

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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THERE can be no doubt that business is losing its tumble-down appearance. Bit by bit it is looking better, but it is possible that the majority of reports do not shape up quite so well as they did last month. The point of view that business would only require a short time to get on its feet is disappearing. Naturally the "hand to mouth" policy is still much in evidence. This policy dies hard.

A lot of cobblestones in the path of business could well be pointed out. Some of them are in a fair way to be permanently removed, but a big one that is still in the road is the comparative position of the farmer and the city man at the present time. The gears between the farm and the city are not meshing properly.

Ordinarily the farmer is the nation's greatest buyer and until he gets back into the market there can be no normal resumption of business. The reason he is not a heavier buyer in the market is because he has to pay too much for what he wants to buy in proportion to the prices which he receives for the products he has to sell. Just like other business men the farmer cannot become a force in the solution of our problems until he can produce, ship and market his products at a profit.

It is plain that the much discussed problem of the movement of the country youth cityward is still in evidence. Short hours, amusements and conveniences all have their attraction. A job in the city looks better than the work on the farm. The farmer works hard and sends his son to school and when the college days are over the boy goes to the city in search for better things than the farm can give him. New blood is required in every line of work, and farming, the greatest of all industries, is no exception.

On the other hand the other fellow's job is not always so attractive in the close-up as it looked from a distance. Underneath the glamour and flourish of the city, is an every day grind that sometimes makes the proverbial "short hour" rule of the city seem more visionary than real. Generally we envy the other fellow because we do not know his job. We can see the easy side of it, but we cannot see what is back

of that. It is interesting to note that since the dizzying prosperity of war-time has passed, the movement from the country to the city is less in evidence.

This is but one angle of the situation which confronts the farmers of today, and there are many others. However, the farmer is not alone in his difficulties, for practically all industries have been meeting problems which do not tend to create enthusiasm.

This is no time for controversy between different factions. No separate interest can get the upper hand over others without damage to itself. So long as it is the belief of an individual or a group of individuals that someone else is responsible for their condition, there will be bitter discontent.

We are all inclined to look too far afield for remedies and forget or neglect those right at hand. The answers to the problems confronting the farmer lies with the farmer himself.

In almost any community there usually can be found a small group of farmers who have climbed a few rungs above the average and are making better and surer profits than their neighbors. It may be wheat, it may be cattle, or it may be something else, but whatever the product, the superior quality means better prices. In other words, a more standardized method of farming, better timing of crops and a closer co-operation between the farmer and his city market, will go far in eliminating present existing defects in our farming system.

When business shows symptoms of going wrong, the successful leader does not wait until it collapses to apply a remedy. He is constantly on the alert for trouble and is always planning how he may best meet present and even imaginary evils. It should be the same way on the farm. The most effective thing the farmers can do is to help themselves.

Close students of the situation see salvation for the farmer in organization for the purpose of marketing his product, without being at the beck and call of those who are out with no other end in view than making profit at his expense. However, it is well to remember that organization cannot hold all the winning cards. The result of organization carried too far may well be an object lesson.

ON PAGES 7 and 8 WILL BE FOUND A SPECIAL REPORT ON THE DYE AND COLOR INDUSTRY.

Country Banks Increase Borrowings; Deposits Off; Acceptance Market Dull

The demand for accommodations from member banks during the past month has continued to fluctuate. There was a slight rise of city bank borrowing from October 20 to October 22 followed by a gradual recession until about the last of the month. Another increase in the demand followed and this lasted until near the middle of November. Since that time another slight decrease is in evidence. Summing up the month ending November 18, there has been a slight decrease in the volume of loans to city banks.

There was a gradual increase in the demand for accommodations from country banks from October 20 until the middle of November. This was followed by slackening demand. During the month ending November 18 there was a noticeable increase in the volume of loans to country banks. The demand from farmers on the country banks for funds to buy stock to fatten, continues heavy.

Indications are that there has been little liquidation of agricultural credits from the sale of this year's crops. There are more country banks borrowing from the Cleveland Federal Reserve Bank than ever before. While there is less money being borrowed than last May, the demand has switched around. At that time the call was coming from the larger city banks, while at present it is coming from an increasing number of the smaller country banks.

This bank has not been called upon recently to extend accommodations to other Federal Reserve banks and the amount of such rediscounts has been reduced from approximately six million to two million dollars. It is interesting to note from the statement of the Federal Reserve Board at the close of business November 16, 1921, that rediscounts for other Federal Reserve banks by Boston, New York and Cleveland banks have declined to \$13,900,000. On October 26, they were \$43,787,000.

Bankers' acceptances bought by the Federal Reserve Bank of Cleveland during October, 1921, amount to \$4,483,344, and the maturing and paid, \$3,209,471. Nineteen accepting banks in the Fourth

District report acceptances executed during October to the amount of \$3,614,903, and acceptances paid \$4,760,553.

The combined reports of 18 large saving banks and trust companies in the Fourth District show a decline in total time deposits of 3.8 per cent for October 31, 1921, compared with the same period last year. This is larger than the September decrease when the same number of banks showed a decline of 1.7 in comparison with the same period last year. October time deposits as compared with the previous month show a decrease of 1.6 per cent.

The undertone of the acceptance market for the first half of the past month was somewhat better with slight improvement in the turnover in comparison with the previous month. Country banks in some sections were buyers. There was also some demand from corporate and individual sources. Rates have tended to decline throughout the month in sympathy with the easier call money rates and the increasing supply of short time demand funds.

The general inactivity of the acceptance market in the past months and the supply and demand of prime bills have had little effect in the setting of the bank acceptance rates. The rates have rather been determined by rates on short time funds in the other markets.

Few bills originated in the District. Much of the supply offered by the brokers was participated in by banks from eastern syndicates. No noticeable improvement appeared in the supply of bills drawn against foreign transactions. However, there was a slight improvement in the supply of paper drawn against domestic shipment. As last month, there was a general decrease in bills drawn against warehouse receipts.

The present rates for prime bills, eligible for rediscount by the Federal Reserve banks, are as follows:

Under 30 days	4¼ to 4½
30 to 60 days	4¼ to 4½
60 to 90 days	4¼ to 4½

Iron and Steel Production Hovering Around Fifty Per cent of Normal; Revision of Freight Rates Disturbing Factor; Purchases by Railroads Encouraging

Failure of recent expectations of a substantial reduction of freight rates to be put into effect promptly has caused much disappointment in the iron and steel industry. It is generally felt in the industry that freight costs at their present high levels are stifling business and that if a material reduction can be brought about, this would give a further important impetus to the reviving market. At present conditions barely are holding their own on the basis of about 50 per cent operations. Furthermore, the uncertainty over freight rates, since it is commonly believed a reduction only is a question of time, is a

disturbing factor and this is having a tendency to hold buying within narrow limits. On the whole, conditions in iron and steel are making little further progress at this time toward normal operations. A fluctuating state of demand is exhibited among the several finished steel products and recessions in some are being offset by improvement in others. Some of the lighter lines, such as sheets and wire which have contributed greatly to the recent increase of steel production, have been showing some falling off. However, the heavier products which have been lagging up to this time are making a better showing

under demands originating with some increase of general business construction, oil field work and railroad buying. The most enheartening feature of the market is the expanding purchases by the railroads. More orders for railroad cars are being placed and are in negotiation than at any time within a year. Some large tonnages of rails for 1922 delivery aggregating at present 300,000 to 400,000 tons and including the requirements for such systems as the Pennsylvania and the New York Central are before the mills. Some of this buying interest manifestly has been stimulated by the reduction of \$7 per ton in steel rails. Another finished line to show growing activity is tin plate in which there has been also a recent reduction of \$10 a ton.

The improved position of the industry in general is clearly set forth by the figures of October production. According to the compilation of *The Iron Trade Review* the output in October was 1,233,232 tons representing an increase of 247,437 tons over September and the largest month since March. Average daily production in October was at the rate of 39,781 tons compared with 32,857 tons in September. Furnaces in blast on the last day of October numbered 95 compared with 84 on the corresponding date in September and 69 on the last day of August. Steel ingot production in October was at the estimated annual rate of 23,000,000 tons compared with an estimated annual rate of 17,350,000 tons in September. In July the country was down to a rate of less than 12,000,000 tons annually. The October annual rate represents about 53 per cent of the high record of steel ingot production which was 1917.

Late iron ore shipments have been ended for the season and total slightly over 22,000,000 tons. This is the smallest annual shipment from the Superior regions in 17 years.

The trend of prices in iron and steel under fractional operations and keen competition now prevailing continues slightly downward. The composite market average of 14 iron and steel products prepared by *The Iron Trade Review* on November 16 stood at \$34.63 compared with an average of \$35.46 in October, \$35.99 in August, \$63.75 in November of last year, and \$24.02 in November, 1913.

Pig iron after showing some buoyancy up to a few weeks ago has settled somewhat and the market is off \$1 or so from its recent top figures. A second advance of \$5 a ton in sheets recently put into effect by a number of the mills has failed to hold, and purchasers are back on the old basis, in fact, the latter is subject to some shading at present.

If the naval disarmament proposals are to be carried out on the lines suggested, the trade position of the iron and steel industry as a whole will be only slightly affected. An authoritative analysis of the steel requirements of the American navy in recent years shows that the steel purchases have aggregated approximately one-half of one per cent of the total finished output of the country. From a tonnage standpoint, therefore, disarmament is a negligible factor. However, those works specializing in the production of arms, guns, projectiles, etc., face material readjustment of their operations, as do also manufacturers of naval operating and maintenance equipment, such as heavy cranes, electrical machinery, etc.

Lake Shipping Season Practically Ended; Ore Shipments For Season Light; Stocks Lower Than Last Year

The lake shipping season finished as it started and the fleet that was in commission after the middle of November was very small. Most of the ore shippers had cleaned up by that time and as the grain movement was not heavy enough to take care of all the tonnage that was offered, a large number of freighters were sent to the dock for the winter. The United States Steel Corporation which shipped a large part of the ore and took care of most of the wild carriers in that trade did not load any cargoes in November, and aside from a few steamers that were operated in the coal and stone trades, most of them were laid up early in November.

The mines in the Lake Superior district only sent forward 3,233,081 tons of ore in October, which was a decrease of 5,615,905 tons compared with October last year, when shipments were 8,848,986 tons. The movement for the season up to November 1 was 21,894,275 tons or 31,228,067 tons less than for the same time in 1920 when the fleet moved 53,122,342 tons. Shipments for November were less than 300,000 tons according to reports received by shippers and that would make the movement for 1921 a little more than 22,000,000 tons which was the

smallest amount moved since 1904 when the fleet carried 21,226,591 tons. Ore has been going forward from dock to the furnaces a little more freely the last few weeks and stocks are not as heavy as they were a year ago. On November 1 the Lake Erie docks were holding 9,672,077 tons and on the same date in 1920 stocks were 10,212,975 tons.

Coal shipments for October were 2,722,633 tons which was a big loss compared with October last year when the fleet loaded 4,486,434 tons. Shipments up to November were 20,870,869 tons and the movement for the season will be a little less than last year. Storage room at some of the upper lake ports is pretty well taken and a number of coal carriers lack cargoes to hold.

The grain movement has been heavy, but owing to the big slump in ore the supply of tonnage was in excess of the demand and sales were low. Grain was carried in November from ports at the head of Lake Superior to Buffalo as low as 1½ cents and storage cargoes were taken at 3 cents. There will be a large amount of grain afloat at this end of the route at the close of the season and a large number of boats will hold cargoes at the upper lake ports.

Little Change in Various Lines of Manufacturing; Closed Car Business Holds Up Well; Good Demand for Plate Glass

There has been little change in various manufacturing lines during the past month. In some industries fall activity is wearing off and the usual dull winter season is causing orders to come in more slowly.

Even in normal years the automobile industry generally experiences a slow-up in business during November and December and this holds good at the present time. This is the season of the year when closed cars are in the greatest demand and the sale of such cars is helping to hold up business.

The condition of the truck industry in the Fourth District continues erratic. From one section of the District comes the report that business is very slow and that with the exception of occasional little spurts, there is little activity of any note. However, local business apparently is better and another report is to the effect that October orders of one large concern were the best since June, 1920, and that they were scattered from one end of the country to the other. No large individual orders were included.

A manufacturer of axles for passenger and commercial cars reports that this particular line of business worked through a small cycle of improvement during September, October, and the first part of November.

Business in the tool manufacturing line is practically the same as in August and September. The tendency to improve in this direction has not developed as was expected.

There has been a steady gain in sales in the paint industry since September 1. Stocks throughout the country are low. Exports are still below normal, but

are showing evidence of picking up. There is a particularly heavy demand for white lead products and October business showed a marked improvement over the corresponding month last year.

Conditions in the tin can industry appear to be improving from day to day. Orders are coming in from all parts of the country in increasing volume and in most instances are accompanied by rush instructions. Cans are now being manufactured for the packing trade in preparation for the fruit and vegetable pack for 1922. Collections in this line continue good.

There has been no change of any consequence in the cork industry since last month. The volume of business is about the same. Whatever change there has been is for the better.

Plate glass companies are operating 75 to 80 per cent of their capacity. The automobile demand for glass has been fair, and the demand from furniture and mirror manufacturers is exceedingly good.

During the past thirty days there has been a decided improvement in the window glass business. Hand plant factories in operation are making all the glass they can, but they have been idle for most of the year. Nearly every window glass manufacturer in the country has more orders than he can fill promptly. Stocks are low and there has been a good seasonal demand.

During the month of October there was a marked improvement in the printing and lithographic ink business, both in the number and the bulk of orders. However, the outlook during the past ten days has not been quite so favorable.

Reduction in Stocks Partially Responsible for Increase in Price of Crude Oil; Sales of Gasoline Heavier Than Last Year

Many calculations on the petroleum industry were upset by the 50 cent mark-up in the price of Pennsylvania crude on November 2, and in the price of Oklahoma crude on November 7. Although the oil situation with reference to the heavy stocks had been easing up a little, this increase came as somewhat of a surprise. Last September the price of Pennsylvania crude was \$2.25 a barrel and it is now \$4.00 a barrel. The peak price of \$6.10 was reached last January. Mid-continent crude has advanced from \$1.00 a barrel the last of September to \$2.00 a barrel against the high price the first of the year of \$3.50.

The advances last September were credited largely to the end being seen in the present known oil-fields of Mexico, salt water appearing most unexpectedly in some of the big wells. There was also a heavy draft in this country on refinery products with a continued decline in the production of crude. The advance of November 7, however, is credited to a drain on stocks by some of the big pipe line interests

in the southwest, due to a continuing heavy demand for petroleum products in this country, and an increasing demand showing up abroad.

What these advances mean to the oil industry are best indicated by a rough computation showing that up to November 15 the increase in crude oil prices represents a total increase in gross receipts by the oil producers east of the Rocky Mountains of around \$27,000,000, an increase in the value of crude oil held in storage of around \$125,000,000 and an increase in the value of products held in storage at refineries of around \$63,000,000. The total increase in income and inventory in about 45 days amounts to approximately \$215,000,000.

The new prices in crude oil has already started some activity and the feeling is quite general that the drilling campaigns will gradually become larger. However, it is not expected that the industry will get well under way for some months yet, for many producers are not equipped financially to go ahead with a big drilling program.

Oil well drilling is at its lowest point in years. There were less than 800 new wells completed in September of this year, which is only about a third of those completed in September of last year. It has been this great reduction in drilling, together with the usual falling off in flush production of the new fields that has been largely responsible for turning the tide. Interest in the east is centered chiefly on Kentucky in the Rockfield and Browning shallow sand areas.

According to the *National Petroleum News*, representatives of the oil industry and railroad executives have practically agreed upon a reduction of 3.5 cents per hundred pounds on petroleum and its products in the territory east of the Mississippi and north of the main line of the Chesapeake and Ohio Railroad through Virginia and Kentucky. This will amount to \$20 a car and will mean a saving to the industry of between \$4,000,000 and \$5,000,000 a year, and will permit the opening up of more territory to the refiner.

Quality of 1921 Crops Good; Corn Crop for 1921 Below 1920 Total; Burley Tobacco Marketing Organization Reality

Final returns on the quality and amount of crops raised during the 1921 season quite generally indicate a satisfactory summer. While the yield of the staple crops has been somewhat below that of 1920, their good quality has in some measure counteracted any decrease in the number of bushels.

According to the latest report of the Ohio Department of Agriculture, the Ohio corn crop this year averages 41 bushels per acre. This is 2.5 bushels less than last year, but the carry-over of last year's crop is higher so that the total supply on farms is only about 7,000,000 bushels less than a year ago.

The yield per acre of corn throughout the United States is 29 bushels which compared with a ten year average of 26.4 bushels. The total corn crop in the United States is estimated at 3,152,000,000 bushels which compares with the last year's crop of 3,232,367,000 bushels. The total carry-over in the United States is 281,000,000 bushels which compares with a farm carry-over last year of 142,000,000 bushels.

Coal Industry Affected by Proposed Railroad Strike; Coke Production Increases

In spite of the falling off in orders that followed the settlement of the railroad controversy, a fair amount of retail coal business is reported. When the strike was declared off many buyers stopped making purchases. Some are still holding off and buying from hand to mouth, expecting a reduction in freight rates.

The effects of the proposed railroad strike and mine strikes over the threatened discontinuance of the check-off can readily be seen in the estimated production figures of the United States Geological Survey during the month ending November 5.

Despite many dreary reports from the oil industry during the past year the fact remains that it has sold more of some of its important products than in any year in its history. The average consumption of gasoline for the first eight months of this year was around 428,000,000 gallons per month as against 411,000,000 gallons per month last year. October reports indicated a considerable reduction in gasoline stocks.

Fuel and gas oil is being sold in larger quantities this year than ever before, the average consumption per month for the first eight months of this year being around 757,000,000 gallons as against 723,000,000 in 1920. The consumption of kerosene and lubricants has been off. Stocks of refinery products have been large, but not much larger in proportion to the consumption than in previous years. The marketing end of the industry has passed through one of its largest and most profitable years and has made big extensions in plant equipment.

Ohio white potatoes are of only fair quality. The average of this crop is estimated at 58 bushels per acre, which means a total state crop of 6,554,000 bushels. This is only two-thirds of last year's crop, or about 5,000,000 bushels less than last year. The average yield per acre of sweet potatoes in Ohio is estimated at 107 bushels. The quality of the crop is good.

An event of outstanding importance in the Burley tobacco district was the success of the co-operative marketing plan. A minimum requirement of 75 per cent of the total Burley tobacco acreage was necessary in order to insure the organization of the Burley Tobacco Growers' Co-operative Association. Final returns show that about 85 per cent has been signed up. The organization can now go ahead and market this year's crop. The exact date for the opening of the marketing season has not been determined.

Week ending October 15.....	9,711,000 net tons
Week ending October 22.....	11,049,000 net tons
Week ending October 29.....	10,956,000 net tons
Week ending November 5.....	9,315,000 net tons

A gradual improvement in production of beehive coke, which had halted in the last week of October, began again in the week ended November 5. The total output in that week is estimated at 115,000 net tons, an increase of 13,000 over the preceding week.

Condition of Paper Industry Shows Little Change; Pulp Imports Fall Off; Box Board Shipments Increase

The condition of the paper industry during the past month has shown little change. There was some gain in orders during the first part of the month and a slight indication for firmer prices. This, however, was offset in the last two weeks by some falling off in demand. Prices have not continued to advance although remaining at a slightly higher level than at the beginning of the month. Apparently the usual seasonal fall is operating and it is believed that this may continue until after the first of the year, as buyers of paper are no doubt endeavoring to keep their inventories at a low point.

An event of the month was the increase of $\frac{3}{4}$ cents per pound on contracts for December delivery of the highest grades of bleached sulphite pulp. At present only a small tonnage of foreign pulp is being imported. The principal reason is that the old standards of foreign pulp appear to have declined. Quite a number of manufacturers report that they have been unable to use foreign pulp in the grades of paper for which the pulp was intended when purchased.

At the end of the first quarter of this year, manufacturers of book, cover, tissue and writing papers, were fortunate who were able to operate at 50 per cent of capacity. Orders usually ran below that figure. Stocks in the mills had become enlarged be-

cause the manufacturers were reluctant to shut down entirely even after cleaning up all unfilled orders and accumulating normal inventories of finished goods.

Production, orders and sales continued relatively the same for the second quarter. However, the third quarter brought up the average so that for the first nine months of the year the production of fine papers was only 39 per cent less than for 1920. Meanwhile the stocks at the mills increased only 4 per cent and it is understood that merchants' stocks have declined about 25 per cent.

Magazine publishing tonnage has been severely affected by a decrease in advertising amounting to 37 per cent less than 1920, still this year's advertising is but 19 per cent less than 1919, while it is actually 10 per cent higher than 1918.

Shipments of box board were larger during October than in any other month this year. However, there is some reluctance on the part of the consumer of box board to place orders for material, unless he has business upon which to use the stock. While there may have been a falling off in placement of new tonnage during the month, mills seem to be able to move along slowly and have not been compelled to close down as many did several months ago.

Proposed Strike Caused Speed-Up in Transportation; Surplus of Shipping Facilities Reduced

After allowing for an unusual pick-up in business caused by the prospect of a general railroad strike and a consequent stocking up by manufacturers and others, October figures on the transportation situation apparently show a continuation of improvement.

On October 31 there was a total of 80,203 idle serviceable freight cars in the country of which 33,643 were coal cars. This is the lowest figure for many months past and does not indicate that there is

great surplus of transportation facilities at present. However, a considerable allowance must be made on account of the threatened strike of railroad employees. That prospect caused an unusual movement of raw materials and speeded up the shipping of finished products. The increase in coal shipments was especially noticeable. Thus the fact that the surplus of coal cars was reduced by about 65,000 during the month is not in itself a safe guide to the increase in normal traffic moving.

Textile Business Less Satisfactory; Little Change in Policy of Retailers

Reports from the textile industry are not quite so encouraging as they were a month ago. Last month some of the larger mills in the Fourth District reported enough orders on the books to run until February. Wool textile mills were operating near capacity.

The open fall weather has had somewhat of a depressing effect on the trade as a whole, and orders

are not coming in so rapidly as was expected. Clothiers on the road report that their end of the business is not very strong and some cancellations are the result. Wool textile mills are now operating about 70 per cent of normal.

There has been little change in the policy of the retailers and they are still ordering on a conservative basis.

The Dye and Color Industry in The Fourth Federal Reserve District

Many thousands of years ago the color and scent of the flowers, the healing herbs and plants, together with other former vegetation, were decomposed in the form of coal. Today there is given back to man, through the wizardry of science and the medium of coal tar, the colors and perfume of the flowers, the flavor of the fruits and the medicinal value of the herbs and roots of pre-historic times. This bears out the saying that nature allows nothing to perish.

The dye and color industry in the United States is still in its infancy, and might not be classed as a major industry in the Fourth Federal Reserve District. However, when we discovered that in this District are located the color plants, furnishing all the color which goes into the printing of our paper currency and of the two-cent postage stamps, we felt justified in preparing a short survey of this industry for our 25,000 readers; and attempt to give a brief, clear, non-technical description of this industry, together with a resume of its historic and economic importance.

It is only the artificial dyeing industry which is modern. The art of natural dyeing has been practiced in some form by all primitive peoples. In biblical history we read that, "Jacob loved Joseph more than all his children, because he was the son of his old age; and he made him a coat of many colors." Moses told how the skins of the ram and the badger used in the tabernacle were dyed red.

Indigo is probably the oldest dye known to man. It is a product of many different plants, found in many countries, and has for untold ages been used by savage and civilized alike. And yet, at the present time, indigo is produced in commercially important quantities, from its natural source, in but two sections of the globe, the Bengal region of India, and Salvador, Central America. These are the last strongholds of an industry that was once world-wide. The chemist has succeeded in improving upon the leisurely and complicated processes of nature to such an extent that synthetic indigo is now produced rapidly and economically from aniline in any desired amount and of higher purity than the natural article. The indigo farmer, like the madder farmer and the cochineal raiser, will ultimately be compelled to turn his land to other crops. The chemist can in a few minutes produce what the indigo plant requires a whole season to do.

The only dye rivaling indigo, in the estimation of the ancients, was Tyrian Purple, a dye so expensive that one pound of purple wool cost about \$240, which would make the dye itself worth approximately \$5,000 a pound. It was such an expensive dye that the Emperor and his family were practically the only users of it, which gave rise to the expression "born to the purple." The dye was obtained from certain species of sea snails, which when decomposed formed this precious coloring material.

In 1909 a color chemist gathered 12,000 of these snails and by very careful work succeeded in getting a total of 1.5 grams of the coloring material.

On analysis it proved to be a combination of indigo and bromine.

It was in 1856 that William Henry Perkin, an Englishman, while endeavoring to devise a method of preparing quinine synthetically, oxidized some aniline oil, and obtained instead a purplish dye, which he called "mauve," and which was the first of the modern synthetic dyes. Many aniline colors and other coal-tar dyes followed, until now dyes of this class have almost entirely superseded the natural dyestuff. Mineral and vegetable dyes were formerly considered more lasting than the artificial ones, but this view has in most cases no foundation for fact.

In attempting to describe the various processes of former industrial surveys, there has been something tangible upon which to base the description, but in this brief survey of the dye industry one enters the realm of the laboratory. An attempt to describe the chemical reaction, the result of which is the making of dyes, would be as futile as attempting to describe the mysterious delusions of a great magician.

Bituminous coal is organic vegetable matter which has decayed and has been solidified by pressure and heat. When this coal is subjected to a high temperature and the air excluded, a process known as destructive distillation takes place. All the material volatile at the temperature of distillation is driven off and what we know as coke is left. Part of the volatile matter, when cooled to ordinary temperature, forms a liquid. The non-condensable or gaseous portion is known and used as coal gas. The condensable or liquid portion is known as coal-tar and is the basic raw material upon which the dye industry is built. By further distillation coal-tar is broken up into several divisions and these divisions are still further broken up by a process known as fractional distillation, in which advantage is taken of the fact that certain products will distill off at certain temperatures.

From coal-tar alone come thousands of compounds; dyestuffs of more shades and colors than can be found in nature, perfumes more pleasing than the flowers produce; medicines adapted to counteract the particular disease; and explosives of great potency.

Practically all the artificial dyes are built up step by step from simpler substances, which in the terms of the chemist are called "synthetical." The vast bulk of our synthetic dyes is built up from five simple initial materials called "crudes." These five crudes are benzole, toluene, naphthalene, anthracene, and carbolic acid. There are five others which are less common. As all these ten crudes are found in the tar obtained when coal is heated for the production of illuminating gas or for the manufacture of coke, and, as this material constitutes their chief source, the resulting dyes are generally known as "coal-tar dyes."

These crudes then represent the foundations upon which can be built an endless variety of structures. The building operations of the chemist differ some-

what from those of the contractor erecting a house, in that the chemist ordinarily puts up his structure one story at a time, each one being complete in itself. At many of these intervening stages, it is entirely possible for him to change his mind and complete his building as a drug, a photographic developer, a perfume, a flavoring extract or a dangerous explosive instead of a dye. These intermediate products, therefore, standing as they do midway between the crude initial materials and finished products, are known as "intermediates," and from the ten crudes approximately 250 intermediates are manufactured commercially for the production of the 1,000 synthetic dyes now found in the world's markets.

In 1920 there were 251 coal-tar intermediates made—all of them products of the single raw material coal tar and many of them by-products of each other—about 923 different dyes, 16 photo-chemicals, 48 coal-tar pharmaceuticals or medicinals, 14 flavors and 41 perfumes.

The output of coal-tar by American coke ovens is sufficient to meet the demands of the domestic coal-tar chemical industry for crude materials. During 1920 the output of by-product ovens increased 23 per cent. Therefore, so far as crude materials are concerned, there is no obstacle to the development of a complete line of dyes and other coal-tar chemicals in this country.

In 1920, 82 manufacturers reported a total production of 88,263,776 pounds of dyes, valued at \$95,613,749. The quantity produced in 1920 represents an increase of about 40 per cent over that of 1919 and exceeds the imports of 1914 by 92 per cent. In fact we have ourselves already become exporters of dyes, our exports for the nine months ending September 30, 1920, having been valued at \$26,032,389.

Few of us realize how intimately the industrial economic life of the United States is bound to the chemical and coal tar industries. Last year there were over \$112,000,000 worth of finished coal-tar products alone produced in the United States, and these products played an important part in practically every life and industry in the country. Some of the great industries in which coal-tar products play a very important part, and which, to a very large extent, dependent on these products are the following industries: textile-silk, cotton and wool dye and color; paint and varnish; printing ink; paper; publishing and advertising; shoe and leather; perfume; rubber; canning; drug, and confectionery. All these industries are well represented in the Fourth Federal Reserve District and most of them are almost entirely dependent on coal-tar products, even though other products form the basis of the industry.

The unique branch of coal-tar products is that of the explosives. All the more important explosives of the present day are either coal-tar products or the result of chemical processes requiring the use of coal-tar products. A dye works can over night be turned into an explosive factory. In a large dye-stuff factory there is an unavoidable production of considerable quantities of substances which are directly available for conversion into explosives.

Moreover, in addition to these by-products, which can be used for manufacture of explosives, any of the materials which are not by-products, but are directly useful for the production of dyes, can also by slight alterations be converted into explosives.

For example, in the production of sulphur black, which is the dye used in the coloring of stockings, if checked at a certain point, becomes deadly picric acid.

One of the color plants in this District visited in the preparation of this article was the plant located in Cincinnati which produces for the Bureau of Printing and Engraving at Washington the dry color from which is printed the two-cent postage stamp. Another color plant visited is located in Cleveland, and this plant furnishes the same Bureau with the dry colors used in the printing of our paper currency.

The process of preparing the dry colors is practically the same for any color, and can be very briefly described. As an example, we will take the dry color used in the printing of the two-cent postage stamp, which commercially is called Red Lake No. 1. The two dyes combined to form this color are tobias acid and beta naphthal. Either of these dyes is a whitish powder, but when mixed with water they form a beautiful red. When properly agitated, the solution is pumped through a filter press, which comes from the presses in the form of pulp. This pulp is then put on large trays and dried in ovens. From the ovens the cake-like layers are taken to very delicately adjusted grinders which grind the cakes to a very fine powder. Chemically pure water must be used in mixing the dyes as any foreign substance would produce a different shade of color. Also an uneven temperature or an improper circulation of air in the ovens, or an improper adjustment of the grinding machines, would also produce different shades of color. From the grinding machines a sample of each batch of colors is taken to the laboratories where chemists test for bleeding in water and oil, also for undertones and overtones.

Now a few words as to the future of the dye industry in the United States: As previously stated, so far as crude materials are concerned there is no obstacle to the development of a complete line of dyes and other coal-tar chemicals in this country. This leaves two other necessary elements, those of capital and skill. As to capital, there is very little question but that it will be forthcoming if proper protection is given this industry. As to skill, the myth, influenced by German thought, that United States' chemists could not produce as good a dye as produced abroad was entirely exploded during the World War. We have the authority of a Swiss chemist, who has had thirty years of dye experience in European countries, that our chemists not only can make a dye equalling that made by Germany, but that in certain colors which he has analyzed they have actually produced a dye superior in quality. The main secret in the making of dyes, he stated, was really no secret at all—simply extreme patience and minute care in the preparation. Temperamentally, we Americans haven't the national habit of mind for painstaking research work and the mechanics of

dye-making, such as the European peoples have. In this line our national sin is quantity rather than quality. However, the American mind has overcome far greater obstacles, and it will overcome this one. The building up of a dye industry is therefore dependent on raw materials, capital, and skilled workmen. The raw materials and the capital we have; it will, however, take a few years to develop patience and skill.

Reduced Inventories Aid Present Rubber Production; Mechanical Rubber Business Strong

The solid improvement which follows real liquidation continues in the rubber industry. In spite of the decline in the volume of tire sales that is natural at this time of year, low inventories have enabled manufacturers to continue production on a satisfactory basis. Production continues around 70 per cent of the July-August peak.

The cost of labor and materials and the retail sales prices on tires have been reduced and the latter are now lower than the pre-war basis. Whereas a rigorous winter was anticipated back in September, it is now felt many more men will be employed than a year ago.

Unsettled weather is causing a demand for rubber footwear. Rubber sundries and mechanical lines are

Following is a list of the dye producers located in the Fourth Federal Reserve District:

Ault & Wiborg, Cincinnati, O.
The Chatfield Mfg. Co., Cincinnati, O.
Cincinnati Chemical Works, Inc., Cincinnati, O.
The Federal Color Laboratories, Norwood, O.
Goodyear Tire & Rubber Co., Akron, O.
The Grasselli Chemical Co., Cleveland, O.
Hord Color Products Co., Sandusky, O.
The Marietta Refining Co., Marietta, O.
Philip Carey Mfg. Co., Lockland, O.
The Sherwin-Williams Co., Cleveland, O.

strong. There is an especially heavy demand for rubber heels. The strength of the manufacturing situation is reflected in the firmer price of crude rubber.

The National Tire Dealers' Association at its annual convention at Cleveland made progress in planning constructive sales work for spring.

Tire companies through the Rubber Association of America have announced an agreement to eliminate abuses of mileage guarantees. Hereafter, their tires will not be guaranteed for a specified definite mileage but only as to material and workmanship. This is another forward step and constitutes another plank in the new business platform of the rubber industry.

ELEVEN MONTHS' PRODUCTION FIGURES

Inventory, Production and Shipments (domestic) of Pneumatic Casings, Tubes and Solid Tires,
as Reported by The Rubber Association of America.

"Production" and "Shipments" figures cover the entire month for which each report is made. "Inventory" is reported as of the last day of each month.

"Inventory" includes tires and tubes constituting domestic stock in factory and in transit to, or at, warehouses, branches (if any), or in possession of dealers on consignment basis, and as a total represents all tires and tubes still owned by manufacturers as a domestic stock.

"Shipments" includes only stock forwarded to a purchaser and does not include stock forwarded to a warehouse, branch, or on a consignment basis, or abroad.

PNEUMATIC CASINGS				
Month	No. Mfgs. Reporting	Inventory	Production	Shipments
November, 1920	36	5,880,016	649,742	806,023
December, 1920	43	5,508,380	506,111	1,327,153
January, 1921	45	5,319,605	703,430	965,417
February, 1921	45	5,193,018	819,892	1,073,756
March, 1921	46	4,597,103	1,163,314	1,614,651
April, 1921	49	4,527,445	1,651,418	1,785,951
May, 1921	59	4,451,668	2,100,917	2,085,882
June, 1921	63	4,154,456	2,313,265	2,643,850
July, 1921	63	3,892,037	2,570,524	2,757,581
August, 1921	66	3,934,583	3,043,187	2,894,442
September, 1921	....	3,340,798	1,929,268	2,047,929

INNER TUBES				
Month	No. Mfgs. Reporting	Inventory	Production	Shipments
November, 1920	40	6,131,935	742,815	920,938
December, 1920	43	5,786,929	508,446	1,481,285
January, 1921	47	5,586,163	740,824	1,042,617
February, 1921	46	5,415,464	916,627	1,129,881
March, 1921	48	5,044,861	1,346,483	1,643,690
April, 1921	51	4,916,772	1,762,122	1,983,571
May, 1921	57	4,751,880	2,210,040	2,342,567
June, 1921	60	3,835,098	2,359,928	3,232,673
July, 1921	61	3,122,815	3,020,981	3,603,248
August, 1921	64	3,649,319	4,430,152	3,804,060
September, 1921	....	3,827,830	3,274,822	2,645,758

SOLID TIRES				
Month	No. Mfgs. Reporting	Inventory	Production	Shipments
November, 1920	11	298,875	21,355	34,217
December, 1920	12	303,473	16,297	40,828
January, 1921	12	303,753	21,220	29,116
February, 1921	12	304,374	23,365	29,599
March, 1921	12	283,800	28,710	43,926
April, 1921	12	269,985	28,859	42,080
May, 1921	12	264,633	35,156	40,122
June, 1921	11	240,336	28,395	49,867
July, 1921	11	220,003	35,123	55,678
August, 1921	11	216,367	55,694	66,866
September, 1921	....	161,832	27,441	50,276

Market for Canned Foods Weak; Distributors' Stocks Light

While the canning industry has had an off season, canners are quite optimistic as to the future. They are still coping with weak markets which have prevailed for some time. While the market for canned foods is not materially declining it is still quite unresponsive due to the conservative buying of distributors.

The hopeful sign from the standpoint of the canners is that the stocks of canned foods carried by the distributors are very light, and that the output of the past season is not sufficient for the needs of the consumers, based on the record of normal consumption for the past five years. It is the general opinion of the careful observers that after the first of the year the market will greatly improve.

At a recent committee meeting between canners and wholesale grocers, some differences that had been causing considerable friction, were ironed out. One cause of friction was the contract requiring the producer to make a 100 per cent delivery or be penalized. This refers to sales made in advance of the pack for future delivery.

The committee reported that this contract had been abrogated and the previous contract permitting the delivery of from 65 to 75 per cent without penalty had been restored. The committee also reported that other matters of misunderstanding between the producer and the distributor had been cleared up and a closer co-operation promised, to the end that the product of the producer may reach the consumer at a reduced cost on the part of the middleman.

General Outlook in Building Favorable; Local Operations Show Increase Over Last Year

Building operations that showed such a reassuring recovery during the month of September are moving along with a fair amount of speed and present indications are that the activity will continue through the winter months.

There has been a better demand for building materials. The completion of many buildings of a residential character has had a noticeable effect on stocks, particularly of the lower grades. Inquiries are becoming more general and there is a greater tendency among dealers who have been buying from hand to mouth to replenish their stocks to something like normal conditions.

The reductions in wages and cost of materials made early in the summer has resulted in increased house building operations in Cleveland and vicinity. The record for the 10 months of the present year show that 1,894 frame dwellings at a cost of \$9,840,000 have been started in the city proper as compared

with 1,527 frame dwellings at a cost of \$8,487,000 for the same period last year.

In the four leading suburbs of East Cleveland, Lakewood, Cleveland Heights and West Park, the total value of permits to November 1 amount to \$14,043,000 as compared with \$11,442,000 for a like period in 1920. In Cleveland Heights alone the value of permits issued from July 1 to November 1 this year was \$2,659,000 in comparison with \$1,359,000 for the same four months last year.

The total number of permits for all classes of buildings in the city proper from January 1 to November 1, this year, was 11,513 at a cost of \$41,475,000 as compared with 10,181 for the same period last year at an estimated cost of \$57,139,000.

Elsewhere in this issue may be found a table showing building operations in the Fourth Federal Reserve District for the month of October.

Common Brick Industry Indicates Substantial Improvement; Paving Brick Plants Running Near Capacity

Reports coming in to the national office of the Common Brick Manufacturers Association of America, which is located in the Fourth Federal District, indicate a substantial improvement in the common brick industry throughout most parts of the country. The sections of the country where a readjustment of freight rates has been made are showing the most improvement.

According to the report of the National Paving Brick Manufacturers Association, also located in the Fourth District, paving brick manufacturers in this District, for the month ending November 20, are for the most part at capacity production. Shipments are heavy. Inventories are low. Manufacturers are loading cars directly from the kilns.

Clearings

	October 16 to November 15		Increase or Decrease	Per cent Inc. or Dec.
	1921	1920		
Akron.....	\$23,200,000	\$36,252,000	— \$13,052,000	—36.0
Canton.....	14,507,707	22,683,523	—8,175,816	—36.0
Cincinnati.....	234,302,103	302,251,956	—67,949,853	—22.5
Cleveland.....	348,941,309	611,444,183	—262,502,874	—42.9
Columbus.....	54,528,100	63,715,500	—9,187,400	—14.4
Dayton.....	16,977,671	18,136,923	—1,159,252	—6.4
Erie.....	8,276,600	11,676,131	—3,399,531	—29.1
Greensburg.....	4,575,590	7,468,098	—2,892,508	—38.7
Lexington.....	5,454,809	6,591,371	—1,136,562	—17.2
Pittsburgh.....	512,096,501	879,496,696	—367,400,195	—41.8
Springfield.....	5,048,545	5,914,190	—865,645	—14.6
Toledo.....	47,500,284	64,654,093	—17,153,809	—26.5
Wheeling.....	19,349,877	24,816,839	—5,466,962	—28.0
Youngstown.....	12,245,768	20,811,190	—8,565,422	—41.2
Total.....	\$1,307,004,864	\$2,075,912,693	—\$768,907,829	—37.0

Debits to Individual Accounts

	Week Ending	Week Ending	Increase or Decrease	Per cent Inc. or Dec.
	Nov. 16, 1921 (271 Banks)	Nov. 17, 1920 (249 Banks)		
Akron.....	\$12,534,000	\$18,528,000	—\$5,994,000	—32.4
Cincinnati.....	62,759,000	67,668,000	—4,909,000	—7.3
Cleveland.....	118,225,000	187,032,000	—68,807,000	—36.3
Columbus.....	26,215,000	29,865,000	—3,650,000	—12.2
Dayton.....	12,875,000	11,724,000	1,151,000	9.8
Erie.....	6,126,000	8,579,000	—2,453,000	—28.6
Greensburg.....	4,061,000	5,636,000	—1,575,000	—27.9
Lexington.....	3,521,000	4,893,000	—1,372,000	—28.0
Oil City.....	2,775,000	3,800,000	—1,025,000	—27.0
Pittsburgh.....	142,300,000	225,358,000	—83,058,000	—36.9
Springfield.....	3,273,000	3,264,000	9,000	2.7
Toledo.....	29,025,000	35,371,000	—6,346,000	—17.9
Wheeling.....	7,912,000	10,118,000	—2,206,000	—21.8
Youngstown.....	10,208,000	16,495,000	—6,287,000	—38.1
Total.....	\$441,809,000	\$628,331,000	—\$186,522,000	—29.7

Comparative Statement of Selected Member Banks in Fourth District

(In Thousands of Dollars)

	Nov. 9, 1921	Oct. 12, 1921	Inc.	Dec.
	85 Banks	85 Banks		
Loans and Discounts secured by U. S. Government obligations.....	49,605	51,499	.....	1,894
Loans and discounts secured by other stocks and bonds.....	332,837	335,803	.....	2,966
Loans and Discounts, all other.....	578,094	590,242	.....	12,148
U. S. Bonds.....	111,205	110,147	1,058	.....
U. S. Victory Notes.....	15,192	14,407	785	.....
U. S. Treasury Notes.....	2,939	6,034	.....	3,095
U. S. Certificates of Indebtedness.....	15,609	10,699	4,910	.....
Other Bonds, Stocks and Securities.....	275,139	277,805	.....	2,666
Total Loans, Discounts and Investments.....	1,380,620	1,396,636	.....	16,016
Reserve with Federal Reserve Bank.....	86,375	93,995	.....	7,620
Cash in Vault.....	30,066	29,320	746	.....
Net Demand Deposits.....	770,911	802,720	.....	31,809
Time Deposits.....	429,081	423,950	5,131	.....
Government Deposits.....	24,202	39,782	.....	15,579
Total Resources at date of this report.....	1,776,088	1,820,461	.....	44,373

Wholesale Trade
Percentage Increase (or Decrease) in Sales During 1920 and 1921
Over the Corresponding Month in Previous Year

	Dry Goods	Groceries	Hardware	Drugs
October, 1920.....	-27.5	-10.8	2.0	.....
November.....	-4.2	-3.8	16.7	45.8
December.....	-20.0	-18.8	-16.9	-17.0
January.....	-51.6	-36.7	-20.6	-19.0
February.....	-22.3	-27.1	-19.0	-31.2
March.....	-14.9	-33.1	-16.3	-29.2
April.....	-4.2	-37.7	-21.9	-23.4
May.....	-13.6	-35.1	-22.0	-23.4
June.....	-24.4	-49.8	-32.9	-22.2
July.....	-35.5	-43.6	-38.5	-15.0
August.....	-13.2	-20.4	-41.1	-21.2
September.....	-19.5	-32.6	-39.5	-18.4
October, 1921.....	7.3	-31.3	-33.0	-16.9

Department Store Sales

	Pgh.	Cleve.	Toledo	Other Cities	District
Percentage of net sales (selling price) during October, 1921, over net sales (selling price) during same month last year.....	-15.6	-16.6	-14.0	- 9.8	-15.2
Percentage of net sales (selling price) from July 1, 1921, to October 31, 1921, over net sales (selling price) during same period last year.....	-20.9	-23.5	-20.1	-13.3	-20.8
Percentage of stocks at close of October, 1921, over stocks at close of same month last year.....	-17.9	-27.5	-27.9	-14.9	-20.9
Percentage of stocks at close of October, 1921, over stocks at close of September, 1921.....	1.9	3.0	1.5	2.8	2.3
Percentage of average stocks at close of each month this season (commencing with July 1, 1921) to average monthly net sales during the same period.....	422.5	420.7	529.6	565.5	441.1
Percentage of all outstanding orders (cost) at close of October, 1921, to total purchases (cost) during the calendar year, 1920.....	5.6	6.5	4.0	7.3	6.0

Movement of Livestock at Principal Centers in Fourth Federal Reserve District For Month of October, 1921-1920

	Cattle		Hogs		Sheep		Calves		Cars Unloaded	
	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Cincinnati.....	34,615	27,329	119,508	109,065	19,303	19,160	11,665	9,638	2,359	2,006
Cleveland.....	10,870	11,343	82,386	67,120	44,980	27,273	8,386	9,312	1,647	1,402
Columbus.....	6	.....	4,968	.....	41	.....	232	.....	9	.....
Dayton.....	2,925	1,953	11,292	9,883	1,044	1,171	708	835	.....	.....
Fostoria.....	1,137	1,068	11,455	9,702	4,072	2,481	406	428	50	30
Pittsburgh.....	51,178	56,453	261,148	206,957	81,788	71,661	31,566	29,306	4,761	5,004
Springfield.....	348	600	7,271	5,000	905	800	155	150	.....	15
Toledo.....	1,328	1,783	12,112	12,207	2,125	2,657	710	916	187	207
Wheeling.....	467	445	1,397	859	416	648	909	957	14	7

Purchases for Local Slaughter

Cincinnati.....	19,677	17,055	70,643	49,389	12,547	9,010	7,037	5,456	.....	.....
Cleveland.....	9,719	10,470	49,586	47,336	26,432	19,434	7,981	8,987	.....	.....
Columbus.....	.....	.....	328	.....	.....	.....	28	.....	.....	.....
Fostoria.....	54	15	1,340	1,400	15	10	55	142	.....	.....
Pittsburgh.....	7,352	7,099	51,399	35,383	13,840	13,541	6,859	7,578	.....	.....
Toledo.....	.....	543	.....	4,626	.....	25	.....	730	.....	.....

Building Operations For Month of October

	Permits Issued				Valuations				Inc. or Dec. of Total Valuation	Per cent Inc. or Dec.
	New Construction 1921	New Construction 1920	Alterations 1921	Alterations 1920	New Construction 1921	New Construction 1920	Alterations 1921	Alterations 1920		
Akron.....	166	221	45	50	346,300	405,597	14,540	42,575	-87,332	-19.5
Canton.....	148	93	68	43	349,120	155,965	18,656	27,330	184,481	100.6
Cincinnati.....	347	76	164	482	912,875	884,810	81,655	325,740	-216,020	-17.8
Cleveland*.....	395	169	813	864	4,317,342	1,435,900	1,335,590	574,650	3,642,382	181.2
Columbus.....	321	196	102	98	596,135	527,275	91,220	85,635	74,445	12.1
Dayton.....	195	128	75	39	695,955	226,977	22,475	58,194	433,259	151.9
Erie.....	122	57	43	35	277,285	168,085	80,800	23,590	166,410	86.8
Lexington.....	16	10	63	69	60,000	46,775	16,495	10,000	19,720	34.7
Pittsburgh.....	394	309	130	82	3,904,927	1,417,444	230,051	365,875	2,351,659	131.9
Springfield.....	54	17	19	10	48,975	9,090	5,300	7,155	38,030	234.1
Toledo.....	176	143	129	153	270,520	359,835	102,929	167,149	-153,535	-29.1
Wheeling.....	74	36	28	18	154,085	45,492	6,110	3,745	110,958	225.4
Youngstown....	92	117	27	19	151,780	501,050	16,340	22,050	-354,980	-67.9
Total.....	2,500	1,572	1,706	1,962	12,085,299	6,184,295	2,022,161	1,713,688	6,209,477	78.6

*1921 figures include Lakewood and East Cleveland.

**Statement of Bituminous Coal Loaded Into Vessels (As Dumped by Docks)
In Net Tons for Season to End of October, 1921, as Compared with the Same
Period for the Seasons of 1920-1919**

Ports	Railroads	1921			1920			1919		
		Cargo	Fuel	Total	Cargo	Fuel	Total	Cargo	Fuel	Total
Toledo	Hocking Valley.....	4,079,150	107,350	4,186,500	3,344,832	73,820	3,418,652	3,939,454	111,006	4,050,460
	Toledo & Ohio Central.....	1,027,438	29,667	1,057,105	1,508,792	56,183	1,564,975	1,158,862	33,925	1,192,787
	Baltimore & Ohio.....	2,354,369	72,016	2,426,385	1,337,380	38,948	1,376,328	2,101,187	50,642	2,151,829
Sandusky	Pennsylvania.....	1,552,971	45,076	1,598,047	1,418,843	21,775	1,440,618	1,253,718	33,382	1,287,100
Huron	Wheeling & Lake Erie.....	1,491,595	42,905	1,534,500	1,641,441	84,893	1,726,334	1,400,981	50,170	1,451,151
Lorain	Baltimore & Ohio.....	2,393,742	97,034	2,490,776	2,735,633	171,290	2,906,923	2,632,866	143,647	2,776,513
	Cleveland	Pennsylvania.....	1,990,664	86,325	2,076,989	1,054,953	151,469	1,206,422	2,190,614	235,336	2,425,950
	Erie.....	359,981	12,782	372,763	364,018	17,486	381,534	305,977	9,904	315,881
Ashtabula	New York Central....	1,064,824	59,124	1,123,948	1,351,849	246,548	1,598,397	1,625,130	143,138	1,768,268
	Pennsylvania.....	2,213,665	72,753	2,286,418	1,662,618	83,858	1,746,476	1,934,022	98,285	2,032,307
Conneaut	Bessemer & Lake Erie.....	1,362,601	18,258	1,380,859	2,105,250	35,516	2,140,766	1,343,888	9,683	1,353,571
Erie	Pennsylvania—West....	770,091	27,030	797,121	228,731	21,730	250,461	690,144	41,835	731,979
	Pennsylvania—East....	209,778	31,073	243,851	335,957	68,672	404,629	163,301	13,181	176,482
Total.....		20,870,869	704,393	21,575,262	19,050,827	1,072,183	20,123,010	20,756,836	987,088	21,743,924

STATEMENT OF CONDITION
FEDERAL RESERVE BANK OF CLEVELAND
NOVEMBER 30, 1921

In Thousands of Dollars

RESOURCES		
Gold and gold certificates	\$ 12,306	
Gold settlement fund—F. R. Board.....	66,000	
Total gold held by bank.....	78,306	
Gold with Federal Reserve Agent.....	165,564	
Gold redemption fund.....	7,245	
	251,115	
Total gold reserves		251,115
Legal tender notes, silver, etc.	7,729	
	7,729	
TOTAL RESERVES		\$258,844
Bills discounted—Secured by U. S. Government obligations	38,953	
Bills discounted—All other	67,291	
Bills bought in open market	2,902	
	109,146	
Total bills on hand		109,146
U. S. bonds and notes	844	
U. S. Certificates of indebtedness—One year.....	9,040	
U. S. Certificates of indebtedness—All other.....	204	
	10,088	
TOTAL EARNING ASSETS		119,234
Bank premises		3,611
5% Redemption fund against F. R. Bank notes.....		539
Uncollected items		47,728
All other resources		1,008
		53,886
TOTAL RESOURCES		430,964
LIABILITIES		
Capital paid in		11,124
Surplus		22,264
Reserved for Government Franchise Tax.....		3,045
Deposits—Government	3,321	
Member Bank-Reserve account	128,295	
All other	725	
	132,341	
TOTAL DEPOSITS		132,341
F. R. notes in actual circulation		213,492
F. R. Bank notes in circulation—net liability.....		4,895
Deferred availability items		42,286
All other liabilities		1,516
		262,189
TOTAL LIABILITIES		430,964

Ratio of total reserves to deposit and F. R. note liabilities combined = 71.8%
 Compared with 72.5% last week.

Ratio of gold reserves to F. R. notes in circulation after setting aside 35 per cent against
 deposit liabilities = 99.5% compared with 96.0% last week.

PICKUPS ON BUSINESS TOPICS

THAT Great Britain does present a really good market for labor-saving devices, provided they are of the right kind, is pointed out by the American Chamber of Commerce in London in a recent report on this trade. Hitherto it seems American exporters generally have not proceeded along the proper lines to insure any real success. They have overlooked the fact that electricity, which is necessary for most of their devices, is not as cheap or as plentiful in England as in the United States and some other countries, and that the initial costs of installing many of the labor saving machines are too high. Although the smaller and less expensive devices, such as the electric iron, are much favored, electrically driven washing machines, carpet sweepers, electric fires and ranges are beyond the reach of the average householder. Until the electricity supply of the country is further developed, non-electrical devices will be most in demand.

German machinery is steadily regaining its markets in Japan, according to press comments. It is said that immediately after the war Japanese machinery orders were placed with Germany only for special goods peculiar to German manufacturers. Subsequent trial orders, however, have proved that the machinery is equal to that produced prior to the war and is offered at prices lower than British and American goods. Principally, orders for scientific and chemical machinery used in laboratories, it is said, are reaching Germany from Japan.

Berlin's automobile show, the first since 1911, marks the complete re-entry of the German automobile industry into world competition. At the same time the German makers opened their speedway, the only one of its kind on the Continent, which undoubtedly served as an immense attraction to the show. There were many interested foreign buyers because of the low price made possible by the depreciated value of the mark.

A preliminary announcement of an automobile exposition in Amsterdam, the Netherlands, in February and March, 1922, is reported. The exhibition is expected to stimulate considerably the interest in motor vehicles, and the period shortly after the exhibition may thus be well chosen for the introduction and sales promotion of American products in this market.

Though Americans are looked upon as a nation of spenders rather than of savers, yet a recent circular issued by the Treasury Department places the per capita savings of the United States at \$250. The savings in Federal securities reaches in liberty bonds and war savings stamps \$21,000,000,000 and in some 30,000 savings banks, \$6,000,000,000.

There is enough timber in the Philippine Islands to take care of the industry of the Far East, according to Major General Leonard Wood. Few people appreciate the enormous resources in the islands in the way of lumber, much of it of the most valuable kind. Nearly 230,000,000 feet of it was cut in 1920, of which 15,000,000 was exported.

Japan is once more importing certain lines of American merchandise, notably steel, iron and chemicals. The Island Empire is commencing to exploit hydraulic possibilities along scientific lines and, while power, of course, will be furnished by local companies, the rails, rolling stock, and electrical equipment will have to be imported.

A sugar estate in the eastern part of Cuba is offering 100,000 bags of 1921-1922 crop sugar for shipment next year, beginning February, price to be based on average cost and freight quotation for Cuban raw sugars, prevailing several days before and several days after date of arrival.

A NEW telephone device, called the mute-a-phone, is easily attached to any telephone and is designed to absorb all sound waves not essential to transmission and to provide in sufficient quantity and of clear quality, enough sound for transmitting any message perfectly, even though the speaker cannot be heard by persons sitting next to him. The producers of this appliance guarantee that the user will be able to converse unheard by persons in close proximity to him; that the party at the other end of the line will hear distinctly and that all outside noises will be kept off the wire.

An attempt is being made to interest the many British wearers of sport shoes in a recently introduced leather or canvas shoe having a sole cut from unvulcanized plantation crêpe rubber. It is thought much better wear is gotten from crêpe rubber soles than from those which have been put through the vulcanizing process. Shoes soled with raw crêpe rubber present a most attractive appearance, as the rubber is of a bright golden color with corrugated surfaces. Aside from giving additional wear, the soles are exceptionally resilient, since they contain many times as much rubber as the ordinary vulcanized rubber sole.

The United States uses about 80 per cent of the rubber that is grown throughout the world, and controls only a small proportion of the supply. The answer to the rubber problem is expansion abroad. If the industry were developed in the Philippines, says one authority, we would obtain from there a steady supply of plantation rubber and thus be free from dependence on foreign nations in time of emergency and from the price-fixing tactics of foreign trusts in time of peace.

The organization of a cotton trading corporation at the free port of Danzig, designed primarily for handling American cotton consigned for sale to European spinners, is indicated in an announcement received by the Department of Agriculture. A fireproof building of 1,196 square yards in area has been leased in the free port and the men behind the project are very anxious to make connections with American exporters of cotton.

There is a big demand for automobiles in Australia. It is estimated that the country could absorb 450,000 cars, but there is only one-sixth of that number in use now. Automobiles costing around \$1,750 are chiefly in demand, and it is on the low prices that America has gained such a firm hold of the market. Australia has an important accessory industry of her own, as well as a good body-building trade.

The total number of tons of cargo which passed through the Panama canal during the fiscal year 1921 exceeded the tonnage of the fiscal year 1920 by 2,225,000 tons, and the increase in tolls amounted to \$2,763,000. Since the opening of the canal, the average toll has been approximately one dollar for each ton of cargo transported.

Automobile license fees in New York State in 1922 will be determined by the horsepower of the motor instead of by list price, according to proposals at a conference between New York Motor Federation and Lowman joint legislative committee on automobile legislation. A fee of fifty cents a horsepower is suggested.

The Soviet government in Russia has begun the issue of bills of the nominal value of one million, five million, and ten million rubles, the idea being that it would be impossible to carry around several millions in small bills. These are said to be the largest denominations ever issued by any government.

The Spanish Government is planning to purchase large quantities of ready-cut houses of various grades and sizes, specially adapted for workmen's homes, according to a cablegram from Commercial Attache Cunningham, at Madrid.