

great depreciation of foreign investments have reduced the purchasing power of France below what it was in 1913. The loss of coal and coke through the cessation of reparation deliveries has in recent months added to the burden of French purchases abroad and reduced the purchasing power available for other commodities. The depreciation of the exchange, resulting in a lower purchasing power for the franc abroad than at home, is another hindrance to imports, though it would encourage exports; but the sharp fluctuations of the exchange, with consequent violent variations of the price level, have been a much more serious disadvantage than the so-called depreciation. Another factor, making itself felt chiefly through freight rates, is found in the fact that, by weight, French exports are only about one-half of her imports. Further, the impoverishment of eastern and central Europe has weakened the demand for the luxuries which form so large a part of French exports.

On the other hand, the situation is not without encouraging factors. Of these the chief is probably the remarkable progress of reconstruction in the industrial area in northern France. While incomplete, the work done so far has enormously increased the wealth and purchasing power of the country over what it was three or four years ago. This significant fact is likely to find increasing reflection in the foreign trade of France.

DEVELOPMENT OF GERMANY'S FOREIGN TRADE SINCE THE WAR.

Germany's foreign trade has undergone many important changes since the outbreak of the war, and both her imports and exports of merchandise have decreased considerably. The decrease of exports, however, is much larger than that of imports, so that the country's unfavorable balance of trade is at present greater than in pre-war days, when Germany's invisible exports were sufficient not only to meet the excess of imports, but also left a considerable amount which was invested abroad. A study of Germany's trade, therefore, involves the question of the country's balance of payments, for otherwise it is impossible to understand how payment has been effected since the war to meet the country's huge excess of imports over exports.

In this article it is proposed to survey briefly Germany's balance of trade and, as far as possible, her balance of payments before, dur-

ing, and after the war; to review the changes that have taken place since the war, and to analyze the various restrictions to which Germany's foreign trade is subject. From the outset it should be noted that Germany's foreign trade statistics at the present time are far from exact, and that the figures quoted in the following study, although taken mainly from official German sources, are to be understood as estimates only. Since September, 1922, Germany's foreign trade has been reported in gold marks, but as gold marks do not circulate and imports and exports are invoiced either in foreign currencies or in paper marks, it is obvious that the new foreign trade statistics are far from being adequate.¹

ESTIMATES OF GERMANY'S BALANCE OF PAYMENTS.

Before the war.—Before the war imports into Germany exceeded exports to a considerable extent. Between 1909 and 1913 the annual excess of imports over exports amounted to 1,900,000,000, 1,400,000,000, 1,600,000,000, 1,700,000,000, and 700,000,000 gold marks, respectively, which was balanced by an excess of invisible exports. The excess of invisible exports was derived mainly from interest on foreign securities held in Germany and from profits of capital invested in various enterprises abroad. The items constituting Germany's balance of payments may be seen from the following table:

GERMANY'S BALANCE OF PAYMENTS IN 1913.

[Millions of gold marks.]

| | Amount. | | Amount. |
|--|---------|---|---------|
| Goods imported..... | 11,719 | Goods exported..... | 10,932 |
| Gold imported..... | 377 | Gold exported..... | 63 |
| | 12,096 | | 10,995 |
| Payments for goods transported on foreign ships, about..... | 450 | Profits derived from shipments on account of foreign owners, about..... | 375 |
| Purchase of securities and investment of capital abroad, about.. | 54 | Revenue derived from German capital invested abroad, about.. | 500 |
| Total..... | 12,600 | Interest on foreign securities held by German citizens, about... | 730 |
| | | Total..... | 12,600 |

The figures of the above table, compiled by the Darmstädter und Nationalbank, are some-

¹ For the method of computation of Germany's foreign trade statistics, see JANUARY, 1923, FEDERAL RESERVE BULLETIN, p. 68.

what different from the figures arrived at by Doctor Glasenapp, vice president of the Reichsbank, who estimated Germany's excess of invisible exports over imports shortly before the war at about 1,700,000,000 marks. According to Doctor Glasenapp's valuation, German nationals received about 1,000,000,000 to 1,500,000,000 gold marks interest on foreign securities, and about 1,000,000,000 gold marks from financial and industrial enterprises established abroad. From this sum about 400,000,000 gold marks may be deducted as representing Germany's invisible imports.²

During and after the war.—Germany's balance of trade and balance of payments during and after the war show quite a different picture from that of pre-war days. Not only have imports, estimated in gold marks, decreased to about one-half and exports to about one-third of their pre-war value, but the invisible exports of Germany have assumed quite a different character. Germany's visible balance of trade, from the outbreak of the war to the end of 1922, may be summarized as follows:

GERMAN IMPORTS AND EXPORTS OF MERCHANDISE,
AUGUST 1, 1914, TO DECEMBER 31, 1922.

[In billions of gold marks.]

| | Imports. | Exports. | Excess of imports. |
|---|----------|----------|--------------------|
| Aug. 1, 1914, to Dec. 31, 1918 (estimate of German Government)..... | 22.8 | 11.7 | 11.1 |
| 1919..... | 6.6 | 1.76 | 4.84 |
| 1920..... | 7.0 | 5.1 | 1.9 |
| 1921 (estimated) ¹ | 4.5 | 3.4 | 1.1 |
| 1922..... | 6.2 | 4.9 | 2.3 |

¹ Official figures available only since May, 1921.

Thus, according to above German estimates, during the war Germany imported about 11,100,000,000 gold marks' worth of goods more than she exported, and during the four after-war years the unfavorable balance of trade amounted to about 10,000,000,000 gold marks. The excess of imports over exports during the war was met mainly by the sale of foreign securities held in Germany and to a smaller extent by shipments of gold and the sale of German currency.

According to the official *Wirtschaft und Statistik*, most foreign securities held in Germany were already liquidated at the end of 1919, so that during the following years the income from sales and from interest on such

securities represented only a small fraction of Germany's invisible exports. The decline in the amount of foreign securities held in Germany, coupled with the liquidation of German enterprises in the various allied countries, necessitated the creation of new classes of invisible exports in order to meet the unfavorable balance of trade. Since the middle of 1919 they have consisted mainly of German marks sold abroad. The total amount of German bank notes held abroad and the amount of mark deposits of foreigners with German banks at the end of 1921 were estimated by the Reichsbank at between 60,000,000,000 and 65,000,000,000 paper marks. No estimates are available as to the amount by which these two items have increased during 1922, but, in view of the attitude of foreigners toward German marks during the past year, one may safely assume that the increase has not been large.

It is impossible to arrive at an estimate of the gold value of these 65,000,000,000 paper marks at the times they were sent abroad. Several billion paper marks were sold abroad during the war, when the average rate of the paper mark was equal to about 76 pfennig in gold, while for the first three years after the war the relation between the paper mark and the gold mark fluctuated very widely. The average value of the paper mark for the years 1919, 1920, and 1921 was 26, 6.7, and 5 gold marks for 100 paper marks, respectively. To the amount of foreign values realized from the sale abroad of German currency about 35,000,000,000 paper marks should be added, which were obtained from the sale of German securities. The invisible exports from Germany were further increased by the sale of real estate, by the expenditures of foreigners in Germany, the remittances by German residents abroad and of various charity institutions, and the shipment of about 1,000,000,000 gold marks.

From the above discussion it may be seen that through transfers abroad of mark exchange, and through the sale of securities and real estate, Germany was able to meet her unfavorable balance of trade. Total sales of marks up to the end of 1921, although they affected the valuation of German exchange abroad, represent at the end of May a value of only about \$1,500,000 and will have practically no influence on Germany's future balance of payments. For the time being the foreign investments in German industry and real estate have no influence on Germany's balance of payments, for the different valuation of the

² See also Dr. Kurt Singer's article in *Wirtschaftsdienst*, July, 1922.

mark in Germany and abroad makes it more profitable for recipients of dividends and rents in German marks to reinvest them in Germany than to convert them into foreign currencies.

CHANGES IN GERMANY'S FOREIGN TRADE AFTER THE WAR.

The large unfavorable balance of merchandise trade has been caused mainly by the fact that Germany's exports decreased to a much larger extent than her imports. The volume of imports into Germany decreased from about 73,000,000 tons in 1913 to 46,000,000 tons in 1922, or about 37 per cent, while exports decreased from 74,000,000 tons in 1913 to 22,000,000 tons in 1922, or about 75 per cent. The smaller decrease in imports is due largely to the importation of foodstuffs and raw materials, and also to the fact that Germany is at present importing bulky commodities which she formerly exported, such as coal, sugar, etc. The lack of complete foreign trade figures for the four postwar years makes impossible a detailed analysis of the movement of the various groups of commodities from and to Germany. In order, however, to indicate the nature of the change of Germany's foreign trade, the movement of some of the more important groups of commodities during the two years 1922 and 1913 will be compared.

Foreign trade in foodstuffs.—The territorial losses of Germany affected to a large degree Germany's foreign trade in foodstuffs. As a result of the peace treaty, the total population of Germany decreased 8 per cent, while the cession of parts of her eastern provinces involved a decrease of about 12 per cent of her agricultural population, about 16 per cent of the annual production of breadstuffs, 18 per cent of the production of potatoes, and 20 per cent of the production of sugar beets. The loss of agricultural districts was further aggravated by the fact that tillage during the war was less intensive and that fertility of the soil decreased due to the lack of animal and mineral fertilizers. Thus, while in 1913 the yield in tons per hectare (2.4 acres) amounted to 1.99 for wheat and 12.9 for potatoes, it amounted to only 1.63 tons for wheat and 11.5 for potatoes in 1920 and 0.7 for wheat and 7.2 for potatoes in 1922. The extremely small yield in 1922 was due to the generally poor crop caused by wet weather. The decrease in the output of agricultural products affected to a very considerable extent Germany's foreign trade in foodstuffs, as may be seen from the following table:

GERMANY'S FOREIGN TRADE IN FOODSTUFFS.

[In thousands of tons.]

| | Imports. | | | Exports. | | |
|----------------------|----------|------|-------|----------|------|-------|
| | 1913 | 1920 | 1922 | 1913 | 1920 | 1922 |
| Wheat..... | 2,546 | 591 | 1,393 | 538 | 2.1 | 4.2 |
| Rye..... | 353 | 404 | 540 | 934 | 1.2 | 2.0 |
| Barley and oats..... | 369 | 77 | 338 | 667 | 5.1 | 0.08 |
| Rice..... | 477 | 127 | 189 | 184 | 1.0 | 15.00 |
| Sugar..... | 2 | 92 | 188 | 1,116 | 6.4 | 12.60 |
| Corn and dall..... | 919 | 409 | 1,085 | 35 | 0.0 | 0.00 |

These figures indicate that the importation of more expensive foodstuffs, such as wheat, decreased considerably, while the importation of cheaper foodstuffs, such as rye and corn, increased, all exports of these cheaper commodities ceasing entirely. The importation of foodstuffs changed not only with regard to quality, but also the quantity of many imported foodstuffs decreased. Most conspicuous of all is the decline in the importation of meat, which decreased from 1,693,000 metric tons in 1913 to 1,029,000 tons in 1921, which decrease corresponds to the general decline in the consumption of meat in Germany. The average per capita consumption of meat of domestic origin in Prussia was 101.57 pounds in 1913, as compared with 62.74 pounds in 1921. The production of sugar decreased from 2,244,283 tons during the year September 1, 1913, to August 31, 1914, to 1,166,958 tons in the year 1921-1922. Decreased production naturally affected Germany's ability to export. Thus Germany, which before the war was one of the largest sugar exporting countries in the world, imported during the last year about 188,000 tons, while her exports of sugar practically ceased entirely. Equally significant has been the change in the importation of luxuries and luxury foodstuffs, such as coffee and tea. In 1919 Germany imported 168,250 tons of coffee and 4,290 tons of tea, as compared with 36,790 tons of coffee and 2,802 tons of tea in 1922. The general decline in the importation of luxuries becomes more apparent from a comparison of the following figures:

IMPORTS OF LUXURIES INTO GERMANY.

[In millions of gold marks.]

| | 1913 | 1922 |
|----------------------------------|------|------|
| Luxury foodstuffs..... | 571 | 233 |
| For luxury use—fruits..... | 148 | 19 |
| Manufactured articles..... | 198 | 33 |
| Silk and half-silk clothing..... | 3.5 | 0.2 |

The decrease is due partly to the decreased purchasing power of most Germans and partly to the restrictions imposed by the German Government in order to decrease the importation of all nonessential commodities (see p. 702).

Coal.—The great change that has taken place in the coal trade is one of the best examples of the factors which explain Germany's large unfavorable balance of trade. According to the various agreements with the Allies, Germany is bound to deliver monthly a certain quantity of coal to France, Belgium, and Italy. These deliveries decrease to a considerable extent the amount of coal available for free exports. Loss of coal territory has caused a decrease in the output of coal from 190,000,000 tons in 1913 to about 126,000,000 tons in 1922. As a result of these changes, Germany, instead of being a coal-exporting country, as she was before the war, is at present a coal-importing country, as may be seen from the following figures:

FOREIGN COAL TRADE OF GERMANY.

[Millions of tons.]

| | Imports. | | | Exports. | | |
|--------------|----------|------|-------|----------|-------------------|-------------------|
| | 1913 | 1920 | 1922 | 1913 | 1920 | 1922 |
| Coal..... | 10.5 | 0.36 | 12.14 | 34.60 | ¹ 21.9 | ² 21.0 |
| Lignite..... | 7.0 | 2.30 | 2.10 | .06 | .07 | .01 |

¹ Of this amount, 14,600,000 tons were deliveries for reparation account.

² Of this amount, 16,000,000 tons were deliveries for reparation account. Includes coke and lignite calculated as coal.

Voluntary exports are in fulfillment of various agreements concluded between German producers, on the one hand, and Swiss, Dutch, and other consumers, on the other hand.

Iron and steel.—Closely connected with coal is the iron and steel trade, which shows much the same tendencies. The change in output and in the foreign trade in steel and iron has been caused mainly by the cession of Alsace-Lorraine, which before the war was Germany's most important source of iron ore. The total quantity of iron ore consumed by the German industry in 1913 amounted to about 40,000,000 tons, of which about 21,000,000 tons were obtained from Alsace-Lorraine, 7,500,000 tons from the rest of Germany, and about 11,500,000 tons were imported. Alsace-Lorraine and the Saar Basin consumed about 13,500,000 tons, thus leaving a surplus of about 7,500,000 tons which was consumed by industries in the rest of Germany. The loss of the Lorraine iron

mines resulted in a decrease in the output of pig iron, which declined from about 19,000,000 tons in 1913 to about 6,500,000 tons in 1922 and in a falling off of the exportation of iron ore from 2,600,000 tons in 1913 to 75,000 tons in 1920 and 173,000 tons in 1922.

The main sources of origin for the importation of iron ore before the war were Scandinavia and Spain. From the Scandinavian countries Germany in 1913 imported 4,867,000 tons, or 32 per cent of all iron-ore imports into Germany, and from Spain 3,632,000 tons, or 24 per cent of the total iron-ore imports. In 1922 the imports from Scandinavia increased to 5,500,000 tons, thus forming about 50 per cent of Germany's total iron imports. The second place, however, is held by France, which, combined with Luxemburg, exported to Germany during the past year 2,835,000 tons, or about 26 per cent of the total German iron-ore imports. Iron-ore receipts from Spain decreased to 1,339,000 tons, or 12 per cent of the total iron-ore imports. The importation of pig iron also increased considerably, while the exportation decreased from 783,000 tons in 1913 to 78,000 tons in 1920 and 158,000 tons in 1922.

Manufactures and other classes of goods.—The character of Germany's foreign trade has also changed since the war. Importation of luxuries of any kind, including many classes of manufactured goods, has decreased, either entirely or to a very large extent. The cession of agricultural territories in the east and the loss of the Lorraine iron mines necessitated both an increase in the importation of foodstuffs and in the importation of iron ore and pig iron. Germany at the present time does not import raw materials, as before the war, in order to export them as half-manufactured goods, but her exports are more and more in the nature of products of skilled labor which takes the form of highly finished products. Thus, for instance, while the total quantity of German exports decreased by about 70 per cent, from 73,714,000 tons in 1913 to 21,556,000 tons in 1922, exports of manufactured goods decreased from 9,318,000 tons to 5,836,000 tons, or only about 37 per cent. Exports of certain types of machinery not only reached their pre-war level but in many instances surpassed it. For instance, the quantity of locomotives exported from Germany increased from 54,000 tons in 1913 to 101,000 tons in 1922 and the exportation of automobiles increased from 13,000 tons in 1913 to 19,000 tons in 1922, and was as high as

44,000 tons in 1920. The exportation of toys and musical instruments has almost reached the pre-war level.

Trade by countries of origin and destination.—Changes in Germany's foreign trade affect not merely its composition by articles but also its distribution by countries. The inaccuracy of Germany's foreign trade statistics and the lack for the most recent years of detailed import and export statistics classified under the head of various countries make a careful analysis impossible. However, some figures for 1920 are available, which if compared with figures for 1913 bring out clearly this change. The outstanding fact is that since the outbreak of the war Germany has been exporting larger quantities of goods to former neutral countries and less to former entente countries. Thus, while exports from Germany to England in 1913 amounted to about 14.2 per cent of Germany's total exports, this figure decreased to about 6.5 per cent in 1920. Exports to Scandinavian countries and Holland, on the other hand, increased from 6.7 and 6.9 per cent of Germany's total foreign exports in 1913 to 14.9 and 16.1 per cent, respectively, in 1920. Imports into Germany show the same trend with the exception of imports from the United States, which increased from 15.9 per cent of Germany's total imports in 1913 to 28.5 per cent in 1920. This increase of imports from the United States reflects the enhanced importance of raw materials and foodstuffs in Germany's imports at the present time and also the total falling off of imports from Russia, which in 1913 amounted to 13.6 per cent of Germany's total imports.

In general, trade relations between the United States and Germany after the war are marked by a large excess of exports from the United States, which was met by large imports of German marks and securities. Since the armistice and to the end of 1922 we exported to Germany about \$1,093,000,000 worth of goods and received during the same period about \$296,000,000 worth of goods, leaving a balance of about \$797,000,000. Against this balance of imports of goods Germany shipped to the United States about \$20,000,000 in gold and silver. Large shipments of gold from Scandinavian countries and some from Holland may also represent in part indirect specie shipments from Germany. The total value of gold and silver shipped for German account to the United States probably does not surpass \$50,000,000. The rest of the balance has been met by the sale of German currency and securi-

ties, by the direct investment of American capital in Germany, and finally by the remittances of funds to Germany for charity purposes. How large these invisible imports from Germany are it is impossible to state, but it may be assumed that they are at least sufficient to cover the balance arising out of the movement of goods.

FOREIGN TRADE CONTROL.

The huge excess of imports over exports, coupled with the different valuation of mark exchange at home and abroad and the tendency to shift capital from Germany to other countries, made it necessary to continue the governmental control of Germany's foreign trade. During the war and up to the end of 1919 an extremely rigorous form of governmental control (so-called "Zwangswirtschaft") existed in Germany, and central organizations were established, which exercised supervision over Germany's foreign trade and the internal consumption of raw materials and of manufactured goods indispensable to the maintenance of Germany's economic life. On December 19, 1919, the foreign trade bureaus, (Aussenhandelstellen) were created, which to a certain extent took over the functions of the central war organization. For the greater part, however, they were new organizations intended to control the movement of goods from and to the country. They are under the supervision of the Reichskommissar for imports and exports, from whom they receive instructions. The management of each foreign trade bureau is entrusted to an agent, who is assisted by a commission for foreign trade. The latter is composed of representatives of manufacturers, exporters and importers, consumers, and workmen. This commission is entrusted with the task of setting up the principles which are to govern and control Germany's foreign trade; with the supervision of the course of business and with the duty of advising the Reichskommissar on questions bearing on the control of foreign commerce.

Functions of the foreign trade bureaus.—Control over foreign commerce exercised by the foreign trade bureaus consists of the investigation of the applications for the import and export of goods. Such investigation results in the granting or refusal of an import or export license. A party to whom such a license has been refused may appeal to the Reichskommissar against the decision of the foreign trade bureau.

The issue of an import license is conditional upon the fact whether the goods to be imported are indispensable from the point of view of home consumption. Thus, for instance, manufactured articles are admitted for import only when home requirements can not be satisfied by home production, and semimanufactured articles and raw material are allowed to be imported only when they are required by German manufacturers for further manufacture (*Veredlungsverkehr*). Import licenses are also granted in the case of finished products intended for reexportation.

Issue of export licenses.—For the purpose of exportation, goods are subdivided into two categories: (1) Those enumerated on the free list which may be exported without a license; (2) those which may not be exported, except under the four following conditions: (a) Issue of a license; (b) fixation of a minimum sale price varying according to the country of destination; (c) payment of a duty; and (d) in the case of consignments to countries with a high rate of exchange, payment to the Reichsbank of a certain percentage of the foreign bills obtained from the export transaction.

The sale price, although it may be lower than the price prevailing in the country of destination, must be above the German home prices. The foreign trade bureaus are therefore obliged constantly to investigate, on the one hand, the conditions under which home production is carried on, and more particularly the cost of production of the German industries whose exports they supervise, and, on the other hand, the conditions of foreign markets, in particular those to which the bulk of German exports is consigned. The study of foreign markets constitutes one of the primary tasks devolving upon the "Preisprüfungsstellen," which are the technical offices affiliated with the foreign trade bureaus.

The foreign trade bureaus furthermore make the granting of export licenses as a rule contingent upon the sale of goods being effected against payment in foreign bills, whenever the goods are consigned to a country whose currency shows a higher rate of exchange than that of the German mark. Since the month of September, 1921, following upon instructions issued by the Reichskommissar for import and export licenses, the sale against payment in foreign bills has been rendered compulsory in the case of a large number of articles. A proportion of these foreign bills must be remitted to the Reichsbank.

The issue of an import or export license is subject to payment of the following dues:

(1) A fee on the value of the goods, levied at the rate of 50 pfennigs per 1,000 marks or fraction of 1,000 marks. This tax is collected by the foreign-trade bureaus whenever they issue export licenses.

(2) In conformity with the terms of paragraph 5 of the decree of December 20, 1919, relating to foreign commerce, and to paragraph 8 of the decree of April 8, 1920, on the same subject, the foreign trade bureaus are empowered to collect special fees on each import or export license. The amount of these dues is settled by the decision of the foreign trade bureaus with the approval of the Reichskommissar.

(3) A duty on exports, which is collected according to a tariff enacted by the decree of October 27, 1921. This tax is calculated according to the value of the goods exported. It does not apply to coal, salt, or potash.

Article 2 of the decree of December 20, 1919, provides that the issue of import or export licenses may be made subject to special conditions. The Reichskommissar is empowered to formulate general instructions determining these conditions; their application in practice, however, devolves upon the foreign-trade bureaus, which may fix quotas (i. e., specific quantities) for imports and exports. The fixing of these quotas involves the authority on the part of the foreign trade bureaus to apportion among the interested parties the quantities of goods to be exported or imported. For example, the importation of cocoa and of cocoa products is, generally speaking, permitted only to firms which were already engaged in this trade or industry in Germany before August 1, 1914.

An interesting example of the charges to which German foreign trade is subject is furnished by the following notice:

A decision of the Ministry of Economic Affairs ordains that in future export licenses for goods falling under the category VI of the customs tariff (paper, cardboard, and their derivatives) shall not be issued except on condition that 1½ per cent of the value of the goods exported be paid as a special tax toward improving the economic situation of the press, by helping to reduce the price of paper.

The foreign trade bureaus have been subject to many criticisms from some of the German exporters and importers. Most complaints, however, are directed not so much against the institutions themselves as against the composition of the foreign trade committees, which it is alleged favor the interests of the big manufac-

turing enterprises directly represented in the committees to the detriment of the merchants engaged in foreign trade. Most of these criticisms found against the Aussenhandelsstellen may be summarized as follows: (1) They possess almost arbitrary power in the matter of granting and refusing import or export licenses; (2) they are vested with power to fix minimum export prices, varying according to the countries of destination; and (3) they are authorized to collect charges to cover expenditures involved in the exercise of control, also to levy duties or special contributions on exports.

SUMMARY.

Germany's unfavorable balance of trade before the war was met by an excess of invisible exports, consisting mainly of interest on foreign securities held in Germany and of revenues derived from German enterprises abroad. Since most foreign securities held in Germany have been disposed of and German enterprises abroad were liquidated in all allied countries, these invisible export items were replaced by the sale of paper marks, German securities, and real estate. Germany's imports and exports have changed to a considerable extent. Exports at the present time consist mainly of highly manufactured goods, while imports are largely composed of foodstuffs and raw materials, since importation of nonessential manufactured goods and luxuries is prohibited. Germany's foreign trade is still subject to very rigid restrictions, administered by various commissions of control.

BRAZIL.

REVIEW OF THE YEAR 1922.

Industrial conditions.—The industrial situation of Brazil during 1922 was affected somewhat by unfavorable economic conditions in Europe, but on the whole a decided improvement was manifest at the close of the year as compared with the end of 1921. As a result of greater industrial and commercial activity, the demand for labor increased and wages advanced generally.

The meat industry of the country showed a remarkable improvement at the end of the year. There were in operation 16 packing houses, with a total declared capital of 187,000

contos. Six of these packing houses were located at São Paulo, six in Rio Grande do Sul, two in Minas, one in the State of Rio, and one in the Federal district.

Considerable impetus has been given to the development of the coal industry of Brazil by the resolutions adopted during the session of the Brazilian Coal Congress, which took place in Rio de Janeiro during the latter part of 1922. It was recommended that an import duty be placed on foreign coal, with a view to increasing the domestic production. The Brazilian coal output is estimated at present at about 415,000 metric tons annually, not quite half of the imports of foreign coal in 1921, or almost a third of the national consumption in that year, while the productive capacity of the mines in operation is estimated to be in excess of total imports of any year past. It must be noted, however, that the greater part of this coal is consumed in southern Brazil, where the mines are located. At the close of 1922 there were only six companies and one State-owned mine producing coal. The mining methods were somewhat backward until recently, when the demand for domestic coal increased as a result of the high prices of foreign coal during the war. The principal obstacles in the way of the greater consumption of Brazilian coal are the imported boilers, which can not be operated as effectively with domestic coal as with the imported. Brazilian coal has a greater ash and sulphur content than the American and English, which renders the former of inferior quality. Nevertheless, since the European war the reduction of coal imports and the consequent rise in prices has brought about a steady increase in the domestic output. The Government of Brazil has offered material assistance to the national coal mining industry by means of loans to mining companies up to one-half of the capital invested in installations and in the purchase of mineral lands. The general opinion with regard to the coal situation of Brazil at the end of 1922 was that without further assistance the industry would show but slow progress during the present year, consumption being restricted to those areas in proximity to the mines. As better transportation facilities are provided, the territory in which the coal can be marketed profitably would naturally be enlarged.

Cotton production of Brazil in 1922 showed considerable improvement as compared with that of previous years. At the International Cotton Congress, which was held in Rio de Janeiro last October, it was estimated that