

The Monthly BUSINESS REVIEW

Covering business and industrial conditions in the Fourth Federal Reserve District

FEDERAL RESERVE BANK of CLEVELAND

D.C. Wills, Chairman of the Board

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AGRICULTURE is the backbone of the American nation. Agricultural prosperity insures national prosperity. There is more money invested in the business of agriculture than in all our manufacturing and railroad interests combined. And yet its business has been so "taken for granted," as it were, that little attention has been bestowed upon it—at least not attention commensurate with its importance in our national life. Conditions are rapidly changing, however, and the possibility of curtailed production, like a gaunt spectre, stares us in the face. Since this condition has arisen, it must be squarely faced and the proper remedial measures applied. We are too far advanced as a people to shut our eyes to disagreeable facts and drift blindly with the current in the hope that they will adjust themselves in time.

For the past five years the farmers of this country have been called upon to produce food in greater quantities than ever before. By force of circumstances America became the granary of the world. This, too, was accomplished under many difficulties. Farm machinery, supplies and equipment followed other articles in a continuous advance to higher price levels; the wages demanded by skilled farm help overtaxed the ingenuity of the farmer to meet them; and last, but by no means least, thousands of farmers' sons and farm hands were called for military service, or lured by the certainty of higher wages and shorter hours to the shop-bench of the manufacturer—and they have not gone back!

This latter phase is the one with which we are particularly concerned. It is not the farmer's problem alone—it is one in which all society has a common interest and which is worthy of serious thought.

The movement from the farm to the city is not entirely the result of the war. That it has been greatly accelerated during the war period is a fact, but figures show a well-defined movement toward the larger centers for the past forty years. Of that part of our population engaged in gainful occupations, the percentages employed in agricultural pursuits in the census years from 1870 to 1910 are as follows: 1870, 47.5; 1880, 44.4; 1890, 39.2; 1900, 35.7; 1910, 32.9. Figures for 1920 are not yet available but there is little question that the proportion has been materially reduced.

These figures show the extent of the "farm-to-city" movement. But to the thoughtful student they suggest that a further increased movement in this direction contains a certain element of danger to our whole social structure. We must have tillers of the soil. We cannot put ourselves in the position of being dependent upon other nations for our daily bread.

Present-day farm life is unattractive, and in many instances unprofitable. People do not readily leave a business which yields a good return, and the many abandoned farms which are to be found, especially near the industrial centers, tell their own story.

It is the farmer's business to feed and clothe the human family, but it must be done at a profit to him. It is as unreasonable to expect him to operate at a loss as it would be to ask any other producer to continue a business which shows final figures on the wrong side of the ledger. The farmer is beginning to *think*. Probably no other employment offers a greater opportunity for thought than his. During the many hours when he is alone at work on his fences, or in his fields, he endeavors to conjure some scheme which will remedy the situation. Unfortunately, it seems that this reflection has resulted in the thought that production must be curtailed. The city consumer does not see conditions as they are, and rails against the farmer, who, in the injustice of the situation, is rapidly assuming a "let them go hungry" attitude.

Unmistakable proof of this is found in the fact that greatly reduced acreage is planned for 1920 throughout the whole United States. Dairy herds are being sold in large number, and farm tenantry is increasing rapidly. It is estimated that forty per cent of the farms in the country are owned by men who themselves live in cities and villages. Two million acres of land are said to be "farmed" out of the city of Chicago alone; that is, the land is owned by residents of the city and either operated directly or rented.

As we have previously stated in our *Review*, the farmer feels that he has been unfairly and unjustly treated. He feels that he is called upon to bid against the manufacturers' high wage scale for his help, and then pay for his machinery and supplies the advanced price which these high wages make necessary. He feels that all efforts

to reduce the cost of living have been directed at him, while he must pay the current high prices for all that he buys. He resents the attitude of his city brother who urges him to "produce" while his own slogan has been "reduce." He cannot understand the position taken by the city worker who demands that the farmer work 10 to 16 hours daily to supply with the necessities of life the man who works but 8 hours. He finds that his son is exchanging the opportunity to work from before sunrise to after sundown for the 8 hour day and the conveniences, pleasures and higher pay of the cities. He finds himself the victim of a distribution system which he neither creates nor controls, whose cost of operation is increased at every point by diminished hours of labor and advanced wage scales. He cannot see any justice in the "spread" between prices paid him for his products and the price paid by the consumer.

Of all these problems, the most serious which confronts the farmer is the shortage and high price of help. City wages cannot be paid on the farm and permit the average consumer to purchase the product. The farmers have tried to meet this condition by buying modern machinery, and power is being substituted for human labor wherever possible. The number of tractors on farms has tremendously increased, and reports from tractor makers indicate a still wider use of this "man-power" saver during the coming year. The increased use of mechanical appliances, however, makes up only in part for the loss of farm help which has occurred in recent years.

Our farmers have always lived an isolated life. With the advent of the telephone, the automobile, the establishment of the rural mail service, and the "good roads" program which has been developed during the past few years, they have been brought into closer touch with their neighbors and the surrounding cities; the development of the gas engine, the individual lighting plant and water system has enabled him to add to his comfort many city conveniences; the community club, the Grange, and the district schools as community centers add something to his heretofore humdrum life. As against these factors there are several drawbacks which have not received sufficient attention. One is the situation of the church in every rural community in this country. Many pulpits have been abandoned, and the churches are without pastors. From a purely commercial point of view, the business of the country, the banks, the courts, and even the government

itself rests upon the foundation of morality; and, whatever our creed, we cannot maintain progress while the churches are growing weaker. The country schools are in many cases grossly inadequate and insufficient funds are available for their improvement. Many sections are entirely without high school facilities and only the most prosperous can afford to send their children to the cities to be educated.

It does not appear, either, that the banks have been doing their full duty to the farmer. They must assume a reasonable share in the solution of his problem. By instructing him in the proper use of farm cost methods and by pointing out to him the advantage of borrowing to effect needed improvements and using the increased revenue to meet the obligation, instead of patiently saving until a sufficient sum has been acquired to make the necessary change, much can be done to aid him.

The banks that grant loans for current agricultural and live stock purposes, as distinguished from loans for fixed investments, serve a double purpose in aiding the farmer and in strengthening their own position by placing in their discount portfolios a liquid class of paper, based on current transactions. Such paper in the hands of member banks is eligible for rediscount at Federal Reserve Banks and may have a maturity of six months from date of rediscount as against the 90 day limitation for commercial paper.

It is interesting to note in this connection that the amount of agricultural and live stock paper rediscounted with the Federal Reserve Bank of Cleveland during the year 1919 was only one-fiftieth of 1 per cent of the total volume of loans and rediscounts.

The business men of the country, including the bankers, should rally to the support of the farmer to assist him in solving the problem of his business and to encourage him to expect cooperation rather than criticism from the cities. A prominent Cleveland manufacturer reports a conversation recently had with an Iowa farmer who said: "This smoking-car is full of smoke and prophets. The city people think the farmer ought to reduce the cost of living. What we need first is a great humorist to make the American people see how silly they are acting, not because the situation is comical, and not because it is serious. It is just new—just different—that's all. Someone with a sense of humor ought to give the American people a good laugh at themselves—a friendly kick—tell them to shut up—go to work—trust in God—and see what happens."

Wheat Crop Disappointing; Corn Acreage Will Probably be Reduced; Farm Bureau Plan Enthusiastically Received

The big feature in the agricultural field is the astonishing growth in the Farm Bureau movement.

This movement, known as the Federation of Farm Bureaus, has already progressed far enough to indicate that in a comparatively short time it will be the national voice for the American Farmer. The degree to which this movement is being supported is best evidenced by the fact that in Michigan, Iowa, Indiana, Illinois and Ohio nearly 85 per cent of all the

farmers solicited are joining. They are paying a fee, on the average \$10 per year for three years, that is going to assure sufficient financial backing to go through with whatever program is outlined. One county in Ohio that had a membership in the old farm bureau organization with fees of one dollar per year of 408, had already signed up over 1300 on the new basis. Another county in western Ohio has nearly 2900 signed up out of a possible 3500.

The principal aims of this organization are three—marketing, legislative and educational. Under marketing it is proposed to encourage a better system of distribution of farm products through the development of co-operative associations. This should ultimately result in a smaller difference between the price the producer gets and what the consumer pays. Under this head also will come the organization of companies to manufacture some of the more generally used supplies that the farmers purchase.

The legislative program is largely a protective measure. Under this, the farmers will develop men who will endeavor to see that no legislation which is inimical to the farmers' interest will be passed and to undertake to have passed some constructive legislation to develop the resources of American agriculture.

Legitimate Business Money Requirements are Met; Acceptance Field Broadening in Scope

Credit appears to be available in sufficient amount for legitimate uses, with rates from 6 to 7 per cent, although 8 per cent is being charged in some places on small amounts for short-time accommodation. The tendency is to hold customers to minimum requirements, and new or additional lines are not put out except where justified by the borrower's business.

Comparatively stable money rates and the probable betterment of the foreign exchange situation have greatly improved the acceptance market during the past month. The supply of bills has been sufficient to meet the demand, but there have been conspicuously few export bills. In the past week a few of these bills have reappeared on the market, some of which have been drawn against shipments to Germany.

Acceptance rates are the same as last month, ranging from $5\frac{3}{4}$ to $6\frac{1}{4}$ per cent for prime eligible bank acceptances. The continued high return on this form of investment has brought in many new buyers, and has greatly strengthened the market. In previous months a large portion of the acceptances purchased by banks could not, owing to the heavy demands made upon them, be held for any appreciable length

Under the educational program efforts will be made to make their own members more efficient, as well as to let the American public know the real truth about the business of farming.

The damage to the winter wheat crop is not yet determinable, but there is no longer any question that the yield will be disappointing. Much corn is still in shock in the fields, and as huskers are asking 15c a bushel to husk it many farmers are buying livestock and feeding the corn in the husk.

Prospects are for a reduced corn acreage, as raisers paid as high as \$10 and \$11 a day for corn cutters last fall and do not desire to repeat that experience. Many are planning on putting in no more than they and their families can care for without outside help.

On account of the unprofitable feeding of hogs last fall, many farmers declare their intention to raise sufficient pork for their own use only.

of time, but at this time purchasers are holding their investments.

Savings banks, insurance companies, large industrial corporations, and even individuals have come into the market and show signs of becoming avid consumers of this form of commercial paper.

Insurance companies are learning that bankers' acceptances suit their requirements as though they were made to their order. They have in the past been required to keep a proportionately large amount of their funds in deposits subject to check, because the American market lacked an investment that was readily liquid and that would practically eliminate risk. The coming of bankers' acceptances made available to them a short time investment, which exactly meets these requirements and bears a most profitable rate of interest. In order to stimulate this trade and avoid any embarrassment to those purchasers who are not familiar with the workings of this instrument, many acceptance dealers are offering to buy back any acceptances sold by them and at the same rate. This assures the investor of an immediate market and a return on their funds at the purchasing rate of discount.

Conservative Buying Feature of Iron and Steel Trade; Orders Now Booked Insure Capacity Production for Months; Inadequate Transportation Facilities Prevent Shipments of Finished Product

Conservatism on the buying side has been more pronounced in iron and steel during the past month. Buyers are less insistent in seeking material for definite early delivery almost regardless of price, which had characterized their movements for some weeks previously. Sensing the more cautious note that has been manifested recently in general business circles, they apparently more fully have appreciated the limitations on prompt supplies obtainable from the mills and that their anxiety to obtain material only was operating to keep the market in a feverish

condition. The subsiding in a considerable measure of the bidding by consumers for iron and steel has imparted a more composed and stabilized appearance to the market and is tending to level off some of the wide fluctuations of prices. Fundamentally the situation presents every index of being as strong as ever, and an underlying shortage of tonnage continues manifest. The disposition of buyers to readjust themselves to a recognition of the impossibility of all demands being met promptly also has had some bearing upon the covering of actual and expected for-

ward requirements. This, however, has not been in an important degree, since consumers invariably are quick to buy ahead on anything like a comparable price at present whenever the mills open their books to such business.

Operating problems, rather than those of trade, have continued to monopolize the attention of the producers. Car and fuel shortages have been a predominating factor and during March floods in eastern Pennsylvania and in the Pittsburgh and Mahoning Valley districts further have interfered with mill and furnace operations. While pig iron and crude steel output has continued to grow, finishing mill activities have remained restricted due to the inadequate transportation facilities. Few companies, especially in the greater Pittsburgh district and in the Mahoning Valley, have been able during the past month to ship a tonnage equal to their output. As a result the piling up of further finished material on mill yards has been necessitated. Some companies in the Pittsburgh district have been accumulating finished products at the rate of about 25 per cent of their output. The leading sheet and tin plate maker has accumulated, principally about Pittsburgh, more than 1000 cars of outbound material, representing 50,000 tons. An independent tin plate maker in the Pittsburgh district has 375,000 boxes on hand awaiting cars. In the Mahoning Valley approximately 75,000 tons of steel have been piled. The extent to which the steel industry has been hobbled by the steel and coal strikes and by shortages of fuel and other material is shown by the estimate that an output of at least 500,000 tons of sheets has been lost from these causes. This is equivalent to 73 days' working capacity or about 20 per cent of annual sheet output. The congestion of finished steel shipments has tended to more than overbalance the effect on the market of any hesitation of buyers to keep on obligating themselves at current prices.

The railroads under private control have come into the market for large quantities of equipment. It is estimated that at one time within the past several weeks, orders for 30,000 cars were under negotiation. Some of these and orders for a considerable number of locomotives have been placed. Car orders however have not kept pace with inquiries. This is ascribed mainly to the fact that a large tonnage of material of the assorted character necessary for this work can not be obtained from the overcrowded mills before a distant date. An example of this is shown by the fact that the leading western producer is sold out on its expected production of steel bars to January 1, 1921. The railroads having come in the market at a belated hour have found the mills heavily obligated to other classes of consumers. The steel industry is disposed to favor the railroads, as a matter of good business policy, to every reasonable extent possible; but just how the needs of the latter are to be worked out within a satisfactory period remains a big problem.

Automobile builders have not shared with other buyers of steel any attitude of greater restraint or caution. These consumers have continued to pick up material right and left to back up their production programs and the prices they have been paying have been almost without limit. Some of these interests unable to get high grade sheets from the mills have gone into the market themselves and bought semi-finished material in the form of sheet bars which they have turned over to the latter for conversion. Such phenomenal prices as \$90 and \$92 Pittsburgh for open hearth sheet bars have been paid under these circumstances by Detroit automobile interests. The influence of automobile steel buying on the steel market clearly is illustrated in sheet bars made of Bessemer steel, which, not being suitable for automobile parts, are selling at an unheard of spread of from \$10 to \$20 a ton below open-hearth sheet bars.

Structural steel awards of the country in February were the largest since June, 1918, totaling 171,000 tons, or 95 per cent of shop capacity. During this month, however, contracts have been in considerably reduced volume and it is apparent that high prices and prolonged deliveries of steel are having their effect in narrowing the market. Numerous projects which were in a well advanced preliminary stage have been held up indefinitely for these reasons.

The pig iron market has entered a state of quieter buying and inquiry following the active market of the past several months. This situation apparently is a natural development arising both from the sold-up condition of the furnaces and the well covered requirements for months ahead of many consumers. Statistics compiled as of March 1 show that the merchant furnaces of the country had on hand unfilled orders approximating 5,000,000 tons, and that shipments and production during February were slightly in excess of 600,000 tons. The marketable pig iron capacity of the country apparently therefore is booked full at the present rate of output to November 1. While there have been some irregularities in pig iron prices as compared with some of the maximum figures recently prevailing, these have been of a local or special character and there has been nothing in them to suggest a weakening of the market.

Pig iron production in February, as compiled by The Iron Trade Review, showed an increased daily rate over January, as between 102,547 tons and 97,172 tons respectively. The average in December was 84,711 tons. The total February output was 2,973,859 tons, compared with 3,012,373 tons in January, and 2,626,074 tons in February. Furnaces in blast at the end of February numbered 303, a gain of 18 in the month. This is the highest number of furnaces in operation since February, 1919, when 311 stacks were blowing. Steel ingot production in February, according to the American Iron and Steel Institute, was at the annual rate of approximately 43,750,000 tons, an increase of about 2,000,000 tons per annum over the January rate.

Busy Season Predicted for Lake Shipping; Shortage of Cars Feared; Early Coal Movement will be Heavy

Business is offered freely at both ends of the route, but aside from the grain trade little chartering has been done during the past month and there will not be much change in the situation until the carrying charges on ore and coal are fixed for the season. Most of the vessel men who were in California and Florida are back on the job, and it is expected that some action along that line will be taken shortly.

Tonnage to take several million bushels of grain at the opening are under charter and a number of steamers that were on the market have been withdrawn and will be sent for ore at the start. The opening grain movement will be light compared with 1919, as stocks at all the upper lake ports are much smaller than they were a year ago.

That there will be employment for all the boats is certain, however, if the railroads are in shape to take care of their end of the business in the ore and coal trades as there will be a big movement from both ends of the route. A car shortage is feared, but

there has been some improvement in the supply during the past two weeks.

The coal docks at the upper lake ports will clean up in better shape than they have for a number of years. Stocks will be low all around and early cargoes will be in big demand, but the movement at the opening will be light, unless there is a marked increase in the output and car supply, as there is a big shortage of coal in the local trades and some of the plants are only working part of the time owing to the lack of fuel.

Ore is going forward to the furnaces from the Lake Erie docks more freely, but the car supply is short of the demand and the movement would be much heavier if the railroads could handle the tonnage. Stocks at the receiving ports are much heavier than they were a year ago. On March 1 the docks were holding 9,015,813 tons and on the same date in 1919 stocks were 7,726,086 tons.

No Slackening in Demand for Manufactured Goods; Scarcity of Labor Causing some Uneasiness; Foreign Demand shows some Improvement

The demand for manufactured goods of all kinds is insistent, and capacity production is the keynote of Fourth District business. Labor is becoming more scarce and, perhaps, somewhat more exacting. There has been a considerable exodus of foreign labor, and in view of the present depreciation of foreign exchange it is expected that immigration will be considerably reduced even after the bars are let down by the Government.

Foreign inquiries are being received in greater volume coincident with the improvement in foreign exchange.

It is reported that some Canadian manufacturers have made inquiries for building sites in this country, as they wish to manufacture their goods here on account of the exchange situation.

Automobile and allied industries continue to travel on "high." Akron rubber output this year will exceed that of any previous year. This is but natural

in view of the tremendous increase in the use of motor cars.

Tool manufacturers report the largest business in the history of the trade, with the bulk of the demand from automobile makers.

Manufacture of laundry machinery is active with no prospect of let-up for many months.

Electrical supply men report that orders are now on file to insure a volume of business for the coming six months equal to that of the previous six month period. The striking feature of the business is the preponderance of sales of the smaller and medium-size pieces of apparatus. There is, however, considerable quickening in the matter of buying of large power units for central stations. This is but natural, since the immense number of current consuming devices being marketed must be backed up by generating equipment.

The glass industry is booming, with capacity production assured if orders are to be met.

Coal Production Still Backward; Coke Situation Improves; Oil Industry Stimulated by Price Advances

The coal situation is very chaotic at the present time on account of the shortage of transportation facilities. In the Pittsburgh district it is reported that the mines have been able to produce but 57 per cent of capacity.

Coal requirements for the year are estimated at 650,000,000 tons, but it is said that of this amount the railroads will be able to move but 550,000,000 tons.

Manufacturers are making great efforts to increase their stocks of coal, which were depleted during the strike, but operators are refusing to make contracts beyond April 1, until they have been advised of the terms of the award of the coal commission. They say they cannot make new contracts until they know

what total wage increases will be and what portion of that increase they will be permitted to pass on to the consumer.

Coke production is increasing with the better movement of cars. Connellsville district output is greater than for some time past.

As we predicted in the *Review* some time ago, the price of crude oil has again been advanced, and considerable new drilling has been begun or is in prospect. One of the larger steel mills in the District, which has used fuel oil in its skelp mill, is reported as arranging for its use in the plate, bar, and rod mills, the extent of its use depending upon the amount available.

Department Stores Show Healthy Growth; Retail Dealers Assume Waiting Attitude on Some Lines; Statistical Data on Department Store Sales and Stocks

During the past week or ten days there has been a slight easing off in retail trade, but not enough to make any material difference in the volume of business so as to create a definite change of sentiment in the minds of manufacturers or jobbers who have merchandise to sell.

Dealers complain that contracts offered for future delivery are even more vague in their terms than formerly. It seems that most manufacturers will not contract for specific dates of delivery nor for definite prices. Certain lines, such as silks, seem to be marking time. There appears to be a definite attitude on the part of retailers to withhold purchasing of these for Fall delivery on account of the enormous advance which obtains. This may have resulted in a slight easement on the raw, but there is no weakening in the price of finished materials. Should this continue long enough it might cause a break in prices of finished goods; but unless the price of raw materials declines soon, there would seem to be no possibility of lower prices even for next Fall.

Dealers in food stuffs predict a slight decline in several food lines, and declare that they would welcome any such movement. The demand continues strong for better qualities of food-stuffs, especially among the laboring class. One large grocery dealer in the District says: "The laboring man is today buying what our wealthy class formerly did. Nothing is too good or too high in price for him. He wants the best."

We offer to our readers this month, and will make a regular feature hereafter of a tabulation of depart-

ment store sales and stocks for each month. These tabulations will show percentages of increase or decrease in sales over the previous month and over the same period one year ago, the percentages of increase or decrease in stocks for similar periods, the percentage of stocks to sales for each season, and the percentages of outstanding orders to total purchases during the previous calendar year.

This compilation will enable us to substitute definite statistical data for general expressions regarding the state of trade, based on reports received from department stores of all classes throughout the district. It is the intention to extend this service to other commercial and manufacturing lines as quickly as possible. The report for the month of February follows:

Percentage increase in net sales during February over net sales during same period last year	28.6
Percentage increase in net sales from Jan. 1 to Feb. 28 over net sales during same period last year	36.0
Percentage increase of stocks at close of Feb. 1920 over stocks at close of same month last year	48.6
Percentage increase of stocks at close of Feb. 1920 over stocks at close of Jan. 1920.....	45.1
Percentage of average stocks at close of each month from Jan. 1 to average monthly net sales during same period.....	386.3
Percentage of outstanding orders at close of Feb. to total purchases during calendar year 1919..	18.6

Limit of High Prices Seems to Have Been Reached in Textiles; Commitments for Fall Trade Show Falling-off

Commitments for fall trade are reported as unquestionably lighter than during the past year, but mills report plenty of orders to maintain employment at the present speed for six months. In the men's garment industry, prices for fall will be high. There have been further increases in wages and advances in the quotations for fabrics over previous prices have been considerable. The impression prevails throughout the trade, however, that the peak of prices has been reached, and that in the Spring of 1921 it will be reasonable to expect an ease-off.

Impressions of the larger producers in the men's garment industry are that production must be increased substantially to offset increased costs. The

tendency is toward concentration to larger and fewer concerns.

Fine wool goods have not changed materially in price, and the supply is not large. The coarser wools have eased-off considerably, and are in very large supply.

Makers of women's wear report business satisfactory, with shipments of materials from the mills coming through in better shape. Shipments of Spring goods have practically been completed, and manufacturers are now working on sample lines for the fall trade. Prices of goods for this season's trade will remain high, with possible slight advances due to increased wage scales.

Labor Shortage Reduces Railroad Efficiency; Car Situation Shows Some Improvement

The railroads find themselves very much in the same position as all other employers of labor, not only in the rural districts, but in the cities as well. During the past severe winter one of the reasons for unsatisfactory transportation furnished by the carriers was the fact that through the rural districts they were unable to secure laborers to thaw out the switches, clean away the snow, and do other similar work absolutely necessary to successful operation of the roads at anything like even post-war efficiency.

The congestion of merchandise in railroad depots is largely due to scarcity and inefficiency of labor. Working forces in freight houses are still much short of normal, and this means much further insufficiency, as the men which the roads are able to obtain are for the most part inexperienced, and even at present high rates of pay are not delivering much more than one-half of the service required.

Embargoes are still in force at certain points, but the situation has shown some improvement during the past thirty days.

No Let-up in Building Activity; Wage Adjustments in Progress; Columbus Disturbed by Strike of Masons

One of the most serious causes for industrial and social unrest is the continued shortage of adequate and satisfactory housing, and unless the financial and business interests are ready to grapple with this subject effectively and adequately many large industrial centers will be seriously handicapped in their operations.

Spring wage adjustments are now in progress between the various associations of employers and employes in the building industry. The process of arriving at satisfactory agreements will proceed thruout the present month and in some cases until near the first of May. This situation exists throughout the District. Demands approximating 25 per cent are being made by the workers. Their argument for such increases is largely based upon the increased cost of sustenance, but is strengthened by the lack of supply in many of the trades. This situation makes the market somewhat uncertain as to buildings, although the volume of operations, both present and prospective, keeps up a large margin of increase as compared with last year. These increases, however, must be discounted to a certain extent when measured in terms of dollars so as to indicate the actual increased cost.

The building industry in Columbus practically is at a standstill because of a controversy between the union bricklayers and the builders supply men. Members of the union sought to dictate to the supply

men as to whom they could sell supplies. They had been selling to certain contractors who employed non-union brickmasons, as well as to the contractors employing union men. When the union issued its ultimatum, supply men decided to stand together in resisting the demand. About 40 non-union brickmasons are at work but 400 are out. While there have been overtures toward settling the dispute, present indications are that it will be some time before an agreement can be reached, as the supply men have been joined by the Brick Contractors Association. Other unions are threatening to join with the brickmasons.

The seriousness of the situation is apparent when it is stated that from 4,000 to 5,000 new homes are needed to take care of the increased population in Columbus. Several factories are in urgent need of additional buildings. The strike, if long continued, will affect retail business.

Some building and loan associations have increased their rate for loans from 6 to 7 per cent, but the movement is not general. Some managers are urging that this be not done unless it is absolutely necessary, as it will have a tendency to stop any plans for home building, even if the brickmasons' strike is settled.

A tabulation of building operations in the principal centers of the District appears elsewhere in this *Review*.

Special Report on Pottery Industry

In keeping with our policy of making special reports covering various industries throughout the Fourth District, we present to our readers this month a survey of the pottery industry.

Within the confines of the East Liverpool district, nationally known as the "Staffordshire of America," is produced 85 per cent of the pottery ware made in the United States. From one small kiln operated by two men, who traveled through the country selling the product of each "firing" as completed, this industry has grown until today there are about 279 kilns in operation, furnishing employment for 9,000 men, representing a capital investment of many millions and producing wares valued at \$14,000,000 annually.

As is the case with many other articles in common use, pottery and chinaware are things about which many of us know but little. A visit through one of the large potteries is most interesting and instructive, and one leaves with a further increased regard for American inventive genius. The industry has been revolutionized by substituting machinery for hand work, making possible the immense growth of the pottery business of which the Fourth Federal Reserve District is so justly proud.

Potteryware was first manufactured in this District by James Bennett, an English potter, who had gone to join the "community colony" established at New Harmony, Ind., and, when the bubble burst, stepped onto an Ohio river steamboat bound for Pittsburgh. In conversation with a passenger he learned of the clay to be found on the hills at East Liverpool. He landed there (in 1839) and procuring a pick and shovel secured samples of the clay, which were pronounced suitable for the manufacture of Rockingham and yellow ware. A piece of ground at East Liverpool was donated to him. On this he erected a one-kiln plant, in which he and his brother produced the first pottery to be manufactured in the upper Ohio Valley. A few pieces of this ware are still to be found in homes throughout this section.

The flood of 1851, overflowing the banks of the river, washed away the Bennett buildings, and their owners left in disgust for Pittsburgh, to engage in the glass business.

The then senior member of a prominent present day pottery firm bought from the Bennett brothers the saggers and potter's wheel which he had used, and in 1854 commenced the manufacture of fruit jars exclusively. A second pottery had been established at East Liverpool, making Rockingham wares from native clays in 1840 and others were established from 1844 to 1849.

The manufacture of yellow ware has almost ceased, and the potteries have now all except one engaged in the production of semi-vitreous or semi-porcelain goods. Considerable progress has been made in the manufacture of this class of goods, and the finer

grades made here compare favorably with similar classes made anywhere in the world.

The native clays were found unsuitable for making the white ware now produced and raw materials are now shipped mostly from England and from the states of North Carolina, Kentucky, Tennessee and Florida. These materials consist largely of English china clay, English ball clay, flint rock, and what is known as "spar"—a white crystal rock. These make up the body of the mixture, and are weighed out in the proper proportions in automatic scales, then poured into large mixers called "blunger mills" and thoroughly mixed in water. The resulting mixture, a thick liquid known as "slip," is drawn off into large cisterns where it is stirred by large paddles to prevent separation and settling of the clays.

When needed for use, the slip is pumped from the cisterns and passed through a fine mesh screen to take out any large particles and impurities. The liquid is then run under very high power electromagnets, where any particles of iron or similar substances are removed.

From the sieves the slip is pumped into filter cloths, and the water pressed out by hydraulic presses, leaving the clay in large "leaves," shaped somewhat like elephants' ears, about one inch thick and weighing from 35 to 40 pounds each. These leaves are then stored in a clay cellar, from which they are run through a "pug mill"—a mechanical contrivance which kneads the clay much as bread dough is kneaded. This machine makes the clay compact, ready for making into ware.

Every piece of pottery (except some fancy art pieces which are still made by hand) is formed upon a mold. These molds are made of plaster of paris, those for flat pieces, such as plates, saucers, etc., being in one piece, and those for what are known as "hollow ware"—sugars, creamers, pitchers, etc.—in halves, which are put together until the clay hardens, when the mold is removed and the piece appears as if by magic.

In the making of flat ware, the clay as it comes from the pug mill is given to the "batter-out," who pulls off a piece sufficiently large to make the desired object. This clay is placed upon a wooden block and flattened out with one stroke to the necessary size. The batter-out then slaps this sheet onto the mold, when it is picked up by the "jigger" man at his side who places the mold on a revolving table. A lever is pulled down which brings a knife-edge tool down onto the clay sheet, cutting away all surplus clay, reducing the sheet on the mold to the same thickness throughout the piece, and forming the "rib" on the bottom. The mold is then taken by a runner into the stove room to dry. The moisture in the clay is driven out by the heat and absorbed by the mold, and the piece is then slipped off the mold and placed in saggers for the first firing. It must be handled very delicately as at this stage it is most easily broken.

The methods employed in making hollow-ware are different. Here, by the old method, each half of the mold is lined with clay, the workmen being so skilled that a uniform thickness is obtained by the senses of sight and touch. The mold halves are then put together and taken to the stove rooms. A new process, which speeds up the production several times, is called "casting" and consists of pouring the liquid slip into molds. It is then allowed to stand for a few minutes, when a sufficient amount adheres to the mold and the balance is poured off. This is a great improvement over the "pressing" method, and much lighter ware is produced in this way.

When the ware is removed from the stove room it is taken to the bisque kilns for firing. The pieces are put into "saggers," which are large, drum-like cases made of porous clays so that they may readily resist expansion and contraction in heating and cooling of the kilns. These saggers are placed one on top of another, being separated by clay wads, and placed in the kilns. The kilns are built of fire-brick, are for the most part 18½ feet in diameter and 16 to 18 feet high. The kilns are then fired for from 50 to 55 hours, gas or coal being used for fuel, and the temperature running to about 2390 degrees Fahrenheit before finishing. It takes 10 to 12 hours for six men to fill one kiln (including placing the ware in the saggers) and two days each for firing and cooling. Consequently, the operation of getting ware through the bisque kiln alone consumes nearly one week.

From the bisque kiln the ware is carried to the bisque warehouse. The fine white sand used to prevent sticking in the first firing is brushed off, the rough edges are fettled and sponged off and the ware is stamped with the trade mark of the manufacturer. This is done with a rubber stamp, exactly the same as those in general office use. The bisque ware then goes to the "dipping house."

Here it is dipped into the "glaze" tubs. The glaze is composed of certain quantities each of lead, zinc, whiting, spar, boracic acid and flint. The porous bisque ware absorbs this glaze, and when it is fired the gloss flows over the surface making a smooth, white, glassy finish.

In this firing, each piece must be separated in the saggers or the heat would fuse the dipped glaze ware together. Small holes are found in the side walls of saggers, and small pins are placed in these holds for supporting the ware. The firing is done in kilns similar to those used in bisque firing, but the time is reduced to 32 hours and the temperature to 2318 degrees.

A comparatively new method of determining temperatures in kilns without the use of thermometer or pyrometer is known as the "cone" system. Small, thin cones some four or five inches in height are made of a certain composition, and made to lean at a slight angle. At a certain definitely known temperature, this cone will "melt down," or start to curl downward.

Different positions of the cone have been numbered, and kilns are now fired to, for instance, a "number five" or "number nine" cone. These cones are placed at different points in the kiln and are visible through peep-holes in the sides of the kilns.

After the ware is removed from the gloss kiln it is taken to the glossed warehouse, where the small, sharp marks left by the pins used in supporting the ware in the saggers are removed, and it is then "selected" for decorating. Only the best pieces are chosen for this purpose and the plain pieces are stored in bins for shipment.

Various methods are employed in decorating. Plain gold or color edge work is done by putting the piece on a small revolving table (decorator's wheel) and a brush dipped into the gold liquid lightly applied to the edge as the piece is turned. Gold and color designs on hollow ware are sometimes stamped and then gilded, but a new method called the "decalcomania" process is largely used. In this method the piece is varnished, and a strip of decalcomania paper (similar to the "transfer paper" we used to play with as children) is placed on the ware. It is then fired for about ten hours, the color is absorbed by the piece, and the paper and varnish burned off. The decalcomania process is used almost entirely for flower design work. From the decorating room the finished ware is taken to the "decorated" warehouse for selection, packing and shipment.

From the time the raw material enters the factory until it leaves the shipping room it is handled from 15 to 40 times, depending upon the kind of ware, whether it is made singly or in parts, decoration, etc. All work is done on a piece-work scale, and every workman is dependent upon the man handling the goods behind him to keep him supplied. The entire work runs with clock-like smoothness and precision. Labor is well paid and constant, thousands of workers being skilled in their different lines as a result of years of experience, never having worked at any other trade—spending their lives, as their fathers have spent theirs, in the shaping of objects of symmetry and beauty for table and household use.

American manufacturers have not developed the making of chinaware to the point where they can successfully compete with European goods of the better class, but agents of the pottery companies are scouring the world for clays with which the finer grades of china may be made. With the impetus given the chinaware business during the war by almost entirely shutting out imports from European countries, and with the tremendous local demand created by reason of increased population and reduced importation, the pottery business appears to be on a firm footing for many years to come.

That the business has become recognized as stable is shown by the action of the Ohio State University in including in their curriculum a course in ceramics. The "cone" system before described is the result of experimentation at the University.

We give below a list of pottery makers in this district, in which the relative capacity is shown by the number of kilns:

	No. Kilns
The Albright China Co.,	Carrollton, Ohio, 7
The Canonsburg Pottery Co.,	Canonsburg, Pa. 10
The Carrollton Pottery Co.,	Carrollton, Ohio, 7
The Cartwright Bros Co.,	East Liverpool, Ohio, 7
The Colonial Co.,	East Liverpool, Ohio, 6
The Crooksville China Co.,	Crooksville, Ohio, 7
The East Liverpool Potteries Co.,	East Liverpool, Ohio, 6
French China Co.,	Sebring, Ohio, 13
The W. S. George Pottery Co.,	East Palestine, Ohio, 33
The Hall China Co.,	East Liverpool, Ohio, 5
The Harker Pottery Co.,	East Liverpool, Ohio, 12
The Edwin M. Knowles China Co.,	East Liverpool, Ohio, 21
The Knowles, Taylor & Knowles Co.,	East Liverpool, Ohio, 32
The Homer Laughlin China Co.,	East Liverpool, Ohio, Newell, W. Va., 78
The Limoges China Co.,	Sebring, Ohio, 9
The Mayer China Co.,	Beaver Falls, Pa., 6
The D. E. McNicol Pottery Co.,	East Liverpool, Ohio, 12
McNicol and Corns Co.,	Wellsville, Ohio, 5
The T. A. McNicol Pottery Co.,	East Liverpool, Ohio, 6
The National China Co.,	Salineville, Ohio, 9
The Owen China Co.,	Minerva, Ohio, 7
The Pope-Gosser China Co.,	Coshocton, Ohio, 7
The Potters Co-Operative Co.,	East Liverpool, Ohio, 11
Saxon China Co.,	Sebring, Ohio, 9
The Salem China Co.,	Salem, Ohio, 6
The Sebring Pottery Co.,	Sebring, Ohio, 11
E. H. Sebring China Co.,	Sebring, Ohio, 7
The Smith-Phillips China Co.,	East Liverpool, Ohio, 6
The Standard Pottery Co.,	East Liverpool, Ohio, 12
The Steubenville Pottery Co.,	Steubenville, Ohio, 7
The Taylor, Smith & Taylor Co.,	East Liverpool, Ohio, 16
The Trenle China Co.,	East Liverpool, Ohio, 5
The Tritt China Co.,	Niles, Ohio, 6
The C. C. Thompson Pottery Co.,	East Liverpool, Ohio, 15
The Vodrey Pottery Co.,	East Liverpool, Ohio, 6
The West End Pottery Co.,	East Liverpool, Ohio, 7

***The Following Banks Have Been Admitted to Membership
During the Past Month***

	Resources
Commercial Banking and Trust Company, Wooster, Ohio.	\$1,031,000
Real Estate Trust Company, Washington, Pa.	2,619,000
Merchants State Bank, New Philadelphia, Ohio.	928,000
Guaranty Safe Deposit & Trust Co., Butler, Pa.	3,722,000
Dollar Savings Bank and Trust Co., Bellaire, Ohio.	1,341,000
Antwerp Exchange Bank Co., Antwerp, Ohio.	410,000
Napoleon State Bank, Napoleon, Ohio.	1,083,000
	Capital
Citizens National Bank, Somerset, Ky.	100,000
Harveysburg National Bank, Harveysburg, Ohio.	25,000
First National Bank, Kansas, Ohio.	25,000

Total Debits by Banks to Individual Accounts

	Week Ending		Increase	Per cent of Increase
	March 17, 1920	March 19, 1919		
Akron - - -	22,036,000	16,320,000	5,716,000	35.0
Cincinnati - - -	72,797,000	65,100,000	7,697,000	11.8
Cleveland - - -	187,730,000	152,003,000	35,727,000	23.5
Columbus - - -	27,720,000	26,628,000	1,092,000	4.1
Dayton - - -	12,436,000	9,897,000	2,539,000	27.7
Erie - - -	8,008,000	6,576,000	1,432,000	21.8
Greensburg - - -	4,466,000	1,985,000	2,481,000	125.0
Lexington - - -	9,100,000	6,900,000	2,200,000	31.9
Oil City - - -	3,421,000	2,382,000	1,039,000	43.6
Pittsburgh - - -	210,694,000	176,862,000	33,832,000	19.1
Springfield - - -	4,296,000	3,116,000	1,180,000	37.9
Toledo - - -	33,896,000	25,274,000	8,622,000	34.1
Wheeling - - -	8,889,000	8,271,000	618,000	7.5
Youngstown - - -	14,471,000	10,765,000	3,706,000	34.4
Total - - -	619,960,000	512,079,000	107,881,000	21.1

Building Operations for Month of February

	Permits Issued				Valuations				Inc. or Dec. of	Percent of Inc. or Dec.
	New Construction		Alterations		New Construction		Alterations		Total Valuations	
	1920	1919	1920	1919	1920	1919	1920	1919	1920 over 1919	
Akron	155	257	45	40	1,291,565	672,330	68,230	32,560	654,905	92.9
Cincinnati	137	86	354	266	530,135	42,585	271,310	149,330	609,530	317.6
Cleveland	169	122	321	404	3,333,500	900,500	304,575	235,105	2,502,470	220.4
Columbus	50	102	53	65	162,975	539,350	331,630	32,120	76,865—	13.5—
Dayton	43	111	20	29	115,819	246,210	13,445	21,825	138,771—	51.8—
Erie	9	40	19	20	34,100	60,312	64,703	11,521	26,970	37.5
Lexington	16	3	33	18	48,420	10,000	10,000	2,325	46,095	373.9
Pittsburgh	151	95	71	75	986,267	186,635	130,181	193,316	736,497	193.8
Springfield	8	4	5	3	11,580	3,900	6,475	950	13,205	272.3
Toledo	53	92	47	55	177,430	304,435	61,341	62,522	128,186—	34.9—
Wheeling	9	19	14	16	17,345	7,175	1,840	2,260	9,750	103.3
Youngstown	35	72	11	11	246,925	91,598	9,525	35,125	129,727	102.4
Total	835	1,003	993	1,002	6,956,061	3,065,030	1,273,255	778,959	4,385,327	114.1

Clearings

	February 16 to March 15		Increase	Per cent of Increase
	1920	1919		
Akron - - -	47,716,000	26,897,000	20,819,000	77.4
Cincinnati - - -	307,021,261	228,915,492	78,105,769	34.1
Cleveland - - -	514,462,382	332,926,476	181,535,906	54.5
Columbus - - -	55,964,300	43,762,100	12,202,200	27.9
Dayton - - -	23,383,068	16,279,447	7,103,621	43.6
Erie - - -	9,771,453	7,138,731	2,632,722	36.9
Lexington - - -	18,231,830	12,762,748	5,469,082	42.9
Pittsburgh - - -	692,176,913	496,859,042	195,317,871	39.3
Springfield - - -	9,129,355	6,346,409	2,782,946	43.8
Toledo - - -	66,532,264	41,456,535	25,075,729	60.5
Wheeling - - -	20,680,778	15,556,918	5,123,860	32.9
Youngstown - - -	19,655,058	16,994,697	2,660,361	15.7
Total - - -	1,784,724,662	1,245,895,595	538,829,067	43.2

PICKUPS ON BUSINESS TOPICS

An American committee on Permanent Organization has been appointed to aid in the formation of an International Chamber of Commerce. The purpose of the proposed organization will be to promote international commerce, to facilitate international trade relations among the nations, to secure harmony of action on all international questions affecting commerce and industry, and to promote peace and cordial relations between the member countries.

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The production of agricultural tractors during the year 1920, in the United States, is estimated at 300,000. This compares with 175,000 turned out in 1919, and 7,540 in 1913, the first year in which the small tractor demonstrated its worth to the farmer. About 12% of our total production of tractors since 1916 has been exported.

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A preliminary survey of the ownership and use of motor trucks by farmers shows that at least 50,000 agriculturists use such vehicles on their farms. These figures for the Fourth District, given out by the United States Department of Agriculture, are: Ohio, 2,261; Pennsylvania, 2,760; Kentucky, 818; West Virginia, 465.

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Checks drawn on 90% of the banks of the United States are now being collected through the Federal Reserve System without deductions for exchange. Of the 29,690 banks in the United States, 26,525 are on the par list.

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Coal companies in eastern Ohio are buying farms and stripping them to take out coal and then making them into farms again. They are planning to make them chiefly into fruit-growing and stock-raising farms. Contrary to the general belief, it has been proved that stripped ground is good for agricultural purposes.

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Twenty-five grocers in Canton, Ohio, have united to cut prices for their customers by buying and advertising collectively.

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Canton, Ohio, High School boys have organized a "Junior Chamber of Commerce" for the purpose of educating its members along industrial, commercial and civil lines. The dues are 50c a semester, and there are 200 members in good standing. They work in co-operation with the Canton Chamber of Commerce, electing officers from among their own members, visiting factories, holding meetings and in other ways becoming familiar with industry and commerce.

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A committee headed by Charles E. Mitchell, president of the National City Company, has been formed to conserve the interests of American holders of the Imperial Russian Government five year 5½% bonds due December 1, 1921. Holders of the bonds are invited to deposit their securities with the depositaries, which are the National City Bank of New York and The Old Colony Trust Company of Boston.

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Army supply bases and terminals on the Atlantic and Gulf coasts, which cost the government \$143,000,000, will be leased to commercial concerns in development of American Commerce. The terminals are at the ports of Boston, New York, Philadelphia, Norfolk, Charleston and New Orleans.

The department of mines and industries of the Union government makes the statement that now is a favorable opportunity for putting capital into the development of South African resources. Great possibilities lie in the direction of steel production, of coal by-product and maize by-product industries, woolen manufacture, shipbuilding and deep sea fisheries, to mention only a few which require large capital.

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Representative Martin Madden of Illinois has formed a vigilance committee in the House for the purpose of fighting extravagance. It will be the purpose of this committee to scrutinize every bill introduced. They will go to the introducer of a bill and point out any elements of extravagance which appear to exist and whenever possible try to persuade the introducer to drop the bill entirely. When this cannot be done the member will be asked to pare down his estimates.

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Senate Agricultural Committee, March 2, voted to eliminate from the annual agricultural bill the \$240,000 voted by the House to continue the time-hallowed custom of distribution of free seeds to their constituents by members of Congress.

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An American syndicate has purchased a controlling interest in Schoeller's iron works at Ternitz and Bleckmann's steel works at Muerszuchlag. Another group is said to be negotiating for the Brevillier and Urban works.

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Belgium is seeking 50,000 tons of American steel-making iron, it was learned at New York, but American iron makers are paying little attention to this and similar inquiries from Europe, because of their inability to meet domestic demands.

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More than 3,500 banks and trust companies have made application for food draft blanks to assist in the relief of European food conditions under the plan that has been worked out by the Relief Administration and the American Bankers' Association.

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Wage increases ranging from 25% to 125% in January, 1920, compared with January, 1919, are shown in eleven of the thirteen leading manufacturing industries by a compilation of the Bureau of Labor Statistics. The biggest advance is in the Woolen industry. The volume of employment increased in various ratios from 4% to 50% in ten of the thirteen industries.

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It is stated in official quarters that in spite of the embargo, New York merchants have not only shipped cargoes to parts in Soviet Russia, but that cargoes of raw materials have been taken back in exchange. It is predicted that Russian trade will be enlarged from week to week.

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In an effort to deal with the exchange situation Italy plans to restrict American imports about 20%, by prohibiting imports of sugar, condensed milk, butter and cheese, according to official advices to the Department of Commerce.

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The British Government will introduce into circulation new nickel coinage in the near future, says a copyright dispatch to the New York Sun. This step will be taken because of the high price of silver and the desire to get rid of cumbersome copper coins.

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Figures published by the Illinois Committee of the Public Utility Information, show that trolley fares in 460 cities have been increased. In fifty-nine cities, ten cent fares are being paid. In the year 1919, forty-eight companies went into receiver's hands, and during the last three years ninety-eight companies, representing about a sixth of the country's mileage, has been involved in bankruptcy courts.