

**Fifth Annual Report**  
**of the**  
**United States Tariff Commission**  
  
**1921**



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**UNITED STATES TARIFF COMMISSION.**

**Office: Eighth and E Streets NW., Washington, D. C.**

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**LETTER OF TRANSMITTAL.**

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UNITED STATES TARIFF COMMISSION,  
*Washington, December 5, 1921.*

MY DEAR MR. SPEAKER: In compliance with the provisions of section 703 of the act of Congress approved September 8, 1916, "to increase the revenue, and for other purposes," I transmit herewith a copy of the Fifth Annual Report of the United States Tariff Commission.

Very truly yours,

THOMAS WALKER PAGE,  
*Chairman.*

HON. FREDERICK H. GILLETT,  
*Speaker of the House of Representatives,*  
*Washington, D. C.*



# FIFTH ANNUAL REPORT OF THE UNITED STATES TARIFF COMMISSION.

WASHINGTON, D. C., *December 5, 1921.*

*To the Congress:*

The United States Tariff Commission begs to submit herewith its fifth annual report for the fiscal year 1920-21.

## I. COOPERATION WITH THE SENATE AND THE HOUSE.

### SPECIAL SERVICES WITH COMMITTEE ON WAYS AND MEANS OF THE HOUSE OF REPRESENTATIVES AND THE COMMITTEE ON FINANCE OF THE SENATE.

The passage of the emergency tariff act and the deliberations of Congress in the preparation of a general revision of the tariff made it necessary for the Tariff Commission to use the energies of its staff in large measure in the preparation and compilation of special reports requested for immediate and temporary use by the Committee on Ways and Means of the House of Representatives and the Finance Committee of the Senate. In addition to this work members of the commission and the experts of its staff were invited by the committees to present and explain in person much of the information that had been assembled but which was not in form sufficiently finished to be published. The usefulness to Congress of the Tariff Commission's activities of such nature is mentioned as follows in the report of the Committee on Ways and Means submitted to the House by the chairman of the committee when the bill H. R. 7456 was reported:

During the consideration of rates as well as during the hearings and previous thereto the Tariff Commission has supplied the committee in the form of tariff surveys concise and comprehensive information on various subjects. In addition to this the staff of the Tariff Commission was placed at the disposal of the committee and has been called upon to work with the committee in the drafting of the various tariff schedules. Through these efforts the bill herein recommended proposes many desirable changes in arrangement and classification.

#### AMERICAN VALUATION.

On March 26, 1921, the commission submitted to the Committee on Ways and Means a report entitled "Information concerning American valuation as the basis for assessing duties ad valorem." That report included a review of legislation and attempted legislation upon dutiable values in the United States from 1789 to 1921, a summary of laws of various foreign countries relative to dutiable values, and a statement of the proportion of import trade affected by ad

valorem, specific, and compound rates, the averages of each, and the respective revenues derived.

From tables contained in the report it appears that in 1920 the imports subject to ad valorem and compound rates comprised 32 per cent of the dutiable import trade or 12.04 of the total free and dutiable imports, and that 56 per cent of the customs revenues were derived from such imports. With respect to the number of articles involved the report stated that the ad valorem list probably covers more articles, each possessing individual value, than are contained in the free list or the free and specific lists combined.

The tables showing the relative ratios of the dutiable imports entering under specific, ad valorem, and compound rates follow :

RELATIVE VALUES OF IMPORTS FOR CONSUMPTION.

*Percentages of imports entered free, and on payment of specific, ad valorem, and compound duties.*

	1920	1919	1914	1913
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Free.....	61.08	70.84	62.69	55.87
Specific.....	26.52	17.94	15.31	23.20
Ad valorem.....	12.06	10.95	21.58	16.18
Compound.....	.34	.27	.42	4.75
Total.....	100.00	100.00	100.00	100.00

*Equivalent ad valorem rates of various duties paid.*

	1920	1919	1914	1913
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Specific.....	10.45	16.90	43.06	23.45
Ad valorem.....	28.72	27.65	29.77	62.49
Compound.....	42.44	52.90	74.11	44.81
All duties on dutiable imports.....	16.39	22.27	35.72	40.08
All duties on total imports.....	6.38	6.20	13.33	17.68

*Percentages of customs revenue derived from different duties.*

	1920	1919	1914	1913
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Specific.....	43.46	48.91	49.47	30.77
Ad valorem.....	54.30	48.84	48.20	57.20
Compound.....	2.24	2.25	2.33	12.03
Total.....	100.00	100.00	100.00	100.00

Without expressing an opinion upon the desirability of adopting American valuation, the commission, in its report, pointed out deficiencies in the present system as well as difficulties in the operation of the proposed change, and, by way of offering constructively helpful suggestions, submitted tentative drafts of bills with explanations of their respective advantages. Among other things, it appears from the report that much of the merchandise now imported either has no foreign market value at all or has a value which can not be ascertained by appraising officers; that cost of production abroad is diffi-

cult and at times impossible to obtain, and that selling price in the United States when the statutory deductions of duties, profits, and other items are made is merely an estimate or approximation of foreign value.

True home value was dealt with as consisting in either the selling price in the United States of domestic products or of imported goods, or both. The successful operation of American valuation was regarded as somewhat predicated upon a flexible rule of comparability or similitude which would apply to imports having no exact counterpart in domestic productions or in previous importations. Material, construction, design, quality, size, texture, use, and value, were mentioned as elements of comparability or similitude and each was considered separately or in conjunction with others, as were also the words "similar," "comparable," and "competitive."

The value of the imports for sale in the United States was suggested as a rule to supplement the main bases of appraisalment. The commission pointed out that arbitrary power in appraising officers would be curbed by the statutory requirement that appraising officers shall use all reasonable ways and means in determining value. The report included a suggestion of benefit to the importers in the proposal that importers be relieved from the binding effect of their entries and from penalties for undervaluation without fraud.

#### HEARINGS ON AMERICAN VALUATION.

Hearings on home valuation were begun by the Committee on Finance of the Senate on July 25, 1921. At the outset of these hearings three members of the Tariff Commission and one of its customs experts, at the request of the committee, appeared and testified before the Committee on Finance.

## II. TARIFF INFORMATION SURVEYS.

### INTRODUCTION.

In contemplation of a future revision of the tariff act, the Tariff Commission soon after its organization outlined a plan for a standard form of pamphlet which was to be prepared for every commodity mentioned in the tariff act. These pamphlets, known as Tariff Information Surveys, were designed to bring together all available information which it was thought would be of service to Congress in connection with a revision of the tariff.

Each survey gives a description of the article under discussion, with its various grades and uses. It then takes up the domestic production of the article, with special reference to the raw materials required and, where these are not available from domestic sources, the extent to which the industry must rely on imports. The process of manufacture is briefly described in order to indicate whether or not the industry is adapted to American conditions and whether highly skilled labor is required. The relation of domestic production to consumption is analyzed in order to show to what extent the domestic consumer is dependent upon imports for his supply and from what countries these imports come. If a commodity is one in which the

United States production exceeds the consumption and an exportable surplus exists, the export trade is discussed and the principal countries of destination are shown. The amount, the nature, and the causes of foreign competition in the American market are stated and analyzed. The survey also shows the rate of duty on any given article under the various tariff acts since 1883, and gives decisions by the Treasury Department and the Court of Customs Appeals regarding classification of commodities under these laws.

When it was announced that hearings would be held in January, 1921, in contemplation of a revision of the tariff act of 1913 the Tariff Commission informed the Committee on Ways and Means of the amount of detailed information which the commission had on hand in manuscript form, but which could not be published because of lack of sufficient funds. The Committee on Ways and Means, realizing the value of such information, arranged to publish the surveys.

The following summaries indicate the scope of the commission's work in the preparation of these pamphlets:

#### SCHEDULE A: CHEMICALS, OILS, AND PAINTS.

Schedule A of the tariff act of 1913 consists of 70 paragraphs, many of which contain provisions for a number of different products. In some cases the commission prepared a single survey to cover the whole paragraph, where the products enumerated in the paragraph were of a related character. In other cases, a separate survey was prepared for each article. The total number of surveys prepared on chemicals, oils, and paints approximated 175; these discussed from 400 to 500 separate chemical commodities. They were published in the form of 28 separate pamphlets, totaling nearly 3,000 pages. Thus, during the hearings on Schedule A, January 6-8, 1921, inclusive, the Committee on Ways and Means was enabled to have detailed information before it.

#### THE RECLASSIFICATION OF THE CHEMICAL SCHEDULE.

Early in 1921 the Tariff Commission began a systematic redrafting of Schedule A of the act of 1913. The rapid development of the chemical industries during the war and the subsequent changes in conditions of international trade in chemical products have been taken into account in formulating a reclassification of the schedule.

The commission made a careful and detailed study of the phraseology of the existing tariff laws, the litigation arising in their operation and court and Treasury decisions relating thereto. Some of the provisions of the act of 1913 were found to be obscure in meaning, difficult to administer, and not in accord with commercial practice. In some cases it was suggested that the defects of the existing law be remedied by a change in the name or description of a commodity, or by a modification of specifications for the various grades and varieties of an article. In other instances it seemed desirable to eliminate special mention of commodities which had become obsolete in modern commerce, but which, purely as a matter of custom, had been carried from one tariff act to another, or to enumerate specifically those that had developed in commercial importance as

a direct outgrowth of war conditions. Specific mention of approximately 100 chemicals which have hitherto not appeared in tariff laws was recommended.

Before submitting plans for the reclassification of the chemical schedule to the Committee on Ways and Means, the Tariff Commission sought the suggestions and comments of customs authorities and discussed the proposed classifications with representative manufacturers and importers. No attempt was made to transfer articles from the dutiable list to the free list, or the reverse, or to discuss the relative merits of specific and ad valorem rates in general. In some instances, however, the facts in the case made one or the other kind of duty clearly desirable.

The report of the Committee on Ways and Means on H. R. 7456 contains the following statement in regard to the reclassification report:

The committee adopted this reclassification (by the Tariff Commission) as a basis for the schedule 1 of H. R. 7456. It is believed with such information at hand the committee has been able to present a chemical schedule which is more scientific and corresponds more nearly to the exact commercial usage than any chemical schedule of previous tariff acts.

#### SUMMARY OF PRINCIPAL CHEMICAL SURVEYS.

A few of the reports dealing with different branches of the chemical industry are here summarized.

##### THE WOOD CHEMICAL INDUSTRY.

The principal wood chemicals are calcium acetate and wood alcohol derived from the destructive distillation of hardwood. Calcium acetate is used primarily in the manufacture of acetic acid and acetone, both of which have wide industrial uses. Wood alcohol is used primarily in the manufacture of formaldehyde, as a methylating agent in the manufacture of certain coal-tar intermediates, and as a solvent in various industries.

The United States possesses by far a larger and more firmly established wood-distillation industry than any other country. It is stated that the combined European and Canadian production of wood-distillation products is about equal to the total output of this country. This indicates that the United States supplies at least 50 per cent of the world's demand for these products. The production prior to the war was in excess of domestic demands, as is shown by the fact that in 1914 about 41 per cent of the calcium acetate and 17 per cent of the wood alcohol produced in this country were exported.

Of the foreign countries which possessed wood-distillation industries the most important prior to the war was Austria-Hungary. Germany, France, Canada, Belgium, Russia, and Sweden have industries of minor importance. The industry in Canada is comparatively small, the total capacity amounting to only about 12 per cent of that of the industry in this country. The output of acetic acid in Canada, one of the important wood chemicals, was greatly increased during the war, owing to the development of the process of producing synthetic acetic acid from calcium carbide. Production by this process in Canada amounts to 650 tons per month of 100 per

cent acetic acid. The outstanding advantage of this process is that it produces in one step an acid of higher purity and concentration than that produced by acetate of lime, which requires several distillations to concentrate and purify it. The synthetic process has also been developed in European countries, chiefly in Germany and Switzerland. Japan during the war developed a wood-distillation industry which in 1918 had an output of more than 15,000,000 pounds of acetate of lime, equal to about 8 per cent of the productive capacity in this country. The maintenance and further growth of the Japanese industry, however, will be difficult on account of the limited supply of hardwoods in that country.

#### CAFFEINE COMPOUNDS.

The manufacture of caffeine in the United States may be taken as an example of our refined chemical industry. It is estimated that approximately 60 per cent of the total consumption of caffeine is used in the manufacture of soft drinks, and the remainder for medicinal purposes.

The manufacture of the alkaloid, caffeine, in the United States is a relatively small industry and is restricted to a few firms. Prior to the war the domestic industry supplied about 150,000 pounds, or two-thirds of the domestic consumption, worth approximately \$500,000. Its principal competitor, the German chemical industry, was cut off from the American market in 1915, and imports fell from 54,000 pounds in 1915 to an average of less than 3,000 pounds for the period 1916-1920. The domestic production had increased in 1919 to 241,615 pounds, valued at \$1,673,682.

The Japanese chemical industry is now attempting to secure Germany's former position as a dominating factor in the caffeine trade. Japan possesses several advantages, the most important of which, perhaps, is her close proximity to an abundant source of the raw material. Tea waste, which contains only about 2 per cent of caffeine, is a very bulky material, and the American manufacturers have found its transportation expensive as well as difficult.

There has been a maladjustment between the rates of duty on the raw material and the finished product. Since 1913 tea waste has been dutiable at 1 cent per pound while the rate on caffeine has been \$1 per pound. Since about 50 pounds of tea waste are required to produce 1 pound of caffeine, the duty on the raw material amounts to 50 cents per pound of caffeine contained. This duty, together with the large difference in ocean freight rates, favors the importation of the prepared alkaloid rather than its raw material.

#### TANNING MATERIALS AND NATURAL DYES.

The vegetable tanning materials and natural dyes are closely related as to origin, method of manufacture, uses, and chemical nature. In many cases it is difficult to determine whether a given product has greater use as a tanning agent or as a natural dye.

The American tanneries, previous to 1900, obtained practically their entire supply of tanning materials from domestic sources—nearly all hemlock and oak. As the virgin forests of these products were becoming exhausted, chestnut extract, made from chestnut wood

of abundant growth in the Appalachian region, was accepted and the production of this extract has since become highly developed in that area.

Since 1900 a large import trade has developed in foreign tanning materials from many parts of the world to replace the insufficient supply of oak and hemlock and to obtain cheaper tanning agents. These include woods, leaves, barks, fruits, nuts, pods, and other vegetable materials, with the extracts made by hot-water treatment of these products, with subsequent evaporation.

The important imported tanning materials include quebracho, mangrove, myrobalans, sumac, divi-divi, valonia, wattle, and gambier.

Important domestic tanning materials include chestnut-wood extract, hemlock, oak, and sumac. Chestnut-wood extract is the most important domestic tanning agent and is available in quantities in excess of domestic needs. The chestnut blight at present threatens the entire stand of chestnut, which will have a tendency to accelerate the rate of cutting. The annual cut of hemlock and oak barks is decreasing. At the present rate of consumption, it is estimated that the supply of these barks will be exhausted in about 40 years. This does not include the western hemlock of Oregon and Washington, which offers a large future supply of bark, utilized at present only to a small extent.

The tariff rates on tanning materials affect not only the domestic producer of crude tanning materials but also manufacturers of extracts, tanners, and, indirectly, users of leather.

In connection with the tariff, the crude tanning materials should be considered from the viewpoint of competition with domestic materials and also of necessary supplies for domestic extract manufacture. Domestic production of extracts from imported crude materials is favored by a duty on extracts with either a low duty or no duty on the crude materials.

The natural dyes, previous to the introduction of coal-tar dyes, served as a basis of dyeing. Although synthetic dyes have largely displaced them, the natural dyes are in demand for certain uses, chiefly in the textile and leather trades.

Certain natural dyes, extracts of logwood, fustic, and redwood, are made in this country from woods imported from the West Indies and Central and South America. The manufacture of dyewood extracts is a highly developed domestic industry. In addition, many dyes prepared from foreign vegetable sources are imported ready for use into the United States. These dyes include cutch, archil and cudbear, natural indigo, saffron, safflower, cochineal, tumeric, annatto, litmus, chlorophyll extract, madder, and Persian berries.

Quercitron and osage orange (the latter of recent development) are the important domestic natural dyes. Imported fustic is competitive with these products for certain uses. In the case of dyewoods a duty on the extracts and a low rate of duty or no duty on the crude material favors the domestic production of extracts in the United States.

#### CENSUS OF DYES AND COAL-TAR CHEMICALS, 1920.

The commission during 1921 took its fourth census of dyes and coal-tar chemicals, which covered the calendar year 1920. This report shows that the output of dyes in 1920 exceeded 88,000,000

pounds, valued at more than \$95,000,000, which was a 40 per cent increase in both quantity and value over the preceding year, and was 92 per cent in excess of the prewar imports. On the other hand, the imports of coal-tar dyes amounted to only 3,400,000 pounds, valued at \$5,760,000. About one-half the import was from Germany and about one-third from Switzerland, the remainder coming from England and other countries. Vat dyes, other than indigo, represented the largest class imported.

A detailed study of production, imports, and exports shows that the value of the domestic output in 1920 was at least 120 per cent of the domestic consumption, assuming that consumption consists of production plus imports minus exports.

The most significant development in 1920 was the large increase in output of vat dyes, which in previous years had been lacking. The output of indigo, the most important vat dye, was more than double the production of 1919 and also twice as great as the prewar imports. The production of vat dyes, other than indigo, showed a gain of nearly 200 per cent over the previous year. While this class still lacks variety and is not yet made in quantity, the progress during 1920 has shown that the American industry is now able to produce vat colors on a large scale.

The total exports in 1920 of "aniline dyes" and "all other dyes and dyestuffs" were approximately \$35,000,000, or about double the value of the 1919 shipments. During the first four months of 1921, however, the exports showed a rapid decline and during the month of April were only about 10 per cent of the maximum monthly export of 1920.

The commission in its previous report on dyes pointed out the fallacy of any deductions as to the competitive strength of the domestic industry based upon the large exports in 1919 and 1920, because of the fact that domestic manufacturers had met with little competition in foreign markets from German dyes during these years. The accuracy of this statement is confirmed by the rapid decline in exports of dyes in 1921, which may be attributed to the reappearance of German dyes either directly or through reexportation of reparations dyes in the large export markets of the world, such as China, Japan, and India.

One of the important developments in the coal-tar industry during 1920 was the production for the first time of triphenylphosphate in large quantities and of tricresylphosphate in lesser amounts. These two coal-tar products have been utilized as substitutes for camphor in the manufacture of pyroxylin plastics. In the past domestic pyroxylin manufacturers' supplies of this material have been controlled by the Japanese camphor monopoly. Although it is still doubtful whether these products can replace camphor for all purposes, or be produced at a price that will make possible commercially their substitution for camphor, the possibility of their development by the coal-tar industry will offset to some degree the monopoly of this commodity which Japan has held in the past.

#### LITHOPONE: COSTS OF PRODUCTION, 1921.

At the request of a committee representing the lithopone manufacturers of the United States, the commission undertook the collection of data to bring up to date its report of 1919 on the cost of manu-

facturing lithopone. (See Fourth Annual Report, pp. 28-30.) Reports as to costs were received from various manufacturers, tabulated, verified by comparison with the books of the companies, and the results published during the month of November.

During the first six months of 1921 only 8 of 13 firms previously manufacturing lithopone were in actual operation, and these were operating at not more than 40 per cent of their capacity. The production during this period was slightly more than 45,000,000 pounds, equivalent to only about one-third of the entire productive capacity of the domestic industry. As imports during the first six months of 1921 were less than 2 per cent of the domestic output, it is obvious that this inactivity of plants was not due to foreign competition.

The weighted average total cost of producing lithopone for the first half of 1921 was 6.26 cents per pound, which is a slight increase over the average cost for 1919. The increase was due to the fact that the industry was operating at such a small proportion of capacity. The total cost was distributed as follows: 42 per cent for material; 13 per cent, direct labor; 41 per cent, factory overhead; and about 4 per cent for sales expense. The percentage of total cost chargeable to material was practically the same in 1921 as in 1919. Direct labor showed a decrease of about 5 per cent and factory overhead increased about 7 per cent.

The average net sales price received for lithopone sold during the first six months of 1921 was 6.76 cents per pound, an increase of 0.09 cent over the gross sales value of 1919. In 1921 the industry as a whole made an apparent average profit of 0.5 cent per pound of lithopone sold; three of the eight firms, however, lost money during this period.

#### SCHEDULE B.—EARTHS, EARTHENWARE, AND GLASSWARE.

The work on schedule B during the past year has covered the subjects of brick, tiles, lime, gypsum, cements, various abrasives, building and decorative stone, the pottery industry, and the manufactures of glass and glassware. The results of the investigation of the commission in this field have been published in 11 pamphlets.

With respect to most articles classed as earthenware, the United States is well supplied with necessary raw material. In the case of some highly composite articles, like glass and glassware, limited amounts of imported material are required. Certain kinds of high-grade marble used for ornamental and sculptural purposes are not available in this country, and are, therefore, imported. These imports, however, seem to be, on the whole, declining.

#### POTTERY.

Pottery may be roughly divided into three classes: (1) Common unmixed or unwashed clay ware, such as common yellow ware used in kitchens; (2) white ware with a porous body, known in the trade as earthenware, and used to a large extent both in homes and hotels for dinner ware; and (3) white and decorated ware with a vitrified or glassy body consisting both of tough vitrified hotel ware and dense and glassy porcelain and bone china. In the manufacture of china-ware, England, France, Germany, Austria, Czechoslovakia, and Japan

are prominent. Japan is a newcomer in the world's market, but because of the low wages prevailing in that country the export trade has expanded rapidly. The United States pottery industry is both a young and a large unit. This industry produces all kinds of ware, and for this reason is in direct competition with every pottery product, from the cheapest earthenware to the finest bone china.

No manufacturing costs in this industry are available at the present time. In the course of manufacture part of the product is rejected at each stage of the process, and the cost of distribution is rendered more difficult by the fact that the rejects are often finished and sold actually below the cost of production. Labor cost is an important item, being about 60 per cent of the total cost. Comparisons based upon wage scales and raw-material prices indicate that the Japanese costs are the lowest, followed in an ascending order by those of Germany, France, England, and the United States. While Japan has important advantages because of low wage rates, it is obliged to pay a high price for coal.

In the discussion of competitive conditions the packing and transportation costs are an important factor. Ordinarily these costs are relatively unimportant in the case of highly manufactured and costly articles. An exception, however, must be made in the case of pottery. The fragile nature of the product necessitates very careful packing, and the resulting packages are so bulky that the freight rate per unit of value is comparatively high.

#### GLASS.

The glass industry covers the manufacture of a great variety of articles, and has been studied by agents of the commission both in this country and in Europe. Glass is an artificial silicate composed of sand (silica) and various alkali, alkali earth, and metal oxides and salts. The general name is usually modified by a descriptive adjective to denote the composition or method of manufacture, such as lime flint, lead flint, plate glass, window glass, optical, or special glass.

The glass industry is located mainly west of the Alleghenies and in districts where natural gas is available and cheap. The glass factories in the East use producer gas or oil for fuel, but the high cost of fuel is offset by the market advantage. At the present time it may be said that the domestic industry occupies a very favorable position as regards fuel supply and net cost per unit of production. Manufacturers of bulk standard lines suffer very little from the high wage scale paid in the United States, but producers of novelty and chemical ware requiring a large amount of hand-blown work are at a considerable disadvantage for this particular reason. Recently there has been a sharp struggle between machine-made products and hand labor. The use of machines as substitutes for skilled labor is increasing rapidly, and would be practically universal were it not for patent rights which limit the use of many machines to a few operators.

#### SCIENTIFIC INSTRUMENTS (OPTICAL GLASS).

Closely connected with the glass industry is the manufacture of scientific instruments in which glass constitutes a large part of the value. Many scientific instruments have been made with great care

and are characterized by a high degree of sensitiveness and dependability. Optical glass, rough cut or unwrought, is an essential element in the manufacture of microscopes, field glasses, range finders, gun sights, photographic lenses, and other optical instruments. Under the act of 1913 they were admitted free of duty. Up to the close of 1917 this glass was not manufactured in the United States but had been imported in its unwrought state, principally from Germany, where many new varieties had been developed after years of scientific research and experiment. It has also been imported, but in much more limited amounts, from France and England. Optical glass in a finished state and as part of a completed optical instrument is also free of duty when imported by educational institutions for their own use.

The advantage possessed by Germany and some other countries over the United States in the manufacture of optical glass is due largely to the greater experience of producers in these countries in the manufacture of highly delicate instruments. It should be said, however, that since 1917 American production has increased and the output shows great progress in general character and efficiency. American manufacturers desire the repeal of paragraph 573 of the tariff act of 1913, which admits free of duty complete optical instruments imported for scientific use in educational institutions, because a very large part of the total domestic demand comes from these institutions. Many scientific men, however, connected with these institutions oppose such a movement, partly on the ground that in certain lines the domestic product is not as yet equal to the foreign and can not be utilized in several lines of research.

#### SCHEDULE C: METALS AND MANUFACTURES OF.

##### CLASSIFICATION OF ARTICLES IN THE METAL SCHEDULE.

There is great need for a reclassification of the articles appearing in the metal schedule of our tariff laws. An attempt logically to classify the articles enumerated is more than a mere effort to satisfy a sense of consistency. The grouping of products according to the materials used, their stage of production, and general uses, facilitates comparison of tariff rates of related commodities. It also helps to clarify the problems connected with levying of compensatory duties.

In the framing of successive tariff laws the addition of articles to the various paragraphs has been made on the basis of the rates imposed rather than on the basis of a proper grouping of allied products. For example, the paragraph devoted to crude steel in recent acts has included not simply ingots, blooms, billets, and the like, but also die blocks and blanks, shafting and certain forms of steel plates and sheets. Plates and sheets, which constitute one of the most important groups of steel products, are treated in the proposed tariff act in seven different paragraphs. In some of these paragraphs they are grouped with articles with which they have no immediate relation. For example, in paragraph 304 they are grouped with steel ingots, blooms, and the like, and in paragraph 315 they are classed with wire rods. A better sequence than this rather scattered arrangement would be the following: (1) Common plates and sheets; (2)

special plates and sheets, i. e., made of special steels; (3) plates and sheets further advanced than hot rolling; (4) plates and sheets coated with other metals (galvanized sheets and tin or terneplate); and (5) plates and sheets coated with layers of other metal, by hammering or forging. Such a classification would provide material grouped according to stage of production and similarity of character and uses.

Then again, in the grouping of paragraphs, unrelated articles are often put together. Thus the provision for pipe and tubing in the proposed bill is placed between paragraphs pertaining, respectively, to iron castings and chains. The paragraph dealing with structural shapes is placed between the paragraphs covering tin and terneplates and those relating to hoops, bands, and scroll iron and steel. A proper classification would not only make the metal schedule more intelligible to the reader and student of tariff law, but would do much to reduce litigation regarding the classification of imported articles.

#### SUMMARY OF SURVEYS.

The surveys on metals and metal manufactures published during the present year are included in 38 pamphlets, 30 of which cover articles enumerated in the dutiable list in the act of 1913 and 8 in the free list. Work on most of these surveys was started before the beginning of the year and in several instances has already been completed. In all cases material gathered for such surveys was brought down to date, and in the majority of instances substantial additions were made thereto. The surveys completed during the present year embrace a variety of subjects, of which the ores of the ferro-alloys, the ferro-alloys themselves, alloy steels (including tool steels), electric apparatus and supplies, and certain miscellaneous metal manufactures may be mentioned.

The articles included in the metal schedule may be broadly divided into four general parts: (1) Ores or concentrates; (2) iron and steel, in their metallic forms; (3) nonferrous metals; and (4) manufactures of metals.

#### ORES OR CONCENTRATES.

The United States is abundantly supplied with ores utilized in the manufacture of the major metals, such as iron, copper, and lead, as well as with coal needed as fuel in the smelting or refining of this raw material. In the case of many minor metal products the United States has relied upon foreign supplies. During the World War, however, the interruption of trade called forth efforts to secure from domestic deposits ores or metals formerly imported. Among the principal materials of this character were manganese ores, tungsten-bearing ores, chromite, and magnesite. A small amount of manganese ores had been mined in the United States prior to the outbreak of the World War. Imported manganese ores, however, were employed by domestic producers in the manufacture of ferromanganese. In addition to the importation of manganese ores, there was a large importation of ferromanganese itself. Tungsten-bearing ores had been produced in this country in the prewar period, but the world's greatest source of supply was Burma. Much of the domestic ore was exported, but a limited amount was used in the manufacture of ferrotungsten.

Chromite was practically not mined at all in this country, and magnesite in rather limited amounts. As these ores were necessary both for war and industrial uses, the partial cutting off of foreign supplies led to the investment of considerable capital in the exploitation of native resources. Manganese in small amounts is essential to the production of Bessemer and open-hearth steel, and in larger amounts to the manufacture of manganese steel. Tungsten is required to produce high-speed steel and certain other tool steels. Chromium is a necessary ingredient in armor plate, projectiles, plates for bank safes, and in other articles where hardness is required. The principal consumption of magnesite is in metallurgy as a refractory material for lining open-hearth steel and other furnaces. Its use also extends to industries manufacturing Sorel cement sanitary flooring, wall plaster, and other similar articles.

With the close of the war producers in these several lines were face to face with renewed importation of the raw materials mentioned. In the case of tungsten-bearing ores domestic production was reduced to a small fraction of the output during the closing years of the war. The mining of chromite was practically abandoned, and domestic manganese ores have been produced in more limited amounts.

Special attention was given by the commission in its reports and surveys to these branches of production and the general results embodied in the pamphlets published under the titles "Ores of the ferro-alloys" and "Cryolite, graphite, and magnesite." An earlier study of these minerals is contained in the report of the commission on "Industrial readjustment of certain mineral industries affected by the war," published in 1920.

#### METALLIC IRON AND STEEL.

The United States occupies a predominant position in the manufacture of articles selling as iron and steel—that is, iron and steel in the forms of pig iron, steel billets, steel bars, structural shapes, rails, plates, and sheets, and the like. Out of an estimated output in 1918 of pig iron amounting to 62,000,000 tons, the United States produced over 39,000,000 tons, or more than 60 per cent of the world's total.<sup>1</sup>

Aside from certain special irons and steels, usually those into which direct labor cost enters as an important item, this country is entirely self-sufficient, and exports large quantities of manufactured material. Careful comparison of domestic and foreign prices shows that ordinary or common pig iron and steel sell, on the whole, at as low prices in the United States as abroad. In the cases of certain special irons and steels, prices in this country are apparently higher, and the position of the American producer is not so secure. This is particularly true of certain alloy steels, of which tool steel is one of the most conspicuous examples. In the manufacture of such steels, as well as in the production of ordinary carbon steels, the ferro-alloys are utilized both as purifying and alloying agencies.

The Tariff Commission undertook an exhaustive field investigation, both in this country and abroad, of the general subject of the ferro-alloys. A report was published entitled "The ferro-alloy industries" embodying the results of this investigation. This report covered all

<sup>1</sup> World figures later than 1918 are not at present available.

the leading ferro-alloys such as the iron-manganese alloys (spiegeleisen and ferromanganese), ferrosilicon, ferrochrome, ferrotungsten, ferrovandium, ferrotitanium, ferrophosphorus, ferromolybdenum, and certain minor ferro-alloys. On some of the leading ferro-alloys cost figures were secured. While these figures were for years when prices were higher than normal, the costs indicate in a general way the relative importance of the several leading items entering into the expense of manufacture. It was shown that the competitive position of the American ferro-alloy manufacturer depends in most cases upon two things: (1) His cost of raw material as compared with that of the foreign producer, and (2) the prices he is obliged to pay for electric power where the electric-furnace method is employed. In the cases of ferromanganese and ferrotungsten, about 60 to 80 per cent of the prices at which these alloys sell represents the cost of ore. In the manufacture of the higher grades of ferrosilicon, the most important item of expense is the price paid for hydroelectric power. Relative conditions, therefore, here and abroad affecting these items of expense necessarily influence the competitive position of the American producer. In the case of at least one ferro-alloy, the United States at present has a strategic position. This country produces ferrovandium, not only for home consumption but also for export. This unique situation is due to the fact that American establishments practically control the world's supply of vanadium ore. The only extensive deposits of this ore at present known exist in Peru and in the United States, and these deposits are controlled by American producers.

The subject of the ferroalloys leads naturally to that of alloy steels. The manufacture of these steels is influenced greatly by the cost of alloying metals. Most of the alloying metals are added to the steel by means of the ferroalloys, which are in some cases more expensive in this country than abroad. The electric furnace process when used in the production of special steels is also more expensive in the United States than in some European countries. It may be said, however, that in the United States alloy steels are in the main made in open-hearth furnaces. Notwithstanding the high cost of manufacture, the production of alloy steels in the United States from 1910 to 1920 increased from 567,819 gross tons to 1,660,292 gross tons, or, in other words, practically trebled within a decade. While the United States produces most of the alloy steels which it uses, the proportion of such steels imported to the total amount consumed is much greater than in the case of ordinary carbon steel. The greater part of this imported alloy steel consists of tool steel.

#### NONFERROUS METALS.

The tariff problems connected with the nonferrous metals differ in many respects from those relating to the production of iron and steel. These problems vary with the source and character of raw material and prevailing trade practices. Thus in the case of lead the United States occupies the position of the largest producer in the world, both in the case of the metal and in that of the ore. The cost of mining ore, however, is greater in this country than in most foreign countries, but the output is interrelated with other mining

and smelting interests, especially silver and zinc. Furthermore, the general practice of treating the ores of the precious metals in lead furnaces makes a large portion of the national output of gold and silver dependent upon the lead-smelting industry. In view of the relatively high cost of ore in the United States and the large amount of ore treated carrying little metallic lead some source other than the output of domestic mines might seem desirable from the standpoint of lead refiners. However, the free entry of lead for domestic consumption would tend to the expansion of the smelters in Mexico (the second largest producer of lead ore in the world) and along the Mexican border and to the closing up of American smelteries less favorably situated. A heavier burden would then be placed upon the producers of ores containing precious metals, especially those having small amounts of lead and not capable of being so advantageously treated in copper furnaces as in lead works. The tariff problems connected with the manufacture of lead are thus seen to be closely related with those of other industries. This industry may be taken as a type or example of certain industries where the subject of an equitable trade policy touches not one but several branches of production.

The industrial situation with reference to the production of copper is not unlike that of iron and steel. The raw material is abundant and cheap in the United States. Unlike several of the ferroalloys, the most commonly used copper alloys are not handicapped in their production by the disadvantages confronting the producer of the former class of material.

The Tariff Commission has also made a study of the quicksilver situation. The bulk of the quicksilver produced in the United States is made in California. Deposits of quicksilver ore are fairly abundant in that State, but of low grade. The average metal content of the ores mined in this country is less than one-half of 1 per cent. Ores of higher content exist in Spain, Italy, and Austria. In Spain the metal content averages about 8 per cent. While American smelting methods are highly efficient and the industry well organized, the high metallic content of Spanish ores materially reduces the cost of production to the foreign producer. Owing to the large amount of waste material in quicksilver ore it is not economical to ship this raw product any great distance from the place where it is mined.

While the United States is endowed with great ore reserves in the case of the major metals it is obliged to rely upon foreign sources for the bulk of its supply of certain other metals. Platinum is not produced at all in the United States, and tin in very limited amounts. Nickel has been refined in very large quantities in this country, but the ore supply is almost entirely foreign. In late years there has been an effort made to establish works for the refining of tin ore or cassiterite. Tin ore is mined at the present time in southeastern Asia (including China and Siam, Malay Archipelago, and the Dutch East Indies), Bolivia, Australia, and South Africa. The smelting industry of the Straits Settlements and of the Dutch East Indies, which received the bulk of the ore produced in Southeastern Asia, is protected by export duties on the raw material, which practically eliminates the possibility of ore from these sources being smelted in the United States. Tin smelting, however, has been developing

in the United States, but the domestic smelters depend upon Bolivian ore. Should this material from any cause be lacking domestic producers would probably be obliged to suspend operations. In the case of nickel there has been a strong agitation in Canada for the smelting of the Sudbury ores at home. A great American refining industry was developed which not only supplied the American market, but became the dominating factor in the world market. Owing to this agitation in Canada the industry is seriously threatened, as practically all of its raw material consists of Sudbury matte.

#### MANUFACTURES OF METALS.

Much attention has been given by the commission to manufactured products consisting, in whole or in large part, of metals. Where these articles are highly standardized, as in the case of most machinery, American producers not only control the home market but export a large part of their product. American cash registers, typewriters, sewing machines, locomotives, typesetting machines, various agricultural machines, and automobiles are highly standardized products and sell throughout the world. The comparative cheapness of the American product is due to mass production and well-standardized interchangeable parts. Even in this field, however, there are some types of machinery largely used in the United States which are for the most part imported. This is particularly true of certain forms of textile machinery. Textile machinery has been studied and the results are embodied in seven or eight published surveys. The United States imports its lace-making and embroidery machines, much of its wool machinery (especially combs and drawing and spinning frames), and even some of its cotton machinery. With respect to this last class of textile machinery, cotton mules, which are all imported, are being gradually displaced by ring-spinning machinery which has been recently extended into the field of the finer cotton yarns.

In the case of some machines, e. g., automobiles, the export trade has developed to such an extent that the home industry is in large measure dependent upon foreign markets. Producers in such fields have expressed fears that high rates of duty might result in retaliatory measures by foreign countries. In practical operation the United States has adhered to what is called the general and autonomous tariff system, i. e., the system of imposing the same rates of duty on imported articles irrespective of country of origin. Reciprocity provisions, it is true, have appeared in our laws, and treaties have been entered into with certain countries such as Cuba or reduced rates have been allowed on products coming from some of our foreign possessions, as the Philippines, but nothing corresponding to the general and conventional system of Germany or the maximum and minimum system of France has been put into operation by this country. The question, however, of enacting such a tariff system has been raised in view of the representations of manufacturers whose foreign trade has become an important part of their business.

With respect to various other manufactured articles, either less standardized than most common forms of machinery or sold in more limited quantities, different problems have arisen, largely connected with industrial conditions obtaining in many countries as the result of the late war. The foreign-exchange situation has for the time

being caused an apparent reduction in the cost of manufacture in certain countries. While there is considerable difference of opinion in regard to the precise effect of foreign-exchange rates on the competitive situation of domestic and foreign producers, there is reason to believe that in the case of commodities in the manufacture of which labor cost is an important item of expense the American producer has not only been handicapped by the higher wage rates ordinarily prevailing in this country as compared with European countries, but by the failure of foreign wages immediately to readjust themselves to reduced exchange rates. In Germany, for example, the purchasing power of the mark in general is greater than the current rates of exchange would indicate. This fact is shown, not only by a comparison of German and American index numbers, but also by a comparison of current prices of similar commodities in Germany and the United States. While such a situation in so far as it is affected by the present monetary condition of the world is temporary, it is for the time being a factor of some importance in the study of international trade relations.

#### SCHEDULE D: WOOD AND MANUFACTURES OF.

During the year surveys have been printed on the several items covered in Schedule D and in the paragraphs relating to wood and wood products in the free list. These surveys include cabinet woods; brier root; paving posts; railroad ties; telephone, telegraph, trolley, and electric-light poles; casks, barrels, and hogsheads; boxes; rattan cane and reeds; osier and willow and manufactures of; toothpicks; skewers; blinds, shades, and screens; baskets; furniture; lumber and shingles. Of these, the survey on lumber and shingles is the most important, both because of the magnitude of the industry and of the tariff and conservation problems involved. In the preparation of this report cost data were obtained covering stumpage, logging, and manufacturing costs in the principal seats of the industry in the United States and Canada. An analysis of the data obtained shows that if averages be taken the cost of producing lumber is slightly greater in British Columbia than in Washington and Oregon, and the costs of producing lumber in eastern and western Ontario are somewhat greater than in the corresponding competing regions in the United States. In regard to shingle production the average cost in British Columbia is only slightly greater than in Washington or Oregon, even after making allowance for the fact that the bulk of the production is of a higher grade. However, the analysis further shows that so far as tariff problems are concerned, conclusions based upon averages are likely to be misleading. There is a wide difference in the costs among individual producers in both regions. Consequently some producers in British Columbia show costs much less than those of many of their competitors in the United States, and some producers in the United States show costs much less than those of their competitors in Canada. The real tariff problem would appear to lie not so much in the inability of American producers to compete as in their protest against what appears to them to be the inequity of being subjected to a tariff barrier against their exportation to Canada while the products of their Canadian competitors are admitted free to the United States.

The cost graphs derived from data obtained from all seats of the lumber industry closely resemble the corresponding graphs for the sugar industry. All show a series of steps from low-cost to high-cost producers, the price line crossing the cost line at a point representing some 90 per cent of the output and thus fixing the position of the marginal producer. There is, however, one interesting point of difference. In the sugar industry the big concerns were in a general way the low-cost concerns, thus showing a clear advantage for large-scale production. In the lumber industry no such correspondence is observable. Apparently the moderate-sized plant is at no disadvantage in comparison with its giant competitor.

#### SCHEDULE E: SUGAR, MOLASSES, AND MANUFACTURES OF.

During the past year surveys have been printed covering the several items mentioned in Schedule E. These surveys include sugar, molasses, maple sugar and sirup, glucose, grape sugar, saccharin, candy, confectionery, and honey.

Early in the year cost questionnaires were sent to all the leading cane-sugar manufacturers in Louisiana, Cuba, Hawaii, and Porto Rico, and to the beet-sugar manufacturers in the continental United States. These questionnaires covered capital investment, and labor material, overhead, and marketing expenses, together with certain other items of interest in connection with the industry. From the data so collected it is expected during the coming year to issue a report amplifying and bringing up to date previous reports relating to sugar which have been issued by the commission.

As nearly all the imported sugar comes from Cuba, one of the most important matters connected with the above-mentioned questionnaires is the cost of production in Cuba. The capital invested in the Cuban industry is, to a large extent, American, and of course the capital invested in the domestic industry is American. In order so to adjust the tariff as to do justice to these conflicting interests it is important to know the Cuban as well as the domestic costs. In the past the Cuban interests have very generally cooperated with the commission in furnishing the data desired. The response to the last set of questionnaires sent out has not, however, been so general. The returns received have in fact been so few in number as hardly to be accepted as typical of the whole industry. It is, of course, optional with Cuban concerns whether they fill out the commission's schedules. It is unfortunate, however, that a larger number have not availed themselves of this opportunity of furnishing the commission with data which could be made of use to Congress in fixing an equitable sugar duty.

However, from such data as have been received from the domestic and Cuban sugar manufacturers, preliminary cost studies have been made, the results of which have been furnished the Committee on Ways and Means.

#### SCHEDULE F: TOBACCO AND MANUFACTURES OF.

The commission has held a series of conferences with representatives of the tobacco trade—manufacturers of cigars and cigarettes, importers of Java, Cuban, and Turkish tobacco, and tobacco grow-

ers—as well as with customs officials and tobacco experts of the Department of Agriculture. Through the cooperation of the Department of Commerce some phases of the tobacco industry in Cuba have been investigated. Upon the basis of material thus collected the commission has prepared a tentative revision of the tobacco schedules. The present law, notably in the case of wrapper tobacco, is extremely difficult to administer, and certain of its provisions tend to promote undesirable practices. Moreover, recent developments in the trade indicate that the two general classes of wrapper and filler tobacco are no longer sufficient for customs purposes.

The tobacco schedule is primarily devised for revenue purposes, and the rates of duty therein are higher than for other products. Nevertheless, it has some tariff problems apart from the revenue aspects of the duties. Although the United States is the world's largest producer and exporter of tobacco, it is dependent upon foreign sources of supply for some particular varieties of leaf used chiefly for cigar wrappers and for blending with or flavoring domestic tobaccos. Since the same or similar kinds are produced in this country at higher prices than abroad there has been a demand for protective duties. The tariff problem relates chiefly to wrapper tobacco, particularly the competition of Java or Sumatra wrapper with Connecticut and New England wrapper and with Florida Sumatra. More recently California has produced tobacco which is said by growers to be of the "Turkish" type, grown from Turkish seed. According to the census of 1919, California's production was 489,000 pounds. The annual imports of Turkish tobacco, which amount to approximately 30,000,000 pounds, consist of three main types produced in Macedonia, Smyrna, and Samsoun. These tobaccos are chiefly used for blending with domestic leaf in "Turkish" blend cigarettes. It is stated that there are large areas in California, now used chiefly for grazing, that may successfully grow Turkish tobacco, although at a cost two or three times as high as in the Near East.

Surveys of the cigarette and wrapper tobacco industries are in progress.

#### SCHEDULE G: AGRICULTURAL PRODUCTS.

##### SUGGESTED REVISION AND RECLASSIFICATION OF TARIFF PARAGRAPHS RELATING TO AGRICULTURAL PRODUCTS AND PROVISIONS.

The need and purpose of a revision and reclassification of Schedule G may be briefly indicated. The language of the existing tariff in general dates back at least to the act of 1883, and in some cases to preceding acts.

The phraseology of the existing tariff schedules upon agricultural products and provisions is frequently obsolete, and not in accord with modern commercial practice or nomenclature. It contains conflicting provisions and duties that are based upon units of measure no longer in commercial use. Some provisions are rendered inoperative by others designed for different purposes by defective phraseology. No apparent order or classification remains in the grouping of the products. Again, many commodities not enumerated in the law have assumed importance in the import trade; these necessarily are assessed either under "catch-all" clauses or under the rule

of similitude at the rates levied upon products with which they are not comparable in value, use, or competitive characteristics. As a further consequence of confused tariff classifications adequate data concerning the imports were often not available. This in turn increased the difficulties of tariff making. The refinements and specialization of modern industry, moreover, frequently require distinctions between different grades or kinds of the same commodity.

Such were the conditions that the revision and reclassification of the schedules were designed to remedy. The effected refinement and specialization in important schedules, it is hoped, will yield more information, lessen litigation, and make the law simpler and easier to administer.

The commission's report on the reclassification of agricultural products consists of two sections. Part I contains a parallel comparison of the proposed revision of the acts of 1909, 1913, and the emergency tariff. Reasons for the suggested changes are stated, and the merits of different methods of levying duties upon particular commodities are reviewed. Useful incidental information regarding commercial practices has also been added; pertinent customs decisions, likewise, and the information needed in computing differences in rates of duty upon raw materials and their derivatives. Part II is a ready statistical reference, giving recent estimates of production as well as imports and exports for a series of years for all the commodities enumerated. A complete index, an important feature of work of this character, facilitates the ready use of this material. Apart from the possible usefulness of such a report in future tariff revisions, and its informative value, it may assist students of the tariff and commerce in maintaining a continuous record.

#### SUMMARY OF PRINCIPAL SURVEYS.

Substantial progress was made during the year in the preparation of commodity surveys in the agricultural schedules. Some of the more important reports are briefly summarized below.

#### AGRICULTURAL STAPLES AND THE TARIFF.

This study, reviewed in the last annual report, was published in December, 1920. It contains an exhaustive study of the tariff problems in six principal agricultural staples: Wheat, oats, barley, flaxseed, hay, and potatoes. These crops take up nearly half of the tilled area of the United States. Consideration is also given to the principal manufactured products: Wheat flour, oatmeal, malt, linseed oil, and oilcake.

#### THE WHEAT AND FLOUR TRADE.

A report published under this title reviews developments in the wheat and flour industry during the period of free trade which followed the relinquishment of war control. Special attention is given to the demand for spring wheat and to the transportation situation along the Great Lakes, for these lie at the root of the Canadian shipments to the United States.

## BEEF AND CATTLE.

A preliminary report upon the beef and cattle industry has been completed. At least half of the productive agricultural area of the United States is devoted to cattle, if range and pasture be added to the tilled area that grows feedstuffs for cattle. Perhaps no other great domestic industry has undergone so striking a transformation in its relation to the tariff. Until 1907 the United States was the dominant factor in the world's export trade; by 1914 it had become a beef importing country. The World War caused a reaction, but in 1920 and 1921 the import balance reappeared. Imports are in great bulk in the form of live cattle. The report discusses in some detail the causes of the decline of the industry, the possible increase in our domestic production, the conditions of foreign competition, and the character of the tariff problem.

## HIDES AND SKINS.

The preliminary report upon hides and skins shows that in some measure the tariff problems here are related to those of the cattle industry. Generally speaking, the number of cattle throughout the world has failed to keep pace with the increase in population. In consequence, there is a tendency toward a growing shortage of raw material for the leather industries. The problem is to some extent being solved by the increasing use of substitutes and by some reduction in the consumption of hides and skins. At the present time the United States is dependent upon foreign sources for approximately 40 per cent of its requirements of cattle hides and calfskins, and for about 50 per cent of its consumption of hides and skins of all kinds. The report discusses conditions of domestic production, the international situation, the relation between hides and skins and the leather industries, and the effect of a tariff upon producers of cattle.

## EGGS AND EGG PRODUCTS.

Increasing refinements of manipulation and specialization in the baking and food industries have caused a rapid expansion in the consumption of dried and frozen whole eggs, as well as of albumen and yolk similarly preserved. Imports are almost entirely in the form of these egg products, of which China is the great source of supply. Dried egg products also come almost entirely from China. Of shell eggs, the United States exports much more than it imports. But the egg-product industries afford an outlet for millions of dozens of inferior or cracked eggs that would otherwise be wasted.

## ALMONDS, WALNUTS, PECANS, AND OTHER NUTS.

This survey treats of the conditions of production and foreign competition in the nut crops of the United States. In regard to almonds and walnuts certain tariff problems arise which are in general similar to those of some other products of California horticulture. In the trade in almonds and walnuts there are two distinct branches—nuts in the shell and the nut meats. It is in the latter that the pres-

sure of foreign competition is chiefly felt. Some of the richest land in California is devoted to walnut culture, but the almond industry is not in so strong a position as the walnut, if relative value of lands be taken as an indication of the status of the industries.

#### MACARONI AND OTHER ALIMENTARY PASTES.

Formerly a large part of our supply of "alimentary pastes" came from Italy, although the United States produces a surplus of durum wheat, especially prized for such pastes. During the war the domestic industry rapidly expanded and replaced the Italian product, which war conditions had eliminated from American markets. Italian macaroni, however, commands a price premium and has a well-established demand, particularly among the foreign residents of the United States, who are the largest consumers. Domestic producers fear that when normal conditions are restored the Italian pastes will regain their former market. Imports during the past two years have been relatively small.

#### SARDINES, TUNA, AND ANCHOVIES.

Another survey treats of the tariff problems in a group of fish classed in the tariff as "fish packed in oil, or in oil and other substances." There is no domestic commercial production of anchovies; and the imports of tuna, consisting of fish packed in olive oil, are much less than exports. Foreign competition chiefly affects the sardine industry. This industry centers in Maine and in California. The Maine canneries pack the young of the sea herring, caught in Canadian waters. Because of the character of this raw material, as well as the large-scale methods of production, the Maine product is inferior to the carefully prepared European sardine. In France, Spain, and Portugal the pilchard is canned, and in Norway the sprat or bristling. The less important but rapidly expanding California pack utilizes the pilchard, a better flavored fish and one more comparable to that packed in Europe.

#### APPLES.

A report has been published upon the trade in green or ripe apples, as well as in apples dried or evaporated and canned. In prepared apples there is virtually no tariff problem, but some competition in green or ripe apples prevails between the Pacific Northwest and British Columbia. Both countries export largely to England and ship some quantities to each other.

#### SCHEDULE I: COTTON MANUFACTURES.

Reports published during the past year include Countable Cotton Cloths, Cotton Cloths Provided for *Eo Nomine*, Cotton Knit Goods, Cotton Wearing Apparel, and the Japanese Cotton Industry and Trade: Recent Developments and Future Outlook.

#### COUNTABLE COTTON CLOTHS.

Cotton cloths, with the exception of a few provided for *eo nomine*, are dutiable in the tariff under progressive rates. To determine the rate applicable to a given cloth it is necessary to count the number of

threads to the square inch. The term "countable cotton cloths" therefore distinguishes them, on the one hand, from the *eo nomine* cloths whose threads do not have to be counted in ascertaining the duty, and, on the other, from articles made of cotton cloth.

This study, of 162 pages, was specially prepared for the use of the Committee on Ways and Means in their revision of the tariff. After showing in complete detail the character of cotton cloths imported, it contrasts previous systems of adjusting duties, and makes various recommendations. Most of these recommendations were adopted by the committee and incorporated in H. R. 7456.

In levying progressive rates of duty on cotton cloth it is necessary to set up some standard on which to base the progression. Under preceding acts experience with double standards, such as the thread count and weight, and triple standards, such as the thread count, weight, and value, has demonstrated the advisability of using the single standard of the official average yarn count derived by simple arithmetic from the thread count and weight. Any standard that is adopted must be more or less arbitrary, because of the many types of cotton cloth, but as variations in production costs conform closely to variations in average yarn count, progressive rates of duty based upon the average yarn count furnish the most scientific and equitable standard that can be devised; and it has the further merit of being easy of administration. The main objection to the principle as applied under the act of 1913 is that the rates of duty are stepped up, by  $2\frac{1}{2}$  or 5 per cent, from one group to another, which in the case of cloths falling near the dividing line causes the *ad valorem* duties to vary too widely between cloths that are almost identical. The use of individual count progression instead of group progression would adjust such inequalities.

Under previous acts different standards have been used, and cotton cloth duties have usually been stated in terms of cents per square yard. The commission recommends the substitution of cents per pound which would be easy to apply and which would facilitate the correct adjustment of duties to values. In whatever terms stated, prices on cotton cloth are primarily based on the pound, since both raw cotton and cotton yarn are sold by the pound. Yarns and cloths are so closely related that progressive rates of duty on the one should be adjusted with regard to the other; this is difficult unless a common base is used and the only one possible is the pound.

Over 90 per cent of the domestic cotton yarns and of cloths made therefrom do not exceed No. 40 yarn count; this marks the ordinary ring-spinning limit of short-staple cotton of not over  $1\frac{1}{16}$  inches in length. For cotton cloth, as for cotton yarn, the commission recommends that there be one rate of progression on cloths up to No. 40 average yarn count, and that another and steeper rate of progression be adopted for cloths above No. 40 and up to about No. 100, above which the rate should be stationary. The sector of active competition between imported and domestic cloths is between No. 40 and No. 100 average yarn count; above No. 100 average yarn count the cloths imported are practically noncompetitive owing to the slight extent to which American manufacturers produce fabrics of such fineness.

Other recommendations include one to abolish any differential on mercerization owing to the fact that cloth is so processed cheaper in this country than abroad.

## COTTON CLOTHS PROVIDED FOR EO. NOMINE.

This survey, also specially prepared for the use of the Committee on Ways and Means, includes careful studies of (a) cloths of cotton or other vegetable fiber and silk; (b) tracing cloth; (c) cotton cloths filled or coated, all oilcloths (except silk oilcloths and oilcloths for floors), and cotton window hollands; (d) waterproof cloth, of cotton or other vegetable fiber; (e) cotton pile fabrics and manufactures thereof; (f) tapestries and other Jacquard figured upholstery goods; (g) cotton table damask and manufactures thereof.

Each of the above studies, in addition to statistical and other data as to the scope of the domestic industry, import and export trade, and revenue derived under various acts, includes recommendations as to tariff phrasing and arrangements.

## STUDY OF 100 IMPORTED COTTON CLOTHS.

After consultation with customs examiners, importers, and manufacturers the commission's representative selected 100 samples of cotton cloths as typical of the import trade. For each of these there were obtained full particulars as to width, weight, construction, yarns, and finish. Normal invoice prices were obtained as of October 1, 1913, and peak invoice prices as of May 1, 1920. These were tabulated and the rates of duty applicable under the acts of 1909 and 1913 were figured out for both normal and peak prices.

For about 50 of these imported cloths there were later obtained invoice prices and the wholesale prices on the American market about July 1, 1921. Wholesale selling prices of comparable and competitive domestic cloths were secured as of the same date. Analysis of these data shows that imported cotton cloths do not as a rule undersell the domestic but that imports consist almost entirely of fabrics desired because of special quality, finish, or design, and that these are sold on the domestic market at higher prices than those of the nearest comparable domestic fabrics.

## RAW COTTON.

A brief report on raw cotton was prepared by the commission and printed by the Committee on Ways and Means. A more extensive survey, containing facts as to the nature of our import and export trade in cotton, which might be useful in the consideration of possible duties on imported cotton of certain types, is now almost ready for the printer.

## COTTON KNIT GOODS.

The survey on cotton knit goods includes a study of the hosiery industry, of the cotton-glove industry, and of all other cotton knit wearing apparel.

When this survey was published the census figures for 1919 were not available, but indications are that there has been an expansion in the cotton hosiery industry since 1914, although the preliminary statistics issued by the Bureau of the Census for 1919 represent a decline in production in that year as compared with 1914. The most

striking feature of this industry during the six years 1914-1920 is the phenomenal growth of the export trade. Little hosiery of American manufacture found its way into foreign markets prior to the war, but in 1918, the first year for which they were recorded, exports of cotton hosiery alone amounted to over five and one-half million dozen pairs and by 1920 (fiscal year) this trade has reached over 12,000,000 dozen pairs. Besides this exceptional expansion in the foreign trade the domestic industry was called upon to replace some two to five million dozen pairs formerly imported, a total market for fourteen to seventeen million pairs more than had been previously required.

The consumption of cotton hosiery in the United States may have been somewhat decreased because of the extensive use of artificial-silk hose (quantities of which have also been exported) and of real silk. The extremely high prices for cotton caused silk hosiery to become more popular.

Prior to the war the hosiery industry in the United States was more largely seamless than full fashioned, because the use of circular machines involved less expenditure of capital, lower labor costs, and greater production. The cessation of imports from Germany, which almost entirely supplied the full-fashioned cotton hosiery, and the greater demand for full-fashioned goods stimulated this branch of the industry to an activity seemingly limited only by the ability of machine builders to deliver the equipment. The newly developed export trade furnished an outlet for any surplus production of seamless hosiery.

Although the hosiery industry has felt the world-wide depression, it has probably been less affected than other branches of the textile industry. The downward trend in prices and the scarcity of silk goods because of the long-continued strike have stimulated interest in cotton hosiery.

Exports of cotton hosiery have assumed important proportions, in 1920 being more than double the largest quantity imported in any one prewar year. But whether or not the American hosiery manufacturer can maintain an export trade when other manufacturing countries reenter the field is dependent upon conditions which are not peculiar to this industry. It is probable that they can hold the domestic market even against a revival of German competition. The question seems to resolve itself into domestic competition in the domestic market and foreign competition in foreign markets. The tariff problem is overshadowed by the labor problem and the problems of trade facilities—transportation, credit, exchange.

The study of the cotton-glove industry, included in this survey, is a reprint, brought up to date, of the data published in the Second Annual Report of the Tariff Commission, 1918. Import statistics tell a very interesting story of this industry. Prewar imports averaged about \$2,000,000 annually, approximately 90 per cent of which consisted of sueded gloves from Germany. Recent statistics show that the negligible imports of war years were practically all from Japan. These were cheap lisle gloves not competitive with the sueded which were being supplied by domestic manufacturers. Shipments of sueded gloves from Germany began to arrive in 1919, and in 1920 formed 16 per cent of the total imports. Although the quantity received from Germany is but a minor part of the domestic

consumption, the facility with which this trade has been resumed shows there is a ready market for the German product.

There is even less of a tariff problem in the cotton knit-underwear industry than in the hosiery industry. Imports amount to only about one-half of 1 per cent of the domestic production. They are, however, almost entirely one grade of goods, those of extremely fine quality, and therefore offer competition to a definite portion of the American trade. Of late years some cheap Japanese goods have been sold in the American market, but their poor cut, workmanship, and general inferiority preclude them as serious competitors.

The woven goods underwear industry has afforded more serious competition to the knit-underwear industry than have goods of foreign manufacture.

#### COTTON WEARING APPAREL.

Unornamented cotton wearing apparel under the headings (*a*) Handkerchiefs, (*b*) Ready-made clothing and articles n. s. p. f., (*c*) Shirt collars and cuffs, and (*d*) Corsets is the subject of this survey.

Plain cotton handkerchiefs form by far the largest portion of the handkerchief trade in the United States, constituting probably three-fourths of the total domestic production and amounting to millions of dollars annually. The industry, for the most part, is conducted by large, well-organized concerns engaged exclusively in the manufacture of handkerchiefs, but a part of the output comes from establishments primarily concerned with other lines. The ratio of imports to domestic production is very small, according to estimates, amounting to only 5 per cent in 1920, when imports were unusual. The increase was due to certain immediate factors rather than to any far-reaching changes in the trade. Chief among these were price fluctuations, which stimulated buying, difference in exchange, and scarcity of linen. The United Kingdom, holding supremacy in fine cotton cloth, is the most important exporter of plain cotton handkerchiefs. Switzerland sends a substantial supply of handkerchiefs to the United States annually, but these are usually embroidered.

Because of the many ramifications of the wearing-apparel industry and the variable conditions of manufacture, no statistics of output are available for ready-made clothing and unspecified articles. In all lines of clothing manufacture, however, the American producer seems adequately prepared to maintain the domestic market. As a result no doubt of the increased purchasing power of the American dollar abroad, imports in 1920 reached \$8,065,722—much above the average—but in the same year exports were \$19,648,303.

There has been considerable agitation concerning the imminence of foreign competition in the shirt collar and cuff industry. This fear is hardly well grounded, as the domestic production in 1914 was valued at \$20,423,124, while imports in that year were only \$5,619. Although they had increased to \$42,537 in 1920 they scarcely imperiled the American industry.

Imports of plain-cotton corsets are insignificant. The domestic industry, while in a highly competitive state as a whole, hardly admits of any competition from abroad. It has been long established and supplies all domestic requirements with articles of the

latest accepted style and of better workmanship than are those produced elsewhere.

SCHEDULE J: FLAX, HEMP, JUTE, AND MANUFACTURES OF.

JUTE AND ITS MANUFACTURES.

A number of factors combined make the subject of jute cloths of unusual interest in the tariff hearings held by the Committee on Ways and Means. Among these were (1) the erection of a bagging mill in India by each of the two domestic companies, which together supply all but a small part of the new jute bagging for covering raw cotton consumed in the United States, and the shipment abroad by these companies of part of the bagging machinery formerly operated in the United States; (2) the beginning of a domestic industry manufacturing paddings of jute or flax, principally of all jute, for use as interlinings in coats; (3) the contemplated expansion of the Indian-jute industry at the close of the war, and the possibility of India in the near future expanding the volume of her jute-yarn shipments, in which line she has never been conspicuous hitherto, because the demand for burlap and sacking bags has been so great as to leave her little surplus yarn for export.

The commission's report on Jute Cloths describes the domestic and international trade in jute bagging for covering cotton, in plain burlap, brattice cloth, paddings or interlinings composed in whole or in part of jute, and in jute webbings. Special attention is paid to the growth and dominant position of India in the jute industry, and to the advantages which she possesses for the manufacture of jute cloths, especially in labor costs, as compared with those of American mills. Three charts are included showing (1) the production and export, 1890-1920, of raw jute from British India, which possesses a monopoly of the raw material; (2) the number of jute spindles and looms in India, 1890-1919; and (3) the prices of burlap on January 1 and July 1, 1890-1920, at the time of export from India.

The report is supplemented by a survey on jute yarns describing the domestic production and the relation of imports to consumption. Besides these studies, there is now available a survey on raw jute, which forms one of the sections of a report on Vegetable Fibers Other than Cotton, to be printed shortly. The surveys on raw jute, jute yarns, jute cloths, together with the report on Bags of Jute or Cotton, printed last year, complete the commission's present study of jute and its manufactures.

The survey on jute yarn is one of four surveys making up a pamphlet which deals with jute and linen yarn, linen thread, and cables and cordage. This report is now practically ready for the printer. Besides information from official and trade sources, it contains cost statements and other data obtained from the trade while H. R. 7456 was being drafted.

FLOOR COVERINGS OTHER THAN WOOL.

This report describes the floor coverings enumerated in paragraphs 272, 273, 276, 298, 299, 302, 303, 323, 332, 368, and 371 of the act of 1913 relating to floor coverings made of grass, straw, "fiber"

(paper) and wool fiber, jute, flax, hemp, cotton, and cocoa fiber (coir). The report also includes some data on linoleum and floor oilcloth. Floor coverings made of grass and those made of wool and paper are treated separately in chapters 1 to 4. Chapter 5 contains a brief discussion, together with statistics, on floor coverings of jute or other vegetable fibers, cotton, and cocoa fiber; also on linoleum and floor oilcloth. In order that the report might be available during the tariff hearings held by the Committee on Ways and Means, it was decided to shorten the treatment given to the products included in chapter 5, although detailed information concerning all but linoleum had been secured. Subsequently a canvass of the linoleum industry was made. A revision of the entire report, including a considerable amplification of the portions now covered by chapter 5, is contemplated.

#### ARTICLES OF FLAX, HEMP, OR RAMIE.

Considerable data have been collected for a report on fabrics and articles made from flax, hemp, or ramie. The data in hand relate to constructions and invoice and domestic selling prices of a number of representative imported fabrics and articles; the types, constructions, and prices of linen, and union fabrics and articles made in the United States; and wages paid to American flax operatives. The question of the suitability of American flax for manufacture into cloth and attempts made to use it by domestic mills will be discussed at length.

#### VEGETABLE FIBERS OTHER THAN COTTON.

In the near future it is hoped to complete this survey, which is now finished with the exception of a few minor fibers. Sections of it dealing with the following fibers are now complete: Flax, hemp, henequen, jute, kapoc, manila, and sisal.

#### SCHEDULE K: WOOL AND ITS MANUFACTURES.

Reports published during the past year include The Wool-Growing Industry, Carpets and Rugs of Wool, and Wool Knit Goods. Three others, Tops, Roving, and Yarns of Wool, Blankets and Flannels of Wool, and Wool Wastes and Waste Materials, have been revised and are about ready for the printer.

#### THE WOOL-GROWING INDUSTRY.

The Tariff Commission completed and published its study of conditions in wool production throughout the world. This report brings up to date the similar study made by the United States Tariff Board in 1910-11, and published in 1912.

The present report on the wool-growing industry is a detailed analysis of permanent and temporary conditions affecting domestic and world production. Particular attention is given to the methods of governmental control at home and abroad during the war years. A result of such control was the large effective surplus of all wools at the close of hostilities. This surplus has clogged trade channels

for two years; it has assisted in forcing a decline of over 50 per cent in wool prices. In fact, from midsummer of 1920 to the spring of 1921, the existence of this supply, in connection with financial stringency, cancellation of orders, and refusal of consumers to pay going prices, virtually destroyed the market for much of the 1920 domestic clip. A recent diminution of this supply, which because of lessened demand has become a continuing surplus, now coincides with rising prices and increasing demand. The report further presents fairly representative domestic costs of production during the high-cost years, and an analysis of methods of production, particularly with reference to the development of existing methods in competition with other farm and range enterprises. It also discusses the land laws and their bearing on prevailing systems of management in the range States. The relation of sheep and wool to other production in the farm States, and the varying regional aspects of sheep production in their relation to other enterprises, likewise are presented in some detail.

In addition, detailed analyses of the routine and the problems concerned with domestic sheep and wool marketing are given. These have an indirect bearing on the tariff problem and in common with other phases of the sheep and wool situation they are subjected to fairly close scrutiny.

Foreign costs of some suggestive value are given and foreign production methods are discussed because of their bearing on past and probable future competition from foreign wool and mutton growers. With the exception of data for Argentina, foreign costs were furnished primarily by consuls and others stationed abroad. The results of a special investigation in Argentina, which also included costs in beef-cattle production, will be presented in a supplementary report now in preparation. This also will contain other data, bearing on the wool situation, which were collected subsequent to publication of the report on the wool-growing industry.

#### CARPETS AND RUGS OF WOOL.

This survey shows the varieties and character of materials employed, the scope of the domestic industry, the status of manufacture abroad and the nature of our imports, and details of domestic costs of production. With these data as a basis it makes recommendations as to tariff classification and phraseology.

Wool is the most important raw material used by the wool carpet industry, but large amounts of cotton, jute, flax, and paper, and some silk and other fibers are also consumed. The wools required must be of superior strength of fiber, long, lustrous, and straight, and because of the use to which they are put, they must be cheap. As wools raised in the United States do not meet these requirements, all carpet wools are imported. China, the United Kingdom, Russia, Turkey, Argentina, and Chile are the main sources of imports.

There are essentially but four distinct types of carpeting: (a) knotted pile, such as the oriental hand-made rugs, and imitation knotted pile, such as the Axminster, the chenille Axminster, and the Smyrna; (b) warp-pile carpets, such as the Brussels and the Brussels tapestry, both of which have a loop pile, the Wilton and the

velvet, both of which have a cut pile; (c) single or multi-cloth carpets, such as the ingrain; and (d) felt carpets, which are of slight importance. The hand-made rugs and the chenille Axminster rugs may be distinguished from the others as distinctively luxury articles.

The United States is the largest producer and consumer of wool carpets and rugs. The output in square yards is however, steadily declining, being 82,670,843 in 1904, 81,218,881 in 1909, 66,340,274 in 1914, and 51,881,000, in 1919. The decline in the domestic production seems to be due largely to the growing preference for hardwood floors with a few rugs thereon instead of the old style floors completely covered with carpeting. The production of ingrain carpeting, which constituted over half of the total in 1899, has declined to less than 4 per cent of the total, and the trend is very marked toward an increasingly large proportion of cut-pile rugs, with roll carpeting and loop piles less and less in favor. The luxurious type of rug, such as the plush-pile fabric is coming into more general use, and it is to be noted that the value per square yard of the domestic output increases at every census. Another factor in the decline in the demand for wool carpets and rugs is the competition of comparatively new classes of floor coverings, especially grass and paper rugs, linoleum, and floor coverings made on a paper-felt base.

The main classes of domestic carpets and rugs of wool now produced in the United States are Axminster, tapestry, velvet, wool and paper, and Wilton in the order stated. Imports are normally small, and with the exception of a small amount of machine-made rugs, particularly chenille Axminsters and high-grade Wiltons, consist almost entirely of oriental hand-made rugs, which are not directly competitive. The main sources of such imports are Turkey, Persia, China, and the United Kingdom.

The production of plush-pile rugs demands wider looms and carries with it higher first costs of mill and machinery. The tendency is to concentrate the manufacture in fewer hands. The industry is carried on mainly in Pennsylvania, New York, and Massachusetts.

Data covering cost facts were obtained from 39 companies by means of a questionnaire and through examination, by representatives of the commission, of the books of certain establishments. This is the first detailed cost investigation of the carpet industry ever made, and although it was a difficult task because of the wide variation in products and the lack of any uniform system of keeping records, much valuable material was obtained. Similar cost data were not available from abroad but comparable statistics of wages and prices were obtained from the United Kingdom.

The revised classification of wool carpets and rugs, which was drawn up by the commission with the assistance of the trade, was adopted by the Committee on Ways and Means and incorporated in H. R. 7456. The main features of this are a clear demarcation between luxury goods, such as oriental rugs and imitations thereof, together with chenille Axminster, and staple goods such as the ordinary machine-made products; the imposition of the same rates on roll goods and on rugs; and the condensation of tariff provisions on wool carpets and rugs into fewer paragraphs.

## WOOL KNIT GOODS.

This survey treats wool knit goods in the order in which they are enumerated in the tariff act of 1913, knit fabrics, hosiery, gloves and mittens, and knit articles not specially provided for.

Although knit fabrics possess characteristics which make them superior for many purposes to woven fabrics, they have only in recent years been developed with sufficient inelasticity to be competitive with woven cloths. This has been possible largely because of the warp knitting machine. The production of such knit fabric is not as yet definitely established in the United States as a distinct branch of the knit-goods industry. Most frequently wool fabrics are made by small concerns which make other wool goods. Imports are not now large, but may well increase when commerce in general moves more regularly.

Wool hosiery has been very popular during the last few years, but in general the demand for it in the United States is less stable than for cotton or silk; consequently there is a greater element of risk in its manufacture, a risk which does not bear equally upon the foreign manufacturer, as north European countries afford a constant market. Great Britain, with the advantage of a wide market afforded by a large home demand and colonial preferential tariffs, is the principal foreign producer. Although England furnishes high-grade and much-advertised wool hosiery to the American market, the quantity is a very small part of the total consumption. The output of domestic mills averages about 5,000,000 dozen pairs annually, and imports recorded since 1914 have not equaled one-half million dozen pairs in any year.

No separate statistics are recorded for the production of wool gloves and mittens. They are usually manufactured in conjunction with other wool knit articles, frequently in small establishments operating less than a dozen machines. Some are made by very large concerns which manufacture wool outerwear. Imports have been very irregular, never approximating the same quantity or value in two consecutive years. They varied from 13,685 dozen pairs in 1917 to 204,554 dozen pairs in 1918.

Wool-knitted articles, not otherwise mentioned, are made up of underwear and outerwear, which comprise sweaters, headwear, bathing suits, leggings, and many other fancy knit articles. The wool underwear industry in the United States is a large, well organized, modernly equipped, heavily capitalized industry. According to the preliminary census figures for 1919, production has approximately doubled since 1914. Import statistics indicate that there is no foreign competition. The outerwear industry has made great advances in the last few years. The organization is entirely different from that of the underwear industry. The variety of product and the constant demand for novelty make standardization difficult. As a consequence the bulk of the output is by very small establishments, although one or two are capitalized at a million dollars or more. This is a branch of the industry where demand is constantly increasing. Although imports are at present small, there is much more likelihood of increase in this line than in wool underwear, as several European countries are developing this trade.

## SCHEDULE L: SILK AND SILK GOODS.

Judged by the increase of raw silk imports, the production of silk goods has, in the last 30 years, increased more than fivefold; in value, it has increased even more rapidly. So great indeed has been the expansion of domestic manufacture that it now exceeds in quantity of output the combined manufacture of all European countries. Concomitant with this development, there has occurred a greatly increased consumption of silk goods by the masses. Silks are no longer merely a luxury of the more or less well to do; they are now in general consumption by all except the very poor. The argument for taxing silk imports as luxuries is, therefore, not so conclusive as it was formerly; especially is this true since the bulk of manufactured silk imports consists at present of low and medium grade goods from Japan instead of, as in the past, high-grade goods from Europe. This change in nature and source of imports, together with the increase in variety of domestic production—especially the embarking during the war upon the manufacture of high-grade fancies theretofore imported from Europe—has created many new tariff problems. These problems have caused the commission to make an intensive study of the international competitive position of the domestic silk manufacturing industry. To this end, domestic and foreign cost, wage, price, and other data have been procured for various branches of silk manufacture.

## SPUN SILK AND THROWN SILK.

Preliminary reports on spun silk and thrown silk have been published as a part of a group of surveys printed for the use of the Committee on Ways and Means under the designation Silk, Silk Yarns, and Silk Pile Fabrics. They embody the most important data obtained in the special investigations of those two yarn producing branches of silk manufacture. In each case, imports and domestic production are analyzed and compared, and figures are presented as to domestic costs and as to domestic and foreign prices on specific yarns. For spun silk, comparison is also made of domestic and foreign wages; and for thrown silk, of domestic and foreign commission throwing rates. The other surveys included in this publication relate to raw silk, silk waste, partially manufactured silk, sewing silk, pile fabrics other than hatters' plush, and hatters' plush.

## THE BROAD SILK INDUSTRY AND THE TARIFF.

The purpose of this report now in course of preparation is to show clearly the position of the domestic industry in relation to the world manufacture of and commerce in silk cloths. When completed for use in connection with tariff revision, it is planned to revise and enlarge this and other preliminary reports and to incorporate them into a complete report upon the whole silk industry.

Introductory to the report on the broad silk industry, there will be the necessary definitions and descriptions, and a summary in which will be briefly outlined all conclusions and recommendations. Following this will be a brief historical background tracing and account-

ing for the growth of the domestic industry from 1860 until the present time. There will then be given a description of the domestic industry as to the character and source of materials, equipment and methods of production as compared with those used in other industries and in other countries, labor conditions, organization, and the amount and general character of domestic production. Comparisons will be made with the silk-weaving industries of other countries. The broad silk industries of the more important competing foreign countries will be given separate treatment with discussion as to the quantity and value of production, sources of materials, geographic distribution, organization, and the amount of exports and imports; the differences between cloth construction here and abroad, and imports will be analyzed to determine to what extent they are competitive; domestic costs, wages, and prices will be shown.

#### RIBBONS AND SMALL WARES OF SILK.

A study of silk ribbon manufacture shows that although this industry is third in size of divisions of silk manufacture it is subject to a much more fluctuating demand. It has therefore been localized to a greater extent than the broad silk industry because difficulty in maintaining mill organization makes its situation in large silk centers where skilled weavers are available more or less necessary. There are certain definite characteristics which distinguish the industry in this country from that in Europe. American-made ribbons are usually of standard quality and width, whereas imports are principally novelty ribbons or those so elaborately figured that they can not be produced profitably in this country. Conditions of manufacture tend to preserve this line of cleavage between the domestic and the foreign product. The high-speed multiple-shuttle ribbon loom has been perfected in the United States, and, almost automatic, producing in maximum quantities, it has been found well adapted to the needs of the American industry. Lower wage costs in foreign countries make possible a larger introduction of the labor element and permit a much broader variation in design and weave.

From a tariff point of view hat bands are about the only item of small wares to which much interest attaches. There was considerable competition from foreign sources prior to the war. Most imported hat bands came from Barmen, Elberfeld, and Crefeld, Germany, with some from St. Etienne, France. Naturally, therefore, imports were negligible during war years and the domestic manufacturer had the entire market. Statistics for the fiscal year 1921 indicate that German manufacturers intend to reassert themselves in this line. Other small wares are imported in negligible quantities, but shipments (largely cords and tassels) from China and Japan have increased.

#### SILK WEARING APPAREL.

Kindred branches of the clothing trades in silk, cotton, and wool are so intimately connected that statistics of production according to material are not available. A large part of the data for the survey on silk wearing apparel was obtained by field work which, through

contact with the trade, established certain general facts. The industry in this country is entirely independent except for style suggestions and that only because Paris is the acknowledged arbiter of fashion. American manufacturers import French dresses to be used as models and are therefore less interested in a tariff on wearing apparel than they are in the clause of the tariff act which permits the free importation of models in bond under provision that they be reexported within six months. A large part of the dutiable imports are Japanese goods, particularly kimonos. France, however, is the most important source of imports.

As in the cotton clothing industry, the export trade in silk wearing apparel has been developed, though to a less degree. In 1918 exports of silk garments were valued at \$2,556,166 and in 1920 they were \$10,016,045.

#### SILK KNIT GOODS.

The silk knit-goods industry, with a production amounting to \$234,-927,000 in 1919, which is almost a fivefold increase over 1914, is second to broad silks as a branch of the silk industry. The momentum gained during the war apparently has not been lost in the subsequent general depression, for the silk trade reports that notwithstanding the long strike in the full-fashioned hosiery mills, throwsters were kept busier on hosiery tram and knitting silks than on any other kinds.

There are four more or less distinct branches of the silk knit-goods industry according to articles produced, but according to materials used they are frequently not differentiated from cotton and wool. These are full-fashioned hosiery, seamless hosiery, glove silk (essentially a silk industry), and outerwear.

Hosiery still forms the largest part of the silk knit-goods industry. There are no separate statistics of the production of seamless and full-fashioned hosiery, but it is safe to say that usually the production of full-fashioned silk far exceeds that of seamless. If, as has been the case this year because of the strike, there is a scarcity of full-fashioned silk hosiery, or if the price of cotton is high, more circular machines will be turned to the production of seamless silk hosiery. The glove-silk industry has been the result of the development of the warp-knitting machines which produce a fabric, either plain or in fancy effects, so fine that the loops are almost imperceptible. This material is used for gloves, for underwear, and for stockings cut and sewed to shape. Besides the familiar jerseys and tricollete a great variety of knitted silks for dress goods has been put upon the market. The outerwear industry has increased in greater proportion during the five years between censuses than any other branch of the silk knit-goods industry. It is probable, however, that the figures include a large value for artificial silk which is not separately stated.

Imports of silk knit goods are very small and, while not recorded by articles, were found on investigation to be largely finer gauge hosiery than is made in this country and some articles of outerwear. There are occasional shipments of ribbed-silk underwear, but the glove-silk underwear is not imported.

## SCHEDULE M: PAPER AND BOOKS.

Surveys have been printed on all the items mentioned in Schedule M and related articles in the free list, except those relating to books and other printed matter.

The commission was called upon for assistance in drafting the new tariff act by the Subcommittee on Paper and Books of the Committee on Ways and Means.

One of the interesting developments affecting the tariff situation is the increase during the last year in imports of paper from Germany. This has led to agitation on the part of American paper manufacturers not only for materially increasing the duties in the forthcoming tariff act but for invoking the provisions of the anti-dumping clause of the emergency tariff act. At the behest of several trade associations, the Treasury Department has undertaken an investigation of the comparative internal and export prices of wood pulp, newsprint paper, and one or two other kinds of paper in Germany and Scandinavian countries. If it can be established that the export prices of wood pulp and paper in these countries are lower than the internal prices, the data secured will presumably be used by the trade as a basis for demanding penalty duties on the kinds of pulp or paper in question.

However, information received by cable through the State Department in August disclosed the fact that at that time the export price of newsprint in dollars was about twice its internal price in dollars, the reason for the disparity being the difference between the internal and external purchasing power of the mark. This factor makes the provisions of the antidumping clause, as far as German products are concerned, very difficult of application.

The first effects of the severe business depression beginning in the latter part of 1920 were felt by different divisions of the paper industry at different times. Probably paper board was the first and newsprint the last to suffer. Newsprint paper stood out prominently in the whole industrial world as one of the commodities least involved in the general depression. The monthly output of newsprint paper remained up to February, 1921, at the high level established during the period of acute scarcity in 1920. Prices of the contract newsprint were not lowered until the spring of 1921, at which time the transition to lower prices was accomplished without nearly as many shutdowns and other maladjustments of supply to demand as were experienced in other branches of the paper industry and in business at large. Not only was the depression felt much later in the newsprint industry, but newsprint production in the fall of 1921 had already, after a temporary decline in the late spring, reached approximately its 1919 level.

Special tariff problems are involved in certain kinds of paper, such as cigarette and unsensitized photographic paper, the manufacture of which was developed during the war largely as the result of the cutting off of imports from Europe and which are now seriously threatened by importations at prices lower than the domestic cost of production.

## SCHEDULE N: SUNDRIES.

The articles enumerated in Schedule N and related articles in other schedules and in the free list of the tariff act of 1913 are treated in more than 50 separate reports or studies. Among the reports completed and printed during the past year were those on asbestos, blasting caps, cartridges and percussion caps, fans, fireworks, furs and fur goods, fur-felt hats, gun wads, hair (both human and animal), haircloth, imitation precious stones, indurated fiberware, jewelry, and related articles, meerschaum, precious and semiprecious stones and pearls, violins, and manufactures of amber, bladders, wax, chip, grass, horn, india rubber and hard rubber, ivory, mother-of-pearl, shell, and horn.

Other reports were revised and brought up to date, so that now only paragraph 358, laces and embroideries, and paragraphs 359-365, leather, gloves, and other manufactures of leather, remain to be printed. A few articles, emery grains and emery, matting and mats of cocoa fiber or rattan, violin rosin, and hatters' plush, are made subjects of studies in connection with related articles in other schedules.

The following résumés indicate the diversity of the articles classified as sundries:

## ASBESTOS.

Although the United States is the largest consumer of asbestos in the world, it never has been and shows no promise of ever becoming an important producer of the crude product. It must therefore rely largely upon the imported article from Canada, the chief source of supply. Manufactures of asbestos, grouped according to similarity in process of manufacture, are discussed under the following headings: (1) Asbestos textiles, (2) Asbestos packings, (3) Asbestos papers and millboards, (4) Asbestos and composition pipes and coverings, and (5) Asbestos shingles, slates, wood, or lumber.

## FUR-FELT HATS.

Hatters' fur is by far the most important material entering into the manufacture of fur-felt hats. It consists of the soft underfur of the rabbit, hare, coney, nutria, or beaver. In the finished hat it becomes, through processes of manufacture, a fibrous substance which bears no resemblance to fur as generally recognized. Rabbit skins are used almost exclusively in the production of hatters' fur, and practically all of these must be imported, as the fur of the domestic rabbit does not meet commercial requirements.

The hat industry is confined largely to a few Eastern States. Style at one time was a better protection to the domestic manufacturer than the tariff. With the advent of chain stores and hat specialists, the models brought out by a few of the leading manufacturers do not regulate fashion to the extent that formerly was the case. Foreign-made hats which come in competition with the domestic product are imported from England, France, Italy, Belgium, and Germany. The machinery used in the production of hats has been largely the invention of Americans.

## FURS AND FUR GOODS.

The United States leads in the production, manufacture, and consumption of raw furs and fur goods. New York and St. Louis are now equal in importance to any fur markets of the world and are centers in the international trade in furs.

Foreign competition is felt principally in the dressing and dyeing of furs. In the past it has been generally recognized that Europeans excelled in these phases of the industry. The war, however, put manufacturers in the United States upon their own resources, and it is now asserted that American fur dyers and dressers can produce results that are unrivalled in color, sheen, suppleness, strength, and beauty.

## HAIRCLOTH.

Press cloth is entirely distinct from crinoline and hair seating; it is a heavy, thick cloth used in the oil-milling industry as a container for seed meats when being subjected to heavy pressure to express the oils. The use of human hair in making press cloth has been established in European countries for some time, but its use in the United States is a recent development. Prior to the war practically all press cloth was made of camel's hair, but with the supply of this material curtailed, camel's-hair press cloth could not be made in sufficient quantities to meet the demands of the oil-milling industry. A substitute was found in the oriental human hair, which, however, requires a different process of spinning from that employed in spinning camel's hair.

## MUSICAL INSTRUMENTS.

Very few violins were made in the United States before the war on what may be termed a commercial scale. There are about three concerns in this country, each of which produces 3,000 or more violins annually. To the average purchaser the fact that a violin is made in a foreign country adds greatly to its value. The claim of age for many foreign-made instruments gives them a decided advantage over the domestic makes. This prejudice is being overcome as a result of a greater use of American-made violins during the war, when the supply from Europe was cut off. Japan, in the last few years, has been exporting violins to the United States.

## CORK.

The chief sources of supply of cork bark are Spain and Portugal. Experiments in its culture have been conducted in this country by the Department of Agriculture, but no cork has been produced for commercial purposes. Domestic manufacturers are, therefore, compelled to import their raw material, but notwithstanding this the United States is one of the leading producers of cork articles. The domestic industry in 1919 included 62 establishments with production valued at \$16,282,000.

Cork manufacturers are of two classes, (1) those cut from the natural cork bark, chiefly bottle stoppers and disks, washers or wafers

used in metallic stoppers, and (2) products of composition cork. The latter, while a comparatively recent development, is an important branch of the industry. The composition is made from the waste, or residue, from natural cork cutting. This is ground, various degrees of fineness being used for different articles, and baked in molds. For some purposes a special glue is used as binder, but generally the natural gum or resin of the cork is sufficient binder. Insulation board is the principal product, although many other articles are made of composition.

With the exception of cork paper, practically all classes of cork products are manufactured in this country.

#### LEATHER AND ITS MANUFACTURES.

The Tariff Commission has been making an investigation of the leather and leather-goods industries and will publish a series of 20 studies of commodities and groups of commodities in this class. Conditions have been ascertained by interviews with a large number of persons in the industry and allied trades, with importers and representatives of trade associations, and by inspection of tanneries, shoe and glove factories, and other leather-goods establishments, wholesale and importing houses, tanning equipment, and shoe-machinery concerns.

The United States is the leading leather and boot and shoe manufacturing nation in the world, and our exports of those commodities attained substantial proportions even before the war, while during and immediately following the war unprecedented totals were reached. The two items, sole leather and upper leather, make up considerably more than one-half the domestic output, and the largest item of our annual exports of leather is usually glazed kid for shoe uppers, although sole and patent leather are also very important. The extensive use of machinery in shoe production, the high degree of specialization, and the large quantity production make the American boot and shoe industry distinct from that of any other country. While most American shoe manufacturers do not fear competition in the home-market, their supremacy is not so firmly established in the foreign trade. We import great quantities of hides and skins from almost all quarters of the globe, and we also utilize large amounts of domestic hides and skins. About 50 per cent of the cow-hides and calfskins used by the tanners of this country are taken off in slaughterhouses of our own country; about 40 per cent of the sheepskins are produced here; while the great quantities of goatskins used are practically all imported. Many miscellaneous skins, such as horsehide, buffalo, kangaroo, cabretta skins for shoe leather, and mocha skins for glove leather are obtained from foreign sources. It is apparent that the question of an import duty on hides and skins is vitally related to the question of duties on leather and manufactures of leather and in general to the status of the leather industry. The Tariff Commission has devoted considerable time to the study of these questions and to the consideration of proper compensatory duties, provided a duty is levied on hides and skins.

The depression in the leather business has been very acute during the past year. Leather prices dropped to very low levels, and many

tanneries and shoe factories were closed for a considerable time. During the autumn months of 1921 there has been some recovery, and at the close of the year a gradual improvement in trade conditions is noted. There was some lag in the prices of shoes over the prices of hides and leather during the "upward swing," and there has also been a similar tendency for the wholesale and retail prices of shoes to come down more slowly than the prices of materials. The strong demand for the "\$5 shoe" has had its influence, and many factories are increasing their output of the cheaper grades.

After the removal or reduction of the duty on several kinds of leather in 1913, importations increased. This was notably true in regard to patent leather and other kinds of shoe upper leather. The country from which most of the increased importation came was Germany, and the German competition was feared by American tanners more than that of any other country. During the war the Canadian leather industry developed rapidly, and importations from that source increased, the varieties which were brought in from Canada being chiefly the heavy leathers—sole, belting, and harness leather. The commission has investigated carefully to determine in what respects the industry has strengthened itself during the war and the period following.

The question of classification of leather is somewhat difficult. The methods used by the various Government and trade agencies and the classifications followed in previous tariff laws are somewhat at variance. The Tariff Commission has studied this question and has based its classification on the best information available concerning actual trade practice. The purpose for which the leather is used seems, on the whole, the best basis of classification, although for tariff purposes something may be said in favor of basing the classification upon the kind of hide or skin from which the leather is made. The difficulty with the first method is that it is often possible to use a piece of leather for any one of several purposes, while the trouble with the other method is that the same hide, treated in different ways, would come out as widely varying products. The Tan-ners' Council, to which most of the domestic leather manufacturers belong, groups its members according to the first-named method, and consequently it has been found most convenient to arrange the Tariff Commission studies under headings which closely correspond with that grouping. For convenience, cross references to the other classification have been arranged.

Leathers are commonly spoken of by the trade as either heavy or light, but their gradation in weight makes it practicable to introduce a third class, and further group (in addition to the above classification) all leathers as heavy, medium, or light. The Tariff Information Surveys have been arranged in this way for publication, and a separate group made up of the manufactures of leather. The information on leather and leather goods, which will shortly be published by the commission, will, therefore, appear under four headings.

The manufacture of patent leather was one of the branches of the industry which seemed to be seriously threatened by German competition in 1913-14, but the domestic industry has undergone a great expansion in the past few years, and in many of the new foreign

markets that have been gained patent leather has a great vogue. This class of products is now among the leading items of leather sent abroad.

Glazed kid for shoe uppers is another leading branch of the industry. The commercial utilization of chrome tanning, which came about 25 years ago, gave a great impetus to the light leather branch of the industry, and the manufacture of glazed kid forged ahead very fast. The United States leather manufacturers early took the lead in making glazed kid, and its exports of this class have been large for many years. The raw material for this kind of leather is goat and kid skin, practically all of which is imported. Domestic manufacturers have been apprehensive of a serious handicap in foreign trade if the export tax of British India, the leading source of goat and kid skins, remains in force. This is a tax of 15 per cent, two-thirds of which is remitted to purchasers in other divisions of the British Empire.

The production of glove leather increased greatly during the war on account of the cessation of imports and the development of the use of chrome tanning. A large amount of cowhide leather has been made in this country for many years for use in the manufacture of working gloves, and some sheepskin has been tanned for working gloves and the heavier varieties of dress gloves. Imported mocha and cape skins have been manufactured into dress-glove leather—in fact, the process of preparing the mocha skins was invented and developed in the United States—but the greater part of the domestic dress-glove leather has always been of the heavier kinds, i. e., for gloves for street or sport wear or for automobile gauntlets. While the new developments have fostered the manufacture of dress-glove leather, the finest qualities are still produced in France, Italy, and Germany.

Much the same kind of division is found between domestic and foreign production of gloves. In this country we manufacture the working gloves, men's dress gloves, and the heavier varieties of women's dress gloves, while the lightest and finest varieties of the last named, requiring considerable handwork, are still more largely produced in Europe than in the United States.

The harness leather and harness and saddlery industries have not developed in the past few years as have most of the other branches of the leather group. This has been due very largely to the great increase in the use of automobiles and motor trucks. During the war there was, of course, a good market for articles of this sort for military use, but since that demand ceased the conditions in the trade have been regarded as serious. There have been complaints in regard to Canadian competition in harness leather and petitions from the domestic manufacturers for an equalization of rates of duty between the two countries.

The manufacture of bookbinder's leather is another branch of the industry which has not developed of late, owing to general market conditions. The high price of leather during the past few years has led to the substitution of cloth, paper, and artificial leather for bookbinding. The methods of manufacturing leather substitutes have been improved to such an extent that it is difficult for any but an expert to distinguish the genuine from the substitute. Leather sub-

stitutes are also largely used for furniture and automobile upholstery and for automobile tops. There is, of course, competition between leather and leather substitutes, but the long run tendency is for the amount of leather manufactured to increase more slowly than the demand for leather, so that leather substitutes will probably fill an existing need and will not cause any curtailment of leather production, with the possible exceptions which have been mentioned.

The embossing of leathers, such as sheepskin and cowhide splits, has also increased to a marked degree. Fancy leathers are made by embossing morocco, levant, seal, and other grains on sheepskin, and the resulting products are considered highly satisfactory for the purposes for which they are employed.

Very little leather tanned in this country is now sold "in the rough"; some of this leather is imported from Great Britain, a light-colored leather of soft tannage. In the early days the country tanneries of the United States sold large quantities of rough leather to persons who made a business of currying and finishing, but who did no tanning; this separation of the processes is, however, no longer a trade practice. This imported leather falls within the class "grain, buff and split." There is some question as to how far it is competitive with domestic leather and how far the imports are supplemental.

### III. SUMMARY OF INVESTIGATIONS DURING THE YEAR.

#### THE FOREIGN-EXCHANGE SITUATION.

The commission has recently issued a report on the relation of depreciated exchanges to foreign trade. The subject has been studied from the point of view of the trade difficulties caused by the low exchange rates among the principal industrial nations of the world, with special reference to the trade of England, France, and Germany with the United States. The statistics on the subject are presented in three sections: (1) Those showing the discrepancy between the internal purchasing power of European moneys and external value as indicated by the rate of exchange in American money (gold); (2) the degree of adjustment to an equivalent gold basis of the prices of standard commodities entering into world trade, such as wheat, cotton, and copper; and (3) the maladjustment of wages in depreciated currency of various countries as measured by the gold equivalent. In the case of Germany the wage rates are also shown in equivalent purchasing power over commodities at wholesale and over the necessities of life as measured by the relative family budgets for a workingman's family in the United States and Germany.

Briefly stated, the conclusions drawn from the data in each of the three sections of the report are as follows: There was a great discrepancy between internal prices as measured by index numbers and the gold value of exchange for England and France during the latter part of 1919 and the calendar year 1920, but in the early part of 1921 the two values were almost identical. That is to say, paper prices in England and France have risen relative to American prices as much as the exchanges have fallen. Therefore, there was neither

advantage nor disadvantage on the average in trading with these countries so far as the exchange rates were concerned. Since May there has been a divergence again of the internal and external values of these moneys, but whether this is more than an incidental variation can not be determined at this time.

The price studies of particular commodities show that the staple articles of international trade have about the same gold price the world over, aside from transportation and similar costs. Articles of more local production and distribution than these are less adjusted to a gold basis and the prices of some articles of special design or construction, such as pottery and fine textiles, are only remotely related to a general world price—i. e., they are priced, especially in Germany, at what the traffic will bear.

The adjustment of wages to a common gold rate is even more remote than the adjustment of prices of special products of local manufacture and distribution. In normal times there are wide discrepancies in wage rates among the various countries and for that reason the amount of the present difference due to low exchanges can not be accurately measured. But this factor is important, especially in the case of Germany. On the average German wages in terms of dollars were only about one-fifth of the American rate for the same operations in the middle of 1921. This difference does not tell the whole story, however, because in the long run the real wages in each country, i. e., the equivalent in terms of commodities, is the more significant comparison. On this basis German wages are roughly half the American rate—about 25 to 30 cents per hour for male workers in terms of the cost of living as compared with 40 to 60 cents an hour for the same grade of labor in the United States.

#### THE UNEMPLOYMENT SITUATION.

Unemployment, which has been a distressing characteristic of industrial conditions throughout the world during the period covered by this report, has been the subject of Government investigations here and in other countries. Early in June the Tariff Commission, pursuant to its statutory obligation "to investigate the operation of the customs laws, including \* \* \* their effect upon the industries and labor of the country," undertook a survey of the extent and causes of unemployment in the United States, to ascertain what relation, if any, existed between imports and unemployment.

The term "unemployment" as here used is applied exclusively to persons who, being employable at some money-yielding occupation, are involuntarily and completely deprived of such gainful employment. The relation of unemployment in general to tariff changes is not definitely indicated by statistical tables of imports, but a careful analysis of import figures may show some connection between such changes and unemployment in particular industries. Numerous tables of interest to legislators and to students of industrial conditions will be embodied in the commission's report on this subject.

Among the causes of unemployment in the United States that are treated in the report are personal causes, climatic and other natural causes, industrial causes and their importance, underlying rea-

sons for lack of work, such as general business depression, seasonal demand for products, failure of individual establishments, sudden changes in industrial technique, slow movements of industrial evolution, special periods of readjustment, and excessive and improperly distributed immigration.

In connection with its investigation of unemployment the commission sent a questionnaire to labor organizations and to manufacturers. Answers were received from 50 of the 104 labor organizations affiliated with the American Federation of Labor, representing a membership of 2,700,000, which is approximately 70 per cent of the membership of the federation. These reports show that there were 1,498,979 members employed. Of the unemployed, 1,098,341 were idle because of lack of work, and 55,507 because of strikes or lockouts. Information on the comparative number employed for a term of years was received from 85 manufacturers. The compilation of their report follows:

Number of employees per month, 1912 to 1921, inclusive:

1912.....	69,756	1917.....	97,211
1913.....	73,126	1918.....	139,512
1914.....	65,082	1919.....	86,421
1915.....	73,612	1920.....	99,958
1916.....	88,708	1921.....	55,101

Average number of persons employed per month for 10-year period, 80,897.7

Number of working hours per week for each month, averaged from 1912 to 1921, inclusive:

1912.....	3,601,002	1917.....	5,316,967
1913.....	3,721,843	1918.....	5,302,851
1914.....	3,512,835	1919.....	4,671,448
1915.....	4,000,383	1920.....	4,794,568
1916.....	4,854,892	1921.....	2,686,659

Average number of working hours per week for 10-year period, 4,534.202.

#### JAPANESE COTTON INDUSTRY AND TRADE.

Japan's favorable position during the World War gave a strong impetus to her growing industrial development and to the expansion of her foreign trade. She was called upon both to supply the domestic needs for commodities formerly imported and to meet the demands of other countries, particularly those of the Orient, for goods which were not procurable from their prewar sources of supply in Europe. Her war-time development therefore took the double form of expansion of old industries and the establishment of new ones. The new developments among the major industries were most marked in the chemical and metal industries and shipbuilding; the growth in these lines served mainly for self-supply. The progress of the textile industries was largely in the nature of further expansion along old lines, with some increase in the range of products and a considerable broadening of export markets. The establishment of a large number of new branches of manufacture was especially stimulated by the temporary shutting off of exports from the Central Powers. This caused a number of countries to turn to Japan as an adaptable workshop for a variety of minor products. The war also accelerated the conversion of a number of industries

from the household to the factory stage, and it was these semi-factory industries that produced most of the newer lines of goods exported from Japan during the last few years, particularly those coming to the United States.

The high price and large profits obtainable brought a period of unprecedented prosperity. This gave rise to an exaggerated business optimism and a widespread industrial boom, culminating in the fall of 1919 in an excessive flotation of new companies and a speculative advance of prices at the very time when foreign purchases were falling off and total imports were beginning to exceed exports. The inevitable reaction, precipitated in the spring of 1920 by the governmental restriction of bank credits, brought on a financial and industrial depression. With the sharp drop in prices and the falling off of trade many speculative ventures of various sorts have been swept away, many war-established plants have shut down, and industrial activity generally has been considerably curtailed.

While the panic of 1920 in Japan has thus caused a definite recession in that country's industrial advance, the essential economic structure of the country appears sound, and certain war-time gains will probably be permanent. These gains are enlarged manufacturing capacity, acquired skill in a number of new lines, and the decided extension of foreign markets and trading outposts. A return to normal market conditions will find Japan measurably ahead of her prewar position in these respects. With unhealthy elements largely swept away, the stronger concerns in Japanese business are reported to be working back, by concerted action, largely through syndicates looking to stabilization of price and disposal of stocks abroad, and, with the definite financial assistance of the Government, toward a more stable condition of industry and trade. The strong war-time and postwar boom seems to have been definitely checked, and the prospect is that the period ahead will be one of slow consolidation, marked by an effort to hold and solidify the industrial and trade advance of the past five years.

Despite the remarkable progress of recent years, Japan can hardly be said to have reached the place of an advanced industrial nation. Among the conditions favoring her industrial progress have been a large body of docile workers with a low standard of living; geographical proximity to Asia, the source of much of her raw materials and the natural outlet for her manufactured products; a growing and subsidized merchant marine; and a native adaptability and eagerness to reproduce the industrial achievements of western nations. Add to these a Government well organized to foster and actually assisting in the industrial and commercial advancement of the nation. On the other hand, Japan has been handicapped in her industrial progress by a number of disadvantages. Among them are her relative poverty in some essential raw materials; the new and unstabilized condition of her industrial development; the lack of adequate modern machinery; and the absence of a body of skilled workers habituated to factory production. With these must be noted the still inefficient organization of many of her industries, her imitative rather than originative methods, the lack of a high standard of quality in her products, and a too ready tendency to speculate.

Japanese manufacturing finds itself in transition from the mediæval household and craftsmen stage to that of a large-scale, standardized, mechanical production under factory conditions. Many industries still lag in the household stage, and a large number of so-called factory industries are still dispersed in small shops, where improvised machinery and laborious methods are employed. There is also the frequent practice of "farming out" certain parts of the work to be done in homes and under crude conditions.<sup>1</sup> Despite the comparatively low wages and long hours which still mark Japanese industry, the advantage which Japanese manufacturers are believed to possess in labor costs is, per unit of output, in many cases very doubtful, owing to the low efficiency of the individual operative, the inadequate machinery with which he works, and the uneconomical organization and inexperienced direction of plants. Moreover, the threefold increase in wages in Japan since 1914 and the high initial cost of the plant equipment to which the new industrial ventures of the last few years have been subject constitute material handicaps, in the way of increased operating costs, that will tend to curtail Japan's former competitive advantage in lower labor costs and overhead, as compared with the older industrial countries.

The surplus production of the major industries in Japan beyond domestic needs goes to supply the adjacent nonmanufacturing markets of the Orient with factory products of an inferior sort, made after European models. They are competitive only in a small measure with the higher grades and more costly products of the western countries.

In the more advanced and more critical countries of the West Japanese factory products have found but limited markets. Japanese exports to the countries of western Europe and to the United States have been in the main of three classes: (1) Natural products or raw materials and their immediate derivatives, as raw silk, tea, vegetable oils, camphor and tungsten; (2) certain specialties distinctly Japanese or oriental in character, as kimonos, "blue-printed" or worked tablecloths, cotton crêpe, decorated pottery, Japanese fans, lacquer ware, and the like; and (3) a variety of minor manufactured products, many of them calling for considerable manual labor and produced under semifactory conditions. Exceptional among the manufactured products are the exports of certain kinds of silk piece goods and chinaware. The raw materials for these products are native and abundant in the country, and the manufacture of them is an ancient art.

Much of the largest part of the shipments from Japan to the western countries belongs to the first and second of these classes. Thus, raw silk alone made up nearly three-quarters in value of the total exports of Japan to the United States during the year 1919. Most of our imports from Japan have been noncompetitive. But during the last few years competition with American products has been felt from Japanese vegetable oils, peas and beans, certain grades of dinner ware, and a variety of minor manufactured products, such as straw mattings, knitted cotton gloves, brushes, buttons, matches, toys, and

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<sup>1</sup> This situation rendered it unusually difficult to obtain exact estimates of representative costs of production in Japan.

notions. The manufacture on a large scale of a number of these products is of recent development both in the United States and Japan, and was stimulated by the war-time curtailment of imports from Europe.

The first part of the commission's report is a general survey of the industrial situation in Japan after the war, and covers the situation up to the beginning of the subsequent economic depression. It describes the position of Japan as an industrial power with regard to labor, fuel and power, raw materials, and transportation; sketches briefly the general industrial and financial structure of the country and the effects of the war upon Japanese industrial development in the principal branches of manufacture; and presents certain comments upon the outlook for the future of Japanese industry, particularly in relation to trade with the United States and the character of the competition that may be expected in the American market.

The second part of the report consists of a more detailed study of the cotton and silk manufacturing industries of Japan. These have been of special interest to American business, as they represent two important types of industrial development in Japan. An intensive study of the two types therefore serves to illustrate the chief problem and the characteristics which mark Japanese industry generally. The study is based upon first-hand observation and inquiry, often in remote parts of Japan seldom visited by foreigners. For the cotton and silk industries the report covers the prewar status of Japan, the war-time expansion in manufacturing and extension of trade, the postwar status and problems, and the prospective trend of development in the future, particularly with regard to trade with the United States. The report includes a comparison of the Japanese and American industries and a statement of the relative conditions of production and the factors in cost, so far as direct comparison is possible.

As an appendix the report includes a careful study of the tariff policy of Japan.

#### SURVEY OF THE FOREIGN TRADE OF JAPAN.

In 1918 the commission published a survey of the foreign trade of Japan, mention of which is made in the second annual report. Owing to the rapidly changing trade conditions of the world as a result of the post-war readjustment much of the material in this report had become obsolete and consequently a new survey has been prepared and is now ready for the press. The publication of an analysis of the Japanese foreign commerce seems particularly opportune in view of the meeting of the Conference on the Limitation of Armament and the discussion of Far Eastern questions involved therein.

The foreign trade of Japan is discussed under three main heads:

(1) *Development of Japanese trade prior to the war.*—This section discusses Japan's commercial growth from 1856 to 1913, particular attention being paid to the status of the Japanese trade in the latter year, the last normal one.

(2) *Japanese trade since 1913.*—This section begins with a general survey of the trade since 1913, and is followed by a review of the commerce with the principal countries and a discussion of the

more important commodities which constitute the trade. The latter part of the section contains an analysis of the commerce based on groups of commodities following the classification in the Japanese official statistics.

(3) *Trade between Japan and the United States.*—This section includes a comprehensive study of the commerce between these two countries, a comparison of the relative value of the trade of each, recent changes, and an analysis of the trade movements of the more important commodities.

The report contains a large number of statistical tables, some of a general basic nature and others dealing with details. Some of the basic tables contain general statistics of trade over long periods of time, others show in more or less detail the trade of Japan with the various countries, and still others indicate over considerable periods of time the commercial movements of the principal commodities which constitute the major portion of Japanese trade. A considerable number of comprehensive basic tables and charts are also included in the appendix. The report outlines the outstanding features in the foreign trade of Japan, particularly during recent years. Formerly the imports of Japan rather uniformly exceeded the exports, but this condition was reversed during the war, and Japan had a "favorable" balance of trade. The post-war years, however, show a return to conditions existing prior to the outbreak of hostilities with a heavy adverse commercial balance. The growth of the Japanese commerce and the shifts occurring during the war and subsequent years are indicated both by statistics and analytical discussion. The commercial relations between Japan and her oriental neighbors, the continually increasing trade between Japan and the United States, particularly the growth of American imports, and the decrease in trade with Europe are brought out by similar methods.

#### INTERNATIONAL TARIFF RELATIONS AND COMMERCIAL TREATIES.

Section 704 of the act creating the Tariff Commission provides that—

The commission shall have power to investigate the tariff relations between the United States and foreign countries, commercial treaties, preferential provisions, and economic alliances.

Under this authorization investigations were begun in 1918 and later, both in connection with the peace conference and at the request of the Ways and Means Committee, of various subjects, including colonial tariff policies, commercial treaties, and reciprocity with Canada. These three investigations have been completed and published; the last named early in the year now under review and the other two, which have been as nearly as possible brought up to date, just prior to the convening of the Conference on the Limitation of Armament.

#### COLONIAL TARIFF POLICIES.

The introductory chapter of the report on colonial tariff policies describes the characteristics of colonial trade, summarizes and compares the colonial tariff policies of the powers, notes the existing

open-door treaties, and directs attention to the tendency toward more pronounced discriminatory regulations. This chapter has also been published separately under the title of "Introductory survey of colonial tariff policies."

Part I of the report surveys in greater detail the colonial tariff policies of France, Germany, Italy, Spain, Portugal, The Netherlands, Belgium, Great Britain (Crown Colonies and India), Japan, and the United States. These are treated separately, and in each group of colonies the description of tariff policy is preceded by a survey of the population, products, trade, government, methods of tariff making, and other relevant information bearing on colonial conditions. The United States, Japan, France, Portugal, Italy, and Spain are to-day giving their own goods substantial preferences in their colonial markets. Belgium and the Netherlands maintain the "open door" in their colonies. With very minor exceptions the "door" remained open also in the British Crown Colonies and in India until after the war, but within the past two years a distinct tendency toward differential import and export duties has shown itself in the dependent colonies. These duties at present affect perhaps no more than 5 per cent of the total trade of the Crown Colonies and India, but the comparatively rapid extension of their number and raising of their rates, coincident with the adoption of a preferential tariff policy in the United Kingdom, suggest that the Government now in power in Great Britain desires to raise special barriers against trade other than British with more than 350,000,000 people controlling over 5,000,000 square miles of territory.

Part II of the report on colonial tariff policies reviews preferential tariffs in Great Britain and the British self-governing Dominions. Canada, Australia, New Zealand, and South Africa have for some years granted to Great Britain and to some other parts of the Empire preferential tariff treatment, and in 1919 Great Britain granted preferential reductions throughout her limited tariff schedule, which has been recently enlarged by the operation of the safeguarding of industries act. The relations of Canada to the West Indies receive attention and the provisions of their trade agreements of 1912 and 1920 are given. An historical study of the development of this movement toward a preferential system has been made for each of the five Dominions and for Great Britain. The forces favoring the movement and the arguments urged for it are set forth in relation to the successive steps in the application of the policy.

#### CANADIAN RECIPROCITY.

A report on Canadian reciprocity was prepared by the commission at the request of the Committee on Ways and Means. The contemplated revision of the tariff of the Dominion of Canada lends interest to a survey of this question.

The report outlines the history of the attempts made since 1854 to secure trade reciprocity between the United States and Canada, and gives particular attention to the proposed concurrent legislation of 1911 and its defeat in Canada. It compares the effect which the agreement of 1911 would have had at the time when it was drawn up,

and after the war when there were suggestions of reviving it. The statistical analysis is based on the trade of the years 1910 and 1918, and shows that the agreement would have exempted from duty, or decreased the duty upon, American exports to Canada to the value of \$33,500,000 in 1910, and to \$126,000,000 in 1918; whereas the agreed exemptions or reductions of American duties would have benefited Canadian exports to the value of \$43,000,000 and \$31,000,000 in the two years, respectively. The change in the relative size of the figures was due chiefly to the unilateral reductions of duty by the American tariff of 1913. Under the agreement, therefore, the United States would, at any time after the passage of the tariff act of 1913 and prior to the passage of the emergency tariff act of 1921, have granted to Canada a smaller concession in effect than was expected at the time at which the agreement was made, while Canada would have granted a greater concession.

The articles which would have been especially affected in 1918 by the proposed rates were flaxseed, oats, and hay. Potatoes and wheat, though more important in the trade, were at the time admitted free into both countries. Oats and hay are both produced in much larger quantities in the United States than in Canada, though both were imported on a limited scale under the duties enforced before and after 1913—hay into the Northeastern States, and oats in years of crop shortage in the United States. The establishment of a common market for Canada and the United States, by the removal of the duties as contemplated by the reciprocity agreement, would have increased the imports and given the Canadian farmers larger returns without greatly affecting prices throughout the United States. Flaxseed is the most important article which would have been made free by the operation of the reciprocity agreement in 1918. It is essentially a frontier crop, and its production in the United States has been decreasing. Canada's surplus has not been sufficient to meet the growing American shortage, and Argentina has become the chief foreign source of supply. Free trade with Canada in flaxseed would result in little change in the American price, but would increase the price to the Canadian farmer by almost the full extent of the duty levied upon imports from other sources.

#### HANDBOOK OF COMMERCIAL TREATIES.

A digest of commercial treaties has been published by the commission under the title "Handbook of Commercial Treaties." This volume supplies, for the first time in any language, a classified summary of the stipulations contained in the commercial treaties, conventions, and tariff agreements in force among all nations. Heretofore the provisions of the commercial treaties of foreign powers have been difficult of access in this country, and in all other countries as well, except to those who are conversant with the foreign languages concerned and who reside in the national capitals and the few other cities where the texts are available.

By far the largest part of the volume consists of digests of bilateral treaties. The form of these digests shows at a glance in which treaties, and in respect to what matters, most-favored-nation treat-

ment, or national treatment, or both (as the case may be), is stipulated between different nations, reference being made in each case to the article, section, or clause of the treaty in question, so that the full text of any stipulation may be readily found whenever wanted for a special purpose. This part of the handbook is arranged on the dictionary plan, alphabetically by countries, and is therefore self-indexing to a great extent.

For multilateral conventions the chronological order has been adopted, the various countries which are parties thereto being enumerated at the beginning of each digest.

A complete chronological index to the entire work is supplied by the list of treaties incorporated in the volume, and the concluding chapter sets out the established principles of international law concerning negotiation and operation of treaties and forms of procedure relating thereto.

#### PREFERENTIAL TRANSPORTATION RATES.

Preferential transportation rates exist and, in the absence of counterbalancing circumstances, tend to neutralize the country's customs tariffs when transportation charges by rail or water, or both, on imported articles are reduced below such charges for like domestic articles. The same result may follow when in the country of export the transportation charges for exported articles are reduced below such rates for similar articles for domestic use.

An investigation was conducted by the commission to ascertain to what degree, if any, such transportation preferences obtain with relation to the trade of the United States and to develop the history and motives in the instances which might be found. The conclusions reached with respect to railway rates upon imported articles as compared with rates upon domestic products between the ports of importation and the principal destination or distributing domestic centers are as follows:

*From North Atlantic ports.*—On import traffic from North Atlantic ports there are now no special rail import rates in existence, the regular domestic rates being applied for import traffic. The two exceptions to this rule are:

(1) From Portland, Me., via the Grand Trunk, special class and commodity rates are quoted on imports.

(2) From Norfolk, Va., certain commodities receive special import rates on shipments to interior southern points.

As in the case of export rates, eastern Canadian ports are permitted special import class and commodity rates by rail on shipments to central western points.

*From South Atlantic ports.*—From the South Atlantic ports special rail import rates are quoted on some commodities when consigned to interior southern points. On shipments to specified locations in the Central West practically all the rail import rates on the South Atlantic seaboard apply from Savannah and are limited according to the foreign origin of the traffic.

*From Gulf ports.*—Special import class and commodity rates by rail are in effect from Gulf ports on shipments to central western

destinations. These rates likewise vary according to the foreign points of origin of the traffic.

On some specified commodities and on class traffic special import rates by rail are quoted on shipments to designated interior southern points.

*From Pacific coast ports.*—From Pacific coast ports special import rates by rail are quoted on many commodities, and the rates are the same to practically all points east of Colorado, Wyoming, New Mexico, and the Dakotas, including some points in these States. In all cases the foreign countries of origin must be stated in order that the import rates may apply. These special commodity rates are primarily designed to enable the Pacific ports and transcontinental railroads to compete with the Atlantic and Gulf ports and with the inland carriers serving these rival ports.

It is evident that no import rail rates lower than the domestic rail rates are at present applicable at the basic rate ports of the North Atlantic seaboard, and that the lower import rail rates in effect before their cancellation in 1918 applied to but a limited number of commodities. Those now in effect from Portland, Me., and the eastern Canadian, South Atlantic, Gulf, and Pacific coast ports to interior southern destinations, with possible individual exceptions, were established primarily for the purpose of commercially equalizing competitive ports and inland transportation routes. It is important to bear in mind that lower rail rates for imports than for domestic articles, which go no further than to equalize the ports at which they apply with basic rate ports, at which lower rail rates for imports than for domestic articles do not obtain, do not affect or neutralize the domestic tariff policy. For example, a shipment of cotton textiles from Manchester to Chicago by way of New York moves from New York to Chicago at the domestic rate. Another shipment of Manchester cotton goods of the same quality received at Chicago via New Orleans moves from New Orleans to Chicago on a rail rate for imports which is lower than the domestic rate from New Orleans by an amount sufficient to make possible such shipment via New Orleans. The two shipments of cotton goods, being of identical quality and the importer having paid the same customs duty and substantially the same combined ocean and rail charges from Manchester to Chicago, are sold to the importers' customers at a uniform price. The prices paid by the ultimate consumer or the importer (who individually or jointly bear the cost of both the import duty and the transportation charges so far as they are borne in the United States) result regardless of the port at which the goods entered, and the rail rates for imports applicable at New Orleans do not lessen the duties imposed by the Government. Moreover, the quantity of Manchester cotton goods received by the Chicago importer is no larger than if the special rail rates were not in effect at New Orleans, for in the absence of such rates the importer's order would be filled by way of the North Atlantic ports or other ports from which the domestic rail freight rates are lower than the domestic rates in effect at New Orleans.

The effect of import rates established to bring about commercial equalization of ports and routes is to divide the flow of import traffic

among the several rival seaboard ports so that all of it will not move through the ports having the lowest domestic freight rates. It is urged that the ports having special rail rates for imports are thus enabled to handle a share of the import trade of the interior, the railroads serving them enhance their traffic, and interior importers and consumers are relieved from the danger of frequent congestion, delays, and irregular deliveries which would probably ensue if all imported products were shipped through the few ports at which the more favorable domestic rates apply. Meanwhile the Government's tariff policy remains intact.

#### EXISTING IMPORT-RATE DIFFERENTIALS.

With these general principles in mind, the differences between rail import and domestic rates may be computed without leading to erroneous comparisons with customs duties. The import rail-rate differentials exhibited in the rate tables in the commission's report are not presented as any indication that rail import rates neutralize customs duties, but as a measure of the extent to which rail rates for imports are reduced at various ports below the domestic freight rates to enable such ports to share in the import trade of the interior. The differentials neutralize shipping costs in the interest of particular ports and routes. They do not neutralize the effect of duties when the differentials do not go beyond the point of equalizing such ports and routes with rival ports and routes having no special rail rates for imports. Experience will show whether or not the disturbance of established port relationships resulting from the horizontal railroad rate advance of August 26, 1920, will cause an abnormal flow of imports through the South Atlantic, Gulf, and Pacific ports relative to the volume of imports handled at the North Atlantic ports. Should such result occur then the import rates in effect at the former ports might in the future tend to have a neutralizing effect upon import duties.

An examination of rate Tables 20 to 25 in the commission's report will show that the general percentage rate advance automatically widened the differences between rail rates for imports and domestic rates at the South Atlantic, Gulf, and Pacific ports, and the rate structures analyzed indicate that the general rate increase also widened the difference between the railroad rates for imports in effect at these ports and the domestic rates applicable to imports at the basic rate ports of the North Atlantic seaboard. As the fundamental purpose of existing rail import rates is port and route equalization, the disturbance of established relationships under railroad rate practices should prove to be but temporary. The chairman of the western trunk line committee, for example, writes that "it is the purpose of the carriers to make the necessary revision as soon as possible, which will restore the old relationship. It will be some time before this work is accomplished, but we will now proceed to that end."<sup>1</sup>

Rate Table 21 in the commission's report shows the difference between domestic and import rail rates on a group of imported commodities shipped through the North Atlantic, eastern Canadian,

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<sup>1</sup> Letter of Oct. 13, 1920.

South Atlantic, and Gulf ports to Pittsburgh, Cleveland, Cincinnati, Chicago, Louisville, St. Louis, Kansas City, and St. Paul. It also shows whether the commodities are on the free list or subject to customs duties, and in the latter instance the rate of duty imposed and such duty converted into the actual or approximate number of cents per hundred pounds. The following significant facts may be noted in connection with Table 21:

(1) Differences between domestic and import rail rates obtain at Montreal, Quebec, Halifax, St. John, Portland via the Grand Trunk, Savannah, Key West, Pensacola, Mobile, and New Orleans, but not at Boston, New York, Philadelphia, Baltimore, or Norfolk.

(2) These differences at the ports at which lower rail import rates apply are radically different and vary widely at different interior destinations. The discrepancies are apparently due to the fact that these rail import rates were not made to discriminate against domestic products, but to equalize commercially the various ports involved. The rail import rates were made with reference to the domestic rates of the basic North Atlantic ports, regardless of the differences which would result between the rail import and domestic rates in effect at the eastern Canadian, South Atlantic, and Gulf ports. The specific differences in cents per hundred pounds between rail import and domestic rates applicable at a given port such as New Orleans, therefore, were largely accidental in that they represent the difference between rail import rates, established with reference to the rates in effect at the North Atlantic ports, and domestic rates, which were established in accordance with conditions obtaining in the domestic traffic of New Orleans. The purpose in making a special rate for imports at a given port is not to place the rate a fixed number of cents below the domestic rate but to adjust the port and its inland routes on a competitive basis with rival ports. Indeed, it will be noted in several instances that the rail import rate is higher than the corresponding domestic rate.

Table 21 also compares the customs duties of the act of 1913 on an extensive group of commodities with the differences between the domestic and import rail rates in effect at New Orleans on import traffic moving to Chicago, Cincinnati, Louisville, Cleveland, Pittsburgh, Kansas City, St. Louis, and St. Paul. Table 22 similarly shows the customs duties and import rail rate differentials applicable on a different list of free and dutiable commodities shipped from North Atlantic, South Atlantic, and Gulf ports to Chicago and Cincinnati. Table 23 contains the rail import class rate differentials applicable on imported traffic moving from North Atlantic, South Atlantic, and Gulf ports to central western destinations.

Typical Pacific coast rail import rate differentials are computed in Table 24, which shows the differences between the domestic commodity rates applicable at San Francisco and the special import rates in effect at Pacific coast ports on a substantial list of free and dutiable commodities of the kind commonly shipped from the Far East and Australasia to Chicago, Cincinnati, and New York. The table also contains the customs duties imposed on such of these commodities as are not on the free list, and further emphasizes the lack of any fixed relationship between rail import rates and customs duties. Table 25 similarly compares customs duties with the import rate differentials

obtaining in case of various imported commodities shipped from South Atlantic and Gulf ports to interior southern destinations.

#### EXPORT RATES.

The rail export rate structures have been analyzed and the relation between railroad export rates and ocean rates traced. They indicate that the fundamental principle of port and route equalization also governs the great majority of the railroad export rates now in effect at the ports; also that most of the export rates applicable from interior southern points to the North Atlantic ports were established for the same purpose, and that the only export rates now in effect from the Central West to the pivotal or basic North Atlantic ports south of Boston are those on grain and flour.

The export rate differentials computed in Tables 26, 27, and 28 will serve the purpose of comparison with the import differentials computed in Tables 20 to 24. It will be noticed that the rail export differentials are as large as the import differentials, and that, as in the import trade, export differentials obtain in case of central western traffic moving through eastern Canadian, South Atlantic, Gulf, and Pacific ports, but, with the specific exception of grain and flour exports, not at New York, Philadelphia, Baltimore, or Norfolk. Boston is the only North Atlantic port having general special export rates by rail without at the same time having special import rates in the freight trade of the Central West, and this variation is due to the fact that the westbound domestic rail rates of Boston are the same as those of New York, while the eastbound domestic rates of the two rival ports differ. To enable Boston to compete in the export trade of the Central West it was found necessary to apply the eastbound domestic rates of New York as special export rates to Boston, and these rates are lower than the eastbound domestic rates to Boston by the amounts shown in Tables 26 and 27. The tables, moreover, indicate that, as in the import trade, the export differentials of the ports at which export rates apply are not uniform or fixed amounts below the prevailing domestic rates in effect at these ports, but vary at different ports and interior points in a way that would seem highly erratic were it not for the fact that both export and import rates are made primarily to equalize commercially competitive ports and rival inland carriers. Import and export rate structures differ in detail because the competitive conditions in the import and export trades are not identical in all respects and because the domestic rate structures applicable at the ports in opposite directions are not the same.

With respect to preferences in the export transportation rates of foreign countries the commission's somewhat limited investigation has not so far disclosed substantial or intentional evasion of this country's tariff laws.

The same inquiry has been conducted to ascertain to what extent, if at all, preferential railway export rates in force in the United States are designed to neutralize the protective tariffs of other countries. The commission's findings on this branch of the subject are as follows:

(a) To North Atlantic ports few special rates for export are quoted.

(b) To South Atlantic ports special export class and commodity rates are quoted on traffic from the Central West, Ohio, and Mississippi River points and interior southern points. Restrictions as to ports to which rates apply are in effect, and some rates apply only on traffic for Cuba.

(c) To Gulf ports many special class and commodity rates are quoted on export traffic from central western and southern points. Foreign countries to which the goods must be destined in order that the rates might apply are specified in the tariffs.

(d) To Pacific coast ports special export commodity rates are blanketed from specified points or States in the United States on traffic destined to designated foreign countries.

#### CONCLUSIONS.

The existing import and export railroad rates in the United States have been established and are maintained primarily for the purpose of equalizing the commercial advantages of rival ports and of the alternative routes over which the foreign trade of the United States is carried. Broadly speaking, the concessions made in import and export rates are intended to place the main ports and the three main seaboard of the United States upon a workable basis of competition.

The rail carriers in the United States as well as the rival ports and trade routes are interested in the general distribution of the import and export traffic among the three seaboard and the many gateways by which the foreign trade of the United States may move. The transportation interests of the carriers and the commercial activities of producers, traders, and seaboard cities have common concern in bringing about a satisfactory distribution of the foreign trade.

The present import and export rates represent the compromises and adjustments resulting from competitive forces that have been operative for many years. This fact is shown by the history of the rates and by the analysis in the commission's report of the forces that have brought about the concessions that have been made in the railroad rates applying to traffic carried in the foreign trade.

It does not appear that the existing reduced railroad rates on imports at the Gulf and Pacific coast ports are intended to offset in whole or in part the duties imposed by the customs tariff. There is indeed no actual connection between the special transportation rates accorded imported goods by the railroads of the United States and the duties on imports. The commission's report shows that some of the concessions in the import rates are less than the amount of the duties on the articles in question. Other rate concessions exceed the duties and although the customs duty on a particular product is uniform at all points, the railroad import rates on which it moves to the interior vary widely at different ports and interior destinations.

The duties and the concessions in the railroad's rates on imports bear little if any relation to each other, since the underlying reason of making concessions in import rates is not to overcome duties but to adjust railroad charges with reference to rates on like commodities handled by carriers serving rival ports. The rail export and import rates applying at the Gulf are adjusted with relation to the domestic rates applying to and from North Atlantic ports. Import

and export rates at the Pacific ports are also adjusted primarily with reference to the rates applying to and from North Atlantic ports. Changes in customs duties in the past have not affected import railroad rates, and presumably will not affect them in the future.

In several countries concessions in railroad rates on exports are made in the interest of foreign trade. More often the railroad-rate reductions apply only to a few commodities, while sometimes the concessions are made on exports generally. Countries especially interested in the development of an export trade have tended to favor that trade to some extent by concessions in rail rates, although Great Britain, a country of the first rank in commerce, has for geographical reasons not found it necessary to make many concessions in railroad rates to facilitate export trade.

In most countries the railroad rates on imports are the same as the rates on like commodities of domestic origin, but there are instances of higher rail rates on imports imposed for the purpose of aiding domestic industry. Such instances are not numerous and are a relatively unimportant feature of the international trade policy of foreign countries.

There is but little governmental control exercised over ocean rates as a condition of grants or subventions or subsidies. This policy has been more favored by Japan than by any other country, but Japan is apparently working away from ship subsidies; and, presumably from the policy of government control of ocean rates by means of such grants to shipping. Preferential ocean rates resulting from government control are not of much significance at the present time.

It is to be added, by way of caution, that wherever the word "equalize" is used with reference to import and export rates to the different ports it should be read as meaning "commercially equalize," and not as implying that the rates at the different ports are actually equal or as implying equality in any particular of traffic phenomena. Rather it is intended to suggest that competitive adjustments have taken place between the railways serving the affected ports or the like ocean carriers which give the shipper alternative ports as gateways for his imports or his exports.

#### DICTIONARY OF TARIFF INFORMATION.

The commission has in progress the collection of varied data relevant to tariff subjects to be embodied in dictionary form. The principal fields to be covered are: (1) The various commodities subject to tariff legislation; (2) tariff laws and administration; (3) treaties and international commercial relations subject to tariff control. Most of the articles consist of brief treatments of subjects more extensively discussed in special reports of the Tariff Commission, and will include references to the more detailed accounts. In the case of general articles, selected bibliographies are added.

At the present time 625 articles on commodities have been prepared. Two hundred and thirty-five articles have been written on the subject of tariff laws and administration. The third group, embracing about 500 separate subjects, has been practically finished.

Final completion of the work awaits the availability of the 1920 statistics of manufactures, the compilation of which is now being brought to a close by the United States Census Bureau.

**IV. LIST OF PRINCIPAL SUBJECTS INVESTIGATED AND REPORTED UPON.**

The scope of the commission's work since its organization in 1917 is briefly outlined by the following detailed list of subjects investigated and reported upon to December, 1921:

*List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921.*

**Abbreviations:**

- \*=Printed edition exhausted.
- \*\*=Not specially provided for, or not provided for eo nomine.
- FL=Free list.
- In prog.=Work in progress.
- Ms.=Manuscript (typewritten).
- M. S.=Miscellaneous series (unnumbered).
- n. s. p. f.=Not specially provided for.
- P.=Printed.
- T. I. S.=Tariff information series.
- W. M.=Reports to Ways and Means Committee (unnumbered).

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Abrasive materials (report).....	P.....				B-3
Acetate (see Copper sulphate and acetate).					
Acetic acid.....	P.....	FL.....	387	1	A-2
<b>Acids:</b>					
Acetic.....	P.....	FL.....	387	1	A-2
Acetic anhydride.....	P.....	A.....	2	1	A-2
Acetone and acetone oil.....	P.....	A.....	3	3	A-2
Arsenic or arsenious.....	P.....	FL.....	387	1	FL-6
Boric.....	P.....	A.....	1	1	A-1
Carbolic (repealed by the act of Sept. 8, 1916).....	P.....	FL.....	387	**25	FL-1
Chromic.....	P.....	FL.....	387	1501	A-18
Citric.....	P.....	A.....	1	1	A-1
Formic.....	P.....	A.....	1	1	A-1
Gallic.....	P.....	A.....	1	1	A-1
Glycerophosphoric.....	P.....	A.....	18	24	A-6
Hydrochloric.....	P.....	FL.....	387	1501	FL-1
Hydrocyanic.....	P.....	FL.....	387	**1	FL-1
Hydrofluoric.....	P.....	FL.....	387	1501	FL-1
Lactic.....	P.....	A.....	1	1	A-1
Muriatic.....	P.....	FL.....	387	1501	FL-1
Nitric.....	P.....	FL.....	387	1501	FL-1
Oxalic.....	P.....	A.....	1	1	A-1
Phosphoric.....	P.....	FL.....	387	1	FL-1
Phthalic (repealed by the act of Sept. 8, 1916).....	P.....	FL.....	387	25	FL-1
Prussic (hydrocyanic).....	P.....	FL.....	387	**1	FL-1
Pyrogallic.....	P.....	A.....	1	1	A-1
Pyroligneous.....	P.....	FL.....	387	**1	A-2
Silicic.....	P.....	FL.....	387	**1	A-18
Sulphuric, or oil of vitriol.....	P.....	FL.....	387	1501	FL-1
Tannic.....	P.....	A.....	1	1	A-1
Tartaric.....	P.....	A.....	1	1	A-1
Valerianic.....	P.....	FL.....	387	1501	FL-1
Acids exempt from duty.....	P.....	FL.....	387	1501	FL-1
Acids of paragraph 1 and related materials provided for in the tariff act of 1913 (report).	P.....				A-1
<b>Aconite.....</b>	P.....	FL.....	388	32, 1502	A-7, FL-2
Adhesive felt for sheathing vessels.....	P.....	FL.....	481	1302	FL-14
Agar-agar.....	P.....	A.....	34	39	A-9
Agate, manufactures of.....	P.....	B.....	98	233	B-11
Agates, unmanufactured.....	P.....	FL.....	390	1503	N-1
Agricultural implements.....	P.....	FL.....	391	1504	FL-3
<b>Agricultural staples and the tariff (report) on:</b>					
Wheat and wheat flour.....	P.....	FL.....	644	730	T. I. S.-20
Oats and oatmeal.....	P.....	G.....	192	727	T. I. S.-20
Barley and barley malt.....	P.....	G.....	188-190	723	T. I. S.-20
Flaxseed or linseed.....	P.....	G.....	212	760	T. I. S.-20
Flaxseed or linseed oil.....	P.....	A.....	45	50	T. I. S.-20
Potatoes.....	P.....	FL.....	581	769	T. I. S.-20
Hay.....	P.....	G.....	205	778	T. I. S.-20
Air rifles.....	P.....	C.....	132	**364	C-14
Alabaster, manufactures of.....	P.....	B.....	98	233	B-11
Albata.....	P.....	C.....	145	377	C-19
Albumen, dried egg.....	P.....	A.....	4	713	G-11
Albumen, n. s. p. f.....	In prog.	FL.....	392	1505	G-11

*List of principal subjects investigated and reported upon by the United States  
Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Alcohol, methyl or wood	P	FL	393	4	A-2
Alcoholic preparations, n. s. p. f.	P	A	16	22	A-5
Alizarin assistants	P	A	45	51	A-11
Alloy steels	P	C	110	304	C-7
Almond oil:					
Bitter	P	A	46	1625	A-11
Sweet	P	A	45	1626	A-11
Almonds	P	G	223	754	G-27
Aloes	P	A, FL	**27**477	32, 1502	A-7
Althea root	P	FL	544	32, 1502	FL-2
Alum	P	A	6	6	A-3
Alumina, hydrate of, or refined bauxite	P	A	6	6	A-3
Aluminum:					
Alloys	P	C	143	374	C-16
Bars, plates, sheets, strips, and rods	P	C	143	374	C-16
Compounds	P	A	6	6	A-3
Hollow ware	P	C	134	339	C-16
Leaf	P	C	146	379	C-18
Manufactures, n. s. p. f.	P	C	134, 167	339	C-16
Ore	P	FL	411	207	C-16
Sulphate	P	A	6	6	A-3
Amber:					
Gum	P	A	36	1577	A-9
Manufactures of	P	N	367	1435	N-19
Amber oil	P	A	46	* * 54	A-12
Ambergris	P	A	49	1506	A-14
Amberoid, gum	P	A	36	1577	A-9
American valuation as the basis for assessing duties ad valorem, information concerning (report)	P				M. S.
Ammonia:					
Carbonate	P	A	7	7	A-3
Chloride (muriate)	P	A	7	7	A-3
Liquid anhydrous	P	A	7	7	A-3
Nitrate	P	FL	395	7	A-3
Perchlorate	P	FL	395	7	A-3
Phosphate	P	A	7	7	A-3
Sulphate	P	FL	395	7	A-3
Ammoniacal gas liquor	P	A	7	** 5	A-3
Amyl acetate	P	A	29	** 35	A-7
Amyl nitrite	P	A	29	** 35	A-7
Amylic alcohol	P	A	33	4	A-9
Anchors and parts of, iron or steel	P	C	106	319	C-5
Anchovies	P	G	**216	**721	G-19
Angles, iron or steel	P	C	104	312	C-3
Animal hair, n. s. p. f.	P	FL	503	1579	N-12
Animal and expressed vegetable oils and fats (report)	P				A-11
Anise-seed oil	P	A	46	1624	A-12
Annatto	P	FL	399	1510	A-8
Annual reports:					
First	P*				M. S.
Second	P				M. S.
Third	P				M. S.
Fourth	P				M. S.
Antifriction balls and bearings	P	C	106	321	C-5
Antimonial lead (type metal)	P	C, FL	160, 637	389	C-17
Antimony:					
Alloys	P	C, FL	154, 572	**1559	C-17
Ore and stibnite containing	P	FL	396	1509	C-17
Oxide, salts, and compounds	P	C	144	8	C-17
Regulus or metal and matte containing	P	C	144	376	C-17
Antitoxins, vaccine virus, and all other serums	P	FL	400	1511	FL-2
Anvils of iron or steel	P	C	118	325	C-9
Apatite	P	FL	401	1632	FL-5
Apples, green or ripe and dried	P	G	217	735	G-20
Arabic, gum	P	A	36	1577	A-9
Archil	P	FL	564	1510	A-8
Argols	P	A	8	9	A-1
Arrowroot	P	FL	402	1512	G-33
Arsenic	P	FL	403	**1559	FL-6
Arsenic or arsenious acid	P	FL	387	1	FL-6
Arsenic, sulphide of	P	FL	403	1513	FL-6
Art squares, wholly or in part of wool	P	K	303	1118	K-6
Art, works of	P	N, FL	{ 376, 611, 652-657 }	1447, 1685-7	N-24
Articles not enumerated but similar to articles enumerated.	P	N	386	1459	N-27

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		Sched-ule.	Para-graph.		
Articles not enumerated or provided for.....	P.....	N.....	385	1457	N-27
Asafetida.....	P.....	FL.....	405	32, 1502	A-7, FL-2
Asbestos:					
Manufactures of.....	P.....	N.....	367	1401	N-20
Unmanufactured.....	P.....	FL.....	406	1515	N-20
Ashes, wood and lye of, and beet-root.....	P.....	FL.....	407	1635	A-16
Asphaltum.....	P.....	FL.....	534	1603	FL-7
Aspic oil or spike lavender.....	P.....	A.....	46	1625	A-12
Attar of rose.....	P.....	A.....	46	1625	A-12
Aubusson carpets.....	P.....	K.....	293, 300	1117	K-6
Automobiles and parts.....	P.....	C.....	119	369	C-10
Automobile equipment, electrical.....	Ms.....	C.....	**167	**372, 393	C-31
Axes.....	P.....	C.....	**167	**393	C-13
Axles of iron or steel.....	P.....	C.....	121	323	C-10
Axminster carpets.....	P.....	K.....	293, 300	1117, 1118	K-6
Babbitt metal.....	P.....	C.....	**154	389	C-17
Bagging for cotton.....	P.....	FL.....	408	1517	J-7
Bags:					
Jute or cotton.....	P.....	I, J.....	{ 266, 281, **284 }	920, 1017	J-9
Leather.....	P.....	N.....	360	1432	N-18
Paper.....	P.....	M.....	324	1305	M-4
Ball clay.....	P.....	B.....	**76	**207	B-4
Balls and bearings, antifriction.....	P.....	C.....	106	321	C-5
Balm of Gilead.....	P.....	FL.....	409	**32	A-7, FL-2
Balsam:					
Canada.....	P.....	A.....	9	10	A-3
Copaiba.....	P.....	A.....	9	10	A-3
Gurjun.....	P.....	A.....	**9	**10	A-3
Peru.....	P.....	A.....	9	10	A-3
Tolu.....	P.....	A.....	9	10	A-3
Balsams (see Drug industry, crude botanical).....	P.....				A-7
Bandings:					
Cotton.....	In prog.....	I.....	262	912	I-7
Silk.....	P.....	L.....	316	1207	I-2
Band iron or steel.....	P.....	C, FL.....	{ 107, 109, 509 }	309, 313, 314	C-4
Bargaining tariffs (see Reciprocity and commercial treaties).					
Barium:					
Carbonate.....	P.....	A.....	10	11	A-4
Chloride.....	P.....	A.....	10	11	A-4
Dioxide.....	P.....	A.....	10	11	A-4
Metal.....	P.....	C.....	143	**1559	C-16
Barley and barley malt (see Agricultural staples and the tariff).					
Barrel hoops, iron or steel.....	P.....	C.....	107	313	C-4
Barrels.....	P.....	D.....	171, 172	409, 410	D-2
Bars:					
Steel.....	P.....	C.....	110	304	C-7
Wrought iron.....	P.....	C.....	103	303	C-2
Barytes:					
Crude.....	P.....	A.....	51	64	{ A-4, T. I. S.-18 }
Ground.....	P.....	A.....	51	64	{ A-4, T. I. S.-18 }
Barium chemical and lithopone industries.....	P.....				T. I. S.-18
Baskets:					
Bamboo, etc.....	P.....	D.....	175	413	D-4
Leather.....	P.....	N.....	360	1432	N-18
Bath mats.....	Ms.....	I.....	284	**909	I-8
Batting, cotton.....	Ms.....	I.....	264	**920	I-8
Bauxite:					
Crude.....	P.....	FL.....	411	207	C-16
Refined.....	P.....	A.....	6	6	A-3
Bay rum.....	P.....	H.....	242	58	A-14
Beads.....	P.....	N.....	333	1403	N-1
Beams, iron or steel.....	P.....	C.....	104	312	C-3
Beans.....	P.....	G.....	197, 199	763	G-8
Beef and cattle industry (report).....	Ms.....	G.....	545, 619	701	W. M.
Beeswax.....	P.....	FL.....	412	1457	FL-7
Belgium, colonial tariffs (see Colonial tariff policies).					
Belladonna leaves and roots.....	P.....	A, FL.....	{ **127, **477 }	34	A-7
Bell metal.....	P.....	FL.....	413	1519	C-19

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Bells.....	P	FL	413	1519	C-19
Belting and sole leather.....	P	FL	**530	**1600	N-15
Belting for machinery.....	P	I	262	912	I-7
Belts and belting, silk.....	P	I	316	1207	L-2
Belts, cotton.....	In prog.	I	262	**912	I-7
Belts, leather.....	P	N	360	1432	N-18
Bergamot oil.....	P	A	46	1625	A-12
Bicycles and finished parts of.....	P	C	120	371	C-10
Billets, iron or steel.....	P	C, FL	110, 613	303, 304	C-7
Billiard balls.....	P	N	341	1413	N-7
Bimetal sheets.....	P	C	109	309	C-23
Binding twine.....	In prog.	FL	415	1521	J-1
Bindings:					
Cotton.....	In prog.	I	262	**912	I-7
Silk.....	P	L	316	1207	L-2
Birch tar oil.....	P	FL	561	**54	A-12
Bismuth.....	P	FL	418	1523	FL-6
Bitumen.....	P	FL	534	1603	FL-7
Black pigments.....	P	A	53	68	A-15
Blacking preparations.....	P	A	11	12	A-5
Blacksmith's hammers, tongs, etc.....	P	C	122	326	C-9
Bladders, integuments, tendons, and intestines of animals and fish sounds, n. s. p. f.....	P	FL	419	706	N-19
Bladders, manufactures of.....	P	N	367	1436	N-19
Blades, cutlery.....	P	C	128-130	354, 355	C-13
Blanc fixe.....	P	A	51	64	A-4
Blankets and quilts, cotton.....	Ms.	I	264	911	I-8
Blanks, iron or steel.....	P	C, FL	110, 613	304	C-7
Blasting caps.....	P	N	346	1418	N-8
Bleaching powder.....	P	A	12	13	A-5
Blinds, of bamboo, wood, straw, or compositions of wood.....	P	D	175	413	D-4
Blood char.....	P	FL	447	66	A-15
Blood, dried, n. s. p. f.....	P	FL	420	1525	FL-5
Bloodroot (see Drug industry, crude botanical).....	P			A-7	A-7
Blooms, iron or steel.....	P	C, FL	{ 110, 518, 613 }	303, 304	C-2, C-7
Boards, sawed, planed, tongued and grooved.....	Ms.	FL	647	404, 1683	FL-37
Boiler plate.....	P	C	105	307	C-4
Boilers.....	P	C	127	328	C-12
Bolting cloth (silk).....	Ms.	FL	422	1526	L-3
Bolts.....	P	C	123	330	C-11
Bone:					
Char.....	P	FL	447	66	A-15
Dust, meal, and ash.....	P	FL	423	1527	FL-5
Manufactures of, n. s. p. f.....	P	N	368	1437	N-21
Bone casings:					
Cotton.....	In prog.	I	262	**912	I-7
Silk.....	P	L	316	1207	L-2
Bones, crude, burned, calcined, etc.....	P	FL	423	1527	FL-5
Bonnets, fur.....	P	N	354	1427	N-13
Bookbinder's leather.....	P	FL	**530	**1600	N-17
Boots and shoes.....	P	FL	530	1601	N-18
Borate materials, crude.....	P	FL	429	1533	A-1
Borax.....	P	A	67	78	A-1, A-18
Boric acid.....	P	A	1	1	A-1
Bort.....	P	N	357	**1561	N-1
Botanical drug industry, crude (report).....	P				A-7
Bottle caps.....	P	C	164	387	C-28
Bottles, glass.....	P	B	53, 84	217, 218	B-9
Boxes:					
Containing oranges, etc.....	P	D	172	410	D-2
Packing, empty.....	P	D	171	409	D-2
Paper, papier-mâché, etc.....	P	M	324	1305, 1313	M-4
Boxwood:					
Rough.....	P	FL	648	404	D-1
Sawed.....	P	D	169	404	D-1
Braces, silk.....	P	L	316	1207	L-2
Brads, iron or steel.....	P	FL	554	331	C-8
Braid machines.....	P	C	165	372	C-29
Brass, old.....	P	FL	430	1534	C-19
Brass rolling-mill products.....	P	C	167	393	C-19
Brazil nuts.....	Ms.	G	*226	755	G-27
Breccia:					
Crude and dressed.....	P	B	97	232	B-11
Manufactures of.....	P	B	98	233	B-11
Briar root and briar wood.....	P	D	168	403	N-26

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
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<b>Brick:</b>					
Refractory—					
Chrome.....	P	B	71	201	B-1
Fire.....					
Magnesite.....					
Structural—					
Common.....					
Sand-lime.....					
Tapestry and front.....					
Vitrified.....					
<b>Bristles:</b>					
Not sorted, etc.....	P	FL	432	1536	N-4
Sorted, etc.....	P	N	337	1407	N-4
Bristol board.....	P	M	328	1307	M-1
Britannia metal, old.....	P	FL	572	**1559	C-17
British wool-manufacturing industry, a survey of (report).	P				W. M.
<b>Brocades, metallic.....</b>	P	C	146	379	C-18
<b>Bromine.....</b>	P	FL	433	42	FL-8
<b>Bronze metal leaf.....</b>	P	C	146	379	C-18
<b>Bronze powders.....</b>	P	C	146	379	C-18
<b>Broom corn.....</b>	P	FL	434	774	N-3
<b>Broom handles.....</b>	Ms.	FL	647	**414	FL-37
<b>Broom roof.....</b>	In prog.	FL	**497	**1575	FL-16
<b>Brooms.....</b>	P	N	336	1407	N-3
<b>Brush industry (report).....</b>	P*				T. I. S.-8
<b>Brushes.....</b>	P	N	336	1407	N-4
<b>Brushes, electrical.....</b>	P	B	81	216	B-8
<b>Brussels carpets.....</b>	P	K	295	1118	K-6
<b>Buchu leaves.....</b>	P	A	39	33	A-7, A-10
<b>Buckles of iron or steel.....</b>	P	C	151	346	C-20
<b>Budding knives.....</b>	P	C	128	354	C-13
<b>Building forms, iron or steel.....</b>	P	C	104	312	C-3
<b>Building stones.....</b>	P	B	99	235	B-11
<b>Bulk beams, iron or steel.....</b>	P	C	104	312	C-3
<b>Bullions.....</b>	P	C	150	382	C-18
<b>Burgundy pitch.....</b>	P	FL	437	1538	FL-2
<b>Burrstones:</b>					
In blocks.....	P	FL	614	1661	B-3
Manufactured.....	P	FL	438	234	B-3
<b>Butter and butter substitutes.....</b>	P	G	195	709	G-7
<b>Button industry (report).....</b>	P*				T. I. S.-4
<b>Butyl alcohol.....</b>	P	A	**33	4	A-9
<b>Cabinet woods.....</b>	P	D, FL	169, 648	404	D-1
<b>Cables (see Cordage).....</b>					
<b>Cacao butter.....</b>	Ms.	G	232	776	G-32
<b>Cadmium.....</b>	P	FL	439	1539	FL-6
<b>Cadmium sulphide.....</b>	P	A	**63	63	A-15
<b>Caffeine and compounds.....</b>	P	A	13	14	A-5
<b>Cajeput oil.....</b>	P	FL	561	**54	A-12
<b>Calced magnesite.....</b>	P	A	42	47	A-10
<b>Calcium:</b>					
Acetate.....	P	FL	440	1540	A-2
Carbide.....	P	FL	440	15	FL-8
Chloride.....	P	FL	440	1540	FL-8
Cyanamid.....	P	FL	499	1540	FL-5
Metal.....	P	C	143	**1559	C-16
Nitrate.....	P	FL	440	1540	A-18
Sulphate.....	P	A	51	71	A-15
Tartrate, crude.....	P	A	8	9	A-1
<b>Calomel.....</b>	P	A	14	16	A-5
<b>Camomile oil.....</b>	P	A	46	**54	A-12
<b>Camphor.....</b>	P	A	36	48	A-9
<b>Canada balsam.....</b>	P	A	9	10	A-3
<b>Candle wicking, cotton.....</b>	In prog.	I	262	912	I-7
<b>Candy, sugar.....</b>	P	E	180	506	E-2
<b>Canes and umbrellas.....</b>	P	N	383	1455	N-27
<b>Canned beans and peas.....</b>	Ms.	G	199	763, 767	G-8
<b>Car blocks, wood.....</b>	Ms.	FL	647	406	FL-37
<b>Carbolic acid (repealed by the act of Sept. 8, 1916).....</b>	P	FL	387	25	FL-1
<b>Caraway oil.....</b>	P	A	46	1625	A-12
<b>Carbon:</b>					
Brushes, disks, plates, and other manufac-tures.....	P	B	81, 82	216	B-8, C-31
Electrodes for electric furnaces, etc.....	P	B	81	216	B-8, C-31
Miscellaneous electrical specialties.....	P	B	81, 82	216	B-8, C-31

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Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Carbon—Continued.					
Pots, porous.....	P.....	B.....	82	**216	B-8
Tetrachloride.....	P.....	A.....	19	17	A-6
Unmanufactured.....	P.....	B.....	81	*1216	B-8
Carbons:					
Arclamps.....	P.....	B.....	82	216	B-8
Electric lighting, composed of petroleum coke and of lampblack.	P.....	B.....	82	**216	B-8
Carbonized noils.....	Ms.....	FL.....	651	1105	K-1
Card clothing.....	P.....	C.....	124	337	C-8
Cardamom seeds.....	P.....	FL.....	595	780	A-7, FL-2
Cardboard.....	P.....	M.....	328	1302	M-1
Cardboard, cut, die-cut, etc.....	P.....	M.....	332	1313	M-4
Carpets (see also Floor coverings, Mattings, Rugs):					
Aubusson, Axminster, moquette, and chenille	P.....	K.....	293	1117	K-6
Brussels.....	P.....	K.....	295	1118	K-6
Ingrain (carpets, mats, and rugs).....	P.....	K.....	{298, 299, 303	1118	K-6
Saxony, Wilton, and Tournay velvet.....	P.....	K.....	294	1118	K-6
Tapestry Brussels.....	P.....	K.....	297	1118	K-6
Treble ingrain, three-ply, and all-chain.....	P.....	K.....	298	1118	K-6
Vegetable fiber except cotton.....	P.....	J.....	*273	1020	J-3
Velvet and tapestry velvet.....	P.....	J, K.....	296	1118	J-3, K-6
Wool Dutch and two-ply ingrain.....	P.....	K.....	299	1118	K-6
Wool or cotton, or in part of either, n.s.p.f.....	P.....	J, K.....	302, 303	1020, 1118	J-3, K-6
Woven whole, for rooms, and oriental, Berlin, Aubusson, Axminster, and similar rugs.	P.....	K.....	300	1117, 1118	K-6
Cartridges, loaded and empty.....	P.....	N.....	346	1418	N-8
Car-truck channels of iron or steel.....	P.....	C.....	104	312	C-3
Cascara sagrada (see Drug industry, crude botan- ical).					
Casein.....	P.....	FL.....	527	1598	FL-15
Cash registers.....	P.....	FL.....	441	1541	FL-3
Casks.....	P.....	D.....	171	409	D-2
Cassava (see Starch and related materials).					
Cassia oil.....	P.....	A.....	46	1624	A-12
Castor or castoreum.....	P.....	FL.....	442	1506	FL-2
Cast iron products.....	In prog.....	C.....	125	327	C-11
Castings, steel.....	P.....	C.....	110	304	C-7
Castor oil.....	P.....	A.....	45	50	A-11
Castoreum.....	P.....	FL.....	442	1506	FL-2
Catgut and manufactures of.....	P.....	N, FL.....	366, 443	1434	N-19
Cattle.....	Ms.....	FL.....	619	701	FL-25
Cattle hair, n.s.p.f.....	P.....	FL.....	503	1579	N-12
Caulstic soda (see Sodium hydroxide).					
Cedar:					
Rough.....	P.....	FL.....	648	402, 404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Cedrat oil.....	P.....	A.....	46	**54	A-12
Celluloid.....	P.....	A.....	25	29	A-6
Cement:					
Copper.....	P.....	FL.....	461	1553	C-19
Keene's.....	P.....	B.....	74	205	B-2
Portland, white, nonstaining.....	P.....	B.....	74	205	B-2
Roman, Portland, and other hydraulic.....	P.....	FL.....	444	203	B-2
Ceramic glazes, colors, etc.....	P.....	A.....	63	231	A-15
Cerium, cerite or cerium ore.....	P.....	FL.....	445	1542	C-22
Cerium salts.....	P.....	A.....	**85	84	C-22
Chains, iron or steel.....	P.....	C.....	126	329	C-13
Chalk and manufactures.....	P.....	A, FL.....	{15, 60, 446, 621	18, 209, 1543	A-5
Chamois skins.....	P.....	N.....	359	1431	N-17
Channels, iron or steel.....	P.....	C.....	104	312	C-3
Charcoal.....	P.....	FL.....	447	1682	A-2
Cheese and substitutes therefor.....	P.....	G.....	196	710	G-7
Chemical compounds n.s.p.f.....	P.....	A.....	5	5	A-3
Chemical glassware (see Optical glass and chem- ical glassware).					
Chemicals (see Dyes and other coal-tar chemicals).					
Chemicals, oils, and paints, suggested reclassifi- cation of.	P.....				M. S.
Chenille carpets (see Carpets).					
Chenilles, silk.....	P.....	L.....	314	1206	L-1
Cherries.....	Ms.....	G.....	217, 488	738	G-21
Chestnut extract.....	P.....	FL.....	624	37	A-8
Chicle.....	P.....	A.....	36	23	A-9
China clay.....	P.....	B.....	76	207	B-4

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Chinaware.....	P.....	B.....	80	213	B-6
Chinese nut oil.....	P.....	FL.....	561	1625	A-11
Chip, manufactures of, n. s. p. f.....	P.....	N.....	368	1436	N-21
Chloral hydrate.....	P.....	A.....	18	24	A-6
Chlorine, liquid, n. s. p. f.....	P.....	A.....	**5	**5	A-5
Chlorine products.....	P.....				A-6
Chlorophyll extract.....	P.....	A.....	31	36	A-8
Chocolate and cocoa.....	Ms.....	G.....	231	776	G-32
Chromate and dichromate of potash.....	P.....	A.....	64	75	A-18
Chromate and bichromate of soda.....	P.....	A.....	67	78	A-18
Chrome pigments.....	P.....	A.....	54	67	A-15
Chromic acid.....	P.....	FL.....	387	1501	A-18
Chromite or chromic ore.....	P.....	FL.....	448	1544	FL-28
Chromium, hydroxide of, crude.....	P.....	FL.....	449	** 5	A-18
Cinchona and other quinine barks.....	P.....	FL.....	410	1518	A-7, FL-2
Cinnamon oil.....	P.....	A.....	46	1625	A-12
Citrate of lime.....	P.....	A.....	41	46	A-1
Citric acid.....	P.....	A.....	1	1	A-1
Citronella oil.....	P.....	A.....	46	1625	A-12
Civet.....	P.....	A.....	49	1506	A-14
Clapboards, wood.....	Ms.....	FL.....	647	1683	FL-37
Clasp knives.....	P.....	C.....	128	354	C-13
Clays and earths.....	P.....	B, FL.....	{ 76, 81, 450 }	207	B-4
Cleaning preparations.....	P.....	A.....	11	12	A-5
Clocks and parts of.....	P.....	C.....	161	368	C-26
Clothing, ready-made:					
Cotton.....	P.....	I.....	256, 261	916, 918	I-5
Fur.....	P.....	N.....	348	1420	N-10
Linen.....	In prog.....	J.....	278	1016	J-6
Silk.....	P.....	L.....	317	1212	L-2
Clover, red flowers ( <i>see</i> Drug industry, crude botanical).					
Coal.....	P.....	FL.....	451	1545	FL-10
Coal-tar chemicals, census of dyes and (report):					
1917.....	P.....				T. I. S.-6
1918.....	P.....				T. I. S.-11
1919.....	P.....				T. I. S.-22
1920.....	P.....				T. I. S.-23
Cobalt:					
Ore and metal.....	P.....	FL.....	453	1547	FL-6
Oxide.....	P.....	A.....	24	27	A-6
Coca leaves.....	P.....	A.....	39	33	A-7, A-10
Cocaine.....	P.....	A.....	47	55	A-7, A-13
Cocculus indicus.....	P.....	FL.....	454	32, 1502	A-7, FL-2
Cochineal.....	P.....	FL.....	455	1510	A-8
Cocoa:					
Butter and substitutes for.....	Ms.....	G.....	232	776	G-32
Crude.....	Ms.....	FL.....	456	1548	G-32
Prepared.....	Ms.....	G.....	231	776	G-32
Cocoa fiber, matting and mats.....	P.....	N.....	371	1021	I-3
Coconut oil.....	P.....	G, FL.....	232, 561	50	A-11, W. M.
Coconut products industry, report on:					
Coconuts.....	P.....	FL.....	557	756	W. M.
Coconut meat, shredded.....	P.....	G.....	221	756	W. M.
Copra.....	P.....	G.....	221	(†)	W. M.
Coconut oil.....	P.....	G, FL.....	232, 561	50	W. M.
Cocoons, silk.....	P.....	FL.....	599	1659	L-1
Cod oil.....	P.....	FL.....	561	49	A-11
Cod-liver oil.....	P.....	FL.....	561	49	A-11
Coffee.....	Ms.....	FL.....	457	1549	G-31
Coins.....	P.....	FL.....	458	1550	FL-20
Coir and coir yarn.....	In prog.....	FL.....	459	1551	FL-16
Coke.....	P.....	FL.....	451	1545	FL-10
Collars and cuffs:					
Cotton.....	P.....	I.....	256	918	I-5
Linen.....	In prog.....	J.....	277	1016	I-6
Collodion.....	P.....	A.....	25	28	A-6
Colonial tariff policies (report).....	P.....				M. S.
Colonial tariff policies, introductory survey of (report).....	Ms.....				M. S.
Color lakes.....	P.....	A.....	63	26	A-15
Coloring for liquors.....	P.....	A.....	26	(**)	A-6
Colors, crude, dry, mixed, etc.....	P.....	A.....	63	26	A-15
Columns and posts, iron or steel.....	P.....	C.....	104	312	C-3

† Special amendment.

*List of principal subjects investigated and reported upon by the United States  
Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Combs of horn or horn and metal.....	P.....	N.....	368	1437	N-21
Commercial treaties ( <i>see</i> Reciprocity and com- mercial treaties, and also Digest of commercial treaties).					
Conduits, electrical.....	Ms., P..	C.....	127	328	C-12, C-31
Confectionery.....	P.....	E.....	180	506	E-2
Conventions ( <i>see</i> Digest of commercial treaties).					
Copal.....	P.....	FL.....	500	1577	FL-17
Copaiba balsam.....	P.....	A.....	9	10	A-3
Copper:					
Alloys, unmanufactured.....	P.....	FL.....	460	1552	C-19
Coins.....	P.....	FL.....	458	1550	FL-20
Medals.....	P.....	FL.....	546	1611	N-24
Metal, crude, refined, and old.....	P.....	FL.....	461	1553	C-19
Ore, matte, regulus, oement, and scale.....	P.....	FL.....	461	1553	C-19
Rolling-mill products.....	P.....	C.....	147	378	C-19
Sulphate and acetate.....	P.....	FL.....	421	1554	FL-8
Copperas.....	P.....	FL.....	462	1568	FL-8
Copra ( <i>see</i> Coconut products industry).					
Coral, marine, unmanufactured.....	P.....	FL.....	463	1555	N-1
Cordage, including cables.....	P.....	J.....	268	1005	J-1
Cords and cords and tassels.....	P.....	L.....	316	1207	L-2
Cork:					
Manufactures of.....	P.....	N.....	340	1412	N-6
Waste, shavings, and refuse.....	P.....	FL.....	464	1556	N-6
Wood, unmanufactured.....	P.....	FL.....	464	1556	N-6
Corn oil.....	P.....	A.....	**45	**50	A-11
Corn or maize.....	Ms.....	FL.....	465	725	G-11
Cornstarch ( <i>see</i> Starch and related materials).					
Corrosive sublimate.....	P.....	A.....	14	16	A-5
Corset clasps.....	P.....	C.....	114	336	C-8
Corset lacings.....	In prog..	I.....	262	912	I-7
Corset steels.....	P.....	C.....	114	336	C-8
Corsets ( <i>see</i> Cotton manufactures.)					
Corundum:					
Manufactures of.....	P.....	N.....	343	1415	B-3
Ore.....	P.....	FL.....	479	1565	B-3
Cosmetics.....	P.....	A.....	48	57	A-14
Cotton manufactures:					
Bandings.....	In prog..	I.....	262	912	I-7
Bath mats.....	Ms.....	I.....	264	**909	I-8
Batting.....	Ms.....	I.....	264	**920	I-8
Belting for machinery.....	In prog..	I.....	262	912	I-7
Belts.....	In prog..	I.....	262	**912	I-7
Bindings.....	In prog..	I.....	262	**912	I-7
Blankets and quilts.....	Ms.....	I.....	261	911	I-8
Bone casings.....	In prog..	I.....	262	**912	I-7
Candle wicking.....	In prog..	I.....	262	912	I-7
Coarse yarn-dyed goods [tartans, tweeds, checks, ticking] ( <i>see</i> Cotton cloths, count- able).					
Cloth of cotton or other vegetable fiber and silk.....	P.....	I.....	254	907	I-4
Cloth, filled or coated.....	P.....	J.....	251	906	I-4
Cloth, tracing.....	P.....	I.....	254	906	I-4
Cloth, Venetian (report).	P.....				T. I. S.-10
Cloth, waterproof, of cotton or other vegetable fiber.....	P.....	I.....	254	906	I-4
Cloths, countable.....	P.....	I.....	{ 252-4, 257, 258, 263 }	903	I-3
Cloths provided for eo nomine.....	P.....				I-4
Clothing, ready-made.....	P.....	I.....	256	918	I-5
Collars and cuffs.....	P.....	I.....	256	918	I-5
Collets.....	In prog..	I.....	262	912	I-7
Combination suits.....	P.....	I.....	261	**916	I-6
Cords.....	In prog..	I.....	262	912	I-7
Corsets.....	P.....	I.....	**256	**918	I-5
Corset covers.....	P.....	I.....	261	**916	I-6
Coutils, plain and fancy ( <i>see</i> Cotton cloths, countable).					
Crochet cotton.....	P.....	I.....	251	902	T. I. S.-12
Cuffs.....	P.....	I.....	256	918	I-5
Darning cotton.....	P.....	I.....	251	902	T. I. S.-12
Drawers.....	P.....	I.....	261	**916	I-6
Embroidery cotton.....	P.....	I.....	251	902	T. I. S.-12
Garters.....	In prog..	I.....	262	912	I-7
Gloves, knit or woven.....	P.....	I.....	260	914	I-6

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Cotton manufactures—Continued.					
Handkerchiefs.....	P.....	I.....	255	917	I-5
Heads.....	In prog.	I.....	262	912	I-7
Hosiery, cut.....	P.....	I.....	259	915	I-6
Hosiery, fashioned and seamless.....	P.....	I.....	260	915	I-6
Jacquard figured upholstery goods.....	P.....	I.....	258	908	I-4
Knit goods.....	P.....	I.....	(259-261, **266)	913-916	I-6
Labels for garments.....	In prog.	I.....	262	912	I-7
Lamp wicking.....	In prog.	I.....	262	912	I-7
Loom harness.....	In prog.	I.....	262	912	I-7
Mop cloths.....	Ms.....	I.....	264	911	I-8
Nets, fishing.....	P.....	I.....	**266	920	J-2
Pants.....	P.....	I.....	261	**916	I-6
Pile fabrics, and manufactures thereof.....	P.....	I.....	257	909	I-4
Pillowcases.....	Ms.....	I.....	264	911	I-8
Polishing cloths.....	Ms.....	I.....	264	909, 911	I-8
Quilts.....	Ms.....	I.....	264	911	I-8
Sheets.....	Ms.....	I.....	264	911	I-8
Shirts.....	P.....	I.....	261	**916	I-6
Small wares.....	In prog.	I.....	262	912	I-7
Spindle banding.....	In prog.	I.....	262	912	I-7
Stockings.....	P.....	I.....	259, 260	915	I-6
Stove wicking.....	In prog.	I.....	262	912	I-7
Suspenders.....	In prog.	I.....	262	912	I-7
Sweaters.....	P.....	I.....	261	**916	I-6
Table damask and manufactures thereof.....	P.....	I.....	263	910	I-4
Tapestries.....	P.....	I.....	258	908	I-4
Tassels.....	In prog.	I.....	262	912	I-7
Thread, sewing.....	P.....	I.....	251	902	T. I. S.-12
Tights.....	P.....	I.....	261	**916	I-6
Tire fabrics.....	In prog.	I.....	262	905	I-7
Towels.....	Ms.....	I.....	264	909, 911, 920	I-8
Tracing cloth.....	P.....	I.....	254	906	I-4
Underwear.....	P.....	I.....	261	916	I-6
Union suits.....	P.....	I.....	261	**916	I-6
Venetian cloth (report).....	P.....	I.....	261	**916	T. I. S.-10
Vests.....	P.....	I.....	261	**916	I-6
Waste fabrics (see Cotton cloths, countable).....	P.....	I.....	254	906	I-4
Waterproof cloth.....	P.....	I.....	256, 261	916, 918	I-5
Wearing apparel.....	P.....	I.....	254	906	I-4
Window holland.....	P.....	I.....	250	901	T. I. S.-12
Yarn.....	P.....	FL.....	391	1504	FL-3
Cotton gins.....	P.....	FL.....			W. M.
Cotton industry, American raw (report).....	P.....				I-10
Cotton industry and trade, Japanese.....	P.....				C-29
Cotton machinery.....	P.....	C.....	**167	**372	A-11
Cottonseed.....	P.....	FL.....	595	**762	A-11
Cottonseed oil.....	P.....	FL.....	561	50	A-11, W. M.
Cottonseed oil industry, American (report).....	P.....				W. M.
Court plasters.....	P.....	A.....	50	61	A-14
Crayons.....	P.....	A.....	63	1449	A-15
Cream, fresh, preserved, etc.....	P.....	FL.....	547	707	G-7
Cream of tartar.....	P.....	A.....	8	9	A-1
Cream separators.....	P.....	FL.....	441	**372, **1504	FL-3
Crin vegetal.....	In prog.	FL.....	**497	**1575	FL-16
Croton oil.....	P.....	FL.....	561	1626	A-11
Crowbars, iron or steel.....	P.....	C.....	122	326	C-9
Crucible plate steel.....	P.....	C.....	105	**304	C-4
Crude artificial abrasives.....	P.....	FL.....	479	1415	B-3
Crushed stone.....	P.....	B.....	**81	**214	B-7
Cryolite.....	P.....	FL.....	468	1558	FL-24
Cudbear.....	P.....	FL.....	469	1510	A-8
Curled hair.....	P.....	N.....	352	1425	N-12
Curling stones.....	P.....	FL.....	470	(**)	N-7
Customs administrative laws, revision of (report).....	P.....				M. S.
Cutch.....	P.....	A.....	**30	36	A-8
Cutlery, table.....	P.....	C.....	130	355	C-13
Cyanide of potash.....	P.....	FL.....	580	1636	A-18
Cyanide of soda.....	P.....	FL.....	605	1654	A-18
Cyanite or kyanite.....	P.....	FL.....	525	1635	A-16
Dalmatian (see Drug industry, crude botanical).....	P.....	FL.....	500	1577	FL-17
Dammar.....	P.....	FL.....			
Dandelion root:					
Ground.....	P.....	G.....	233	775	A-7
Unground.....	P.....	FL.....	473	775	A-7
Deals, sawed, planed, tongued and grooved.....	Ms.....	FL.....	647	404, 1683	FL-37

*List of principal subjects investigated and reported upon by the United States  
Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Deck and bulb beams, iron or steel.....	P.....	C.....	104	312	C-3
Dental instruments.....	P.....	C.....	**167	359	B-10
Dextrine.....	P.....	A.....	36	81	A-9
Diamond bort.....	P.....	N.....	337	1501	B-3
Diamond dust.....	P.....	N.....	337	1429	B-3
Diamonds, glaziers' and engravers'.....	P.....	FL.....	474	1561	N-1
Dice.....	P.....	N.....	341	1412	N-7
Die blocks or blanks, iron or steel.....	P.....	C, FL.....	110, 613	304	C-7
Digest of commercial treaties (report).....	P.....				M. S.
Digitalis ( <i>see</i> Drug industry, crude botanical).					
Dimity and dimity checks ( <i>see</i> Cotton cloths, countable).					
Divi-divi.....	P.....	FL.....	475	1563	A-8
Divi-divi extract.....	P.....	A.....	**30	36	A-8
Domestic potato products industry (report).....	P.....				W. M.
Dominoes.....	P.....	N.....	341	1413	N-7
Dragon's blood.....	P.....	FL.....	476	1577	FL-17
Drain tile.....	P.....	B.....	**81	**214	B-7
Drawers, cotton.....	P.....	I.....	261	**916	I-6
Dress steels.....	P.....	C.....	114	336	C-8
Druggets and bookings.....	P.....	K.....	301	1118	K-6
Drug industry, crude botanical (report).....	P.....				A-7
Druggists' sundries, rubber.....	P.....	N.....	368	**1436	N-21
Drugs exempt from duty (report).....	P.....				FL-2
Dumping and unfair foreign competition in the United States and Canada's antidumping law (report).....	P.....				W. M.
Dutch metal leaf.....	P.....	C.....	146	379	C-18
Dye industry 1918 and 1919, costs of production in (report).....	P.....				T. I. S.-15
Dyes and coal-tar chemicals, census of (reports): 1917.....	P*				T. I. S.-6
1918.....	P.....				T. I. S.-11
1919.....	P.....				T. I. S.-22
1920.....	P.....				T. I. S.-23
Dyes and other coal-tar chemicals (report).....	P.....				M. S.
Dyes and related coal-tar chemicals (report).....	P*				W. M.
Dyestuff situation in the textile industries (report).....	P*				T. I. S.-2
Earthenware:					
Common yellow, brown, gray.....	P.....	B.....	78	210	B-6
Rockingham.....	P.....	B.....	**78	**210, **212	B-6
Sanitary.....	P.....	B.....	**79, **80	**212, **213	B-6
White and cream colored.....	P.....	B.....	79	212	B-6
Earths, clays and (report).....	P.....				B-4
Earthy and mineral substances, manufactured (report).....	P.....				B-7
Ebony:					
Rough.....	P.....	FL.....	648	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Eel grass.....	P.....	N.....	372	1440	N-22
Eggs and egg products.....	Ms.....	G.....	203, 204, 478	713	G-13
Electrical apparatus and supplies (survey).....	Ms.....				C-31
Electrical insulators.....	P.....	B.....	**79	1439	B-6
Electrodes, carbon.....	P.....	B.....	81	216	B-8
Embroidery cotton.....	P.....	I.....	251	902	T. I. S. 12
Embroidery machines and parts of.....	P.....	C.....	165	372	C-23
Emery:					
Grains.....	P.....	N.....	343	1415	B-3
Manufactures of.....	P.....	N.....	343	1415	B-3
Ore.....	P.....	FL.....	479	1565	B-3
Wheels.....	P.....	N.....	343	1415	B-3
Enamel, fusible.....	P.....	B.....	96	231	A-15
Enamel ware.....	P.....	C.....	134	339	C-15
Enflourage greases.....	P.....	A.....	49	1566	A-14
Engines, internal-combustion.....	P.....	C.....	**167	**393	C-29
Engines, steam.....	P.....	C.....	165	372	C-29
Engraved forms for bonds.....	P.....	FL.....	612	**341	C-15
Engraved plates.....	P.....	C.....	137	341	C-15
Envelopes.....	P.....	M.....	324, 327	**1305, 1308	M-4, M-6
Epsom salts.....	P.....	A.....	42	47	A-10
Ergot.....	P.....	A.....	28	34	A-7
Essential and distilled oils.....	P.....	A, FL.....	46, 561	54, 1625	A-12
Ethers and esters.....	P.....	A.....	29	22, 35	A-7
Ethyl acetate.....	P.....	A.....	29	35	A-7
Ethyl chloride.....	P.....	A.....	29	35	A-7
Eucalyptus oil.....	P.....	A.....	**46	54	A-12
Explosives, n. s. p. f.....	P.....	FL.....	501	1578	FL-18

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Export duties, colonial ( <i>see</i> Colonial tariff policies).					
Extra-thread fabrics (clipped spots, lappets, swivels) ( <i>see</i> Cotton cloths, countable).					
Eyeglasses.....	P.....	B.....	91	225	B-10
Plans:					
All kinds except palm leaf.....	P.....	N.....	349	1422	N-11
Palm leaf.....	P.....	FL.....	480	1567	N-11
Farm tractors.....	P.....	FL.....	**391	**1504	FL-3
Farm wagons.....	P.....	FL.....	391	1504	FL-3
Fats commonly used in soap, etc.....	P.....	FL.....	498	**49**50**53	FL-15
Leathers, artificial.....	P.....	N.....	347	1419	N-9
Feldspar:					
Crude.....	P.....	FL.....	**540	**214	B-4
Manufactured.....	P.....	B, FL.....	**81, 549	**207, 1614	B-4
Felt, adhesive, for sheathing vessels.....	P.....	FL.....	481	1302	FL-14
Fence posts of wood.....	Ms.....	FL.....	647	406	FL-37
Fence rods, wire.....	P.....	C.....	113	315	C-8
Fennel oil.....	P.....	A.....	46	**54	A-12
Ferrocyanide blues.....	P.....	A.....	52	65	A-15
Ferro-alloys:					
Chromite.....	P.....	FL.....	448	1544	FL-28
Manganese.....	P.....	FL.....	**540	302	FL-28
Molybdenum.....	P.....	FL.....	**549	302	FL-28
N. s. p. f.....	P.....	FL.....	549	1614	FL-28
Tungsten-bearing.....	P.....	FL.....	633	302	FL-28
Vanadium.....	P.....	FL.....	**549	1614	FL-28
Ferromanganese.....	P.....	FL.....	518	302	C-1
Fertilizer, raw materials exempt from duty.....	P.....				FL-5
Fiber ware, indurated.....	P.....	N.....	355	1303	N-11
Fibers.....	In prog..	FL.....	{ 285, 159, 485, 497 }	1575	FL-16
Fibrin.....	P.....	FL.....	482	1569	FL-15
Field glasses.....	P.....	B.....	93	228	B-10
Filberts.....	Ms.....	G.....	224	755	G-27
Files.....	P.....	C.....	131	362	C-13
Films, sensitized but not exposed.....	P.....	FL.....	576	1450	N-25
Filter masse.....	P.....	M.....	321	1303	M-1
Firearms and parts.....	P.....	C, FL.....	{ 132, 133, 597 }	364-366, 1648	C-14
Firewood.....	Ms.....	FL.....	647	1683	FL-37
Fireworks.....	P.....	N.....	344	1416	N-8
Fishing tackle.....	P.....	C.....	136	344	C-15
Fish in oil and in other substances.....	Ms.....	G.....	216	721	G-19
Fish oils.....	P.....	A.....	44	49	A-11
Flavin.....	P.....	FL.....	**624	**36	A-8
Flavoring extracts.....	P.....	A.....	49	37	A-14
Flax.....	P.....	FL.....	485	1001	FL-16
Flax yarn.....	Ms.....	J.....	270	1004	J-1
Flaxseed ( <i>see</i> Agricultural staples and the tariff).					
Flint and flint stones.....	P.....	FL.....	486	1571	B-3
Flitters.....	P.....	C.....	146	379	C-18
Floats.....	P.....	C.....	131	362	C-13
Floor coverings other than wool ( <i>see also</i> Carpets, Matting, and Rugs):					
Cocoa mats and matting.....	P.....	N.....	371	1021	J-3
Cotton.....	P.....	K.....	302	1020	J-3
Fiber (paper) and wool fiber, ingrain.....	P.....	K.....	{ 298, 299, 503 }	1118	J-3
Fiber (paper), made on plain looms.....	P.....	M.....	323, 332	1020	J-3
Flax, hemp, jute, or other vegetable fiber.....	P.....	J.....	273	1020	J-3
Linoleum and oilcloth.....	P.....	J.....	276	1018	J-3
Straw, grass, or other vegetable substances.....	P.....	J.....	272	1020	J-3
Floor coverings, wool ( <i>see</i> Carpets; <i>also</i> Rugs).					
Floral essences.....	P.....	A.....	49	1566	A-14
Floral waters.....	P.....	A.....	48	58	A-14
Flour, wheat ( <i>see</i> Agricultural staples and the tariff).					
Flowers and millinery ornaments.....	P.....	N.....	317	1419	N-9
Flues.....	P.....	C.....	127	328	C-12
Fluorspar.....	P.....	B.....	76	207	B-4
Forgings, iron or steel.....	P.....	C.....	106	319	C-5
Formaldehyde or formalin.....	P.....	A.....	32	38	A-2
Formic acid.....	P.....	A.....	1	1	A-1
Fowls, land and water.....	Ms.....	FL.....	416	711	G-30
Frames.....	P.....	C.....	104	312	C-3
France, colonial tariffs ( <i>see</i> Colonial tariff policies).					

*List of principal subjects investigated and reported upon by the United States  
Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Free importations for scientific purposes.....	P.....	FL.....	573,653,654	1531 1660 1686,1687	B-10
Free zones in ports of the United States (report).....	P.....				M. S.
Fuller's earth.....	P.....	B.....	76	207	B-4
Fulminate and fulminating powder.....	P.....	FL.....	490	1516	FL-18
Fur hats, bonnets, or hoods.....	P.....	N.....	354	1427	N-13
Furnaces, welded, cylindrical.....	P.....	C.....	127	328	C-12
Furniture, wood, house or cabinet.....	P.....	D.....	176	414	D-4
Furs:					
Dressed.....	P.....	N.....	348	1420	N-10
For hatters' use.....	P.....	N.....	348	1421	N-10
Manufactures of, prepared for use as materials	P.....	N.....	348	1420	N-10
Undressed.....	P.....	FL.....	491	1573	N-10
Fusains.....	P.....	A.....	63	1449	A-15
Fusel oil.....	P.....	A.....	33	4	A-9
Fusible enamels.....	P.....	A.....	96	231	A-15
Fustic, extract for dyeing and tanning.....	P.....	A.....	**310	36	A-8
Gall nuts.....	P.....	FL.....	624	1563	A-1
Gallic acid.....	P.....	A.....	1	1	A-1
Galvanized sheets.....	P.....	C.....	109	309	C-4
Gambier.....	P.....	FL.....	492	1510	A-8
Games.....	P.....	N.....	342	1414	N-7
Garlic industry (see Onion and garlic industry).					
Garters:					
Cotton.....	In prog.	I.....	262	912	I-7
Silk.....	P.....	L.....	316	1207	L-2
Gas-mantle, incandescent, industry (report).....	P.....				C-22
Galatin.....	P.....	A.....	34	39	T. I. S.-14
Gentian.....	P.....	A.....	39	33	A-9
German silver.....	P.....	C.....	145	377	A-7, A-10
Germany, colonial tariffs (see Colonial tariff policies).					C-19
Gill nettings:					
Cotton.....	P.....	I.....	266	**920	J-2
Flax, hemp, ramie.....	P.....	J.....	271	1006	J-2
Ginghams (see Cotton cloths, countable).					
Ginseng (see Drug industry, crude botanical).					
Girders, iron or steel.....	P.....	C.....	101	312	C-3
Glass and glassware:					
Blown ware.....	P.....	B.....	84	218	B-9
Bottles.....	P.....	B.....	83, 84	217, 218	B-9
Chemical.....	P.....	B, FL.....	**84, **573	**214, **217, **218, **1686	B-10
Cylinder, polished.....	P.....	B.....	86	220	B-9
Cylinder, unpolished.....	P.....	B.....	85	219	B-9
Plate, bent, ground, or otherwise manufac- tured.....	P.....	B.....	90	224	B-9
Plate, cast, polished.....	P.....	B.....	88	222	B-9
Plate, rolled and rough.....	P.....	B.....	87	221	B-9
Silvered.....	P.....	B.....	89, 90	223, 224	B-9
Window, bent, ground, or otherwise manu- factured.....	P.....	B.....	90	**224	B-9
Window, polished.....	P.....	B.....	90	**220	B-9
Window, unpolished.....	P.....	B.....	85	219	B-9
Windows, stained.....	P.....	B.....	95	230	B-9
Glass industry as affected by the war (report).....	P*				T. I. S.-5
Glass pot clay.....	P.....	FL.....	450	207	B-4
Glauber salt.....	P.....	A.....	67	78	A-18
Gloves:					
Cotton.....	P.....	L.....	260	914	I-6
Horsehide.....	P.....	FL.....	495	1433	N-18
Leather.....	P.....	N.....	361-364,	1433	N-18
Silk.....	P.....	L.....	**317	1208	L-2
Wool.....	P.....	K.....	288	1115	K-3
Glucose.....	P.....	E.....	178	504	E-2
Glue.....	P.....	A.....	34	39	A-9
Glycerin.....	P.....	A.....	35	40	A-9
Glycerophosphoric acid.....	P.....	A.....	18	24	A-6
Goats (see Wool-growing industry).					
Goggles.....	P.....	B.....	91	225	B-10
Goldbeaters' molds and skins.....	P.....	FL.....	496	1574	N-19
Gold:					
Articles, n. s. p. f.....	P.....	C.....	167	393	N-1
Bullion.....	P.....	FL.....	436	1537	FL-20
Coins.....	P.....	FL.....	458	1550	FL-20

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Gold—Continued.					
Leaf.....	P.....	C.....	148	380	C-18
Ores.....	P.....	FL.....	565	1628	FL-20
Sweeps.....	P.....	FL.....	565	1628	FL-20
Goldenseal ( <i>see</i> Drug industry, crude botanical).					
Gramophones.....	P.....	N.....	374	1441	N-23
Granadilla:					
Rough.....	P.....	FL.....	648	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Grape sugar.....	P.....	E.....	178	504	E-2
Graphite.....	P.....	FL.....	579	211	FL-24
Grass, manufactures of, n. s. p. f.....	P.....	N.....	368	1437	N-21
Grasses and fibers.....	In prog.....	J, FL.....	{ 285, 459, 485, 497 }	1575	FL-16
Greases, commonly used in soap, etc.....	P.....	FL.....	498	**49, **50, 53	FL-15
Grindstones.....	P.....	B.....	100	236	B-3
Grit, iron or steel.....	P.....	C.....	112	335	B-3
Great Britain, colonial tariffs ( <i>see</i> Colonial tariff policies).					
Gross-Almerode glass pot clay.....	P.....	FL.....	450	207	B-4
Guano.....	P.....	FL.....	499	1576	FL-5
Guaiacol carbonate.....	P.....	A.....	18	26	A-6
Gum arabic.....	P.....	A.....	36	1577	A-9
Gun blocks, wood.....	Ms.....	FL.....	647	1683	FL-37
Gunpowder.....	P.....	FL.....	501	1578	FL-18
Gun wads.....	P.....	N.....	350	1423	N-11
Gurjun balsam.....	P.....	A.....	** 9	** 10	A-3
Gutta-percha:					
Crude.....	P.....	FL.....	502	1587	FL-17
Manufactures of.....	P.....	N.....	368	1437	N-21
Gypsum.....	P.....	B.....	74	205	B-2
Hair:					
Curled, for mattresses.....	P.....	N.....	352	1425	N-12
Horse, cattle, and other animal.....	P.....	FL.....	503	1579	N-12
Human.....	P.....	N.....	351	1424	N-12
Haircloth.....	P.....	N.....	353	1426	N-12
Hammers, blacksmiths', etc.....	P.....	C.....	122	326	C-9
Handbook of commercial treaties between all nations (report).					M. S.
Handkerchiefs:					
Cotton.....	P.....	I.....	255	917	I-5
Linen.....	In prog.....	J.....	282	1015	J-6
Silk.....	P.....	L.....	315	1209	L-2
Handle bolts.....	Ms.....	FL.....	647	1683	FL-37
Hardware, umbrella.....	P.....	C.....	141	342	C-8
Hare, skins of.....	P.....	FL.....	603	1573	N-10
Harness and saddle leather.....	P.....	FL.....	530	1600	N-15
Harness and saddlery.....	P.....	FL.....	530	1600	N-18
Hassocks.....	P.....	K.....	303	1119	K-6
Hat bands, silk.....	P.....	L.....	316	1207	L-2
Hats:					
Fur.....	P.....	N.....	354	1427	N-13
Straw.....	P.....	N.....	335	1406	N-2
Hatters' plush.....	P.....	N.....	382	1453	L-1
Hay ( <i>see</i> Agricultural staples and the tariff).					
Heading blocks, wood.....	Ms.....	FL.....	647	406	FL-37
Heading bolts, wood.....	Ms.....	FL.....	647	406	FL-37
Healds, cotton.....	In prog.....	I.....	262	912	I-7
Healing plasters.....	P.....	A.....	50	61	A-14
Heating apparatus, electric.....	Ms.....	C.....	167	339	C-31
Hemlock:					
Bark.....	P.....	FL.....	624	1563	A-8
Extract.....	P.....	FL.....	624	36	A-8
Hemp.....	Ms.....	FL.....	485	1001	FL-16
Hemp yarn.....	P.....	J.....	270	1004	J-1
Hemp-seed oil.....	P.....	A.....	45	50	A-11
Henbane ( <i>see</i> Drug industry, crude botanical).					
Henocquen.....	Ms.....	FL.....	** 497	** 1575	FL-16
Herring oil.....	P.....	A.....	44	49	A-11
Hide rope.....	In prog.....	FL.....	505	1581	N-18
Hides and skins.....	Ms.....	G.....	506,603,604	1582, 1653	
Hinges.....	P.....	C.....	123	(**)	C-11
Hobnails.....	P.....	FL.....	554	331	C-8
Hoesheads.....	P.....	D.....	171	409	D-2
Hollow ware:					
Aluminum.....	P.....	C.....	134	339	C-16
Cast, iron or steel.....	P.....	C.....	125	327	C-11
Enameled, iron or steel.....	P.....	C.....	134	339	C-15
Hones.....	P.....	FL.....	507	1583	B-3
Honey.....	P.....	G.....	206	717	E-2

## List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Hoods, fur	P	N	354	1427	N-13
Hoods, unmanufactured	P	FL	508	1584	FL-5
Hooks and eyes	P	C	151	347	C-20
Hoop iron or steel	P	C	107, 109	309, 313	C-4
Hoop poles, wood	Ms.	FL	647	**414	FL-37
Hoop poles, wood	Ms.	FL	617	**414	FL-37
Horns and parts of	P	FL	511	1585	N-21
Horse hair, n. s. p. f.	P	FL	503	1579	N-12
Horse, mule, and ox shoes	Ms.	FL	551	333	FL-1
Horseshoe-nail rods	P	FL	554	**315	C-8
Horseshoe nails	P	FL	554	331	C-8
Hose:					
Hydraulic or flume, cotton	P	J	274	1007	J-4
Rubber, chief value	P	N	**368	**1437	J-4
Rubber, vegetable fiber, chief value	P	J	274	1007	J-4
Hosiery:					
Cotton	P	L	259, 260	915	I-6
Silk	P	L	**317	1208	L-2
Wool	P	K	288	1115	K-3
Hospital utensils	P	C	134	339	C-15
Hubs for wheels, wood	Ms.	FL	647	406	FL-37
Human hair	P	N	351	1424	N-12
Hydrastis (see Drug industry, crude botanical).					
Hydrochloric acid	P	FL	387	1501	FL-1
Hydrocyanic acid	P	FL	387	**1	FL-1
Hydrofluoric acid	P	FL	387	1501	FL-1
Hyoscyamus (see Drug industry, crude botanical).					
Hyposulphite of soda (see Sodium sulphite).					
Ice	P	FL	512	1586	FL-6
Ichthyol oil	P	FL	561	**5	A-12
Incandescent gas mantle industry	P				C-22
Incandescent lamps	P	B	95	229	B-9
Incandescent light bulbs	P	B	95	229	B-9
India rubber:					
Crude and scrap	P	FL	513	1587	FL-17
Manufactures of, n. s. p. f.	P	N	368	1437	N-21
Indurated fiber ware	P	N	355	1303	M-4
Ingots, steel	P	C, FL	110, 613	304	C-7
Ink and ink powders	P	A	37	41	A-9
Insect powders (see Drug industry, crude botanical).					
Integuments	P	FL	419	706	N-19
Interim legislation (report)	P*				M. S.
International commercial law (see Handbook of commercial treaties).					
Intestines of animals and fish sounds	P	FL	419	706, 1524	N-19
Iodine, crude or resublimed	P	FL	515	42	A-9
Iodoform	P	A	38	**5	A-9
Ipecac	P	FL	516	32, 1502	A-7, FL-2
Iridium, crude	P	FL	517	1589	FL-20
Iron:					
Band	P	C, FL	{107, 109, 509}	309, 313, 314	C-4
Bars	P	C	103	303	C-2
Blooms	P	FL	518	303	C-4
Chromite of	P	FL	448	1544	FL-28
Hollow ware, cast	P	C	125	327	C-11
Hoop	P	FL	509	314	C-4
Kettledge	P	FL	518	301	FL-21
Loops	P	FL	518	303	C-4
Malleable castings	P	C	125	327	C-11
Ore	P	FL	518	1590	FL-21
Oxide	P	A	55	1663	A-15
Pigs	P	FL	518	301	FL-21
Round	P	C	103	303	C-2
Scrap, wrought	P	FL	518	301	FL-21
Slabs	P	FL	518	303	C-4
Sulphate or copperas	P	FL	462	1568	FL-8
Sulphuret of	P	FL	617	1663	FL-18
Wrought	P	FL	518	301	FL-21
Iron or steel:					
Air rifles	P	C	132	**364	C-14
Anchors	P	C	106	319	C-5
Angles	P	C	104	312	C-3
Antifriction balls and bearings	P	C	106	321	C-5
Anvils	P	C	118	325	C-9
Automobiles and parts	P	C	119	369	C-10

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Iron or steel—Continued.					
Axes.....	P	C	**167	**393	C-13
Axes.....	P	C	121	323	C-10
Ball bearings.....	P	C	106	321	C-5
Barbed wire.....	P	FL	645	1680	C-8
Barrel hoops.....	P	C	107	313	C-4
Beams.....	P	C	104	312	C-3
Bicycles and parts thereof.....	P	C	120	371	C-10
Billets.....	P	C, FL	110, 613	303, 304	C-7
Blacksmiths' hammers, tongs, and sledges.....	P	C	122	326	C-9
Blades, cutlery.....	P	C	128-130	354, 355	C-13
Blanks.....	P	C, FL	110, 613	304	C-7
Blooms.....	P	C, FL	{ 110, 518, 613 }	303, 304	C-2, C-7
Brads.....	P	FL	554	331	C-8
Budding knives.....	P	C	128	354	C-13
Building forms.....	P	C	104	312	C-3
Bulb beams.....	P	C	124	312	C-3
Card clothing.....	P	C	124	337	C-8
Car-truck channels.....	P	C	104	312	C-3
Chains.....	P	C	126	329	C-12
Channels.....	P	C	104	312	C-3
Clasp knives.....	P	C	128	354	C-13
Columns and posts.....	P	C	104	312	C-3
Cotton ties.....	P	FL	509	314	C-4
Crowbars.....	P	C	122	326	C-9
Deck beams.....	P	C	104	312	C-3
Engraved plates.....	P	C	137	341	C-15
Fence rods, wire.....	P	C	113	315	C-8
Files and file blanks.....	P	C	131	362	C-13
Fishing tackle.....	P	C	136	344	C-15
Floats.....	P	C	131	362	C-13
Flues.....	P	C	127	328	C-12
Forgings.....	P	C	106	319	C-5
Frames.....	P	C	104	312	C-3
Furnaces, welded, cylindrical.....	P	C	127	328	C-12
Girders.....	P	C	104	312	C-3
Grit.....	P	C	112	335	B-3
Hobnails.....	P	FL	554	331	C-8
Hoop.....	P	C, FL	{ 107, 109, 509 }	309, 313	C-4
Hollow ware, enameled.....	P	C	134	339	C-15
Horseshoe nails.....	P	FL	554	331	C-8
Horseshoe-nail rods.....	P	FL	554	**315	C-8
Horse, mule, and ox shoes.....	Ms.	FL	554	333	FL-
Hospital utensils.....	P	C	134	339	C-15
Joists.....	P	C	104	312	C-3
Kitchen utensils.....	P	C	134	339	C-15
Manicure knives.....	P	C	128	354	C-13
Motor cycles and parts.....	P	C	120	371	C-10
Muskets.....	P	C	132	364	C-14
Nail rods.....	P	C	113	315	C-8
Nuts.....	P	C	123	330	C-11
Plates—					
Boiler.....	P	C	105	307	C-4
Crucible plate steel.....	P	C	105	**304	C-4
Saw.....	P	C	105	**304	C-4
Pocketknives.....	P	C	128	354	C-13
Pruning knives.....	P	C	128	354	C-13
Railway bars and rails.....	P	FL	587	322	C-6
Railway fishplates.....	P	C	108	322	C-6
Railway wheels.....	P	C	142	324	C-15
Rasps.....	P	C	131	362	C-13
Razors.....	P	C	128	358	C-13
Rifles.....	P	C	132	364	C-14
Rivet rods.....	P	C	113	315	C-8
Rivets, lathed.....	P	C	138	332	C-11
Roller bearings.....	P	C	106	321	C-5
Sand.....	P	C	112	335	B-3
Sashes.....	P	C	104	312	C-3
Saws.....	P	C	139	340	C-4
Scissors and shears.....	P	C	128	357	C-13
Screws.....	P	C	140	338	C-8
Scroll.....	P	C	107, 109	309, 313	C-4
Sheets.....	P	C	{ 105, 109, 110 }	308-310	C-4

*List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Iron or steel—Continued.					
Shot.....	P	C.....	112	335	B-3
Shotgun barrels.....	P	FL.....	597	1648	C-14
Shotguns.....	P	C.....	132, 133	364, 365	C-14
Side arms.....	P	C.....	129	363	C-13
Skelp.....	P	C.....	105	307, 308	C-4
Slabs.....	P	FL.....	518, 613	303, 304	C-4
Spikes.....	P	FL.....	554	331	C-8
Spiral nut locks.....	P	C.....	123	330	C-11
Splice bars.....	P	C.....	108	322	C-6
Sprigs.....	P	FL.....	554	**331	C-8
Sprocket chains.....	P	C.....	126	329	C-12
Staples.....	P	FL.....	554	331	C-8
Stays.....	P	C.....	127	328	C-12
Strips.....	P	C.....	{ 105, 109, 110 }	**313	C-4
Structural shapes.....	P	C.....	104	312	C-3
Studs.....	P	C.....	138	332	C-11
Swords and sword blades.....	P	C.....	129	363	C-13
Table utensils.....	P	C.....	134	339	C-15
Tacks.....	P	FL.....	554	331	C-8
Taggers tin.....	P	C.....	109	310	C-4
Tanks.....	P	C.....	127	328	C-12
Terneplate.....	P	C.....	109, 115	310, 311	C-4
Ties, cotton.....	P	FL.....	509	314	C-4
Tin plate.....	P	C.....	109, 115	310, 311	C-4
Tires, locomotive.....	P	C.....	142	324	C-15
Track tools.....	P	C.....	122	326	C-9
Tubes, finished, n. s. p. f.....	P	C.....	127	328	C-12
Tubes, welded.....	P	C.....	127	328	C-12
Umbrella hardware.....	P	C.....	141	342	C-8
Vessels, cylindrical or tubular.....	P	C.....	127	328	C-12
Washers.....	P	C.....	123	330	C-11
Wedges.....	P	C.....	122	326	C-9
Wire—					
Barbed.....	P	FL.....	645	1680	C-8
Flat.....	P	FL.....	645	317	C-8
Insulated cable.....	P	C.....	114	316	C-8
Fencing.....	P	FL.....	645	317	C-8
Heddles or healds.....	P	C.....	114	316	C-8
Manufactures of, n. s. p. f.....	P	C.....	114	393	C-8
Rods.....	P	C.....	113	315	C-8
Rope and strand.....	P	C.....	114	316	C-8
Round.....	P	C.....	114	316	C-8
Iron-oxide pigment, n. s. p. f.....	P	A.....	55	70	A-15
Iron sulphate or copperas.....	P	FL.....	462	1568	FL-8
Isinglass.....	P	A.....	34	39	A-9
Istle or tampeco.....	In prog..	FL.....	497	1575	FL-16
Italy, colonial tariffs (see Colonial tariff policies).					
Ivory and manufactures of, n. s. p. f.....	P	N.....	369	1438	N-21
Ivy or laurel root.....	Ms.....	D.....	168	403	D-1
Jacquard paper.....	P	M.....	328	1309	M-7
Jacquard-woven fabrics (see Cotton cloths, count-able).					
Jalap.....	P	FL.....	519	32, 1502	A-7, FL-2
Japan, colonial tariffs (see Colonial tariff policies).					
Japan, trade during the war (report).....	P				M. S.
Japanese and other crêpes (see Cotton cloths, count-able).					
Japanese cotton industry and trade.....	P				I-10
Jasmine oil.....	P	A.....	46	**54	A-12
Jet:					
Manufactures of.....	P	B.....	98	233	B-11
Unmanufactured.....	P	FL.....	520	1592	N-1
Jewelry and parts and findings.....	P	N.....	356	1428	N-1
Joists, iron or steel.....	P	C.....	104	312	C-3
Joss sticks and light.....	P	FL.....	521	1593	N-8
Juglandium oil.....	P	FL.....	561	**54	A-12
Juniper oil.....	P	A.....	46	**54	A-12
Jute and jute butts.....	Ms.....	FL.....	497	1575	FL-16
Jute cloth.....	P	J.....	{ 279, 284, 408 }	1008, 1010, 1517 }	J-7
Jute yarn.....	P	J.....	267	1003	J-1
Kaimite (see also Potash).....	P	FL.....	525	1635	A-16
Kaolin.....	P	B.....	76	207	B-4
Kapoc.....	Ms.....	FL.....	**497	**1575	FL-16
Kauri.....	P	FL.....	500	1577	FL-17
Kelp.....	P	FL.....	523	1595	A-16

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Kentledge.....	P.....	FL.....	518	301	FL-21
Kieserite.....	P.....	FL.....	524	1596	FL-22
Kindling wood.....	Ms.....	FL.....	647	**1683	FL-37
Kitchen utensils.....	P.....	C.....	134	339	C-15
Knit goods:					
Cotton.....	P.....	I.....	{ 259-261, * 266 }	913-916	I-6
Silk.....	P.....	L.....	317, 318	1208	L-2
Wool.....	P.....	K.....	288	1115	K-3
Knitting machines.....	P.....	C.....	**167	**372	C-29
Knives, pen, pocket, etc.....	P.....	C.....	128	354	C-13
Labels for garments.....	In prog.....	I.....	262	912	I-7
Lac, shell.....	P.....	FL.....	526	1597	FL-17
Lace machines and parts of.....	P.....	C.....	165	372	C-29
Lacings, boot, shoe, and corset.....	In prog.....	I.....	262	912	I-7
Lactarene.....	P.....	FL.....	527	1598	FL-15
Lactic acid.....	P.....	A.....	1	1	A-1
Lahn.....	P.....	C.....	150	382	C-18
Lame.....	P.....	C.....	150	382	C-18
Lamp wicking.....	In prog.....	I.....	262	912	I-7
Lancewood:					
Rough.....	P.....	FL.....	648	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Lanolin.....	P.....	A.....	44	**49	A-11
Lard, lard oil, lard substitutes and compounds.....	Ms.....	G.....	528	703	
Last blocks, wood.....	Ms.....	FL.....	647	**406	FL-37
Laths.....	Ms.....	FL.....	647	1683	FL-37
Laurel-root wood.....	Ms.....	D.....	168	403	D-1
Lavender oil.....	P.....	A.....	46	1625	A-12
Lead:					
Acetate.....	P.....	A.....	57	44	A-15
Articles of.....	P.....	C.....	153	389	C-21
Manufactures of, n. s. p. f.....	P.....	C.....	167	393	C-21
Metallic.....	P.....	C.....	**153	**389	C-21
Nitrate of.....	P.....	A.....	57	44	A-15
Ore.....	P.....	C.....	152	388	C-21
Oxides.....	P.....	A.....	56	69	A-15
League of Nations mandates (see Colonial tariff policies).					
Leather:					
Bags, baskets, and belts.....	P.....	N.....	360	1432	N-18
Belting and sole.....	P.....	FL.....	*530	**1600	N-15
Bookbinder's.....	P.....	FL.....	**530	**1600	N-17
Boot and shoe cut stock.....	P.....	FL.....	530	**1600	N-18
Boots and shoes.....	P.....	FL.....	530	1601	N-18
Case, bag, and strap.....	P.....	FL.....	*530	**1600	N-16
Chamois.....	P.....	N.....	359	1431	N-17
Fancy.....	P.....	FL.....	530	**1600	N-17
Glove.....	P.....	N.....	359	1431	N-17
Gloves.....	P.....	NFL.....	{ 361-365, 495 }	1433	N-18
Harness.....	P.....	FL.....	530	**1600	N-15
Harness and saddlery.....	P.....	FL.....	530	1600	N-18
Leather, n. s. p. f.....	P.....	FL.....	530	1600	N-17
Manufactures of, n. s. p. f.....	P.....	N.....	360	1432	N-18
Patent.....	P.....	FL.....	*530	*1600	N-16
Pianoforte.....	P.....	N.....	359	1431	N-17
Rough.....	P.....	FL.....	*530	**1600	N-15
Shoe laces.....	P.....	FL.....	530	1600	N-18
Split.....	P.....	FL.....	*530	1600	N-16
Upholstery.....	P.....	N.....	359, 530	1431, **1600	N-16
Upper.....	P.....	FL.....	*530	1600	N-16
Leatherboards.....	P.....	FL.....	530	1302, 1313	M-1
Leeches.....	P.....	FL.....	531	1602	FL-2
Lemon juice, etc.....	P.....	FL.....	532	1604	A-1
Lemon oil.....	P.....	A.....	46	54	A-12
Lemon-grass oil.....	P.....	A.....	46	1625	A-12
Lemons.....	Ms.....	G.....	220	743	G-27
Leno-woven fabrics (see Cotton cloths, countable).					
Lenses.....	P.....	B.....	92	226	B-10
Lentils.....	Ms.....	G.....	197	765	G-8
Levant wormseed (see Santonin).					
Licorice:					
Extracts of.....	P.....	A.....	40	45	A-7, A-10
Root.....	P.....	A.....	39	33	A-7, A-10
Light bulbs, incandescent.....	P.....	B.....	95	229	B-9
Lighting fixtures (see Electrical apparatus and supplies).					
Lignum-vitæ:					
Rough.....	P.....	FL.....	648	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Lime.....	P.....	B.....	73	204	B-2

## List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Lime, citrate of.....	P.....	A.....	41	46	A-1
Lime oil.....	P.....	A.....	46	1625	A-12
Limestone-rock asphalt.....	P.....	FL.....	534	1603	FL-7
Linen:					
Collars and cuffs.....	In prog.	J.....	277	1016	J-6
Fabrics.....	In prog.	J.....	280, 283, 284	1009-1012	J-8
Handkerchiefs.....	In prog.	J.....	282	1015	J-6
Thread.....	P.....	J.....	269	1004	J-1
Linoleum and floor oilcloth.....	P.....	J.....	276	1018	J-3
Linotype machines.....	P.....	FL.....	441	1541	FL-3
Linseed oil.....	P.....	A.....	45	50	/A-11; (T. I. S-20.
Lithographic plates.....	P.....	C.....	137	341	C-15
Lithographic stones.....	P.....	FL.....	535	1606	C-15
Lithopone.....	P.....	A.....	61	74	/A-4; (T. I. S-18.
Litmus.....	P.....	FL.....	536	1510	A-8
Loadstones.....	P.....	FL.....	537	1607	FL-21
Lock washers.....	P.....	C.....	123	330	C-11
Locomotives, steam.....	P.....	C.....	165	372	C-29
Logwood:					
Crude.....	P.....	FL.....	**624	1563	A-8
Extract.....	P.....	A.....	30	36	A-8
Logs.....	Ms.....	FL.....	647	402, 404, 1682	FL-37
London purple.....	P.....	FL.....	569	59	FL-8
Loom harness.....	In prog.	I.....	262	912	I-7
Loops, iron.....	P.....	FL.....	518	303	C-4
Lumber, sawed, planed, tongued and grooved.....	P.....	FL.....	647	1683	FL-37
Macaroni, vermicelli, and all similar preparations.....	P.....	G.....	191	726	G-3
Mace oil.....	P.....	A.....	**46	**54	A-12
Machinery:					
Agricultural implements.....	P.....	FL.....	391	1504	FL-3
Cash registers.....	P.....	FL.....	441	1541	FL-3
Cotton gins.....	P.....	FL.....	391	1504	FL-3
Cotton machinery.....	P.....	C.....	**167	**372	C-29
Cream separators.....	P.....	FL.....	441	**372, **1504	FL-3
Embroidery machines.....	P.....	C.....	165	**372	C-29
Engines, internal combustion.....	P.....	C.....	**167	**393	C-29
Engines, steam.....	P.....	C.....	165	372	C-29
Farm tractors.....	P.....	FL.....	**391	**1504	FL-3
Farm wagons.....	P.....	FL.....	391	1504	FL-3
Knitting machines.....	P.....	C.....	**167	372	C-29
Lace and braid machines.....	P.....	C.....	165	372	C-29
Linotype machines.....	P.....	FL.....	441	1541	FL-3
Locomotives, steam.....	P.....	C.....	165	372	C-29
Miscellaneous machinery.....	P.....	C.....	167	372	C-29
Printing presses.....	P.....	C.....	165	**372	C-29
Sand-blast machines.....	P.....	FL.....	441	1541	FL-3
Sewing machines.....	P.....	FL.....	441	1541	C-29
Shoe machinery.....	P.....	FL.....	441	1541	FL-3
Silk machinery.....	P.....	C.....	**167	**372	C-29
Sludge machines.....	P.....	FL.....	441	1541	FL-3
Sugar machinery.....	P.....	FL.....	391	1504	FL-3
Tar and oil spreading machines.....	P.....	FL.....	441	1541	FL-3
Textile machinery (general).....	P.....	C.....	167	372	C-29
Tools, machine.....	P.....	C.....	165	372	C-29
Typesetting machines.....	P.....	FL.....	441	1541	FL-3
Typewriters.....	P.....	FL.....	441	1541	FL-3
Wool machinery.....	P.....	C.....	**167	**372	C-29
Madder.....	P.....	FL.....	538	**26	A-8
Magnesite, crude and calcined.....	P.....	FL.....	539	47	FL-24
Magnesite industry (report).....	P.....				W. M.
Magnesium:					
Carbonate.....	P.....	A.....	42	47	A-10
Metallic.....	P.....	C.....	143	375	C-16
Sulphate.....	P.....	A.....	42	47	A-10
Magnetite iron ore.....	P.....	FL.....	537	1590	FL-21
Mahogany:					
Rough.....	P.....	FL.....	618	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Malleable-iron castings.....	P.....	C.....	125	327	C-11
Malt, barley (see Agricultural staples and the tariff).					
Mandrake (see Drug industry, crude botanical).					
Manganese, oxide and ore of.....	P.....	FL.....	540	302	FL-28

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Mangrove:					
Bark.....	P.....	FL.....	**624	1563	A-8
Extract.....	P.....	FL.....	**624	36	A-8
Manicure knives.....	P.....	C.....	128	354	C-13
Manila.....	Ms.....	FL.....	497	1575	FL-16
Manna.....	P.....	FL.....	541	32, 1502	A-7, FL-2
Manuscripts.....	Ms.....	FL.....	542	1608	M-8
Manure, substances used only for.....	P.....	FL.....	499	1576	FL-5
Maple sirup.....	P.....	E.....	178	504	E-2
Maple sugar.....	P.....	E.....	178	504	E-2
Marble:					
Crude and dressed.....	P.....	B.....	97	232	B-11
Manufactures of.....	P.....	B.....	98	233	B-11
Marjoram (see Drug industry, crude botanical).					
Marrons.....	P.....	G.....	557	755	G-27
Marrow, crude.....	P.....	FL.....	543	1608	FL-15
Marshmallow or althea root.....	P.....	FL.....	544	32, 1502	A-7, FL-2
Masks.....	P.....	N.....	370	**1313	N-22
Matches.....	P.....	N.....	345	1417	N-8
Matting and mats (see also Carpets, Floor coverings, and Rugs):					
Cocoa fiber and rattan.....	P.....	N.....	371	1021	J-3
Cotton.....	P.....	K.....	302	1020	J-3
Straw, grass, and other vegetable substances.....	P.....	J.....	272	1020	J-3
Medals.....	P.....	FL.....	546	1611	N-24
Medicinal compounds, n. s. p. f.....	P.....	A.....	5	5	A-3
Medicinals, chlorine products (report).....	P.....				A-6
Melada and concentrated melada.....	P.....	E.....	177	501	E-1
Menthol.....	P.....	A.....	43	48	A-10
Mercurials.....	P.....	A.....	14	16	A-5
Mercury (see Quicksilver).					
Mesothorium.....	P.....	FL.....	**585	1640	C-22
Metallics.....	P.....	C.....	146	379	C-18
Metal powders, metal leaf, and tinsel products (report).....	P.....				C-18
Metal threads.....	P.....	C.....	150	382	C-18
Mica.....	P.....	B.....	77	208	B-5
Microscopes.....	P.....	B.....	94	228	B-10
Milk, sugar of.....	P.....	FL.....	547	(**)	FL-15
Milk and cream:					
Fresh.....	P.....	FL.....	547	707	G-7
Preserved or condensed.....	P.....	FL.....	547	708	G-7
Mill shafting.....	P.....	C.....	110	304	C-7
Millinery ornaments.....	P.....	N.....	347	1419	N-9
Millstones.....	P.....	FL.....	438	234	B-3
Mineral industries affected by the war, industrial readjustment of (report).....	P.....				T. I. S.-21
Mineral salts obtained by evaporation.....	P.....	FL.....	548	1613	FL-22
Minor metals (report).....	P.....				FL-6
Mirrors, small.....	P.....	B.....	95	230	B-9
Molasses.....	P.....	E.....	177	501, 503	E-1
Molybdenum ore.....	P.....	FL.....	**549	302	FL-28
Monazite sand.....	P.....	C.....	154	1616	C-22
Monumental stone.....	P.....	B.....	99	235	B-11
Mop cloths, cotton.....	Ms.....	I.....	264	911	I-8
Moquette carpets (see Carpets).					
Morphine (see Opium).					
Moss, seaweed, etc.:					
Manufactured.....	P.....	N.....	372	1440	N-22
Unmanufactured.....	P.....	FL.....	552	1617	N-22
Most-favored-nation clause (see Handbook of commercial treaties).					
Mother-of-pearl and shell:					
In natural state.....	P.....	FL.....	570	1630	N-21
Manufactures of, n. s. p. f.....	P.....	N.....	309	1438	N-21
Motor cycles and parts.....	P.....	C.....	120	371	C-10
Mungo.....	Ms.....	FL.....	651	1105	FL-40
Muriatic acid.....	P.....	FL.....	387	1501	FL-1
Mushrooms.....	P.....	G.....	199	766	G-9
Musical instruments.....	P.....	N.....	373	1441	N-23
Musk, grained or in pods.....	P.....	A.....	49	1506	A-14
Mus-kets.....	P.....	C.....	132	364	C-14
Mutton and lamb.....	P.....	G.....	619	702	M. S.
Myrobalan:					
Fruit.....	P.....	FL.....	553	1563	A-8
Extract.....	P.....	FL.....	**624	36	A-8
Nail rods.....	P.....	C.....	113	315	C-8
Nails, cut, horse-hoe, and wire.....	P.....	FL.....	554	331	C-8
Napped fabrics (see Cotton cloths, countable).					

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Narrow wares:					
Cotton.....	In prog.	I.....	262	912	L-7
Linen.....	In prog.	J.....	278	1014	J-5
Silk.....	P.....	L.....	316	1207	L-2
Naval stores.....	P.....	FL.....	635	1672	FL-17
Needles:					
Hand sewing and darning.....	P.....	FL.....	555	1618	C-15
Knitting or sewing machine.....	P.....	C.....	135	343	C-15
Neroli oil.....	P.....	A.....	46	1625	A-12
Netherlands, colonial tariffs (see Colonial tariff policies.)					
Nets, fishing:					
Cotton.....	P.....	I.....	266	**920	J-2
Flax, hemp, ramie.....	P.....	J.....	271	1006	J-2
New Zealand flax.....	In prog.	FL.....	**497	**1575	FL-16
Newsprint paper.....	P.....	M.....	567	1659	M-2
Nickel:					
Cast metal, oxide, alloys, sheets and strips.....	P.....	C.....	155	385	C-23
Manufactures, n. s. p. f.....	P.....	C.....	167	393	C-23
Ores and matte.....	P.....	FL.....	565	1628	C-23
Nippers.....	P.....	C.....	166	361	C-9
Niter cake (see Sodium sulphate).					
Nitric acid.....	P.....	FL.....	387	1501	FL-1
Noils:					
Carbonized wool.....	Ms.....	FL.....	651	1105	K-1
Silk.....	P.....	L, FL.....	311, 599	1201, **1650	L-1
Novelty articles.....	P.....	N.....	336	1428	N-1
Novelty yarn goods (see Cotton cloths, countable).					
Nursery and greenhouse stock.....	Ms.....	G.....	211	753	G-17
Nutmalls.....	P.....	FL.....	624	1563	A-1
Nutmalls, extracts of.....	P.....	A.....	30	**36	A-1
Nutmeg oil.....	P.....	A.....	**46	**54	A-12
Nuts.....	P.....	G.....	{223, 224, 226}	{754, 755, 758, 759}	G-27
Nuts, iron and steel.....	P.....	C.....	123	330	C-11
Nux vomica.....	P.....	FL.....	558	1621	A-7, FL-2
Oak:					
Bark.....	P.....	FL.....	624	1563	A-8
Extract.....	P.....	FL.....	624	36	A-8
Oakum.....	P.....	FL.....	559	1622	FL-14
Oats and oatmeal (see Agricultural staples and the tariff).					
Odoriferous substances, preparations, and mixtures.	P.....	A.....	49	56	A-14
Oil cake (see also Cottonseed-oil industry and Soya-bean-oil industry).	P.....	FL.....	560	1623	A-11
"Oil of vitriol".....	P.....	FL.....	387	1501	FL-1
Oilcloth, floor.....	P.....	J.....	276	1018	J-3
Oilcloths (except silk oilcloths and oilcloths for floors).	P.....	L.....	254	906	I-4
Oil-spreading machines.....	P.....	FL.....	441	1541	FL-3
Oils:					
Acetone.....	P.....	A.....	3	3	A-2
Almond—					
Bitter.....	P.....	A.....	46	1625	A-11
Sweet.....	P.....	A.....	45	1626	A-11
Amber.....	P.....	A.....	46	**54	A-12
Animal and expressed vegetable (report)	P.....				A-12
Anise-seed.....	P.....	A.....	46	1625	A-12
Aspic.....	P.....	A.....	46	1625	A-12
Attar of rose.....	P.....	A.....	46	1625	A-12
Bergamot.....	P.....	A.....	46	1625	A-12
Birch-tar.....	P.....	FL.....	561	**54	A-12
Cajeput.....	P.....	FL.....	561	**54	A-12
Camomile.....	P.....	A.....	46	**54	A-12
Caraway.....	P.....	A.....	46	1625	A-12
Cassia.....	P.....	A.....	46	1625	A-12
Castor.....	P.....	A.....	15	50	A-11
Cedrat.....	P.....	A.....	46	**54	A-12
Chinese nut.....	P.....	FL.....	561	1626	A-11
Cinnamon.....	P.....	A.....	46	1625	A-12
Citronella.....	P.....	A.....	46	1625	A-12
Coconut.....	P.....	G, FL.....	232, 561	50	A-11, W.M.
Cod.....	P.....	FL.....	561	49	A-11
Cod-liver.....	P.....	FL.....	561	49	A-11
Corn.....	P.....	A.....	**45	**50	A-11
Cottonseed.....	P.....	FL.....	561	50	A-11, W.M.
Croton.....	P.....	FL.....	561	1626	A-11
Essential and distilled (report).....	P.....				A-12

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Oils—Continued.					
Eucalyptus	P	A	**46	54	A-12
Expressed vegetable	P				A-11
Fennel	P	A	46	**54	A-12
Fish	P	A	44	49	A-11
Fusel	P	A	33	4	A-9
Hemp-seed	P	A	45	50	A-11
Herring	P	A	44	49	A-11
Ichthyol	P	FL	561	**5	A-12
Jasmine	P	A	46	**54	A-12
Juglandium	P	A	561	**54	A-12
Juniper	P	FL	46	**54	A-12
Lavender	P	A	46	1625	A-12
Lemon	P	A	46	54	A-12
Lemon-grass	P	A	46	1625	A-12
Lime	P	A	46	1625	A-12
Linseed	P	A	45	50	A-11,
					T. I. S.-20.
Mace	P	A	**46	**54	A-12
Neroli	P	A	46	1625	A-12
Nutmeg	P	A	**46	**54	A-12
Olive	P	A	45	50, 1626	A-11
Orange	P	A	46	54	A-12
Origanum	P	A	46	1625	A-12
Palm and palm-kernel	P	FL	561	1626	A-11
Peanut	P	A	45	50	A-11
Peppermint	P	A	46	54	A-12
Perilla	P	FL	561	1626	A-11
Petroleum, crude and refined	P	FL	561	1627	FL-7
Poppy-seed	P	A	45	50	A-11
Rape-seed	P	A	45	50	A-11
Rose, or attar of roses	P	A	46	1625	A-12
Rosemary, or anthoss	P	A	46	1625	A-12
Seal	P	A	44	49	A-11
Sesame-seed	P	A	45	1626	A-11
Sod	P	A	44	49	A-11
Soya-bean	P	FL	561	50	A-11
Sperm	P	A	44	49	A-11
Spike lavender	P	A	46	1625	A-12
Thyme	P	A	46	1625	A-12
Valerian	P	A	46	** 54	A-12
Vegetable, expressed	P				A-11
Oils and fats, animal and expressed vegetable (report).	P				A-11
Oils, suggested reclassification of chemicals, paints, and.	P				M. S.
Old pewter and britannia metal	P	FL	572	**1559	C-17
Oleomargarine	P	G	195	709	G-7
Olive oil	P	A	45	50, 1626	A-11
Onion and garlic industry, American (report)	P				W. M.
Onions	P	G	208	768	G-15
Opium and its derivatives	P	A	47	55	A-7, A-13
Optical glass, rough	P	FL	494	227	B-10
Optical glass and chemical glassware (see Chemical glassware).					
Optical instruments	P	B	93, 94	228	B-10
Onyx:					
Crude and dressed	P	B	97	232	B-11
Manufactures of	P	B	98	233	B-11
Open-door agreements (see Colonial tariff policies).					
Opera glasses	P	B	93	228	B-10
Orange oil	P	A	46	54	A-12
Orchil (see Archil).					
Organs	P	N	**373	**1441	N-23
Origanum oil	P	A	46	1625	A-12
Osage-orange extract	P	A	**30	**36	A-8
Osier	P	D	173	411	D-3
Osmium	P	FL	517	1589	FL-20
Outerwear, silk, knit	P	L	**317	1208	L-2
Outline of work and plans	P*				M. S.
Oxalic acid	P	A	1	1	A-1
Packing boxes	P	D	171	409	D-2
Packing-box shooks	P	D	171	409	D-2
Paddings, flax, hemp, or jute	P	J, FL	{ 283, 284, 408 }	1010	J-7
Paints	P	A	63	62, 63	A-15
Paints, suggested reclassification of chemicals, oils, and.	P				M. S.
Palladium	P	FL	517	1589	FL-20

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Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Palm nuts.....	P.	FL.	557	1620	FL-28
Palings.....	Ms.	FL.	647	407	FL-37
Palm and palm-kernel oil.....	P.	FL.	561	1626	A-11
Palm leaf, manufactures of, n. s. p. f.....	P.	N.	368	1437	N-21
Palm-leaf fans.....	P.	FL.	480	1567	N-11
Pants, cotton.....	P.	I.	261	** 916	I-6
Paper:					
Bags, surface-coated, paper.....	P.	M.	324	1305	M-4
Bibulous.....	P.	M.	323	**1304	M-3
Book.....	P.	M.	322	1301	M-2
Box board.....	P.	M.	320	**1302	M-1
Boxes, covered with coated paper, etc.....	P.	M.	324	1305	M-4
Boxes, n. s. p. f.....	P.	M.	(**)	1313	M-4
Cigarette.....	P.	N.	381	1452	M-4
Cloth-lined.....	P.	M.	324	1305	M-4
Cut, die-cut, etc.....	P.	M.	332	1313	M-4
Decalcomania.....	P.	FL.	567	1305	M-4
Decorated.....	P.	M.	324	1305	M-4
Envelopes.....	P.	M.	324, 327	**1305, 1308	M-4, M-6
Filtering.....	P.	M.	323	1309	M-3
Fine.....	P.	M.	326	1307	M-6
Gummed.....	P.	M.	324	1305	M-4
Imitation parchment.....	P.	M.	324	1305	M-3
Manufactures, n. s. p. f.....	P.	M.	332	1313	M-4
Newsprint.....	P.	M.	567	1659	M-2
Not specially provided for.....	P.	M.	352	1309	M-4
Parchment.....	P.	M.	324	1305	M-3
Photographic.....	P.	M.	324	1305	M-4
Press.....	P.	M.	328	1313	M-1
Reinforced.....	P.	M.	324	1305	M-4
Sheathing.....	P.	M.	320	1302	M-1
Stock, crude.....	P.	FL.	566	1641	M-4
Surface-coated.....	P.	M.	324	1305	M-4
Tissue.....	P.	M.	323	1304	M-3
Wall.....	P.	M.	**328	**1309	M-7
Waxed.....	P.	M.	(**)	1305	M-4
Wrapping.....	P.	M.	328	1305	M-7
Paper and books (report).....	P*				T. I. S.-1
Papier-mâché.....	P.	M.	332	1303	M-4
Papier-mâché, manufactures of.....	P.	N.	369	1303, 1313	N-21
Parchment.....	P.	FL.	568	1629	M-3
Paris green.....	P.	FL.	569	59	FL-3
Paris white.....	P.	A.	60	18	A-5
Patent leather.....	P.	FL.	**530	**1000	N-16
Paving posts.....	P.	D.	170	405	D-3
Peanut oil.....	P.	A.	45	50	A-11, W.M.
Peanut industry, survey of the American (report).....	P.				W. M.
Pearl hardening.....	P.	A.	71	**205	A-15
Pearls:					
Imitation and synthetic.....	P.	N.	357	1429	N-1
Unstrung.....	P.	N.	357	1429	N-1
Peas.....	Ms.	G.	199, 209	767	G-3
Peas, canned.....	Ms.	G.	199	767	G-3
Peat moss.....	P.	N.	377	1448	N-22
Pecans.....	P.	G.	**226	758	G-27
Pencil leads.....	P.	N.	379	1450	N-22
Pencils, lead and slate.....	P.	N.	378	1449	N-22
Penholders.....	P.	C.	157	352, 353	C-24
Penis.....	P.	C.	156, 157	351, 352	C-24
Peppermint oil.....	P.	A.	46	54	A-12
Percussion caps.....	P.	N.	346	1418	N-8
Perfumery.....	P.	A.	45	57	A-14
Perilla oil.....	P.	FL.	561	1626	A-11
Periodicals.....	P.	FL.	556	1619	N-24
Persian berries.....	P.	A.	30	36	A-8
Peru, balsam.....	P.	A.	9	10	A-8
Petroleum oil, crude and refined.....	P.	FL.	561	1627	FL-7
Pewter metal, old.....	P.	FL.	572	**1559	C-17
Phonographs.....	P.	N.	374	1442	N-28
Phosphates, crude.....	P.	FL.	574	1632	FL-5
Phosphoric acid.....	P.	FL.	387	1	FL-1
Phosphorus.....	P.	FL.	575	60	FL-1
Photographic goods.....	P.	N.	350, 576	1451	N-25
Photographic lenses.....	P.	B.	94	228	B-10
Phthalic acid (repealed by the act of Sept. 8, 1916).....	P.	FL.	387	25	FL-1
Pianos.....	P.	N.	373	1441	N-23
Pickets.....	Ms.	FL.	647	407	FL-37
Pig iron.....	P.	FL.	518	301	FL-21
Pigments, paints, and varnishes (report).....	P.				A-15

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Pile fabrics and manufactures of:					
Cotton.....	P.....	I.....	257	909	I-4
Silk (except hatters') .....	P.....	L.....	314	1206	L-1
Pillowcases, cotton.....	Ms.....	I.....	257	909	I-8
Pins.....	P.....	C.....	158	350	C-8
Pipes and smokers' articles.....	P.....	N.....	381	1452	N-26
Pipes of iron or steel.....	P.....	C.....	127	328	C-12
Pitch of wood.....	P.....	FL.....	626	1667	FL-17
Planks, not further manufactured than sawed, planed, tongued and grooved.	Ms.....	FL.....	647	404, 1683	FL-37
Plaster of Paris, manufactures of.....	P.....	N.....	369	1438	B-2
Plaster rock.....	P.....	B.....	74	205	B-2
Plasters, court and healing.....	P.....	A.....	50	61	A-14
Plates, iron or steel.....	P.....	C.....	{105, 109, 110}	304, 307, 309	C-5
Plates and mats of dog and goat skins.....	P.....	N.....	348	1420	N-10
Platinum:					
Metals, ores of.....	P.....	FL.....	565	1627	FL-20
Miscellaneous manufactures.....	P.....	C, FL.....	167, 578	393	FL-20
Native alloys with.....	P.....	FL.....	517	1589	FL-20
Salts of.....	P.....	A.....	65	19	A-17
Sheets, plates, wire, and sponge.....	P.....	FL.....	578	1634	FL-20
Unmanufactured.....	P.....	FL.....	578	1634	FL-20
Pliers.....	P.....	C.....	166	361	C-9
Plumbago or graphite.....	P.....	FL.....	579	211	FL-24
Plush, hatters'.....	P.....	N.....	382	1453	L-1
Plushes, silk.....	P.....	L.....	314	1206	L-1
Pocketknives.....	P.....	C.....	128	354	C-13
Podophyllum (see Drug industry, crude botanical).					
Poles, telephone, trolley, electric light, and tele-graph.	P.....	D.....	170	405	D-2
Polishing cloths, cotton.....	Ms.....	I.....	264	909, 911	I-8
Polishing preparations.....	P.....	A.....	11	12	A-5
Poplius and reps (see Cotton cloths, countable).					
Poppy-seed oil.....	P.....	A.....	45	50	A-11
Porcelain:					
Chemical.....	P.....	B.....	80	213	B-6
Electrical.....	P.....	B.....	80	213	B-6
Tableware.....	P.....	B.....	80	213	B-6
Portugal, colonial tariffs (see Colonial tariff policies).					
Posts of wood.....	Ms.....	FL.....	647	406	FL-37
Potash industry (report).....	P.....				A-16
Potassium (metal).....	P.....	C.....	143	**1559	C-16
Potassium:					
Bicarbonate.....	P.....	A.....	**5, 64	75	A-16
Carbonate.....	P.....	FL.....	580	75	A-16
Chlorate.....	P.....	A.....	64	75	A-16
Chromate and bichromate.....	P.....	A.....	64	75	A-18
Crude, or "black salts".....	P.....	FL.....	580	1635	A-16
Cyanide.....	P.....	FL.....	580	1636	A-18
Hydroxide (hydrate).....	P.....	FL.....	580	75	A-16
Iodide.....	P.....	A.....	38	75	A-9
Murjate.....	P.....	FL.....	580	1635	A-16
Nitrate, crude.....	P.....	FL.....	580	75	A-18
Nitrate, refined.....	P.....	A.....	64	75	A-18
Permanganate.....	P.....	A.....	64	75	A-16
Prussiates, red or yellow.....	P.....	A.....	64	75	A-18
Sulphate.....	P.....	FL.....	580	1635	A-16
Potato products industry, domestic (report).....	P.....				W. M.
Potato starch (see Starch and related materials).					
Potatoes.....	P.....	FL.....	581	769	T. I. S.-20
Potatoes (see Agricultural staples and the tariff).					
Pottery industry (report).....	P.....				B-6
Power machinery and apparatus, electrical.....	Ms.....	C.....	**167	**372, **393	C-31
Preferential tariff policies (see Colonial tariff policies).					
Preferential transportation rates (report).....	Ms.....				M. S.
Pressboards.....	P.....	M.....	328	1313	M-1
Press cloths (camel's hair).....	In prog.	K.....	288	**1100	K-2
Printing presses.....	P.....	C.....	165	**372	C-29
Pruning knives.....	P.....	C.....	128	354	C-13
Prussiate of potash (see Potassium).					
Prussiate of soda (see Sodium compounds).					
Prussic acid.....	P.....	FL.....	387	**1	FI-1
Pulpboard.....	P.....	M.....	320	1302, 1313	M-1
Pulp, manufactures of, n. s. p. l.....	P.....	N.....	355	1303	N-11
Pulp woods.....	Ms.....	FL.....	647	{**402, **1458, **1683}	f L-37
Pumice stone and manufactures of.....	P.....	B.....	75	206	B-3

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Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Pyralin ( <i>see</i> Pyroxylin plastics).					
Pyrethrum ( <i>see</i> Drug industry, crude botanical).					
Pyrites.....	P.....	FL.....	617	1663	FL-18
Pyrites, dross or residuum from burnt.....	P.....	FL.....	518	1590	FL-18
Pyrogallic acid.....	P.....	A.....	1	1	A-1
Pyrolieneous acid.....	P.....	FL.....	387	**1	A-2
Pyrophoric alloys.....	P.....	C.....	** 167	**393	C-22
Pyroxylin plastics.....	P.....	A.....	25	29	A-6
Quebracho:					
Extract.....	P.....	FL.....	624	36	A-8
Wood.....	P.....	FL.....	** 624	1563	A-8
Quercitron.....	P.....	FL.....	** 624	** 36	A-8
Quicksilver.....	P.....	C.....	159	383	C-25
Quills, manufactures of, n. s. p. f.....	P.....	N.....	368	1437	N-21
Quilts, cotton.....	Ms.....	I.....	264	911	I-8
Quinine and related alkaloids.....	P.....	FL.....	584	1639	FL-2
Quoits.....	P.....	FL.....	470	** 393	N-7
Rabbits, skins of.....	P.....	FL.....	603	** 1573	N-10
Radioactive substances.....	P.....	FL.....	585	1640	C-22
Radioactive substitutes for radium salts.....	P.....	FL.....	585	1640	FL-22
Radium salts.....	P.....	FL.....	585	1640	FL-22
Railroad ties.....	P.....	D.....	170	405	D-2
Rails and railway bars.....	P.....	FL.....	587	322	C-6
Railway fishplates.....	P.....	C.....	108	322	C-6
Railway wheels and parts of.....	P.....	C.....	142	324	C-15
Ramie:					
Fiber.....	In prog.	FL.....	** 497	** 1575	FL-16
Gill netting.....	P.....	J.....	271	1006	J-2
Hat braids.....	P.....	N.....	334	1404	N-2
Rapeseed oil.....	P.....	A.....	45	50	A-11
Rasps, iron or steel.....	P.....	C.....	131	362	C-13
Rattan:					
Chair cane or reeds wrought from.....	P.....	D.....	173	411	D-3
Matting and mats.....	P.....	N.....	371	1021	J-3
Unmanufactured.....	P.....	FL.....	648	1684	D-3
Razors.....	P.....	C.....	123	358	C-13
Reciprocity and commercial treaties (report).....	P.....				M. S.
Reciprocity and commercial treaties, summary of report.....	P.....				M. S.
Reciprocity with Canada (report).....	P.....				M. S.
Reclassification (suggested) of chemicals, oils, and paints (report).....	P.....				M. S.
Redwood:					
Extract for dyeing.....	P.....	A.....	** 30	** 36	A-3
Tanning material.....	P.....	FL.....	** 624	** 1563	A-3
Rennets, raw or prepared.....	P.....	FL.....	588	1642	FL-15
Rhodium.....	P.....	FL.....	517	1589	FL-20
Rhodium salts.....	P.....	A.....	65	19	A-17
Ribbons, silk, velvet, or plush.....	P.....	L.....	314, 316	1206, 1207	L-1, L-2
Rice and rice products.....	Ms.....	G.....	193	728	G-5
Rice starch ( <i>see</i> Starch and related materials).					
Rifles.....	P.....	C.....	132	364	C-14
Rivets.....	P.....	C.....	138	322	C-11
Rochelle salts.....	P.....	A.....	8	9	A-1
Rock crystal, manufactures of.....	P.....	B.....	98	233	B-11
Rods, wire.....	P.....	C.....	113	315	C-3
Roller bearings.....	P.....	C.....	106	321	C-5
Roofing felt.....	P.....	M.....	320	1302	M-1
Rose oil, or attar of roses.....	P.....	A.....	46	1625	A-12
Rosemary or anthos oil.....	P.....	A.....	46	1625	A-12
Rosewood:					
Rough.....	P.....	FL.....	648	404	D-1
Sawed.....	P.....	D.....	169	404	D-1
Rosin, violn.....	P.....	N.....	375	1446	FL-17
Rotten stone.....	P.....	FL.....	614	1660	B-3
Rubber, india:					
Crude.....	P.....	FL.....	513	1587	FL-17
Druggists' sundries.....	P.....	N.....	368	** 1437	N-21
Hard, manufactures of.....	P.....	N.....	369	1438	N-21
Manufactures, n. s. p. f.....	P.....	N.....	368	1437	N-21
Rugs ( <i>see also</i> Carpets, Floor coverings, and Mattings):					
Cotton.....	P.....	K.....	302	1020	J-3
Ingrain.....	P.....	K.....	{ 298, 299, 303 }	1118	K-6
Straw, grass, or other vegetable substances.....	P.....	J.....	272	1020	J-3
Wool or part wool, n. s. p. f.....	P.....	K.....	303	1118	K-6
Ruthenium.....	P.....	FL.....	517	1589	FL-20
Saccharin.....	P.....	E.....	179	26	E-2

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Sacks of jute or cotton.....	P.....	I, J.....	{ 266, 281, 284 }	920, 1017	J-9
Safety fuses.....	P.....	N.....	346	1418	N-8
Safflower.....	P.....	A.....	31	1510	A-8
Saffron.....	P.....	A.....	31	1510	A-8
Sage (see Drug industry, crude botanical).					
Sago and sago flour.....	P.....	G.....	590	1644	G-33
Saltp or salop.....	P.....	FL.....	592	* * 32	A-7, FL-2
Salcin.....	P.....	FL.....	591	505	FL-2
Salsoda (see Sodium carbonates).					
Salmon industry.....	Ms.....	G.....	**216, **483	719	G-19c
Salt.....	P.....	FL.....	593	78	FL-22
Salt cake (see Sodium sulphate).					
Salt peter:					
Refined.....	P.....	A.....	64	75	A-18
Crude.....	P.....	FL.....	580	75	A-18
Salts:					
Antimony.....	P.....	C.....	144	8	C-17
Bismuth.....	P.....	A.....	65	20	A-17
Epsom.....	P.....	A.....	42	47	A-10
Glauber.....	P.....	A.....	67	73	A-18
Gold.....	P.....	A.....	65	19	A-17
Mineral, obtained by evaporation.....	P.....	FL.....	548	1613	FL-22
Opium.....	P.....	A.....	47	55	A-13
Platinum.....	P.....	A.....	65	19	A-17
Radium.....	P.....	FL.....	585	1640	FL-22
Rhodium.....	P.....	A.....	65	19	A-17
Rochelle.....	P.....	A.....	8	9	A-1
Selenium.....	P.....	FL.....	585	1646	FL-22
Silver.....	P.....	A.....	65	19	A-17
Thorium.....	P.....	C.....	154	84	C-22
Tin.....	P.....	A.....	65	85	A-17
Uranium.....	P.....	FL.....	638	1674	FL-22
Sand and stone.....	P.....	FL.....	614	1661	B-3
Sand of iron or steel.....	P.....	C.....	112	335	B-3
Sand-blast machines.....	P.....	FL.....	441	1541	FL-3
Sanguinaria (see Drug industry, crude botanical).					
Santonin and its salts.....	P.....	FL.....	594	76	FL-2
Sardines.....	P.....	G.....	**216, **483	721	G-19
Sarsaparilla root.....	P.....	A.....	39	33	A-7, A-10
Sashes, iron or steel.....	P.....	C.....	104	312	C-3
Sateens, including venetians (see Cotton cloths, countable).					
Satin white.....	P.....	A.....	51	71	A-15
Satinwood:					
In the log.....	P.....	FL.....	648	404	D-1
Sawed into boards.....	P.....	D.....	169	404	D-1
Sawdust.....	Ms.....	FL.....	647	**414	FL-37
Saw plate.....	P.....	C.....	105	304	C-4
Saws.....	P.....	C.....	139	340	C-4
Schappe yarn.....	P.....	L.....	312	1202	L-1
Scientific instruments and apparatus.....	P.....	FL.....	573, 653	360	B-10
Scissors.....	P.....	C.....	128	357	C-13
Scrap iron or steel.....	P.....	FL.....	518	301	FL-21
Screens of bamboo, wood, straw.....	P.....	D.....	175	413	D-4
Screws of iron or steel.....	P.....	C.....	140	338	C-8
Scroll iron and steel.....	P.....	C.....	107, 109	309, 313	C-4
Seal oil.....	P.....	A.....	44	49	A-11
Seaweeds.....	P.....	N, FL.....	372, 552	1440	N-22
Sea grass.....	P.....	N.....	372	1440	N-22
Seines:					
Cotton.....	P.....	I.....	**266	**920	J-2
Flax, hemp, ramie.....	P.....	J.....	271	1006	J-2
Selenium, and its salts.....	P.....	FL.....	585	1646	FL-22
Semiprecious stones, manufactures of.....	P.....	B.....	98	233	B-11
Senegal.....	P.....	A.....	36	1577	A-9
Serums.....	P.....	FL.....	400	1511	FL-2
Sesame-seed oil.....	P.....	A.....	45	1626	A-11
Sewer-pipe tile.....	P.....	B.....	**81	**214	B-7
Sewing machines.....	P.....	FL.....	441	1541	C-29
Shades of bamboo, wood, straw, or compositions of wood.....	P.....	D.....	175	413	D-4
Shears.....	P.....	C.....	128	357	C-13
Sheep (see Wool-growing industry, report on).					
Sheep dip.....	P.....	FL.....	596	1647	FL-8
Sheets, cotton.....	Ms.....	I.....	264	911	I-8
Sheets, iron or steel.....	P.....	C.....	{ 105, 109, 110 }	308-310	C-4
Shell, manufactures of.....	P.....	N.....	369	1438	N-21
Shell lac and other forms of lac.....	P.....	FL.....	526	1597	FL-17
Shingles.....	Ms.....	FL.....	647	408	FL-37

*List of principal subjects investigated and reported upon by the United States  
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Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Shingle bolts.....	Ms.....	FL.....	647	1683	FL-37
Ship planking.....	Ms.....	FL.....	647	**1683	FL-37
Ship timber.....	Ms.....	FL.....	647	1683	FL-37
Shirtings (see Cotton cloths, countable).					
Shirts:					
Cotton.....	P.....	I.....	261	**916	I-6
Silk.....	P.....	L.....	**317	1211	L-2
Shoe lacings:					
Cotton.....	P.....	I.....	262	912	L-7
Leather.....	P.....	FL.....	530	1600	N-18
Shoe machinery.....	P.....	FL.....	441	1541	FL-3
Shoes, boots and.....	P.....	FL.....	530	1601	N-18
Shotgun barrels, forged, rough bored.....	P.....	FL.....	597	1647	C-14
Shotguns.....	P.....	C.....	132, 133	364, 365	C-14
Shot, iron or steel.....	P.....	C.....	112	335	B-3
Sidearms.....	P.....	C.....	129	363	C-13
Sienna.....	P.....	A.....	55	70	A-15
Silicic acid.....	P.....	FL.....	387	**1	A-18
Silk:					
Artificial, and articles of.....	P.....	L.....	319	1215	T. I. S.-3
Bandings.....	P.....	L.....	316	1207	L-2
Beltings.....	P.....	L.....	316	1207	L-2
Belts.....	P.....	L.....	316	1207	L-2
Bindings.....	P.....	L.....	316	1207	L-2
Bolting cloth.....	Ms.....	FL.....	422	1526	I-3
Bone casings.....	P.....	L.....	316	1207	L-2
Braces.....	P.....	L.....	316	1207	L-2
Chenilles.....	P.....	L.....	314	1206	L-1
Clothing, ready made.....	P.....	L.....	317	1212	L-2
Cocoons.....	P.....	FL.....	599	1649	L-1
Cords and cords and tassels.....	P.....	L.....	316	1207	L-2
Fabrics, knit.....	P.....	L.....	**318	1208	L-2
Garters.....	P.....	L.....	316	1207	L-2
Gloves.....	P.....	L.....	**317	1208	L-2
Handkerchiefs.....	P.....	L.....	315	1209	L-2
Hatters' plush.....	P.....	N.....	382	1453	L-1
Hosiery.....	P.....	L.....	**317	1208	L-2
Hatbands.....	P.....	L.....	316	1207	L-2
Knit goods.....	P.....	L.....	317, 318	1208	L-2
Manufactures, n. s. p. f.....	In prog.	L.....	318	1213	L-3
Mufflers.....	P.....	L.....	315	1209	L-2
Narrow wares.....	P.....	L.....	316	1207	L-2
Noils.....	P.....	L, FL.....	311, 599	201, **1650	L-1
Outerwear, knit.....	P.....	L.....	**317	1208	L-2
Partially manufactured from cocoons or waste silk.....	P.....	L.....	311	1201	L-1
Pile fabrics other than hatters' plush.....	P.....	L.....	314	1206	L-1
Plushes.....	P.....	L.....	314	1206	L-1
Raw.....	P.....	FL.....	600	1651	L-1
Ribbons.....	P.....	L.....	316	1207	L-2
Sewing, twist, floss, etc.....	P.....	L.....	313	1204	L-1
Schappe yarn.....	P.....	L.....	312	1202	L-1
Shirt collars.....	P.....	L.....	**317	1210	L-2
Shirts, men's and boys'.....	P.....	L.....	**317	1211	L-2
Spun.....	P.....	L.....	312	1202	L-1
Suspenders.....	P.....	L.....	316	1207	L-2
Tassels.....	P.....	L.....	316	1207	L-2
Thread.....	P.....	L.....	313	1204	L-1
Thrown.....	P.....	L.....	313	1203	L-1
Tubings.....	P.....	L.....	316	1207	L-2
Underwear, knit.....	P.....	L.....	**317	1208	L-2
Velvets.....	P.....	L.....	314	1206	L-1
Waste.....	P.....	FL.....	599	1650	L-1
Wearing apparel (except knit).....	P.....	L.....	317	1210-1212	L-2
Webs and webbing.....	P.....	L.....	316	1207	L-2
Woven fabrics in the piece.....	P.....	L.....	318	1205	L-3
Yarn, n. s. p. f.....	P.....	L.....	312	1202	L-1
Silk and manufactures of silk (report).....	P*				T. I. S.-3
Silk machinery.....	P.....	C.....	**167	**372	C-29
Silkworm eggs.....	P.....	FL.....	601	1564	L-1
Silver:					
Argentine, albata, or German.....	P.....	C.....	145	377	C-19
Bullion.....	P.....	FL.....	436	1537	FL-20
Coins.....	P.....	FL.....	458	1550	FL-20
Leaf.....	P.....	C.....	149	381	C-18
Manufactures of, except tableware.....	P.....	C.....	**167	**393	N-1
Ores.....	P.....	FL.....	565	1628	FL-20
Salts of.....	P.....	FL.....	585	1646	FL-22
Sweeps.....	P.....	FL.....	565	1628	FL-20
Sirups of cane juice.....	P.....	E.....	177	501	E-1
Sisal.....	Ms.....	FL.....	497	1575	FL-16

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Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Skelp.....	P.....	C.....	105	307,308	C-4
Skewers, butchers' and packers'.....	P.....	D.....	174	412	D-3
Slabs of iron or steel.....	P.....	FL.....	518,613	303,304	FL-21
Slag.....	P.....	FL.....	499	1576	FL-5
Slate and manufactures of.....	P.....	B.....	101	237	B-11
Sludge machines.....	P.....	FL.....	441	1541	FL-3
Small-package articles, chemicals and medicinal compounds.....	P.....	A.....	17	21	A-5
Small wears (see Narrow wears).					
Smokers' articles.....	P.....	N.....	381	1452	N-26
Snap fasteners.....	P.....	C.....	151,167	348	C-20
Soaps, toilet and other.....	P.....	A.....	66	77	A-17
Soapstone or steatite.....	P.....	A.....	69	209	A-19
Sod oil.....	P.....	A.....	44	49	A-11
Soda ash (see Sodium carbonates).					
Soda crystals (see Sodium carbonates).					
Sodium (metal).....	P.....	C.....	143	**1559	C-16
Sodium:					
Arsenate.....	P.....	FL.....	605	78	A-18
Benzoate (see Dyes and other coal-tar chem- icals: Dyes and coal-tar chemicals, census of, 1917, 1918, 1919, 1920).					
Bicarbonate.....	P.....	A.....	67	78	A-18
Borate.....	P.....	A.....	67	78	A-1
Carbonates (soda ash, saltsoda, soda crystals).	P.....	A, FL.....	67,605	78	A-18
Chlorate.....	P.....	A.....	67	78	A-18
Chromate and bichromate.....	P.....	A.....	67	78	A-18
Compounds.....	P.....	A, FL.....	67,605	78, 79, 1654	A-18
Hydrosulphite, n. s. p. f.....	P.....	A.....	**5	79	A-18
Hydroxide, or caustic soda.....	P.....	A.....	67	78	A-18
Hyposulphite.....	P.....	A.....	67	78	A-18
Nitrate.....	P.....	FL.....	605	1654	A-18
Nitrite.....	P.....	A.....	67	78	A-18
Phosphate.....	P.....	A.....	67	78	A-18
Prussiate, yellow.....	P.....	A.....	67	78	A-18
Silicate.....	P.....	FL.....	605	78	A-18
Sulphate, crude, or salt cake and niter cake.....	P.....	FL.....	605	1654	A-18
Sulphate, crystallized, or Glaubers salt.....	P.....	A.....	67	78	A-18
Sulphide.....	P.....	A.....	67	78	A-18
Sulphite and hydrosulphite.....	P.....	A.....	67	78	A-18
Sulphoxylate.....	P.....	A.....	(**)	(**)	A-18
Thio-sulphate (see Sodium hypesulphite).					
Soluble starch.....	P.....	A.....	36	81	A-9
Soya beans and soya-bean products.....	Ms.....	FL.....	606	**772, 773	FL-33
Soya-bean oil.....	P.....	FL.....	561	50	A-11, W.M.
Soya-bean-oil industry, American (report).					W. M.
Spain, colonial tariffs (see Colonial tariff policies).					
Spangles.....	P.....	N.....	333	1403	N-1
Spectacles.....	P.....	B.....	91	225	B-10
Spelter (see Zinc).					
Sperm oil.....	P.....	A.....	44	49	A-11
Spiegeleisen.....	P.....	FL.....	518	301	C-1
Spike lavender oil.....	P.....	A.....	46	1625	A-12
Spikes of iron or steel.....	P.....	FL.....	554	331	C-8
Spindle banding, cotton.....	In prog.....	I.....	262	912	I-7
Spiral nut locks.....	P.....	C.....	123	330	C-11
Splice bars of iron or steel.....	P.....	C.....	108	322	C-6
Sponges.....	P.....	A.....	68	1445	A-19
Sprigs.....	P.....	FL.....	554	**331	C-8
Sprinkler tops.....	P.....	C.....	164	387	C-28
Sprocket chains.....	P.....	C.....	126	329	C-12
Spunk.....	P.....	FL.....	608	1656	N-8
Staples of iron or steel.....	P.....	FL.....	554	331	C-8
Starch and related materials (report).					G-33
Stave bolts, wood.....	Ms.....	FL.....	647	406	FL-37
Staves of wood.....	Ms.....	FL.....	647	407	FL-37
Stays, steel.....	P.....	C.....	127	328	C-12
Steatite (see Soapstone).					
Steel (see also Iron or steel):					
Alloys.....	P.....	C.....	110	304	C-7
Band.....	P.....	FL.....	509	314	C-4
Billets and bars.....	P.....	C, FL.....	110, 613	304	C-7
Blooms and slabs.....	P.....	C, FL.....	110, 613	304	C-2, C-7
Castings.....	P.....	C.....	110	304	C-7
Corset clasps.....	P.....	C.....	114	336	C-8
Corset steels.....	P.....	C.....	114	336	C-8
Die blocks or blanks.....	P.....	C, FL.....	110, 613	304	C-7
Engraved forms for bonds.....	P.....	FL.....	612	**341	C-15
Engraved plates.....	P.....	C.....	137	341	C-15
Hoop.....	P.....	FL.....	509	314	C-4
Ingots.....	P.....	C, FL.....	110, 613	304	C-7
Manufactures, n. s. p. f.....	P.....	C.....	107	393	C-29

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Steel—Continued.					
Plate, crucible.....	P.....	C.....	105	304	C-4
Plates.....	P.....	C.....	110	304	C-4
Plates, engraved:					
For bonds.....	P.....	FL.....	612	**341	C-15
For designs.....	P.....	C.....	137	**341	C-15
Points.....	P.....	C.....	138	332	C-11
Saws.....	P.....	C.....	139	340	C-4
Scrap.....	P.....	FL.....	518	301	FL-21
Shafting, mill.....	P.....	C.....	110	304	C-7
Shavings.....	P.....	C.....	111		B-3
Tool steels.....	P.....	C.....	110	304, 305	C-7
Wool.....	P.....	C.....	111	334	B-3
Strap leather.....	In prog.	FL.....	**530	**1600	N-16
Stencil-dyed fabrics (see Cotton cloths, countable).					
Stockings:					
Cotton.....	P.....	I.....	259, 260	915	I-6
Silk.....	P.....	L.....	**317	1208	L-2
Wool.....	P.....	K.....	288	1115	K-3
Stone and manufactures of.....	P.....	B.....	97-99, 101	{ 232, 233, 235, } 237	B-11
Stonecrushed, unsuitable for monumental or building use.	P.....	FL.....	614	1661	B-7
Stones, precious.....	P.....	N.....	357	1429	N-1
Stoneware.....	P.....	B.....	78, 79	210, 212	B-6
Stove wicking, cotton.....	In prog.	I.....	262	912	I-7
Stramonium (see Drug industry, crude botanical).					
Straw, manufactures of, n. s. p. f.....	P.....	N.....	368	1437	N-21
Strontium compounds.....	P.....	FL.....	615	1662	FL-22
Structural shapes of iron or steel.....	P.....	C.....	104	312	C-3
Strychnine and its salts.....	P.....	FL.....	646	83	FL-2
Studs of iron or steel.....	P.....	C.....	138	332	C-11
Sugar.....	P.....	E.....	177	501	E-1
Sugar box shooks.....	P.....	D.....	171	409	D-2
Sugar industry, cost of production in the (report).	P*				T. I. S.-9
Sugar machinery.....	P.....	FL.....	391	1504	FL-3
Sugar of milk.....	P.....	FL.....	547	(**)	FL-15
Sugar, refined, costs, prices, and profits (report).	P.....				T. I. S.-16
Sulphide of zinc, white.....	P.....	A.....	61	74	A-4
Sulphur.....	P.....	FL.....	617	1663	FL-18
Sulphur chlorides.....	P.....	A.....	**5	**1663	A-6
Sulphur ore, or pyrites.....	P.....	FL.....	617	1663	FL-13
Sulphuric acid, or oil of vitriol.....	P.....	FL.....	387	1501	FL-1
Sulphuric ether.....	P.....	A.....	29	**35	A-7
Sumac, extract, for dyeing.....	P.....	A.....	30	1536	A-8
Sunn.....	In prog.	FL.....	497	1575	FL-16
Surgical instrument industry in the United States (report).	P.....				T. I. S.-7
Surgical instruments.....	P.....	C.....	**167	359	B-10
Suspenders:					
Cotton.....	In prog.	I.....	262	912	I-7
Silk.....	P.....	L.....	316	1207	L-2
Sweaters, cotton.....	P.....	I.....	261	**916	I-6
Swords.....	P.....	C.....	129	363	C-13
Table damasks and manufactures of, cotton.....	P.....	I.....	263	910	I-4
Table utensils.....	P.....	C.....	134	339	C-15
Tacks.....	P.....	FL.....	554	331	C-8
Talc.....	P.....	A.....	69	209	A-19
Tallow.....	Ms.....	G.....	622	701	
Tamarinds.....	P.....	FL.....	623	1665	FL-2
Tank bottoms.....	P.....	E.....	177	501	E-1
Tanks, iron or steel.....	P.....	C.....	127	328	C-12
Tannin.....	P.....	A.....	1	1	A-1
Tannic acid.....	P.....	A.....	1	1	A-1
Tanning materials and natural dyes (report). (Includes all tanning materials and natural dyes provided for in the act of 1913, in paragraphs 30, 31, 399, 455, 469, 475, 492, 536, 538, 553, 564, 618, 624, 630, 634, and 639.)	P.....				A-3
Tapes, flax measuring.....	Ms.....	J.....	275	1014	J-5
Tapstry Brussels carpets.....	P.....	K.....	297	1118	K-6
Tapstry velvet carpets.....	P.....	K.....	296	1118	K-6
Tapstries and other Jacquard figured upholstery goods.....	P.....	I.....	258	908	I-4
Tapioca (see Starch and related materials).					
Tar and oil spreading machines.....	P.....	FL.....	441	1541	FL-3

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Tar and pitch of wood.....	P.....	FL.....	626	1667	A-2, FL-17
Tariff policies (see Colonial tariff policies).					
Tariff systems (see Reciprocity and commercial treaties, report on).					
Tartaric acid.....	P.....	A.....	1	1	A-1
Tassels:					
Cotton.....	In prog..	I.....	262	912	I-7
Silk.....	P.....	L.....	316	1207	L-2
Tea.....	Ms.....	FL.....	627	1668	FL-34
Tea waste, etc.....	P.....	A.....	13	14	A-5
Tees, iron or steel.....	P.....	C.....	104	312	C-3
Telephone and trolley poles.....	P.....	D.....	170	405	D-2
Teeth, natural.....	P.....	FL.....	628	1669	N-21
Telescopes.....	P.....	B.....	94	228	B-10
Tendons.....	P.....	FL.....	419	706	N-19
Terne plate.....	P.....	C.....	109, 115	310, 311	C-4
Terpin hydrate.....	P.....	A.....	18	24	A-6
Terra alba.....	P.....	FL.....	629	**205	FL-22
Terra cotta.....	P.....	B.....	**81	**214	B-7
Textile industries (see Dyestuff situation in the textile industries).					
Textile machinery, general.....	P.....	C.....	167	372	C-29
Thread:					
Cotton.....	P.....	I.....	251	902	T. I. S.-12
Linen.....	P.....	J.....	269	1004	J-1
Silk.....	P.....	L.....	313	1204	L-1
Thrown silk.....	P.....	L.....	313	1203	L-1
Thorite.....	P.....	C.....	154	1616	C-22
Thorium oxide and salts of.....	P.....	C.....	154	84	C-22
Thyme oil.....	P.....	A.....	46	1625	A-12
Thymol.....	P.....	A.....	18	24	A-6
Ties, cotton.....	P.....	FL.....	509	314	C-4
Ties, railroad.....	P.....	D.....	170	405	D-2
Tights, cotton.....	P.....	I.....	261	**916	I-6
Tiles:					
Decorative.....	P.....	B.....	72	202	B-1
Fireproofing (see Earthy and mineral substances, manufactured).					
Floor.....	P.....	B.....	72	202	B-1
Glass.....	P.....	B.....	96	231	B-1
Manufactures of.....	P.....	B.....	72	202	B-1
Roofing.....	P.....	B.....	72	202	B-1
Wall.....	P.....	B.....	72	202	B-1
Timber.....	Ms.....	FL.....	647	401, 1683	FL-37
Tin:					
Chlorides.....	P.....	A.....	65	85	A-17
Metal.....	P.....	FL.....	631	386, 1670	FL-35
Ore.....	P.....	FL.....	631	1670	FL-35
Plate.....	P.....	C.....	109, 115	810, 311	C-4
Salts.....	P.....	A.....	65	85	A-17
Scrap.....	P.....	FL.....	631	386	FL-35
Tagger's tin.....	P.....	C.....	109	310	C-4
Tinsel wire and fabrics.....	P.....	C.....	150	382	C-18
Tire fabrics, cotton.....	In prog..	I.....	262	905	I-7
Tires, locomotive.....	P.....	C.....	142	324	C-15
Toilet preparations.....	P.....	A.....	48	57	A-14
Tolu.....	P.....	A.....	9	10	A-3
Tonka beans.....	P.....	A.....	70	87	A-19
Tool steels and substitutes for.....	P.....	C.....	110	304, 305	C-7
Tools, machine.....	P.....	C.....	165	372	C-29
Toothpicks of wood.....	P.....	D.....	174	412	D-3
Towels, cotton.....	Ms.....	I.....	264	909, 911, 920	I-8
Toys.....	P.....	N.....	342	1414	N-7
Tracing cloth.....	P.....	I.....	254	906	I-4
Track tools.....	P.....	C.....	122	326	C-9
Tractors, farm.....	P.....	FL.....	**391	**1504	FL-3
Transportation rates, preferential (report).	Ms.....				M. S.
Treaties (see Digest of commercial treaties: Reciprocity and commercial treaties).					
Tripoli.....	P.....	FL.....	614	1661	B-3
Truffles.....	P.....	G.....	199	766	G-9
Tubes, collapsible.....	P.....	C.....	164	387	C-23
Tubes, iron or steel.....	P.....	C.....	127	323	C-12
Tubes, plate metal.....	P.....	C.....	127	323	C-12
Tubes, welded.....	P.....	C.....	127	323	C-12
Tubings, silk.....	P.....	L.....	316	1207	L-2
Tuna industry.....	P.....	G.....	**483	1645	G-19
Tungsten-bearing ores.....	P.....	FL.....	633	302	FL-28
Turmeric.....	P.....	FL.....	634	780	A-8
Turpentine, spirits of.....	P.....	FL.....	635	1672	FL-17

List of principal subjects investigated and reported upon by the United States  
Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para- graph of bill of 1921.	Report No.
		Sched- ule.	Para- graph.		
Turtles.....	In prog..	FL....	636	1673	FL-32
Twills (see Cotton cloths, countable).					
Twine (see Binding twine; also Linen thread).					
Type metal.....	P.....	C.....	160	389	C-17
Types.....	P.....	C.....	160	384	C-17
Typesetting machines	P.....	FL....	441	1541	FL-3
Typewriters.....	P.....	FL....	441	1541	FL-3
Ultramarine blue.....	P.....	A.....	52	65	A-15
Umber.....	P.....	A.....	55	70	A-15
Umbrella hardware.....	P.....	C.....	141	342	C-8
Umbrellas.....	P.....	N.....	383	1455	N-27
Underwear:					
Cotton.....	P.....	I.....	261	916	I-6
Silk, knit.....	P.....	L.....	317	1208, 1212	I-2
Union suits, cotton.....	P.....	I.....	261	**916	I-6
United States, colonial tariffs (see Colonial tariff policies).					
Upholstery goods:					
Cotton.....	P.....	I.....	258	908	I-4
Leather.....	P.....	N.....	350, 530	1431, **1600	N-16
Uranium compounds.....	P.....	FL....	638	1674	FL-22
Urea.....	P.....	A.....	18	24	A-6
Vaccines.....	P.....	FL....	400	1511	FL-2
Valerian oil.....	P.....	A.....	46	**54	A-12
Valerianic acid.....	P.....	FL....	387	1501	FL-1
Valonia:					
Extract.....	P.....	A.....	30	36	A-8
Material.....	P.....	FL....	639	1563	A-8
Vanadium ore.....	P.....	FL....	549	**1614	FL-28
Vandyke brown.....	P.....	A.....	**63	**63	A-15
Vanilla beans.....	P.....	A.....	70	87	A-19
Vanillin.....	P.....	A.....	70	56	A-19
Varnish gums.....	P.....				FL-17
Varnishes.....	P.....	A.....	58	72	A-15
Vegetable and fish oils.....	P.....	A, FL	44, 45, 561	49, 50, 52	A-11
Vegetable ivory, manufactures of, n. s. p. f.....	P.....	N.....	369	1438	N-21
Vegetable substances, crude.....	P.....	FL....	552	1617	N-22
Vegetable tallow and oils not chemically com- pounded, n. s. p. f.....	P.....	FL....	498	1675	FL-15
Vellum.....	P.....	FL....	568	1629	M-3
Velvets.....	P.....	L.....	314	1206	L-1
Veneers of wood.....	P.....	D.....	169	404	D-1
Venevians, cotton (report).....	P.....				T. I. S.-10
Vermilion reds.....	P.....	A.....	59	73	A-15
Vessels, cylindrical or tubular.....	P.....	C.....	127	328	C-12
Vestings (see Cotton cloths, countable).					
Vests, cotton.....	P.....	I.....	261	**916	I-6
Violin rosin.....	P.....	N.....	375	1446	FL-17
Viols.....	P.....	N.....	**373	1441	FL-17
Viscoloid (see Pyroxylin plastics).					
Voiles, plain and fancy (see Cotton cloths, countable).					
Wagon blocks, wood.....	Ms.....	FL....	647	406	FL-37
Wagons (see Farm wagons).					
Walnuts.....	P.....	G.....	224	758	G-27
Wash cloths.....	Ms.....	I.....	264	909	I-7
Washers, iron or steel.....	P.....	C.....	123	330	C-11
Waste:					
Cork.....	P.....	FL....	464	1556	N-6
Cotton.....	Ms.....	FL....	467	1557	FL-12
N. s. p. f.....	P.....	N.....	384	1456	N-27
Silk.....	P.....	FL....	599	1650	L-1
Tea.....	P.....	A.....	13	14	A-5
Wool.....	Ms.....	FL....	651	1105	K-1
Waste fabrics, cotton (see Cotton manufactures).					
Watches and parts of.....	P.....	C.....	161	367	C-26
Waterproof cloth.....	P.....	I.....	254	906	I-4
Wax, manufactures of.....	P.....	N.....	367	1436	N-19
Wax, vegetable or mineral.....	P.....	FL....	641	1676	FL-7
Wearing apparel:					
Cotton.....	P.....	I.....	256, 261	916-918	I-5
Fur.....	P.....	N.....	348	1420	N-10
Linen.....	In prog.	J.....	278	1016	J-6
Silk (except knit).....	P.....	L.....	317	1210-1212	L-2

List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Webs and webbing:					
Cotton.....	P.....	I.....	266	920	J-2
Flax, hemp, ramie.....	P.....	J.....	271	1006	J-2
Silk.....	P.....	L.....	316	1207	L-2
Wedges.....	P.....	C.....	122	326	C-9
Weeds, manufactures of.....	P.....	N.....	368	1437	N-21
Whalebone:					
Manufactures of.....	P.....	N.....	368	1437	N-21
Unmanufactured.....	P.....	FL.....	643	1679	N-21
Whale oil.....	P.....	A.....	44	49	A-11
Wheat.....	P.....	FL.....	644	730	T. I. S.-20
Wheat flour.....	P.....	FL.....	644	730	T. I. S.-20
Wheat and wheat flour trade (supplemental information).	P.....				W. M.
Whetstones.....	P.....	FL.....	507	1583	B-3
Whip gut:					
Manufactures of.....	P.....	N.....	366	1434	N-19
Unmanufactured.....	P.....	FL.....	443	1434	N-19
White enamel for clock dials.....	P.....	FL.....	493	**231	A-15
White lead.....	P.....	A.....	56	69	A-15
White metal alloys, miscellaneous.....	P.....	C.....	**154	**1559	C-17
White sulphide of zinc.....	P.....	A.....	61	74	A-4
Whiting.....	P.....	A.....	60	18	A-5
Willow.....	P.....	D.....	173	411	D-3
Willow furniture.....	P.....	D.....	173	411	D-3
Window hollandes (see Cotton manufactures).					
Wine lees.....	P.....	A.....	S	9	A-1
Wire:					
Aluminum.....	P.....	C.....	**114	**316	C-16
Barbed.....	P.....	FL.....	645	1680	C-8
Brass.....	P.....	C.....	114	378	C-19
Cables, insulated.....	P.....	C.....	114	316	C-8
Copper.....	P.....	C.....	114	378	C-19
Fencing.....	P.....	FL.....	645	317	C-8
Flat.....	P.....	C.....	114	316	C-8
Healds.....	P.....	C.....	114	316	C-8
Heddles.....	P.....	C.....	114	316	C-8
Insulated.....	P.....	C.....	114	316	C-8
Manufactures of, n. s. p. f.....	P.....	C.....	114	393	C-8
Rods.....	P.....	C.....	113	315	C-8
Rope and strand.....	P.....	C.....	114	316	C-8
Round.....	P.....	C.....	114	316	C-8
Wires and cables, electrical.....	Ms.....	C.....	114	316	C-S, C-31
Wiring devices, electrical.....	Ms.....	B, C.....	**80, **167	**213, **333	C-31
Wood screws.....	P.....	C.....	140	338	C-8
Wood chemical industry.....	P.....				A-2
Wood flour.....	Ms.....	FL.....	647	**414	FL-37
Wood:					
Barrels, boxes, and shooks.....	P.....	D.....	171, 172	409, 410	D-2
Baskets.....	P.....	D.....	175	413	D-4
Blinds, curtains, shades, and screens.....	P.....	D.....	175	413	D-4
Cabinet woods.....	P.....	D, FL.....	169, 648	404	D-1
Furniture.....	P.....	D.....	176	414	D-4
Posts, poles, and railroad ties.....	P.....	D.....	170	405	D-2
Rattan.....	P.....	D, FL.....	173, 648	411, 1684	D-3
Toothpicks and skewers.....	P.....	D.....	174	412	D-3
Unmanufactured.....	Ms.....	FL.....	647, 648	404, 1683	FL-37
Willow.....	P.....	D.....	173	411	D-3
Wool:					
Carbonized.....	Ms.....	FL.....	651	1105	K-1
Combed or tops.....	Ms.....	K.....	286	1106	K-1
Extract.....	Ms.....	FL.....	651	1105	K-1
Flocks.....	Ms.....	FL.....	651	1105	K-1
Floor coverings.....	P.....	K.....	293, 303	1117, 1118	K-6
Gloves and mittens.....	P.....	K.....	288	1115	K-3
Hosiery.....	P.....	K.....	288	1115	K-3
Knit fabrics.....	P.....	K.....	288	1115	K-3
Knitted articles, n. s. p. f.....	P.....	K.....	291	1115	K-3
Mungo.....	Ms.....	FL.....	651	1105	K-1
Noils.....	Ms.....	FL.....	651	1105	K-1
Rags.....	Ms.....	FL.....	586	1105	K-1
Raw (see Wool-growing industry).....	P.....	FL.....	305, 650	1101, 1102	
Roving, wool or camel's hair.....	Ms.....	K.....	286	1106	K-1
Screens.....	P.....	K.....	303	1119	K-6
Shoddies.....	Ms.....	FL.....	651	1105	K-1
Tops.....	Ms.....	K.....	286	1106	K-1
Waste.....	Ms.....	FL.....	651	1105	K-1
Yarn.....	Ms.....	K.....	287, 307	1107	K-1

*List of principal subjects investigated and reported upon by the United States Tariff Commission, Washington, December, 1921—Continued.*

Subject.	Status.	Tariff act of 1913.		Para-graph of bill of 1921.	Report No.
		Sched-ule.	Para-graph.		
Wool greases.....	P.....	A.....	44	49	A-11
Wool-growing industry (report).....	P.....				M. S.
Wool machinery.....	P.....	C.....	**167	**372	C-29
Works of art.....	P.....	N, FL.	{376, 653-656	1446, 1686, 1688	N-24
Worm gut:					
Manufactures of.....	P.....	N.....	366	1434	N-19
Unmanufactured.....	P.....	N.....	443	1434	N-19
Woven fabrics:					
Flax, hemp, or ramie.....	In prog..	J.....	{280, 283, 284	1009	J-8
Jute.....	P.....	J, FL.	279, 408	1008	J-7
Silk.....	P.....	L.....	318	1205	L-3
Yarns:					
Coir.....	In prog..	FL.....	459	1551	FL-16
Cotton.....	P.....	I.....	250	901	T. I. S.-12
Flax, hemp, or ramie.....	P.....	J.....	270	1004	J-1
Jute.....	P.....	J.....	267	1003	J-1
Silk.....	P.....	L.....	312, 313	1202, 1203	L-1
Wool.....	Ms.....	K.....	287, 307	1107	K-1
Zaffer.....	P.....	FL.....	657	1690	FL-6
Zinc:					
Chloride.....	P.....	A.....	62	88	A-15
Dust.....	P.....	C.....	163	391	C-27
Manufactures of.....	P.....	C.....	167	393	C-27
Metal.....	P.....	C.....	163	391	C-27
Ore.....	P.....	C.....	162	390	C-27
Oxide.....	P.....	A.....	61	74	A-15
Pigments.....	P.....	A.....	61	74	A-15
Sheets.....	P.....	C.....	163	391	C-27
Sulphate.....	P.....	A.....	62	88	A-15

## V. INVESTIGATIONS IN FOREIGN COUNTRIES.

### EUROPE.

In the early part of 1921 the commission sent four special experts to Europe for the purpose of investigating the textile, glass, metal, pottery, and other industries in such detail as the limited time at their disposal would permit. The countries visited were England, Scotland, Ireland, Belgium, France, Germany, Czechoslovakia, Italy, Switzerland, and Austria.

Considerable data relative to wages, earnings, working hours, prices, and industrial and economic conditions were obtained. The results of the investigations will be embodied in the various tariff information surveys and other reports.

The reception accorded and the assistance given to the commission's representatives by the American Government officials residing abroad, by foreign Government officials and employees, trade associations, trade-unions, chambers of commerce, and individuals were cordial and helpful. One of the gratifying results of the investigations was the establishment of connections, which, it is believed, will enable the commission to secure valuable foreign data in the future.

### ARGENTINA.

During the summer of 1921 an investigation was made in Argentina to ascertain methods, and, so far as possible, costs of production in the cattle and sheep industries of Argentina. An agent of

the commission was in that country from about the 1st of April to the 1st of July, traveled over a considerable part of the country, and interviewed a large number of men engaged in the production and marketing of cattle, sheep, and wool.

Pertinent facts as to methods of production in different regions were secured. Fairly representative cost data were obtained for typical cattle-breeding ranches as well as cattle-fattening ranches. Equally significant costs were ascertained for the three chief methods of sheep and wool production in the leading sheep regions. A detailed report concerning these matters is in preparation.

Concerning Argentina's production, little first-hand information was available, yet that country's share in the world's meat trade has been rapidly increasing. Briefly, there are three main methods of beef production. One is the herding of the cattle for a more or less dual purpose; some or all of the cows are milked once a day and the calves suckle the remainder of their milk. This method prevails in the rich grazing area of northeastern Argentina. That it is growing in importance is evinced by the rapid increase in dairy production during recent years. Virtually all dairy manufactures depend on such herds for their raw material. A second method is the maintenance of breeding herds in distant western and southern areas and the shipment of yearling and 2-year old steers to richer grazing sections for finishing. This method is similar to that followed in Texas and the Southwest. The third method, confined to the richer grazing region of northeastern Argentina, is the maintenance of breeding herds on the ranches where steers are finished for market.

There are also three methods of sheep and wool production. One uses fine-wool flocks in semiarid regions and makes wool the chief source of income. Wethers are not sold until two fleeces are shorn. The second uses crossbred sheep; wethers are disposed of as long yearlings, and wool is equally as important as mutton in flock receipts. Flocks of this type are found mainly in humid sections, though some are kept in parts of the semihumid areas where rainfall is more dependable and the grazing is better. The third system uses crossbred sheep but disposes of lambs at 6 to 8 months of age; mutton is considerably more important than wool. Such flocks are not very numerous as yet and are practicable only in humid sections; they seldom occur outside of the Province of Buenos Aires.

#### CANADA.

Early in 1921 the commission sent one of its agricultural experts to Canada. Special effort was made to obtain data regarding costs, methods of production in the principal crops and live-stock products, marketing channels, competitive conditions, and such other economic factors as would be of importance in a comparison with like industries south of the border.

From various sources a considerable amount of valuable information was obtained. Among the more important of these sources were the United States consuls, Dominion and provincial departments of agriculture, Board of Grain Commissioners for Canada, Dominion live-stock commissioner, Dominion bureau of statistics, National Re-

sources Branch of the Department of the Interior, agricultural experiment stations, trade associations, cooperative associations, united farmers' organizations, editors of agricultural journals, grain exchange members, elevator men, stockyard officials, besides a number of leading dealers in and producers of the various products from Quebec to British Columbia. Contacts were also established with principal Canadian sources of information, and arrangements were made regularly to obtain pertinent information regarding Canadian agriculture.

The two principal productive sections of Canada are separated by a stretch of unfertile, barren land about 600 miles wide. The eastern section is devoted largely to mixed farming and fruit growing, and conditions surrounding production correspond generally to conditions prevailing in New York State and adjacent territory across the boundary. In the western prairie provinces are great wheat and grain ranches and cattle ranges. This section corresponds generally to the Dakotas.

Particular attention was given to live stock, wheat and other grains, apples, and dairy products. Limitation of time prevented more than passing attention to less important products. Much data and material were obtained which were of value in the consideration of the new tariff schedules and in the preparation of the surveys of the commission.

#### VI. FORMER RECOMMENDATIONS RENEWED.

Several of the commission's recommendations in prior annual reports have been considered and in part given legislative form, either by enactment into law by the Congress or tentatively in H. R. 7456, which has passed the House of Representatives and is now pending before the Committee on Finance of the Senate.

#### DUMPING AND UNFAIR FOREIGN COMPETITION.

Title II of H. R. 2435, otherwise known as the emergency tariff bill, which became a law on May 27, 1921, is specifically directed toward the prevention of dumping and unfair competition, with respect to which the commission reported to the Congress on October 4, 1919. The effectiveness of this new legislation, the administration of which rests with the Treasury Department, remains to be determined. The commission is advised by the Treasury Department that the act has been invoked only to an unimportant extent and that no rulings under it by the Treasury Department have so far been reviewed by the Board of General Appraisers or by the Court of Customs Appeals.

#### CUSTOMS ADMINISTRATIVE LAWS.

The commission in all its previous reports to the Congress has directed attention to the desirability of revising the laws regulating the collection and safeguarding of duties on imports, commonly referred to as the customs administrative laws. After careful investigation, in which officers of the Government charged with the duty of construing and enforcing the statutes and representatives of all

interests—importing, exporting, and manufacturing—were consulted, the commission on August 26, 1918, submitted to the Committee on Ways and Means of the House of Representatives a report upon the subject, together with a draft of a complete revision and codification of all administrative laws. This report was prepared and submitted pursuant to section 702 of Title VII of the act of September 8, 1916.

On May 7, 1921, at the request of the Committee on Ways and Means, the commission resubmitted that report in amended form. The most important changes consisted in the substitution, by request of that committee, of American for foreign valuation as the basis for the assessment of duties, and the omission, likewise by request, of Chapter II of the original report, relating to collection districts, ports, and officers. With other minor changes, this amended revision or code constitutes a part of the general tariff bill, H. R. 7456, as passed by the House of Representatives July 21, 1921.

It should be borne in mind that by reason of the omission of Chapter II some uncertainty has been injected into the repealing provisions (Chap. VII). In the commission's original report of 1918 all the statutes relating exclusively to the collection and protection of duties were brought together in a way to enable them to be expressly repealed. Many of these statutes are more than a century old; some have been superseded or impliedly repealed by other legislative enactments; but the assurance that they are no longer to be either wholly or partially in effect can only be effectively obtained by repealing them in express terms. This situation emphasizes but one of the many advantages of having a complete code of customs administrative laws in which can be found every provision in force, thereby rendering unnecessary recourse to the Revised Statutes, the Statutes at Large, and judicial construction thereunder.

#### FOREIGN-TRADE ZONES.

Upon request of the Committee on Commerce of the United States Senate a report was compiled and submitted to the Sixty-fifth Congress in connection with bills introduced at that session providing permissive legislation for the establishment of foreign-trade zones. Although not included in the report, the Tariff Commission, upon the request of the Senate Committee on Commerce, filed an informal memorandum with that Committee showing conclusively, in the opinion of the Tariff Commission, that objections to the legislation on constitutional grounds are not well founded.

The report in a somewhat revised form, upon request, was submitted to the Committee on Ways and Means of the House of Representatives.

As a result of its investigation the Tariff Commission, acting under the provisions of law, recommended the adoption of permissive legislation for the establishment of foreign-trade zones. The building up and maintenance of an American merchant marine and the facilitating of our foreign commerce justify and demand the elimination of unnecessary hindrances and delays incident to the present system of bonded warehouses and drawback and the adoption of the foreign-trade zone is an alternative and supplementary device.

A bill to provide for the establishment of such zones has been reported during the first session of the Sixty-seventh Congress in the Senate by Mr. Jones of Washington for the Committee on Commerce. At the same time Mr. Jones announced his intention of proposing the bill as an amendment to the bill, H. R. 7456, for the revision of the tariff.

The Tariff Commission now therefore renews its recommendation that such permissive legislation be enacted.

#### RECIPROCITY AND COMMERCIAL TREATIES.

The Tariff Commission in February, 1919, submitted to Congress a comprehensive report on reciprocity and commercial treaties. This report discusses in detail the reciprocity and tariff experiences of the United States. Among the subjects thus covered are the Canadian reciprocity treaty of 1854, the Hawaiian reciprocity treaty of 1875, the agreements under the tariff acts of 1890, 1897, and 1909, the Brazilian preferential arrangement, the Cuban reciprocity treaty of 1902, and the attempt to establish commercial reciprocity with Canada by concurrent legislation in 1911. The report also discusses fully the complicated subject of the most-favored-nation clause in commercial treaties, and, finally, surveys the tariff systems of Germany, France, and Russia.

The report is prefaced by recommendations with regard to the use of tariffs as a means of preventing discriminations to the disadvantage of American citizens and their products in foreign markets. The recommendations emphasize the principle that "the United States should ask no special favors and should grant no special favors," and that "it should exercise its powers and should impose its penalties not for the purpose of securing discriminations in its favor but to prevent discriminations to its disadvantage." The commission recommends the enactment of legislation authorizing the imposition of additional or penalty duties by proclamation of the President on imports from countries not according to the United States the same treatment accorded to other "most-favored" nations.

The report maintains that it should be the policy of our Government to offer equality of tariff treatment to all who grant like treatment to the United States and its products, and to penalize with a higher tariff those countries which refuse us equality of treatment. It urges that in order to obtain the desired flexibility Congress should define in general terms the kind and degree of unequal treatment which is to be penalized, but should leave to the President the application of the law to particular cases. The mere possibility of the imposition of maximum or penalty duties will tend to secure equality of treatment for the United States and its products without formal action. By virtue of the need for prompt and effective action it also points out that when agreements within the provisions of the law are entered into further ratification by the Senate or approval by Congress should not be required.

As a result of the commission's exhaustive review of the subject the following additional constructive legislative suggestions may be made: The law should be sufficiently inclusive to enable the President to penalize not merely open discriminations but also discrimina-

tions more or less concealed in customs regulations, transportation rates, sanitary provisions, or even in classification where the effect is to place American products at a serious disadvantage. Congress should enumerate the articles or commodities upon which additional duties may be imposed and should specify the maximum increases which may be made in such duties as penalties for discrimination. Two considerations should be borne in mind: First, a variety of products should be named, selected with the view of inflicting in operation a genuine penalty on foreign countries discriminating against us, with the minimum injury to American consumers, and, second, those products should be chosen which are imported in substantial amounts from more than one source in order that the imposition of the additional duties on imports from the country to be penalized may result in a diversion of that trade to another country without great inconvenience to importers and consumers in the United States. An imported commodity, which is also produced in large amounts in this country and the production of which could be increased, would be suitable for the list, even though it were imported from a single country.

Having enumerated the articles and specified the maximum penalty duty, Congress should leave the President wide discretion in administering the law within these limits. The necessary flexibility can not be obtained unless the President has power to proclaim, at his discretion and without further action by Congress, the maximum tariff on any or all of the articles enumerated in the law, or to impose such additional duty up to the maximum authority in the law, as the circumstances may require. Many discriminations can not be reached at all unless in the administration of the additional tariff thus provided the penalty can be fitted to the offense.

The tariff bill which passed the House of Representatives, if finally enacted into law, will continue the authorization of the negotiation of treaties which make special tariff concessions to single countries. The bill even goes further in that by it the power of making and enforcing trade agreements having, within certain limitations, a like effect is conferred upon the President alone. Again, the provisions of the bill, e. g., in regard to automobiles and bicycles, far from imposing a single uniform rate, will result in the imposition of a different rate upon the product of each of the important producing countries. These discriminations will be irreconcilable with any interpretation of the most-favored-nation clause. While the bill contains these and other provisions for discriminatory duties and for treaties and agreements introducing discriminatory duties, it provides no machinery for penalizing discriminations against the United States except that when the United States imports from a country which makes discriminations against American exports, articles like or similar to those upon which the discrimination rests, the President is authorized to impose upon these articles when produced in the said country discriminatory duties at rates equivalent to the discriminations upon American exports. Since it is unusual for a country, even one as large as the United States, both to export to and to import from the same country significant quantities of like or similar articles it is evident that this provision will ordinarily remain ineffective.

### VII. CONFERENCE ON THE LIMITATION OF ARMAMENT.

Upon the request of the Secretary of State the Tariff Commission has assisted, as have other branches of the Government, in preparing certain economic data for the use of the American delegates to the Conference on the Limitation of Armament. The commission has not only made available advanced copies of its reports on commercial treaties and colonial tariff policies but its experts have prepared memoranda on certain industries and have made a comprehensive analysis of the exports and imports of Japan with particular reference to her commerce with the United States. This report on Japan trade has been summarized elsewhere in this report.

Mr. Culbertson of the commission was designated technical adviser in charge of economic questions to the American delegation, and has devoted a portion of his time to the work of the conference.

### VIII. CHANGES IN PERSONNEL.

Mr. Thomas O. Marvin, of Massachusetts, was appointed by the President on March 11, 1921, and confirmed by the Senate, for the term ending September 7, 1922, made vacant by the resignation of Commissioner William Kent on March 31, 1920.

Mr. William Burgess, of Pennsylvania, was appointed by the President on June 27, 1921, and was confirmed by the Senate, for the term ending September 7, 1923, made vacant by the resignation of Commissioner Frank W. Taussig on July 31, 1919.

### IX. FINANCES AND APPROPRIATIONS.

The commission renewed in its estimates for the fiscal years 1922 and 1923 its former recommendations that the appropriations for the commission be increased in order that it may be in a position to discharge more effectively the duties imposed upon it by law. The amount appropriated for the fractional fiscal year remaining at the time the commission was created and which was obviously intended to serve only during the preliminary period of its organization has never been increased. This fact is the more significant in view of the increased cost now involved in expenditures of all kinds, such as supplies, transportation, equipment, printing, and like charges. The amount of field work which the commission has been able to conduct, and which is highly important in its investigations, has been too narrowly restricted. It has been likewise impracticable for the commission to prosecute sufficiently comprehensive investigations of competitive conditions in foreign countries.

The expenditures of the commission from July 1, 1920, to June 30, 1921, were as follows:

Salaries of commissioners.....	\$32,020.83
Salaries of employees.....	189,234.25
Rent of office building.....	13,000.00
Travel and field expenses.....	14,696.30
Foreign investigations.....	1,711.80
Books of reference and publications.....	918.92
Printing and binding.....	29,682.68
Office equipment, supplies, telephone and telegraph service, maintenance, and miscellaneous expenses.....	13,721.69
Total.....	294,986.47

<sup>1</sup> One vacancy for entire year and one for nine months.

## X. THE COMMISSION LIBRARY.

The library consists of 3,217 bound volumes and approximately 4,853 pamphlets. The accessions for the year amount to 599 volumes. Of this number, 66 were new books while 533 volumes were periodicals and pamphlets newly bound. The pamphlet collection has not increased. While about 1,000 new publications of this character were added, an equal number of duplicates and worn-out pamphlets were discarded, leaving the total amount as it was last year. Two hundred and thirty-seven trade and technical periodicals and Government publications, most of them gifts, were received regularly. This is an increase of 7 over the preceding year.

The Library of Congress, the departmental libraries, and the Public Library of the District of Columbia were freely drawn upon for books and periodicals. On the other hand, the Tariff Commission library was made use of by other departments and officials.

In its new quarters the library occupies two rooms, one being used as stack room and the other as reading room. In the stack room an additional steel stack provides for the growing collection.

## XI. CLASSIFICATION OF PERSONNEL.

A detailed classification of the personnel of the commission as of June 30, 1921, is shown in the following statement:

Commissioners.....	5
Secretary .....	1
Clerks to commissioners.....	1
Special experts.....	40
Clerks, including stenographers and typists.....	47
Telephone operator and stock clerk.....	1
Messengers.....	2
Skilled laborer .....	1
Total.....	98

Respectfully submitted.

THOMAS WALKER PAGE, *Chairman.*  
 THOMAS O. MARVIN, *Vice Chairman.*  
 DAVID J. LEWIS.  
 WILLIAM S. CULBERTSON.  
 EDWARD P. COSTIGAN.  
 WILLIAM BURGESS.