

UNITED STATES  
DEPARTMENT OF COMMERCE  
WASHINGTON

SURVEY OF  
CURRENT BUSINESS

JULY, 1928

No. 83



COMPILED BY  
**BUREAU OF THE CENSUS**  
IN COOPERATION WITH  
BUREAU OF FOREIGN AND DOMESTIC COMMERCE  
AND  
BUREAU OF STANDARDS

**IMPORTANT NOTICE**

*In addition to figures given from Government sources, there are also incorporated for completeness of service figures from other sources generally accepted by the trader, the authority and responsibility for which are noted in the "Sources of Data" on pages 139-142 of the February semiannual issue.*

Subscription price of the SURVEY OF CURRENT BUSINESS is \$1.50 a year; single copies (monthly), 10 cents; semiannual issues, 25 cents. Foreign subscriptions, \$2.25; single copies (monthly issues), including postage, 14 cents; semiannual issues, 36 cents. Subscription price of COMMERCE REPORTS is \$4 a year with the SURVEY, \$5.50 a year. Make remittances only to Superintendent of Documents, Washington, D. C., by postal money order, express order, or New York draft. Currency at sender's risk. Postage stamps or foreign money not accepted.



## INTRODUCTION

THE SURVEY OF CURRENT BUSINESS is designed to present each month a picture of the business situation by setting forth the principal facts regarding the various lines of trade and industry. At semiannual intervals detailed tables are published giving, for each item, monthly figures for the past two years and yearly comparisons, where available, back to 1913; also blank lines sufficient for six months have been left at the bottom of each table, enabling those who care to do so to enter new figures as soon as they appear (see issue for February, 1928, No. 78). In the intervening months the more important comparisons only are given in the table entitled "Trend of business movements."

### WEEKLY SUPPLEMENT

Realizing that current statistics are highly perishable and that to be of use they must reach the business man at the earliest possible moment, the department has arranged to distribute supplements every week to subscribers in the United States. The supplements are usually mailed on Saturdays and give such information as has been received during the week ending on the preceding Tuesday. The monthly information contained in these bulletins is republished in the Survey, and the supplements also contain charts and tables of weekly data.

### BASIC DATA

The figures reported in the accompanying tables are very largely those already in existence. The chief function of the department is to bring together these data which, if available at all, are scattered in hundreds of different publications. A portion of these data are collected by Government departments, other figures are compiled by technical journals, and still others are reported by trade associations.

### RELATIVE NUMBERS

To facilitate comparison between different important items and to chart series expressed in different units, relative numbers (often called "index numbers," a term referring more particularly to a special kind of number described below) have been calculated.

In computing these relative numbers the last pre-war year, 1913, or the first postwar year, 1919, have usually been used as a base equal to 100 wherever possible. More lately the average for 1923-1925 has been frequently taken as 100.

The relative numbers are computed by allowing the monthly average for the base year or period to equal 100. If the movement for a current month is greater than the base, the relative number will be greater than 100, and vice versa. The difference between 100 and the relative number will give at once the per cent increase or decrease compared with the base period. Thus a relative number of 115 means an increase of 15 per cent over the base period, while a relative number of 80 means a decrease of 20 per cent from the base.

Relative numbers may also be used to calculate the approximate percentage increase or decrease in a move-

ment from one period to the next. Thus, if a relative number at one month is 120 and for a later month it is 144 there has been an increase of 20 per cent.

### INDEX NUMBERS

When two or more series of relative numbers are combined by a system of weightings, the resulting series is denominated an index number. The index number, by combining many relative numbers, is designed to show the trend of an entire group of industries or for the country as a whole, instead of for the single commodity or industry which the relative number covers. Comparisons with the base year or with other periods are made in the same manner as in the case of relative numbers.

### RATIO CHARTS

In many instances the charts used in the Survey of Current Business are of the type termed "Ratio Charts" (logarithmic scale), notably the Business Indicator charts on page 2. These charts show the percentage increase and allow direct comparisons between the slope of one curve and that of any other curve regardless of its location on the diagram; that is, a 10 per cent increase in an item is given the same vertical movement whether its curve is near the bottom or near the top of the chart. The difference between this and the ordinary arithmetic form of chart can be made clear by an example. If a certain item, having a relative number of 400 in one month, increases 10 per cent in the following month, its relative number will be 440, and on an ordinary chart would be plotted 40 equidistant scale points higher than the preceding month. Another movement with a relative number of, say, 50 also increases 10 per cent, making its relative number 55. On the ordinary (arithmetic) scale this item would rise only 5 equidistant points, whereas the previous item rose 40 points, yet each showed the same percentage increase. The ratio charts avoid difficulty and give to each of the two movements exactly the same vertical rise, and hence the slopes of the two lines are directly comparable. The ratio charts compare percentage changes, while the arithmetic charts compare absolute changes.

### RECORD BOOK

As an aid to readers in comparing present data with monthly statistics in previous years, the department is compiling a Record Book of Business Statistics, in which data now carried in the Survey of Current Business are shown by months as far back as 1909, if available. Full descriptions of the figures and reports of how the data are used in actual practice by business firms are contained in the Record Book. The sections covering textiles and metals have already been issued and may be obtained for 10 cents per copy from the Superintendent of Documents, Government Printing Office, Washington, D. C. (Do not send stamps.) Notices of other sections will be given in the Survey as they are issued.

*This issue presents practically complete data for the month of May and contains text covering the early weeks of June (page 1), for which the basic figures in table and chart form are presented regularly in the weekly supplements. As most data covering a particular month's business are not available until from 15 to 30 days after the close of the month, a complete picture of that month's operations can not be presented at an early date, but the weekly supplements give every week the latest data available.*



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## CONTENTS

SUMMARIES		INDEX BY SUBJECTS	
	Page		Text page      Table page
Preliminary summary for June.....	1	Textiles.....	9      25
Business conditions in May.....	4	Metals and metal products.....	10      27
Business indicators (table and charts).....	2, 3	Fuels.....	11      31
Wholesale prices (table and charts).....	6, 7	Automobiles and rubber.....	11      30, 32
Indexes of business (production, prices, sales, etc.).....	15	Hides and leather.....	11      32
Automobiles, building, mining, manufacturing, electric power, and transportation (charts).....	8	Paper and printing.....	11      33
NEW DETAILED TABLES		Building construction and housing.....	12      34
Revised indexes:		Lumber products.....	12      35
Output of forest products.....	18	Stone, clay, and glass products.....	12      36
Marketings of crops and animals.....	18, 19, 20	Chemicals and oils.....	12      37
Cold storage holdings of fish.....	19	Foodstuffs and tobacco.....	13      39
Cold storage holdings of meats.....	19	Transportation and public utilities.....	14      42
Index of industrial production.....	20	Employment and wages.....	5      44
Factory employment by States.....	22	Distribution movement (trade, advertising, etc.).....	14      45
		Banking and finance.....	14      45
		Foreign exchange and trade, gold and silver.....	14      48

## PRELIMINARY SUMMARY FOR JUNE

The volume of trade during the early weeks of June, as reflected by check payments, was greater than in the corresponding period of last year. The value of new building contracts awarded was also running higher than a year ago. Operations in steel plants, although slightly below the May level, were more active than in June, 1927. Factory employment in Detroit, largely indicative of conditions in the automobile industry, registered little change from May, but was considerably greater than a year ago. Loans and discounts of Federal reserve member banks receded from the high point reached during the preceding month, while interest rates on both time and call funds continued to rise, averaging higher also than a year ago.

The general level of wholesale prices showed but little change from May but was higher than a year ago. Prices for iron and steel continued to weaken, being lower also than in June a year earlier, while

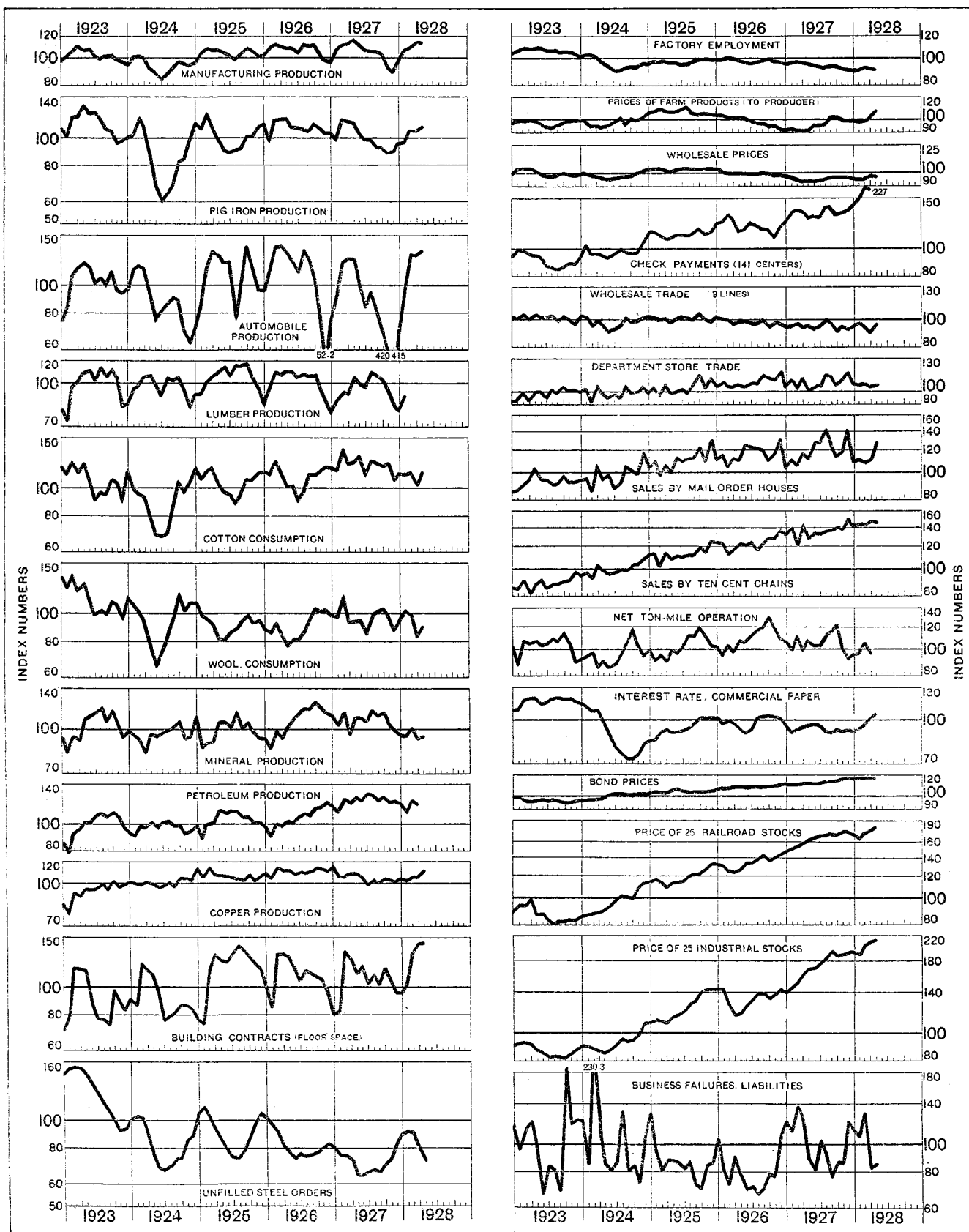
prices for copper and cotton averaged higher than in either period.

Stock prices receded substantially from the high record registered in May, while bond prices, reflecting higher interest rates, exhibited a further tendency to decline. Brokers' loans were substantially reduced during the month, following the decline in stock and bond prices. The Federal reserve ratio continued to decline, being lower also than in June of last year. Business failures were more numerous than in either the previous month or June a year ago.

The production of lumber was running smaller than in May, showing a decline also from last year, but production of bituminous coal, also declining from May, was on about the same level as in June, 1927. Car loadings of freight continued to record declines from the preceding year. Petroleum production was running lower than in either the previous month or June, 1927.

# MONTHLY BUSINESS INDICATORS, 1923-1928

Ratio charts—see explanations on inside front cover. The curves on check payments, wholesale trade, sales of mail-order houses and 10-cent chains, and department stores have been adjusted for normal seasonal variations, and that on manufacturing production for the varying number of working days in the month]



## MONTHLY BUSINESS INDICATORS

The principal business indicators are shown below, all calculated on a comparable basis, the average for the years 1923 to 1925 inclusive. Thus the table gives a bird's-eye view of the business situation in a concise form, so that trends of the principal indicators may be seen at a glance.

Certain indicators, in which there is a marked seasonal movement, are shown with the average seasonal variations eliminated, as noted below. In this manner a more understanding month-to-month comparison may be made.

ITEM	MONTHLY AVERAGE					1927												1928				
	1923	1924	1925	1926	1927	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May		
1923-1925 monthly average=100																						
<b>Industrial production:</b>																						
• Total manufacturing.....	101.0	94.0	105.0	108.0	106.0	110.0	109.0	111.0	108.0	106.0	107.0	105.0	102.0	98.0	99.0	107.0	111.0	110.0	110.0	110.0	110.0	110.0
Total minerals.....	105.0	96.0	99.0	107.0	107.0	118.0	104.0	108.0	104.0	100.0	108.0	105.0	105.0	101.0	103.0	103.0	103.0	105.0	103.0	104.0	104.0	104.0
Pig iron.....	111.7	86.7	101.5	109.0	101.0	116.6	114.5	113.5	103.4	98.8	98.6	92.9	93.2	88.6	90.2	96.1	97.1	107.1	106.6	109.9	109.9	109.9
Steel ingots.....	104.8	88.7	106.4	113.1	104.6	131.2	119.4	117.1	101.1	92.7	101.2	94.6	95.9	90.5	91.9	115.4	117.0	130.4	124.5	121.6	121.6	121.6
Automobiles.....	101.5	90.9	107.7	108.5	85.7	119.5	122.6	122.4	97.5	81.3	93.5	78.9	66.5	40.7	40.4	70.2	98.1	125.2	124.2	129.0	129.0	129.0
Cement.....	92.1	99.8	108.1	110.0	115.3	92.1	113.0	134.4	138.6	140.1	147.4	140.8	138.2	116.3	96.5	78.6	70.8	82.3	108.4	139.0	139.0	139.0
Lumber (5 species).....	98.6	96.2	105.2	101.5	94.9	91.6	91.0	101.9	99.9	96.5	107.5	105.8	101.5	94.4	82.9	76.1	87.2	97.1	98.7	98.7	98.7	98.7
Cotton (consumption).....	105.9	89.7	104.4	108.5	120.3	135.3	120.6	123.3	129.1	110.9	123.4	122.2	119.4	121.9	105.9	113.5	111.8	113.3	102.3	112.6	112.6	112.6
Wool (consumption).....	112.8	94.6	92.6	89.7	97.0	114.5	92.8	93.6	95.0	84.1	98.1	101.6	103.7	97.8	88.0	95.2	102.0	98.7	82.0	92.7	92.7	92.7
<b>Raw material output:</b>																						
Animal products.....	100.0	104.0	96.0	96.0	97.0	94.0	95.0	115.0	123.0	109.0	105.0	87.0	95.0	92.0	88.0	96.0	94.0	97.0	95.0	107.0	107.0	107.0
Crops.....	92.0	104.0	104.0	109.0	113.0	89.0	62.0	62.0	60.0	65.0	115.0	183.0	219.0	166.0	120.0	98.0	81.0	77.0	81.0	70.0	70.0	70.0
Forest products.....	99.0	97.0	104.0	98.0	93.0	94.0	93.0	99.0	96.0	89.0	99.0	98.0	96.0	93.0	86.0	81.0	87.0	97.0	96.0	100.0	100.0	100.0
Crude petroleum.....	99.4	96.9	103.7	104.6	121.4	122.7	118.2	124.2	121.4	127.6	127.1	122.3	125.6	120.2	120.7	117.8	110.9	122.2	117.5	122.5	122.5	122.5
Bituminous coal.....	108.0	92.5	99.5	109.7	99.4	138.1	79.6	81.2	84.1	77.2	95.7	96.2	101.0	93.3	94.8	101.5	94.9	100.9	73.9	84.1	84.1	84.1
Copper.....	93.4	100.2	106.4	110.2	104.9	105.1	107.8	108.6	105.4	99.4	102.0	100.0	106.1	103.2	101.9	103.8	102.2	106.6	105.7	111.8	111.8	111.8
<b>Power and construction:</b>																						
Electric power.....	92.5	98.1	109.5	122.6	133.3	136.4	129.3	131.6	129.5	129.2	133.5	131.7	138.2	137.1	143.8	144.9	137.0	144.5	136.7	142.0	142.0	142.0
Building contracts (37 States).....	89.7	92.7	117.6	111.0	106.8	132.4	126.0	111.6	118.6	102.4	110.1	101.9	115.0	105.2	95.2	96.0	103.7	132.7	142.4	143.5	143.5	143.5
<b>Unfilled orders:</b>																						
General index.....	121.7	87.0	91.5	94.6	74.0	81.2	77.2	74.3	72.2	72.1	71.5	69.9	67.0	67.1	71.5	81.2	81.6	81.4	76.8	73.5	73.5	73.5
U. S. Steel Corporation.....	125.8	83.6	90.6	82.1	71.1	74.4	72.4	63.9	63.9	65.8	66.9	65.9	70.0	72.4	83.2	89.5	92.1	90.8	81.1	71.6	71.6	71.6
<b>Stocks:</b>																						
• General index.....	88.9	102.2	108.9	129.5	139.6	136.1	129.1	134.6	132.8	141.4	152.7	145.8	140.1	140.9	139.3	137.0	144.4	137.1	133.4	139.4	139.4	139.4
• Manfd. commodities (28).....	86.6	104.1	108.6	109.4	120.0	115.1	115.5	118.0	116.9	121.3	127.9	125.2	120.9	116.9	126.8	125.2	122.3	121.6	121.0	121.0	121.0	121.0
Cotton.....	102.5	91.4	106.2	145.5	153.2	172.1	148.2	124.0	100.3	85.8	87.6	135.2	179.8	200.0	195.8	178.8	159.1	135.7	117.8	96.7	96.7	96.7
Copper (refined).....	106.4	113.9	73.1	64.8	85.4	91.1	87.7	95.5	85.1	92.2	82.7	76.4	74.1	80.3	84.2	85.2	76.8	77.1	64.4	58.6	58.6	58.6
<b>Employment:</b>																						
Factories.....	106.6	96.3	97.2	98.0	94.3	97.4	96.6	95.6	95.0	93.1	93.2	93.8	93.4	91.6	90.7	89.8	91.2	91.8	91.4	91.2	91.2	91.2
<b>Prices:</b>																						
Farm products, to producers.....	97.8	97.1	106.5	98.6	94.9	91.3	90.6	91.3	94.2	94.2	95.7	101.4	100.7	99.3	99.3	99.3	97.8	99.3	101.4	107.2	107.2	107.2
Wholesale, all commodities.....	99.7	97.2	102.6	99.1	95.4	93.7	92.9	92.9	93.0	93.3	94.4	95.6	96.1	95.8	95.9	95.4	95.5	95.1	96.5	97.7	97.7	97.7
Retail food.....	97.6	97.6	104.9	107.6	103.6	102.9	102.9	103.6	106.2	102.9	101.6	102.9	104.3	104.9	104.2	103.6	101.3	101.2	101.6	102.8	102.8	102.8
Cost of living (including food).....	98.1	99.9	102.3	102.3	99.9	99.9	99.9	99.9	100.5	98.7	98.7	99.3	99.9	99.9	99.9	99.2	98.4	98.1	97.9	98.4	98.4	98.4
<b>Distribution (values):</b>																						
• Bank debits, 141 cities.....	91.2	96.7	111.9	119.6	132.5	136.6	134.3	127.7	129.7	127.8	137.6	141.0	130.7	132.1	136.9	142.1	149.6	164.8	161.8	168.8	168.8	168.8
• Wholesale trade.....	101.0	98.0	101.0	98.0	95.0	96.0	94.0	95.0	93.0	95.0	100.0	96.0	91.0	95.0	93.0	95.1	97.0	92.8	89.2	96.2	96.2	96.2
• Department stores, sales.....	98.0	99.0	103.0	106.0	106.0	105.0	105.0	103.0	104.0	103.0	111.0	109.0	105.0	107.0	111.0	105.0	105.0	105.0	103.0	104.0	104.0	104.0
• Mail-order houses, sales.....	92.0	98.0	110.0	115.0	120.0	117.0	113.0	118.0	121.0	127.0	133.0	122.0	117.0	119.0	128.0	113.0	116.0	113.0	117.0	132.0	132.0	132.0
• 10-cent chains, sales.....	88.0	99.0	113.0	125.0	138.0	128.0	137.0	132.0	135.0	139.0	140.0	141.0	144.0	140.0	147.0	140.0	142.0	142.0	147.0	144.0	144.0	144.0
Imports.....	97.8	93.1	109.0	114.3	107.9	117.1	116.3	107.3	109.9	98.9	114.2	105.9	110.1	106.6	102.5	104.6	108.7	117.8	107.2	109.9	109.9	109.9
Exports.....	91.5	100.8	107.8	105.5	106.8	107.7	109.4	103.5	94.0	90.1	98.7	112.0	128.7	121.4	107.4	108.2	97.8	110.8	95.9	111.4	111.4	111.4
<b>Transportation:</b>																						
• Car loadings.....	99.8	97.6	102.8	106.8	104.0	135.3	86.1	108.8	102.6	102.7	103.3	103.3	101.3	95.2	96.8	98.0	101.8	129.0	83.0	106.4	106.4	106.4
Freight, net ton-miles.....	102.2	95.9	101.9	109.1	101.5	112.1	99.4	107.5	103.1	102.9	112.5	115.1	122.1	99.8	92.7	97.2	95.7	105.8	96.1	-----	-----	-----
<b>Finance:</b>																						
Member bank loans and discounts.....	94.1	98.5	107.4	112.9	117.3	114.6	114.6	116.7	117.5	115.7	117.3	119.3	120.0	121.4	123.2	121.9	120.9	123.3	127.3	126.9	126.9	126.9
Interest rate (commercial paper).....	115.9	90.8	93.4	98.5	98.1	92.9	95.2	95.9	95.9	94.5	90.6	89.9	92.2	91.0	92.2	90.1	93.6	97.3	100.1	105.7	105.7	105.7
Federal reserve ratio.....	99.0	104.1	96.9	96.0	99.1	102.1	103.0	99.5	100.5	103.2	101.4	98.8	98.4	92.2	86.5	95.5	96.0	95.6	90.9	89.2	89.2	89.2
Price, corporation bonds.....	96.4	99.9	103.6	108.0	112.5	111.2	111.9	112.1	111.2	111.4	112.9	113.4	114.4	114.9	115.6	115.9	115.8	115.7	116.0	115.0	115.0	115.0
Price, railroad stocks.....	86.0	96.1	117.9	133.4	162.7	152.4	158.3	162.4	165.3	167.3	167.9	171.5	168.5	171.6	171.1	169.1	164.7	170.1	176.0	178.9	178.9	178.9
Price, industrial stocks.....	86.1	91.9	122.0	132.4	171.4	150.8	159.8	167.6	168.8	177.3	153.7	193.9	186.4	196.0	193.7	193.5	191.2	204.8	210.4	213.2	213.2	213.2
Failures (liabilities).....	106.0	106.8	87.2	80.4	102.3	136.5	125.4	89.1	81.3	101.8	92.4	77.3	85.5	85.3	120.9	112.3	106.3	129.3	82.5	85.2	85.2	85.2

\* Seasonal adjustments.

## BUSINESS CONDITIONS IN MAY

### PRODUCTION

Manufacturing output, after adjustments for seasonal conditions, showed no change from the preceding month but declined from May, 1927. Mineral output, however, although lower than a year ago, was somewhat higher than in April. Marketings of animal products in May, although higher than in the preceding month, were lower than a year ago. Crop marketings showed a decline from the preceding month and a gain over last year. The output of forest products registered an increase over the previous month and over last year, as well.

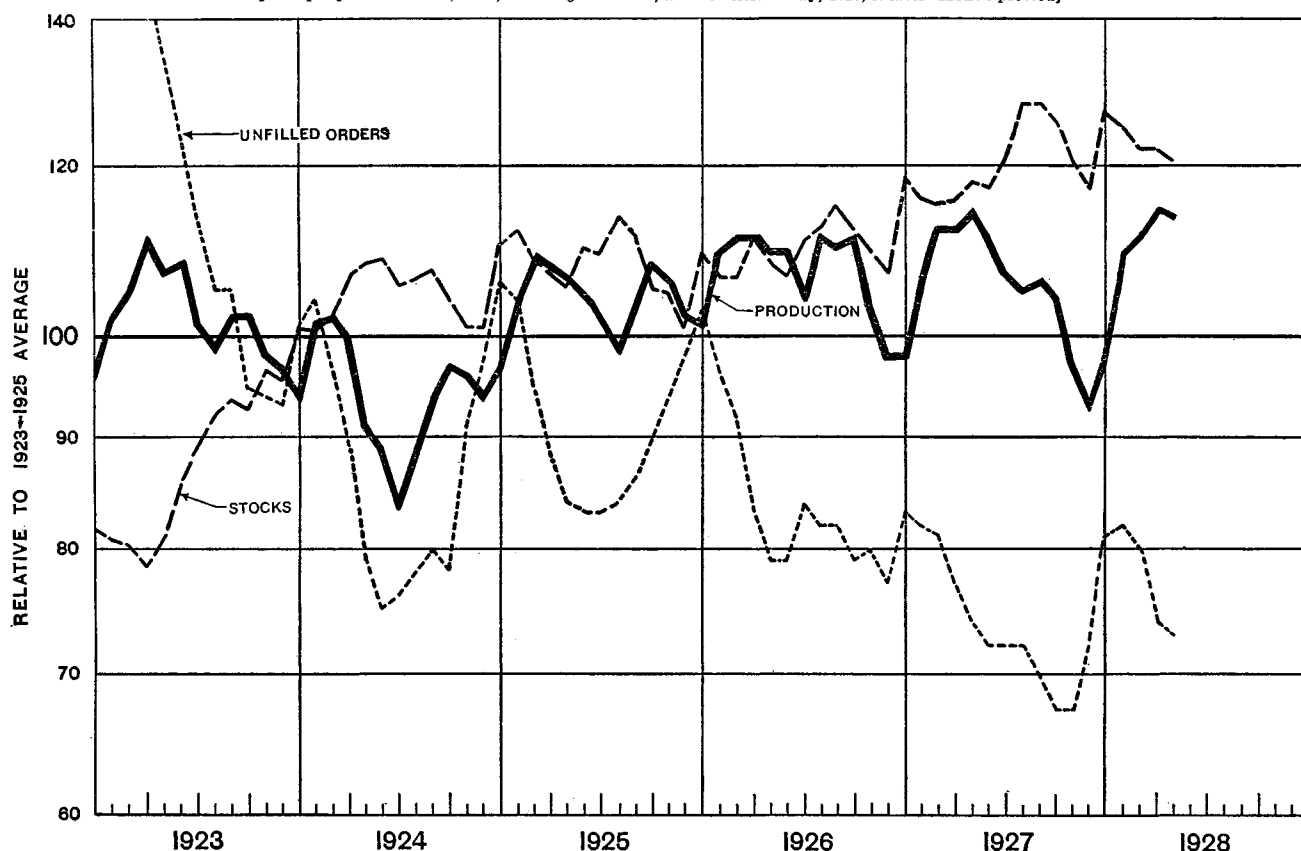
### SALES

The index of unfilled orders for manufactured commodities declined from both the preceding month and May, 1927. As compared with April, unfilled orders for textiles and lumber showed gains, insufficient, however, to offset the decline in iron and steel. Contrasted with a year ago, the gain in iron and steel orders was insufficient to offset declines in textiles and lumber.

Wholesale trade was larger in May than in April, making an increase also over a year ago. As compared with a year ago, all lines of wholesale trade showed increases except dry goods and women's

### PRODUCTION, STOCKS, AND UNFILLED ORDERS FOR MANUFACTURED COMMODITIES

1923-1925 monthly average—100. Adjustment has been made for the seasonal movement of stocks and relative number of working days for production. Unfilled orders are principally those of iron, steel, building materials, and textiles. May, 1928, is latest month plotted]



### COMMODITY STOCKS

Stocks of commodities, after adjustments for seasonal variations, were larger at the end of May than at the end of either the preceding month or May of last year. The increase in the general index over the preceding month was solely due to larger holdings of raw foodstuffs, stocks of other raw materials and manufactured commodities showing declines from the preceding month. The increase over last year was due to larger stocks of both raw foodstuffs and manufactured commodities other than foodstuffs, declines being registered in stocks of manufactured foodstuffs.

clothing, which declined from 1927. Retail trade in May, as measured by department store sales, after adjustments for seasonal conditions, showed a gain over a year ago. Merchandise stocks held by department stores at the end of May, however, were also smaller than a year ago. Sales by mail-order houses and 10-cent chain store systems showed gains over May, 1927, with a gain over April also by mail-order houses. Sales by grocery and drug chains showed larger business than a year ago, while cigar chains reported a decline. As compared with the preceding month, grocery and drug chains showed gains in May but shoe and candy chains showed smaller business.



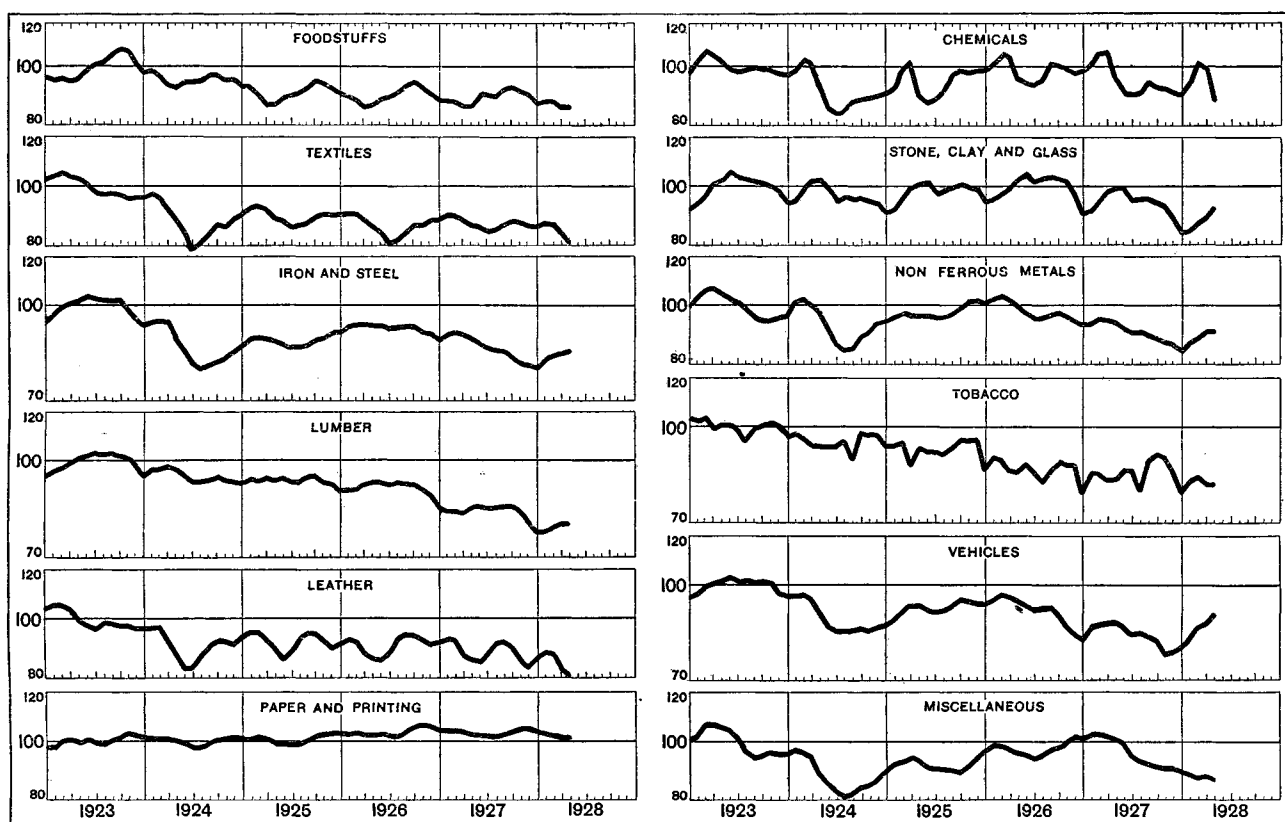
### PRICES

The general index of wholesale prices registered an advance over both the preceding month and May of last year. Compared with April, all groups showed higher average prices except hides and leather and chemicals, which declined, and textiles and house furnishings, which showed no change. Contrasted with a year ago, all groups showed higher prices, except fuel and lighting and building materials, which declined, and metals, chemicals, and house furnishings, which showed no change. Classified by state of manufacture, all groups showed higher average prices than in either the previous month or May a year ago.

May, 1927. As compared with April, the declines in the number of employees in the textile, leather, and chemical industries were more than sufficient to offset increased employment in iron and steel, stone, clay and glass, tobacco, and vehicle factories. Contrasted with last year, employment was lower in all groups except vehicles. The greatest decline in factory employment from May, 1927, occurred in chemicals, stone, clay and glass, textiles, leather, and iron and steel factories. Factory pay-roll payments in May, although unchanged from the previous month, were also lower than a year ago. Smaller pay-roll payments than in April were registered in textile, leather, and

### FACTORY EMPLOYMENT, BY GROUPS

[1923 monthly average=100. May, 1928, is latest month plotted]



The index of prices received by farmers for their produce also showed gains over both periods, all groups showing gains over both the previous month and May a year ago, except dairy and poultry products, which showed no change from the previous month. Retail food costs were higher than in April but lower than a year ago, while the general index of cost of living showed similar comparisons. As compared with a year ago, all items entering the cost of living index were lower except clothing and light, which showed no change, while as compared with the previous month, the general increase in the cost of living was solely due to higher food costs.

### EMPLOYMENT

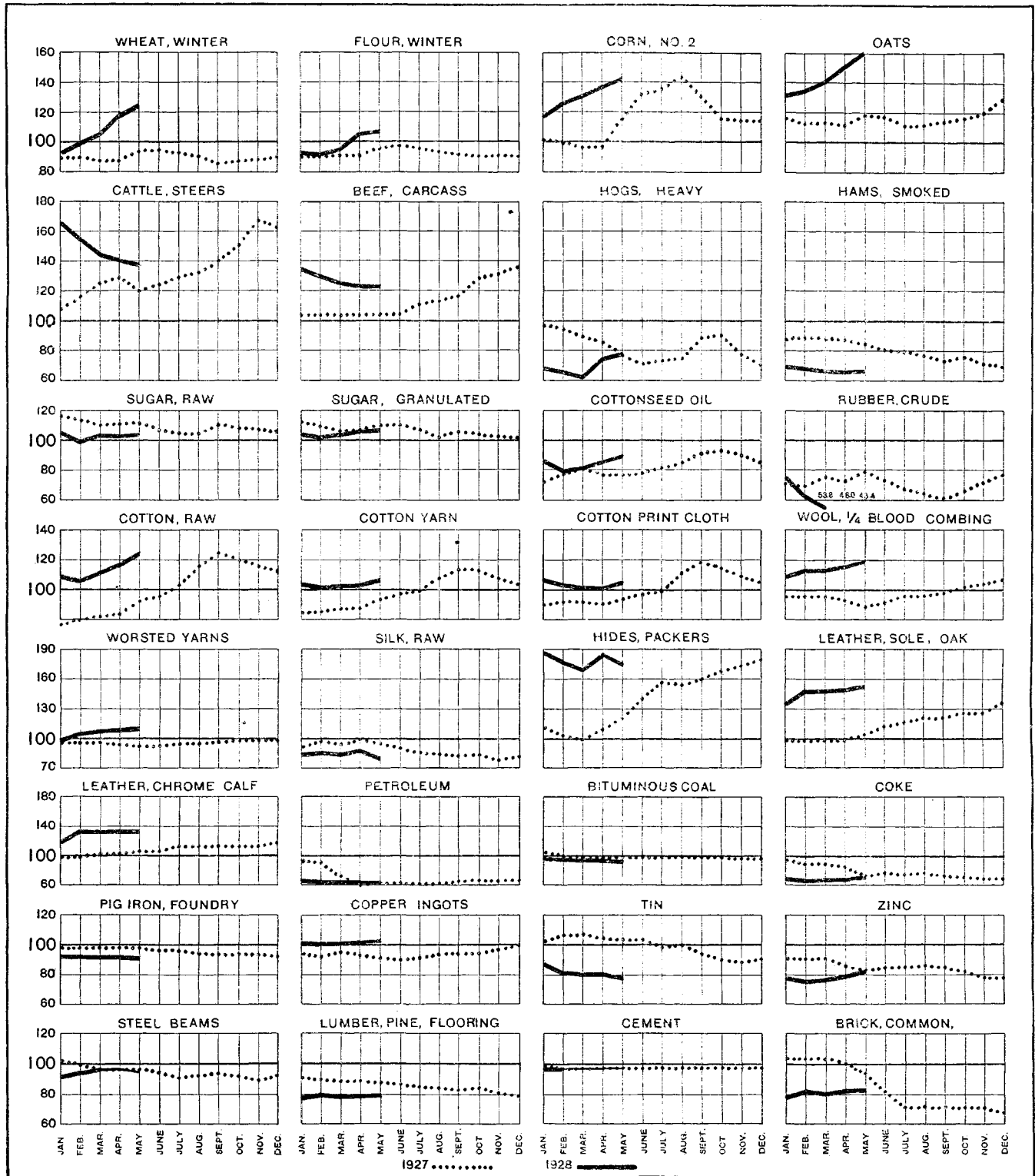
The general index of factory employment in May was lower than in April, recording a decline also from

chemical factories, sufficient to offset increases in other groups. Contrasted with a year ago, all groups showed smaller pay-roll payments except paper and printing and vehicles, which showed no change.

Reports from the American Federation of Labor show 13 per cent of union members in representative cities out of employment in May, as compared with 16 per cent for April. Wages of common labor showed practically no change from the preceding month but were higher than a year ago. The number of applicants per job at employment agencies declined from the preceding month but were larger than in May of last year. Employment in anthracite mines was greater than in the preceding month but smaller than a year ago.

# WHOLESALE PRICES FOR SPECIFIED COMMODITIES

[Relative numbers, 1926 monthly average taken as 100. May, 1923, is latest month plotted. Data from which these charts are drawn are given on the opposite page]





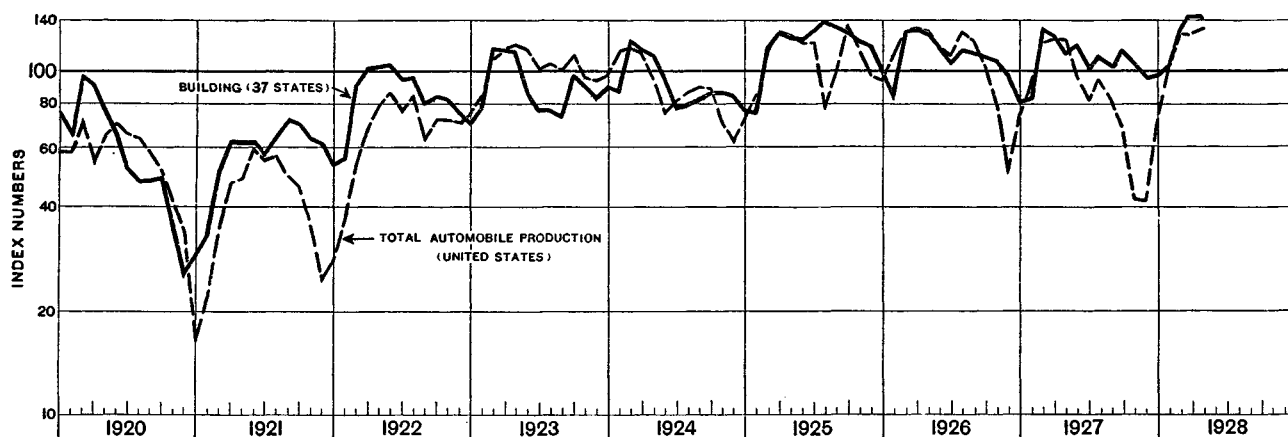
# WHOLESALE PRICES FOR SPECIFIED COMMODITIES

NOTE.—Prices to producer on farm products and market price of wool are from *U. S. Department of Agriculture, Bureau of Agricultural Economics*, nonferrous metals from the *Engineering and Mining Journal-Press*, except tin, which is from the *American Metal Market*. All other prices are from *U. S. Department of Labor, Bureau of Labor Statistics*. So far as possible all quotations represent prices to producer or at mill.

COMMODITIES	Unit	ACTUAL PRICE (dollars)			RELATIVE PRICE				
					1926 average = 100				
		April, 1928	May, 1928	May, 1927	March, 1928	April, 1928	May, 1928	April, 1927	May, 1927
<b>FARM PRODUCTS—AVERAGE PRICE TO PRODUCER</b>									
Wheat.....	Bushel.....	1.292	1.443	1.232	90	96	107	87	91
Corn.....	Bushel.....	.919	1.025	.730	123	132	147	94	104
Potatoes.....	Bushel.....	1.168	1.033	1.460	61	63	56	68	79
Cotton.....	Pound.....	.187	.201	.139	118	124	133	82	92
Cottonseed.....	Ton.....	39.40	43.00	26.05	139	145	158	95	96
Cattle, beef.....	Pound.....	.0892	.0909	.0717	136	138	141	110	111
Hogs.....	Pound.....	.0775	.0882	.0941	63	66	75	88	80
Lambs.....	Pound.....	.1273	.1303	.1192	106	110	113	104	103
<b>FARM PRODUCTS—MARKET PRICE</b>									
Wheat, No. 1, northern spring (Minneapolis).....	Bushel.....	1.417	1.502	1.444	85	92	97	87	93
Wheat, No. 2, red, winter (Chicago).....	Bushel.....	1.812	1.898	1.443	105	118	123	87	94
Corn, contract grade No. 2, cash (Chicago).....	Bushel.....	1.033	1.072	.874	131	136	141	97	115
Oats, contract grades, cash (Chicago).....	Bushel.....	.646	.692	.508	141	150	161	111	118
Barley, feeding (Chicago).....	Bushel.....	1.011	1.041	.896	143	146	150	119	129
Rye, No. 2, cash (Chicago).....	Bushel.....	1.266	1.362	1.134	126	133	143	108	119
Tobacco, leaf, average sales, warehouse (Kentucky).....	Cwt.....	12.735	11.643	6.239	147	150	137	77	74
Cotton, middling upland (New York).....	Pound.....	.203	.217	.163	111	116	124	84	93
Wool, 1/4 blood combing, Ohio and Pennsylvania fleeces (Boston).....	Pound.....	.53	.55	.41	113	115	129	93	89
Cattle, steers, good to choice, corn fed (Chicago).....	Cwt.....	13.340	13.181	11.440	144	140	138	129	123
Hogs, heavy (Chicago).....	Cwt.....	9.085	9.613	9.445	63	74	78	85	77
Sheep, ewes (Chicago).....	Cwt.....	8.900	7.313	5.900	128	135	111	118	90
Sheep, lambs (Chicago).....	Cwt.....	15.975	15.188	14.850	112	117	111	115	108
<b>FOOD</b>									
Flour, standard patents (Minneapolis).....	Barrel.....	8.113	8.490	7.830	90	96	101	86	93
Flour, winter straights (Kansas City).....	Barrel.....	7.556	7.631	6.963	95	104	105	91	96
Sugar, 96° centrifugal (New York).....	Pound.....	.045	.045	.048	104	103	104	111	111
Sugar, granulated, in barrels (New York).....	Pound.....	.058	.059	.060	104	106	107	106	110
Cottonseed oil, prime yellow (New York).....	Pound.....	.099	.106	.091	81	84	89	77	77
Beef, fresh, carcass, good native steers (Chicago).....	Pound.....	.200	.201	.170	125	122	122	104	104
Beef, fresh, carcass, steers (New York).....	Pound.....	.222	.229	.188	130	130	134	109	110
Pork, smoked hams (Chicago).....	Pound.....	.201	.206	.259	67	65	67	87	84
Butter, creamery, 92 score (New York).....	Pound.....	.45	.45	.43	109	100	100	111	96
Oleomargarine, standard, uncolored (Chicago).....	Pound.....	.215	.215	.215	103	94	94	94	94
<b>TEXTILES</b>									
Cotton yarns, carded, white, northern, mule spun, 22-1 cones (Boston).....	Pound.....	.366	.380	.335	102	102	106	87	94
Cotton-print cloth, 64 x 60-38 1/2"-5.35-yards to pound.....	Yard.....	.076	.079	.071	101	101	105	90	94
Cotton sheeting, brown 4/4 Trion (New York).....	Yard.....	.091	.092	.082	99	97	99	87	88
Worsted yarns, 2/32's cross-bred stock, white, in skein (Boston).....	Pound.....	1.550	1.575	1.325	106	108	110	94	92
Woman's dress goods, French, 39 inches at mills, serge.....	Yard.....	1.025	1.025	.975	99	99	99	94	94
Suitings, unfinished worsted—13-ounce, mill.....	Yard.....	2.008	2.008	1.913	100	100	100	95	95
Suitings, serge, 11-ounce, 56-58 inch.....	Yard.....	2.095	2.095	2.048	97	97	97	95	95
Silk, Japan, 13-15.....	Pound.....	5.360	4.998	5.831	84	87	81	99	94
Hosiery, women's, pure silk, mill.....	Dozen pair.....	10.290	10.290	11.270	85	85	85	93	93
<b>LEATHER</b>									
Hides, green salted, packers' heavy native steers (Chicago).....	Pound.....	.256	.246	.168	169	183	175	108	129
Hides, calfskins, No. 1, country, 8 to 15 pounds (Chicago).....	Pound.....	.295	.295	.177	155	170	170	92	102
Leather, chrome calf, dull or bright "B" grades (Boston).....	Square foot.....	.600	.600	.489	132	132	132	102	106
Leather, sole, oak, scoured backs, heavy (Boston).....	Pound.....	.655	.670	.450	148	149	153	98	103
Boots and shoes, men's black calf, blucher (Massachusetts).....	Pair.....	6.750	6.750	6.400	106	106	106	100	100
Boots and shoes, men's dress welt tan calf (St. Louis).....	Pair.....	5.000	5.000	4.850	102	102	102	99	99
<b>FUEL</b>									
Coal, bituminous, mine-run (composite price).....	Net ton.....	4.016	3.986	4.264	94	93	92	99	99
Coal, bituminous, prepared sizes (composite price).....	Net ton.....	4.249	4.288	4.706	92	89	89	98	98
Coal, anthracite, chestnut (composite price).....	Long ton.....	12.794	12.786	12.871	96	93	93	94	94
Coke, Connellsville (range of prompt and future) furnace—at ovens.....	Short ton.....	2.744	2.695	2.940	6	67	66	85	72
Petroleum, crude, Kansas-Oklahoma—at wells.....	Barrel.....	1.190	1.190	1.155	63	63	63	59	61
<b>METALS</b>									
Pig iron, foundry No. 2, northern (Pittsburgh).....	Long ton.....	19.010	18.960	20.250	92	92	92	98	98
Pig iron, basic, valley furnace.....	Long ton.....	17.000	16.300	18.200	92	92	88	102	98
Steel billets, Bessemer (Pittsburgh).....	Long ton.....	33.000	33.000	33.000	94	94	94	95	94
Copper ingots, electrolytic, early delivery (New York).....	Pound.....	.1399	.1420	.1262	100	101	103	93	91
Brass, sheets, mill.....	Pound.....	.188	.189	.180	99	99	100	96	95
Lead, pig, desilverized, for early delivery (New York).....	Pound.....	.0610	.0612	.0662	71	72	73	85	79
Tin, Straits (New York).....	Pound.....	.5236	.5154	.6752	80	80	79	104	103
Zinc, slab, western (St. Louis).....	Pound.....	.0576	.0603	.0608	77	78	82	86	83
<b>BUILDING MATERIAL AND MISCELLANEOUS</b>									
Lumber, pine, southern, yellow flooring, mill.....	M feet.....	35.74	35.88	39.32	79	79	80	88	87
Brick, common red, domestic building (New York).....	Thousand.....	13.50	13.50	15.50	81	82	82	100	94
Cement, Portland, net without bags to trade, f. o. b. plant (Chicago district).....	Barrel.....	1.600	1.600	1.600	97	97	97	97	97
Steel beams, mill (Pittsburgh).....	Cwt.....	1.900	1.875	1.900	97	97	96	97	97
Rubber, Para Island, fine (New York).....	Pound.....	.183	.165	.300	54	48	43	72	79
Sulphuric acid 66° (New York).....	Ton.....	15.500	15.500	15.500	107	107	107	103	103
Wood pulp, sulphite, domestic, unbleached, news grade (New York).....	Cwt.....	2.525	2.525	2.630	88	88	88	96	92
Newsprint, rolls, contract, mill.....	Cwt.....	3.250	3.250	3.250	94	94	94	94	94

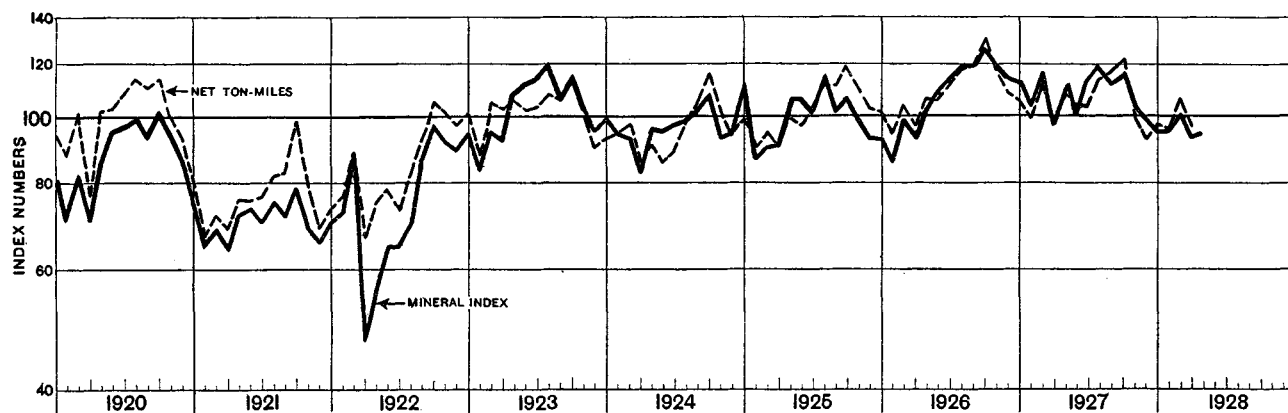
### NEW BUILDING CONTRACTS AND AUTOMOBILE PRODUCTION

[Relative numbers, monthly average, 1923-1925, taken as 100]



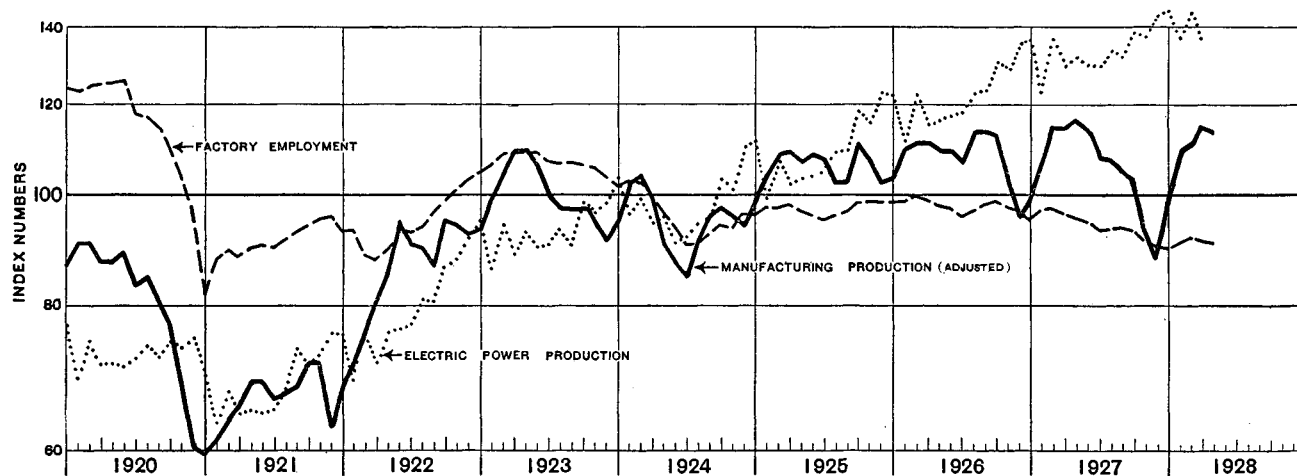
### MINERAL PRODUCTION AND RAILROAD TON-MILEAGE

[Relative numbers, monthly average, 1923-1925, taken as 100]



### FACTORY EMPLOYMENT, MANUFACTURING, AND ELECTRIC POWER PRODUCTION

[Relative numbers, monthly average, 1923-1925, taken as 100]



## REVIEW BY PRINCIPAL BRANCHES OF INDUSTRY AND COMMERCE

### TEXTILES

Receipts of wool at Boston were larger in May than in either the preceding month or the same month of last year, with imports making similar comparisons with both prior periods. Consumption of raw wool by textile mills showed a large increase over the previous month but was lower than a year ago. Machinery activity in woolen mills was correspondingly higher than in the preceding month and lower than a year ago.

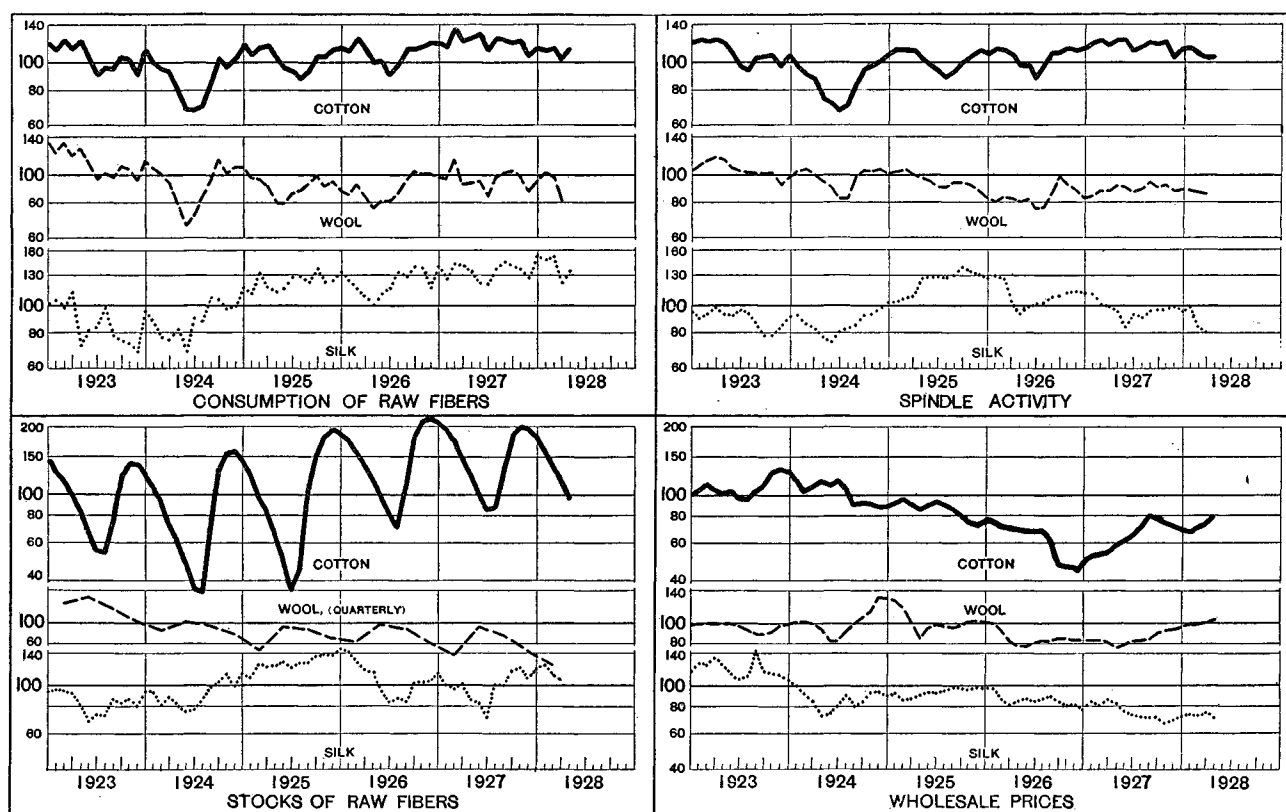
Receipts of cotton into sight were larger than a year ago. Exports of raw cotton, although greater than in the previous month, were smaller than last year.

Unfilled orders at the end of May were lower than at the end of the previous month, but stocks of cotton textiles were larger. Prices of cotton yarns and fabrics averaged higher than in either the previous month or May of last year.

Reports from cotton finishers showed larger orders and shipments than in the previous month but both items showed declines from a year ago. Operating activity of cotton finishers was lower than in either the previous month or May of last year. Stocks of finished goods, although greater than a year ago, were lower than at the end of April. Unfilled orders on the books of cotton finishers at the end of May were

### THE TEXTILE INDUSTRIES

[Relative numbers, monthly average 1923-1925, taken as 100. Where available. May, 1928, is latest month plotted]



Cotton consumption by textile mills was larger than in the previous month but smaller than a year ago, while for the first five months cotton consumption showed a decrease of almost 10 per cent from the same period of last year. Stocks of cotton held by mills and warehouses at the end of May were considerably smaller than a year ago. Prices for cotton, both to the producer and at wholesale, averaged higher than in either prior comparative period.

Cotton machinery, reduced to a ratio capacity, was more active than in April but showed lower activity than a year ago. Production and shipments of cotton textiles were larger than in April, but new orders fell

lower than at the end of either the previous month or the same month of 1927.

Silk imports in May were considerably larger than in either the preceding month or May of last year, while for the first five months the total importation also recorded an advance over the same period of 1927. Deliveries of silk to consuming establishments also showed gains over both periods as well as in the cumulative total for the first five months of the year. Stocks of silk were generally higher than a year ago. Silk prices were likewise lower, showing a decline also from April. Imports of rayon, although larger than in the previous month, were substantially lower than a year ago.

### METALS

Consumption of iron ore in May, although greater than in the preceding month, was smaller than a year ago. More pig-iron furnaces were in blast than at the end of April but a decline was registered from last year. The output of pig iron was larger than in April but smaller than in May of last year, the first five months of the year also recording a decline from 1927. Wholesale prices for iron averaged lower than in either the preceding month or May a year ago.

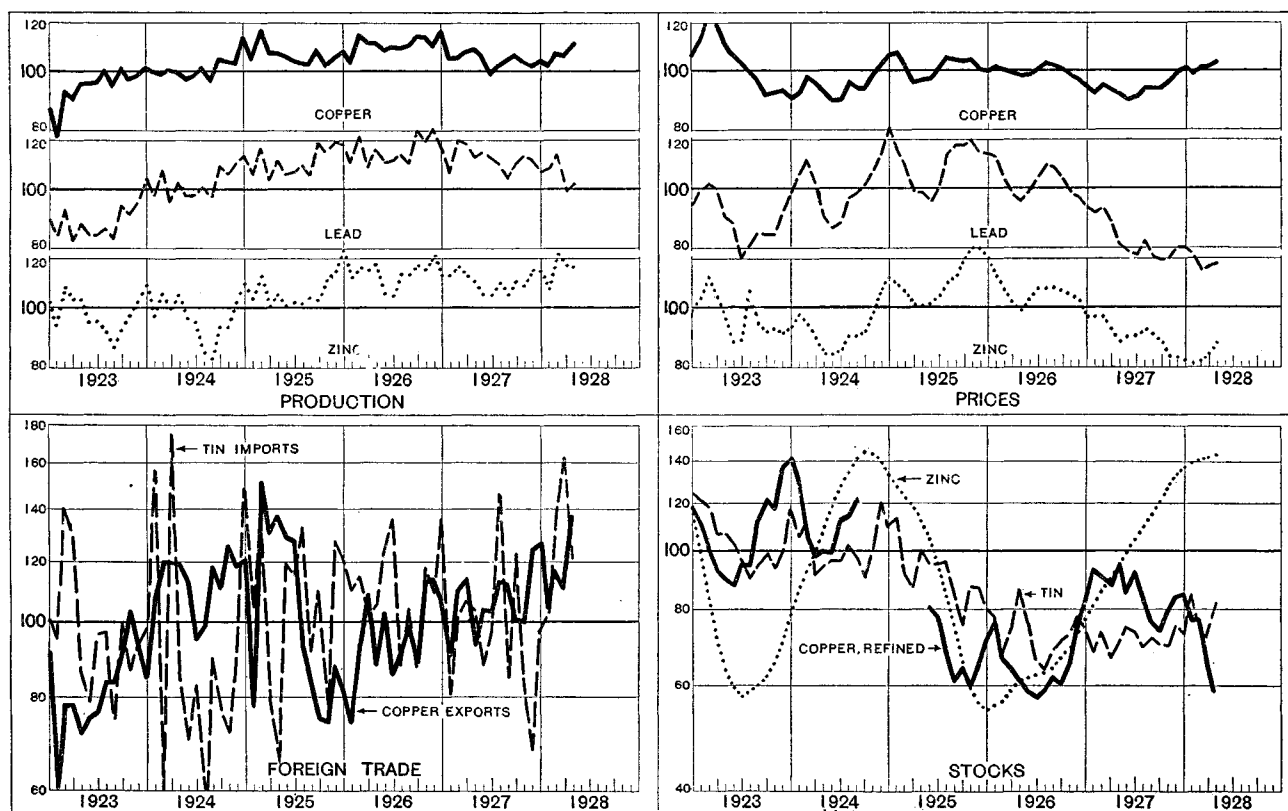
The production of steel ingots, although lower than in April, was greater than a year ago, both for May

Production and exports of copper were larger than in either the preceding month or May of last year. Stocks of refined copper in North and South America were considerably lower than in either the preceding month or May a year ago. Wholesale prices for copper continued to average higher than in either prior period.

Imports of tin, although lower than in the preceding month, were greater than a year ago. For the first five months of the year tin imports showed a gain of 18 per cent over last year. Deliveries of tin declined from both the preceding month and May a year ago,

### THE METAL INDUSTRIES

[Relative numbers, monthly average 1923-1925, taken as 100. May, 1928, is latest month plotted. Curve covering zinc stocks is plotted from 12 months' moving monthly averages plotted on the end month]



and for the first five months of the year. Unfilled orders for steel at the end of May were lower than at the end of April but larger than a year ago. The production of steel sheets by independent manufacturers showed gains over both periods although the ratio to capacity declined. Stocks of steel sheets were higher than at the end of April but lower than a year ago.

Production and new orders for steel castings showed gains over both the preceding month and May of last year, but for the first five months of the year were smaller than a year ago. New orders for fabricated structural steel showed gains over both periods, and also in the five-month total

the total for first five months showing practically no change from last year. World stocks of tin at the end of May were greater than a year ago. Tin prices averaged lower than in either the previous month or May of last year.

Fewer zinc retorts were in operation at the end of May than at either the end of the previous month or May a year ago. Zinc production, although lower than in April, was higher than a year ago. For the first five months of the year zinc production was slightly lower than for the same period of last year. Zinc stocks at the end of the month were larger than at the end of either prior period. Prices for zinc averaged higher than in April but were slightly below a year ago.



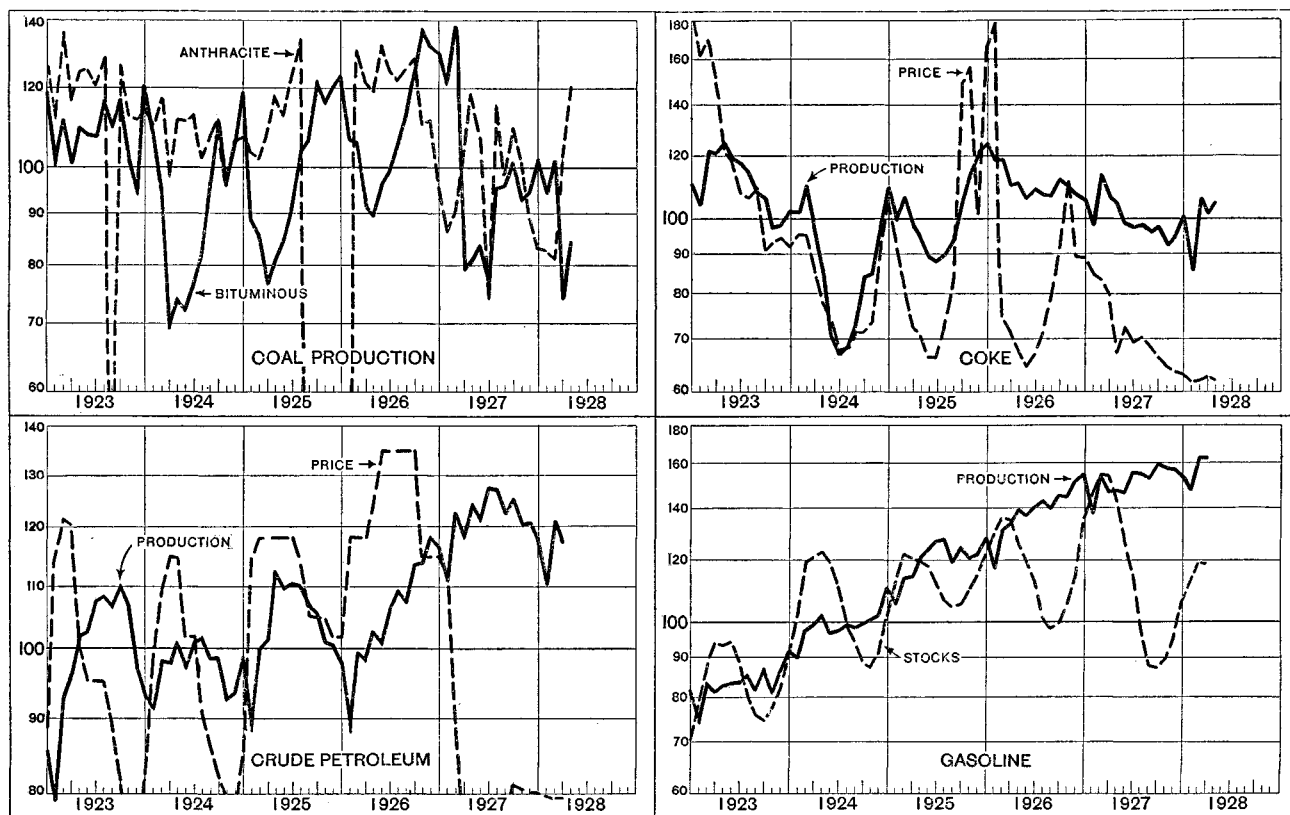
The production of lead, although greater than in April, was lower than a year ago. Lead prices, averaging higher than in April, were lower than in May of last year.

#### FUELS

The output of bituminous coal was larger than in either the previous month or May of last year. Prices for bituminous at the mines averaged lower than in either the previous month or the same month of 1927. The production of anthracite coal was likewise larger than in either the preceding month or May of last year, but the total for the first five months was lower than in the same period of 1927. The price for anthracite at wholesale was slightly lower than in either the preceding month or May of last year. The

#### THE FUEL INDUSTRIES

[Relative numbers, monthly average 1923-1925 taken as 100. May, 1928, is latest month plotted where data were available]



production of coke, although greater than in April, showed little change from a year ago. Coke prices averaged lower than in either prior period.

#### AUTOMOBILES

The production of automobiles in May was larger than in either the previous month or May of last year, the total for the first five months also showing a gain over the same period of 1927. Exports of automobiles, although greater than in April, were smaller than a year ago, but the total for the first five months showed a gain over last year. Shipments of accessories and parts, both as original equipment and for replacements, showed gains over both prior periods, while the production of automobile rims, although smaller than in April, was larger than a year ago.

#### HIDES AND LEATHER

Imports of hides and skins were larger than in either the preceding month or May of last year, while the output of hides, as reflected by the slaughter of cattle, although greater than in April, was lower than a year ago. The production of sole leather gained in May over both prior periods. Exports of sole leather, although smaller than in April, were greater than in May of last year. Exports of upper leather showed gains over both periods, while prices for leather continued to average higher than in either the preceding month or May a year ago. The production of shoes was larger than in April. Exports of shoes increased over April but were considerable smaller than a year ago. Prices for shoes, unchanged from

April, were generally higher than in May of last year.

#### PAPER AND PRINTING

Imports of chemical wood pulp increased over April but were smaller than a year ago. The output of newsprint paper showed a gain over the previous month but a decline from last year, with a corresponding decrease in the five-months' total. Imports of newsprint showed gains over both periods. Production of newsprint in Canada increased over both the previous month and May of last year, with a corresponding gain over a year ago for the first five months. Stocks of newsprint held at both domestic and Canadian mills at the end of the month were considerably larger than a year ago.

## BUILDING AND CONSTRUCTION

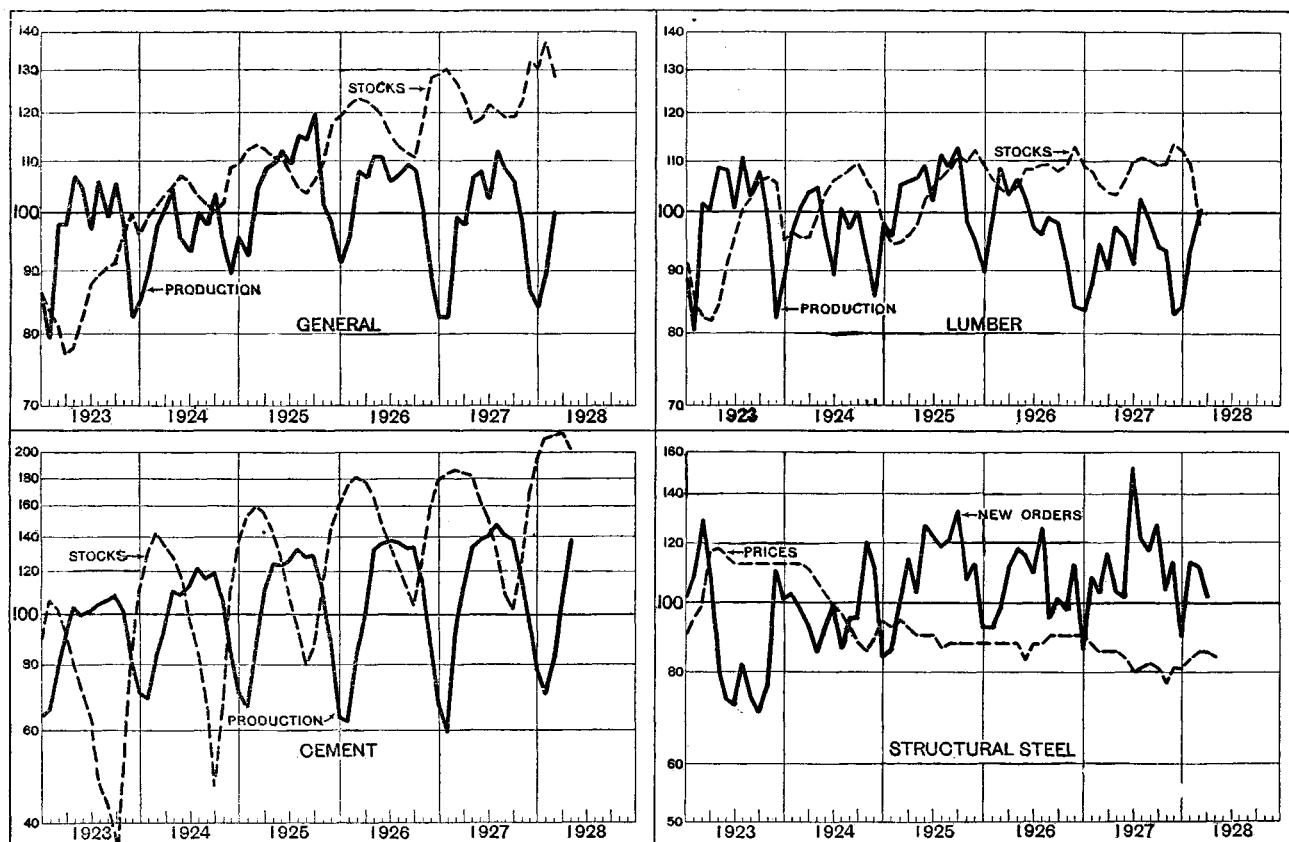
Contracts awarded for building construction, measured both in value and in floor space, showed gains over both the preceding month and May, 1927. Measured in floor space, gains were registered over last year in all groups except industrial buildings and certain public and semipublic structures. Building costs in May showed relatively little change from the previous month but were generally lower than a year ago. Fire losses in the United States and Canada,

## STONE AND CLAY PRODUCTS

Production and shipments of face brick averaged higher than in April and shipments were higher also than a year ago. Stocks of face brick were lower than in April but slightly higher than last year. Unfilled orders were lower than at the end of either prior period. Prices for common brick, showing no change from the previous month, were lower than a year ago. New orders for porcelain plumbing fixtures were smaller than in April. New orders for terra cotta

### THE BUILDING-MATERIAL INDUSTRIES

[Relative numbers, monthly average 1923-1925 taken as 100]



although smaller than in April, were considerably larger than a year ago.

### LUMBER AND LUMBER PRODUCTS

The production of lumber was generally lower than a year ago, most of the principal species showing declines. As compared with April, the output of southern pine gained, while Douglas-fir production declined. Shipments of both Douglas fir and southern pine were larger than in either the previous month or May of last year. Lumber prices were somewhat stronger than in April but averaged lower than a year ago. Production and shipments of maple flooring were lower than a year ago, while for oak flooring these items showed gains over the same period. Stocks of flooring, both species, were larger than a year ago.

were likewise smaller than April but in tonnage were higher than a year ago. New orders for vitreous china plumbing fixtures were lower than in either the previous month or May of last year, but for the first five months showed a considerable gain. The production and shipments of Portland cement showed gains over both the previous month and May, 1927, while the output of polished plate glass made similar comparisons.

### CHEMICALS

Imports of potash and nitrate of soda, although smaller than in April, were considerably larger than a year ago. Exports of sulphuric acid declined from both periods but exports of fertilizer increased. The consumption of fertilizer in Southern States was greater than a year ago, the gain over the first five

months of 1927 amounting to more than 20 per cent. Exports of coal-tar dyes increased over April but declined from a year ago. Chemical prices showed practically no change from either period, while prices for oils and fats, averaging higher than in April, were lower than a year ago.

### FOODSTUFFS AND TOBACCO

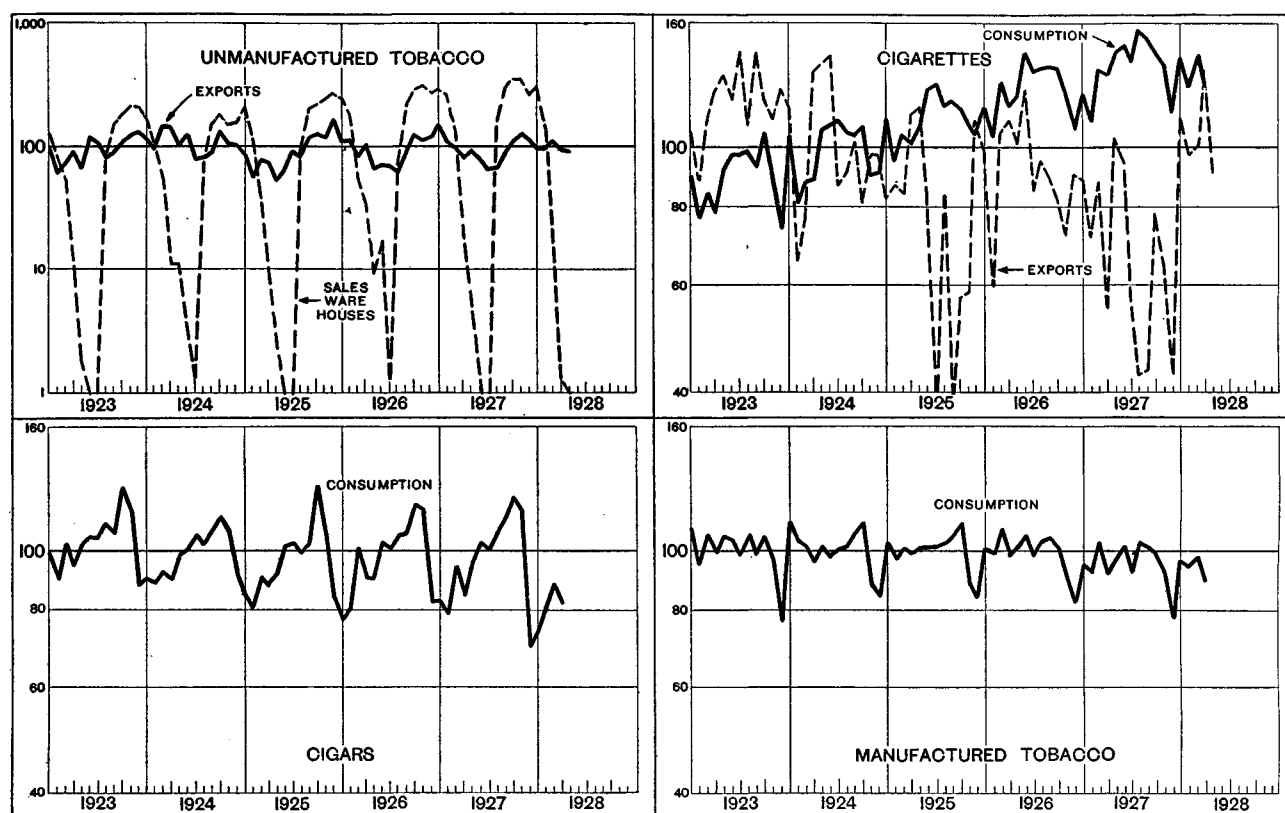
The visible supply of wheat at the end of May was considerably larger than a year ago. Receipts and shipments were larger than in either the previous month or May of last year and prices averaged higher than in either period. The visible supply of corn showed a substantial decline from a year ago, while receipts and shipments increased. Corn prices aver-

but inspected slaughter was greater than in either the previous month or May of last year. Storage of lamb and mutton was greater than a year ago, while prices for sheep and lamb, averaging lower than in April, were higher than May of last year.

The factory output of butter was smaller than a year ago, while receipts, although larger than in April, were likewise smaller than last year. Storage holdings of creamery butter were considerably smaller than a year ago. The wholesale price of butter, showing no change from the previous month, averaged higher than a year ago. The production of cheese was smaller than in May of last year. Wholesale prices of cheese showed no change. Receipts of eggs, although higher than in April, were somewhat lower

### THE TOBACCO INDUSTRIES

[Relative numbers, monthly average, 1923-1925, taken as 100. Where available, May, 1928, is latest month plotted]



aged higher than in either period. Total grain exports, although higher than in April, were considerably lower than a year ago.

Cattle receipts and slaughter declined from a year ago. Exports of beef products were lower than a year ago, but higher than in April, while storage holdings showed a considerable decline from both periods. Wholesale prices of cattle and beef were generally higher than in either the previous month or May a year ago. Receipts of hogs were higher than last year, while inspected slaughter, although higher than in April, was lower than a year ago. Storage of pork products was considerably larger than last year. Prices for hogs and pork products were higher than in April, although pork products were lower than last year. Receipts of sheep were lower than a year ago,

than a year ago, while storage holdings were also lower than last year.

Sugar imports were lower than in either the previous month or May of last year. Refinery stocks of raw sugar gained over both periods. Prices of sugar showed no change from April but were generally lower than a year ago.

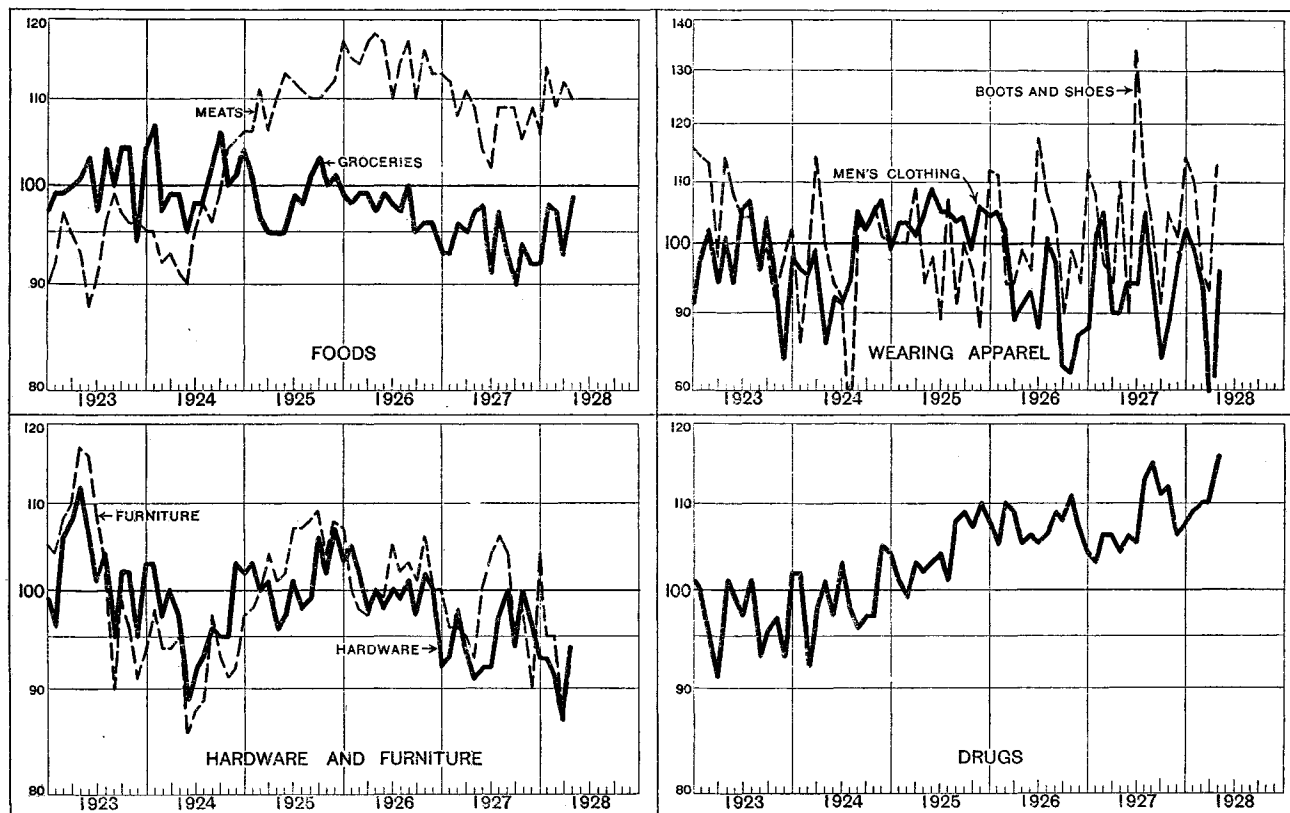
Consumption of cigarettes in May was larger than a year ago. Cigarette exports in May were smaller than in either the previous month or May of last year, but for the first five months were more than 30 per cent larger than a year ago. Sales of tobacco at loose-leaf warehouses were considerably smaller in either the previous month or a year ago, while prices, although lower than in April, were considerably higher than a year ago.

### TRANSPORTATION

Freight-car loadings were lower than in May, 1927, all groups showing a decline from a year ago except grain and grain products and miscellaneous. More surplus freight cars were available at the end of May than a year ago. Clearances of vessels engaged in foreign trade showed a tonnage gain over the previous month but a decline from a year ago. Merchandise warehouse space at the end of April was 70 per cent filled, showing no change from the condition at the end of the previous month.

### WHOLESALE TRADE

[Relative numbers, monthly average 1923-1925 taken as 100. May, 1928, is latest month plotted. Curves are adjusted for seasonal variation]



### DISTRIBUTION

Newspaper advertising showed declines from both the previous month and May of last year. Magazine advertising, declining from the previous month, was greater than a year ago. Postal receipts were greater than in either the previous month or the same month of 1927. Sales of mail-order houses and 10-cent chain-store systems showed gains over a year ago.

### BANKING AND FINANCE

The volume of check payments, both in and outside of New York City, showed gains over both the preceding month and a year ago. Loans and discounts of Federal reserve member banks, declining from the previous month, were higher than a year ago. Rediscounts by Federal reserve banks continued to show gains over both periods. The reserve ratio at the end of May was lower than at the end of either the previous month or May, 1927.

Interest rates on all types of money averaged higher than in either the previous month or May of last year. Loans to brokers and dealers continued to increase, while dividend and interest payments scheduled for June were greater than in either the previous month or June a year ago. Business failures showed smaller liabilities than a year ago but more firms failed than in May of 1927. New sales of ordinary life insurance gained over both the previous month and May of last year.

### GOLD, SILVER, FOREIGN EXCHANGE, AND TRADE

Gold receipts at the mint were larger in May than in either the previous month or May, 1927. Imports of gold declined from both periods. Gold exports, although smaller than in April, were considerably greater than a year ago. The monetary stock of gold at the end of May declined from both prior periods. Silver production, although greater than in April, was smaller than a year ago. Stocks of silver in the United States were considerably smaller than a year ago. Silver prices at New York averaged higher than in either the previous month or May of last year.

Exchange on the principal foreign countries showed little change from the previous month but, as compared with a year ago, most currencies were higher, the principal exceptions being the Japanese yen, and the Canadian dollar. Imports and exports of merchandise into the United States showed larger values than in either the previous month or May, 1927.



## INDEXES OF BUSINESS

The index numbers presented in this table are designed to show the trend in production, prices, trade, etc., by commodities or groups. They consist in general of weighted combinations of series of individual relative numbers; often the individual relative numbers are also given. The function of index and relative numbers is explained on the inside front cover. All of the index numbers have been reworked to a comparable basis on the average of the years 1923 to 1925, while maxima and minima are given only since 1923, thus eliminating the abnormal period prior to 1923. The data covering mineral and manufacturing production are those compiled by the Federal Reserve Board and are here substituted for those previously given. The complete series on these two indexes as well as for animal and crop marketings and the output of forest products are given on pp. 18 to 22, inclusive, of this issue.

	Maxi- mum since Jan. 1, 1923	Mini- mum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			March	April	May	March	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927
PRODUCTION										
(Relative to 1923-1925 monthly average as 100)										
MINERALS										
Total.....	120	90	118	104	108	105	103	104	+1.0	-3.7
Bituminous coal.....	125	77	131	87	94	99	87	93	+6.9	-1.1
Anthracite coal.....	133	1	88	108	117	79	109	114	+4.6	-2.6
Crude petroleum.....	124	88	123	119	120	121	119	116	-2.5	-3.3
Iron-ore shipments.....	134	0			120			80		-33.3
Copper.....	116	82	100	106	107	102	103	110	+6.8	+2.8
Zinc.....	124	93	114	110	108	112	114	113	-0.9	+4.7
Lead.....	125	75	115	120	113	109	100	100	0.0	-11.5
Silver.....	123	85	90	90	90	94	89	88	-1.1	-2.2
ANIMAL PRODUCTS (marketings)										
Total.....	124	79	94	95	115	97	95	107	+12.6	-7.0
Wool.....	421	26	65	72	135	49	61	195	+219.7	+44.4
Livestock.....	131	76	88	79	93	92	83	90	+8.4	-3.2
Poultry and eggs.....	148	68	113	143	143	118	130	139	+6.9	-2.8
Dairy products.....	160	64	96	102	135	97	101	115	+13.9	-14.8
Fish.....	187	44	161	116	142	160	137	156	+13.9	+9.9
CROPS (marketings)										
Total.....	231	45	89	62	62	77	81	70	-11.1	+12.9
Grains*.....	205	38	62	45	57	112	66	78	+18.2	+36.8
Vegetables*.....	199	60	112	114	115	106	91	136	+49.5	+18.3
Fruits*.....	251	55	61	72	93	44	47	94	+100.0	+1.1
Cotton products*.....	346	11	110	72	57	60	58	56	-3.4	-1.8
Miscellaneous crops*.....	266	23	105	36	29	40	25	23	-8.0	-20.7
FOREST PRODUCTS										
Total.....	112	80	94	93	99	97	92	100	+8.7	+1.0
Lumber.....	112	80	95	90	97	98	95	97	+2.1	0.0
Pulp wood.....	151	54	100	119	117	102	111	120	+8.1	+2.6
Gum (rosin and turpentine)*.....	161	18	32	74	113	25	77	140	+81.8	+23.9
Distilled wood.....	148	66	108	99	91	103	91	85	-6.6	-6.6
MANUFACTURING										
Grand total (adjusted for working days).....	113	82	110	109	111	110	110	110	-0.0	-0.9
Iron and steel.....	120	59	115	116	116	114	125	117	-6.4	+0.9
Textiles.....	121	77	114	112	116	106	101	107	+5.9	-7.8
Food products.....	106	92	99	98	103	105	97	96	-1.0	-3.6
Paper and printing.....	118	91	113	114	112	118	118	125	+5.9	+11.6
Lumber.....	110	90	91	88	95	96	97	91	-6.2	-4.2
Automobiles.....	134	47	106	106	103	114	110	108	-1.8	+4.9
Leather and shoes.....	117	86	99	99	100	101	96	99	+3.1	-1.0
Cement, brick, and glass.....	122	92	119	109	108	109	108	113	+4.6	+4.6
Nonferrous metals.....	121	87	108	112	111	107	110	111	+0.9	0.0
Petroleum refining.....	142	84	135	134	132	141	147	150	+2.0	+13.6
Rubber tires.....	138	66	123	131	127	135	131			
Tobacco manufactures.....	123	93	116	122	122	119	119	120	+0.8	-1.6

\* Fluctuations between maximum and minimum due largely to seasonal conditions.

## INDEXES OF BUSINESS—Continued

	Maxi- mum since Jan. 1, 1923	Mini- mum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			March	April	May	March	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927
STOCKS										
(Relative to 1923-1925 monthly average as 100)										
(Corrected for seasonal variation)										
Total.....	153	84	136	129	135	137	133	139	+4.5	+3.0
Raw foodstuffs.....	222	72	161	140	160	157	154	182	+18.2	+13.8
Raw materials for manufacture.....	170	71	153	148	138	145	131	118	-9.9	-14.5
Manufactured foodstuffs.....	119	84	86	93	108	100	107	93	-13.1	-13.9
Other manufactured commodities.....	139	73	125	123	121	130	127	125	-1.6	+3.3
(Unadjusted index)										
Total.....	150	77	146	132	122	148	139	129	-7.2	+5.7
Raw foodstuffs.....	198	60	198	166	145	198	183	163	-10.9	+12.4
Raw materials for manufacture.....	196	64	138	123	108	131	117	102	-12.8	-5.6
Manufactured foodstuffs.....	132	79	84	84	89	97	97	96	-1.0	+7.9
Other manufactured commodities.....	136	74	128	126	121	133	129	125	-3.1	+3.3
UNFILLED ORDERS										
(Relative to 1923-1925 monthly average as 100)										
Total.....	157	67	81	77	74	81	77	74	-5.2	-1.4
Textiles.....	154	62	89	88	88	75	71	72	+1.4	-18.2
Iron and steel.....	157	66	76	73	64	90	82	72	-12.2	+12.5
Vehicles.....	204	53	86	74	73	71	73	73	0.0	0.0
Lumber.....	142	56	79	76	86	72	70	79	+11.4	-9.3
WHOLESALE TRADE										
(Relative to 1923-1925 monthly average as 100)										
Grand total, all classes.....	124	82	103	90	87	99	86	89	+3.5	+2.3
Groceries.....	119	86	94	90	95	95	88	96	+9.1	+1.7
Meats.....	125	87	104	104	109	105	105	110	+4.8	+0.9
Dry goods.....	128	71	95	76	76	87	70	75	+7.1	-1.3
Men's clothing.....	167	43	144	88	54	131	75	57	-24.0	+5.6
Women's clothing.....	188	26	108	64	39	89	53	35	-34.0	-10.3
Boots and shoes.....	128	68	111	100	111	110	99	114	+15.2	+2.7
Hardware.....	118	82	102	96	93	95	89	97	+9.0	+4.3
Drugs.....	125	88	117	108	98	120	112	109	-2.7	+11.2
Furniture.....	129	72	100	96	83	107	88	87	-1.1	+4.8
RETAIL TRADE										
(Relative to 1923-1925 monthly average as 100)										
MAIL-ORDER HOUSES (4 houses)†.....	156	64	125	120	99	125	115	116	+0.9	+17.2
CHAIN STORES:†										
Ten-cent.....	250	62	116	135	123	133	135	139	+3.0	+13.0
Grocery.....	224	77	174	172	171	224	202	213	+5.4	+24.6
Wearing apparel.....	350	47	148	199	171	200	195	221	+13.3	+29.2
Drug.....	169	82	143	144	134	163	154	164	+6.5	+22.4
Cigar.....	160	79	111	113	113	107	100	110	+10.0	-2.7
Candy.....	161	70	115	136	115	119	130	127	-2.3	+10.4
Shoe.....	163	55	96	150	109	117	130	130	0.0	+19.3
DEPARTMENT STORES: *										
Sales.....	186	71	100	111	102	103	102	107	+4.9	+4.9
Stocks.....	117	83	106	106	103	103	104	101	-2.9	-1.9
EMPLOYMENT										
(Relative to 1923-1925 monthly average as 100)										
Number employed, by industries:										
Total, all classes.....	109	90	97	97	96	92	91	91	0.0	-5.2
Food products.....	112	90	91	90	91	92	90	90	0.0	-1.1
Textiles.....	114	85	97	96	94	94	91	88	-3.3	-6.4
Iron and steel.....	114	87	99	98	97	91	91	92	+1.1	-5.2
Lumber.....	107	80	86	86	87	82	83	83	0.0	-4.6
Leather.....	112	86	97	93	91	93	88	86	-2.3	-5.5
Paper and printing.....	106	97	104	103	103	101	101	101	0.0	-1.9
Chemicals.....	111	88	110	110	99	105	105	92	-12.4	-7.1
Stone, clay, and glass.....	107	85	97	98	101	89	91	94	+4.4	-6.9
Metal products other than iron and steel.....	110	87	98	97	97	92	94	94	0.0	-3.1
Tobacco products.....	108	82	88	86	86	86	84	85	+1.2	-1.2
Vehicles.....	110	82	93	93	93	91	93	96	+3.2	+3.2
Miscellaneous.....	115	86	110	109	108	93	94	93	-1.1	-13.9

† See table pp. 20 and 21 of the May, 1928, issue for earlier data.

\* See tables on pp. 20 and 21 of the April, 1928, issue for earlier data.

## INDEXES OF BUSINESS—Continued

	Maxi- mum since Jan. 1, 1923	Mini- mum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			March	April	May	March	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927
<b>EMPLOYMENT—Continued</b>										
(Relative to 1923-1925 monthly average as 100)										
Amount of pay roll, by industries:										
Total, all classes.....	111	85	103	102	101	96	95	95	0.0	-5.9
Food products.....	108	90	94	93	96	96	92	94	+2.2	-2.1
Textiles.....	115	78	102	97	95	94	87	86	-1.1	-9.5
Iron and steel.....	117	79	106	104	101	97	97	99	+2.1	-2.0
Lumber.....	107	84	92	91	94	87	88	89	+1.1	-5.3
Leather.....	117	77	97	91	88	92	80	77	-3.7	-12.5
Paper and printing.....	114	94	111	110	110	110	110	110	0.0	0.0
Chemicals.....	114	89	114	114	104	107	107	99	-7.5	-4.8
Stone, clay, and glass.....	111	84	101	104	106	91	94	97	+3.2	-8.5
Metal products other than iron and steel.....	114	81	102	95	99	94	95	97	+2.1	-2.0
Tobacco products.....	111	81	85	82	88	84	78	81	+3.8	-8.0
Vehicles.....	114	79	98	100	101	98	100	101	+1.0	0.0
Miscellaneous.....	119	86	117	119	115	97	99	96	-3.0	-16.5
<b>PRICE INDEX NUMBERS</b>										
<b>FARM PRICES</b>										
(Relative to 1909-1914 average as 100)										
All groups.....	152	125	126	125	126	137	140	148	+5.7	+17.5
Grains.....	178	108	121	119	127	136	144	160	+11.1	+26.0
Fruits and vegetables.....	253	108	140	147	158	174	179	181	+1.1	+14.6
Meat animals.....	154	98	144	143	137	139	142	151	+6.3	+10.2
Dairy and poultry.....	166	122	133	133	130	137	134	134	0.0	+3.1
Cotton and cottonseed.....	252	81	102	101	113	147	154	166	+7.8	+46.9
Unclassified.....	108	79	81	80	79	89	85	86	+1.2	+8.9
<b>WHOLESALE PRICES</b>										
<b>Department of Labor Indexes</b>										
(Relative to 1926 monthly average as 100)										
All commodities.....	105	94	95	94	94	96	97	99	+2.1	+5.3
Farm products.....	114	94	94	94	96	104	108	110	+1.8	+14.6
Food, etc.....	106	85	95	95	94	98	100	101	+1.0	+7.4
Hides and leather products.....	127	98	101	102	104	124	127	126	-0.8	+21.2
Textile products.....	114	94	94	94	94	97	97	97	0.0	+3.2
Fuel and lighting.....	112	81	90	85	84	81	81	82	+1.2	-2.4
Metals and metal products.....	113	97	98	98	99	98	98	99	+1.0	0.0
Building materials.....	116	90	95	95	95	91	93	94	+1.1	-1.1
Chemicals.....	104	95	97	98	95	96	96	95	-1.0	0.0
House-furnishing goods.....	111	98	98	98	98	98	98	98	0.0	0.0
Miscellaneous.....	127	85	91	91	91	87	85	85	0.0	-6.6
Classified by state of manufacture:										
Semimanufactured articles†.....	128	96	97	96	96	98	98	99	+1.0	+3.1
Finished products†.....	103	93	95	94	94	95	96	97	+1.0	+3.2
Raw materials†.....	109	93	94	93	94	98	100	101	+1.0	+7.4
Nonagricultural commodities.....	106	93	95	94	93	94	95	96	+1.1	+3.2
<b>Commercial Indexes</b>										
(Relative to 1926 monthly average as 100)										
Dun's.....	106	85	97	97	99	104	106	104	-1.9	+5.1
Bradstreet's.....	112	95	97	96	96	104	104	102	-1.9	+6.2
<b>COST OF LIVING</b>										
<b>National Industrial Conference Board Indexes</b>										
(Relative to July, 1914)										
All items weighted.....	172	158	164	164	164	161	161	162	+0.6	-1.2
Food (Dept. Labor).....	167	141	154	154	155	151	152	154	+1.3	-0.6
Shelter.....	186	163	172	171	170	165	163	163	0.0	-4.1
Clothing.....	177	160	172	172	171	173	171	171	0.0	0.0
Fuel and light (combined).....	179	156	166	161	160	163	160	158	-1.2	-1.2
Fuel.....	208	174	189	181	179	184	179	176	-1.7	-1.7
Light.....	123	118	122	122	122	122	122	122	0.0	0.0
Sundries.....	176	171	173	173	173	171	171	171	0.0	-1.2

† See table on p. 23 of June issue for earlier data.

111271-28-3

# OUTPUT OF FOREST PRODUCTS

(Relative to 1923-1925 monthly average as 100)

MONTH	1920					1922					1924					1926				
	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood
January.....	78	77	103	43	113	75	74	86	48	70	92	89	133	56	112	91	90	111	33	110
February.....	80	79	91	24	108	72	73	70	28	70	95	96	97	39	104	96	99	90	27	102
March.....	91	89	118	12	118	83	83	101	32	82	99	101	97	26	112	106	109	101	18	111
April.....	93	91	125	29	116	84	84	99	57	62	108	104	151	61	106	103	103	119	44	113
May.....	90	87	121	80	109	100	99	108	105	63	107	105	127	128	96	108	106	121	102	103
June.....	90	87	103	112	115	100	100	101	115	70	97	96	106	135	76	103	103	92	156	89
July.....	82	80	93	135	116	92	93	81	115	80	88	89	70	157	66	96	97	67	161	86
August.....	85	85	75	123	135	102	103	92	123	84	100	101	83	145	67	97	100	54	153	94
September.....	83	82	78	114	113	96	98	84	112	84	97	97	89	127	72	98	99	75	132	93
October.....	81	78	101	97	105	97	98	87	97	106	101	100	112	100	83	92	98	82	124	105
November.....	71	68	94	91	100	96	94	101	109	136	93	92	106	106	79	92	91	99	109	105
December.....	55	52	75	82	90	80	78	83	109	146	88	86	101	116	84	85	84	90	124	105
Monthly average.....	82	80	98	79	112	90	90	91	88	88	97	96	106	100	88	98	98	92	99	-----
MONTH	1921					1923					1925					1927				
	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood	Total	Lumber	Pulp wood	Gum (rosin and turpentine)	Distilled wood
January.....	50	49	66	37	79	89	89	91	58	148	97	98	98	45	101	82	83	72	42	114
February.....	56	58	48	25	70	80	80	84	38	121	93	96	82	40	89	87	88	83	33	98
March.....	67	69	64	25	68	101	102	100	37	130	105	105	114	40	98	94	95	100	32	108
April.....	70	70	83	42	42	100	100	103	67	118	108	106	141	63	101	93	90	119	74	99
May.....	76	77	69	80	35	110	109	119	123	126	108	107	120	123	98	99	97	117	113	91
June.....	75	77	53	106	32	108	109	99	138	120	108	109	93	149	89	96	96	88	133	92
July.....	70	71	47	116	24	98	100	65	147	109	101	102	85	155	94	89	91	64	124	90
August.....	75	76	58	112	25	109	111	78	159	105	108	111	66	137	93	99	102	63	119	116
September.....	72	73	62	102	33	100	103	69	130	92	109	111	78	128	93	98	99	84	124	113
October.....	76	75	80	86	45	107	108	99	127	104	112	112	109	106	94	96	94	100	117	104
November.....	78	76	94	98	60	101	101	99	109	114	100	98	115	77	104	93	91	111	109	100
December.....	73	70	93	107	68	87	84	115	120	96	97	96	111	90	109	86	83	111	98	95
Monthly average.....	70	70	68	78	49	99	100	93	104	115	104	104	101	96	97	93	93	93	93	102

## REVISED INDEXES OF OUTPUT OF FOREST PRODUCTS AND MARKETINGS OF CROPS AND ANIMALS

(1923-1925 monthly average=100)

There are presented herewith revised indexes of the output of forest products and the marketings of crops and animal products, revisions having been made in the weightings and base period. For both the weightings and base period the average for the years 1923-1925, inclusive, has been taken.

### FOREST PRODUCTS

For forest products the same items and sources have been used as in the original index, the index being constructed in the same manner. (See issue for August, 1922.) The commodities for which monthly data are available constitute about 40 per cent of the estimated timber cut from the forests each year and represent about 80 per cent of the value of forest products marketed for manufacturing purposes. The revised weightings for forest products follow:

ITEM USED	WEIGHT
Logs used for lumber and lath.....	88
Pulp wood.....	9
Gum.....	2
Hardwoods in distillation.....	1
Total.....	100

### CROP MARKETINGS

For crops the same items and sources have been used as in the original index. (See issue for July, 1922.) The commodities

for which monthly data are available and which are included in the index represent approximately 87 per cent of the total sales value of all crops. The old index was weighted by the values of crops grown as adduced from census returns covering 1919, while the revised index is weighted by the average farm income from sales for the years 1923 to 1925, inclusive, as computed by the Department of Agriculture. The revised weightings for crop marketings follow:

ITEM USED	WEIGHT
GRAINS:	
Corn.....	45
Wheat.....	77
Oats.....	17
Barley.....	4
Rye.....	3
Rice.....	4
Total.....	150
VEGETABLES:	
Potatoes (white).....	25
Sweet potatoes.....	3
Tomatoes.....	6
Onions.....	2
Cabbage.....	2
Celery.....	1
Total.....	39



## ANIMAL MARKETINGS

ITEM USED	WEIGHT
<b>FRUITS:</b>	
Apples.....	15
Peaches.....	5
Citrus fruits.....	10
Grapes.....	6
Pears.....	2
Watermelons.....	1
Cantaloupes.....	2
Strawberries.....	3
Total.....	44
<b>COTTON PRODUCTS:</b>	
Cotton.....	154
Cottonseed.....	15
Total.....	169
<b>MISCELLANEOUS:</b>	
Hay.....	18
Tobacco.....	27
Flaxseed.....	5
Cane sugar.....	1
Total.....	51
Grand total.....	453

For animals a change has been made in the items included, especially as respects the substitution of butter receipts for receipts of milk at New York, the entire weight for dairy products being assigned to butter receipts. Except as noted below, the index is constructed in the same manner as the old index. (See issue for June, 1922.) As in the case of crop marketings, the revised index of animal marketings is weighted by the average farm income derived from sales by farmers during the years 1923 to 1925, inclusive. The old index was given by commodities, while the revised index is shown by major groups.

The revised weightings for animal products follow:

ITEM USED	WEIGHT
Livestock.....	22
Dairy products.....	15
Poultry and eggs.....	5
Wool.....	1
Fish.....	1
Total.....	44

COLD-STORAGE HOLDINGS, TOTAL FISH, 15TH OF MONTH<sup>1</sup>

[Thousands of pounds]

MONTH	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
January.....		32,235	51,116	80,684	61,510	53,851	48,320	40,033	52,627	55,308	48,181	58,655	53,921
February.....		14,727	35,907	67,617	47,904	42,117	37,742	27,070	40,421	44,034	37,378	48,684	44,872
March.....		13,374	28,457	50,036	29,958	33,404	25,474	16,724	29,571	29,865	24,894	34,887	34,528
April.....		9,516	26,548	37,111	20,633	28,444	17,485	10,599	21,489	22,442	16,154	24,731	26,473
May.....		14,040	31,403	37,174	19,804	26,346	17,074	12,312	21,840	23,749	21,540	29,782	26,358
June.....		27,791	50,298	48,840	27,779	32,311	20,818	17,780	27,115	31,980	31,346	38,696	
July.....		38,431	64,865	59,674	36,618	40,160	25,621	27,237	36,036	40,458	45,606	42,118	
August.....		44,025	82,555	65,145	47,140	47,431	32,227	39,101	49,026	47,474	57,627	54,061	
September.....		47,198	89,204	69,581	56,296	54,469	41,139	53,220	56,607	55,447	64,657	60,330	
October.....	37,753	60,677	93,812	76,763	64,731	58,899	54,755	62,616	67,025	58,358	70,310	65,960	
November.....	44,703	70,939	99,632	78,769	67,549	61,228	54,503	63,458	70,406	61,849	75,035	66,790	
December.....	42,784	69,987	96,600	74,202	65,841	59,126	48,689	64,290	68,325	58,048	69,854	64,787	
Monthly average.....		36,912	62,533	62,133	45,480	44,816	35,321	36,203	45,041	44,084	46,882	48,957	

<sup>1</sup> Compiled by the U. S. Department of Commerce, Bureau of Fisheries, representing total fish stocks, including fish frozen when imported, at principal warehouses on the 15th of the month.

COLD-STORAGE HOLDINGS, TOTAL MEATS, INCLUDING LARD, END OF MONTH<sup>1</sup>

[Thousands of pounds]

MONTH	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
January.....	961,658	1,177,275	1,590,665	1,284,179	1,059,607	685,480	932,517	1,041,903	1,132,699	760,289	820,139
February.....	1,002,119	1,330,909	1,561,788	1,390,704	1,255,723	741,850	1,017,009	1,131,426	1,251,548	821,853	900,101
March.....	917,169	1,444,815	1,501,233	1,437,135	1,236,320	803,448	1,098,551	1,193,583	1,192,275	846,171	971,565
April.....	889,591	1,422,701	1,444,852	1,394,327	1,194,980	808,942	1,179,016	1,165,952	1,150,999	812,708	993,134
May.....	904,232	1,405,973	1,366,864	1,361,035	1,199,201	868,820	1,129,754	1,156,237	1,043,314	783,605	1,012,427
June.....	973,795	1,257,248	1,346,589	1,387,750	1,193,703	970,943	1,164,647	1,137,522	1,024,249	826,247	1,100,477
July.....	1,005,721	1,238,912	1,271,859	1,306,613	1,038,896	931,608	1,126,738	1,080,261	986,349	901,159	1,123,747
August.....	880,291	1,140,529	1,149,221	1,147,999	920,807	846,866	983,876	950,327	809,639	876,502	1,034,057
September.....	702,731	995,724	1,060,715	893,035	692,570	664,526	796,067	756,635	633,385	724,528	822,973
October.....	624,340	958,354	946,755	717,624	539,498	549,146	663,803	567,466	523,731	594,580	635,349
November.....	753,410	1,019,742	914,248	692,319	546,660	601,671	774,820	634,058	544,265	578,075	587,338
December.....	1,035,917	1,303,566	1,078,172	879,564	614,144	803,297	949,582	946,801	658,209	692,024	721,055
Monthly average.....	887,581	1,224,646	1,269,413	1,157,693	962,764	773,050	984,698	981,848	908,389	768,145	893,530

<sup>1</sup> Compiled by the U. S. Department of Agriculture, Bureau of Agricultural Economics, representing total meats and lard held in cold-storage warehouses and meat-packing establishments at the end of each month. It should be noted that these holdings are distinctly seasonal.

## MARKETINGS OF CROPS AND ANIMAL PRODUCTS

(Relative to 1923-1925 monthly average as 100)

MONTH	CROPS										ANIMAL PRODUCTS													
	Total	Grains	Vegetables	Fruits	Cotton	Miscellaneous	Total	Grains	Vegetables	Fruits	Cotton	Miscellaneous	Total	Wool	Livestock	Poultry and Eggs	Dairy products	Fish	Total	Wool	Livestock	Poultry and eggs	Dairy products	Fish
	1920						1924						1920						1924					
January.....	113	81	58	39	134	240	86	82	89	58	78	145	81	51	109	57	52	55	100	89	120	86	79	58
February.....	88	70	45	39	88	217	75	106	92	63	38	107	65	42	78	57	51	60	91	41	99	84	85	94
March.....	72	64	66	44	65	147	62	82	104	57	32	67	77	42	88	78	62	100	96	93	95	104	93	99
April.....	45	46	46	32	46	50	46	50	85	55	33	38	68	34	75	94	49	94	98	75	94	137	92	93
May.....	45	56	44	48	30	56	52	56	92	92	34	41	87	30	94	114	70	113	109	86	96	140	120	87
June.....	52	73	75	58	22	64	50	59	117	90	18	39	103	99	90	98	121	125	124	195	92	110	164	103
July.....	63	89	71	77	29	78	60	87	101	119	21	31	94	120	78	68	124	97	122	270	93	93	164	127
August.....	68	91	66	86	25	130	101	187	79	117	35	71	87	165	83	56	94	131	101	246	87	72	121	113
September.....	102	118	112	135	68	133	171	202	125	166	165	139	81	91	90	55	76	89	100	112	106	68	100	112
October.....	145	114	154	206	142	188	221	205	166	220	257	195	76	51	93	50	59	94	103	83	120	72	89	114
November.....	134	92	114	114	165	187	179	139	100	116	255	163	80	35	108	71	47	74	96	93	115	108	64	79
December.....	111	88	50	58	141	169	146	114	64	54	220	138	72	40	86	98	46	64	108	125	128	135	70	70
Monthly average.....	86	82	75	78	80	138	104	114	101	101	99	98	81	66	89	75	71	91	104	126	104	101	103	96
	1921						1925						1921						1925					
January.....	110	113	69	50	103	206	112	107	86	54	121	166	76	26	98	62	54	69	96	26	117	68	80	62
February.....	96	78	61	51	71	296	75	72	89	45	76	98	68	30	79	72	51	87	84	36	92	81	74	102
March.....	87	95	80	56	53	207	68	70	95	45	69	56	77	46	81	116	62	83	89	41	87	105	86	134
April.....	57	62	79	51	48	58	45	38	95	53	42	29	78	43	77	126	68	62	90	31	83	135	89	102
May.....	70	84	82	68	64	40	47	53	107	71	27	30	91	59	80	108	104	76	100	67	83	123	120	100
June.....	76	110	96	71	55	35	47	70	114	69	12	27	103	97	84	88	137	99	116	154	85	117	157	142
July.....	84	134	75	91	50	46	58	87	83	128	13	37	85	186	68	66	107	88	111	289	82	85	145	138
August.....	105	177	79	96	53	98	96	126	80	110	70	90	94	206	82	72	110	105	98	155	86	68	116	151
September.....	129	162	136	134	109	91	180	135	161	207	218	174	84	111	83	67	88	85	90	56	90	69	95	159
October.....	159	131	183	177	186	120	197	91	171	245	290	180	89	82	100	64	79	96	100	44	113	71	92	119
November.....	116	72	77	74	157	179	169	93	87	110	262	196	82	83	93	90	64	60	91	55	101	107	75	85
December.....	108	104	55	48	129	138	155	116	61	54	226	194	80	114	83	111	65	50	93	42	102	124	76	53
Monthly average.....	100	110	89	80	90	126	104	88	102	99	119	106	84	90	84	87	82	80	96	83	93	96	101	112
	1922						1926						1922						1926					
January.....	92	114	76	40	77	137	102	90	80	50	107	186	82	104	93	69	73	41	88	36	96	79	83	77
February.....	82	131	65	37	42	124	74	70	68	48	68	134	74	101	78	68	68	67	79	38	79	76	83	83
March.....	67	91	112	37	45	57	63	60	89	56	62	66	84	82	81	108	79	107	94	88	88	104	97	134
April.....	48	52	108	39	36	37	53	50	73	53	52	51	81	73	72	148	74	69	89	67	79	114	96	104
May.....	73	96	112	93	49	34	52	49	94	83	42	33	107	126	91	138	120	85	100	104	83	125	115	129
June.....	67	87	125	73	41	43	56	75	137	74	19	41	121	221	89	111	166	89	119	171	85	126	160	157
July.....	66	107	81	83	32	32	79	141	105	168	11	30	104	305	78	79	137	106	111	340	80	92	144	167
August.....	98	150	95	114	46	102	96	141	75	172	48	69	96	164	90	68	108	114	96	178	85	82	107	180
September.....	145	161	145	185	131	112	159	112	142	207	193	159	87	65	97	61	81	100	95	64	99	77	95	138
October.....	178	145	163	195	215	144	231	114	184	245	346	220	96	65	120	62	72	99	95	52	109	76	81	134
November.....	147	124	93	103	197	125	194	91	99	127	320	217	93	73	113	88	67	77	94	64	102	125	72	112
December.....	124	143	61	60	133	140	148	77	74	67	238	186	92	59	104	126	68	54	92	75	92	142	76	76
Monthly average.....	99	117	103	88	87	91	109	89	102	113	125	116	93	120	92	94	93	84	96	106	90	102	101	124
	1923						1927						1923						1927					
January.....	98	131	77	60	77	117	117	89	88	62	139	194	97	51	109	100	85	44	88	46	96	83	80	102
February.....	64	90	70	55	37	75	98	76	83	61	108	174	79	45	89	80	71	70	79	48	78	80	81	109
March.....	65	85	113	55	39	67	89	62	112	61	110	105	95	70	96	120	87	87	94	65	88	113	96	161
April.....	52	71	106	46	26	46	62	45	114	72	72	36	92	61	92	121	85	85	95	72	79	143	102	116
May.....	49	50	91	90	32	32	62	57	115	93	57	29	110	80	90	148	115	96	115	135	93	143	135	142
June.....	48	58	101	76	23	34	60	76	130	91	31	28	119	167	90	117	160	98	123	348	89	110	160	153
July.....	57	87	68	98	24	34	65	116	99	114	12	25	111	197	96	85	135	118	109	421	76	81	142	154
August.....	93	150	76	101	47	85	115	169	86	124	74	106	98	133	98	79	100	121	105	225	89	77	123	187
September.....	133	116	139	168	133	143	183	178	146	183	186	220	94	79	103	71	88	114	87	89	85	75	89	150
October.....	174	111	165	251	216	165	219	160	199	223	260	266	105	33	131	78	81	112	95	68	108	73	81	154
November.....	149	110	94	143	189	181	166	109	107	96	227	238	98	62	117	106	71	88	92	68	101	114	71	119
December.....	122	113	60	60	146	169	120	104	74	57	145	170	101	117	113	132	74	68	88	66	92	126	71	79
Monthly average.....	92	98	97	100	82	96	113	103	113	103	118	132	100	91	103	103	96	92	97	138	89	103	103	136

INDEX OF INDUSTRIAL PRODUCTION <sup>1</sup>

[Adjusted for seasonal variations, except where otherwise noted. 1923-1925 average=100]

YEAR AND MONTH	TOTAL INDUSTRIAL		MANUFACTURES														MINERALS										
	Un-adjusted	Ad-justed	Total		Iron and steel	Textiles	Food products	Paper and printing	Lumber	Automobiles	Leather and shoes	Cement, brick, and glass	Nonferrous metals	Petroleum refining	Rubber tires	Tobacco manufactures	Total		Bituminous coal	Anthracite coal	Crude petroleum	Iron ore shipments	Copper	Zinc	Lead	Silver	
			Un-adjusted	Ad-justed													Un-adjusted	Ad-justed									
1919 monthly av.....	83	83	84	82	92	93	76	79	53	104	53	67	54	83	83	77	88	109	52	88	77	77	87	84	87		
1920 monthly av.....	87	87	86	99	84	84	86	79	55	95	68	78	63	86	86	89	108	110	61	114	80	80	87	84	87		
1921 monthly av.....	67	67	66	46	88	84	86	68	41	91	62	39	64	55	85	70	79	112	64	40	30	39	66	84	87		
1922 monthly av.....	85	85	87	83	99	94	85	89	66	103	78	69	74	78	88	74	80	69	76	80	63	68	77	87	84		
1923 monthly av.....	101	101	106	105	100	95	99	103	110	95	94	94	86	85	96	105	109	115	100	114	93	96	88	103	103		
1924 monthly av.....	95	95	94	88	90	102	99	96	91	93	95	99	98	99	99	96	92	109	97	79	100	97	102	100	100		
1925 monthly av.....	104	104	105	106	104	98	106	105	107	97	110	107	115	116	105	105	99	99	77	103	102	107	107	111	98		
1926 monthly av.....	108	108	113	104	98	114	100	109	98	112	112	125	116	116	112	112	107	110	104	105	112	110	116	116	96		
1927 monthly av.....	106	106	106	104	114	97	112	94	86	103	109	109	136	121	117	117	107	98	100	122	93	105	111	112	93		
<b>1919</b>																											
January.....	81	83	82	84	100	76	93	70	68	57	108	34	78	48	75	74	78	88	118	51	96	86	86	84	84		
February.....	78	80	81	81	96	70	92	70	75	51	99	37	71	50	79	63	69	78	91	49	86	84	84	84	84		
March.....	76	77	78	78	85	71	90	68	77	48	96	40	60	49	87	61	68	82	79	50	69	69	69	69	69		
April.....	78	78	80	79	74	83	95	69	78	45	101	45	60	53	73	65	73	87	107	48	69	69	69	69	69		
May.....	80	77	80	78	65	92	97	69	77	40	106	53	50	56	72	75	75	92	106	47	99	64	88	88	88		
June.....	84	83	85	84	81	96	92	75	79	40	102	56	53	55	74	82	78	94	106	51	98	67	88	88	88		
July.....	87	87	87	88	91	101	92	79	79	47	100	60	56	54	75	88	82	101	111	54	100	73	88	88	88		
August.....	89	89	90	90	98	98	90	80	81	48	105	64	67	55	81	83	79	97	116	54	53	76	88	88	88		
September.....	89	87	89	87	77	103	96	79	83	53	106	67	75	56	84	94	85	107	111	55	98	81	88	88	88		
October.....	88	86	87	85	67	106	93	81	85	63	103	66	72	58	89	96	88	115	119	53	85	80	88	88	88		
November.....	86	85	90	89	74	108	91	83	84	68	109	66	80	57	101	63	61	41	121	54	80	85	88	88	88		
December.....	81	85	82	87	75	104	89	84	78	72	109	51	79	55	104	70	74	80	118	55	75	88	88	88	88		
<b>1920</b>																											
January.....	92	95	94	96	96	104	98	88	87	86	113	82	85	54	100	82	85	104	111	57	87	88	88	88	88		
February.....	93	95	96	97	102	105	89	87	91	79	107	81	83	55	92	78	84	100	110	57	86	94	94	94	94		
March.....	93	94	95	95	101	102	87	88	88	68	105	75	83	58	100	80	89	110	118	59	82	97	97	97	97		
April.....	87	88	89	89	88	103	80	90	87	52	105	66	81	58	93	73	83	103	98	59	81	96	96	96	96		
May.....	92	90	93	91	100	96	88	90	78	56	120	65	78	60	93	86	85	100	118	58	108	80	95	95	95		
June.....	92	90	91	90	106	84	88	89	79	56	116	64	83	65	87	95	90	110	116	59	109	82	83	83	83		
July.....	87	88	86	88	103	79	84	92	74	57	106	62	83	64	77	94	89	107	116	60	106	80	89	89	89		
August.....	89	88	88	88	108	78	82	88	76	53	93	62	81	68	81	98	92	111	117	62	111	83	88	88	88		
September.....	88	85	87	85	107	76	78	88	75	50	79	60	75	70	81	94	85	111	70	62	107	79	87	87	87		
October.....	85	82	83	80	101	68	74	85	75	40	66	65	70	70	81	100	91	111	114	63	127	74	78	78	78		
November.....	78	75	74	72	89	58	81	78	69	34	62	65	70	70	21	77	92	110	113	65	130	78	73	73	73		
December.....	68	70	65	67	83	50	75	74	61	35	67	64	62	70	16	70	87	91	114	120	65	70	59	59	59		
<b>1921</b>																											
January.....	66	67	64	65	71	64	77	67	54	25	70	46	59	69	22	81	77	80	89	117	64	65	53	77	77		
February.....	65	66	64	64	61	70	80	68	62	31	72	45	53	64	24	91	72	77	77	130	64	61	40	73	73		
March.....	64	65	63	63	47	79	83	66	64	41	74	51	52	61	30	89	67	74	72	114	67	64	32	60	111		
April.....	64	65	64	63	39	85	85	63	64	47	81	60	43	65	45	86	66	73	75	124	66	38	35	58	83		
May.....	67	66	66	65	42	87	82	61	69	46	91	63	61	63	58	83	73	74	89	115	66	40	18	38	57		
June.....	66	65	65	64	35	92	83	60	67	41	101	67	29	63	66	82	73	71	83	114	65	42	15	44	54		
July.....	64	64	63	64	30	92	86	60	69	45	108	69	27	60	85	82	70	67	75	108	64	46	14	34	55		
August.....	67	66	66	66	39	91	91	62	66	45	98	71	31	61	86	89	71	69	76	106	65	50	16	34	65		
September.....	69	67	68	67	40	98	87	67	66	47	96	68	34	62	64	88	72	68	76	110	60	47	17	34	64		
October.....	73	71	72	71	51	97	89	72	72	46	97	71	34	65	65	90	78	73	93	110	57	46	18	32	74		
November.....	72	71	72	72	53	99	83	74	77	43	97	68	39	65	58	85	71	67	77	107	64	10	17	47	77		
December.....	66	70	66	70	49	97	82	76	83	36	102	63	39	65	60	74	64	67	68	91	70	14	46	79	76		
<b>1922</b>																											
January.....	72	73	72	73	53	97	85	75	85	44	101	56	46	65	63	79	73	76	84	100	72	19	48	78	76		
February.....	76	76	76	75	62	93	91	77	81	46	98	55	51	65	63	78	81	87	104	115	74	30	50	79	76		
March.....	81	80	80	78	72	94	90	80	78	49	97	70	57	68	68	80	88	97	120	134	77	45	53	71	76		
April.....	78	77	83	81	83	88	89	80	81	56	99	75	62	09	69	83	48	53	46	0	74	57	54	73	77		
May.....	82	81	88	86	90	94	94	85	87	60	97	80	64	73	72	86	53	53	51	0	73	24	68	57	71		
June.....	87	86	91	90	93	97	97	86	93	70	99	84	71	76	81	92	63	58	55	1	73	78	71	65	70		
July.....	84	86	88	89	94	96	97	87	92	70	100	83	74	80	83	93	61	56	43	2	75	102	72	71	72		
August.....	83	84	86	87	76	101	99	89	92	74	99	78	74	77	81	102	68	62	57	2	74	104	75	72	84		
September.....	89	88	89	89	83	102	94	91	92	68	105	84	77	78	83	97	88	82	93	75	74	82	76	78	80		
October.....	96	94	96	94	95	106	95	90	94	78	108	92	80	78	88	96	98	91	97	126	76	87	77	89	82		
November.....	99	97	99	98	96	112	101	91	95	87	114	91	83	81	92	98	94	90	132	80	84	79	89	87	96		
December.....	95	100	95	100	101	112	101	93	96	93	115	93	83	81	92	91	94	99	107	134	84	81	90	85	98		

YEAR AND MONTH	TOTAL INDUSTRIAL		MANUFACTURES														MINERALS									
	Un-adjusted	Ad-adjusted	Total		Iron and steel	Textiles	Food products	Paper and printing	Lumber	Automobiles	Leather and shoes	Cement, brick, and glass	Nonferrous metals	Petroleum refining	Rubber tires	Tobacco manufactures	Total		Bituminous coal	Anthracite coal	Crude petroleum	Iron ore shipments	Copper	Zinc	Lead	Silver
			Un-adjusted	Ad-adjusted													Un-adjusted	Ad-adjusted								
1923																										
January	99	100	99	100	104	108	92	93	98	94	112	103	87	84	94	97	97	100	107	124	88	-----	84	94	83	100
February	101	100	102	100	105	111	95	94	90	94	113	93	87	84	97	97	94	100	107	124	88	-----	82	95	84	98
March	105	103	106	103	105	113	105	93	97	97	117	97	93	84	103	95	97	106	112	133	94	-----	88	98	91	111
April	108	107	109	106	116	115	106	96	99	97	117	95	95	86	101	96	99	112	124	127	97	-----	87	99	93	123
May	108	107	108	107	120	112	101	98	98	99	117	94	97	86	98	94	108	108	118	120	99	100	92	99	95	123
June	105	105	104	104	114	109	95	99	98	102	117	92	95	88	88	95	113	107	120	101	112	94	97	95	96	101
July	100	103	98	102	115	102	96	96	102	100	112	92	95	87	66	95	115	109	113	119	104	118	98	96	93	105
August	100	102	98	101	109	100	100	96	99	100	108	94	95	86	67	93	116	110	112	123	106	119	99	95	89	94
September	101	100	101	101	105	102	100	94	102	110	107	97	94	87	71	98	106	98	109	44	107	114	99	93	86	93
October	101	99	99	98	97	97	105	94	100	110	102	94	92	87	76	97	113	105	102	116	108	112	99	93	75	99
November	99	97	98	96	89	98	104	91	99	112	102	95	97	89	81	98	108	104	95	115	110	121	99	98	84	96
December	92	96	92	95	89	93	102	92	100	117	98	98	97	90	85	95	93	99	92	117	100	-----	100	97	84	92
1924																										
January	98	100	98	99	99	97	101	98	97	115	97	98	96	92	96	102	99	103	109	113	95	-----	100	101	83	89
February	103	102	104	102	110	94	105	100	102	117	97	97	100	95	93	95	100	106	112	116	97	-----	101	94	95	112
March	102	100	104	101	112	92	103	102	98	105	96	96	98	97	95	98	93	101	99	117	98	-----	94	96	96	101
April	96	95	98	95	95	89	100	103	98	93	91	93	96	101	90	96	84	92	82	103	98	-----	98	95	97	88
May	90	89	89	88	76	82	102	99	95	80	91	94	102	101	83	102	93	93	80	109	97	99	97	100	103	102
June	85	85	83	83	65	77	102	97	91	71	89	93	100	99	80	100	96	91	78	108	95	93	95	99	105	92
July	81	83	79																							

<sup>1</sup> See footnote on preceding page.



## FACTORY EMPLOYMENT

(Relative to 1923 monthly average=100)

MONTH	NEW YORK <sup>1</sup>														
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
	Number of employees														
January.....		83.4	99.6	109.7	110.4	103.1	112.0	84.4	83.8	99.0	96.6	89.7	92.5	87.7	82.6
February.....		85.5	101.7	110.2	112.0	101.9	110.9	85.9	86.5	100.1	97.6	91.3	93.1	88.8	83.5
March.....		85.6	102.8	111.8	113.1	101.2	114.0	86.8	87.5	102.5	98.0	92.3	93.3	89.3	83.9
April.....		86.2	104.6	110.0	111.9	101.1	112.5	85.1	86.4	102.2	94.8	90.5	92.0	88.1	82.9
May.....		87.9	102.6	109.2	111.6	100.2	110.8	83.4	87.1	101.2	90.9	89.4	90.1	86.8	82.0
June.....	91.0	88.8	103.5	107.9	111.9	99.9	110.4	81.8	88.5	100.3	88.4	88.7	89.7	86.6	-----
July.....	87.8	87.9	102.5	107.4	113.7	102.5	109.8	80.2	88.5	99.6	85.0	87.8	87.6	85.1	-----
August.....	83.6	87.2	104.0	105.6	111.3	104.7	107.6	80.1	90.6	98.7	85.1	88.0	88.3	85.7	-----
September.....	87.4	92.0	106.7	107.5	111.0	105.7	106.2	83.2	92.4	99.1	88.4	90.3	90.4	87.5	-----
October.....	86.7	92.4	107.5	109.6	105.9	104.2	104.2	85.3	95.4	100.4	89.5	92.1	91.5	87.6	-----
November.....	84.8	96.3	109.7	110.5	109.5	107.1	98.6	85.2	97.6	99.0	89.5	92.7	90.3	85.9	-----
December.....	83.8	97.9	110.9	110.8	108.5	110.8	91.3	85.2	99.0	97.8	90.2	93.2	89.4	84.4	-----
Monthly average.....	<sup>2</sup> 86.4	89.3	104.7	109.2	110.9	103.5	107.4	83.9	90.3	100.0	91.2	90.5	90.7	87.0	-----
MONTH	Weekly pay roll														
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
	Number of employees														
January.....		38.2	49.5	61.5	68.1	85.4	109.0	85.5	75.2	95.2	98.7	93.2	98.6	95.1	88.6
February.....		39.2	51.4	61.9	72.6	82.5	107.8	84.5	76.7	95.1	99.3	93.8	97.7	96.0	89.4
March.....		40.0	52.7	64.8	77.6	82.6	116.7	85.0	78.9	101.2	101.3	96.4	99.5	97.6	91.3
April.....		40.0	54.3	62.6	79.0	82.1	114.8	81.8	76.6	101.3	96.4	92.0	97.5	94.3	87.6
May.....		41.2	53.6	64.4	81.6	81.8	115.7	79.1	78.7	102.7	91.9	92.1	94.9	92.9	87.8
June.....	42.0	41.6	54.8	64.2	84.0	82.6	116.6	77.2	80.9	102.6	88.3	91.0	95.5	92.7	-----
July.....	40.1	41.5	53.1	63.8	86.7	86.9	114.8	74.4	80.5	100.7	84.4	90.2	92.6	90.4	-----
August.....	38.1	41.5	55.2	63.7	86.8	91.6	113.4	74.8	83.4	98.3	85.6	91.0	93.6	92.2	-----
September.....	40.0	43.3	58.2	67.0	90.9	96.4	112.0	76.6	87.2	99.8	91.0	93.9	97.3	95.0	-----
October.....	39.0	45.0	59.0	69.7	87.0	93.4	110.7	76.8	89.6	102.2	90.4	96.6	98.5	94.2	-----
November.....	38.3	47.6	61.1	71.8	86.9	97.7	103.8	76.1	93.3	100.4	90.9	97.5	96.6	90.7	-----
December.....	38.5	48.6	63.1	72.0	92.3	107.1	95.1	77.9	95.9	100.5	93.5	96.4	96.7	91.7	-----
Monthly average.....	<sup>2</sup> 39.4	42.3	55.5	65.6	82.8	89.3	110.9	79.2	83.1	100.0	92.7	93.9	96.6	93.6	-----

ILLINOIS<sup>3</sup>

MONTH	Number of employees								Average weekly earnings						
	1921	1922	1923	1924	1925	1926	1927	1928	1922	1923	1924	1925	1926	1927	1928
January.....		85.4	96.8	95.9	89.2	90.3	88.6	80.5		93.3	100.7	102.1	104.3	104.3	101.6
February.....		85.4	99.2	98.0	90.6	91.8	89.1	82.7		94.8	104.8	103.9	108.1	106.6	106.9
March.....		87.0	101.6	98.0	89.6	92.1	88.9	83.7		95.4	102.0	102.3	105.9	106.1	105.2
April.....		87.6	102.4	96.8	88.7	91.8	88.3	82.6		99.0	102.8	103.3	106.6	107.4	104.5
May.....		90.3	102.5	94.4	87.8	91.6	87.8	83.2		103.4	102.2	103.7	106.8	105.7	-----
June.....		103.0	91.2	87.4	91.5	87.5	-----	-----		104.7	101.2	103.9	107.2	108.1	-----
July.....		89.5	100.9	87.1	86.3	91.6	84.3	-----		87.6	99.3	98.6	101.2	103.3	104.6
August.....	84.2	90.9	99.7	87.4	86.4	91.2	85.5	-----	88.5	98.8	99.6	103.1	105.7	105.7	-----
September.....	90.9	92.7	98.7	88.0	88.5	93.2	85.3	-----	93.8	102.4	100.4	98.2	103.3	102.1	-----
October.....	87.8	93.9	98.7	87.0	89.2	92.8	85.3	-----	91.7	104.2	102.2	105.2	107.2	105.6	-----
November.....	86.4	95.7	98.4	86.7	89.9	91.6	83.2	-----	92.1	100.2	102.0	105.1	105.6	104.3	-----
December.....	83.1	97.8	97.6	88.4	90.3	90.3	82.2	-----	93.9	104.4	104.7	106.2	106.6	104.0	-----
Monthly average.....	<sup>4</sup> 86.5	90.6	100.0	91.6	88.7	91.7	86.3	-----	<sup>4</sup> 91.3	100.0	101.8	103.2	105.9	105.4	-----

WISCONSIN<sup>5</sup>

MONTH	Employees on pay roll						Total pay roll						Average weekly earnings					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
January.....	97.1	97.1	95.6	99.9	93.5	90.3	90.8	94.4	97.9	104.7	96.9	88.9	93.5	101.4	102.5	104.7	102.6	98.4
February.....	99.9	96.7	97.3	101.7	96.2	92.1	96.1	105.2	104.2	112.1	104.7	99.1	96.2	97.6	107.1	110.2	108.8	107.6
March.....	100.4	101.7	97.7	101.3	96.9	92.6	97.1	107.1	103.6	112.3	104.2	106.7	96.7	105.3	106.1	110.8	107.6	115.2
April.....	101.2	99.3	97.7	100.2	95.1	-----	100.2	102.5	104.1	110.7	102.9	-----	98.9	103.3	106.6	110.4	108.1	-----
May.....	99.4	94.1	98.4	98.8	93.4	-----	103.2	98.7	107.4	109.1	99.4	-----	103.8	104.8	109.1	110.3	106.5	-----
June.....	100.9	90.4	99.4	98.4	94.1	-----	104.1	90.2	105.8	107.3	102.2	-----	103.2	99.8	106.4	109.0	108.7	-----
July.....	104.1	93.7	104.2	102.2	97.1	-----	99.5	87.8	106.3	103.4	98.1	-----	95.5	93.7	101.9	101.3	101.0	-----
August.....	102.8	93.4	100.9	102.3	98.7	-----	104.1	92.9	109.6	107.9	106.9	-----	101.2	99.5	108.6	105.4	108.2	-----
September.....	99.9	92.3	100.7	100.6	95.9	-----	101.2	92.1	106.4	106.3	101.7	-----	101.2	99.8	105.8	105.6	105.9	-----
October.....	98.2	93.3	100.1	98.2	94.9	-----	102.6	97.3	110.5	109.2	100.6	-----	104.5	104.2	110.3	111.2	105.9	-----
November.....	98.7	94.4	99.5	96.5	90.9	-----	102.7	97.6	106.9	100.2	99.6	-----	104.1	103.4	107.5	103.9	105.9	-----
December.....	97.2	94.6	100.4	94.3	90.7	-----	98.5	99.1	108.1	97.9	99.5	-----	101.4	104.7	107.7	102.8	105.3	-----
Monthly average.....	100.0	95.1	99.3	99.5	94.8	-----	100.0	97.1	105.9	106.8	101.4	-----	100.0	101.5	106.6	107.1	106.2	-----

<sup>1</sup> Compiled from data furnished by the New York State Department of Labor from reports of 1,648 firms, employing more than one-third of the factory workers of the State.<sup>2</sup> Seven months' average.<sup>3</sup> Compiled from data furnished by Illinois Department of Labor from about 1,400 manufacturers, employing about 400,000 people, based on pay roll nearest to the 15th of the month.<sup>4</sup> Five months' average.<sup>5</sup> Compiled by the Industrial Commission of Wisconsin from reports of manufacturing plants in Wisconsin.

## FACTORY EMPLOYMENT—Continued

MONTH	OKLAHOMA <sup>1</sup>														
	Employees on pay roll (number)					Total pay roll (dollars)					Average weekly earnings (dollars)				
	1924	1925	1926	1927	1928	1924	1925	1926	1927	1928	1924	1925	1926	1927	1928
January.....		27,463	30,351	31,141	25,615		\$741,553	\$832,895	\$968,279	\$684,796		\$27.00	\$27.44	\$27.88	\$26.73
February.....		28,067	30,629	30,226	24,251		751,897	845,745	847,568	719,180		26.79	27.61	28.04	29.65
March.....		28,952	30,754	31,423	24,492		772,158	811,834	862,666	634,029		26.67	26.40	27.45	25.84
April.....		28,677	30,539	31,226	26,205		780,170	842,252	858,228	708,792		27.21	27.58	27.48	27.04
May.....		28,537	31,193	29,865	26,553		769,118	858,684	813,902	702,263		26.95	27.53	27.25	26.44
June.....	28,213	28,570	31,548	30,059		\$739,094	774,043	864,559	819,301		\$26.20	27.09	27.40	27.24	
July.....	28,517	28,978	31,368	30,173		723,282	778,779	849,582	814,180		25.36	26.88	27.08	26.98	
August.....	27,867	29,424	32,012	30,718		731,607	777,485	861,375	819,430		26.25	26.42	26.91	26.66	
September.....	28,077	29,665	32,947	29,948		735,946	776,741	903,086	970,393		26.21	26.18	27.41	32.73	
October.....	28,550	29,874	31,499	27,624		777,554	808,347	876,355	740,591		27.23	27.06	27.82	26.89	
November.....	28,085	29,889	31,750	26,667		769,435	813,057	887,549	676,490		27.40	27.20	27.95	25.36	
December.....	28,329	30,329	31,264	26,883		774,189	833,461	887,128	673,185		27.33	27.48	28.38	25.37	
Total.....	197,638	348,425	375,854	355,953		5,251,107	9,376,809	10,321,044	9,764,213						
Monthly average.....	28,234	29,035	31,321	29,663		750,158	781,401	860,087	813,684		26.57	26.91	27.46	27.44	

## EMPLOYEES ON PAY ROLL

MONTH	MILWAUKEE <sup>2</sup>								CLEVELAND <sup>3</sup>							
	1921	1922	1923	1924	1925	1926	1927	1928	1921	1922	1923	1924	1925	1926	1927	1928
	Number															
January.....	27,318	23,135	34,525	33,723	31,680	35,782	35,039	35,492	77,788	69,352	89,675	88,400	69,406	78,899	75,335	71,121
February.....	27,088	23,659	35,476	34,409	31,350	35,844	35,745	36,111	74,350	73,158	91,376	88,288	69,861	79,657	76,983	72,979
March.....	23,052	25,994	35,140	33,207	32,257	35,595	35,942	36,883	74,829	74,711	93,617	77,033	71,544	80,244	79,228	74,274
April.....	23,247	26,308	35,564	30,376	32,123	34,951	35,326	36,871	74,629	78,144	93,244	73,431	72,553	79,408	80,251	76,118
May.....	23,261	26,884	35,215	28,312	32,050	34,307	34,604	36,777	75,215	80,577	93,642	70,146	72,335	90,380	79,528	76,556
June.....	22,934	27,866	35,776	25,643	32,239	34,233	34,542		65,747	84,198	91,706	67,526	71,680	79,866	78,448	
July.....	23,467	28,844	35,740	24,328	32,823	34,531	35,337		61,423	80,348	93,151	65,214	71,153	80,803	75,329	
August.....	23,511	29,008	34,570	25,925	33,243	35,188	35,361		67,969	84,451	92,195	64,770	71,779	81,712	74,500	
September.....	23,575	29,046	34,308	25,907	34,057	35,767	35,544		68,219	83,089	91,724	66,392	71,865	81,790	72,247	
October.....	24,062	31,988	33,292	26,436	34,784	34,973	35,195		66,797	84,796	89,907	76,850	74,445	78,175	69,046	
November.....	23,567	32,236	30,540	29,140	34,835	34,398	35,176		67,349	86,384	87,358	66,930	77,381	74,728	69,706	
December.....	24,410	32,847	33,363	30,096	35,164	34,124	34,592		64,809	87,650	87,802	66,319	78,054	75,289	68,408	
Monthly average.....	24,199	28,151	34,459	28,959	33,050	34,974	35,193		69,927	80,572	91,283	72,608	72,672	80,079	74,917	

MONTH	MASSACHUSETTS <sup>4</sup>										MARYLAND <sup>5</sup>				
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1924	1925	1926	1927	1928
	Relative to 1919-1923 average=100										Relative to 1924 monthly average=100				
January.....	106.4	115.8	81.3	90.7	102.0	94.7	90.7	92.7	90.7	82.3	103.4	95.1	102.9	100.6	85.4
February.....	103.6	114.6	85.3	92.3	104.3	95.3	92.2	94.0	92.3	83.3	104.5	99.3	103.6	102.8	87.4
March.....	104.1	115.6	87.7	92.3	106.1	95.4	92.5	95.4	91.4	82.1	103.1	101.5	104.2	96.9	88.9
April.....	103.9	114.4	88.2	89.5	105.8	93.5	91.3	93.4	89.3	80.4	103.7	100.7	103.4	97.8	88.5
May.....	105.4	113.1	89.2	89.3	105.2	89.5	89.4	92.0	87.7	75.4	101.6	98.9	102.5	95.1	
June.....	107.9	110.1	89.4	90.0	102.4	85.3	87.1	89.4	85.9		97.9	98.4	102.3	93.0	
July.....	109.4	106.6	88.2	90.2	100.6	81.7	86.3	87.1	83.9		95.7	97.0	101.9	90.7	
August.....	111.1	104.6	89.2	92.3	100.0	84.6	88.3	89.6	85.9		94.4	99.0	103.4	92.4	
September.....	112.6	102.3	90.9	96.2	100.8	88.0	90.1	92.4	87.1		99.0	103.1	107.0	94.0	
October.....	113.5	100.4	91.3	99.3	100.9	90.8	92.2	94.6	87.4		100.0	103.1	106.9	92.5	
November.....	115.0	93.4	91.3	101.3	99.8	91.3	93.1	93.7	86.2		98.6	102.2	104.8	89.1	
December.....	117.1	85.3	90.9	101.3	97.3	91.7	92.4	91.3	83.0		95.1	103.7	103.2	88.3	
Monthly average.....	109.2	106.4	88.6	93.7	102.1	90.2	90.5	92.1	87.6		100.0	100.2	103.8	94.4	

MONTH	IOWA <sup>7</sup>							MONTH	IOWA <sup>7</sup>						
	1922	1923	1924	1925	1926	1927	1928		1922	1923	1924	1925	1926	1927	1928
	Relative to 1923 monthly average=100								Relative to 1923 monthly average=100						
January.....	66.4	93.9	100.3	106.9	119.5	113.3	117.9	August.....	78.3	102.3	99.5	111.8	123.0	118.7	-----
February.....	68.6	96.3	99.2	108.0	119.3	116.0	119.0	September.....	82.3	103.2	101.5	114.5	125.1	118.8	-----
March.....	72.0	97.8	101.3	109.2	119.4	116.1	121.0	October.....	86.5	103.1	103.2	121.5	125.7	119.7	-----
April.....	71.7	99.6	100.0	108.9	121.2	119.5	-----	November.....	91.9	104.4	105.8	121.2	124.7	118.1	-----
May.....	72.4	99.4	97.6	109.3	120.8	118.3	-----	December.....	92.0	99.7	106.4	121.7	124.1	122.0	-----
June.....	75.4	99.7	99.8	110.7	122.9	120.2	-----	Monthly average..	77.8	100.0	101.0	112.9	122.4	118.2	-----
July.....	75.8	100.7	97.5	110.9	122.5	117.2	-----								

<sup>1</sup> Compiled by the Oklahoma Department of Labor from reports of 710 establishments throughout the period.

<sup>2</sup> Seven months' average.

<sup>3</sup> Compiled by the Milwaukee Public Employment Office from reports from 50 identical manufacturers, 4 of which are now out of business. Data are for the end of the month.

<sup>4</sup> Compiled by the Cleveland Chamber of Commerce from reports of 100 identical manufacturers, except that in November, 1925, when one plant went out of business, another was substituted. Data are for the end of the month.

<sup>5</sup> Compiled by the Massachusetts Department of Labor and Industries from about 1,000 manufacturers. The same firms do not report each month and the index is thus compiled from link relatives.

<sup>6</sup> Compiled from data furnished by the Maryland Commission of Labor and Statistics from about 250 manufacturers each month, link relatives being used for identical concerns from month to month. Monthly reports show details by industries.

<sup>7</sup> Compiled from data supplied by the Iowa Bureau of Labor from reports of about 300 firms, the index being compiled by the link-relative method based on reports of identical firms for succeeding months.

## TREND OF BUSINESS MOVEMENTS

The following table contains a summary of the monthly figures, designed to show the trend in important industrial and commercial movements. These data represent continuations of the figures presented in the latest semiannual number (February, 1928) in which monthly figures for 1926 and 1927 may be found, together with explanations as to the sources and exact extent of the figures quoted. The figures given below should always be read in connection with those explanations. Data on stocks, unfilled orders, etc., are given as of the end of the month referred to. For explanations of relative numbers, including base periods, see introduction on inside front cover.

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	January	Febru-ary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
TEXTILES												
Wool												
Receipts at Boston:												
Total.....thous. of lbs..	17,281	18,085	24,706	21,346	33,331	28,025	26,394	+56.1	+26.3	131,291	114,749	-12.6
Domestic.....thous. of lbs..	8,044	6,399	6,498	8,138	25,843	9,522	17,938	+217.6	+44.1	48,718	54,922	+12.7
Foreign.....thous. of lbs..	9,237	11,686	18,208	13,208	7,488	18,503	8,456	-43.3	-11.4	82,573	59,827	-27.5
Imports:												
In condition imported.....thous. of lbs..	24,759	21,305	29,473	20,474	25,040	29,239	18,117	+22.3	+38.2	142,427	121,051	-15.0
Grease equivalent.....thous. of lbs..	28,353	23,646	33,120	23,600	28,163	33,177	20,362	+19.3	+38.3	159,873	136,882	-14.4
Consumption by textile mills, grease equivalent.....thous. of lbs..	45,087	48,324	46,757	38,855	43,911	43,971	44,338	+13.0	-1.0	234,898	222,934	-5.1
Machinery activity, hourly:												
Looms—												
Wide.....per ct. of hours active..	62	60	57	58	60	57	58	+3.4	+3.4			
Narrow.....per ct. of hours active..	52	51	57	51	53	60	61	+3.9	-13.1			
Carpet and rug.....per ct. of hours active..	68	67	68	71	65	67	67	-8.5	-3.0			
Sets of cards.....per ct. of hours active..	78	78	79	78	80	78	80	+2.6	0.0			
Combs.....per ct. of hours active..	75	80	70	64	64	77	74	0.0	-13.5			
Spinning spindles—												
Woolen.....per ct. of hours active..	78	77	76	75	79	77	80	+5.3	-1.2			
Worsted.....per ct. of hours active..	66	65	61	56	55	63	61	-1.8	-9.8			
Prices:												
Raw, territory, fine, scoured, dolls. per lb..	1.17	1.20	1.20	1.19	1.18	1.08	1.08	-8	+9.3			
Raw, Ohio and Pa. fleeces,												
1/4 blood, combing, grease, dolls. per lb..	.50	.52	.52	.53	.55	.43	.41	+3.8	+34.1			
Worsted yarn.....dolls. per lb..	1.43	1.50	1.53	1.55	1.58	1.35	1.33	+1.9	+18.8			
Women's dress goods, French												
serge, 39 in.....dolls. per yd..	1.00	1.00	1.03	1.03	1.03	.98	.98	0.0	+5.1			
Suiting, 13-oz.....dolls. per yd..	1.935	1.953	2.008	2.008	2.008	1.913	1.913	0.0	+5.0			
Cotton												
Receipts into sight.....thous. of bales..	898	633	715	714	693	877	691	-2.9	+3	5,642	3,653	-35.3
Imports, unmanufactured.....bales..	41,445	38,200	41,433	18,196	19,842	38,053	21,347	+9.0	-7.1	197,313	159,116	-19.4
Exports, unmanufactured (incl. linters).....bales..	728,935	634,890	614,428	485,219	591,345	855,449	628,132	+21.9	-5.9	4,739,417	3,054,817	-35.5
Consumption by textile mills.....bales..	582,417	573,810	581,318	525,158	577,710	618,279	629,948	+10.0	-8.3	3,134,063	2,840,413	-9.4
Stocks, domestic, end of month:												
Total, mills and w'houses.....thous. of bales..	6,721	5,982	5,104	4,429	3,637	5,561	4,659	-17.9	-21.9			
Mills.....thous. of bales..	1,707	1,669	1,593	1,508	1,331	1,891	1,792	-11.7	-25.7			
Warehouses.....thous. of bales..	5,014	4,313	3,511	2,921	2,306	3,770	2,867	-21.1	-19.6			
Stocks, world visible, end of month:												
Total.....thous. of bales..	7,163	6,702	6,273	6,023	5,630	7,380	6,507	-6.5	-13.5			
American.....thous. of bales..	5,470	5,020	4,543	4,102	3,533	5,718	4,815	-13.9	-26.6			
Prices:												
To producer, all grades.....dolls. per lb..	.186	.170	.178	.157	.201	.123	.139	+7.5	+44.6			
In New York, middling.....dolls. per lb..	.190	.185	.195	.203	.217	.146	.163	+6.9	+33.1			
Cotton Yarn												
Machinery activity of spindles:												
Active spindles.....thousands..	31,698	31,687	31,413	30,965	29,060	32,887	32,905	-6.2	-11.7			
Total activity.....millions of hours..	8,259	7,969	8,312	7,416	7,959	8,788	8,983	+7.3	-11.4			
Activity per spindle.....hours..	227	220	231	206	222	238	244	+7.8	-9.0			
Ratio to capacity.....per cent..	101.5	101.2	96.8	94.8	95.0	105.6	108.9	+2	-12.8			
Carded sales yarn:												
Production.....thous. of lbs..	18,934	18,642	22,598	16,737	16,358			-2.3				
Stocks, end of month.....thous. of lbs..	13,444	13,611	13,475	13,390	13,427			+3				
Unfilled orders, end of mo.....thous. of lbs..	38,287	38,457	33,030	31,925	28,484			-10.8				
Prices:												
22/1 cones, Boston.....dolls. per lb..	.369	.360	.366	.366	.380	.312	.335	+3.8	+13.4			
40/1s, southern spinning.....dolls. per lb..	.523	.494	.483	.480	.480	.446	.456	0.0	+5.3			
Cotton Goods												
Cotton textiles:												
Production.....thous. of yds..	297,669	300,323	358,025	286,005	349,325			+22.1			1,591,347	
New orders.....thous. of yds..	194,114	256,328	349,855	335,117	269,845			-19.5			1,405,259	
Shipments.....thous. of yds..	266,947	285,404	337,573	270,172	326,244			+20.8			1,486,340	
Stocks, end of month.....thous. of yds..	367,223	382,143	402,594	418,427	441,508			+5.5				
Unfilled orders, end month.....thous. of yds..	313,893	284,817	297,069	362,044	305,645			-15.6				
Fine cotton goods, production.....pieces..	401,676	429,095	461,429	255,949	128,604	492,467	479,275	-49.8	-73.2	2,388,525	1,676,753	-29.8
Cotton cloth:												
Imports.....thous. of sq. yds..	6,472	5,813	7,921	6,418	5,722	6,369	6,892	-10.8	-17.0	28,733	32,346	+12.6
Exports.....thous. of sq. yds..	34,963	33,380	42,237	39,831	43,011	54,236	51,796	+8.0	-17.0	226,278	193,422	-14.5
Fabrics for tire manufacture,												
consumption.....thous. of lbs..	16,040	16,924	18,854	18,310		17,238	16,029			2 61,856	2 70,128	+13.4
Elastic webbing, shipments.....thous. of dolls..	1,159	1,374	1,627	1,332	1,415			+6.2			6,907	
Prices:												
Print cloth, 64 x 60.....dolls. per yd..	.080	.077	.076	.076	.079	.068	.071	+3.9	+11.3			
Sheeting, brown.....dolls. per yd..	.098	.095	.092	.091	.092	.081	.082	+1.1	+12.2			
Cotton goods (Fairchild), rel. to 1911-1913..	166	163	161	161	164	146	147	+1.9	+11.6			

\* Cumulative through Apr. 30.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	January	Feb-ruary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
TEXTILES—Continued												
Cotton Finishing												
White, dyed and printed (outside mills):												
Billings, finished goods.....thous. of yds..	68,737	78,786	89,740	75,378	73,539	91,675	85,054	-2.4	-13.5	443,860	386,180	-13.0
New orders, gray yardage.....thous. of yds..	75,665	79,184	81,328	68,316	72,961	85,323	77,170	+6.8	-5.5	444,825	377,454	-15.1
Shipments, finished goods.....cases.....	44,673	49,035	51,495	43,378	47,555	51,869	49,711	+9.6	-4.3	259,003	236,136	-8.8
Stocks, finished goods, end mo.....cases.....	40,751	38,698	39,787	40,876	40,449	38,275	37,340	-1.0	+8.3			
Operating activity.....per ct. of capacity.....	62	69	69	64	62	78	72	-3.1	-13.9			
Unfilled orders, end of month.....days.....	4.7	5.2	4.8	4.5	4.3	6.2	6.1	-4.4	-29.5			
Printed only (mills and outside):												
Production.....thous. of yds..	49,826	64,015	75,725	69,378	73,520			+6.0			332,464	
Stocks, end of month.....thous. of yds..		74,326	75,153	78,151	76,149			-2.6				
Silk												
Imports, raw.....thous. of lbs..	7,405	6,657	6,725	6,561	9,133	6,418	7,322	+39.2	+24.7	34,396	36,481	+6.1
Deliveries (consumption).....bales.....	52,420	50,679	52,011	41,258	46,367	47,853	45,486	+12.4	+1.9	233,748	242,735	+3.8
Stocks, end of month:												
At warehouses.....bales.....	47,528	41,677	40,186	35,483	42,088	31,749	35,527	+18.6	+18.5			
At manufacturing plants.....bales.....	26,700	27,567	23,096	24,369	23,523	22,581	18,984	-3.5	+23.9			
Silk machinery activity:												
Broad looms.....per cent of normal.....	94.6	99.1	98.8	88.5		86.4	87.3					
Narrow looms.....per cent of normal.....	50.7	50.6	52.5	49.8		62.6	61.6					
Spinning spindles.....per cent of normal.....	77.3	79.1	67.7	64.2		79.7	76.5					
Price, Japanes, 13-15, New York, dolls. per lb..	5.145	5.292	5.194	5.390	4.998	6.125	5.831	-7.3	-14.3			
Rayon												
Imports.....thous. of lbs..	1,366	1,146	1,080	844	902	1,518	1,799	+6.9	-49.9	6,587	5,338	-19.0
Stocks, bonded, end month.....thous. of lbs..	2,915	3,048	3,263	3,164		1,022	1,366					
Price, 150 denier, A grade, N. Y. dolls. per lb..	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.0	0.0			
Clothing												
Men's and boys' garments cut: *												
Suits.....thous. of garments.....	2,207	2,408	2,265	1,584		1,932	1,775			2,915	2,846	-7.5
Separate trousers.....thous. of garments.....	2,021	2,043	2,329	1,662		2,032	2,032			2,806	2,805	-8.5
Overcoats.....thous. of garments.....	269	280	280	199		255	378			1,203	1,028	-14.5
Overalls:												
Cut.....dozen garments.....	353,790	376,887	386,482	336,530							1,453,689	
Net shipments.....dozen garments.....	294,231	352,708	370,541	316,120							1,333,600	
Unfilled orders, end of mo. dozen garments.....	99,039	105,970	104,143	123,980								
Hosiery												
Production.....thous. of dozen pairs.....	3,578	3,603	3,808	3,304		3,709	3,694			15,189	14,293	-5.9
Net shipments.....thous. of dozen pairs.....	3,033	3,279	3,808	3,217		3,618	3,551			14,456	13,337	-7.7
Stocks, end of month.....thous. of dozen pairs.....	7,983	8,466	8,494	8,618		7,758	7,914					
New orders.....thous. of dozen pairs.....	3,109	3,137	3,363	3,418		3,963	4,058			15,557	13,027	-16.3
Unfilled orders, end of mo. thous. of dozen pairs.....	5,380	5,167	4,532	4,520		5,807	6,141					
Knit Underwear												
Production.....thous. of dozen garments.....	1,022	1,132	1,215	1,151	1,162	1,108	1,082	+1.0	+7.4	5,259	5,682	+8.0
Net shipments.....thous. of dozen garments.....	917	1,042	1,194	965	1,043	1,013	958	+8.1	+8.9	4,865	5,161	+6.1
Stocks, end of mo.....thous. of dozen garments.....	1,202	1,209	1,250	1,520	1,657	1,395	1,527	+9.0	+8.5			
New orders.....thous. of dozen garments.....	1,309	1,025	1,208	934	1,041	949	952	+11.5	+9.3	5,772	5,517	-4.4
Unfilled orders, end of month.....thous. of dozen garments.....	2,313	2,275	2,281	2,245	2,228	2,566	2,583	-8	-13.7			
Burlaps and Fibers												
Imports:												
Burlaps.....thous. of lbs..	48,922	66,102	63,901	62,050	58,124	50,271	62,760	-6.3	-7.4	249,978	299,099	+19.7
Fibers (unmanufactured).....long tons.....	39,268	28,493	32,882	23,682	21,846	43,437	30,569	-7.8	-28.5	153,745	146,171	-4.9
Pyroxylin Coated Textiles												
Pyroxylin spread.....thous. of lbs..	4,068	4,752	5,670	4,636	5,422	3,559	3,854	+17.0	+40.7	18,292	24,548	+34.2
Shipments billed.....thous. of linear yards.....	3,051	3,654	4,469	3,705	3,991	2,752	2,930	+7.7	+36.2	13,707	18,870	+37.7
Unfilled orders, end mo. thous. of linear yards.....	3,588	4,715	4,499	3,817	4,005	2,995	2,768	+4.9	+44.7			
Fur												
Sales by dealers.....thous. of dollars.....	7,081	13,919	14,572	11,113	12,905	17,544	17,551	+16.1	-26.5	92,619	59,590	-35.9
Buttons												
Fresh-water pearl buttons:												
Production.....ration to capacity.....	48.8	51.1	51.9	50.7	48.8	50.9	51.5	-3.7	-5.2			
Stocks, end of month.....thous. of gross.....	10,902	10,748	10,914	10,949	11,098	9,900	9,830	+1.4	+12.9			
Ocean pearl buttons: *												
Production.....number of gross.....	189,864	233,393	225,053	219,571	206,129	209,227	208,226	-6.1	-1.0	944,056	1,074,010	+13.8
Shipments.....number of gross.....	223,095	258,195	229,397	216,842	203,755	210,455	216,928	-6.0	-6.1	1,102,323	1,131,284	+2.6
New orders.....number of gross.....	300,605	336,045	236,835	215,522	198,998	203,227	208,774	-7.7	-4.7	1,312,635	1,288,005	-1.9
Stocks, end of month.....number of gross.....	565,248	577,789	585,268	584,308		539,676	534,801					

\* See tables on p. 48 of the May, 1928, issue for earlier data.

† Cumulative through Apr. 30.

‡ Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
IRON AND STEEL												
Iron												
Manganese ore, imports.....thous. of long tons..	9	18	13	14	16	30	18	+14.3	-11.1	111	70	-36.9
Iron ore:												
Imports.....thous. of long tons..	251	230	163	225	211	240	186	-6.2	+13.4	1,049	1,080	+3.0
Shipments from mines.....thous. of long tons..				6	5,363	1,560	7,752		-30.8	9,312	5,369	-42.3
Receipts—												
Lake Erie ports and furnaces.....thous. of long tons..					2,848	733	4,969		-42.7	5,702	2,848	-50.1
Other ports.....thous. of long tons..				6	1,517	316	2,183		-30.5	2,499	1,523	-39.1
Consumption.....thous. of long tons..	4,303	4,395	4,808	4,781	4,948	5,019	5,013	+3.5	-1.3	23,821	23,235	-2.5
Stocks, end of month—												
Total.....thous. of long tons..	33,350	29,003	24,259	17,570	18,877	20,753	22,971	+7.4	-17.8			
At furnaces.....thous. of long tons..	27,062	23,015	18,691	14,388	13,942	16,050	18,215	-3.1	-23.5			
On Lake Erie docks.....thous. of long tons..	6,288	5,988	5,568	5,182	4,935	4,703	4,756	-4.8	+3.8			
Pig-iron production:												
Total, United States.....thous. of long tons..	2,870	2,900	3,200	3,186	3,284	3,422	3,391	+3.1	-3.2	16,341	15,440	-5.5
Merchant furnaces.....thous. of long tons..	715	625	612	630	631	784	772	+2	-18.3	3,808	3,213	-15.6
Canada.....thous. of long tons..	65	65	78	75	88	77	79	+17.3	+11.4	335	371	+10.7
Furnaces in blast, end of month:												
Furnaces.....number	185	187	197	195	198	220	211	+1.5	-6.2			
Capacity.....long tons per day	96,640	100,060	104,650	104,015	106,145	112,955	107,445	+2.0	-1.2			
Per cent of total.....per cent	52.9	53.6	56.8	56.9	57.7	60.4	58.3	+1.4	-1.0			
Ohio gray-iron foundries:												
Meltings—												
Actual.....long tons..	13,977	15,270	13,355	19,039		19,189	20,117			266,292	261,641	-7.0
Normal.....long tons..	16,097	15,245	12,123	17,579		21,159	23,241			276,658	261,044	-20.4
Ratio to normal.....per cent of normal	86.8	100.0	110.0	108.0		90.6	86.5					
Stocks, end of month.....per cent of normal	129	135	149	143		99	111					
Receipts.....per cent of normal	88	105	115	115		79	86					
Malleable castings:												
Production.....short tons..	50,096	54,031	57,649	52,004	56,412	55,318	53,698	+8.5	+5.1	277,297	270,192	-2.6
Operating activity.....per ct. of capacity	41.9	62.3	67.6	61.0	66.0	55.3	53.4	+8.2	+23.6			
Shipments.....short tons..	44,458	49,253	58,254	52,383	53,222	56,595	53,501	+1.6	-5	265,440	257,570	-3.0
New orders.....short tons..	49,251	51,414	56,634	50,296	50,489	53,002	46,119	+4	+9.5	250,286	258,084	+3.1
Wholesale prices:												
Foundry, No. 2, northern.....dolls. per long ton..	19.01	19.01	19.01	19.01	18.96	20.26	20.26	-3	-6.4			
Basic (valley furnace).....dolls. per long ton..	17.00	17.00	17.00	17.00	16.30	19.00	18.20	-4.1	-10.4			
Composite pig iron.....dolls. per long ton..	18.37	18.45	18.40	18.40	18.18	20.04	19.89	-1.2	-8.6			
Cast-Iron Boilers and Radiators												
Round boilers:												
Production.....thous. of lbs..	9,037	13,341	15,631	12,452	14,232	23,719	23,128	+14.3	-38.5	111,882	64,693	-42.2
Shipments.....thous. of lbs..	11,009	10,620	10,407	9,280	12,166	19,352	20,992	+31.1	-42.0	85,030	53,482	-37.1
New orders.....thous. of lbs..	11,511	10,566	11,238	9,554	14,888	17,627	23,086	+55.8	-35.5	85,997	57,757	-32.8
Stocks, end of month.....thous. of lbs..	79,400	81,894	87,666	90,529	91,098	106,225	108,721	+6	-16.2			
Square boilers:												
Production.....thous. of lbs..	24,743	29,068	36,544	28,994	34,790	20,442	21,367	+20.0	+62.8	109,235	154,089	+41.1
Shipments.....thous. of lbs..	19,292	18,099	16,474	15,787	20,268	16,164	18,539	+28.4	+9.3	74,467	89,920	+20.8
New orders.....thous. of lbs..	18,230	19,466	17,006	15,582	29,021	15,610	21,439	+86.2	+35.4	76,503	99,305	+29.8
Stocks, end of month.....thous. of lbs..	120,522	131,341	151,678	164,514	181,972	105,300	106,933	+10.6	+70.2			
Radiators:												
Production.....thous. sq. ft. heating surface..	12,581	14,774	18,039	13,651	16,513	15,326	14,797	+21.0	+11.6	76,452	75,558	-1.2
Shipments.....thous. sq. ft. heating surface..	10,661	9,357	7,994	7,541	9,730	10,594	12,965	+29.0	-25.0	51,828	45,283	-12.6
New orders.....thous. sq. ft. heating surface..	9,990	12,139	8,792	8,928	13,572	10,873	15,810	+52.0	-14.2	54,904	53,421	-2.7
Stocks, end of month.....thous. sq. ft. heating surface..	48,714	54,353	64,467	70,845	77,926	53,598	60,439	+10.0	+28.9			
Gas-fired boilers:												
Shipments.....dollars	96,589	128,824	177,859	161,976								
Shipments.....thous. B. t. u.	86,892	103,250	147,845	119,354								
Production.....thous. B. t. u.	132,733	165,901	217,385	161,317								
Stocks, end of month.....thous. B. t. u.	846,845	880,423	923,617	983,786								
Crude Steel												
Steel ingots, production:												
United States, total.....thous. of long tons..	3,991	4,045	4,508	4,303	4,203	4,127	4,047	-2.3	+3.9	20,311	21,050	+3.6
Ratio to capacity.....per cent	81	86	89	91	83	86	85	-8.8	-2.4			
Canada.....thous. of long tons..	84	99	118	113	118	109	97	+4.4	+21.6	428	532	+24.3
U. S. Steel Corporation, unfilled orders, end mo.....thous. of long tons..	4,276	4,398	4,335	3,872	3,417	3,456	3,051	-11.8	+12.0			
Steel castings: †												
Production—												
Total.....short tons..	74,082	87,323	93,521	85,669	91,638	94,677	86,942	+7.0	+5.4	460,456	432,233	-6.1
Ratio to capacity.....per cent	51	60	65	59	63	66	60	+6.8	+5.0			
Railroad specialties.....short tons..	28,714	37,719	38,448	32,619	36,558	39,189	35,236	+12.1	+3.8	185,016	174,058	-5.9
Miscellaneous.....short tons..	45,368	49,604	55,073	53,050	55,080	55,488	51,706	+3.8	+6.5	275,440	258,175	-6.3
New orders—												
Total.....short tons..	91,072	90,677	83,285	83,737	84,824	81,044	72,744	+1.3	+16.6	446,291	433,595	-2.8
Ratio to capacity.....per cent	63	63	58	58	59	56	50	+1.7	+18.0			
Railroad specialties.....short tons..	41,276	41,096	30,992	32,910	34,954	32,279	28,946	+6.5	+20.8	190,721	181,128	-5.0
Miscellaneous.....short tons..	49,796	49,581	52,293	50,827	49,870	48,765	43,798	-2.1	+13.9	255,570	252,467	-1.2
Sheets, black, blue, galvanized, and full finished:												
Production—												
Total.....net tons..	316,541	330,565	366,127	327,909	349,367	316,100	309,360	+6.5	+12.9	1,523,827	1,690,509	+10.9
Ratio to capacity.....per cent	89.6	98.7	103.0	97.8	95.6	103.1	98.7	-2.2	-3.1			
Stocks, end of month—												
Total.....net tons..	170,453	169,918	163,846	163,053	166,711	169,977	173,986	+2.2	-4.2			
Unsold.....net tons..	59,508	55,594	53,144	53,853	54,047	46,901	45,670	+4	+18.3			
Shipments.....net tons..	274,126	298,420	359,532	327,674	326,324	300,858	302,759	-4	+7.8	1,442,484	1,586,076	+10.9
New orders.....net tons..	302,921	266,210	399,441	284,070	250,316	292,965	212,337	-11.9	+17.9	1,354,510	1,502,958	+11.0
Unfilled orders, end of month.....net tons..	694,197	667,054	675,196	571,761	527,477	491,290	439,067	-7.7	+20.1			

\* See table on p. 18 of the April, 1928, issue for earlier data.

† See table on p. 20 of the March, 1928, issue for earlier data.

‡ Cumulative through Apr. 30.

§ Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
IRON AND STEEL—Continued												
Crude Steel—Continued												
Steel barrels:												
Production.....barrels.....	475,906	518,944	636,855	667,827	696,281	599,771	588,077	+4.3	+18.4	2,796,969	92,995,813	+7.
Ratio to capacity.....per cent.....	43.7	46.2	55.1	57.5	59.8	53.8	52.2	+4.0	+14.6			
Shipments.....barrels.....	474,159	514,362	644,321	661,949	694,843	609,090	575,712	+5.0	+20.7	2,782,324	2,989,834	+7.5
Stocks, end of month.....barrels.....	54,353	58,935	51,269	57,147	58,585	50,070	62,435	+2.5	-6.2			
Unfilled orders, end of month.....barrels.....	1,351,797	1,417,627	1,343,553	1,276,994	1,257,117	1,365,555	1,197,894	-1.6	+4.9			
Track work, production.....short tons.....	9,332	11,371	15,058	13,511		17,081	16,768			62,944	49,272	-21.7
Iron, steel, and heavy hardware sales.....rel. to Jan., 1921.....	157	158	187	187		199	198					
Lock washers, shipments.....thous. of dolls.....	219	236	293	270	282	273	275	+4.4	+2.5	1,311	1,300	-0.8
Wholesale prices:												
Steel billets, Bessemer.....dolls. per long ton.....	33.00	33.00	33.00	33.00	33.00	33.25	33.00	0.0	0.0			
Iron and steel, comp.....dolls. per long ton.....	35.27	35.57	35.81	35.67	35.55	36.76	36.76	-3.3	-3.3			
Structural steel beams.....dolls. per 100 lbs.....	1.80	1.85	1.90	1.90	1.88	1.90	1.90	-1.1	-1.1			
Composite finished steel.....dolls. per 100 lbs.....	2.47	2.52	2.54	2.51	2.49	2.55	2.54	-0.8	-2.0			
Fabricated Steel Products												
Structural steel, fabricated:*												
New orders, (prorated).....short tons.....	210,000	266,250	258,750	236,250	315,000	262,500	232,500	+33.3	+35.5	1,166,250	1,286,250	+10.3
Ratio to capacity.....per cent.....	56	71	69	63	84	70	62	+33.3	+35.5			
Shipments (prorated).....short tons.....	210,000	236,250	228,750	240,000	266,250	232,500	232,500	+10.9	+14.5	1,083,750	1,181,250	+9.0
Ratio to capacity.....per cent.....	56	63	61	64	71	62	62	+10.9	+14.5			
Steel plate, fabricated, new orders:												
Total.....short tons.....	35,787	49,820	46,840	50,347	42,376	47,347	37,883	-15.8	+11.9	236,134	225,170	-4.6
Ratio to capacity.....per cent.....	45	62	59	63	53	59	47	-15.9	+12.8			
Oil-storage tanks.....short tons.....	11,101	25,532	25,226	22,095	14,849	13,019	10,855	-32.8	+36.8	100,326	98,803	-1.5
Steel bars, cold finished, shipments *.....tons.....	45,010	40,354	39,957	35,971	39,431	39,897	37,379	+9.6	+5.5	199,603	200,723	+0.6
Steel boilers, new orders:												
Quantity.....number.....	1,042	986	1,247	1,325	1,572	1,548	1,419	+13.6	+10.8	6,502	6,172	-5.1
Area.....thous. of sq. ft.....	872	1,165	1,337	1,295	1,454	1,490	1,355	+12.3	+7.3	6,906	6,123	-11.3
Steel furniture:												
Business group—												
Shipments.....thous. of dolls.....	2,713	2,909	3,169	3,066	3,213	2,850	2,529	+4.8	+27.0	13,876	15,069	+8.6
New orders.....thous. of dolls.....	3,248	3,296	3,283	2,915	3,085	2,751	2,381	+5.8	+29.6	13,812	15,828	+14.6
Unfilled orders, end mo. thous. of dolls.....	2,000	2,359	2,512	2,360	2,233	1,646	1,593	-5.4	+39.7			
Shelving—												
Shipments.....thous. of dolls.....	680	682	832	716	769	678	585	+7.4	+31.5	3,118	3,679	+18.0
New orders.....thous. of dolls.....	769	741	841	741	733	622	686	-1.1	+6.9	3,232	3,825	+18.3
Unfilled orders, end mo. thous. of dolls.....	680	743	794	794	753	627	731	-5.2	+3.0			
Iron and steel:												
Exports.....long tons.....	205,766	185,915	221,935	215,184	267,890	192,339	202,708	+24.5	+32.2	947,504	1,096,690	+15.7
Imports.....long tons.....	49,903	36,861	58,666	55,567	55,092	42,550	55,836	-9.9	-1.3	219,825	256,089	+16.5
Enamelled Ware												
Baths:												
Shipments.....pieces.....	71,041	76,318	95,818	105,718	125,370	99,993	104,953	+18.6	+19.5	469,672	474,265	+1.0
Stocks, end of month.....pieces.....	154,620	164,014	172,292	159,892	135,776	175,728	158,014	-15.1	-14.1			
New orders.....pieces.....	77,712	84,084	124,016	191,571	127,528	98,762	109,224	-33.4	+16.8	479,591	604,911	+26.1
Unfilled orders, end of month.....pieces.....	36,473	43,321	61,880	139,801	136,238	44,405	46,666	-2.5	+191.9			
Lavatories:												
Shipments.....pieces.....	85,942	87,370	114,558	124,027	140,974	111,301	109,206	+13.7	+29.1	526,308	552,871	+5.0
Stocks, end of month.....pieces.....	201,770	217,543	227,151	212,325	183,141	255,264	243,959	-13.7	-24.9			
New orders.....pieces.....	93,364	97,613	153,131	209,744	138,620	107,102	116,205	-33.9	+19.3	534,549	692,478	+29.5
Sinks:												
Shipments.....pieces.....	92,743	90,629	119,596	125,479	143,485	114,302	112,461	+14.3	+27.6	543,338	571,932	+5.3
Stocks, end of month.....pieces.....	233,751	262,380	281,911	268,699	239,875	318,391	303,586	-10.7	-21.0			
New orders.....pieces.....	97,470	103,263	147,261	216,182	144,698	115,254	118,391	-33.1	+22.2	556,431	708,874	+27.4
Miscellaneous sanitary ware:												
Shipments.....pieces.....	39,426	42,545	50,302	51,510	53,188	49,018	49,844	+3.3	+6.7	235,710	236,971	+0.5
Stocks, end of month.....pieces.....	131,077	140,815	137,416	125,325	113,051	129,823	135,726	-9.8	-16.7			
New orders.....pieces.....	39,480	46,694	61,600	73,455	54,847	43,020	46,937	-25.3	+16.9	229,529	276,076	+20.3
Small ware (all except baths):												
Unfilled orders, end of month.....pieces.....	100,160	124,743	185,255	360,858	348,844	102,664	117,488	-3.3	+196.9			
Enamelled sheet-metal ware:												
Shipments.....dozen pieces.....	319,871	372,848	442,689	350,544		337,181	318,071			1,501,070	1,485,952	-1.0
Porcelain flat ware:												
New orders—												
Total.....thous. of sq. ft.....	5,421	5,378	7,024	5,430		5,586	5,285			26,053	23,253	-10.7
Ratio to capacity.....per cent.....	45	45	59	45		45	42					
Shipments—												
Total.....thous. of sq. ft.....	5,473	5,824	6,526	6,219		6,596	6,253			26,098	24,042	-7.9
Ratio to capacity.....per cent.....	46	49	54	52		52	49					
Machinery												
Washing-machines, shipments:												
Total.....number.....	68,840	74,830	90,770	86,772	88,164	94,725	80,158	+1.6	+10.0	398,182	409,376	+2.8
Electric.....number.....	56,728	61,944	74,610	69,884	70,922	78,993	64,493	+1.5	+10.0	326,276	334,088	+2.4
Water softeners, shipments.....units.....	1,268	1,396	1,956	1,489	1,480	1,878	1,467	-6.6	+9.9	7,866	7,589	-3.5
Water systems, shipments.....units.....	6,746	6,076	7,873	8,182	8,997	6,387	7,500	+10.0	+20.0	29,644	37,874	+27.8
Pumps:												
Domestic shipments—												
Pitcher, hand, etc.....units.....	51,822	51,999	52,946	42,990	40,190	47,430	37,562	-6.5	+7.0	219,728	239,947	+9.2
Power, horizontal type.....units.....	1,591	1,598	2,578	2,299	2,305	776	967	+3.3	+138.4	3,921	10,371	+164.5
Steam, power, and centrifugal—												
New orders.....thous. of dolls.....	1,137	1,346	1,418	1,504	1,428	1,405	1,497	-5.1	-4.6	7,726	6,833	-11.6
Shipments.....thous. of dolls.....	1,138	1,177	1,332	1,376	1,518	1,565	1,511	+10.3	+5.5	7,157	6,551	-8.3
Unfilled orders, end mo. thous. of dolls.....	3,112	3,260	3,309	3,383	3,239	3,525	3,482	-4.3	-7.0			
Agricultural machinery and equipment:												
Shipments—												
Total.....rel. to 1923-25.....	116.0	168.8	216.0	187.2	188.7	152.3	149.1	+8.8	+26.6			
Domestic.....rel. to 1923-25.....	117.2	159.4	216.8	184.6	182.4	154.8	153.9	-1.2	+18.5			
Foreign.....rel. to 1923-25.....	109.9	218.2	211.4	200.6	184.7	139.2	124.0	-7.9	+49.0			
Production.....rel. to 1923-25.....	130.7	136.5	143.9	148.2	146.9	145.9	145.3	-9.9	+1.1			

\* See table on p. 21 of the March, 1928, issue for earlier data.

\* Cumulative through Apr. 30.

\* Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Percent increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
IRON AND STEEL—Continued												
Machinery—Continued												
Foundry equipment:												
New orders.....rel. to 1922-24..	129.7	123.6	138.6	107.7	335.6	130.0	134.8	+211.6	+149.0			
Shipments.....rel. to 1922-24..	116.4	110.6	147.9	112.5	104.7			-6.9				
Unfilled orders, end mo.....rel. to 1922-24..	120.6	132.9	127.1	126.1	344.5			+173.2				
Stokers, mechanical, sales:												
Quantity.....number..	75	85	123	88	130	77	97	+47.7	+34.0	463	501	+8.2
Power.....horsepower..	26,572	43,643	43,425	31,043	38,705	26,249	43,601	+24.7	-11.2	201,411	183,388	-8.9
Machine tools:												
New orders.....rel. to 1922-24..	218	201	222	222	205	126	127	-7.7	+61.4			
Shipments.....rel. to 1922-24..	149	175	210	219	204	138	135	-6.8	+51.1			
Unfilled orders, end of mo.....rel. to 1922-24..	293	330	376	371	345	216	198	-7.0	+74.2			
Woodworking machinery: <sup>a</sup>												
New orders.....thous. of dolls..	1,145	1,245	1,317	1,329		1,307	1,351			2 5,591	2 5,036	-9.9
Shipments.....thous. of dolls..	1,130	1,147	1,346	1,150		1,516	1,282			2 5,571	2 4,773	-14.3
Shipments.....number of machines..	920	890	1,064	931		1,068	1,119			2 4,165	2 3,805	-8.6
Cancellations.....thous. of dolls..	23	9	21	42		31	3			2 69	2 95	+37.7
Unfilled orders, end of mo.....thous. of dolls..	1,456	1,539	1,438	1,577		1,549	1,586					
Electric hoists:												
New orders—												
Quantity.....number..	346	399	557	394	462	284	330	+17.3	+40.0	1,436	2,158	+50.3
Value.....dollars..	160,852	172,472	260,222	198,004	204,550	138,829	171,192	+3.3	+19.5	736,713	996,100	+35.2
Shipments.....dollars..	133,842	166,920	214,080	188,967	190,174	138,510	124,729	+6	+52.5	669,748	893,983	+33.5
Electric overhead cranes:												
Shipments.....thous. of dolls..	432	595	672	659	547	909	671	-17.0	-18.5	4,283	2,905	-32.2
New orders.....thous. of dolls..	358	519	704	410	708	660	487	+72.7	+45.4	3,479	2,699	-22.4
Unfilled orders, end mo.....thous. of dolls..	1,735	1,763	1,699	1,520	1,671	2,772	2,555	+9.9	-34.6			
Electric industrial trucks and tractors:												
Shipments, domestic—												
Tractors.....number of vehicles..	5	15	18	9	8	12	19	-11.1	-57.9	58	55	-5.2
All other types.....number of vehicles..	98	86	97	122	95	89	77	-22.1	+23.4	449	498	+10.9
Exports.....number of vehicles..	9	18	16	6	13	4	10	+116.7	+30.0	48	62	+29.2
Fire-extinguishing equipment, shipments:												
Motor vehicles.....number..	73	91	108	101	101	125	133	0.0	-24.1	571	474	-17.0
Hand types.....number..	43,175	40,710	52,375	46,643	55,033	47,850	56,548	+18.0	-2.7	249,355	237,936	-4.6
Patents issued:												
Total, all classes.....number..	3,504	3,136	3,229	3,321	4,248	3,554	4,524	+27.9	-6.1	18,322	17,438	-4.8
Agricultural implements.....number..	45	32	49	45	56	50	86	+24.4	-34.9	279	227	-18.6
Internal-combustion engines.....number..	51	61	52	43	63	124	65	+46.5	-3.1	387	270	-30.2
NONFERROUS METALS												
Copper												
Production:												
Mines.....short tons..	68,469	67,423	70,327	69,721	73,729	71,122	71,613	+5.7	+3.0	357,449	349,669	-2.2
Smelter.....short tons..	77,429	81,895	79,110	82,087	85,745	80,940	82,132	+4.5	+4.4	413,821	406,266	-1.8
Refined (N. and S. America).....short tons..	122,723	124,848	128,972	122,824	129,236	125,796	125,581	+5.2	+2.9	634,135	628,603	-0.9
World production, blister.....short tons..	140,546	144,546	144,842	143,427	153,414	135,729	139,114	+7.0	+10.3	687,397	726,775	+5.7
Domestic shipments, refined.....short tons..	64,824	73,789	72,642	72,234	79,103	73,976	69,779	+9.5	+13.4	367,355	362,592	-1.3
Exports.....short tons..	52,095	43,092	48,210	45,550	56,667	46,908	38,394	+24.4	+47.6	211,671	245,614	+16.0
Stocks (North and South America), end mo:												
Refined.....short tons..	96,476	86,932	87,292	72,893	66,288	99,256	108,079	-9.1	-38.7			
Blister.....short tons..	237,961	247,529	242,416	235,392	241,755	249,834	242,074	+2.7	-1			
Wholesale price, electrolytic.....dolls. per lb..	.1385	.1382	.1385	.1399	.1420	.1281	.1262	+1.5	+12.5			
Copper Products												
Plumbing fixtures:												
Wholesale price, 6 pieces.....dollars..	98.59	98.40	99.35	100.76	100.11	105.29	105.09	-6	-4.7			
Wire cloth:												
Production.....thous. of sq. ft..	449	435	584	413	431	468	444	+4.4	-2.9	2,391	2,312	-3.3
Shipments.....thous. of sq. ft..	425	453	452	405	407	400	384	+5	+6.0	2,057	2,142	+4.1
Stocks, end of month.....thous. of sq. ft..	1,189	1,150	1,141	1,147	1,134	1,263	1,300	-1.1	-12.8			
New orders.....thous. of sq. ft..	414	399	400	399	371	322	351	-7.0	+5.7		1,983	
Unfilled orders, end of mo.....thous. of sq. ft..	315	297	269	283	258	300	220	-8.8	+17.3			
Make and hold orders, end of month.....thous. of sq. ft..	441	412	422	438	402	358	413	-8.2	-2.7			
Tin												
Deliveries (consumption).....long tons..	5,415	5,790	7,960	7,010	5,335	6,720	6,070	-23.9	-12.1	31,595	31,510	-0.3
Stocks, end of month:												
World visible supply.....long tons..	15,244	17,645	15,586	15,001	17,064	13,849	14,655	+13.8	+16.4			
United States.....long tons..	2,518	1,998	2,078	1,973	3,708	1,704	1,604	+87.9	+131.2			
Imports.....long tons..	5,727	5,092	8,138	9,494	7,045	6,228	6,029	-25.8	+16.9	30,873	36,396	+17.9
Wholesale price, Straits,† N. Y.....dolls. per lb..	.5564	.5249	.5218	.5236	.5154	.6802	.6752	-1.6	-23.7			
Zinc												
Retorts in operation, end of month.....number..	72,204	72,444	71,252	72,522	70,260	81,096	78,057	-3.1	-10.0			
Per cent of total.....per cent..	57.0	57.2	56.2	59.0	57.2	59.3	57.0	-3.1	+4			
Production.....short tons..	52,414	50,042	55,881	53,493	53,422	51,626	51,296	-1	+4.1	267,707	266,252	-0.9
Stocks, end of month.....short tons..	42,163	41,290	41,529	44,759	45,225	41,208	42,046	+1.0	+7.6			
Ore, Joplin district:												
Shipments.....short tons..	37,612	47,217	47,972	51,579	50,630	71,077	44,222	-1.8	+14.5	300,862	235,010	-21.9
Stocks, mines, end of month.....short tons..	49,905	52,398	59,746	49,097	41,747	21,536	27,984	-15.0	+49.2			
Price, slab, prime western.....dolls. per lb..	.0564	.0555	.0562	.0576	.0603	.0634	.0608	+4.7	-8			
Lead												
Production.....short tons..	54,406	54,991	58,031	50,115	51,230	60,193	57,285	+2.2	-10.6	292,140	268,773	-8.0
Ore shipments:												
Joplin district.....short tons..	7,463	6,665	6,424	6,438	6,352	12,602	7,581	-1.3	-16.2	48,607	33,342	-31.4
Utah.....short tons..	75,855	72,264	77,054	58,401	61,790	76,452	63,518	+5.8	-2.7	332,401	345,364	+3.9
Receipts in U. S. ore.....short tons..	55,970	54,021	52,150	47,939		60,134	56,942			226,565	210,080	-7.3
Stocks, U. S. and Mexico, end mo.....short tons..	157,417	167,692	173,411	161,207		160,437	175,230					
Price, pig, desilverized, N. Y.....dolls. per lb..	.0650	.0633	.0600	.0610	.0612	.0713	.0662	+3	-7.6			

\* See p. 41 of Part II, Metals and machinery of the Record Book of Business Statistics for earlier data.  
† See table on p. 23 of the June, 1928, issue for earlier data.

<sup>2</sup> Cumulative through Apr. 30.  
<sup>3</sup> Revised.



## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1923					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	January	Febru-ary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
NONFERROUS METALS—Continued												
Other Metal Products												
Babbitt metal, consumption:												
Total apparent.....thous. of lbs.	4,929	4,470	4,928	4,843	4,607	4,812	4,946	-4.9	-6.9	26,276	23,777	-9.5
Direct by producers.....thous. of lbs.	894	1,027	1,025	1,118	1,028	950	971	-8.1	+5.9	5,415	5,092	-6.0
Sale to consumers.....thous. of lbs.	4,034	3,444	3,903	3,725	3,578	3,862	3,975	-3.9	-10.0	20,861	18,684	-10.4
Band instruments, shipments:												
Total.....dollars	318,106	445,737	468,757	392,146	374,490	429,411	404,648	-4.5	-7.5	2,275,800	1,999,236	-12.2
Cup mouthpieces.....dollars	126,852	169,616	178,457	158,677	163,075	162,103	153,434	+2.8	+6.3	813,949	796,677	-2.1
Saxophones.....dollars	169,050	247,489	263,685	211,414	185,511	246,168	227,899	-12.3	-18.6	1,341,383	1,077,149	-19.7
Wood wind.....dollars	22,204	28,632	26,615	22,055	25,904	21,140	23,315	+17.5	+11.1	120,468	125,410	+4.1
Pails and tubs, galvanized:												
Production.....dozens	125,536	165,757	173,592	208,544	-----	183,812	159,178	-----	-----	2,655,999	2,673,429	+2.7
Shipments.....dozens	149,304	162,153	175,473	201,119	-----	198,711	133,387	-----	-----	2,688,927	2,688,049	-1.1
Other galvanized ware:												
Production.....dozens	32,678	28,513	50,904	31,545	-----	30,423	33,011	-----	-----	2,133,402	2,143,640	+7.7
Shipments.....dozens	35,689	26,334	45,205	36,452	-----	33,785	29,900	-----	-----	2,132,970	2,143,680	+8.1
Electrical Equipment												
Electrical porcelain, shipments:												
Standard.....dollars	77,212	65,809	49,536	57,919	-----	88,755	72,846	-----	-----	2,377,702	2,250,476	-33.7
Special.....dollars	115,394	110,933	131,212	116,516	-----	148,789	132,927	-----	-----	2,554,661	2,474,055	-14.5
High tension.....dollars	408,401	438,584	444,804	521,682	-----	-----	-----	-----	-----	-----	-----	-----
Glazed nail knobs.....thous. of pieces	3,363	2,441	1,297	2,207	-----	3,391	3,107	-----	-----	-----	-----	-----
Unglazed nail knobs.....thous. of pieces	1,091	1,070	1,381	953	-----	1,121	1,502	-----	-----	-----	-----	-----
Tubes.....thous. of pieces	1,127	975	1,087	1,155	-----	1,508	1,218	-----	-----	-----	-----	-----
Laminated phenolic products, shipments.....dollars	677,861	683,664	877,401	872,336	-----	510,548	496,592	-----	-----	2,194,961	2,311,262	+59.6
Motors:												
New orders.....dollars	569,883	767,634	889,110	730,979	-----	736,082	831,274	-----	-----	2,238,730	2,957,606	-8.7
Billings (shipments).....dollars	638,562	627,799	782,185	749,534	-----	737,349	753,547	-----	-----	2,977,140	2,798,080	-6.0
Outlet boxes and covers, shipments.....pieces	2,139,038	2,715,105	3,166,488	2,518,077	-----	1,960,806	2,332,608	-----	-----	2,367,667	2,053,708	+25.9
Vulcanized fiber:												
Shipments, total.....thous. of dolls.	663	685	662	621	-----	796	734	-----	-----	2,324	2,631	-18.8
Consumption.....thous. of lbs.	2,355	2,442	2,965	2,700	-----	2,701	2,465	-----	-----	2,11,013	2,10,462	-5.0
Industrial reflectors, sales.....units	137,417	118,363	137,102	107,801	-----	115,111	123,080	-----	-----	2,518,706	2,500,683	-3.5
Flexible cords:												
Shipments.....thous. of ft.	35,082	37,279	42,390	37,853	-----	-----	-----	-----	-----	-----	-----	-----
Stocks, end of month.....thous. of ft.	51,396	47,277	44,958	44,751	-----	-----	-----	-----	-----	-----	-----	-----
Welding sets, new orders:												
Single operator.....units	128	172	285	239	-----	153	136	-----	-----	2,552	2,824	+49.3
Multiple operator.....units	7	21	31	28	-----	12	7	-----	-----	2,47	2,87	+85.1
Nonmetallic conduits, shipments.....thous. of ft.	8,085	6,755	8,270	7,860	-----	10,365	11,390	-----	-----	2,40,203	2,30,970	-23.0
Delinquent accounts, electrical trade:												
Amount.....dollars	184,500	184,688	213,043	173,482	196,243	247,479	177,403	+13.1	+10.6	-----	-----	-----
Delinquent firms.....number	1,361	1,407	1,769	1,435	1,488	1,936	1,442	+2	+3.2	-----	-----	-----
AUTOMOBILES												
Production:												
United States—												
Total.....number of cars	231,693	323,809	413,379	410,189	425,990	404,759	404,115	+3.9	+5.4	1,743,007	1,805,060	+3.3
Passenger cars.....number of cars	205,576	291,151	371,821	364,877	375,798	357,009	357,150	+3.0	+5.2	1,523,891	1,609,223	+5.6
Trucks.....number of cars	26,117	32,658	41,558	45,312	50,192	47,750	46,965	+10.8	+6.9	223,116	195,837	-12.2
Canada—												
Total.....number of cars	8,463	12,504	17,478	24,240	33,942	24,611	25,708	+40.0	+32.0	106,973	96,627	-9.7
Passenger cars.....number of cars	6,705	10,315	15,232	20,546	29,764	20,890	21,991	+44.9	+35.3	88,541	82,562	-6.8
Trucks.....number of cars	1,758	2,189	2,246	3,694	4,178	3,721	3,717	+13.1	+12.4	18,432	14,065	-23.7
Exports (assembled):												
From United States—												
Total.....number of cars	32,060	33,952	49,974	42,269	47,912	46,703	49,052	+13.4	-2.3	196,641	206,167	+4.8
Passenger cars.....number of cars	20,476	25,114	40,181	33,644	38,851	34,840	38,542	+15.5	+8	146,844	158,266	+7.8
Trucks.....number of cars	11,584	8,838	9,793	8,625	9,061	11,863	10,510	+5.1	-13.8	49,797	47,901	-3.8
From Canada—												
Total.....number of cars	3,502	4,111	3,557	3,996	6,157	4,075	5,588	+54.1	+10.2	31,509	21,323	-32.3
Passenger cars.....number of cars	1,838	2,628	2,686	2,957	4,511	2,930	3,901	+52.6	+15.6	22,236	14,620	-34.3
Trucks.....number of cars	1,664	1,483	871	1,039	1,646	1,145	1,687	+58.4	-2.4	9,273	6,703	-27.7
Foreign assemblies.....number of cars	12,114	12,556	15,967	18,272	19,994	22,264	24,490	+9.4	-18.4	98,858	78,903	-20.2
Shipments (General Motors Co.):												
To dealers.....number of cars	125,181	169,232	197,821	197,597	207,325	169,067	173,182	+4.9	+19.7	727,952	897,156	+23.2
To users.....number of cars	107,278	132,029	183,706	209,367	224,094	180,106	171,364	+7.0	+30.8	680,780	856,474	+25.8
Accessories and parts:												
Shipments—												
Original equipment.....rel. to Jan., 1925	163	187	231	213	215	185	184	+9	+16.8	-----	-----	-----
Replacement parts.....rel. to Jan., 1925	137	128	136	151	185	117	123	+22.5	+50.4	-----	-----	-----
Accessories.....rel. to Jan., 1925	79	91	113	107	113	156	131	+5.6	-13.7	-----	-----	-----
Service parts.....rel. to Jan., 1925	142	158	174	164	157	223	192	-4.3	-18.2	-----	-----	-----
Exports.....thous. of dolls.	7,489	9,570	12,157	12,466	11,491	10,609	9,817	-7.8	+17.1	46,266	53,173	+14.9
Rim production.....thous. of rims	1,812	1,806	2,420	2,316	2,186	2,060	2,169	-5.6	+8	9,543	10,540	+10.4
New passenger-car registrations:												
Total.....number of cars	135,843	165,256	254,723	332,056	-----	331,396	314,988	-----	-----	2,948,176	2,887,878	-6.4
Highest price group.....number of cars	6,817	7,436	11,370	14,705	-----	13,720	13,732	-----	-----	2,34,465	2,40,328	+17.0
Second highest group.....number of cars	32,515	34,542	53,461	71,050	-----	76,127	67,334	-----	-----	2,202,207	2,191,568	-5.3
Third highest group.....number of cars	45,330	50,004	76,360	99,201	-----	76,306	72,569	-----	-----	2,205,087	2,268,895	+31.1
Lowest price group.....number of cars	52,630	72,670	112,820	146,282	-----	163,308	160,704	-----	-----	2,600,187	2,384,402	-23.1
Miscellaneous.....number of cars	551	604	712	818	-----	1,935	649	-----	-----	2,6,230	2,2,685	-56.9

\* See table on p. 13 of the April, 1923, issue for earlier data.

† Cumulative through Apr. 30.

‡ Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per cent increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
FUELS												
Coal and Coke												
Bituminous:												
Production—												
United States.....thous. of short tons..	44,208	41,351	43,955	32,188	36,624	34,674	35,395	+13.8	+3.5	240,002	198,326	-17.4
Canada.....thous. of short tons..	<sup>1</sup> 1,695	<sup>1</sup> 1,403	<sup>1</sup> 1,401	1,123	1,144	1,315	1,306			5,677	5,622	-1.0
Exports.....thous. of long tons..	850	796	756	711	1,144	1,258	1,368	+60.9	-16.4	7,074	4,257	-39.8
Consumption—												
By vessels.....thous. of long tons..	319	267	305	306	364	345	332	+19.0	+9.6	1,679	1,561	-7.0
By electric-power plants.....thous. of short tons..	3,695	<sup>3</sup> 3,455	<sup>3</sup> 3,467	3,095	3,278	3,278	3,273			<sup>2</sup> 13,977	<sup>2</sup> 13,712	-1.9
By railroads.....thous. of short tons..	8,304	7,872	8,265			7,693	7,724					
By coke plants—												
United States.....thous. of short tons..	6,192	5,964	6,548	6,235	6,460	6,557	6,442	+3.6	+3	32,657	31,399	-3.9
Canada.....thous. of short tons..	257	233	252	243	266	253	249	+9.5	+6.8	1,235	1,251	+1.3
Stocks, end of month, held by consumers.....thous. of short tons..	51,500		48,300									
Prices—												
Mine aver. (spot).....dolls. per short ton..	1.84	1.86	1.92	1.74	1.73	2.12	1.99	-6	-13.1			
Wholesale, comp.....dolls. per short ton..	4.093	4.069	4.045	4.016	3.986	4.265	4.264	-7	-6.5			
Retail, composite.....dolls. per short ton..	9.21	9.28	9.26	9.20	8.18	8.95	8.88	-11.1	-7.9			
Anthracite:												
Production.....thous. of short tons..	5,690	5,582	5,497	6,909	8,124	7,127	8,002	+17.6	+1.5	33,640	31,802	-5.5
Exports.....thous. of long tons..	233	224	189	182	266	201	305	+46.2	-12.8	1,067	1,094	+2.5
Stocks, end of mo. in yds. of dealers.....no. of days' supply..		42	25			44						
Prices—												
Wholesale, comp.....dolls. per long ton..	13.130	13.232	13.207	12.794	12.786	12.932	12.891	-1	-8			
Retail, composite.....dolls. per short ton..	15.08	15.09	15.08	14.64	14.46	14.61	14.53	-1.2	-5			
Coke:												
Production, U. S.—												
Beehive.....thous. of short tons..	376	390	449	377	376	779	630	+3	-40.3	3,840	1,968	-48.7
By-product.....thous. of short tons..	<sup>3</sup> 3,897	<sup>2</sup> 2,233	4,065	3,925	4,084	3,708	3,788	+4.1	+7.8	18,516	19,204	+3.7
Production, Canada.....thous. of short tons..	179	167	178	171	190	170	174	+11.1	+9.2	851	885	+4.0
Exports.....thous. of long tons..	65	76	74	62	89	50	50	+43.5	+78.0	264	366	+38.6
Price, furnace, Connellsville.....dolls. per short ton..	2.78	2.71	2.72	2.74	2.70	3.49	2.94	-1.4	-8.2			
Petroleum												
Crude petroleum:												
Production.....thous. of bbls..	72,321	68,059	75,037	72,127	75,218	72,590	76,275	+4.3	-1.4	363,518	362,762	-0.2
Stocks at end of month—												
Total (comparable).....thous. of bbls..	358,892	363,340	368,744	371,579	371,551	297,895	307,016	0.0	+21.0			
Tank farms, pipe lines.....thous. of bbls..	317,725	320,979	325,135	328,354	328,258	260,410	270,518	0.0	+21.3			
Refineries.....thous. of bbls..	41,167	42,361	43,609	43,225	43,293	37,485	36,498	+0.2	+18.6			
California—												
Light.....thous. of bbls..	20,493	20,110	19,633	18,752	19,170	29,460	27,143	+2.2	-29.4			
Heavy.....thous. of bbls..	94,327	94,797	94,484	94,301	93,941	88,383	90,289	-0.4	+4.0			
Imports.....thous. of bbls..	6,145	6,036	6,845	5,661	6,766	4,063	4,557	+19.5	+48.5	21,749	31,453	+44.6
Consumption (run to stills).....thous. of bbls..	68,193	65,601	72,124	72,979	77,311	66,624	69,759	+5.9	+10.8	337,763	356,208	+5.5
Refinery operations.....per ct. of capacity..	72	73	75	79	80	77	78	+1.3	+2.6			
Price, Kansas-Oklahoma.....dolls. per bbl..	1.220	1.213	1.190	1.190	1.190	1.114	1.155	0.0	+3.0			
Oil wells completed.....number..	764	836	949	961	961	1,528	1,274	0.0	-24.6	6,946	4,471	-35.6
Gasoline:												
Production—												
Raw (at refineries).....thous. of bbls..	27,879	26,775	29,245	29,332	30,825	26,577	26,787	+5.1	+15.1	134,234	144,056	+7.3
Natural gas (at plants).....thous. of bbls..	3,367	3,279	3,426	3,469	3,474	3,171	3,219	+0.1	+7.9	15,739	17,015	+8.1
Exports.....thous. of bbls..	3,692	3,326	3,777	4,044	6,535	3,424	4,366	+61.6	+49.7	17,807	21,374	+20.0
Consumption.....thous. of bbls..	20,939	21,136	24,041	25,712	27,355	23,371	26,579	+6.4	+2.9	108,542	119,183	+9.8
Stocks, end of month—												
Raw (at refineries).....thous. of bbls..	36,112	38,782	40,229	40,210	47,336	52,379	48,609	+42.6	+18.0			
Natural gas (at plants).....thous. of bbls..	740	824	842	832	809	788	926	-2.8	-12.6			
Prices—												
Wholesale, New York.....dolls. per gal..	.170	.170	.170	.170	.170	.194	.190	0.0	-10.5			
Retail, wagon, * 50 cities.....dolls. per gal..	.143	.147	.148	.150	.152	.153	.147	0.0	+3.4			
Retail distribution, 41 States.....thous. of gals..	600,133	602,361	<sup>3</sup> 689,610	745,828		698,448	760,166			<sup>2</sup> 2,374,551	<sup>2</sup> 2,637,932	+11.1
Kerosene:												
Production.....thous. of bbls..	5,047	4,783	4,717	5,033	5,243	4,608	4,663	+4.2	+12.4	23,639	24,823	+5.0
Exports.....thous. of bbls..	2,345	1,541	1,325	1,468	1,489	1,833	1,604	+1.4	-7.2	7,752	8,168	+5.4
Consumption.....thous. of bbls..	2,742	3,221	2,737	3,234	3,383	2,776	3,188	+4.6	+6.1	15,792	15,317	-3.0
Stocks at refineries, end mo. thous. of bbls..	7,670	7,692	7,826	7,733	7,537	8,725	8,568	-2.5	-12.0			
Retail distribution, 13 States.....thous. of bbls..	30,746	30,176	33,707	33,206	32,209	33,712	33,712			<sup>2</sup> 122,397	<sup>2</sup> 127,835	+4.4
Price, 150° water white.....dolls. per gal..	.070	.070	.069	.069	.074	.079	.076	+7.2	-2.6			
Gas and fuel oils:												
Production.....thous. of bbls..	32,271	30,944	34,071	33,857	35,620	31,856	33,499	+5.2	+6.3	160,853	166,763	+3.7
Consumption—												
By vessels.....thous. of bbls..	3,783	3,751	4,236	4,275	5,013	4,204	4,250	+17.3	+18.0	19,855	21,058	+6.1
By electric pow. plants.....thous. of bbls..	589	545	610	553	490	549	487	-8.1	+0.6	3,168	2,762	-12.8
By railroads.....thous. of bbls..	4,047	3,853	4,106			3,920	3,948					
Stocks at refineries, end mo. thous. of bbls..	29,623	29,011	29,170	29,499	32,888	23,732	26,059	+11.5	+26.2			
Price, Okla., 24-26, refineries.....dolls. per bbl..	.800	.850	.850	.840	.763	1.063	.925	-9.2	-17.5			
Lubricating oil:												
Production.....thous. of bbls..	2,658	2,728	2,905	3,026	3,091	2,615	2,625	+2.1	+17.8	12,909	14,408	+11.6
Consumption.....thous. of bbls..	1,606	1,533	1,988	2,362	1,989	1,712	1,928	+15.8	+3.2	8,721	9,478	+8.7
Stocks at refineries, end mo. thous. of bbls..	7,978	8,332	8,412	8,018	8,060	8,176	8,011	+0.5	+0.6			
Price, cylinder oil.....dolls. per gal..	.245	.245	.223	.221	.228	.254	.251	+3.2	-9.2			
Asphalt:												
Production.....thous. of short tons..	199	209	270	274	331	274	319	+20.8	+3.8	1,179	1,283	+8.8
Stocks, end of month.....thous. of short tons..	209	230	269	274	262	220	223	-4.4	+17.5			
Imports.....thous. of short tons..	7	4	8	6	13	8	8	+116.7	+62.5	64	38	-40.6
Coke:												
Production.....thous. of short tons..	103	100	107	109	118	88	88	+8.3	+34.1	455	537	+18.0
Stocks, end of month.....thous. of short tons..	330	337	352	342	348	319	329	+1.8	+5.8			
Wax:												
Production.....thous. of lbs..	55,320	49,724	50,207	57,548	51,072	48,917	46,267	-11.3	+10.4	250,305	263,871	+5.4
Stocks, end of month.....thous. of lbs..	<sup>1</sup> 150,485	<sup>1</sup> 150,033	<sup>1</sup> 120,800	<sup>1</sup> 110,010	103,639	211,019	207,329	-5.8	-50.0			

\*See table on p. 21 of the March, 1928, issue for earlier data.

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
RUBBER												
Crude Rubber												
World shipments, plantation.....long tons..	48,134	48,579	46,362	---	---	44,751	48,748	---	---	---	---	---
Imports (including latex).....long tons..	39,108	33,392	40,688	37,958	31,014	46,202	36,518	-18.3	-15.1	189,912	182,160	-4.1
Consumption by tire mfrs.....thous. of lbs..	43,709	46,468	48,897	43,701	---	51,333	47,270	---	---	2 191,062	2 182,775	-4.3
World stocks, end of month:												
World total.....long tons..	276,670	269,572	260,991	248,995	---	263,362	258,300	---	---	---	---	---
United States.....long tons..	110,243	108,955	114,060	113,083	105,357	92,757	94,563	-6.8	+11.4	---	---	---
Europe.....long tons..	69,594	66,268	61,478	56,689	---	71,229	71,562	---	---	---	---	---
Producing countries.....long tons..	27,453	25,649	22,353	19,223	20,116	26,176	26,475	+4.6	-24.0	---	---	---
Afloat.....long tons..	69,380	68,700	63,100	60,000	---	73,200	65,700	---	---	---	---	---
Wholesale price, Para, N. Y.....dolls. per lb..	.288	.234	.204	.183	.165	.274	.300	-9.8	-45.0	---	---	---
Tires and Tubes												
Pneumatic tires:												
Production.....thousands..	4,026	4,784	5,128	4,645	---	4,742	4,629	---	---	2 17,034	2 18,583	+9.1
Stocks, end of month.....thousands..	7,491	8,826	9,318	9,561	---	9,113	9,370	---	---	---	---	---
Shipments—												
Domestic.....thousands..	3,924	3,653	4,137	4,229	---	4,118	4,069	---	---	2 14,950	2 15,943	+6.6
Export.....thousands..	132	133	174	143	---	171	186	---	---	2 693	2 582	-16.0
Inner tubes:												
Production.....thousands..	4,086	5,176	5,427	4,999	---	5,536	5,060	---	---	2 18,662	2 19,688	+5.5
Stocks, end of month.....thousands..	9,760	11,020	11,878	12,500	---	13,371	13,813	---	---	---	---	---
Shipments—												
Domestic.....thousands..	4,469	3,997	4,205	4,196	---	4,669	4,501	---	---	2 17,394	2 16,867	-3.0
Export.....thousands..	90	81	98	86	---	105	109	---	---	2 364	2 355	-2.5
Solid and cushion:												
Production.....thousands..	37	37	44	44	---	64	65	---	---	2 211	2 162	-23.2
Stocks, end of month.....thousands..	164	159	159	157	---	162	178	---	---	---	---	---
Shipments—												
Domestic.....thousands..	31	36	41	40	---	54	45	---	---	2 184	2 148	-19.6
Exports.....thousands..	3	3	5	3	---	5	4	---	---	2 28	2 14	-50.0
Other Rubber Products												
Rubber-proofed fabrics:												
Production—												
Total.....thous. of yds..	2,177	2,575	2,853	2,416	---	2,800	2,642	---	---	2 9,556	2 10,021	+4.9
Auto fabrics.....thous. of yds..	600	757	805	835	---	820	955	---	---	2 3,234	2 2,997	-7.3
Raincoat fabrics.....thous. of yds..	874	1,107	1,148	874	---	1,498	1,206	---	---	2 4,353	2 4,003	-8.0
All other.....thous. of yds..	703	711	900	707	---	482	481	---	---	2 1,969	2 3,021	+53.4
New orders, auto fabrics.....thous. of yds..	773	960	896	980	---	805	740	---	---	2 3,618	2 3,609	-0.2
Production, relative to capacity per cent..	29.6	28.8	26.6	27.6	---	41.4	59.9	---	---	---	---	---
Rubber heels:												
Production.....thous. of pairs..	17,682	19,181	22,583	18,575	---	14,169	16,133	---	---	2 54,202	2 78,021	+43.9
Shipments—												
To shoe manufacturers.....thous. of pairs..	10,786	10,802	10,083	8,639	---	6,682	7,128	---	---	2 27,925	2 40,310	+44.4
To repair trade.....thous. of pairs..	6,314	6,754	9,407	6,173	---	6,507	7,016	---	---	2 20,949	2 28,648	+36.8
For export.....thous. of pairs..	793	1,127	1,169	819	---	768	666	---	---	2 3,446	2 3,908	+13.4
Stocks, end of month.....thous. of pairs..	43,796	44,289	46,144	48,892	---	47,869	47,516	---	---	---	---	---
Rubber soles:												
Production.....thous. of pairs..	3,431	3,628	3,747	2,928	---	1,726	1,779	---	---	2 4,742	2 13,734	+139.2
Shipments—												
To shoe manufacturers.....thous. of pairs..	2,243	2,087	1,692	1,524	---	1,122	1,275	---	---	2 3,713	2 7,546	+103.2
To repair trade.....thous. of pairs..	916	992	1,090	884	---	532	572	---	---	2 1,306	2 3,882	+197.2
For export.....thous. of pairs..	675	529	282	141	---	53	19	---	---	2 313	2 1,627	+419.8
Stocks, end of month.....thous. of pairs..	3,148	3,381	3,822	4,084	---	4,113	3,853	---	---	---	---	---
Mechanical rubber goods, shipments:												
Total.....thous. of dolls..	5,630	5,838	6,675	5,406	---	5,823	5,726	---	---	2 23,989	2 23,549	-1.8
Belting.....thous. of dolls..	1,388	1,351	1,524	1,211	---	1,459	1,350	---	---	2 5,806	2 5,474	-5.7
Hose.....thous. of dolls..	2,257	2,289	2,589	2,078	---	2,370	2,437	---	---	2 10,138	2 9,213	-9.1
All other.....thous. of dolls..	1,984	2,199	2,562	2,117	---	1,995	1,939	---	---	2 8,046	2 8,862	+10.1
Rubber bands,* shipments.....pounds..	217,798	195,249	215,724	169,403	---	---	---	---	---	---	---	---
HIDES AND LEATHER												
Hides												
Imports:												
Total hides and skins.....thous. of lbs..	36,409	33,421	48,489	45,443	61,288	33,234	37,105	+34.9	+65.2	155,548	225,050	+44.7
Calfskins.....thous. of lbs..	3,410	2,861	3,018	2,836	4,387	2,809	3,598	+54.7	+21.9	14,985	16,512	+10.2
Cattle hides.....thous. of lbs..	18,856	16,269	28,833	26,101	36,913	15,148	16,699	+41.4	+121.0	70,966	126,972	+78.9
Goatskins.....thous. of lbs..	5,448	7,453	8,362	8,182	10,082	8,195	8,267	+23.2	+22.0	36,948	39,527	+7.0
Sheepskins.....thous. of lbs..	5,117	4,276	4,841	5,428	6,016	5,113	6,393	+10.8	-5.9	23,486	25,678	+9.3
Stocks, end of month:												
Total hides and skins.....thous. of lbs..	244,242	238,736	229,970	228,037	---	220,679	230,924	---	---	---	---	---
Cattle hides.....thous. of lbs..	204,224	200,897	194,655	190,492	---	170,732	174,407	---	---	---	---	---
Calf and kip skins.....thous. of lbs..	23,825	21,615	20,136	22,687	---	31,638	35,532	---	---	---	---	---
Sheep and lamb skins.....thous. of lbs..	16,193	16,224	15,179	14,858	---	18,309	20,985	---	---	---	---	---
Prices:												
Green salted, packers'.....dolls. per lb..	.261	.248	.237	.256	.246	.152	.168	-3.9	+46.4	---	---	---
Calfskins, country No. 1.....dolls. per lb..	.300	.291	.269	.295	.295	.160	.177	0.0	+66.7	---	---	---
Inspected slaughter of livestock:												
United States—												
Cattle.....thous. of animals..	711	666	665	623	723	742	785	+16.1	-7.9	3,774	3,388	-10.2
Calves.....thous. of animals..	383	374	407	438	473	454	462	+8.0	+2.4	2,147	2,075	-3.4
Swine.....thous. of animals..	5,479	5,780	5,140	3,446	3,804	3,330	3,766	+10.4	+1.0	18,842	23,649	+25.5
Sheep.....thous. of animals..	1,151	1,048	1,016	918	1,015	960	992	+10.6	+2.3	5,100	5,148	+0.9
Canada—												
Cattle and calves.....no. of animals..	66,128	61,041	80,550	95,521	123,257	98,759	114,484	+29.0	+7.7	424,687	426,497	+1.4
Swine.....no. of animals..	271,156	247,966	246,597	222,116	218,751	209,671	212,835	-1.5	+2.8	1,131,652	1,206,586	+6.6
Sheep.....no. of animals..	26,090	18,482	16,543	16,018	16,775	17,005	13,790	+4.7	+21.6	101,905	93,908	-7.6

\* See table on p. 18 of the April, 1928, issue for earlier data.

2 Cumulative through Apr. 30.

2 Revised

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 1 from 1927
	January	Feb-ruary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
HIDES AND LEATHER—Continued												
Leather												
Production:												
Sole leather...thous. of backs, bends, sides..	1,223	1,240	1,363	<sup>1</sup> 1,358	1,392	1,397	1,378	+2.5	+1.0	6,577	6,577	0.0
Finished sole and belting...thous. of lbs..	23,095	23,409	25,245	24,761	-----	25,897	25,842	-----	-----	<sup>2</sup> 99,895	<sup>2</sup> 96,510	-3.4
Finished upper...thous. of sq. ft..	71,415	70,509	73,045	63,730	-----	59,753	60,197	-----	-----	<sup>2</sup> 268,980	<sup>2</sup> 278,699	+3.6
Oak and union harness...stuffed sides..	79,438	85,757	79,226	<sup>3</sup> 69,462	68,608	80,464	81,719	-1.2	-6.0	361,048	382,491	+5.9
Skivers...doz.	19,931	20,154	19,061	<sup>3</sup> 18,237	19,156	22,966	23,985	+5.0	-20.1	114,554	96,539	-15.7
Unfilled orders, oak and union harness...sides..	119,896	79,257	59,769	<sup>3</sup> 54,183	45,330	128,446	238,983	-16.3	-81.0	-----	-----	-----
Stocks, end of month:												
Sole and belting...thous. of lbs..	54,828	54,085	54,302	57,335	-----	65,608	66,298	-----	-----	-----	-----	-----
Upper...thous. of sq. ft..	245,931	242,361	249,023	253,557	-----	274,983	267,949	-----	-----	-----	-----	-----
Stocks in process of tanning, end of month:												
Sole and belting...thous. of lbs..	85,396	86,028	87,299	89,181	-----	90,794	90,395	-----	-----	-----	-----	-----
Upper...thous. of sq. ft..	149,952	147,315	141,386	140,713	-----	145,298	144,257	-----	-----	-----	-----	-----
Exports:												
Sole...thous. of lbs..	1,265	1,076	971	753	650	846	521	-13.7	+24.8	4,268	4,715	+10.5
Upper...thous. of lbs..	15,532	15,567	14,297	10,846	11,400	13,388	11,151	+5.1	+2.2	61,131	67,642	+10.7
Total...thous. of sq. ft..	10,614	10,750	9,830	7,311	7,603	9,786	8,167	+4.0	-6.9	44,960	46,108	+2.6
Cattle and calf...thous. of sq. ft..	4,103	3,836	3,605	2,958	3,028	2,896	2,525	+2.4	+19.9	13,226	17,530	+32.5
Patent...thous. of sq. ft..	815	981	862	577	769	706	459	+33.3	+67.5	2,945	4,004	+36.0
Sheep...thous. of sq. ft..												
Prices:												
Sole, oak, scoured backs...dolls. per lb..	.59	.65	.65	.66	.67	.43	.45	+1.5	+48.9	-----	-----	-----
Chrome calf, "B" grades...dolls. per sq. ft..	.54	.60	.60	.60	.60	.46	.48	0.0	+25.0	-----	-----	-----
Leather Products												
Shoes:												
Production...thous. of pairs..	25,939	29,248	32,013	<sup>3</sup> 26,178	-----	28,389	25,626	-----	-----	<sup>1</sup> 111,951	<sup>1</sup> 113,378	+1.3
Exports...thous. of pairs..	388	303	471	394	409	595	586	+3.8	-30.2	2,628	1,965	-25.2
Wholesale prices--												
Men's black calf												
bucker, Mass...dolls. per pair..	6.75	6.75	6.75	6.75	6.75	6.40	6.40	0.0	+5.5	-----	-----	-----
Men's dress welt, tan												
calf, St. Louis...dolls. per pair..	5.00	5.00	5.00	5.00	5.00	4.85	4.85	0.0	+3.1	-----	-----	-----
Women's black kid, dress												
welt, lace, oxford...dolls. per pair..	4.03	4.15	4.15	4.15	4.15	4.00	4.00	0.0	+3.8	-----	-----	-----
G oves, cut...dozen pairs..	177,884	194,874	223,271	210,420	-----	219,370	208,924	-----	-----	844,376	806,449	-4.5
PAPER AND PRINTING												
Wood Pulp												
Mechanical:												
Production...short tons..	142,034	132,743	143,678	<sup>3</sup> 149,652	156,258	165,680	160,192	+4.4	-2.5	764,100	724,365	-5.2
Consumption and shipments...short tons..	139,851	135,952	144,771	<sup>3</sup> 133,702	143,015	142,483	137,997	+7.0	+3.6	721,192	697,291	-3.3
Stocks, end month...short tons..	159,575	156,366	155,274	<sup>3</sup> 173,134	186,377	221,535	243,762	+7.6	-23.5	-----	-----	-----
Imports...short tons..	21,082	21,151	21,124	18,549	24,024	19,772	17,217	+29.5	+39.5	91,836	105,930	+15.3
Chemical:												
Production...short tons..	209,106	209,820	228,692	<sup>3</sup> 210,780	222,924	218,996	214,848	+5.8	+3.8	1,105,478	1,081,322	-2.2
Consumption and shipments...short tons..	210,016	207,926	230,484	<sup>3</sup> 211,400	225,710	221,406	214,918	+6.8	+5.0	1,102,812	1,085,536	-1.6
Stocks, end of month...short tons..	44,726	47,162	45,554	<sup>3</sup> 43,872	41,456	39,290	39,120	-5.5	+6.0	-----	-----	-----
Imports...short tons..	156,164	130,152	83,352	80,592	90,736	82,536	116,912	+12.6	-22.4	539,757	540,996	+2.2
Price sulphite...dolls. per 100 lbs..	2.53	2.53	2.53	2.53	2.53	2.75	2.63	0.0	-3.8	-----	-----	-----
Newsprint Paper												
Production:												
United States, total...short tons..	119,525	112,302	119,932	117,553	126,010	129,892	127,395	+7.2	-1.1	645,842	595,322	-7.8
Ratio to capacity...per cent..	84	79	80	84	84	-----	-----	0.0	-----	-----	-----	-----
Canada...short tons..	186,721	189,822	197,976	192,645	203,811	166,460	171,586	+5.8	+18.8	825,850	970,975	+17.6
Consumption by publishers...short tons..	172,952	162,573	186,232	181,112	186,641	186,138	186,268	+3.1	+0.2	873,624	889,510	+1.8
Shipments:												
United States...short tons..	114,211	109,666	113,752	118,453	122,540	128,666	126,984	+3.5	-3.5	633,186	578,622	-8.6
Canada...short tons..	186,829	188,163	190,305	193,443	203,836	168,711	170,468	+5.4	+19.6	813,471	962,576	+18.3
Imports...short tons..	177,908	172,635	172,896	163,179	181,913	147,736	170,545	+11.5	+6.7	785,123	868,431	+10.6
Exports:												
United States...short tons..	1,758	539	854	638	882	1,073	1,314	+38.2	-32.9	6,269	4,671	-25.5
Canada...short tons..	157,466	183,414	216,160	140,011	194,298	123,449	149,924	+38.8	+29.6	741,403	891,349	+20.2
Stocks, end of month:												
At mills--												
United States...short tons..	25,905	28,499	34,648	33,734	37,207	24,105	24,233	+10.3	+53.5	-----	-----	-----
Canada...short tons..	37,731	39,145	47,657	46,641	46,290	26,389	27,520	-0.8	+68.2	-----	-----	-----
At publishers...short tons..	207,449	215,118	206,392	188,384	184,580	215,329	193,005	-2.0	-4.4	-----	-----	-----
In transit to publishers...short tons..	46,522	48,212	41,613	43,363	46,627	40,798	43,862	+7.5	+6.3	-----	-----	-----
Price, roll, f. o. b. mill...dolls. per 100 lbs..	3.25	3.25	3.25	3.25	3.25	3.25	3.25	0.0	0.0	-----	-----	-----
Printing												
Book publication:												
American manufacture...no. of titles..	507	654	853	697	599	819	693	-14.1	-13.6	3,593	3,310	-7.9
Imported...no. of titles..	118	153	151	123	119	135	70	-3.3	+70.0	591	664	+12.4
Sales books:												
New orders...thous. of books..	12,329	12,332	13,190	11,796	12,162	11,045	12,233	+3.1	-0.6	59,914	61,809	+3.2
Shipments...thous. of books..	11,897	11,722	11,930	11,807	11,645	11,167	10,781	-1.4	+8.0	56,844	59,001	-3.8
Printing activity...weighted index number..	108	109	<sup>3</sup> 112	111	-----	107	107	-----	-----	-----	-----	-----
Cash checks, shipments...thous. of checks..	75,144	65,865	78,629	71,715	80,116	71,767	79,472	+11.7	+0.8	387,097	371,469	-4.0
Blank forms, new orders...thous. of sets..	43,173	37,172	40,221	40,880	-----	31,270	36,739	-----	-----	<sup>2</sup> 124,957	<sup>2</sup> 161,446	+29.2
Box Board												
Operation...thous. of inch hours..	7,892	8,194	8,856	<sup>3</sup> 8,312	8,721	7,771	7,836	+4.9	+11.3	38,817	41,975	+8.1
Operation...per ct. of capacity..	78.9	82.0	82.0	<sup>3</sup> 83.1	83.9	74.7	78.4	+1.0	+7.0	-----	-----	-----
Production...short tons..	205,065	213,066	227,573	<sup>3</sup> 221,046	241,919	205,589	200,216	+9.4	+20.8	988,531	1,108,669	+12.2
New orders...short tons..	205,549	216,051	245,753	<sup>3</sup> 211,237	224,220	197,435	194,122	+6.1	+15.5	999,768	1,102,810	+10.3
Unfilled orders, end of month...short tons..	82,446	86,780	94,065	84,513	73,157	101,861	93,248	-13.4	-21.5	-----	-----	-----
Consumption of waste paper...short tons..	190,631	194,756	209,806	<sup>3</sup> 211,869	220,261	189,942	193,077	+4.0	+14.1	938,408	1,027,323	+9.5
Shipments...short tons..	198,194	211,687	237,807	<sup>3</sup> 220,248	235,648	209,944	201,788	+7.0	+16.8	994,168	1,103,584	+11.0
Stocks, end of month...short tons..	49,172	50,490	40,424	40,312	48,906	50,211	48,906	+21.3	0.0	-----	-----	-----
Stocks of waste paper, end of month:												
On hand...short tons..	157,185	142,723	139,775	132,719	127,352	147,938	149,438	-4.0	-14.8	-----	-----	-----
In transit and unshipped purchases...tons..	62,791	60,918	47,582	47,551	46,225	46,314	59,289	-2.8	-22.0	-----	-----	-----

\* See tables on p. 48 of the May, 1928, issue for earlier data.

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
PAPER AND PRINTING—Continued												
Other Paper												
Binder's board, production.....short tons..	2,547	4,382	3,626	3,450	3,720	3,040	2,796	+7.8	+33.0	13,646	17,725	+29.9
Book paper:												
Production.....short tons..	121,509	123,939	137,572	125,191	130,199	110,217	103,604	+4.0	+25.7	569,194	638,410	+12.2
Ratio to capacity.....per cent..	90	93	91	91	90			-1.1				
Shipments.....short tons..	125,033	123,567	135,370	117,304	124,861	110,658	100,185	+6.4	+24.6	562,281	626,135	+11.4
Stocks, end of month.....short tons..	68,265	69,630	72,415	81,105	86,782	66,099	71,387	+7.0	+21.6			
New orders—												
Coated.....p. ct. of normal production..	83	96	88	97	74	87	84	-23.7	-11.9			
Uncoated.....p. ct. of normal production..	87	86	81	84	77	90	89	-8.3	-13.5			
Unfilled orders, end of month—												
Coated.....p. ct. of normal production..	11	11	10	12	11	10	12	-8.3	-8.3			
Uncoated.....p. ct. of normal production..	9	9	8	9	7	10	10	-22.2	-30.0			
Wrapping paper:												
Production.....short tons..	96,223	93,249	101,618	91,744	97,702	93,419	84,451	+6.5	+15.7	453,916	480,536	+5.9
Ratio to capacity.....per cent..	91	89	89	86	87			+1.2				
Shipments.....short tons..	93,144	93,249	96,334	89,542	94,478	87,627	80,735	+5.5	+17.0	439,924	466,747	+6.1
Stocks, end of month.....short tons..	87,895	87,593	92,551	93,975	97,228	72,705	73,081	+3.5	-33.0			
Fine paper:												
Production.....short tons..	37,471	38,870	42,399	40,288	40,904	40,539	38,734	+1.5	+5.6	187,680	199,932	+6.5
Ratio to capacity.....per cent..	93	97	93	92	87			-5.4				
Shipments.....short tons..	35,550	38,287	43,459	37,548	40,863	39,931	38,424	+8.8	+6.3	189,951	195,707	+3.0
Stocks, end of month.....short tons..	52,410	52,973	51,850	53,741	53,791	49,446	50,436	+1.1	+6.7			
All other grades:												
Production.....short tons..	99,588	96,075	106,528	99,266	107,475	99,211	100,357	+8.3	+7.1	502,692	508,932	+1.2
Shipments.....short tons..	98,946	93,680	105,905	97,858	105,705	98,063	98,298	+8.0	+7.5	499,053	504,094	+1.0
Stocks, end of month.....short tons..	60,838	66,766	66,466	69,798	71,569	67,589	72,942	+2.5	-1.9			
Total paper (inc. newsprint and box board):												
Production.....short tons..	679,331	677,501	735,622	695,088	744,209	678,867	654,757	+7.1	+13.7	3,347,945	3,531,801	+5.5
Ratio to capacity.....per cent..	82	82	82	85	83			-2.4				
Shipments.....short tons..	665,078	670,136	732,627	680,953	724,095	674,889	646,414	+6.3	+12.0	3,318,563	3,472,889	+4.7
Stocks, end of month.....short tons..	344,485	355,951	358,354	372,665	395,483	330,155	340,985	+6.1	+16.0			
Paper-board Shipping Boxes												
Production:												
Total.....thous. of sq. ft..	347,622	402,183	425,361	405,319	398,473	403,165	406,633	-1.7	-2.0	2,023,821	1,978,958	-2.2
Corrugated.....thous. of sq. ft..	227,280	326,430	348,835	327,815	323,493	322,002	326,474	-1.3	-9.9	1,617,463	1,553,853	-3.9
Solid fiber.....thous. of sq. ft..	70,342	75,753	76,526	78,845	74,980	81,163	80,159	-4.9	-6.5	406,358	376,446	-7.4
Operating activity:												
Total.....per cent of normal..	69	77	80	74	72	77	75	-2.7	-4.0			
Corrugated.....per cent of normal..	67	75	78	72	69	76	75	-4.2	-8.0			
Solid fiber.....per cent of normal..	75	84	85	80	80	77	76	0.0	+5.3			
Other Paper Products												
Abrasive paper and cloth:												
Domestic sales.....reams..	80,505	83,969	96,871	81,782	94,309	85,334	85,928	+15.3	+9.8	429,262	437,436	+1.9
Foreign sales.....reams..	17,112	16,169	20,558	19,634	18,944	16,714	17,735	-3.5	+6.8	81,437	92,417	+13.5
BUILDING CONSTRUCTION AND HOUSING												
Rental advertisements, Minneapolis.....number..	2,473	2,465	3,820	5,561	5,212	5,895	5,828	-6.3	-10.6	21,992	19,531	-11.2
Real estate conveyances (41 cities).....number..	139,314	136,968	157,819	148,496		160,088	150,558			2,587,035	2,582,397	-0.8
Building Costs												
Building materials:												
Frame house, 6 room.....rel. to 1913..	178	182	184	179	177	190	189	-1.1	-6.3			
Brick house, 6 room.....rel. to 1913..	183	186	187	184	183	189	189	-5.5	-3.2			
Concrete factory costs (Aberthaw).....rel. to 1913..	192	192	192	191	191	193	193	0.0	-1.0			
Building costs (Eng. News Record).....rel. to 1913..	205	205	206	207	206	207	206	-5.0	0.0			
Building costs (A. G. C.).....rel. to 1913..	199	199	197	197	197	201	200	0.0	-1.5			
Construction costs (Am. Appraisal):												
Frame.....rel. to 1913..	205	203	203	203	203	204	204	0.0	-5.5			
Brick, wood frame.....rel. to 1913..	214	212	212	212	212	213	213	0.0	-5.5			
Brick, steel frame.....rel. to 1913..	196	197	197	197	197	197	196	0.0	+5.5			
Reinforced concrete.....rel. to 1913..	200	200	200	200	200	200	199	0.0	+5.5			
Contracts and Losses												
Contracts awarded (36 states):												
Commercial buildings.....thous. of sq. ft..	10,803	9,084	10,826	13,896	14,316	12,259	12,499	+3.0	+14.5	58,306	58,925	+1.1
Industrial buildings.....thous. of sq. ft..	4,412	5,384	6,940	10,834	6,020	9,187	6,062	-44.4	-7.7	29,446	33,590	+14.1
Residential buildings.....thous. of sq. ft..	37,516	42,548	54,582	55,281	56,655	47,731	38,223	+2.5	+48.2	194,679	246,582	+26.7
Educational buildings.....thous. of sq. ft..	3,380	3,071	5,209	5,071	6,960	4,515	5,136	+37.3	+35.5	20,422	23,691	+16.0
Other public and semi-public buildings.....thous. of sq. ft..	3,955	4,855	6,385	5,941	6,063	5,582	7,957	+2.1	-23.8	29,134	27,199	-6.6
Grand total.....thous. of sq. ft..	60,271	65,137	84,266	91,222	91,693	79,722	70,580	+5.5	+29.9	336,045	392,589	+16.8
Contracts awarded, value (36 States):												
Commercial buildings.....thous. of dolls..	65,981	51,564	69,490	80,514	87,162	78,084	69,183	+8.3	+26.0	397,958	354,711	-10.9
Industrial buildings.....thous. of dolls..	34,833	31,716	48,068	83,208	31,627	40,032	42,869	-62.0	-26.2	197,976	229,452	+15.9
Residential buildings.....thous. of dolls..	136,904	232,574	266,069	269,325	280,292	259,841	212,500	+4.1	+31.9	1,030,686	1,235,164	+19.8
Educational buildings.....thous. of dolls..	22,854	18,232	33,255	31,829	46,073	34,326	33,655	+44.8	+36.9	141,911	152,243	+7.3
Other public and semi-public buildings.....thous. of dolls..	30,055	53,893	49,454	45,900	33,503	58,227	67,334	-27.0	-50.2	266,899	212,715	-20.3
Public works and utilities.....thous. of dolls..	69,676	56,134	106,511	113,746	144,738	113,246	105,220	+27.2	+37.6	423,179	490,805	+16.0
Grand total.....thous. of dolls..	410,535	444,023	572,847	624,523	641,395	583,766	530,762	+2.7	+20.8	2,460,618	2,693,323	+9.5
Contracts awarded, Canada.....thous. of dolls..	29,480	25,875	22,946	56,346	70,684	38,582	46,758	+25.4	+51.2	139,095	196,331	+41.1
Building volume (A. G. C.).....rel. to 1913..	125	124	137	164	185	166	197	+12.8	-6.1			
Fire losses:												
United States and Canada (Journal of Commerce).....thous. of dolls..	43,261	41,105	30,377	25,981	23,202	39,721	20,713	-10.7	+12.0	151,438	163,926	+8.2
Canada (Monetary Times).....thous. of dolls..	2,959	1,713	2,048	2,101	2,860	2,173	1,338	+36.1	+113.8	10,226	11,681	+14.2

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		crease (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
LUMBER PRODUCTS												
Softwood Lumber												
Southern pine:												
Production (computed).....M ft. b. m.	418,717	424,525	460,346	421,911	440,306	412,472	439,870	+4.4	+0.1	2,122,640	2,165,805	+2.0
Operation.....per cent of full time.....	97	99	100	99	99			0.0				
Shipments (computed).....M ft. b. m.	428,220	417,652	481,645	447,083	489,100	438,466	460,588	+9.4	+6.2	2,096,148	2,261,700	+7.9
New orders (computed).....M ft. b. m.	473,900	430,141	498,006	464,896	420,169	433,287	463,831	-9.6	-9.4	2,185,700	2,287,112	+4.6
Stocks, end of mo. (computed).....M ft. b. m.	1,200,031	1,206,904	1,185,605	1,160,433	1,101,740	1,205,135	1,218,391	-5.1	-9.6			
Unfilled orders, end mo. (com.).....M ft. b. m.	352,826	365,315	381,676	399,489	349,362	311,099	314,563	-12.5	+11.1			
Exports, lumber.....M ft. b. m.	66,332	47,011	66,527	53,952	75,054	80,305	63,216	+39.1	+18.7	305,905	308,876	+1.0
Price, flooring.....dolls. per M ft. b. m.	35.26	36.12	35.69	35.74	35.88	39.56	39.32	+0.4	-8.7			
Douglas fir:												
Production (computed).....M ft. b. m.	410,493	507,633	508,528	520,615	490,175	484,355	532,253	-5.8	-7.9	2,448,632	2,437,444	-5.5
Shipments (computed).....M ft. b. m.	397,571	479,879	479,879	549,264	558,217	565,827	548,369	+1.6	+1.8	2,522,496	2,464,810	-2.3
New orders (computed).....M ft. b. m.	444,514	541,206	521,062	533,733	620,888	548,368	553,741	+6.4	+12.1	2,623,216	2,711,403	+3.4
Exports, lumber.....M ft. b. m.	85,299	45,346	58,020	58,862	71,427	46,699	59,973	+21.3	+19.1	256,361	318,954	+24.4
Exports, timber.....M ft. b. m.	2,280	44,236	43,423	43,226	60,797	45,003	56,865	+40.6	+6.9	190,605	193,952	+1.8
Price, No. 1 common, dolls. per M ft. b. m.	15.23	15.99	16.08	15.99	16.70	17.24	16.34	+4.4	+2.2			
Price, flooring, 1 x 4, B.....M ft. b. m.	34.04	34.04	34.13	33.97	34.47	35.81	35.69	+1.5	-3.4			
California redwood:												
Production (computed).....M ft. b. m.	39,454	43,276	51,210	38,489	41,400	34,199	44,692	+7.6	-7.4	185,919	213,829	+15.0
Shipments (computed).....M ft. b. m.	30,201	38,700	43,847	38,820	47,772	44,278	56,527	+23.1	-15.5	224,990	199,340	-11.4
New orders (computed).....M ft. b. m.	38,763	37,299	45,316	36,741	49,351	47,394	55,619	+34.3	-11.3	245,686	207,470	-15.6
Unfilled orders, end mo. (com.).....M ft. b. m.	50,415	48,000	49,003	47,916	47,281	70,703	70,293	-1.3	-32.7			
California white pine:												
Production.....M ft. b. m.	51,187	51,452	80,683	100,978	134,273	57,305	114,984	+33.0	+16.8	316,680	418,573	+32.2
Shipments.....M ft. b. m.	90,891	97,412	114,182	106,186	107,267	100,206	106,470	+1.0	+7	461,517	516,038	+11.8
Stocks, end of month.....M ft. b. m.	609,181	566,957	534,740	493,696	473,560	477,411	482,405	-4.1	-1.8			
Western pine:												
Production (computed).....M ft. b. m.	<sup>3</sup> 48,843	<sup>3</sup> 74,843	<sup>3</sup> 139,087	<sup>3</sup> 155,995		154,742	160,121			<sup>2</sup> 421,811	<sup>2</sup> 418,768	-7
Shipments (computed).....M ft. b. m.	<sup>3</sup> 109,273	<sup>3</sup> 121,504	<sup>3</sup> 151,903	<sup>3</sup> 147,406		156,237	146,741			<sup>2</sup> 531,720	<sup>2</sup> 530,086	-3
Stocks, end of mo. (computed).....M ft. b. m.	<sup>3</sup> 889,525	<sup>3</sup> 880,228	<sup>3</sup> 585,478	<sup>3</sup> 589,040		1,056,021	1,027,541					
Unfilled orders* (computed).....M ft. b. m.	<sup>3</sup> 90,042	<sup>3</sup> 106,554	<sup>3</sup> 119,656	<sup>3</sup> 128,236								
North Carolina pine:												
Production (computed).....M ft. b. m.	40,019	51,317	47,523	57,155	60,039	49,462	50,204	+5.0	+19.6	251,146	256,053	+2.0
Shipments (computed).....M ft. b. m.	37,030	46,746	54,866	62,978	62,125	51,191	56,918	-1.4	+22.0	254,968	263,745	+3.4
Northern pine:												
Lumber—												
Production.....M ft. b. m.	33,550	34,513	32,731	36,412	45,687	42,302	47,379	+25.5	-3.6	188,410	182,893	-2.9
Shipments.....M ft. b. m.	29,451	35,413	39,645	37,914	44,152	41,353	43,401	+16.5	+1.7	187,691	186,575	-6
New orders.....M ft. b. m.	32,703	36,470	38,856	35,926	35,974	44,555	44,451	+1	-19.1	184,491	179,929	-2.5
Lath—												
Production.....M ft. b. m.	7,315	5,726	5,143	6,184	9,967	9,866	13,194	+61.2	-24.5	44,181	34,335	-22.3
Shipments.....M ft. b. m.	5,300	5,609	9,593	5,927	9,316	9,675	13,634	+57.2	-31.7	45,240	35,745	-21.0
Northern hemlock:												
Production.....M ft. b. m.	11,425	13,360	18,089	14,871		16,159	16,931			<sup>2</sup> 75,644	<sup>2</sup> 57,745	-23.7
Shipments.....M ft. b. m.	7,485	9,520	13,255	16,153		22,278	23,922			<sup>2</sup> 73,987	<sup>2</sup> 46,413	-37.3
Hardwood Lumber												
Walnut lumber:												
Production.....M ft. b. m.	3,063	2,585	3,268	2,955	2,894	2,547	2,717	-2.1	+6.5	13,606	14,765	+8.5
Shipments.....M ft. b. m.	2,687	2,762	3,042	2,646	3,388	2,745	2,884	+28.0	+17.5	14,856	14,525	-2.2
Stocks, end of month.....M ft. b. m.	13,264	13,179	13,327	13,635	13,264	11,093	10,915	-2.7	+21.5			
New orders.....M ft. b. m.	2,628	2,807	2,835	2,652	4,180	2,978	3,042	+57.6	+37.4	15,941	15,102	-5.3
Unfilled orders, end of month.....M ft. b. m.	5,389	5,491	4,613	4,491	5,540	8,213	8,114	+23.4	-31.7			
Walnut logs:												
Purchased.....M ft. log measure.....	2,255	2,131	2,185	2,402	2,972	2,285	3,440	+23.7	-13.6	13,141	11,945	-9.1
Made into lumber and veneer.....M ft. log measure.....	2,416	2,014	2,407	2,678	2,769	2,176	2,476	+3.4	+11.8			
Stocks, end of month.....M ft. log measure.....	3,041	3,229	2,951	2,806	3,009	1,918	2,882	+7.2	+4.4	11,839	12,284	+3.8
Northern hardwoods:												
Production.....M ft. b. m.	37,543	41,185	44,948	38,404		40,625	28,691			<sup>2</sup> 171,450	<sup>2</sup> 162,080	-5.5
Shipments.....M ft. b. m.	24,164	26,512	29,373	28,491		27,838	26,919			<sup>2</sup> 116,336	<sup>2</sup> 108,540	-6.7
Lower Michigan hardwoods:												
Production.....M ft. b. m.	7,934	9,188	9,193	8,625		9,713	7,683			<sup>2</sup> 34,655	<sup>2</sup> 34,940	+8
Shipments.....M ft. b. m.	8,147	7,541	6,078	6,548		7,484	8,091			<sup>2</sup> 30,467	<sup>2</sup> 28,314	-7.1
Stocks, end of month.....M ft. b. m.	30,821	30,626	30,870	30,925		47,803	46,375					
All hardwoods:												
Total stocks, end of month—												
Total hardwoods.....M ft. b. m.	1,021,295	1,145,176	1,244,922	1,188,647		802,761	770,467					
Gum.....M ft. b. m.	297,464	334,702	366,302	363,792		200,180	191,549					
Oak.....M ft. b. m.	360,590	408,852	437,410	424,084		290,994	276,704					
Unsold stocks—												
Total hardwoods.....M ft. b. m.	805,780	912,816	1,009,703	970,821		617,375	595,295					
Gum.....M ft. b. m.	219,301	254,192	283,915	284,850		142,647	139,531					
Oak.....M ft. b. m.	296,720	337,262	372,698	362,108		229,171	215,629					
Unfilled orders—												
Total hardwoods.....M ft. b. m.	256,464	281,196	279,835	259,346		219,108	206,994					
Gum.....M ft. b. m.	100,560	103,092	101,957	96,360		72,069	65,237					
Oak.....M ft. b. m.	69,392	78,296	71,804	68,589		69,044	67,964					
Total Lumber												
Production, 10 species.....M ft. b. m.	<sup>2</sup> 2,007,672	<sup>2</sup> 2,232,563	<sup>2</sup> 2,458,532	<sup>2</sup> 2,397,203	<sup>2</sup> 2,444,685	2,268,148	2,452,123	+2.0	-0.3	11,414,398	11,540,670	+1.1
Exports, planks, joists, etc.....M ft. b. m.	239,145	158,909	186,541	179,352	223,649	188,014	192,997	+24.7	+15.9	867,015	987,596	+13.9
Retail yards, Minneapolis district:												
Sales.....M ft. b. m.	5,042	4,535	7,106	9,485		7,789	15,619			<sup>2</sup> 24,278	<sup>2</sup> 26,168	+7
Stocks, end of month.....M ft. b. m.	88,976	94,155	91,428	93,983		90,846	106,879					
Composite lumber prices:												
Hardwoods.....dolls. per M ft. b. m.	40.42	40.47	41.24	39.77	38.39	40.65	41.96	-3.5	-8.5			
Softwoods.....dolls. per M ft. b. m.	27.37	27.50	27.55	28.00	28.39	30.52	30.65	+1.4	-7.4			

\* See table on p. 22 of the April, 1928, issue for earlier data.

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
LUMBER PRODUCTS—Continued												
Flooring												
Maple flooring:												
Production.....M ft. b. m.	7,346	7,519	7,862	7,331	7,070	8,141	8,282	-3.6	-14.6	44,742	37,128	-17.0
Shipments.....M ft. b. m.	7,252	6,889	8,184	7,545	8,256	10,022	11,921	+9.4	-30.7	47,271	38,126	-19.3
Stocks, end of month.....M ft. b. m.	28,721	29,118	28,036	28,326	27,514	28,154	25,055	-2.9	+9.8			
New orders.....M ft. b. m.	8,161	7,712	7,211	7,036	9,197	9,103	11,785	+30.7	-22.0	42,000	39,317	-6.4
Unfilled orders, end of month.....M ft. b. m.	9,154	10,034	9,816	9,963	11,423	10,856	13,238	+14.7	-13.7			
Oak flooring:												
Production.....M ft. b. m.	35,947	38,771	42,272	42,924	47,785	35,697	40,380	+11.3	+18.3	186,810	207,699	+11.2
Shipments.....M ft. b. m.	38,080	40,232	47,599	46,105	50,256	40,970	49,034	+9.0	+2.5	199,393	222,272	+11.5
Stocks, end of month.....M ft. b. m.	82,239	82,758	78,855	77,491	75,948	62,196	51,430	-2.0	+47.7			
New orders.....M ft. b. m.	53,888	36,163	48,815	46,071	50,295	45,763	48,424	+9.2	+3.9	215,426	235,232	+9.2
Unfilled orders, end of month.....M ft. b. m.	45,925	42,975	47,134	48,004	48,681	51,623	52,315	+1.4	-6.9			
Doors at wholesale*												
White pine:												
Receipts.....number	10,756	18,763	44,442	16,487	14,130			-14.8				
Shipments.....number	12,465	19,309	38,449	20,028	19,146			-4.4				
Stocks, end of month.....number	111,313	116,234	163,986	83,908	68,396			-18.5				
Unsold stock, end of month.....number	94,534	88,582	121,445	61,048	46,758			-23.4				
Fir:												
Receipts.....number	9,175	18,069	29,822	10,006	12,117			+21.1				
Shipments.....number	8,860	15,524	31,339	17,218	9,010			-47.7				
Stocks, end of month.....number	47,601	80,340	113,361	87,199	47,315			-45.7				
Unsold stock, end of month.....number	41,637	65,764	89,047	65,653	16,726			-74.5				
Wooden Furniture												
Household furniture and case goods:												
Shipments.....dolls., average per firm	38,668	44,655	44,553	42,424		46,214	45,042			197,907	170,300	-13.9
Unfilled orders.....dolls., average per firm	44,017	40,051	31,970	27,970		36,952	43,125					
Grand Rapids district:												
Shipments.....No. of days' production	23	25	25	20		20	17					
New orders.....No. of days' production	40	23	20	19		14	29					
Unfilled orders, end of month.....No. of days' production	44	42	34	30		33	42					
Outstanding accounts, end of month.....No. of days' sales	55	54	53	47		47	44					
Cancellations.....per cent of new orders	7.0	13.0	7.0	12.0		26.0	10.0					
Plant operation.....per cent of full time	95.0	94.0	92.0	90.0		95.0	95.0					
Piano benches and stools:												
New orders (av. per firm).....dollars	7,043	7,556	6,818	5,626	6,581	8,129	7,011	+17.0	-6.1	39,984	33,624	-15.9
Unfilled orders, end of month (av. per firm).....dollars	2,851	2,076	1,978	1,650	2,094	2,004	1,972	+26.9	+6.2			
Shipments—Value (av. per firm).....dollars	5,918	7,647	6,933	5,955	6,136	7,935	6,976	+3.0	-12.0	38,853	32,569	-16.2
Quantity (total).....pieces	7,617	9,781	9,104	7,694	7,958	10,218	8,900	+3.4	-10.6	49,736	42,154	-15.2
Plywood and Veneer												
Plywood:												
New orders.....thous. of sq. ft. of surface	2,469	2,450	2,709	2,450		2,362	3,426			12,818	10,078	-21.4
Shipments.....thous. of sq. ft. of surface	2,575	2,896	3,125	2,680		2,370	2,136			12,082	11,276	-6.7
Unfilled orders, end of month.....thous. of sq. ft. of surface	2,863	2,808	3,807	2,582		3,182	3,290					
Rotary-cut veneer:												
Purchases.....number of carloads	80	97	91	173	165	84	100	-4.6	+65.0	470	606	+28.9
Receipts.....number of carloads	132	115	173	183	229	84	127	+25.1	+80.3	432	834	+93.1
STONE, CLAY, AND GLASS PRODUCTS												
Clay Products												
Face brick, averages per plant:												
Production.....thousands	482	526	640	622	796	729	819	+28.0	-2.8	3,449	3,066	-11.1
Shipments.....thousands	402	447	686	768	925	774	860	+20.4	+7.6	3,024	3,228	+6.7
Stocks, end of month.....thousands	2,958	3,037	2,960	2,757	2,517	2,614	2,507	-8.7	+4			
Unfilled orders, end of month.....thousands	761	844	899	958	942	1,074	1,069	-1.7	-11.9			
Common brick:												
Stocks, end of month—Burned.....thousands	517,897	487,713	405,461	344,572		371,320	329,572					
Unburned.....thousands	68,611	64,492	69,460	96,998		100,953	154,151					
Shipments.....thousands	131,338	121,089	233,702	236,433		197,411	237,107			590,436	722,562	+22.4
Unfilled orders, end of month.....thousands	219,233	231,203	251,105	275,872		348,211	274,959					
Plants closed down.....number	91	73	57	23		2	1					
Price, red, New York.....dolls. per thous.	12.75	13.50	13.25	13.50	13.50	16.50	15.50	0.0	-12.9			
Porcelain plumbing fixtures:												
Net new orders.....pieces	13,953	12,794	42,130	59,647	22,465			-62.3				
Shipments.....pieces	13,239	11,969	12,079	17,037	15,459			-9.3				
Unfilled orders, end of month.....pieces	22,639	23,464	53,515	96,125	103,181			+7.3				
Stocks, end of month.....pieces	37,374	40,930	42,442	48,831	50,819			+4.1				
Vitreous china plumbing fixtures:												
New orders.....pieces	237,727	494,042	391,101	238,169	233,728	217,740	241,315	-1.9	-3.1	1,018,290	1,594,767	+56.6
Shipments.....pieces	240,829	246,002	335,948	291,130	288,530	220,786	246,223	-0.9	+17.2	1,253,761	1,402,439	+11.9
Unfilled orders, end of month.....pieces	329,482	577,522	622,215	569,254	514,452	347,635	342,717	-9.6	+50.1			
Stocks, end of month.....pieces	544,461	538,965	463,180	445,752	448,326	618,492	607,968	+0.6	-26.3			
Floor and wall tile:												
Production.....thous. of sq. ft.	4,663	4,649	5,287			5,453	5,210					
Shipments, quantity.....thous. of sq. ft.	3,951	4,185	5,253	5,553		4,948	5,092			18,818	18,942	+7
Shipments, value.....thous. of dolls.	1,495	1,683	2,035	2,016		1,879	1,902			7,149	7,229	+1.1
Stocks, end of month.....thous. of sq. ft.	13,902	14,169	13,907			11,658	11,766					

\* See table on p. 18 of the April, 1928, issue for earlier data.

Cumulative through Apr. 30.

Revised.



## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (—)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (—) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
STONE, CLAY, AND GLASS PRODUCTS—Continued												
Clay Products—Continued												
Terra cotta, new orders:												
Quantity.....net tons..	10,850	10,284	16,563	12,226	10,857	14,633	10,751	−11.2	+1.0	55,620	60,780	+9.3
Value.....thous. of dolls..	949	1,040	1,454	1,153	1,113	1,513	1,140	−3.5	−2.4	6,034	5,709	−5.4
Sand lime brick:												
Production.....thousands..	12,789	10,921	17,063	<sup>1</sup> 10,012	22,244	16,217	23,225	+122.2	−4.2	74,074	63,029	−14.9
Shipments by rail.....thousands..	4,945	3,738	4,273	<sup>1</sup> 4,829	7,752	6,229	8,196	+60.5	−5.4	31,141	25,537	−18.0
Shipments by trucks.....thousands..	7,024	6,204	9,391	<sup>1</sup> 9,182	18,229	10,884	13,250	+98.5	+37.6	46,741	50,030	+7.0
Stocks, end of month.....thousands..	15,867	16,920	16,777	<sup>1</sup> 15,121	12,159	8,493	8,740	−19.6	+39.1			
Unfilled orders, end of month.....thousands..	14,830	12,625	16,942	<sup>1</sup> 14,123	14,445	18,413	17,237	+2.3	−16.2			
Portland Cement												
Production.....thous. of bbls..	9,768	8,797	10,223	13,468	17,280	14,048	16,701	−28.3	+3.5	57,834	59,536	+2.9
Operation.....per ct. of capacity..	49.4	47.5	51.7	70.0	86.6			+23.7				
Stocks, end of month.....thous. of bbls..	25,116	27,349	27,445	27,627	25,921	23,654	23,503	−6.2	+10.3			
Stocks, clinkers, end of month.....thous. of bbls..	9,672	12,237	14,463	15,002	13,964	13,335	12,514	−6.9	+11.6			
Shipments.....thous. of bbls..	6,541	6,563	10,135	13,307	18,986	14,350	16,865	+42.7	+12.6	55,014	55,532	+9
Wholesale prices, composite.....dolls. per bbl..	1.683	1.683	1.683	1.683	1.683	1.683	1.683	0.0	0.0			
Highways												
Concrete pavements, new contracts:												
Total.....thous. of sq. yds..	5,902	7,464	12,406	17,788	20,695	15,482	14,234	+16.3	+45.4	47,643	64,255	+34.9
Road.....thous. of sq. yds..	4,103	5,615	8,746	12,722	13,246	10,264	8,235	+4.1	+60.9	28,626	44,432	+55.2
Federal-aid highways:												
Completed—												
Cost.....thous. of dolls..	10,728	8,209	11,411			6,170	9,101					
Distance.....miles..	458	340	395			265	414					
Under construction, end of month.....miles..	8,480	8,267	8,332			9,821	10,000					
Plate Glass												
Production, polished.....thous. of sq. ft..	8,205	10,093	11,297	9,953	10,224	10,299	9,618	+2.7	+6.3	49,832	49,772	−1
Glass Containers												
Actual production:												
Quantity.....gross..	2,207	2,085	2,570	2,421	2,688	2,205	2,197	+11.0	+22.3	10,610	11,971	+12.8
Relation to capacity.....per cent..	76.9	72.7	82.9	84.3	86.7	74.1	73.8	+2.8	+17.5			
New orders.....gross..	2,680	2,577	3,424	1,965	2,137	2,004	1,800	+8.8	+18.7	11,757	12,783	+8.7
Shipments.....gross..	1,958	2,113	2,646	2,491	2,729	2,346	2,383	+9.6	+14.5	10,767	11,937	+10.9
Stocks, end of month.....gross..	6,327	6,370	6,283	6,239	6,192	6,341	6,149	−8	+7			
Unfilled orders, end of month.....gross..	10,140	10,633	11,272	10,705	10,076	10,658	10,135	−5.9	−6			
Illuminating Glassware												
Production:												
Total.....number of turns..	2,685	2,936	3,137	3,243		3,030	2,797			<sup>1</sup> 11,621	<sup>1</sup> 12,001	+3.3
Ratio to capacity.....per ct. of capacity..	34.8	40.6	39.4	41.8		39.8	37.0					
New orders.....per ct. of capacity..	39.7	38.1	39.6	42.4		39.6	45.0					
Shipments.....per ct. of capacity..	36.5	36.9	39.5	40.1		38.8	39.3					
Unfilled orders, end of month.....number of weeks' supply..	1.2	1.4	1.3	1.1		1.0	1.2					
Stocks, end of month.....number of weeks' supply..	4.2	4.3	4.2	3.7		3.7	3.6					
CHEMICALS AND OILS												
Chemicals												
Sulphuric acid:												
Exports.....thous. of lbs..	560	580	728	842	516	1,024	730	−38.7	−29.3	3,560	3,226	−9.4
Price, wholesale.....dolls. per 100 lbs..	.78	.78	.78	.78	.78	.75	.75	0.0	+4.0			
Nitrate of soda:												
Imports.....long tons..	69,867	144,716	177,187	131,819	113,722	97,480	43,578	−13.7	+161.0	316,027	637,311	+101.7
Production in Chile—												
Quantity.....metric tons..	242,800	236,600	253,800	255,100		99,050	105,900			<sup>1</sup> 342,933	<sup>1</sup> 988,300	+188.2
Units reporting.....number of plants..	62	63	63	63		30	32					
Potash salts:												
Imports.....long tons..	31,646	33,774	22,230	28,137	12,997	15,911	8,292	−53.8	+68.8	92,094	128,784	+39.8
Production in France (K <sub>2</sub> O content)*												
metric tons..	31,290	33,958	34,770			25,740	30,200					
Sales in Germany (K <sub>2</sub> O content)*												
metric tons..	202,010	208,400	161,460	67,414		50,955	43,048			<sup>1</sup> 588,949	<sup>1</sup> 639,284	+8.5
Superphosphate (acid phosphate):												
Production.....short tons..	358,008	345,040	<sup>1</sup> 361,729	355,614		<sup>1</sup> 213,967	240,939			<sup>1</sup> 989,409	<sup>1</sup> 1,420,391	+43.6
Stocks, end of month.....short tons..	2,196,736	2,087,723	<sup>1</sup> 1,386,087	864,054		<sup>1</sup> 1,016,748	1,013,638					
Shipments.....short tons..	101,540	201,571	<sup>1</sup> 447,461	390,894		<sup>1</sup> 295,200	107,738			<sup>1</sup> 821,109	<sup>1</sup> 1,141,466	+39.0
Fertilizer:												
Exports.....long tons..	87,632	74,955	114,632	127,111	146,480	128,689	119,927	+16.0	+22.1	537,064	550,810	+2.6
Consumption, Southern States.....short tons..	603,343	1,113,569	2,185,435	862,878	198,810	870,224	146,454	−77.0	+35.7	3,876,596	4,964,035	+21.1
Dyes and dyestuffs, exports:												
Vegetable.....thous. of lbs..	239	276	490	296	160	300	451	−45.9	−64.5	1,619	1,461	−9.7
Coal tar.....thous. of lbs..	1,715	2,848	1,735	1,788	1,898	1,227	1,928	+6.2	−9.6	11,566	9,984	−13.7
Arsenic												
Crude:												
Production.....short tons..	1,158	1,600	1,076	1,098		1,075	905			<sup>1</sup> 5,016	<sup>1</sup> 4,932	−1.7
Stocks, end of month.....short tons..	1,407	2,005	1,834	1,863		2,208	1,432					
Refined:												
Production.....short ton..	827	668	688	669		925	683			<sup>1</sup> 3,678	<sup>1</sup> 2,852	−22.5
Stocks, end of month.....short tons..	2,496	2,403	2,479	2,760		2,059	1,718					
Price index numbers:												
Crude drugs.....rel. to Aug., 1914..	208	209	212	210		207	205					
Essential oils.....rel. to Aug., 1914..	130	131	132	139		123	121					
Drugs and pharmaceuticals.....rel. to Aug., 1914..	169	169	169	169		156	156					
Chemicals.....rel. to 1913-14..	112	112	113	113	113	113	113	0.0	0.0			
Oils and fats.....rel. to 1913-14..	130	122	122	125	128	132	130	+2.4	−1.5			

† See table on p. 18 of the April, 1928, issue for earlier data.

\* See table on p. 21 of the March, 1928, issue for earlier data.

† See table on p. 22 of the June, 1928, issue for earlier data.

‡ Cumulative through Apr. 30.

§ Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April 1928	May, 1928, from May, 1927	1927	1928	
CHEMICALS AND OILS—Continued												
Wood Chemicals												
Acetate of lime:												
Production—												
United States.....thous. of lbs.	12,519	11,718	13,022	<sup>3</sup> 11,693	10,987	13,138	12,552	-6.0	-1.25	66,762	59,939	-10.2
Canada.....thous. of lbs.	1,109	1,091	1,152	944	701	932	756	-25.7	-7.3	4,942	4,998	+1.1
Shipments—												
United States.....thous. of lbs.	11,095	9,539	12,303	<sup>3</sup> 12,092	15,588	13,560	11,972	+28.9	+30.2	59,784	60,616	+1.4
Canada.....thous. of lbs.	831	507	488	1,636	698	428	531	-57.3	+31.5	2,424	4,159	+71.6
Stocks, end of month—												
United States.....thous. of lbs.	17,203	19,562	20,186	<sup>3</sup> 20,516	16,292	22,207	23,068	-20.6	-29.4			
Canada.....thous. of lbs.	2,840	3,459	4,062	3,084	3,120	3,454	3,398	+1.2	-8.2			
Exports.....thous. of lbs.	1,630	1,760	2,037	917	1,152	974	1,582	+25.6	-27.2	6,265	7,496	+19.6
Price, wholesale.....dolls. per cwt.	3.50	3.50	3.50	3.50	3.50	3.50	3.50	0.0	0.0			
Methanol, crude:												
Production—												
United States.....gallons.	649,551	592,855	657,460	<sup>3</sup> 607,253	559,604	666,638	638,376	-7.8	-12.3	3,517,764	3,066,723	-12.8
Canada.....gallons.	47,234	45,659	47,377	35,768	28,505	39,016	30,088	-20.3	-5.3	207,953	204,543	-1.6
Stocks at crude plants, end of month—												
United States.....gallons.	344,798	363,325	333,496	<sup>3</sup> 323,183	299,062	325,888	345,366	-7.5	-13.4			
Canada.....gallons.	39,249	46,158	55,776	32,773	29,533	41,468	29,910	-9.9	-1.3			
Stocks at refineries and in transit—												
United States.....gallons.	1,126,152	1,132,377	1,079,047	1,120,970	909,620	819,216	896,334	-18.9	+1.5			
Canada.....gallons.	56,104	55,298	47,268	55,934	57,270	12,949	33,078	+2.4	+73.1			
Exports.....gallons.	33,384	42,871	41,232	59,244	98,763	41,254	22,863	+66.7	+332.0	111,939	275,494	+146.1
Wood at chemical plants:												
Consumption—												
United States.....cords.	68,559	64,080	72,303	<sup>3</sup> 63,973	59,744	69,895	64,309	-6.6	-7.1	359,164	328,659	-8.5
Canada.....cords.	5,858	5,640	5,793	4,664	3,500	4,790	3,298	-25.0	+6.1	24,790	25,455	+2.7
Stocks, end of month—												
United States.....cords.	560,568	543,555	534,161	<sup>3</sup> 515,250	489,388	524,259	551,536	-5.0	-11.3			
Canada.....cords.	74,440	74,734	75,117	74,749	74,800	31,113	27,041	+1	+176.6			
Daily capacity—												
Total.....cords.	3,293	3,323	3,323	3,275	3,267	3,535	3,535	-0.2	-7.6			
Shutdown.....cords.	249	261	261	<sup>3</sup> 263	290	319	537	+13.7	-44.3			
Methanol, refined:												
Production—												
United States.....gallons.	496,073	390,099	442,023	468,446	557,780	420,741	426,304	+19.1	+30.8	2,202,031	2,354,421	+6.9
Canada.....gallons.	38,700	44,850	48,400	46,000	30,400	39,910	10,550	-33.9	+188.2	162,745	208,350	+28.8
Stocks, end of month—												
United States.....gallons.	455,316	467,723	412,597	430,298	505,299	606,975	554,313	+17.4	-8.8			
Canada.....gallons.	29,198	33,044	48,413	47,311	55,359	73,706	73,726	+17.0	-24.2			
Shipments—												
United States.....gallons.	482,666	407,351	469,308	412,597	492,081	416,996	469,513	+19.3	+4.8	2,009,581	2,244,003	+11.7
Canada.....gallons.	17,775	35,986	11,505	39,856	14,528	35,340	20,432	-63.5	-28.9	148,434	119,650	-19.4
Price, wholesale, N. Y.....dolls. per gal.	.48	.46	.46	.46	.46	.83	.83	0.0	-4.6			
Ethyl Alcohol												
Production.....thous. of gals.	13,050	11,220	11,050	11,784		12,674	13,052			47,734	47,064	-1.4
Withdrawn for denaturation.....thous. of gals.	10,098	9,061	8,686	9,334		11,618	11,584			41,883	37,179	-11.2
Warehouse stocks, end of month.....thous. of gals.	9,463	10,120	10,945	11,267		8,459	9,335					
Explosives												
(Black powder, permissible, and other high explosives)												
Production.....thous. of lbs.	29,607	31,895	30,001	32,153		31,962	34,168			133,382	123,656	-7.3
Shipments.....thous. of lbs.	31,332	31,035	30,801	32,095		33,132	35,355			132,326	125,263	-5.3
New orders.....thous. of lbs.	29,879	29,203	29,660	30,701		31,415	33,961			127,650	119,443	-6.4
Stocks, end of month.....thous. of lbs.	17,973	18,447	18,645	17,647		18,043	16,784					
Naval Stores												
Turpentine (gum):												
Net receipts, southern ports.....barrels.	7,764	4,568	5,624	20,765	39,764	30,989	48,025	+91.5	-17.2	101,670	78,485	-22.8
Stocks at ports, end of month.....barrels.	72,035	61,906	40,338	45,458	46,741	31,802	47,264	+2.8	-1.1			
Price, southern, New York.....dolls. per gal.	.60	.60	.60	.58	.54	.67	.63	-6.9	-14.3			
Rosin (gum):												
Net receipts, southern ports.....barrels.	41,160	30,549	25,544	67,762	118,460	97,028	150,397	+75.1	-21.2	350,097	283,475	-19.0
Stocks at 3 ports, end of month.....barrels.	200,262	159,053	123,074	140,805	128,789	107,562	153,445	-2.5	-16.1			
Price, B. New York.....dolls. per bbl.	9.54	8.94	8.89	8.54	8.15	9.70	9.67	-4.6	-15.8			
Rosin (wood):												
Production.....barrels.	29,200	32,792	35,148	34,831	36,036	34,598	36,508	+3.4	-1.3	173,630	168,007	-3.2
Stocks, end of month.....barrels.	85,413	90,429	98,101	108,394	114,160	58,652	64,763	+5.3	+76.3			
Turpentine (wood):												
Production.....barrels.	5,771	5,645	6,647	6,052	6,350	7,035	6,974	+4.9	-8.9	34,902	30,455	-12.7
Stocks, end of month.....barrels.	10,631	10,477	10,862	10,963	9,459	7,473	8,746	-13.7	+8.2			
Pine oil:												
Production.....gallons.	198,646	237,953	259,079	240,845	248,606	239,027	243,880	+3.2	+1.9	1,176,899	1,185,129	+7
Stocks, end of month.....gallons.	605,771	641,354	693,522	727,416	708,195	355,790	392,864	+5.6	+95.5			
Roofing												
Roofing, felt:												
Production, dry felt.....tons.	21,743	19,098	25,492	27,534	27,521	27,638	27,019	-1	+1.9	118,801	121,388	+2.1
Stocks, end of month, dry felt.....tons.	3,088	3,558	2,775	2,844	2,366	3,089	2,806	-16.8	-15.7			
Prepared roofing:												
Shipments.....thous. of roof squares.	1,587	1,320	<sup>3</sup> 3,248	<sup>3</sup> 3,016	3,008	3,183	3,020	-3	-4	12,190	12,179	-1

<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
CHEMICALS AND OILS—Continued												
Fats and Oils												
Total vegetable oils and copra:												
Exports.....thous. of lbs..	9,405	8,939	9,406	4,618	1,996	6,050	8,519	-56.8	-76.6	36,921	36,986	+0.2
Imports.....thous. of lbs..	59,870	49,811	56,179	65,152	57,049	72,305	74,369	-12.4	-23.3	284,977	288,061	+1.1
Copra, imports.....short tons..	26,872	5,178	15,200	11,334	21,383	19,107	20,418	+88.7	+4.7	86,473	79,967	-7.5
Copra or coconut oil:												
Imports.....thous. of lbs..	32,751	22,271	20,889	23,112	15,076	35,149	26,538	-34.8	-43.2	125,558	114,099	-9.1
Consumption in oleomargarine.....thous. of lbs..	13,191	14,009	13,381	12,284	11,613	10,279	8,734	-5.5	+33.0	49,699	64,478	+29.7
Oleomargarine:												
Production.....thous. of lbs..	26,205	27,624	27,288	24,291	23,744	23,569	20,917	-2.3	+13.5	115,063	129,152	+12.2
Consumption.....thous. of lbs..	27,729	26,327	27,427	22,800	23,381	23,267	20,799	+2.5	+12.4	113,515	127,644	+12.5
Animal glues, shipments.....thous. of lbs..	6,814	6,672	6,524	6,587		6,175	5,840			26,176	26,597	+1.6
Cottonseed												
Cottonseed:												
Receipts at mills.....short tons..	339,212	177,229	95,296	15,947	5,660	103,239	56,611	-64.5	-90.0	1,574,035	633,344	-59.8
Consumption (crush).....short tons..	570,408	450,627	323,307	164,872	66,040	352,994	196,510	-60.9	-66.4	2,701,083	1,575,254	-41.7
Stocks at mills, end of month.....short tons..	763,353	489,955	261,944	113,019	52,437	311,931	171,852	-53.6	-69.5			
Cottonseed oil, crude:												
Production.....thous. of lbs..	181,022	144,658	108,387	56,945	24,437	106,887	62,182	-57.1	-60.7	817,420	515,449	-36.9
Stocks, end of month.....thous. of lbs..	168,519	159,302	124,730	83,371	47,409	123,141	73,029	-43.1	-35.1			
Cottonseed oil, refined:												
Production.....thous. of lbs..	143,378	138,231	124,848	84,159	61,935	111,408	91,455	-26.4	-32.3	780,877	552,551	-29.2
Stocks, end of month.....thous. of lbs..	538,257	566,832	541,640	516,232	480,431	531,376	507,762	-6.9	-5.4			
Price, yellow, prime, N. Y.....dolls. per lb..	.101	.093	.096	.099	.106	.091	.091	+7.1	+16.5			
Consumption in oleomarg.....thous. of lbs..	2,162	2,114	2,214	2,015	2,135	2,173	1,974	+6.0	+8.2	10,653	10,640	-1
Cottonseed cake and meal:												
Production.....short tons..	259,275	202,264	150,984	82,273	31,376	164,748	84,889	-61.9	-63.0	1,215,544	726,172	-40.3
Stocks, end of month.....short tons..	177,118	170,827	111,819	84,870	59,745	180,741	153,853	-29.6	-61.2			
Exports.....short tons..	53,249	27,671	12,514	8,230	4,906	8,636	21,527	-40.4	-77.2	196,897	106,570	-45.9
Flaxseed												
Minneapolis and Duluth:												
Receipts.....thous. of bush..	925	660	595	474	650	374	491	+37.1	+32.4	2,741	3,304	+20.5
Shipments.....thous. of bush..	576	457	612	584	675	330	338	+15.6	+99.7	2,024	2,904	+43.5
Stocks, end of month.....thous. of bush..	3,212	2,668	2,087	1,627	856	1,860	1,381	-47.4	-38.0			
Imports.....thous. of bush..	1,181	1,264	1,671	1,718	2,156	2,360	2,376	+25.5	-9.3	10,397	7,990	-23.2
Linseed oil:												
Shipments from Minneapolis.....thous. of lbs..	13,023	12,917	15,722	15,079	17,245	10,826	16,951	+14.4	+57.5	50,364	73,986	+46.9
Price, New York.....dolls. per lb..	.098	.098	.099	.098	.103	.106	.115	+5.1	-10.4			
Linseed cake and meal:												
Shipments from Minneapolis.....thous. of lbs..	27,056	28,540	29,547	21,607	16,621	11,178	7,801	-23.1	+113.1	70,881	123,371	+74.1
Exports.....thous. of lbs..	44,367	53,532	53,686	38,582	45,331	64,896	41,403	+17.5	+9.5	286,590	235,498	-17.8
FOODSTUFFS												
Wheat												
Visible supply, end of month:												
United States.....thous. of bush..	82,368	74,260	69,939	63,625	50,381	40,455	30,062	-10.8	+67.9			
Canada.....thous. of bush..	152,560	152,760	143,919	129,552	112,054	83,121	64,600	-13.5	+73.5			
Production, crop estimate:												
Winter wheat.....thous. of bush..					512,252		552,384					
Receipts, principal markets.....thous. of bush..	23,542	22,488	26,263	17,949	24,481	14,420	19,258	+36.4	+27.1	95,830	114,723	+19.7
Shipments, principal markets.....thous. of bush..	14,284	12,771	14,883	14,269	26,426	17,636	17,556	+85.2	+50.5	71,526	82,633	+15.5
Exports:												
United States—												
Wheat only.....thous. of bush..	5,956	2,276	2,740	2,723	4,823	11,363	8,960	+77.1	-46.2	38,374	18,518	-51.7
Including wheat flour.....thous. of bush..	11,560	6,526	7,290	7,860	8,624	15,935	13,903	+12.6	-38.0	60,288	41,670	-30.9
Canada—												
Wheat only.....thous. of bush..	15,201	18,372	18,655	8,361	30,282	20,182	28,698	+262.2	+5.5	89,268	90,871	+1.8
Including wheat flour.....thous. of bush..	18,647	21,828	23,794	11,103	34,268	22,050	32,316	+208.6	+6.0	106,234	109,640	+3.2
Prices:												
No. 2, red winter, Chicago.....dolls. per bush..	1.43	1.54	1.62	1.81	1.90	1.34	1.44	+5.0	+31.9			
No. 1, northern spring, cash, Minneapolis.....dolls. per bush..	1.293	1.263	1.315	1.417	1.502	1.341	1.444	+6.0	+4.0			
Wheat Flour												
Grinding of wheat:												
United States.....thous. of bush..	42,403	41,140	44,748	38,986	39,401	38,028	38,924	+1.1	+1.2	193,710	206,678	+6.7
Canada.....thous. of bush..	7,246	6,737	7,481	6,058		5,281	6,658			24,358	27,522	+13.0
Production:												
United States, actual.....thous. of bbls..	9,132	8,872	9,659	8,400	8,493	8,309	8,497	+1.1	+5	42,389	44,556	+5.1
United States, prorated.....thous. of bbls..	10,502	10,107	10,738	9,661		9,667	9,532			38,735	41,008	+5.9
Canada.....thous. of bbls..	1,579	1,464	1,617	1,314		1,154	1,455			5,336	5,974	+12.0
Production, grain offal.....thous. of lbs..	744,527	727,287	790,088	686,720	697,012	659,198	672,824	+1.4	+15.6	3,332,879	3,645,634	+9.4
Capacity operated, flour mills.....per cent..	55	56	54	51	50	49	52	-2.0	-3.8			
Consumption (computed).....thous. of bbls..	8,207	9,340	10,499	8,064		8,551	8,733					
Stocks, all positions, end of month (computed).....thous. of bbls..	7,150	6,970	6,200	6,700		6,600	6,300					
Exports:												
United States.....thous. of bbls..	1,245	947	1,011	1,067	845	1,016	1,699	-23.0	-23.1	4,865	5,145	+5.8
Canada.....thous. of bbls..	766	768	1,142	609	886	415	804	+45.5	+10.2	3,760	4,171	+10.9
Wholesale prices:												
Standard patents, Minn.....dolls. per bbl..	7.45	7.37	7.54	8.11	8.49	7.25	7.83	+4.7	+8.4			
Winter, straights, Kansas City.....dolls. per bbl..	6.70	6.66	6.88	7.56	7.63	6.58	6.96	+9	+9.6			

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.<sup>4</sup> As of June 1.<sup>5</sup> Final estimate for 1927.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	January	Feb-ruary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
FOODSTUFFS—Continued												
Corn												
Exports, including meal.....thous. of bush..	1,661	4,097	3,697	3,355	1,186	1,548	1,717	-64.6	-30.9	9,485	13,996	+47.6
Visible supply, end of month.....thous. of bush..	30,078	43,582	46,734	36,056	27,554	39,130	31,528	-23.6	-12.6			
Receipts, principal markets.....thous. of bush..	36,001	44,126	41,039	19,579	21,541	10,451	12,599	+10.0	+71.0	94,665	162,286	+71.4
Shipments, prin. markets.....thous. of bush..	19,551	22,705	24,402	18,849	22,188	12,326	10,142	+17.7	+118.8	51,717	107,695	+108.2
Grindings (starch, glucose).....thous. of bush..	8,330	8,339	9,243	8,285	6,921	6,846	6,365	-16.5	+8.7	33,675	41,118	+22.1
Price No. 2 Chicago.....dolls. per bush..	.89	.95	.99	1.03	1.07	.74	.87	+3.9	+23.0			
Oats												
Receipts, principal markets.....thous. of bush..	10,495	11,667	13,975	12,436	13,359	9,127	11,888	+7.4	+12.4	55,717	61,932	+11.2
Visible supply, end of month.....thous. of bush..	21,519	20,634	16,265	11,453	7,319	30,298	22,350	-36.1	-67.3			
Exports, including meal.....thous. of bush..	623	336	453	387	465	853	3,216	+20.2	-85.5	4,884	2,264	-53.6
Price, contract grades, Chi.....dolls. per bush..	.56	.58	.61	.65	.69	.48	.51	+6.2	+35.3			
Grindings, Canada.....thous. of bush..	1,040	822	944	846		632	694			2,850	3,652	+28.1
Production, oatmeal and rolled oats, Canada.....thous. of lbs..	12,461	9,360	10,982	10,208		6,661	8,148			31,865	43,011	+35.0
Barley												
Receipts, principal markets.....thous. of bush..	6,401	4,457	5,052	2,717	3,031	2,210	2,167	+11.6	+39.9	11,641	21,658	+86.0
Visible supply, end of mo.....thous. of bush..	2,359	2,206	2,738	2,339	1,435	1,619	947	-38.6	+41.0			
Exports.....thous. of bush..	1,901	1,004	915	876	1,386	1,364	1,591	+58.2	-12.9	7,826	6,082	-22.3
Price, fair to good, malting, Chicago.....dolls. per bush..	.93	.96	.99	1.01	1.04	.83	.90	+3.0	+15.6			
Rye												
Production, crop estimate.....thous. of bush..					36,676		58,572					
Receipts, principal markets.....thous. of bush..	1,477	1,333	1,982	1,186	1,593	1,449	3,272	+34.3	-51.3	9,643	7,570	-21.5
Visible supply, end of mo.....thous. of bush..	3,656	4,078	4,959	5,051	1,696	6,249	2,213	-66.4	-23.4			
Exports, including flour.....thous. of bush..	519	458	313	366	3,345	4,500	5,861	+914.0	-42.9	12,542	5,001	-60.1
Price, No. 2, Chicago.....dolls. per bush..	1.09	1.12	1.20	1.27	1.32	1.03	1.13	+3.9	+16.9			
Total Grains												
Total grain exports, incl. flour.....thous. of bush..	12,264	12,431	12,659	12,644	15,006	24,200	26,288	+18.7	-42.9	95,026	65,004	-31.6
Rice												
Southern paddy, receipts at mills.....bbls..	853,581	804,645	942,266	620,032	351,607	371,901	396,006	-43.3	-11.2	2,855,368	3,572,131	+25.1
Shipments:												
Total from mills.....pockets (100 lbs.)..	1,118,120	961,109	905,678	835,992	909,718	569,194	700,427	+8.8	+29.9	4,002,076	4,730,617	+18.2
New Orleans.....pockets (100 lbs.)..	158,323	224,932	170,442	205,148	203,261	130,146	119,681	-9	+69.8	875,480	962,106	+9.9
Stocks, end of month.....pockets (100 lbs.)..	2,106,310	2,038,415	2,137,656	1,957,878	1,455,366	1,696,891	1,400,980	-25.7	+3.9			
Exports.....pockets (100 lbs.)..	469,435	322,071	288,771	392,919	380,725	256,598	256,598	-3.1	+48.4	1,930,125	1,853,921	-3.9
Imports.....pockets (100 lbs.)..	52,744	58,820	39,279	34,447	27,452	46,034	46,034	-20.3	-40.4	333,589	211,380	-36.6
Other Crops												
Apples:												
Cold-storage holdings, end of month.....thous. of bbls..	5,307	3,699	2,454	1,378	599	1,598	1,534	-56.5	+12.2			
Car-lot shipments.....carloads..	5,305	4,913	3,569	2,322	1,803	3,630	2,465	-22.4	-26.8	273,081	17,912	-33.9
Potatoes, car lot shipments.....carloads..	19,665	22,258	23,582	16,851	22,955	19,497	16,407	+36.2	+39.9	91,631	105,311	+14.9
Onions, car-lot shipments.....carloads..	3,114	2,470	1,743	2,993	4,133	2,968	2,455	+38.1	+68.3	11,976	14,453	+20.7
Citrus fruit, car-lot shipments.....carloads..	9,057	8,735	10,194	8,893	8,350	12,911	10,643	-6.1	-21.5	593,080	45,229	-23.4
Hay, all tame, receipts.....short tons..	63,009	62,673	57,567	46,628	42,955	52,716	50,563	-7.9	-15.0	302,276	272,832	-9.7
Cattle and Beef												
Cattle movements, primary markets:												
Receipts.....thousands..	1,771	1,516	1,465	1,684	1,799	1,674	1,956	+6.8	-8.0	8,760	8,235	-6.0
Shipments, total.....thousands..	660	552	522	640	682	602	732	+6.6	-6.8	3,135	3,056	-2.5
Shipments, stocker and feeder.....thousands..	234	194	173	254	283	204	235	+11.4	+20.4	1,020	1,138	+11.6
Local slaughter.....thousands..	1,080	961	940	1,013	1,120	1,066	1,201	+10.6	-6.7	5,549	5,114	-7.8
Beef products:												
Production, inspected.....thous. of lbs..	387,750	370,385	378,251	361,718	422,916	421,666	449,382	+16.9	-5.9	2,153,019	1,921,020	-10.8
Apparent consumption.....thous. of lbs..	393,945	379,461	384,815	375,381	435,081	436,178	463,240	+15.9	-6.1	2,202,853	1,968,683	-10.6
Exports.....thous. of lbs..	974	935	1,143	1,052	1,165	2,043	1,418	+10.7	-17.8	9,209	5,269	-42.8
Cold-storage holdings, end mo.....thous. of lbs..	71,651	63,749	57,256	46,194	37,547	62,928	50,413	-18.7	-25.5			
Prices:												
Cattle, corn-fed, Chicago.....dolls. per 100 lbs..	15.80	14.78	13.72	13.34	13.18	12.28	11.44	-1.2	+15.2			
Steer rounds No. 2.....dolls. per lb..	.220	.200	.205	.200	.201	.176	.184	+5	+9.2			
Western dressed steers, N. Y.....dolls. per lb..	.230	.230	.221	.222	.229	.187	.188	+3.2	+21.8			
Hogs and Pork												
Hog movements, primary markets:												
Receipts.....thousands..	5,306	5,267	4,639	3,483	3,723	3,142	3,613	+6.9	+2.8	18,069	22,418	+24.1
Shipments, total.....thousands..	1,849	1,810	1,760	1,385	1,296	1,101	1,216	-6.4	+6.6	6,527	8,100	+24.1
Shipments, stocker and feeder.....thousands..	77	75	78	65	66	84	72	+1.5	-8.3	451	361	-20.0
Local slaughter.....thousands..	3,443	3,457	2,892	2,077	2,420	2,050	2,380	+16.5	+1.7	11,516	14,289	+24.1
Pork products, total:												
Production, inspected.....thous. of lbs..	935,467	1,017,548	890,408	585,081	672,640	603,019	681,902	+15.0	-1.4	3,372,310	4,101,144	+21.6
Apparent consumption.....thous. of lbs..	675,668	641,246	618,459	528,236	619,757	473,266	560,558	+17.3	+10.6	2,584,038	3,083,366	+19.3
Exports.....thous. of lbs..	98,794	109,280	116,937	86,159	85,201	91,842	91,878	-1.1	-7.3	419,512	496,371	+18.3
Cold-storage holdings, end of month:												
Total.....thous. of lbs..	739,645	1,006,998	1,162,243	1,133,760	1,102,306	869,823	899,826	-2.8	+22.5			
Fresh and cured.....thous. of lbs..	655,638	885,916	997,737	960,672	916,727	770,212	787,850	-4.6	+16.4			
Lard (included in pork products):												
Production.....thous. of lbs..	190,557	217,354	155,052	127,075		126,009	142,527			541,183	690,038	+27.5
Exports.....thous. of lbs..	70,660	79,872	79,929	50,554	55,540	67,345	64,418	-1.8	-13.8	294,529	342,555	+16.3
Cold-storage holdings, end mo.....thous. of lbs..	84,007	121,082	164,506	173,088	185,579	99,611	111,976	+7.2	+65.7			
Prices:												
Hogs, heavy, Chicago.....dolls. per 100 lbs..	8.32	8.03	7.83	9.09	9.61	10.51	9.45	+5.7	+1.7			
Hams, smoked, Chicago.....dolls. per lb..	.212	.210	.207	.201	.206	.268	.259	+2.5	-20.5			
Lard, prime contract, N. Y.....dolls. per lb..	.124	.116	.118	.121	.123	.128	.129	+1.7	-4.7			

\* Cumulative through Apr. 30.

\* Revised.

\* As of June 1.

\* Final estimate for 1927.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	January	Feb-ruary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
FOODSTUFFS—Continued												
Sheep and Lambs												
Sheep movement, primary market:												
Receipts.....thousands.....	1,705	1,669	1,520	1,591	1,952	1,486	2,013	+22.7	-3.0	8,298	8,437	+1.7
Shipments, total.....thousands.....	705	729	705	778	994	690	1,064	+27.8	-6.6	3,961	3,911	-1.3
Shipments, stocker and feeder.....thousands.....	116	101	95	134	205	118	259	+53.0	-20.8	860	651	-24.3
Local slaughter.....thousands.....	994	945	814	814	951	800	951	+16.8	0.0	4,344	4,518	+4.0
Lamb and mutton:												
Production, inspected.....thous. of lbs.....	47,081	44,057	42,129	36,248	38,455	37,545	37,731	+6.1	+1.9	201,491	207,971	+3.2
Apparent consumption.....thous. of lbs.....	47,055	44,428	43,052	38,039	40,177	38,641	38,452	+5.6	+4.5	205,065	212,751	+3.7
Cold-storage holdings, end mo.....thous. of lbs.....	4,404	4,020	3,262	1,828	1,235	1,862	1,210	-32.4	+2.1			
Prices:												
Sheep, ewes, Chicago.....dolls. per 100 lbs.....	6.05	8.16	8.41	8.90	7.31	7.78	5.90	-17.9	+23.9			
Sheep, lambs, Chicago.....dolls. per 100 lbs.....	12.65	15.13	15.38	15.98	15.19	15.81	14.85	-4.9	+2.3			
Miscellaneous Meats												
Cold-storage holdings, end mo.....thous. of lbs.....	64,219	71,707	74,949	70,438	65,636	58,521	60,978	-6.8	+7.6			
Total Meats												
Production, inspected.....thous. of lbs.....	1,370,298	1,431,989	1,310,789	983,046	1,134,010	1,062,230	1,169,015	+15.4	-3.0	5,726,831	6,230,132	+8.8
Cold-storage holdings, end mo.....thous. of lbs.....	879,919	1,146,474	1,297,700	1,252,200	1,206,724	993,134	1,012,427	-3.6	+19.2			
Apparent consumption.....thous. of lbs.....	1,116,668	1,065,135	1,046,326	941,656	1,095,016	948,077	1,062,251	+16.3	+3.1	4,991,948	5,264,801	+5.5
Poultry												
Receipts at 5 markets.....thous. of lbs.....	29,347	20,857	18,135	16,006	17,862	13,956	20,157	+11.6	-11.4	96,543	102,207	+5.9
Cold-storage holdings, end of mo.....thous. of lbs.....	118,154	103,494	83,169	56,832	43,915	77,282	61,525	-22.7	-28.6			
Fish												
Total catch, prin. fishing ports.....thous. of lbs.....	14,300	18,860	23,316	24,387	27,650	20,556	25,171	+13.4	+9.8	111,826	113,513	+1.5
Cold-storage holdings, 15th of mo.....thous. of lbs.....	53,921	44,877	34,528	26,473	26,358	24,731	29,782	-4	-11.5			
Canned salmon:												
Shipments, United States.....cases.....	254,394	316,392	314,241	116,155	42,117	206,647	288,120	+13.1	-34.8	1,546,965	1,001,184	-39.2
Exports, Canada.....cases.....	168,946	79,760	103,127	37,231		53,450	64,590			417,247	421,181	+9
Butter												
Production (factory).....thous. of lbs.....	103,861	96,768	107,896	117,757	156,020	124,099	165,790	+32.5	-5.9	582,248	582,302	0.0
Receipts, 5 markets.....thous. of lbs.....	42,271	41,140	45,748	44,721	54,427	48,279	63,710	+21.7	-14.6	233,279	228,307	-2.1
Cold-storage holdings, creamery, end of month.....thous. of lbs.....	28,273	14,404	5,716	5,109	16,020	3,436	25,404	+213.6	-36.9			
Apparent consumption.....thous. of lbs.....	159,687	143,844	156,505	163,257	205,973	165,822	149,660	+26.2	+37.6	751,661	829,266	+10.3
Wholesale price, New York.....dolls. per lb.....	.49	.47	.49	.45	.45	.50	.43	0.0	+4.7			
Cheese												
Total, all varieties:												
Production (factory).....thous. of lbs.....	24,033	24,456	30,410	28,960	40,305	38,126	51,262	+39.2	-21.4	175,175	148,164	-15.4
Receipts, 5 markets.....thous. of lbs.....	14,409	13,716	14,655	15,138	16,254	16,923	21,301	+7.4	-23.7	80,718	74,172	-8.1
Apparent consumption.....thous. of lbs.....	37,408	36,618	41,490	36,570	38,807	38,212	42,420	+6.1	-8.5	196,378	190,893	-2.8
Cold-storage holdings, end mo.....thous. of lbs.....	55,862	48,754	43,303	41,791	49,030	45,616	50,864	+17.3	-3.6			
Imports.....thous. of lbs.....	5,347	5,308	5,759	6,229	6,280	6,923	7,072	+8	-11.2	32,215	28,918	-10.2
Exports, United States.....thous. of lbs.....	257	208	266	187	303	327	297	+62.0	+2.0	1,696	1,221	-28.0
Exports, Canada.....thous. of lbs.....	1,324	1,148	2,011	668	4,860	1,117	2,619	+627.5	+85.6	13,540	10,011	-26.1
American whole milk:												
Cold-storage holdings, end mo.....thous. of lbs.....	41,793	36,710	31,887	30,207	36,803	32,487	35,826	+21.8	+2.7			
Wholesale price, New York.....dolls. per lb.....	.29	.24	.25	.24	.24	.24	.24	0.0	0.0			
Eggs												
Receipts, 5 markets.....thous. of cases.....	862	1,320	2,034	2,360	2,503	2,729	2,523	+6.1	-8	9,395	9,079	-3.4
Cold-storage holdings, end of month:												
Case.....thous. of cases.....	26	66	1,087	4,515	8,162	5,501	8,962	+80.8	-8.9			
Frozen.....thous. of lbs.....	38,575	31,362	34,411	51,532	68,223	52,053	71,605	+32.4	-4.7			
Milk												
Condensed milk:												
Total stocks, mfrs., end mo.—												
Case goods.....thous. of lbs.....	20,618	17,924	15,844	18,496	22,396	14,608	26,709	+21.1	-16.1			
Bulk goods.....thous. of lbs.....	8,457	7,635	8,299	11,757	16,241	9,721	15,392	+38.1	+5.5			
Unsold stocks, mfrs., end mo.—												
Case goods.....thous. of lbs.....	15,151	12,534	10,868	13,169	18,079	8,317	21,706	+37.3	-16.7			
Bulk goods.....thous. of lbs.....	5,216	5,230	6,034	6,453	7,937	3,689	5,220	+23.1	+52.0			
Exports.....thous. of lbs.....	3,819	2,645	4,707	2,700	3,279	2,761	3,642	+21.4	-10.0	14,924	17,150	+14.9
Wholesale price, New York.....dolls. per case.....	6.00	5.98	5.84	5.83	5.83	5.84	5.93	0.0	-1.7			
Evaporated milk:												
Manufacturers' stocks, end of mo.—												
Total, case goods.....thous. of lbs.....	118,444	93,528	75,949	94,338	119,068	58,455	106,636	+26.2	+11.7			
Unsold, case goods.....thous. of lbs.....	95,120	65,497	56,201	72,121	95,243	8,531	48,947	+32.1	+94.6			
Exports.....thous. of lbs.....	7,360	7,531	8,742	6,421	7,906	7,054	7,305	+21.6	+6.9	30,476	37,860	+24.2
Wholesale price, New York.....dolls. per case.....	4.58	4.46	4.23	4.23	4.28	4.58	4.63	+1.2	-7.6			
Production, condensed and evaporated milk.....thous. of lbs.....	102,847	131,323	181,476	170,884	205,123	182,413	239,980	+20.0	-14.6	811,387	791,653	-2.4
Powdered milk:												
Manufacturers' stocks, end mo.—												
Total, case goods.....thous. of lbs.....	8,334	9,185	9,113	12,156	15,536	6,683	9,136	+27.8	+70.1			
Exports.....thous. of lbs.....	236	328	266	303	273	336	387	-9.9	-29.5	1,416	1,406	-7
Net new orders.....thous. of lbs.....	4,880	4,781	6,062	6,037	6,590	6,012	5,716	+9.2	+15.3	24,190	28,349	+17.2

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumulative 1928 from 1927
	January	Febru-ary	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
FOODSTUFFS—Continued												
Milk—Continued												
Fluid milk:												
Receipts—												
Boston (includ. cream).....thous. of qts..	17,490	15,964	18,176	17,697	-----	17,976	17,725	-----	-----	<sup>2</sup> 68,640	<sup>2</sup> 69,327	-----
Greater New York.....thous. of qts..	109,709	104,413	114,214	109,613	117,558	108,761	114,529	+7.2	+2.6	541,665	555,507	+2.6
Production—												
Minneapolis, St. Paul.....thous. of lbs..	26,140	26,192	28,780	27,522	-----	26,458	30,818	-----	-----	<sup>2</sup> 104,343	<sup>2</sup> 109,767	+5.2
Consumption in manufacture of oleomargarine.....thous. of lbs..	7,190	8,117	7,762	7,035	7,455	6,518	5,913	+6.0	+26.1	32,022	37,559	+17.3
Sugar												
Raw:												
Imports—												
From Hawaii, Porto Rico.....long tons..	45,026	130,034	204,691	164,551	158,387	158,556	144,715	-3.7	+9.4	673,807	702,689	+4.3
From foreign countries.....long tons..	219,926	344,459	425,517	448,325	271,492	417,332	348,546	-39.4	-22.1	1,696,946	1,710,020	+8
Meltings, 8 ports.....long tons..	307,050	310,612	468,496	409,447	378,231	482,656	472,528	-7.6	-20.0	2,161,642	1,873,836	-13.3
Stocks at refineries, end month.....long tons..	192,968	333,493	458,231	666,061	701,624	379,210	370,898	+5.3	+89.2	-----	-----	-----
Receipts, domestic, New Orleans.....long tons..	None.	None.	None.	None.	None.	30	50	-----	-100.0	-----	-----	-----
Refined:												
Shipments, 2 ports.....long tons..	40,958	47,631	70,414	60,571	58,371	85,401	84,961	-3.6	-31.3	361,251	277,945	-23.1
Stocks, 2 ports.....long tons..	29,542	20,283	31,621	42,092	43,208	49,441	44,643	+2.7	-3.2	-----	-----	-----
Exports, including maple.....long tons..	3,184	8,842	9,865	8,645	11,869	15,822	10,524	+37.3	+12.8	56,942	42,405	-25.5
Prices:												
Wholesale, 96° centrif., N. Y. dolls. per lb..	.045	.043	.045	.045	.045	.048	.048	0.0	-6.3	-----	-----	-----
Wholesale, granulated, N. Y. dolls. per lb..	.057	.056	.057	.058	.059	.058	.060	+1.7	-1.7	-----	-----	-----
Retail, granulated, N. Y. dolls. per lb..	.063	.063	.063	.064	.065	.063	.063	+1.6	+3.2	-----	-----	-----
Retail average, 51 cities, relative to 1913..	129	129	129	129	129	133	133	+1.6	-1.5	-----	-----	-----
Cuban movement (raw):												
Receipts at Cuban ports.....long tons..	238,129	898,615	1,016,015	586,747	237,507	595,154	227,001	-59.5	+4.6	3,194,213	2,977,013	-6.8
Exports.....long tons..	212,161	326,705	584,153	447,097	287,561	441,653	336,320	-35.7	-14.5	1,853,907	1,857,677	+2
Stocks, end of month.....long tons..	177,891	851,113	1,202,571	1,325,601	1,263,287	1,449,624	1,357,045	-4.7	-6.9	-----	-----	-----
Coffee												
Imports.....thous. of bags..	1,148	1,024	1,085	935	839	962	712	-10.3	+17.8	4,335	5,031	+16.1
Visible supply:†												
World.....thous. of bags..	4,862	4,792	5,050	5,152	5,143	4,261	4,322	-0.2	+19.0	-----	-----	-----
United States.....thous. of bags..	782	833	873	892	775	806	743	-13.1	+4.3	-----	-----	-----
Receipts, total, Brazil †.....thous. of bags..	<sup>1</sup> 1,224	<sup>1</sup> 1,032	<sup>1</sup> 1,332	<sup>1</sup> 1,203	1,158	933	1,058	-3.7	+9.5	5,324	5,949	+11.7
Clearances:†												
Total, Brazil, for world.....thous. of bags..	<sup>1</sup> 1,248	<sup>1</sup> 988	<sup>1</sup> 1,318	<sup>1</sup> 1,052	1,306	942	935	+24.1	+59.1	5,287	5,922	+12.0
Total, Brazil, for U. S. ....thous. of bags..	687	507	789	518	649	511	509	+25.3	+27.5	2,805	3,150	+12.3
Price, Rio No. 7, Brazil grades.....dolls. per lb..	.148	.157	.168	.154	.157	.162	.154	+1.9	+1.9	-----	-----	-----
Tea												
Imports.....thous. of lbs..	8,190	6,087	7,577	4,299	4,755	5,251	4,732	+10.6	+0.5	29,813	30,878	+3.6
Stocks, United King., end mo.....thous. of lbs..	254,957	252,704	242,771	223,464	195,988	175,080	<sup>1</sup> 157,172	-12.3	+24.7	-----	-----	-----
Price, Formosa, fine, New York.....dolls. per lb..	.325	.325	.325	.325	.325	.345	.345	0.0	-5.8	-----	-----	-----
TOBACCO												
Consumption (tax-paid withdrawals):												
Large cigars.....thousands..	413,532	453,605	497,904	459,022	54,501	475,980	540,874	+18.0	+0.1	2,453,326	2,365,564	-3.6
Small cigarettes.....thousands..	8,368,087	7,531,914	8,470,466	7,511,408	8,891,803	7,880,403	8,538,988	+18.4	+4.1	38,324,009	40,774,678	+6.4
Manufac. tobacco and snuff.....thous. of lbs..	33,002	32,310	33,582	30,602	33,042	31,561	33,420	+8.0	-1.1	165,206	162,538	-1.6
Exports:												
Unmanufactured.....thous. of lbs..	42,958	41,624	46,938	42,007	39,681	35,209	40,740	-5.5	-2.6	232,323	213,208	-8.2
Cigarettes.....thousands..	962,574	836,921	864,541	1,147,089	781,118	468,852	893,152	-31.9	-12.5	3,482,268	4,592,243	+31.9
Sales of loose-leaf, warehouses.....thous. of lbs..	135,470	61,235	8,325	587	154	8,076	2,180	-73.8	-92.9	63,499	8,230	-87.0
Price, leaf, Kentucky.....dolls. per 100 lbs..	23.227	19.294	12.468	12.735	11.643	6.490	6.299	-8.6	+84.8	-----	-----	-----
TRANSPORTATION												
River and Canal Cargo Traffic												
Panama Canal:												
Total cargo traffic.....thous. of long tons..	2,372	2,660	2,429	2,474	2,498	2,430	2,380	+1.0	+5.0	11,816	12,433	+5.2
In American vessels.....thous. of long tons..	1,019	1,121	1,101	1,154	1,162	1,410	1,308	+0.7	-11.2	6,433	5,557	-13.6
In British vessels.....thous. of long tons..	698	872	682	716	726	491	550	+1.4	+32.0	2,699	3,694	+36.9
Sault Ste. Marie canals.....thous. of short tons..	None.	None.	None.	9,298	-----	4,698	12,573	-----	-----	-----	-----	-----
New York State canals.....thous. of short tons..	None.	None.	None.	None.	124	169	285	-----	-56.5	-----	-----	-----
Cape Cod Canal.....short tons..	73,093	30,575	63,371	105,857	110,136	54,155	60,482	+4.0	+82.1	259,041	383,032	+47.9
Suez Canal.....thous. of metric tons..	2,647	2,439	2,891	-----	2,786	2,410	-----	-----	-4.2	1,362,418	1,049,953	-22.9
Welland Canal.....short tons..	None.	None.	None.	52,469	997,484	321,670	1,040,748	+82.4	-5.1	1,335,416	1,095,416	-18.0
St. Lawrence Canal.....short tons..	None.	None.	None.	56,931	1,038,485	241,073	1,094,346	+4.5	+18.5	500,674	566,344	+13.1
Mississippi River Govt. barges.....short tons..	103,521	125,328	104,535	112,960	118,000	121,673	99,608	-----	-----	-----	-----	-----
Ohio River, Pittsburgh, Pa., to Wheeling W. Va.....short tons..	517,488	656,435	680,548	772,624	954,357	744,400	696,722	+23.5	+37.0	4,352,947	3,581,452	-17.7
Allegheny River.....short tons..	81,555	80,245	118,900	238,970	344,578	184,015	195,792	+44.2	+76.9	663,087	864,278	+30.3
Monongahela River.....short tons..	2,327,249	2,056,247	2,103,877	1,964,311	2,215,732	1,829,631	1,806,081	+12.8	+22.7	10,470,977	10,667,413	+2.6
Ocean Traffic												
Clearances, vessels in foreign trade:												
Total.....thous. of net tons..	5,163	5,035	5,581	5,537	5,993	6,160	6,248	+8.3	-4.0	27,464	27,312	-4.2
American.....thous. of net tons..	1,865	1,877	1,895	2,090	2,837	2,618	2,632	+35.8	+7.8	10,635	10,564	-1.1
Foreign.....thous. of net tons..	3,298	3,158	3,686	3,447	3,159	3,542	3,616	-8.4	-12.6	16,759	16,748	-1.1
Shipbuilding												
Completed during month:												
Total.....gross tons..	9,294	20,787	12,990	9,880	-----	42,752	49,030	-----	-----	<sup>2</sup> 110,391	<sup>2</sup> 52,951	-52.0
Steel seagoing.....gross tons..	2,888	15,218	5,907	1,488	-----	33,631	31,661	-----	-----	<sup>2</sup> 77,218	<sup>2</sup> 25,501	-67.0
Building or under contract, end of month:												
Merchant vessels.....thous. of gross tons..	214	207	232	252	259	235	235	+2.8	+10.2	-----	-----	-----

† See table on p. 23 of the April, 1928, issue for earlier data.

<sup>2</sup> Cumulative through Apr. 30.<sup>3</sup> Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. in-crease (+) or de-crease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
TRANSPORTATION—Continued												
Freight Cars												
Surplus (daily av. last week of month):												
Total.....cars.....	403,792	372,916	344,502	320,762	304,152	259,736	256,448	-5.2	+18.6			
Box.....cars.....	182,001	155,554	125,627	134,069	143,264	137,432	133,345	+6.9	+7.4			
Coal.....cars.....	169,463	168,172	171,481	140,991	108,833	90,075	78,148	-22.3	+39.3			
Shortage (daily av. last week of month):												
Total.....cars.....	4	None.	None.	None.	None.	19	10		-100.0			
Box.....cars.....	3	None.	None.	None.	None.	8	None.					
Coal.....cars.....	None.	None.	None.	None.	None.	1	None.					
Car loadings:												
Total.....cars.....	3,447,723	3,589,694	4,452,031	3,738,295	4,006,058	3,875,589	4,108,472	+7.2	-2.5	320,525,186	19,533,801	-4.8
Grain and grain products.....cars.....	187,197	187,045	237,266	159,131	163,112	148,524	158,954	+2.5	+2.6	3,855,401	933,752	+9.2
Livestock.....cars.....	127,658	130,005	43,383	105,146	106,860	110,340	115,383	+1.6	-7.4	3,602,067	613,052	+1.8
Coal and coke.....cars.....	752,752	726,259	869,335	620,985	670,821	663,092	689,313	+8.0	-2.7	4,276,565	3,640,152	-14.9
Forest products.....cars.....	233,368	270,914	343,780	257,316	269,769	273,757	284,106	+4.8	-5.0	1,443,433	1,375,147	-4.7
Ore.....cars.....	31,737	31,394	42,859	41,055	165,201	101,893	239,532	+302.4	-31.0	3,476,622	312,246	-34.5
Merchandise and l. c. l.....cars.....	927,299	974,382	1,299,322	1,040,999	1,046,138	1,047,971	1,050,276	+0.5	-0.4	5,369,480	5,288,140	-1.5
Miscellaneous.....cars.....	1,187,712	1,269,635	1,816,986	1,313,963	1,584,156	1,530,012	1,570,908	+4.7	+0.8	7,501,618	7,371,312	-1.7
Railroad Operations												
Operating revenue:												
Freight.....thous. of dolls.....	337,382	346,024	387,739	355,955		371,571	390,680			2,490,330	2,427,110	-4.2
Passenger.....thous. of dolls.....	78,483	69,551	70,466	70,951		77,372	78,532			314,281	289,451	-7.9
Total operating.....thous. of dolls.....	457,426	456,593	505,185	474,310		498,927	518,569			2,987,696	2,189,514	-4.7
Operating expenses.....thous. of dolls.....	363,384	348,498	373,305	363,381		384,958	390,787			2,520,527	2,148,568	-5.4
Net operating income.....thous. of dolls.....	56,634	70,064	90,774	70,548		73,598	85,664			299,046	288,020	-3.7
Freight carried.....mills. ton-miles.....	36,271	35,701	39,497	35,866		37,111	40,113			155,421	2,147,305	-5.2
Railway Equipment												
Locomotive (Am. Ry. Assn.):												
Owned, end of month—												
Quantity.....number.....	60,679	60,598	60,471	60,373	60,284	62,238	62,172	-1	-3.0			
Tractive power.....mills. of lbs.....	2,597	2,596	2,596	2,595	2,595	2,614	2,616	0.0	-8			
In bad order end of month—												
Quantity.....number.....	8,733	8,857	8,287	8,563	8,421	8,915	9,030	-1.7	-6.7			
Per cent of total in use.....per cent.....	14.5	14.7	13.7	14.3	14.1	14.5	14.7	-1.4	-4.1			
Installed.....number.....	154	141	140	96	139	187	143	+44.8	-6.1	782	670	-14.3
Retired.....number.....	259	222	267	194	223	223	213	+17.5	+7.0	1,061	1,170	+10.3
New orders.....number.....	2	30	15	33	52	27	184	+57.6	-71.6	392	132	-66.3
Shipments, manufacturers' (Census)—												
Total.....number.....	47	59	70	46	41	98	109	-10.9	-62.4	481	263	-53.3
Steam, domestic.....number.....	22	43	44	38	29	72	77	-23.7	-62.3	318	176	-44.7
Electric, domestic.....number.....	23	11	15	6	19	23	15	+66.7	-33.3	67	65	-2.0
Unfilled orders (railroads), end of mo.—												
From manufacturers.....number.....	151	148	117	112	83	187	251	-25.9	-66.9			
In railroad shops.....number.....	22	23	20	25	30	30	40	+20.0	-25.0			
Unfilled orders, manufacturers' (Census)—												
Total.....number.....	222	204	178	183	220	334	434	+17.0	-49.3			
Steam, domestic.....number.....	161	146	123	129	138	255	380	+7.0	-63.7			
Electric, domestic.....number.....	28	40	37	41	39	42	34	-4.9	+14.7			
Exports, steam.....number.....	13	6	26	16	5	15	10	-68.7	-50.0	122	66	-45.9
Freight cars (Am. Ry. Assn.):												
Owned, end of month—												
Quantity.....cars.....	2,309,577	2,306,816	2,303,688	2,301,692	2,300,133	2,332,184	2,333,098	-1	-1.4			
Capacity.....mills. of lbs.....	210,649	210,471	210,312	210,234	210,249	211,619	211,875	0.0	-8			
In bad order, end of month—												
Quantity.....cars.....	136,115	138,870	139,698	149,869	151,359	135,458	147,449	+1.0	+2.7			
Per cent of total in use.....per cent.....	6.0	6.2	6.2	6.7	6.7	5.9	6.5	0.0	+3.1			
New orders.....cars.....	2,098	5,876	4,029	5,683	2,354	3,362	4,378	-58.6	-46.2	34,374	20,040	-41.7
Shipments—												
Total.....cars.....	774	444	3,332	4,568	5,908	5,570	6,202	+29.3	-4.7	22,453	15,026	-33.1
Domestic.....cars.....	576	444	3,231	4,324	5,354	5,562	6,182	+35.4	-5.3	22,358	14,479	-35.2
Unfilled orders (railroads)—												
Total.....cars.....	18,464	19,748	22,233	19,325	17,847	26,305	23,666	-7.6	-24.6			
From manufacturers.....cars.....	15,459	17,603	20,648	17,589	14,198	18,217	15,122	-19.4	-6.3			
In railroad shops.....cars.....	3,005	2,145	1,585	1,736	3,679	8,088	8,544	+111.9	-56.9			
Passenger cars:												
New orders.....cars.....	615	82	45	142	153	6	52	+7.7	+194.2	830	1,037	+29.3
Shipments—												
Total.....cars.....	78	74	80	51	23	88	52	-54.9	-55.8	342	306	-10.5
Domestic.....cars.....	63	72	50	34	18	88	52	-47.1	-65.4	308	242	-21.4
Passenger Travel												
National parks:												
Visitors.....number.....	50,591	57,950	57,732	71,079	125,162	56,543	140,716	+74.5	-11.1	367,427	363,054	-1.2
Automobiles entered.....number.....	6,679	6,658	3,194	12,426	23,341	8,508	28,477	+87.8	-18.0	56,418	52,298	-7.3
Arrivals from abroad:												
Immigrants.....number.....	18,146	20,888	26,270	30,709		23,034	31,819			2,103,401	2,961,013	+7.1
United States citizens.....number.....	19,909	31,941	34,217	32,586		29,055	26,238			2,103,817	2,118,653	+14.3
Departures abroad:												
Immigrants.....number.....	5,323	4,708	4,931	4,515		4,185	6,148			2,16,306	2,19,477	+19.4
United States citizens.....number.....	27,126	34,810	29,422	29,506		26,815	28,849			2,105,071	2,120,864	+15.0
Passports issued.....number.....	8,896	8,971	17,344	27,098	37,648	27,144	32,863	+38.9	+14.6	95,997	99,947	+4.1
Pullman company operations:												
Revenue.....thous. of dolls.....	6,963	6,393	6,131	6,515		6,329	6,419			2,26,053	2,26,002	-2
Passengers carried.....thousands.....	2,886	2,563	2,625	2,713		2,775	2,780			2,11,084	2,10,787	-2.7
Hotel room occupancy.....per ct. of capacity.....	72	71	68	73	69	72	70	-5.5	-1.4			

† See table on p. 18 of the April, 1928, issue for earlier data.

‡ Cumulative through Apr. 30.

§ Revised.



## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
PUBLIC UTILITIES												
Telephone companies:												
Operating revenue.....thous. of dolls.	66,026	64,567	68,120	67,337	-----	65,163	65,748	-----	-----	\$ 256,616	\$ 266,050	+3.7
Operating income.....thous. of dolls.	16,783	15,048	17,335	17,386	-----	16,650	16,130	-----	-----	\$ 65,388	\$ 67,152	+2.7
Telegraph companies:												
Commercial telegraph tolls.....thous. of dolls.	9,956	9,785	10,904	10,569	-----	10,636	10,697	-----	-----	\$ 41,203	\$ 41,214	0.0
Operating revenue.....thous. of dolls.	12,467	12,201	13,573	13,205	-----	13,152	13,321	-----	-----	\$ 51,071	\$ 51,446	+7.7
Operating income.....thous. of dolls.	1,137	1,228	2,009	1,805	-----	1,956	1,864	-----	-----	\$ 6,927	\$ 6,179	-10.8
Gas and electric companies:												
Gross earnings.....thous. of dolls.	\$ 196,573	\$ 187,426	\$ 187,990	184,000	-----	176,467	\$ 171,256	-----	-----	\$ 725,347	\$ 755,989	+4.2
Net earnings.....thous. of dolls.	\$ 79,013	\$ 74,221	\$ 72,935	69,000	-----	64,908	\$ 61,195	-----	-----	\$ 270,976	\$ 295,169	+8.9
Electric railways (212 companies):												
Passengers carried.....thous. of persons	814,172	769,974	820,733	771,816	797,279	800,722	802,172	+3.3	-6	4,024,651	3,973,974	-1.3
Average fare.....cents	\$ 8.025	\$ 8.032	8.034	8.034	8.050	7.852	7.871	+2	+2.3	-----	-----	-----
Electric power production:												
Total.....mills. of kw. hours	7,265	\$ 6,871	\$ 7,234	6,847	-----	6,482	\$ 6,600	-----	-----	\$ 26,318	\$ 28,217	+7.2
By water power.....mills. of kw. hours	2,739	2,585	\$ 2,850	2,940	-----	2,610	\$ 2,674	-----	-----	\$ 10,000	\$ 11,114	+11.1
By fuels.....mills. of kw. hours	4,526	\$ 4,287	\$ 4,384	3,907	-----	3,872	\$ 3,926	-----	-----	\$ 16,318	\$ 17,104	+4.8
In street railways, manfg. plants, etc.†.....mills. of kw. hours	598	468	479	428	-----	447	\$ 471	-----	-----	\$ 1,800	\$ 1,973	+9.6
In central stations†.....mills. of kw. hours	6,667	\$ 6,403	\$ 6,755	6,419	-----	6,035	\$ 6,129	-----	-----	\$ 24,518	\$ 26,244	+7.0
Electric power production (Canada):*												
Total.....mills. of kw. hours	1,318	1,274	1,333	1,263	-----	1,110	\$ 1,116	-----	-----	\$ 4,457	\$ 5,188	+16.4
By water power.....mills. of kw. hours	1,298	1,256	1,315	1,246	-----	1,095	\$ 1,102	-----	-----	\$ 4,393	\$ 5,115	+16.4
Exported.....mills. of kw. hours	124	123	136	122	-----	130	\$ 125	-----	-----	\$ 517	\$ 505	-2.3
Electric power, gross revenue.....thous. of dolls.	172,400	163,400	157,350	153,400	-----	\$ 144,800	140,600	-----	-----	\$ 604,300	\$ 646,550	+7.0
EMPLOYMENT AND WAGES												
Employment in factories:												
New York State.....thousands	457	462	464	459	454	487	480	-1.1	-5.4	-----	-----	-----
Detroit.....thousands	224	233	246	253	259	226	206	+2.4	+25.7	-----	-----	-----
New Jersey.....rel. to 1923	91	91	90	90	90	97	94	0.0	-4.3	-----	-----	-----
Pennsylvania.....rel. to 1923	80	82	82	80	80	87	87	0.0	-8.0	-----	-----	-----
Delaware.....rel. to 1923	75	74	74	74	75	76	74	+1.4	+1.4	-----	-----	-----
Wisconsin.....rel. to 1915	111.6	113.8	114.5	-----	-----	117.3	115.2	-----	-----	-----	-----	-----
Illinois.....rel. to 1922	88.9	91.3	92.4	91.2	91.8	97.5	96.9	.7	-5.3	-----	-----	-----
Massachusetts.....rel. to 1914	80.5	81.5	80.4	78.8	73.9	87.4	85.0	-6.2	-14.0	-----	-----	-----
Total pay roll:												
New York State (weekly).....thous. of dolls.	13,361	13,477	13,760	13,200	13,241	14,214	14,010	.3	-5.5	-----	-----	-----
Wisconsin.....rel. to 1915	231.6	258.2	277.8	-----	-----	268.1	259.3	-----	-----	-----	-----	-----
New Jersey.....rel. to 1923	98	100	99	96	98	106	102	+2.1	-3.9	-----	-----	-----
Pennsylvania.....rel. to 1923	79	85	85	80	83	92	89	+3.8	-6.7	-----	-----	-----
Delaware.....rel. to 1923	76	76	78	75	79	80	78	+5.3	+1.3	-----	-----	-----
Ohio construction employment.....rel. to 1923	54	57	71	77	-----	65	69	-----	-----	-----	-----	-----
Employment, trade-unions U. S.....per cent.	82.2	81.8	82.0	84.0	87.0	-----	-----	+3.6	-----	-----	-----	-----
Anthracite mines:												
Employment.....rel. to 1923-25	120.2	113.6	107.7	112.3	115.9	115.5	\$ 119.0	+3.2	-2.6	-----	-----	-----
Pay roll.....rel. to 1923-25	98.7	96.0	88.5	86.1	122.1	93.0	\$ 120.1	+41.8	+1.7	-----	-----	-----
Federal civilian employees, Washington, D. C., end of month.....number	60,743	60,999	61,049	61,311	-----	59,772	59,879	-----	-----	-----	-----	-----
Average weekly earnings, factories:												
Illinois.....dolls.	27.49	28.93	28.48	28.28	-----	29.07	28.60	-----	-----	-----	-----	-----
New York State.....dolls.	29.22	29.16	29.64	28.78	29.19	29.17	29.18	+1.4	0.0	-----	-----	-----
Wisconsin.....dolls.	23.60	25.80	27.62	25.49	24.59	25.81	25.62	-3.5	-3.6	-----	-----	-----
Massachusetts.....rel. to 1914	232.1	234.7	235.6	\$ 230.4	232.9	234.9	234.7	+1.1	-8.8	-----	-----	-----
New Jersey.....rel. to 1923	109	110	110	108	110	110	109	+1.9	+9	-----	-----	-----
Pennsylvania.....rel. to 1923	98	104	104	99	103	105	102	+4.0	+1.0	-----	-----	-----
Delaware.....rel. to 1923	100	102	104	99	104	104	104	+5.1	0.0	-----	-----	-----
Average weekly earnings (National Industrial Conference Board):												
Grand total (both sexes).....dollars	27.24	27.35	27.59	27.19	-----	27.39	27.52	-----	-----	-----	-----	-----
Total male.....dollars	29.80	30.32	30.60	30.25	-----	30.03	30.20	-----	-----	-----	-----	-----
Skilled male.....dollars	31.22	31.70	32.11	31.82	-----	31.50	31.69	-----	-----	-----	-----	-----
Unskilled male.....dollars	24.66	25.25	25.05	24.47	-----	24.60	24.63	-----	-----	-----	-----	-----
Total women.....dollars	17.23	17.39	17.34	16.69	-----	17.39	17.36	-----	-----	-----	-----	-----
Average weekly hours:												
Nominal (both sexes).....hours	49.5	49.6	50.0	49.3	-----	50.4	49.6	-----	-----	-----	-----	-----
Actual (both sexes).....hours	47.9	48.0	48.2	47.4	-----	48.1	48.3	-----	-----	-----	-----	-----
Wages, road labor, by districts:												
New England.....cents per hour	53	52	51	50	49	49	49	-2.0	0.0	-----	-----	-----
Middle Atlantic.....cents per hour	48	47	48	46	42	47	46	-8.7	-8.7	-----	-----	-----
South Atlantic.....cents per hour	24	22	23	23	28	25	27	+21.7	+3.7	-----	-----	-----
East South Central.....cents per hour	25	26	28	26	27	25	24	+3.8	+12.5	-----	-----	-----
West South Central.....cents per hour	26	28	28	27	29	34	26	+7.4	+11.5	-----	-----	-----
East North Central.....cents per hour	39	41	41	41	38	38	37	-7.3	+2.7	-----	-----	-----
West North Central.....cents per hour	37	39	37	36	37	38	38	+2.8	-2.6	-----	-----	-----
Mountain.....cents per hour	41	43	42	46	49	43	45	+6.5	+8.9	-----	-----	-----
Pacific.....cents per hour	50	54	52	53	51	52	50	-3.8	+2.0	-----	-----	-----
United States, average.....cents per hour	37	38	38	40	40	39	38	0.0	+5.3	-----	-----	-----
Wage rates, U. S. Steel Corp.....cents per hour	50	50	50	50	50	50	50	0.0	0.0	-----	-----	-----
Wages, steel sheet workers.....per cent of base	125.5	125.5	125.5	125.5	-----	128.5	125.5	-----	-----	-----	-----	-----
Applicants per 100 jobs, employment agencies:												
United States.....number	170	175	154	137	128	119	118	-6.6	+8.5	-----	-----	-----
Eastern States.....number	192	208	171	146	138	122	121	-5.5	+14.0	-----	-----	-----
Central States.....number	203	189	166	147	135	140	137	-8.2	-1.5	-----	-----	-----
Southern States.....number	188	222	264	219	204	111	119	-6.8	+71.4	-----	-----	-----
Western States.....number	87	75	65	69	66	62	61	-4.3	+8.2	-----	-----	-----

† In table on p. 22 of the June, 1928, issue for earlier data.

\* See table on p. 22 of the April, 1928, issue for earlier data.

‡ Cumulative through Apr. 30.

§ Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per cent increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
EMPLOYMENT AND WAGES—Contd.												
Factory Labor Turnover												
(Percentage of number on pay roll)												
Departures:												
Total.....per cent (annual basis)...	27.8	28.2	31.8	37.9	38.4	48.3	44.7	+1.3	-14.1			
Voluntary quits.....per cent (annual basis)...	15.9	14.7	19.5	25.4	25.6	32.4	31.9	+8	-19.7			
Lay offs.....per cent (annual basis)...	8.3	7.9	8.1	7.5	7.9	9.7	7.6	+5.3	+3.9			
Discharges.....per cent (annual basis)...	3.6	4.7	4.2	5.0	4.9	6.2	5.2	-2.0	-5.8			
Accessions.....per cent (annual basis)...	33.4	32.0	36.5	41.3	43.8	47.5	48.0	+6.1	-8.8			
DISTRIBUTION MOVEMENT												
Retail Sales												
Mail-order houses:												
Total sales, 2 houses.....thous. of dolls.	37,465	38,392	41,787	40,100	40,074	40,648	33,742	-1	+18.8	185,924	197,818	+6.4
Sears, Roebuck & Co.....thous. of dolls.	24,240	23,842	23,986	24,159	24,203	24,091	19,994	+2	+21.1	110,385	120,430	+9.1
Montgomery Ward & Co.....thous. of dolls.	13,225	14,550	17,801	15,941	15,871	16,557	13,748	-4	+15.4	75,539	77,388	+2.4
Ten-cent chain stores:												
Total sales (4 chains).....thous. of dolls.	31,901	35,363	40,447	39,765	42,234	40,782	37,560	+6.2	+12.4	175,557	189,710	+8.1
Total stores operated (4 chains).....number	2,431	2,446	2,467	2,476	2,488	2,281	2,300	.5	+8.2			
F. W. Woolworth & Co.....thous. of dolls.	17,114	19,001	21,839	21,937	22,967	22,351	20,916	+4.8	+9.9	96,364	102,888	+6.8
Stores operated.....number	1,591	1,603	1,619	1,624	1,634	1,515	1,528	.6	+6.9			
S. S. Kresge Co.....thous. of dolls.	8,658	9,320	10,855	10,784	11,340	10,788	9,602	+5.2	+18.1	45,838	50,957	+11.2
Stores operated.....number	436	439	443	445	449	388	392	.9	+14.5			
McCrary Stores Corp.....thous. of dolls.	2,369	2,867	3,123	3,060	2,974	3,314	2,879	-2.8	+3.3	14,106	14,393	+2.0
Stores operated.....number	221	221	222	222	221	205	208	.5	+6.2			
S. H. Kress & Co.....thous. of dolls.	3,760	4,175	4,630	4,984	4,923	4,329	4,163	-1.2	+18.3	19,249	22,472	+16.7
Stores operated.....number	183	183	183	185	184	171	172	.5	+7.0			
Metropolitan.....thous. of dolls.	692	752	912	918	972	1,000	855	+5.9	+13.7	4,004	4,246	+6.0
Stores operated.....number	91	91	93	93	93	82	83	0.0	+12.0			
F. & W. Grand.....thous. of dolls.	800	901	1,128	1,172	1,153	1,188	935	-1.6	+23.3	4,369	5,154	+18.0
Stores operated.....number	62	63	64	65	66	52	53	+1.5	+24.5			
W. T. Grant Co.....thous. of dolls.	2,624	2,843	3,707	3,656	4,096	3,364	3,160	+12.0	+29.6	13,766	16,926	+23.0
Stores operated.....number	154	158	161	172	175	115	117	+1.7	+49.6			
Restaurant chains:												
Childs Co., sales.....thous. of dolls.	2,346	2,187	2,286	2,171	2,132	2,443	2,402	-1.8	-11.2	12,223	11,122	-9.0
J. R. Thompson Co., sales.....thous. of dolls.	1,235	1,164	1,245	1,207	1,256	1,198	1,222	+4.1	+2.8	6,006	6,107	+1.7
Other chain stores:												
Isaac Silver & Bros.....thous. of dolls.	312	388	480	512	469	465	410	-8.4	+14.4	1,855	2,161	+16.5
Stores operated.....number	22	23	23	23	23	22	21	0.0	+9.5			
Hartman Corporation.....thous. of dolls.	907	1,096	1,234	2,185	1,526	2,427	1,841	-30.2	-17.1	7,430	6,948	-6.5
Stores operated.....number	19	19	20	20	20	17	17	0.0	+17.6			
J. C. Penny Co.....thous. of dolls.	7,722	8,906	13,134	12,993	14,890	13,721	11,632	+14.1	+27.5	49,149	57,585	+17.2
Stores operated.....number	913	914	930	945	945	832	885	0.0	+6.8			
United Cigars Stores Co.....thous. of dolls.	5,562	5,926	6,578	6,242	6,959	6,652	6,774	+11.5	+2.7	31,364	31,267	-3
Stores operated.....number	3,151	3,113	3,118	3,151	3,182	3,112	3,105	+1.0	+2.5			
A. Schulte (Inc.).....thous. of dolls.	1,826	1,902	2,153	1,915	2,036	2,592	2,493	+6.3	-18.3	12,193	9,832	-19.4
Stores operated.....number	300	298	296	298	291	294	290	-2.3	+3			
G. C. Murphy Co.....thous. of dolls.	598	673	788	930	896	831	733	-3.7	+22.2	3,456	3,885	+12.4
Stores operated.....number	113	113	111	111	115	98	98	+3.6	+17.3			
Installment sales in New England department stores; ratio to total sales.....per cent.												
	8.6	8.2	6.3	4.8		5.1	5.2					
Advertising												
Magazine advertising for the following month.....thous. of lines.												
	2,176	2,517	2,926	2,812	2,571	2,770	2,350	-8.6	+9.4	14,312	14,813	+3.5
Newspaper advertising.....thous. of lines.												
	95,545	89,023	105,595	107,115	105,928	112,501	113,444	-1.1	-6.6	522,527	503,206	-3.7
Air mail:												
Weight dispatched.....pounds.	144,289	153,363	173,929			45,856	46,133					
Postal Business												
Postal receipts:												
50 selected cities.....thous. of dolls.	30,579	30,547	34,280	30,758	31,589	31,750	29,323	+2.7	+7.7	155,356	157,753	+1.5
50 industrial cities.....thous. of dolls.	3,438	3,482	3,670	3,348	3,276	3,338	3,082	-2.2	+6.3	16,593	17,214	+3.7
Money orders:												
Domestic paid (50 cities)—												
Quantity.....number	10,468	10,645	12,356	10,941	11,014	11,623	10,348	.7	+6.4	55,538	55,424	-.2
Value.....thous. of dolls.	78,220	78,887	92,750	84,068	86,110	92,019	83,189	+2.4	+3.5	431,933	420,035	-2.8
Domestic issued (50 cities)—												
Quantity.....number	3,416	3,340	3,764	3,417	3,461	3,378	3,240	+1.3	+6.8	16,729	17,398	+4.0
Value.....thous. of dolls.	34,117	33,077	36,739	33,967	35,277	34,857	33,931	+3.9	+4.0	171,423	173,177	+1.0
BANKING AND FINANCE												
Life Insurance												
(Association of Life Insurance Presidents)												
Policies, new (45 companies):												
Ordinary.....number of policies	183,511	212,120	204,939	228,861	276,180	246,519	233,729	+20.7	+18.2	1,118,686	1,165,611	+4.2
Industrial.....number of policies	901,786	846,745	1,049,955	980,796	839,453	851,905	902,343	-14.4	-7.0	4,091,219	4,618,735	+12.9
Group.....number of contracts	125	175	202	159	172	176	197	+8.2	-12.7	919	833	-9.4
Total.....number of policies and contracts	1,085,422	1,059,040	1,315,096	1,209,816	1,115,805	1,098,600	1,136,269	-7.8	-1.8	5,210,824	5,785,179	+11.0
Policies and certificates issued:												
Total policies and certificates.....number	1,111,705	1,112,665	1,350,682	1,246,362	1,164,472	1,729,415	1,166,877	-6.6	-.2	6,020,923	5,985,886	-.6
Group insurance certificates.....certificates	26,408	53,800	35,788	36,705	48,839	30,991	30,805	+33.1	+58.5	211,018	201,540	-4.5
Amount of new insurance (45 companies):												
Ordinary.....thous. of dolls.	575,127	651,037	790,827	706,852	749,297	749,923	699,846	+6.0	+7.1	3,393,124	3,473,140	+2.4
Industrial.....thous. of dolls.	236,303	221,948	273,551	259,962	216,396	227,279	241,662	-16.8	-10.5	1,103,151	1,208,160	+9.5
Group.....thous. of dolls.	46,841	91,505	57,986	62,007	205,195	46,960	45,683	+230.9	+349.2	336,264	463,534	+37.8
Total insurance.....thous. of dolls.	858,271	964,490	1,122,364	1,028,821	1,170,888	1,024,162	987,191	+13.8	+18.6	4,832,539	5,144,834	+6.5

\* See table on p. 22 of the June, 1928, issue for earlier data.

† Cumulative through Apr. 30.

\* Revised.

\* Cumulative through June 30.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
BANKING AND FINANCE—Continued												
Life Insurance—Continued												
Premium collections (45 companies):												
Ordinary.....thous. of dolls.	148,947	154,292	168,961	157,836	165,718	149,993	145,256	+5.0	+14.1	725,781	795,734	+9.6
Industrial.....thous. of dolls.	54,564	48,193	51,013	50,691	52,184	45,650	45,750	+2.9	+14.1	226,140	256,645	+13.5
Group.....thous. of dolls.	7,618	17,623	6,465	5,928	5,930	5,427	4,943	0.0	+20.0	28,012	43,564	+55.5
Total.....thous. of dolls.	211,129	220,108	226,439	214,455	223,832	201,070	195,949	+1.4	+14.2	979,933	1,095,963	+11.8
Admitted life insurance assets (41 companies):												
Grand total.....mills. of dolls.	11,704	11,796	11,893	12,001	12,001	10,812	10,896					
Mortgage loans—												
Total.....mills. of dolls.	5,103	5,129	5,153	5,199	5,199	4,722	4,764					
Farm.....mills. of dolls.	1,615	1,613	1,604	1,602	1,602	1,611	1,615					
All other.....mills. of dolls.	3,488	3,516	3,549	3,597	3,597	3,111	3,149					
Bonds and stocks (book value):												
Total.....mills. of dolls.	4,417	4,454	4,506	4,563	4,563	4,067	4,085					
Government.....mills. of dolls.	938	939	939	943	943	917	914					
Railroad.....mills. of dolls.	2,311	2,329	2,345	2,359	2,359	2,204	2,210					
Public-utility.....mills. of dolls.	1,004	1,017	1,050	1,064	1,064	806	816					
All other.....mills. of dolls.	164	169	172	197	197	140	145					
Policy loans and premium notes:												
.....mills. of dolls.	1,383	1,396	1,412	1,426	1,426	1,282	1,291					
(Life Insurance Sales Research Bureau)												
Sales of ordinary life insurance (81 companies):												
United States total.....thous. of dolls.	609,228	731,145	832,250	769,263	834,557	778,451	752,267	+8.5	+10.9	3,643,553	3,776,443	+3.6
Eastern manuf. dist.....thous. of dolls.	261,893	318,664	343,463	314,944	343,822	316,582	309,265	+9.2	+11.2	1,533,611	1,582,786	+3.2
Western manuf. dist.....thous. of dolls.	130,338	160,185	185,240	165,567	180,589	173,372	163,551	+9.1	+10.4	800,528	821,919	+2.7
Western agric. district.....thous. of dolls.	90,662	104,811	127,286	119,317	128,946	114,529	110,340	+8.1	+16.9	528,091	571,022	+8.1
Southern district.....thous. of dolls.	68,847	81,213	96,766	94,128	99,513	93,904	91,834	+5.7	+8.4	421,202	440,467	+4.6
Far western district.....thous. of dolls.	57,483	66,272	79,495	75,307	81,687	80,064	77,277	+8.5	+5.7	360,121	360,244	0.0
Canada total, 15 companies.....thous. of dolls.	47,569	40,290	44,823	46,718	49,870	41,631	44,553	+6.7	+11.9	201,578	229,270	+13.7
Banking												
Check payments:												
New York City.....mills. of dolls.	37,884	32,740	44,786	41,778	45,270	32,007	31,270	+8.4	+44.8	156,466	202,458	+29.4
Outside New York City.....mills. of dolls.	25,007	21,755	25,847	25,225	26,346	23,579	22,873	+4.4	+15.2	114,718	124,180	+8.2
Canada.....mills. of dolls.	1,871	1,665	1,812	1,729	2,279	1,473	1,645	+31.8	+38.5	7,266	9,356	+28.8
Federal reserve banks:												
Bills discounted.....mills. of dolls.	423	493	524	757	944	444	497	+24.7	+59.9			
Notes in circulation.....mills. of dolls.	1,577	1,588	1,567	1,591	1,593	1,718	1,740	+1.1	+8.4			
Total investments.....mills. of dolls.	812	752	733	656	525	562	593	-26.0	-11.5			
Total reserve.....mills. of dolls.	2,971	2,974	2,931	2,868	2,757	3,207	3,154	-3.9	-12.6			
Total deposits.....mills. of dolls.	2,452	2,426	2,404	2,404	2,408	2,314	2,367	-3.4	+1.7			
Reserve ratio.....per cent.	73.7	74.1	73.8	70.2	68.9	79.5	76.8	-1.9	-10.3			
Federal reserve member banks:												
Total loans and discounts.....mills. of dolls.	15,265	15,143	15,442	15,951	15,893	14,353	14,625	-4.4	+8.7			
Total investments.....mills. of dolls.	6,575	6,558	6,627	6,637	6,683	5,924	5,977	+7.7	+11.8			
Net demand deposits.....mills. of dolls.	13,888	13,716	13,823	13,946	13,628	13,041	13,414	-2.3	+1.6			
Brokers' loans, end of month:												
To New York Stock Exchange members.....mills. of dolls.	4,420	4,323	4,640	4,908	5,274	3,341	3,458	+7.5	+52.5			
By New York F. R. member banks.....mills. of dolls.	3,816	3,722	3,825	4,262	4,469	2,883	3,062	+4.4	+46.0			
Interest rates:												
Time loans, 90 days.....per cent.	4.38	4.56	4.43	4.94	5.25	4.44	4.38	+6.3	+19.9			
Call loans, renewal.....per cent.	4.24	4.38	4.47	5.08	5.70	4.18	4.26	+12.2	+33.8			
Prime com. paper (4-6 mos.).....per cent.	4.00	4.00	4.13	4.38	4.50	4.13	4.13	+2.7	+9.0			
Prime bankers' acceptances.....per cent.	3.38	3.50	3.50	3.75	4.00	3.63	3.63	+6.7	+10.2			
N. Y. Fed. Res. Bank (redisc.).....per cent.	3.50	4.00	4.00	4.00	4.50	4.00	4.00	+12.5	+12.5			
Federal land banks.....per cent.	5.15	5.06	5.06	5.06	5.47	5.21	5.19	+8.1	+5.4			
Intermediate credit banks.....per cent.	4.50	4.58	4.60	4.60	4.60	4.50	4.50	0.0	+2.2			
Deposits, New York State savings banks, end of month.....mills. of dolls.	34,193	34,204	34,252	34,262	4,253	3,965	3,974	-1.2	+7.0			
Public Finance												
Government debt, gross, end mo.....mills. of dolls.	18,050	17,951	17,957	17,848	17,756	18,941	18,874	-1.5	-5.9			
Customs receipts.....thous. of dolls.	41,975	42,130	48,277	45,740	41,438	51,253	45,615	-9.4	-9.2	237,695	219,560	-7.6
Total ordinary receipts.....thous. of dolls.	168,840	228,118	241,626	169,965	164,632	190,380	170,370	-3.0	-3.2	1,355,184	1,373,481	+1.4
Expenditures chargeable to ordinary receipts.....thous. of dolls.	349,142	173,283	248,258	326,769	217,061	310,511	213,028	-33.6	+1.9	1,316,628	1,314,483	-1.2
Money in circulation,* end mo.....mills. of dolls.	4,677	4,690	4,749	4,738	4,744	4,891	4,863	-1.1	-3.0			
Business Failures												
Liabilities (United States):												
Total commercial.....thous. of dolls.	47,634	45,071	54,814	34,985	36,117	53,156	37,785	+3.2	-4.4	247,063	218,621	-11.5
Manufacturers.....thous. of dolls.	14,871	12,751	20,412	13,236	14,230	25,278	13,802	+7.5	+3.1	91,962	75,560	-17.9
Trade establishments.....thous. of dolls.	26,446	24,952	26,186	18,649	18,009	22,308	19,978	+17.8	-5.4	118,413	112,533	-5.0
Agents and brokers.....thous. of dolls.	6,318	7,367	8,216	5,700	2,887	5,570	4,005	-47.6	-25.4	36,688	30,588	-16.6
Liabilities (Canada).....thous. of dolls.	3,249	4,012	6,829	1,556	3,707	1,557	1,826	+138.2	+163.0	11,569	19,353	+67.3
Firms (United States):												
Total commercial.....number	2,643	2,176	2,236	1,818	2,008	1,968	1,852	+10.5	+8.4	10,463	10,881	+4.0
Manufacturers.....number	553	468	546	432	470	492	444	+8.8	+5.9	2,417	2,469	+2.2
Trade establishments.....number	1,946	1,581	1,566	1,276	1,407	1,342	1,292	+10.3	+8.9	7,452	7,776	+4.3
Agents and brokers.....number	144	127	124	110	131	134	116	+19.1	+12.9	594	636	+7.1
Firms (Canada).....number	210	210	150	125	127	152	157	+1.6	-19.1	967	822	-9.4

\* See table on p. 21 of the June, 1928, issue for earlier data.

\* See table on p. 22 of the June, 1928, issue for earlier data.

3 Revised.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
BANKING AND FINANCE—Continued												
Dividend and Interest Payments												
(For the following month)												
Grand total.....thous. of dolls.	353,000	428,900	561,230	334,850	467,225	386,650	440,700	+39.5	+6.0	\$2,779,320	\$2,875,405	+3.5
Interest payments.....thous. of dolls.	176,000	258,750	372,050	203,500	316,900	254,900	290,000	+55.7	+9.3	\$1,708,370	\$1,787,800	+4.6
Dividend payments:												
Total.....thous. of dolls.	157,000	170,150	189,180	131,350	150,325	131,750	150,700	+14.4	-2.2	\$1,060,950	\$1,087,605	+2.5
Industrial and misc.....thous. of dolls.	114,300	129,050	149,500	96,550	118,050	98,100	119,500	+22.3	-1.2	\$776,275	\$787,250	+1.4
Steam railroads.....thous. of dolls.	33,100	34,600	28,380	27,100	26,075	26,300	25,450	-3.8	+2.5	\$175,700	\$183,055	+4.2
Street railways.....thous. of dolls.	9,600	6,500	11,300	7,700	6,200	7,350	5,750	-19.5	+7.8	\$57,475	\$62,300	+8.5
New Security Issues												
Foreign loans in the U. S.†.....thous. of dolls.	159,825	131,129	118,437	156,039	233,870	203,415	52,879	+49.9	+342.3	633,682	799,300	+26.1
Foreign governments.....thous. of dolls.	79,808	117,351	85,750	87,130	79,885	121,686	23,000	-8.3	+247.3	355,879	449,924	+26.4
Total corporation.....thous. of dolls.	573,573	612,696	741,950	833,206	757,834	520,452	712,924	-9.0	+6.3	3,123,433	3,519,259	+12.7
Purpose of issue—												
New capital.....thous. of dolls.	408,545	411,352	380,707	484,090	583,357	388,871	447,135	+20.5	+30.5	2,276,523	2,268,051	-4.4
Refunding.....thous. of dolls.	165,028	201,344	361,243	349,116	174,477	131,581	265,789	-50.0	-34.4	846,910	1,251,208	+47.7
Kinds of issue—												
Stocks.....thous. of dolls.	138,545	126,857	245,096	310,263	321,257	100,059	127,464	+3.5	+152.0	728,519	1,142,018	+56.8
Bonds and notes.....thous. of dolls.	435,028	485,840	496,854	522,943	436,577	420,393	585,460	-16.5	-25.4	2,394,915	2,377,242	-7.7
Class of industry—												
Railroads.....thous. of dolls.	78,222	74,216	192,781	95,053	23,601	57,830	129,225	-69.9	-77.9	417,989	468,873	+12.2
Public utilities.....thous. of dolls.	210,155	262,825	226,733	380,541	242,497	196,731	255,614	-36.3	-5.1	1,324,416	1,322,751	-1.1
Industrials.....thous. of dolls.	118,902	93,570	131,262	138,172	150,783	58,963	83,288	+9.1	+81.0	449,695	632,689	+40.7
Oil.....thous. of dolls.	2,200	20,675	12,962	7,300	22,929	79,500	75,160	+214.1	-69.5	257,388	66,056	-74.3
Land and buildings.....thous. of dolls.	78,741	48,038	73,935	97,152	82,253	56,594	41,510	-15.3	+98.2	285,758	380,119	+32.6
Shipping and misc.....thous. of dolls.	74,331	112,672	102,803	114,988	230,272	70,508	67,124	+100.3	+243.1	323,423	635,066	+96.4
Bond issues (Canada):												
Govt. and provincial.....thous. of dolls.	4,000	5,000	—	36	30,000	10,044	8,400	—	+257.1	54,695	39,036	-28.6
Municipal.....thous. of dolls.	415	1,560	4,379	2,312	4,347	11,531	1,517	+88.0	+186.6	34,064	13,013	-61.8
Corporation.....thous. of dolls.	9,396	3,185	7,490	41,845	57,970	31,260	30,100	+38.5	+92.6	96,479	119,886	+24.3
States and municipalities:												
Permanent loans.....thous. of dolls.	103,199	\$132,740	\$132,510	\$130,359	133,883	124,808	\$210,051	+2.7	-36.3	674,284	632,691	-6.2
Temporary loans.....thous. of dolls.	73,320	113,389	75,359	\$78,001	13,320	67,252	18,010	-82.9	-26.0	305,106	353,389	+15.8
Tax-exempt securities outstanding, end of month.....mills. of dolls.	16,278	16,442	\$16,557	\$16,667	16,728	15,561	15,693	+4	+6.6	—	—	—
Agricultural Finances												
Loans outstanding, end mo.:												
Federal farm loan banks.....thous. of dolls.	1,158,717	1,168,354	1,256,111	1,261,834	—	1,117,914	1,124,055	—	—	—	—	—
Joint-stock land banks.....thous. of dolls.	608,798	609,984	611,004	610,921	—	614,481	617,220	—	—	—	—	—
Fed. intermed. credit banks.....thous. of dolls.	74,888	75,220	74,119	72,351	—	76,595	70,888	—	—	—	—	—
War Finance Corporation.....thous. of dolls.	1,244	1,226	1,037	985	926	5,220	5,050	-6.0	-81.7	—	—	—
Stocks and Bonds												
Stock prices, average daily closing:												
25 industrials, average.....dolls. per share.	242.25	239.32	256.36	263.34	266.82	199.99	209.83	+1.3	+27.2	—	—	—
25 railroads, average.....dolls. per share.	118.29	115.20	119.00	123.09	125.10	110.74	113.60	+1.6	+10.1	—	—	—
103 stocks, average.....dolls. per share.	142.13	139.30	147.91	159.16	162.58	121.65	131.18	+2.1	+23.9	—	—	—
Southern cotton mills.....dolls. per share.	112.25	111.73	111.33	110.97	110.58	111.36	111.93	-4	-1.2	—	—	—
Stock prices, average weekly closing:												
Total stocks (229).....rel. to 1917-21.	195.2	191.8	202.9	215.2	221.8	162.5	167.5	+3.1	+32.4	—	—	—
Railroads (31).....rel. to 1917-21.	158.2	153.7	159.0	164.8	168.1	147.4	150.5	+2.0	+11.7	—	—	—
Industrials (198).....rel. to 1917-21.	210.4	207.5	220.9	236.2	243.9	168.7	174.6	+3.3	+39.7	—	—	—
Automobile (10).....rel. to 1917-21.	369.8	372.9	453.3	508.4	528.2	266.6	276.7	+3.9	+90.9	—	—	—
Chain stores (11).....rel. to 1917-21.	582.3	565.0	579.7	597.2	605.0	446.3	466.1	+1.3	+29.8	—	—	—
Copper (11).....rel. to 1917-21.	150.5	148.5	148.0	158.1	165.8	117.1	117.4	+4.9	+41.2	—	—	—
Food (9).....rel. to 1917-21.	430.6	425.8	433.9	443.8	444.8	343.3	369.1	+1.2	+20.5	—	—	—
Machinery mfg. (5).....rel. to 1917-21.	122.3	125.6	128.2	133.2	136.4	102.3	106.9	+2.4	+27.6	—	—	—
Petroleum (17).....rel. to 1917-21.	107.4	101.9	106.2	116.6	122.3	101.9	103.2	+4.9	+18.5	—	—	—
Railroad equipment (10).....rel. to 1917-21.	231.6	225.3	227.5	228.2	224.6	187.3	196.0	-1.6	+14.6	—	—	—
Steel (9).....rel. to 1917-21.	159.1	154.5	157.6	160.0	160.8	135.3	136.0	+5	+18.2	—	—	—
Textile (5).....rel. to 1917-21.	46.6	47.5	49.6	52.6	52.5	39.5	41.2	-2	+27.4	—	—	—
Theater (3).....rel. to 1917-21.	178.6	180.3	188.8	199.8	207.0	180.2	179.0	+3.6	+15.6	—	—	—
Tire and rubber (7).....rel. to 1917-21.	64.7	58.7	55.1	55.7	56.2	52.6	49.1	+9	+14.5	—	—	—
Tobacco (7).....rel. to 1917-21.	220.5	209.2	212.4	215.7	201.3	172.7	183.5	-6.7	+9.7	—	—	—
Traction, gas and power (16).....rel. to 1917-21.	294.8	309.9	315.7	339.7	360.4	226.7	239.2	+6.1	+50.7	—	—	—
Stock sales, N. Y. Stock Exch. thous. of shares.	56,963	47,165	84,988	80,569	82,164	49,636	46,598	+2.0	+76.3	231,211	351,849	+52.2
Bond sales:												
Miscellaneous.....thous. of dolls.	269,374	222,644	204,610	301,084	263,383	290,520	303,510	-12.5	-13.2	1,516,065	1,361,100	-10.2
Liberty-Treasury.....thous. of dolls.	20,864	16,611	11,910	14,489	14,764	25,800	31,163	+1.9	-52.6	143,071	78,608	-45.1
Total.....thous. of dolls.	290,238	239,255	316,520	315,573	278,152	316,320	334,673	-11.9	-16.9	1,659,136	1,439,738	-13.2
Bond prices:												
Highest-grade rails, p. ct. of par, 4% bond.	97.04	96.50	95.90	95.33	94.49	94.74	95.06	-9	-6	—	—	—
Second-grade rails, p. ct. of par, 4% bond.	88.75	88.61	88.81	87.89	86.92	84.48	84.84	-1.1	+2.5	—	—	—
Public utility, p. ct. of par, 4% bond.	79.66	80.03	80.32	82.17	81.42	76.19	76.49	-9	+6.4	—	—	—
Industrial, p. ct. of par, 4% bond.	81.28	81.33	80.95	81.09	80.73	79.58	79.38	-4	+1.7	—	—	—
Comb. price index, p. ct. of par, 4% bond.	86.15	86.13	86.04	\$86.26	85.54	83.19	83.37	-8	+2.6	—	—	—
Bond prices, 1st of following month:												
5 Liberty bonds, p. ct. of par.	105.94	105.96	106.05	105.98	105.03	103.41	104.14	-9	+9	—	—	—
16 foreign govt. and city, p. ct. of par.	105.90	105.92	105.67	105.46	105.28	104.74	105.67	-2	+2	—	—	—
Comb. price index, 66 bonds, p. ct. of par.	102.60	102.41	102.58	102.44	101.71	100.67	101.03	-7	+7	—	—	—

† See table on p. 22 of the April, 1928, issue for earlier data.

‡ Revised.

§ Cumulative through June 30.

## TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through May, except where otherwise noted. Earlier data for items shown here may be found on pages 24 to 138 of the February, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JANUARY 1 THROUGH MAY 31		Per ct. increase (+) or decrease (-) cumulative from 1927
	January	February	March	April	May	April	May	May, 1928, from April, 1928	May, 1928, from May, 1927	1927	1928	
BANKING AND FINANCE—Continued												
Stocks and Bonds—Continued												
Bond yields:												
Railroads (15).....per cent..	4.18	4.20	4.21	4.24	4.27	4.31	4.29	+ .7	- .5			
Industries (15).....per cent..	4.76	4.79	4.77	4.78	4.81	4.83	4.83	+ .6	- .4			
Utilities (15).....per cent..	4.68	4.65	4.62	4.56	4.57	4.79	4.77	+ .2	- 4.0			
Municipal (15).....per cent..	3.89	3.89	3.89	3.93	4.02	3.96	3.94	+ 2.3	+ 2.0			
Municipal bond yield (20).....per cent..	3.87	3.87	3.93	3.97	4.01	3.95	3.95	+ 1.0	+ 1.5			
U. S. Treasury notes and certificates, 3-6 months.....per cent..	3.31	3.33	3.27	3.62	3.90	3.39	3.33	+ 7.7	+ 17.1			
Liberty and Treasury bonds 1-3 months.....per cent..	3.35	3.36	3.30	3.32	3.35	3.47	3.44	+ .9	- 2.6			
Long-term real-estate bonds issued:												
Grand total.....thous. of dolls..	61,167	39,840	62,962	87,748	77,450	49,794	35,520	- 11.7	+ 118.0	248,912	329,167	+ 32.2
Purpose of issue—												
Finance construction.....thous. of dolls..	32,759	14,085	13,520	29,220	44,515	25,912	13,740	+ 52.3	+ 224.0	105,762	134,099	+ 26.8
Real-estate mortgage.....thous. of dolls..	12,900	2,710	35,557	36,865	20,910	13,937	9,165	- 43.3	+ 128.2	61,622	108,942	+ 76.8
Acquisitions and improvements.....thous. of dolls..	6,533	12,175	4,225	16,323	2,600	1,470	1,975	- 84.1	+ 31.6	43,598	41,856	- 4.0
Kind of structure—												
Office and commercial.....thous. of dolls..	29,000	22,415	11,965	14,605	45,175	18,177	10,070	+ 209.3	+ 348.6	78,565	123,160	+ 56.8
Hotels.....thous. of dolls..	650	700	4,010	11,395	10,300	11,380	600	- 9.6	- 42.5	19,815	27,055	+ 36.5
Apartments.....thous. of dolls..	4,309	1,910	4,060	3,635	4,265	2,720	3,430	+ 17.3	+ 24.3	24,532	18,179	- 25.9
GOLD AND SILVER												
Gold:												
Domestic receipts at mint.....fine ounces..	73,624	72,119	67,872	<sup>1</sup> 65,166	75,983	68,531	66,956	+ 16.6	+ 13.5	356,085	754,764	+ 112.0
Rand output.....fine ounces..	843,857	816,133	877,380	825,907	886,186	824,014	859,479	+ 7.3	+ 3.1	4,163,125	4,249,463	+ 2.1
Imports.....thous. of dolls..	38,320	14,686	2,683	5,319	1,968	14,503	34,212	- 63.0	- 42.5	146,761	62,976	- 57.1
Exports.....thous. of dolls..	52,086	25,806	97,536	96,469	83,689	2,592	2,510	- 13.2	- 9.7	28,031	355,586	
Monetary stock, end mo.*.....millis. of dolls..	4,373	4,362	4,305	<sup>1</sup> 4,266	4,161	4,610	4,608	- 2.5	- 9.7			
Silver:												
Production—												
United States.....thous. of fine oz..	4,980	4,490	5,333	<sup>1</sup> 4,668	4,735	4,712	4,811	+ 1.4	- 1.6	24,802	24,206	- 2.4
Canada.....thous. of fine oz..	1,433	1,272	1,469	<sup>1</sup> 1,388	1,322	1,716	1,393	- 4.8	- 5.1	7,826	6,884	- 12.0
Stocks, end of month—												
United States.....thous. of fine oz..	574	170	461	128	133	602	231	+ 3.9	- 42.4			
Canada.....thous. of fine oz..	1,141	547	803	550	456	723	602	- 17.1	- 24.3			
Imports.....thous. of dolls..	6,305	4,658	5,134	<sup>1</sup> 4,888	3,003	3,815	5,083	- 38.6	- 40.9	22,206	23,988	+ 8.0
Exports.....thous. of dolls..	6,692	7,479	7,405	6,587	6,712	6,824	6,026	+ 1.9	+ 11.4	32,548	34,875	+ 7.1
Price at New York.....dolls. per fine oz..	.571	.570	.572	.574	.603	.564	.563	+ 5.1	+ 7.1			
FOREIGN EXCHANGE RATES												
Europe:												
England.....dolls. per £ sterling..	4.88	4.87	4.88	4.88	4.87	4.86	4.86	- .2	+ .2			
France.....dolls. per franc..	.039	.039	.039	.039	.039	.039	.039	0.0	0.0			
Italy.....dolls. per lira..	.053	.053	.053	.053	.053	.050	.054	0.0	- 1.9			
Belgium.....dolls. per franc..	.139	.139	.139	.140	.140	.139	.139	0.0	+ .7			
Netherlands.....dolls. per guilder..	.403	.403	.403	.403	.404	.400	.400	+ .2	+ 1.0			
Sweden.....dolls. per krone..	.269	.268	.268	.268	.268	.268	.268	- .4	0.0			
Switzerland.....dolls. per franc..	.193	.192	.193	.193	.193	.192	.192	0.0	+ .5			
Asia:												
Japan.....dolls. per yen..	.469	.469	.472	.477	.466	.484	.471	- 2.3	- 1.1			
India.....dolls. per rupee..	.367	.365	.365	.366	.366	.361	.362	0.0	+ 1.1			
America:												
Canada.....dolls. per Canadian doll..	.998	.998	1.000	1.000	.999	1.001	1.001	- .1	- .2			
Argentina.....dolls. per gold peso..	.971	.971	.973	.972	.972	.962	.962	0.0	+ 1.0			
Brazil.....dolls. per milreis..	.120	.120	.120	.120	.120	.118	.118	0.0	+ 1.7			
Chile.....dolls. per paper peso..	.122	.122	.122	.120	.122	.120	.120	+ 1.7	+ 1.7			
U. S. FOREIGN TRADE												
Imports												
Grand total.....thous. of dolls..	<sup>1</sup> 337,943	<sup>1</sup> 351,035	<sup>1</sup> 380,429	<sup>1</sup> 345,233	354,715	375,734	<sup>1</sup> 346,501	+ 2.7	+ 2.4	1,768,284	1,769,355	+ .1
By broad divisions:												
Europe—												
Total.....thous. of dolls..	97,158	<sup>1</sup> 105,897	<sup>1</sup> 104,707	94,275	-----	107,517	<sup>1</sup> 99,722	-----	-----	<sup>2</sup> 412,504	<sup>1</sup> 402,037	- 2.5
France.....thous. of dolls..	12,126	<sup>1</sup> 13,918	<sup>1</sup> 12,571	10,435	-----	13,454	<sup>1</sup> 11,158	-----	-----	<sup>2</sup> 54,288	<sup>1</sup> 49,050	- 9.6
Germany.....thous. of dolls..	15,855	<sup>1</sup> 19,227	18,471	16,712	-----	17,817	<sup>1</sup> 14,140	-----	-----	<sup>2</sup> 63,357	<sup>1</sup> 70,265	+ 10.9
Italy.....thous. of dolls..	8,846	<sup>1</sup> 8,069	<sup>1</sup> 8,238	7,861	-----	11,061	9,006	-----	-----	<sup>2</sup> 35,520	<sup>1</sup> 33,044	- 7.0
United Kingdom.....thous. of dolls..	23,095	<sup>1</sup> 28,799	32,945	28,084	-----	27,762	31,469	-----	-----	<sup>2</sup> 108,743	<sup>1</sup> 112,923	+ 3.8
North America—												
Total.....thous. of dolls..	76,518	<sup>1</sup> 79,430	88,522	84,999	-----	86,436	<sup>1</sup> 85,903	-----	-----	<sup>2</sup> 328,425	<sup>1</sup> 329,469	+ .3
Canada.....thous. of dolls..	37,027	<sup>1</sup> 36,370	39,414	35,064	-----	36,135	<sup>1</sup> 39,464	-----	-----	<sup>2</sup> 144,665	<sup>1</sup> 147,875	+ 2.2
South America—												
Total.....thous. of dolls..	47,192	<sup>1</sup> 47,427	<sup>1</sup> 59,221	50,739	-----	46,894	<sup>1</sup> 36,637	-----	-----	<sup>1</sup> 183,206	<sup>1</sup> 204,579	+ 11.7
Argentina.....thous. of dolls..	6,747	<sup>1</sup> 6,962	<sup>1</sup> 12,529	10,747	-----	9,388	6,581	-----	-----	<sup>2</sup> 32,010	<sup>1</sup> 36,985	+ 15.5
Asia and Oceania—												
Total.....thous. of dolls..	107,507	<sup>1</sup> 109,301	120,080	109,784	-----	125,134	<sup>1</sup> 118,967	-----	-----	<sup>1</sup> 458,865	<sup>1</sup> 446,672	- 2.7
Japan.....thous. of dolls..	32,001	<sup>1</sup> 33,593	30,759	29,502	-----	31,864	<sup>1</sup> 33,172	-----	-----	<sup>1</sup> 126,182	<sup>1</sup> 125,855	- .3
Africa, total.....thous. of dolls..	9,573	8,967	7,896	6,392	-----	9,752	5,272	-----	-----	<sup>1</sup> 38,782	<sup>1</sup> 32,828	- 15.4
By classes and commodities:												
Crude materials.....thous. of dolls..	<sup>1</sup> 133,395	<sup>1</sup> 130,882	<sup>1</sup> 145,537	<sup>1</sup> 127,065	138,553	152,906	<sup>1</sup> 135,718	+ 9.0	+ 2.1	707,939	675,433	- 4.6
Foodstuffs, crude, and food animals.....thous. of dolls..												
Manufactured foodstuffs.....thous. of dolls..	48,301	47,542	53,452	46,049	47,955	43,045	<sup>1</sup> 37,163	+ 4.1	+ 29.0	209,993	243,299	+ 15.9
Semimanufactures.....thous. of dolls..	28,724	36,040	41,007	43,272	34,232	46,876	<sup>1</sup> 39,392	- 20.9	- 13.1	199,163	183,276	- 8.0
Finished manufactures.....thous. of dolls..	61,221	<sup>1</sup> 64,382	<sup>1</sup> 64,944	<sup>1</sup> 60,678	59,087	64,537	<sup>1</sup> 63,780	- 2.6	- 7.4	310,970	310,312	- .2
	66,302	<sup>1</sup> 72,188	<sup>1</sup> 75,488	<sup>1</sup> 68,169	74,887	68,370	<sup>1</sup> 70,488	+ 9.9	+ 6.3	340,218	357,034	+ 4.9

\* See table on p. 22 of the June, 1928, issue for earlier data.  
† See table on p. 21 of June, 1928, issue for earlier data.

<sup>1</sup> Cumulative through April 30.  
<sup>2</sup> Revised.



## PUBLICATIONS OF THE DEPARTMENT OF COMMERCE

Recent publications of the Department of Commerce having the most direct interest to readers of the *SURVEY OF CURRENT BUSINESS* are listed below. A complete list may be obtained by addressing the Division of Publications, Department of Commerce, at Washington. Copies of the publications may be purchased from the Superintendent of Documents, Government Printing Office, Washington, at the prices stated. If no price is mentioned, the publication is distributed free.

### OFFICE OF THE SECRETARY

**Civil Aeronautics in United States.**—Aeronautics Bulletin No. 1 (formerly Information Bulletin No. 1); 22 pages, 3 illus. Brief account of the development of aviation in the United States.

**Construction of Airports.**—Aeronautics Bulletin No. 2 (formerly Information Bulletin No. 2); 16 pages, 29 illus. This publication contains regulations and suggestions of the Aeronautics Branch of the Commerce Department regarding the preparation and management of airplane landing fields.

**Air Marking for Cities.**—Aeronautics Bulletin No. 4 (formerly Information Bulletin No. 38); 1 page. Suggestions for marking buildings as aid to aviators.

**Airports and Landing Fields.**—Aeronautics Bulletin No. 5 (formerly Information Bulletin No. 5); 15 pages. List of airports and landing fields arranged alphabetically under the States in which they are located.

**Radio Service Bulletin.** May, 1928.—21 pages. Issued monthly by the Radio Division of the Department of Commerce. Contains lists of radio stations and references to current radio literature. Single copies, 5c; annual subscription, 25c.

### BUREAU OF THE CENSUS

(For information concerning plan of publication and distribution of census publications, address the Director of the Census.)

**Census of Religious Bodies, 1926.**—Denominational reports showing history, doctrine, and organization with general statistics concerning membership, value, amount of church property, debt, expenditures, etc.:

Free Magyar Reformed Church in America. Paper, 9 pages, price 5c.  
Church of God and Saints of Christ. Paper, 10 pages, price 5c.  
Frelands. Paper, 30 pages, price 5c.  
Reformed Church in America. Paper, 15 pages, price 5c.  
German Baptist Brethren (Dunkers). Paper, 31 pages, price 5c.  
River Brethren. Paper, 15 pages, price 5c.  
Swedish Evangelical Free Church of the United States of America. Paper, 9 pages, price 5c.  
Church of the Nazarene. Paper, 15 pages, price 5c.  
Evangelical Synod of North America. Paper, 11 pages, price 5c.  
Reformed Episcopal Church. Paper, 10 pages, price 5c.  
Christian Union. Paper, 11 pages, price 5c.

**Biennial Census of Manufactures, 1925.**—This publication gives statistics of all manufactures in the United States, showing the amount of production, labor employed, wages paid, cost of materials used, and value of products of each class of factories, and the relative magnitude of the various industries. The industrial importance of individual States and cities and their changes in rank are also shown. Cloth, 1469 pages, price \$2.

### BUREAU OF FOREIGN AND DOMESTIC COMMERCE

(The publications of this bureau may also be purchased from the bureau or its district offices.)

**Monthly Summary of Foreign Commerce of United States, April, 1928.**—Parts I and II. Part I contains statistics of exports of domestic merchandise and imports by articles for April, 1927 and 1928, and for four months ended April, 1927 and 1928. Part II contains summaries of export and import trade, monthly average import and export prices, statistics of trade with Alaska, Hawaii, and Porto Rico. Single copies, Part I, 10c; Part II, 5c. Annual subscriptions, \$1.25.

**Standards Yearbook, 1928.**—Miscellaneous Publication No. 83; vi+399 pages, 16 illus. This publication gives an account of the activities of the Standards Bureau, and the accomplishments of technical and trade associations and of government and State agencies in standardization work. A bibliography on standardization is included. Price, \$1.

**Balance of International Payments of United States in 1927.** by Ray Hall, with foreword by Herbert Hoover, Secretary of Commerce. Trade Information Bulletin No. 552; ii+66 pages. Survey of the items in the international balance of payments of the United States, such as tourist expenditures abroad, American investments abroad and foreign investments in United States, immigrant remittances, war debt payments to United States, international insurance remittances, international banking accounts, and movement of gold, silver, and paper currency. A statement is made regarding the purpose and method of balance of payments.

**Candy Distribution in United States.** by Rupert L. Purdon. Domestic Commerce Series No. 23; vi+50 pages, 12 illus. Survey of the amount of candy produced in the United States, the comparative sales of different kinds, sales and per capita consumption by States, relative amounts sold by different classes of distributors, exports, and transportation and packing practice. Price, 10c.

**Regulation of Motor Boats.** Department Circular No. 236; 4 pages. This publication contains the text of the law governing equipment of motor boats, with the regulations promulgated by the Department of Commerce for the enforcement of this law.

### BUREAU OF FISHERIES

**Propagation and Distribution of Food Fishes, Fiscal Year 1927.** by Glen C. Leach. Document No. 1033. (Appendix VIII to Report of U. S. Commissioner of Fisheries for 1927, pp. 683-736, 5 illus.) This is the report for the fiscal year 1927 on the activities of the Fisheries Bureau in operating fish hatcheries in cooperation with State agencies, and in the distribution of fish and fish eggs to restock waters in various parts of the country. Price, 10c.

**Statistics of Catch of Cod off East Coast of North America in 1926.** by Oscar E. Sette. Document No. 1034. (Appendix IX to Report of U. S. Commissioner of Fisheries for 1927, pp. 737-743, 1 illus.) Report on the cod catch by the fishermen of Newfoundland, France, Canada, the United States, and Portugal off the east coast of North America, showing the size, trend, and relative importance of the fisheries of each of these countries. Price, 5c.

**Trade in Fresh and Frozen Package Fish Products.** by R. H. Fiedler. Economic Circular No. 63; 13 pages, 1 illus. This circular discusses the advantages and disadvantages of package fish and the methods of preparing and packing fish sold in this way.

### BUREAU OF MINES

**Mineral Resources of United States, 1925.**

Part I. Metals. xii+at24+763 pages. Price, \$1.25.  
Part II. Nonmetals. vi+615 pages. Price, \$1.

**Mineral Resources of United States, 1926.** The reports on mineral resources are first issued in the form of separate bulletins of which the following has been released since the June announcement and may be obtained at the price indicated:

Gold, Silver, Copper, Lead, and Zinc in Montana in 1926. (Pt. I, pp. 371-414.) Price, 10c.

**Questions and Answers on Timbering Bituminous Coal Mines.** by J. W. Paul. Miners' Circular 31; ii+82 pages, 28 illustrations, 1 plate. These questions and answers are published as suggestions of methods to prevent accidents in coal mines. Price, 10c.

**Thermodynamic Properties of Oxygen and Nitrogen.** by Russell W. Millar and John D. Sullivan. Technical Paper 424; ii+20 pages, 2 charts. Price, 15c.

### BUREAU OF NAVIGATION

**American Documented Seagoing Merchant Vessels of 500 Gross Tons and Over, May, 1928.** ii+65 pages. Published monthly. Single copies, 10c; annual subscription, \$1.25.

### COAST AND GEODETIC SURVEY

**Hydrographic Manual.** by J. H. Hawley. Special Publication No. 143; vi+170 pages, illustrations, plates. This publication gives the requirements of the Coast and Geodetic Survey for the execution of hydrographic surveys and describes the equipment and methods used. Price, 45c.

### LIGHTHOUSE SERVICE

**Civil Service Regulations for Lighthouse Service, 1928.** ii+19 pages. These are the regulations governing the application of civil service rules to the Lighthouse Service.

**Regulations for Lighting Bridges, 1928.** 10 pages, 5 pages of plates. This publication contains the regulations for lighting bridges and for lights on dams, piers, and other obstructions to navigation on rivers.



# CHIEF FUNCTIONS OF THE DEPARTMENT OF COMMERCE

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## AERONAUTICS BRANCH

WILLIAM F. McCAIGSON, Jr., Assistant Secretary of Commerce for Aeronautics

Establishment of civil airways and maintenance of aids to air navigation; inspection and registration of aircraft and licensing of pilots; enforcement of air traffic rules; investigation of accidents; encouragement of municipal air ports; fostering of air commerce; scientific research in aeronautics; and dissemination of information relating to commercial aeronautics. (Some of these functions are performed by special divisions of the Lighthouse Service, the Bureau of Standards, and the Coast and Geodetic Survey.)

## BUREAU OF THE CENSUS

WILLIAM M. BREWSTER, Director

Taking censuses of population, inmates of institutions, mines and quarries, forest products, and water transportation every 10 years; censuses of agriculture and electrical public utilities every 5 years; and a census of manufactures every 2 years.

Compilation of statistics of wealth, public debt and taxation, including financial statistics of local governments, every 10 years; annual compilation of financial statistics of State and municipal governments.

Compilation of statistics of marriage, divorce, births, deaths, and penal institutions annually, and of death rates in cities and automobile accidents weekly.

Compilation quarterly or monthly of statistics on cotton, wool, tobacco, leather, and other industries; publication in the Survey of Current Business of monthly commercial and industrial statistics.

## BUREAU OF FOREIGN AND DOMESTIC COMMERCE

IRVING KLAIS, Director

The collection of timely information concerning world market conditions and openings for American products in foreign countries, through commercial attaches, trade commissioners, and consular officers, and its distribution through weekly Commerce Reports, bulletins, confidential circulars, the news and trade press, and district and cooperative offices in 65 cities.

The maintenance of commodity, technical, and regional divisions to afford special service to American exporters and manufacturers.

The compilation and distribution of lists of possible buyers and agents for American products in all parts of the world and publication of weekly lists of specific sales opportunities abroad.

The publication of statistics on imports and exports.

The study of the processes of domestic trade and commerce.

## BUREAU OF STANDARDS

GEORGE E. BYRNE, Director

Custody, development, and construction of standards of measurement, quality, performance, or practice; comparison of standards used by scientific or other institutions; determination of physical constants and properties of materials; researches and tests on materials and processes; and publication of scientific and technical bulletins reporting results of researches and fundamental technical data.

Preparation of specifications for Government purchases, through the Federal Specifications Board.

Collection and dissemination of information concerning building codes and the planning and construction of houses.

Establishment of simplified commercial practices through cooperation with business organizations in order to reduce the waste resulting from excessive variety in commodities.

## BUREAU OF MINES

SCOTT THAYER, Director

Technical investigations in the mining, preparation and utilization of minerals, including the study of mine hazards and safety methods and of improved methods in the production and use of minerals.

Testing of Government fuels and management of the Government Fuel Yard at Washington.

Research on habits and operation of plants producing oil.

Studies in the economics and marketing of minerals and collection of statistics on natural resources and mine accidents.

The dissemination of results of technical and economic researches in bulletins, technical papers, mineral resources series, miners' circulars, and miscellaneous publications.

## BUREAU OF FISHERIES

HARRY O. MATHER, Commissioner

The propagation and distribution of food fish and shellfish, in order to prevent the depletion of the fisheries; investigations to promote conservation of fishery resources; the development of commercial fisheries and agriculture; study of fishery methods, improvements to merchandising and collection of fishery statistics; administration of Alaska fisheries and fur seals; and the protection of species off the coast of Florida.

## BUREAU OF LIGHTHOUSES

GEORGE R. FURMAN, Commissioner

Maintenance of lighthouses and other aids to water navigation. Establishment and maintenance of aids to navigation along civil airways.

Publication of Light Lists, Buoy Lists, and Notices to Mariners, giving information regarding these aids to navigation.

## COAST AND GEODETIC SURVEY

E. LAMAR JOHNS, Director

Survey of the coasts of the United States and publication of charts for the navigation of the adjacent waters, including Alaska, the Philippine Islands, Hawaii, Porto Rico, the Virgin Islands, and the Canal Zone; interior control surveys; magnetic surveys; tide and current observations; and astronomical investigations.

Publication of results through charts, coast pilots, tide tables, current tables, and special publications.

## BUREAU OF NAVIGATION

ARTHUR J. DYKES, Commissioner

Superintendence of commercial marine and merchant seamen. Supervision of registering, enrolling, licensing, numbering, etc., of vessels under the United States flag, and the annual publication of a list of such vessels.

Enforcement of the navigation and steamboat inspection laws, including imposition of fees, fines, tonnage taxes, etc.

## STEAMBOAT INSPECTION SERVICE

DICKINSON N. HOOVER, Supervising Inspector General

The inspection of merchant vessels, including boilers, hulls, and life-saving equipment; licensing of officers of vessels; certification of ship seamen and deck crew, and the investigation of violations of steamboat inspection laws.

## UNITED STATES PATENT OFFICE

THOMAS L. BOWMAN, Commissioner

The granting of patents and the registration of trade-marks, prints, and labels after technical examination and judicial proceedings.

Maintenance of library with public search room, containing copies of foreign and United States patents and trade-marks. Recording bills of sale, assignments, etc., relating to patents and trade-marks. Furnishing copies of records pertaining to patents.

Publication of the weekly Official Gazette, showing the patents and trade-marks issued.

## RADIO DIVISION

W. D. TANTILL, Chief

Inspection of radio stations on ships; inspection of radio stations on shore, including broadcasting stations; licensing radio operators; assigning station call letters; enforcing the terms of the International Radiotelegraphic Convention; and examining and settling international radio accounts.