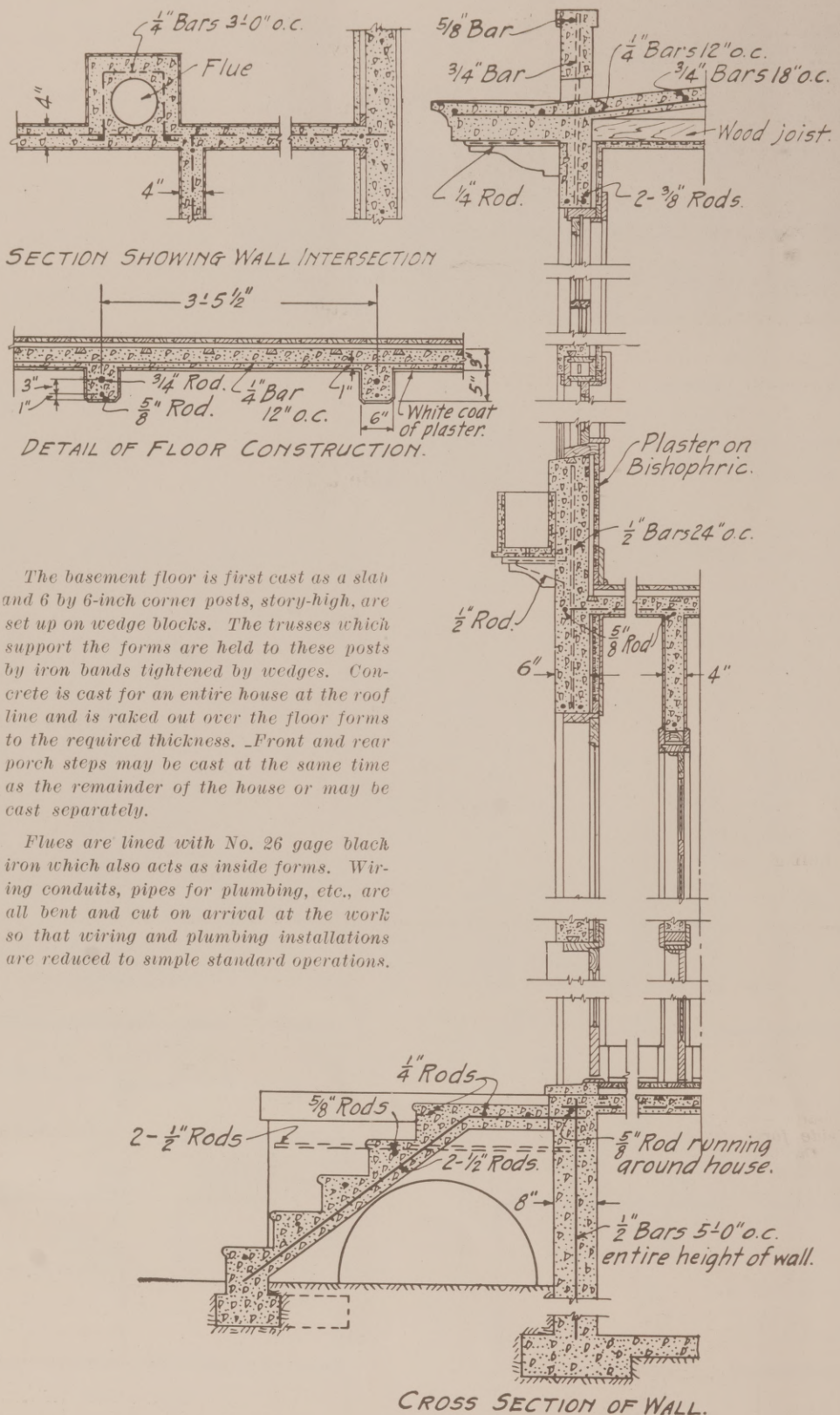
The system adopted was one developed by C. H. Ingersoll of "dollar-watch" fame, after ideas advanced several years ago by Thomas A. Edison. The forms used are of wood and are set up for a complete house at one operation. The reinforcement, electric wiring, plumbing, and similar service installations are put in place, and then concrete is placed continuously from basement to roof.

Before decision was reached as to the exact size and design for these houses, very careful attention was given to determining what could be done to prevent an appearance of monotony, that many people believe is unavoidable when a group of houses essentially all alike are built. The Valley View houses were designed with three different elevations, so that their facing directions could be varied and thus present different street entrances.

The tract of land was laid out with winding instead of straight streets. The houses were set back from the sidewalk line and ample parking provided between sidewalk and street curb. Surface finish



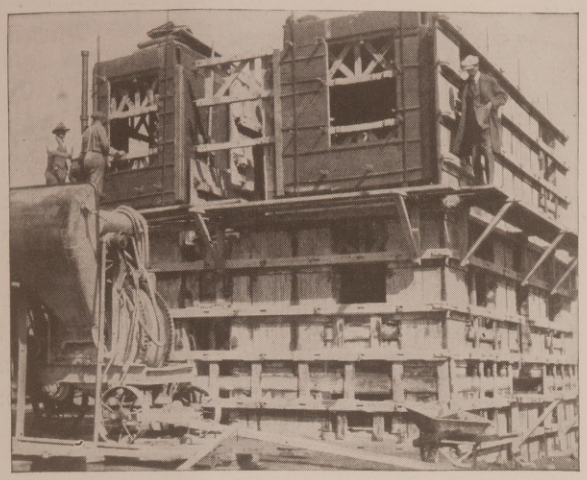
Standard floor plans of the Ingersoll concrete house as built at Valley View.



The basement floor is first cast as a slab and 6 by 6-inch corner posts, story-high, are set up on wedge blocks. The trusses which support the forms are held to these posts by iron bands tightened by wedges. Concrete is cast for an entire house at the roof line and is raked out over the floor forms to the required thickness. Front and rear porch steps may be cast at the same time as the remainder of the house or may be cast separately.

Flues are lined with No. 26 gage black iron which also acts as inside forms. Wiring conduits, pipes for plumbing, etc., are all bent and cut on arrival at the work so that wiring and plumbing installations are reduced to simple standard operations.

Typical details of the Ingersoll concrete house.



The Ingersoll type of concrete house is cast in one continuous operation, so the forms are set up complete before any concrete is placed.

was varied by the use of several colors for the stucco coat, and window flower boxes, with shrubbery in the yards, helped to make up the outstanding features of an exceedingly attractive housing development.

Careful estimates of cost showed that these houses compared favorably with either brick or frame construction, and that as the houses would be thoroughly fireproof, free from maintenance and depreciation and no insurance would be required, the ultimate economy of concrete was apparent.

Valley View homes are truly a standardized product. Four and six-room houses have been built, but as the six-room size has proved more popular, additions now being made to the development are six-room houses only. First and second floor plans of these are shown in illustrations on page three.

The houses have full basements with pipeless heater, have modern plumbing and are lighted by electricity. In the kitchen there are a sink, laundry trays and kitchen cabinets.

Basement walls are 8 inches thick, and the first and second story walls, 6 inches thick, of 1:2:4 concrete. Floors are light beam and slab construction, resulting in a beamed ceiling effect. Floors are covered with wood flooring. The illustration on page four shows these and other typical details of these houses.

Exterior walls are floated with cement-mortar, then given a thin stucco finish applied with a coarse brush. White, buff and salmon are among the colors used to vary surface tone. Interior of outside walls is plastered on Bishopric board nailed to furring strips embedded in the concrete, so as to provide a 1-inch air space for insulation.

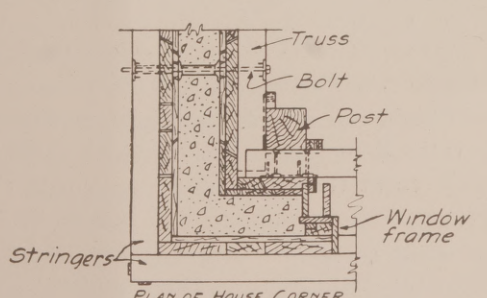
Roofs are reinforced concrete beam and slab construction. Insulation of the roof is obtained by suspending the ceiling on joists, thus providing an air space. The inside of parapet wall, top of cornice and roof surface are coated with waterproof paint.

The only wood in the houses is the floor covering, doors and door frames, window frames and sash, built-in kitchen cabinet and trim. Therefore, insurance is saved, as the houses so nearly approach complete fireproofness as to make fire risk negligible.

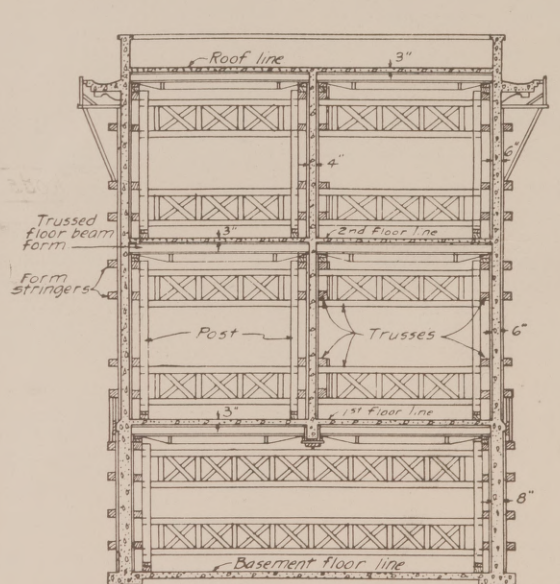
Cost and Financing.

These houses are sold for actual cost. In spite

Ingersoll standard wooden forms for these houses are constructed of 2-inch stock, crossed at right angles with best grade ⅞-inch lumber, creosoted and thoroughly painted. They are oiled before used and cleaned where necessary after use. The form members proper are supported by heavy wooden trusses by means of bolts passing from outside to inside with wooden washers for spacers between inside and outside form sections. The trusses are on the inside of the building proper and support the trussed floor beam forms which in turn carry the floor slab forms.



PLAN OF HOUSE CORNER



SECTION SHOWING GENERAL ARRANGEMENT OF FORMS

Details of Ingersoll standard forms.

TABLE OF QUANTIES AND LABOR COSTS

Item	Quantity of Material	Labor	
		Hours	Cost
Excavation	65 cu. yd.	193	$ 83.73
Forms, Erecting		443	195.30
Removing		221	92.53
Moving Equipment		27	12.04
Concrete and Concreting (entire building)	400 bags cement 35 cu. yd. sand 55 cu. yd. gravel		
Cellar Floors		66	32.44
Steps		31½	14.86
Building Proper		185	81.34
Placing Reinforcing	1951 lb.	22	8.18
Waterproofing	15 gal.	38	17.03
Lathing	1500 sq. ft. Bishopric bd. 500 wood lath	29½	16.42
Furring	1120 lin. ft. 1 by 2 in.	51½	31.94
Plaster and Plastering	50 bags scratch coat 27 bags white coat 2 bbl. plaster of Paris		
Plastering		112½	73.36
Patching		9	6.25
Flue Lining	112 lin. ft. black iron pipe	11	6.81
Stucco Exterior Fnish	10 bags lime 24 bags stucco	162¼	88.40
Millwork			
Window and Door Frames		14¼	8.96
Stairs		28½	16.45
Kitchen Cabinet		10	6.64
Windows	20 sash	20½	12.72
Doors	11 doors	17	11.14
Carpentry and Lumber			
Foors	800 feet flooring	40	24.39
Inside Trim	1960 lin. ft	79½	50.27
Framing Timbers	228 ft. 2 by 3 in.		
Spreaders	440 lin. ft.		
Floor Blocks and Grounds	1500 lin. ft.		
Painting, Exterior	2 gal. paint	21	10.58
Interior	2 gal. varnish	57	29.13
Plumbing	Kitchen on first floor and bathroom on second floor	124	71.85
Heating	Pipeless furnace	18	10.40
(Temporary Heat)	Account winter construction	5	2.16
		2037	$1,015.32

of the considerable increase in general building costs, duplication of operations and efficiency of crews on this work have so contributed to economy that these six-room houses are being provided and sold with the lot at $3,550 each. This figure includes pipeless heaters, laundry tubs, kitchen cabinet and hot water boiler, also concrete walks laid to front and rear doors, and grading of the grounds.

The original selling plan contemplated a down payment of 10 per cent of the purchase price. In many cases, however, the intending purchaser is not able to make this payment and sale is made without down payment. If no down payment is made the monthly payment for the six-room house is $21.39 and $17.85 for the four-room house. Complete cost of the latter type is $2,750. The monthly payments mentioned are sufficient to amortize all but $1,500 of the original cost in thirteen years. The remainder may be left on the property as a 6 per cent purchase bond secured by mortgage. Of course, the purchaser may at any time take full title to the property by paying the balance due.

In formulating a policy to handle the development at Valley View, the Ingersoll-Rand Company adopted a broad-minded attitude toward the general housing shortage, and at the same time recognized the social advantage to an industrial community of having in it some families not dependent on the industry. Accordingly, a limited number of these houses may be rented by other than Ingersoll-Rand employes at a slightly higher rental than is paid by the latter, but no houses are sold to anyone who is not an employe of the company.

The tabulation on page five, complied from complete, itemized data on the last ten houses built in 1919, shows labor cost and quantities of material required for one of the six-room houses.

Results of This Development

Up to the time this article was written, 22 of the four-room houses and 29 of the six-room houses had been completed. Construction of the six-room type has been going on with the expectation that a total of 75 houses would be completed in the development in 1920. A second set of forms for six-room houses is now in use so that two houses per week may be finished.

No better proof is needed of the wisdom of the Ingersoll-Rand Co. in planning and carrying out this development than the reception which these houses have enjoyed at the hands of its employes. Before the decision was reached to undertake the project and the final details worked out for concrete construction, the Phillipsburg Development Corporation built some frame houses of the same size as the six-room concrete one, heated and otherwise fitted

up with the same appointments. When the first concrete houses were completed there was a ready call for the frame houses, but none for the concrete ones. At the end of a month, however, after a few families had occupied some of the concrete houses, those living in the frame ones requested permisson to move into the concrete houses, and there still continues, after two winters, a demand for the concrete houses with which the corporation has not been able to keep pace.

Further wisdom of the planners is found in the influence of attractive landscaping, the pleasing variety of surface color and setting, and the stabilizing influence of home ownership on the purchasers. They take special pride in keeping up the appearance of their properties and surroundings, even to the extent of training vines on trillises, keeping the window flower boxes bright with flowers and in making other additions to accord with their individual ideas, taste and means.

It is not possible, through the medium of the photographic illustrations which accompany this description, to do adequate justice to Valley View. It must be seen in its setting and its entirety to be fully appreciated. The Ingersoll-Rand Co. is proving that the housing problem can be solved, if it is tackled in the only way possible to solve it—that is, by building houses. Moreover, the fundamental requirements of an industrial development, such as low cost, low maintenance, absence of depreciation, security against loss by fire or tornado, comfort, convenience and attractiveness, have been secured through concrete by applying Ingersoll ideas of quantity production, so successfully practiced in other lines, to the building of houses.

American City Planners Meet at Baltimore.

"The Control and Regulation of the Fringes of Cities" was the subject discussed at the fifth annual meeting of the American City Planning Institute, held on January 29, in Baltimore, at the Hotel Belvedere followed by a city planning trip on Sunday, whereon Baltimore's broad plans were highly commended.

Reports from various cities on methods and experience in controlling the layout of plants were made. Among those who spoke or read papers were the following: Major Joseph W. Shirley, Baltimore; J. Harvey Gillingham, Philadelphia; Charles D. White, Harverhill, Mass.; R. V. Black, Akron, O., and B. A. Haldeman, Harrisburg, Pa. The acceptance of new plats and guide proposed for use of city plan commissions was discussed by John Nolen, Cambridge, Mass., and the Canadian, English and European methods and experience by Frank B. Williams of New York City. E. P. Goodrich of New York City discussed how far city plan regulations should control the acceptance of plats, and whether the authority of city plan commissions should extend beyond the city limits.

Among those who took part in the meeting were: Thomas Adams, Ottawa; Arthur C. Comey, Cambridge; E. H. Bouton, Baltimore; A. W. Crawford, Philadelphia; George B. Ford, New York; F. L. Olmstead, Brookline, Mass.; E. L. Palmer, Jr., Baltimore; Flavel Shurtleff, Boston, and Lawrence Viller, New York.

North Carolina to License Engineers.

Charles E. Waddle, chairman of the legislative committee of the North Carolina Society of Engineers, received from Senator Marcus Erwin, of Buncombe county, a message stating that he would introduce in the upper house a bill creating a board of examiners to pass upon the qualifications of applicants and to issue licenses to those found qualified. This measure, to be introduced in the house of representatives by Representative Barnhill, of Nash county, was drafted by the legislative committee of the Society of Engineers.

Just before leaving for Raleigh Mr. Waddell expressed hope of its passage. He later attended a gathering of the society held in Raleigh. Among those to represent Asheville is Wythe M. Peyton, division state highway engineer and president of the Ashville chapter, North Carolina Society of Engineers.

Sections one and two of the proposed law give an insight into its intentions:

Section 1. In order to safeguard life health and property, any person practicing or offering to practice engineering or land surveying in this state shall heareafter be required to submit evidence that he or she is qualified so to practice, and shall be registered as hereinafter provided; and from 12 months after this act becomes effective, it shall be unlawful for any person to practice or to offer to practice engineering or land surveying in this state, unless such person has been duly registered under the provision of this act.

Section 2. Nothing in this act shall be construed as requiring registration for the purpose of practicing engineering or land surveying by an individual, firm or corporation on property owned or leased by said individual, firm or corporation unless the same involves the public safety or health.

Other members of the legislative committee are: H. W. Kueffner, Durham; Curtis A. Mees, Charlotte; E. W. Myers, Greensboro; J. L. Becton, Wilmington.

Greensboro Ready for Meet.

Governor Chas. H. Brough, president, and J. A. Rountree, director-general of the United States Good Roads Association, have issued an official call that the ninth annual convention of the United States Good Roads Association meet in Greensboro, N. C., April 18th to 23rd, inclusive.

Governors, probate judges, mayors, presidents of chambers of commerce, good roads associations, automobile clubs, farmers associations and all other organizations interested in good roads have been requested to appoint delegates that will attend this convention, which promises to be the most important good roads convention that has been held in this country since the good roads agitation was started.

The Bankhead federal aid appropriation, which every state in the Union has been receiving on the fifty-fifty basis for the past eight years, will cease in June if this or the next Congress does not re-enact the measure. This convention will take steps to urge Congress to pass the measure. Action endorsing a system of national highways will be taken.

Already many distinguished men have accepted invitations to attend the convention and participate in the same.

The association has members in every state in the Union and many of them have signified their intention of attending the meeting.

In connection with the meeting the United States good roads exhibition will be held, which will be confined to many new types of road building machinery and highway transportation equipment, road materials, machinery and equipment used in the construction and maintenance of roads and pavements. A select number of automobiles, trucks and tractors will be shown.

The road department at Washington has been requested and is expected to have an exhibit that is worthy of the government.

During "Good Roads Week" the Bankhead National Highway Association, which has members in thirteen states, will hold its fifth annual meeting in Greensboro. This Association will have at least one thousand delegates in attendance. Invitations have been extended to other highway and subsidiary organizations to hold meetings and conferences during the week.

Director-General Rountree, who has charge of the executive affairs of the United States Good Roads Association and the Bankhead National Highway Association, will go to Greensboro, early in February with a staff of assistants, and open headquarters, where he will remain for the next 60 days promoting these three great meetings.

Governor Brough, President of the United States Good Roads Association, expects to visit a number of the governors in more than a dozen states, personally invited them to attend the convention and deliver addresses to the same, also to see that good delegations attend the meeting from their respective states.

General Contractors at New Orleans.

Union labor and profiteering in building material were attacked by the Associated General Contractors of America, which held their third annual convention in New Orleans January 25-27.

Two hundred and forty delegates from 28 States attended the convention.

'Labor and material piracy are blocking the greatest building program the world has ever seen," said F. L. Cranford of New York, who represents the organization before the Calder committee at Washington and at the Lockwood inquiry in New York. "Construction waits upon capital, and capital is waiting until it feels that it can venture with confidence and profit."

That the organization stands squarely behind the Lockwood investigation in New York was the statement of D. H. Garber of New York. Mr. Garber further said he believed the Calder investigation would be the means to cheaper and better construction throughout the United States.

Judge W. W. Warwick, Comptroller of the United States Treasury, urged, among other reforms, a centralized government purchasing department, with branches throughout the country. He opposed the formation of Government corporation in future emergencies, because, he said, they cannot command the methods and the making a success of private business. He suggested that a national department of public works should be created and was warmly seconded by various contractors.

The convention adopted resolutions calling for an adjustment of freight rates, the solution of housing problems and high rents, the passage of the Calder bill exempting mortgage investments up to $40,000 per individual, and immediate inquiry into the prices of building materials, passage of the budget law, creation of a national public works department.

Gen. W. O. Winston of Minneapolis was elected president. Gen. R. C. Marshall, Jr., was renamed general manager of the association, with instructions to increase his staff of experts sufficiently to meet the new duties of his office.

The annual banquet was a brilliant affair. General Winston presided and D. A. Garber acted as toastmaster. A tribute was paid W. A. Rogers, retiring president.

New members on the board of directors were chosen as follows: F. W. Cranford of New York, Arthur Bent of Los Angeles, W. E. Wood of Detroit, Daniel Preck of St. Louis and C. L. Wason of Boston, vice-presidents; Noble F. Hoggson of New York, George C. Mason of Portland, Ore.; William A.

Stuart of New York, A. E. Wells of Chicago, Richard McCarthy of New Orleans, G. O. Muhlsfeld of Boston, Col. John A. Wiggins of Philadelphia and Chas. Folliott of St. Paul. Lee Paschell of Richmond was chosen treasurer.

Plans Development for Georgia.

The board of trustees at the Georgia School of Technology has announced plans for a new department—an Industrial Development—as one of the expansions in scope to be realized from the $5,000,000 campaign next April.

The new department very likely is the first of its kind ever inaugurated by any technical college. Its purposes are explained as follows:

1. To catalogue Georgia's industrial possibilities by locating and classifying Georgia's natural resources and opportunities for development.

2. To develop a constituent list of capitalists and investors throughout the United States.

3. To generally exploit Georgia's resources and bring capital and opportunity together.

4. To strengthen the State of Georgia and its Engineering School throughout the world.

5. To cooperate in all industrial matters with civic organizations, public utilities and railroads throughout the State and the South.

6. To make public and to practically dispense information of importance to industrial Georgia.

7. To conduct a general industrial service bureau.

8. To compile for practical reference data pertaining to industry.

9. To act as an industrial clearing house for the State of Georgia.

In considering the need for this new department, and the practicability of establishing it at a greater Georgia Tech, the Tech trustees and the executive officers and committee of the $5,000,000 campaign went exhaustively into the needs of Georgia, a state with enormous natural resources greatly needing to be developed, and consulted with many experts.

For example, the industrial representatives of all the railroads operating in Georgia and the South were assembled and the project put squarely before them in a meeting of which J. C. Williams, manager of the development service of the Southern Railway, was chairman.

Among many other points, it was shown that there is no window glass or plate glass factory in the South, though conditions are favorable; that in November, 1920, 500 carloads of fire brick went from the North to Cuba; that the Latin-American countries were calling for vast quantities of cement, which the South was not in position to supply; that there is only one pottery South of East Liverpool, O., a section of 30 million population, and that in a period of three months 66 thousand tons of pottery

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clay were imported from England, when it might just as well have been mined and prepared in the South.

The attitude of the railroad representatives was expressed in the following resolutions:

"That the industrial representatives of the transportation lines present endorse this Greater Georgia Tech movement for Greater Industrial Georgia, and pledge our co-operation with the Industrial Service of Georgia Tech in every proper way to develop the resources of Georgia, secure the location of new industries, and promote the expansion of existing industries."

In the discussion of the new department, it was clearly shown that Georgia Tech, in establishing the department, was assuming a definite role in the industrial development of Georgia—not simply the steady improvement of industrial enterprizes by the greater output of trained men; by a prospective research laboratory, and by an extension service department, but specifically by bringing capital from everywhere to Georgia opportunities—a direct service to the industrial development of the state.

The Cement Industry of Austria.

Consul Carol H. Foster, with the American Mission at Vienna, reports that in consequence of more plentiful fuel the Austrian cement industry has been able to increase production for 1920 by approximately 20 per cent. The output for the year will amount to 120,000 or possibly 130,000 tons. This is far below the capacity of the industry and only about 22 per cent of the normal needs of the region now comprised within Austria. It is expected that exporting will be resumed, at least to some extent, during 1921.

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