
APPENDIXES

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APPENDIX A.—SCHEDULES.

The information contained in the statistics of manufactures for 1919 was collected by means of a general schedule, which was used in every manufacturing establishment, and certain supplementary schedules. The general schedule is here reproduced.

In addition to the general schedule there was a special schedule entitled "Administrative and general office schedule." This schedule was used generally in cases where companies controlled a number of factories from a central office and did not make a distribution of the general expenses of such office among the separate reports for the different plants. This schedule, which was used for reporting the capital of the company as a whole, the employees at the central office, their salaries and wages, and the miscellaneous expenses, is reproduced on page 518.

Supplemental schedules were used for particular industries and were designed to develop statistics peculiar to the different industries to which they relate, such as the quantities and values of materials and products, and in some cases data with regard to the mechanical equipment of the plant. These special schedules are numerous and for lack of space can not be reproduced. The schedule used for cotton manufactures is, however, given on page 516 for the purpose of illustrating the general character of these schedules.

Following is a list of the industries and products for which supplemental schedules were used, the schedule being in each case similar to that for cotton, but varying to suit the conditions peculiar to each industry. The schedules marked with an asterisk were used in conjunction with the Geological Survey.

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| 102. Agricultural implements. | *172. Clay products. | 136. Glucose and starch factories. | 153. Petroleum, refining. |
| 103. Aircraft. | 119. Coal-tar chemicals. | | 154. Phonographs, graphophones, and talking machines. |
| 104. Ammunition, firearms, ordnance, and accessories. | *173. Coke (other than in by-product coke ovens and gas-house coke). | *177. Grindstones, oilstones and whetstones, pulp stones, scythestones, hones, and rubbing stones. | *181. Potash materials. |
| *169. Antimony smelters. | *174. Coke and by-products in by-product ovens. | 138. Ice, manufactured. | 155. Printing and publishing. |
| 105. Automobiles. | *175. Copper refineries. | 139. Iron and steel, blast furnaces. | 156. Railroad repair shops, steam and electric. |
| 106. Beet-sugar factories. | *176. Copper smelters. | 137. Knit goods. | 157. Rice, cleaning and polishing. |
| 107. Boots and shoes. | 121. Cordage and twine, jute goods, and linen goods. | *178. Lead refineries. | 158. Rubber goods. |
| 108. Brass, bronze, and copper products. | 122. Cotton manufactures. | *179. Lead smelters. | *182. Salt works. |
| 109. Butter, cheese, and condensed-milk factories. | 123. Cotton lace goods. | 141. Leather gloves and mittens. | *183. Sand-lime brick. |
| 110. Buttons. | 124. Cottonseed products. | 142. Leather, tanned and curried. | 159. Shipbuilding. |
| 111. Cane sugar. | 125. Druggists' preparations and patent and proprietary medicines and compounds. | *180. Lime. | 160. Silk manufactures. |
| 112. Cane-sugar refining. | 126. Dyestuffs and extracts—natural. | 143. Lumber and timber products. ¹ | 161. Slaughtering and meat packing. |
| 113. Canning and preserving, fish and oysters. | 127. Electrical machinery and apparatus. | 144. Machinery. | 162. Soap. |
| 114. Canning and preserving, fruits and vegetables. | 128. Engines. | 145. Machine tools. | 140. Steel works and rolling mills. |
| *170. Carbon black from natural gas. | 129. Essential-oil factories. | 146. Motorcycles and bicycles. | 163. Textile machinery. |
| 115. Carriages and wagons. | 130. Explosives. | 147. Musical instruments. | 164. Tin-plate and terneplate works. |
| 116. Cars, steam and electric railroad. | 131. Ferroalloys. | 148. Needles, pins, and hooks and eyes. | *184. Tin smelters. |
| 117. Cast-iron pipe. | 132. Fertilizers. | 149. Oilcloth and linoleum. | 165. Turpentine and rosin. |
| *171. Cement. | 133. Flour, feed, and grist mills. | 150. Paints and varnishes. | 166. Wire. |
| 118. Chemical manufactures. | 134. Gas, manufactured. | 151. Paper and pulp. ² | 167. Wood distillation. |
| 120. Chocolate and cocoa products and confectionery. | 135. Glass works. | 152. Pulp wood consumed (card). | 168. Wool manufactures. |
| | | | *185. Zinc smelters. |

¹ Eastern states (E. S.) and Western states (W. S.).
² Mills making wood pulp must also prepare card schedule "Pulpwood consumed."

APPENDIX B.—INSTRUCTIONS TO SPECIAL AGENTS.

DAILY REPORTS AND CORRESPONDENCE.

1. **Daily reports.**—All special agents must make daily work reports (Form 30) not only for every day they are actually employed and for which compensation is claimed, but every day during employment, including Sunday, must be accounted for, whether or not work or travel is actually performed. Failure to make a report for each day will delay payment of salary and expense accounts. The daily reports of the agents working under the supervision of chief special agents, together with all schedules taken daily, as herein provided, must be forwarded at the close of the day to the chief special agent in charge of the city or district. The daily reports and schedules secured by agents who do not work under the direction of a chief special agent must be forwarded daily to the Bureau of the Census. The daily report calls for details as to travel on official business. Whenever such travel is necessary, agents are required to use railroad, trolley, or stage, if available, and in cases where livery or automobile is used the necessity must be fully explained on the daily report of the day such conveyance was used. These side trips may often be avoided by use of phone, and every effort should be made in this direction. Inquiry will often develop the size or importance of an establishment located in some remote section, and if a very small gristmill or sawmill, for instance, the agent should try to have the report mailed to him at some place he must visit in the vicinity of the establishment in question. The agent, therefore, must carefully examine his list of establishments to be canvassed in advance of reaching the locality, and familiarize himself with the inaccessible places long before reaching the city or town from which the actual visit is to be made, and take some such action as indicated to avoid expenditure of time and money, excessive and unwarranted, for very meager results. The mail and the telegraph addresses should be given daily and changes indicated sufficiently far in advance to enable the office to reach the agents by mail and wire at all times. All telegrams must be addressed to the Census Bureau, not to the Director of the Census.

2. **Registered mail.**—All reports are to be forwarded by registered mail in the return penalty envelope furnished for that purpose. Attention is directed to section 29, of the census act, page 71, wherein it will be seen that there is no restriction as to class or weight of official mail addressed to the Census Office. This provision has been incorporated in the postal regulations.

3. **Requests for supplies.**—Letters relative to the progress of the work and requests for supplies, instructions, etc., must be addressed to the Director of the Census, Washington, D. C., unless otherwise specially provided for, as in the case of agents working in a city or territory in charge of a chief special agent. Inquiries or requisitions of any character must not be made upon the daily report, but should be made on the special printed form or in a separate letter.

4. **Date of completing work.**—Special agents must give sufficient notice of the date they will complete the work to which they are assigned, so that they may be assigned to other territory without loss of time.

LISTS AND CANVASS OF ESTABLISHMENTS.

5. **Index cards.**—To assist in the canvass of establishments, each special agent will be furnished with index cards (Forms 8-608c and 8-608d) containing the names and addresses of establishments to be canvassed in his district. These cards will be arranged and listed alphabetically by cities and towns within each county. In addition, except for agents working under chief special agents in certain large cities, an itinerary list will be furnished with localities arranged as nearly as possible in the order in which the special agent will visit the establishments with the least expenditure of time and duplication of travel. A careful notation must be made on the typewritten list of the disposition of each card and the list must be returned to this office upon the completion of the canvass in each district. If it is found necessary to change the prescribed route to save time, or for other reasons, the office must at once be notified by letter.

On the right-hand margin of the index cards is stamped the source from which the name of the establishment was obtained, as—Bradstreet, City directory, Trade directory, Internal revenue, Forestry, etc.

The word "circular" on the left-hand margin of an index card shows that the circular which was sent to the establishment containing inquiries in regard to the character of the industry and the place where the report would be made, etc., was returned by the establishment.

"Agent investigate" across the face of a card indicates that the information received by the Census Bureau in regard to the establishment was not sufficient to explain the nature of the industry and that there is doubt as to whether the establishment comes within the scope of the census. The agent, therefore, must make such inquiries as will make the conditions plain and obtain a report if one should be secured.

The reverse side of each card must be examined, as notations may have been placed there which will be of assistance in locating the establishment or securing the report.

6. **Unlisted establishments.**—Although the list of establishments has been made as complete as possible it has not been practicable to secure absolute accuracy and completeness, and special agents must be constantly on the alert to discover establishments not named on the cards. Agents will be held strictly accountable for a complete canvass of the district to which they are assigned. They must make careful inquiry for other manufactories located in that vicinity; and in rural districts also they should be on the lookout for establishments in their districts for which they have no cards. Where additional establishments are found, reports must be obtained for them, and in all such cases the note "No index card for this establishment" must be made on the bottom of the title-page of the report.

7. **Cards for nonmanufacturing establishments.**—It is possible that some establishments for which there are index cards may be found to be engaged in industries (see pars. 25 to 36) which are omitted from the census of manufactures. In each case a notation is to be made on the card and daily report stating the reason why the report was not secured. It is not sufficient to state: "Not a manufacturing establishment." The character of the business must be briefly and accurately described by a notation, such as "Retail confectioner," "Restaurant," "Caterer," "Carpenter shop," "Cleaning and pressing wearing apparel," "Drug store," "Product less than \$500," etc.

8. **Establishments reported in 1914.**—The industry number (according to the 1914 classification) is given in the upper left-hand corner of all index cards for establishments reported at that census. The fact that the establishment reported at the prior census has answered the preliminary circular for this census that it was in business during 1919 indicates that a report must be secured.

9. **Return of index cards.**—Special agents in every instance will be held to a strict accountability for all index cards assigned them. A return must be secured from each establishment or a satisfactory explanation given on the back of the card, as instructed, in paragraph 7, if the establishment is not a manufacturing establishment, or such as: "General office located at —, where information must be secured"; or "Establishment removed to —" (giving date of removal and stating whether manufacturing was done at the place of canvass during any part of the year 1919).

Each index card is numbered and the same number is on the typewritten list of establishments. This number must in all cases be written in the upper right-hand corner of the schedule and the left-hand margin of the daily report.

Each index card must be signed by the special agent and returned either attached to the appropriate schedule or to the daily report with an explanation as above indicated. For certain large cities where there is a chief special agent the cards may be retained by him until the completion of the canvass.

10. **Change in name of establishment.**—If there has been a change in the name or location of the factory since the index card was prepared, or if a report is secured for an establishment under a different name from that appearing on the card, the card must be corrected to agree with the new conditions and the daily report must state this change. No erasures, however, are to be made on the index card.

11. **Central Offices.**—As a rule, "Central office cards" (Form 8-706c) represent establishments of considerable importance, and, for this and many other reasons, should receive the earliest attention by special agents. This is very important and applies not only to agents in charge of metropolitan districts, and all others having

special agents under their supervision, but to those working independently who may have "Central office cards."

12. **Establishments having office outside agent's district.**—The office has endeavored to ascertain the name and location of all factories for which the census reports will be made from a central office, and the cards for such factories are stamped "Central office." In some cases where plants are controlled from a central office the Bureau of the Census has been advised that the census report will be made at the plant. In such cases the card has been stamped "Information at the plant," and the agent is required to secure a complete report. In case the special agent discovers an establishment in his district for which the reports are to be prepared elsewhere, and which has not been indicated on the index card as a "Central office" as indicated above, the facts must be stated on the index card and also on the daily report and the card returned attached to the daily report. It is important that the precise post-office address (street number or room in office building) of such office be stated. If, in such cases, answers to any of the inquiries can be obtained at the factory canvassed, they should be obtained and the partially prepared report forwarded with full explanation. These facts should not only be reported to the Census Bureau but also to the agent in charge of the city where the report is to be secured by the use of postal cards, prepared for that purpose. The agent will then take no further action with regard to securing the report unless he receives further instructions.

13. **Factories outside, but offices inside, the agent's district.**—Reports must not be secured from the office of any establishment having no factory within the limits of the district being canvassed unless the index card states that the report must be secured at such office or special instructions are received. In the absence of such instructions it may be assumed that the establishment will make report to the agent for the place where the factory is located.

14. **Additional factories of same owner, but outside the agent's district.**—It will sometimes be found that the individual or company reporting also operates a factory, or factories, outside of the agent's district. Where it is found that a report for such factory can be secured only at the office the agent is visiting, he should obtain the report and call attention to it on his daily work report, so that prompt notice may be given to the agent in the district where the factory is located. Each report of a factory outside of the district of the agent must be taken under the local name of such factory and show its location by state, county, city, or town, etc. The correct location of the factory is of vital importance and must be carefully reported. If, on the other hand, the reports for these outside factories must be secured only at the factories, a slip should be attached to the report secured for the local factory, giving the location of each of the outside factories and the name and the place where the information may be obtained, and at once forwarded to the Census Office.

15. **Idle establishments.**—No report should be secured for establishments which were closed or idle during the whole of the census year nor for establishments that were abandoned or dismantled prior to January 1, 1919. All manufacturing establishments, however, that commenced operations or did any work during the census year ending December 31, 1919, must be reported whether or not they were in operation at the time of canvass or at the end of the year 1919 (see par. 26).

METHOD OF SECURING REPORTS.

16. **Schedules mailed to manufacturers.**—Blank schedules have been mailed to all establishments listed. A number of these establishments have made complete reports by mail, and the cards for these establishments are stamped "Report secured by mail." Cards for such establishments are furnished the special agents to acquaint them with the fact that a return has been received. The cards for such establishments must be returned by the agent with his daily report for the day he canvasses the neighborhood in which the establishments are located, and the names of the establishments must be given on the daily report.

If the report received from the establishment by mail is defective, a copy will be sent to the agent for completion. These copies must be carefully preserved and completed or corrected as may be necessary. The corrected copy must be signed as "Corrected by" the agent securing the corrections and returned as an original schedule, together with its accompanying card, or a complete new schedule secured and returned with the card; in the latter case the words "See copy" must be written on the top margin of the title-page of the new schedule. The defective copy must always be returned, either "corrected" or attached to the new report, if one is secured.

17. **Understanding of the schedules necessary.**—Before undertaking the field work, it is essential that employees should thoroughly understand the schedules to be used, both the General and the Supplemental, but particularly the interrelation of the several inquiries in the General Schedule. This is not only necessary to determine whether or not the individual reports are fully and prop-

erly prepared, but in order that the agent may be able when called upon to explain the details fully to manufacturers. The several inquiries of the General Schedule are explained separately in these instructions, but their relation one with the other must also be given careful consideration. For instance, the capital must be consistent with the value of products and harmonize with answer as to "Rent of factory or works" under Inquiry 8, "Rent and taxes"; labor and wages not only what seems necessary for the production, but to make sure that the total number of wage earners in Inquiries 4 and 5 are in agreement; and that the materials used are not only harmonious as to kinds used for the products reported, but their total cost consistent with the value of products. These features will vary more or less according to the industry reporting, which, of course, must also receive consideration. Wherever there is a seeming inconsistency in the relation of any of the inquiries, an explanation must be made under "Remarks," even if the agent personally has satisfied himself that it is correct.

18. **Reports already forwarded by manufacturers.**—In some cases the manufacturer will have already forwarded his report to Washington before the agent arrives. If the agent is satisfied that the report has been sent by mail, he must immediately notify the office, giving the date of mailing by the manufacturer, enter the fact on his daily report, and make the following entry on the index card: "Report sent by mail." In some cases the replies to the preliminary circular have been confused with the report itself. The agent must be satisfied that this is not the case before concluding that the report has been mailed. The agent should not accept a promise that the report will be sent to him or to Washington later, but should secure it in person.

19. **Reports prepared by manufacturers awaiting agent's call.**—In case the manufacturer has the report prepared when the agent arrives, the agent should satisfy himself as to the source and accuracy of the information, and if necessary explain the meaning of any question concerning which the manufacturer is in doubt, and assure himself that the report is complete before it is accepted.

If a manufacturer insists upon sending his report to the Census Bureau by mail instead of giving it to the special agent, the agent, if possible, should see that the schedule is properly prepared, and furnish an addressed official envelope for mailing it to the bureau. He must also give the name of the establishment on his daily report, with the statement that the schedule will be, or has been, sent by mail.

If the report has not been prepared, and the agent is unable to secure it, he should go over the inquiries with the manufacturer, and obtain a definite date when the report will be mailed, which date must be noted in his daily report in order that the office may be in a position to notify the company of the failure to keep its promise in case the report is not received as agreed upon. Such cases, however, must be exceptional, and fully explained, since the duty of the agent is to get the report in person. If the report is partly made out and must be left with the manufacturer for completion, a copy of the report so far as prepared must be sent to the office with explanation.

20. **Promptness required of agents.**—Ordinarily the agent will be able to secure the report on his first visit, or in the case of large or complex establishments requiring more than one visit, should at least begin the actual work of compiling the data on his first visit. For a majority of establishments the report can be secured without necessitating a lengthy interview or a second call. The making of future appointments for the preparation of the report should be avoided, since such appointments are apt to lead to delay.

It is not necessary that the agent enter into profuse explanations or give time to anything beyond the necessary work of interrogation. He should be prompt and decisive in announcing his object and making his inquiries, but in so doing he should be courteous, and careful not to arouse antagonism or give offense.

21. **Answers to inquiries to be taken from books of accounts and records.**—The information secured must be accurate. In drafting the schedule every effort has been made to frame the inquiries in such a form that the answers to them can generally be taken directly from the books of accounts and the records of the establishment canvassed. The agent may find a disposition on the part of some persons furnishing the information to give general statements or estimates, claiming that they approximate very closely the exact figures. General statements or estimates, however, must not be accepted where it is possible to secure the answers directly from books of accounts and records.

22. **Erroneous statements.**—The special agent is not to accept answers which he knows, or has reason to believe, are false, as he has a right to a true statement on every matter respecting which he is bound to inquire. In most cases if his informant gives him a round number (e. g., 6,000 or 200,000) it is likely to be only an estimate, and should not be accepted if more precise data can be secured. If statements which are obviously erroneous are persisted in, the special agent should enter upon the report the facts as nearly as he

can ascertain them by his own observation or by inquiry of creditable persons, and state the source of the information secured.

23. Compulsory feature of census.—It will generally be found that the person called upon will give the information without objection or delay. Special agents are therefore cautioned not to refer unnecessarily to the compulsory feature of the law. Only where the information required by law is positively refused need the penalties of noncompliance be referred to. The special agent will then quietly but firmly point out the consequences of persistent refusal, quoting, if necessary, the provision of the law as shown on pages 70 and 71 of these instructions.

24. Information confidential.—Special agents are prohibited by law from delegating to any other person their authority to enter establishments and collect information.

Attention is also called to the penal provisions in the census act, pages 69 and 70 of these instructions, one of which provides that information gained by a special agent or by any other employee in the performance of his duties must not be disclosed to any person not authorized to receive the same, under a penalty not to exceed \$1,000 or imprisonment for two years, or both.

If manufacturers or others furnishing data object to giving the report on the ground that it would disclose the secrets of their business, the special agent should assure them that the results of their individual business will not be made public and should call attention to the statement to that effect on the title-page of the schedule and to the provisions of the law. The agent may also explain that the information will not be used for the purposes of taxation, or in any manner to identify the operations of any individual establishment, and will not be disclosed to any bureau of the Federal Government unless so stated on the schedules. The intent of the law, which will be strictly carried out, is to prevent the disclosure of information which might in any way operate to the detriment of the person or establishment supplying the same.

WHAT CONSTITUTES A FACTORY—ESTABLISHMENTS NOT TO BE CANVASSED.

25. Census confined to factories.—The census is confined to manufacturing establishments conducted under the factory system as distinguished from the neighborhood, hand, and building industries. No precise definition of a factory for census purposes can be given, but the following instructions relative to the omission of certain classes of establishments will show the general line of division. In cases where there is reasonable doubt as to whether an establishment should be taken or omitted, a report should be secured, and under "Remarks" give the reason for securing it.

26. Very small establishments.—Do not report small establishments having annual products of less than \$500. This does not apply to establishments idle during a portion of the year or new establishments started during the year, and which for that reason did not have products in excess of that amount but are capable, under normal conditions, of producing annual products of \$500 or more.

Reports should not be secured for work done in homes, such, for instance, as the manufacture of clothing and gloves, the knitting of socks or garments, the making of rag carpets, for all of which reports are required when done in factories. The amount paid by manufacturers for work of this kind, however, should appear in the reports of those for whom the work is done, as "Contract work" under Inquiry 6.

27. Building trades.—Establishments engaged in the various building industries must not be reported. This applies particularly to the following:

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| <ul style="list-style-type: none"> Architects. Bridge building. Building and construction work. Carpenter shops and contracting carpenters. Electric wiring and construction work. Excavating, well digging, etc. Masonry, brick and stone builders and contractors. Moving and raising buildings. | <ul style="list-style-type: none"> Painting—house, theatrical scenes, etc. Paper hanging. Paving and the laying of artificial stone, concrete, etc. Plastering and stuccowork. Plumbing, gas fitting, steam fitting, etc. Roofing, laying of roofing of any character. Railroad construction. Stage carpentering. |
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Establishments engaged in manufacturing supplies used in building, however, are to be included—for example, planing mills making supplies for carpenters; brick manufacturers; cutting of marble and stone, whether at quarries or separate establishments; manufacturers of paving materials, paints, plumbing supplies, electrical apparatus and appliances; shops where roofing, cornices, etc., are manufactured; coppersmithing and sheet-iron work establishments should be reported. If the building materials are manufactured by an establishment which is also engaged in the construction of buildings, bridges, etc., the report should relate only to the manufacturing part of the business.

28. Custom work on wearing apparel.—Reports are not required for establishments doing strictly *custom work*, i. e., work to the order of the individual buyer on wearing apparel of all sorts. This applies to the following classes of establishments, among others:

- Boot and shoe custom and repair shops.
- Custom tailoring shops, or the manufacture of clothing by persons in their own living quarters.
- Dressmaking.
- Cleaning and pressing garments, without mechanical power.
- Furstoremaking and repairing garments for individual customers.
- Millinery establishments.

Establishments engaged in manufacturing the same classes of articles for the general trade should be reported.—For example, boot and shoe factories; establishments manufacturing ready-made clothing, whether for men or women; establishments manufacturing fur goods for the trade; and establishments manufacturing millinery goods for the trade should be reported. Certain industries, boots and shoes and the ready-made clothing industries being examples, operate under peculiar conditions. In addition to those that cut out the stock and manufacture, there are establishments that cut out the stock and have all or a part of the manufacturing done by contract, and reports for such establishments must be secured under either condition of doing business. Shops or factories where the work done is entirely on material owned by others must also be reported. Reports, however, must not be secured for establishments having goods made for them but who furnish none of the materials. Dye works, bleacheries, and print works engaged in dyeing, bleaching, or refinishing fabrics must be reported.

The phrase "the general trade," as used in these instructions, means those who again sell the goods, whether at wholesale or at retail, as distinguished from the individual customer buying goods to special order for his own personal use.

29. Retail stores.—Retail stores and other establishments which incidentally manufacture small quantities of goods which they sell must not be reported. This applies to the following classes of establishments, among others:

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| <ul style="list-style-type: none"> Confectionery stores. Drug stores. Furniture stores. Hair-work stores. | <ul style="list-style-type: none"> Hairdressing establishments, etc. Jewelry stores. Opticians. |
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Establishments making these same articles for the general trade must be reported.—In particular, some retail jewelers, druggists, and opticians also are large manufacturers of the goods which they retail or sell to other dealers, and these should be reported. (The bleaching and dyeing of sponges, done by a few large druggists, should be reported.)

Prior to the great war, lenses were chiefly of foreign manufacture, but are now largely made in the United States. This being a new industry, special agents must always show lenses separately. If manufactured as an industry by itself, a complete report must be secured on the General Schedule, and if produced in connection with the manufacture of other optical goods made for the trade, show the value of lenses separately.

30. Miscellaneous hand trades.—The small hand trades, engaged chiefly in repair work or work to the individual order, should not be reported. This applies, among others, to the following:

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| <ul style="list-style-type: none"> Bicycle repairing. Blacksmith and wheelwright shops. Establishments, however, that manufacture carriages and wagons or other vehicles during the year must be reported. Blue printing. Harness shops. Hectograph or "multigraph" work. Locksmith and gunsmith shops. | <ul style="list-style-type: none"> Photography. Picture framing. Furniture-repairing and upholstery shops. Rag carpets, not made in factories. Sewing-machine repair shops. Taxidermists. Typewriter repairing. Tin shops. Undertakers. |
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Establishments engaged in these or similar industries which manufacture goods for the general trade, must be reported.—Thus, boiler works and foundry and machine shops must be reported, also harness and saddlery factories making goods for the general trade, manufacturers of looking-glass and picture frames for the general trade, and tin shops where goods are made in considerable quantities. When engraving is done by lithographing or printing establishments, this work must be included in their total business; engraving, diesinking, and plate printing must be reported. Garages or shops where the repair work on automobiles or carriages and wagons is extensive and partakes of the character of machine-shop work must be reported.

The manufacture of ice when produced for sale by cold-storage plants must be reported. If the cold-storage business is incident to the manufacture of ice, the report may cover the operations of the entire establishment. On the other hand, if the manufacture of ice for sale is incident to the other business, get a separate report for the manufacture of ice.

31. Specially omitted industries.—The following industries, although sometimes referred to as manufacturing industries, are not so considered by the Census Bureau, and no reports must be secured for them:

Costumers making costumes for rent only.
Cotton cleaning and rehandling.
Cotton compressing.
Cotton ginning.
Dentistry.
Dressing, packing, and shipping of poultry. (When done on a large scale, however, or by slaughtering and meat-packing establishments it must be reported.)
Electric light and power stations.
Fisheries. (The canning and preserving of fish and oysters, however, must be reported.)
Florists and floral designs of natural flowers.
Gas, purchased and distributed, manufactured or natural, should not be reported unless the company also manufactures gas.
Hay and straw baling.
Ice harvesting. (The manufacture of ice must be reported.)
Junk shops.
Kindling wood.
Map mounting.
Packing and shipping of fruits and vegetables (except as provided in par. 34).
Professional services.
Rectifying and blending of liquors.
Retail butchers.
Salting hides.
Stone crushing when done in connection with road building or other construction work. Reports, however, should be obtained for establishments which are engaged in stone crushing as a business and sell the product as such.
Tobacco stemming and rehandling.

In addition to the industries indicated for which reports should not be secured, attention is called to the following, which likewise should not be reported:

Bottling should not be reported unless it is done by establishments in which the liquors, mineral waters, soda waters, sirups, tinctures, beverages, etc., are manufactured. In such cases the report should cover both the manufacturing and bottling operations.

Dairies should not be reported, although they may manufacture butter or cheese from surplus milk and cream. Butter and cheese factories, however, must be reported, although they may sell some milk and cream.

Manufacturing carried on in educational, eleemosynary, and penal institutions must not be reported. If, however, a private manufacturing concern has all or a portion of its work done by convict labor, the amount paid for such labor must be reported under Inquiry 6, as "Amount paid for contract work not done by the regular employees."

32. Distinction between farm and factory products.—The manufacture of butter, cheese, cider, vinegar, wine, and other products may be carried on either upon farms or in factories. In the former case the products will be classed as agricultural and no report is required, but in the latter they will be classed with those reported under the head of manufactures. As a rule, however, when manufactures of this character are conducted on farms where, in addition to the crops of the farm in question, materials purchased from others are also used, they will be classed as factories for census purposes and reports secured. *Factories canning fruits and vegetables, etc., for the trade must be reported, even though carried on in connection with a farm.*

The pulling and the scouring of wool done in establishments expressly devoted to such work should be reported. Such work done in slaughtering establishments and tanneries should be included in the reports for these establishments.

33. Sugar, molasses, sirup, sorghum.—Mills located on farms for the manufacture of sugar, molasses, sirup, or sorghum, will not be deemed to be "factories" if they confine their operations to the treatment of cane grown on the farm on which they are located. If, however, a mill located on a farm treats cane grown on farms other than the one on which such mill is located, it should be treated as a factory and a report secured. Reports, however, must be secured for all mills in Louisiana and Texas engaged in the production of cane sugar and molasses located on plantations, although only the cane grown on the plantation is treated.

34. Packing and shipping of fruit.—In some localities this industry has reached such a condition of development as to constitute a factory industry. This is especially true when the fruit is dipped in hot water or placed in sulphur fumes, or where raisins are seeded and other processes performed. Reports must be secured for operations of this character.

The packing of oysters in hermetically sealed cans should be reported. The packing of oysters in open cans or in other containers where they are not subjected to any preservative process should not be reported unless carried on in connection with the hermetically sealing and preserving of oysters.

35. Reason for omitting establishments specified.—The object of the omission from the census of the classes of establishments indicated by the foregoing lists is to confine the census so far as possible to an enumeration of the factory industries. In many instances the same industry is carried on in large and small establishments, and, except as stated in paragraph 26, no distinction is made in the size of the establishment to be reported. It is in cases where the

manufacture is incident to a mercantile business that the agents are most often called upon to exercise judgment in regard to the preparation of the reports, but the sale of products bought from others is mercantile business and is not to be included except under very special conditions (see par. 50).

36. Small custom mills.—Flour, feed, and grist mills and saw-mills grinding or sawing for toll or for local custom exclusively, must be reported.

37. Lumber industry special schedule (E. S. and W. S.)—In reporting establishments engaged in merchant or contract sawing of lumber or in the manufacture of other products from logs or bolts, or those engaged in getting out saw logs or other timber products, the special schedule for "Lumber and timber products" (Form 143) should be used instead of the regular General Schedule. Among the products to be reported on the special schedule for "Lumber and timber products," are lumber, lath, shingles, crossies, telegraph and telephone poles, tanbark, cooperage stock, and veneers.

Two schedules have been prepared for this industry in order to meet the different kinds of wood found in certain so-called eastern and western states (E. S. and W. S., respectively). The W. S. must be used in the following western states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington, and Wyoming. All other states requiring the lumber schedule must be reported on the E. S. schedule. Both the W. S. and E. S. schedules have the same form number, 143.

38. Pulp wood consumed in 1919.—A card schedule (Form 152) has been provided for reporting pulp wood used by pulp mills in 1919 and reports must be secured in accordance with the inquiries. This card schedule should be mailed with the supplemental schedules for paper and pulp mills (Form 151) and receive the same general treatment.

39. Turpentine industry.—The operation of stills for the production of turpentine and naval stores is frequently associated with the gathering of crude materials and the care of a turpentine forest, and in such cases a combined report for the entire business should be made unless the books permit an accurate separation of the two branches.

40. Printing and publishing establishments.—Printing and publishing establishments, whether engaged in printing alone, publishing alone, or both of these lines of work, must be reported. Writing of books and solicitation of contracts for printing, when no work is done in the preparation of the manuscript, such as printing, binding, etc., however, must not be reported.

41. Manufacture of ice cream.—Reports must be secured for all establishments manufacturing ice cream for the trade. Reports are not required for establishments making ice cream in small quantities to be sold over their own counters at retail, but the value of this product should show separately if made by confectioners, bakers, or others from whom reports are secured for products other than ice cream.

42. Dyeing and cleaning.—At the censuses of 1904, 1909, and 1914 establishments engaged in dyeing and cleaning were omitted from the census statistics. At the census of 1919, however, reports must be secured for establishments of this character that are operated by mechanical power, which actually do dyeing. Reports should be secured, also, for large establishments operated by mechanical power engaged in cleaning and pressing garments, etc. No reports are required, however, for the numerous establishments cleaning and pressing garments not having mechanical power. "Dyeing and cleaning" must not be confused with the "dyeing and finishing" industry.

43. Power laundries.—All steam laundries, or laundries using power, except those operated in connection with hotels or institutions, must be reported on the General Schedule. Hand laundries using no power must not be reported. Make only one entry for value of products, which should be the amount received for work done.

WHAT CONSTITUTES AN ESTABLISHMENT—DIVIDED ESTABLISHMENTS.

44. Definition of establishment.—The term "establishment," as a unit of enumeration for this census, with the exceptions noted, is deemed to be one or more factories, mills, or plants owned or controlled by one individual, partnership, corporation, or other owner, located in the same town or city, and for which one set of books of account is kept.

45. Separate sets of books.—When the owner operates two or more plants in the same town or city, and maintains separate sets of books for each, they should be treated as separate establishments; but if one set of books only is kept, they may be treated as one establishment.

46. Separation of industries.—It is necessary to publish separately the statistics for the different industries as defined by the Census Bureau. Therefore, when two or more distinct industries,

such as those indicated by the *supplemental schedules*, are carried under the same ownership with only a single set of books, separate reports for the different industries must be prepared when practicable in the same way as described in paragraph 47 (see par. 112, sec. (b)).

47. **Separation of localities.**—It is necessary, however, to secure separate statistics for the different states and counties, and also for all cities with a population of 10,000 and over. Therefore, when the same owner operates two or more plants in different states, counties, or cities, or operates one plant in a city and another outside of that city, separate reports covering the plant or plants in each state, county, or each city of 10,000 population and over must be prepared, *though only one set of books is kept for all the plants*. If estimates are necessary to make the complete reports for the separate plants, they must be carefully prepared in consultation with the person who furnishes the information and marked "Estimate."

48. **Industrial zones or metropolitan districts.**—(No compilation was made of the returns under this instruction.)

49. **Reports for same ownership.**—All reports secured by the special agent for plants conducted under the same ownership, whether covered by a single set of books or by separate sets of books, must be fastened together and proper notation made of the fact in the daily report.

50. **Establishments engaged in manufacturing and also in other business.**—A considerable number of establishments will be found which are engaged in manufacturing, and at the same time in some nonmanufacturing branch of business or industry, with only a single set of books covering the combined business. In those cases where the nonmanufacturing branches of business are incident to the manufacturing business, or are insignificant, the schedule may cover the entire business. On the other hand, where the nonmanufacturing business is of importance the agent should prepare a schedule covering only the manufacturing, following the instructions in paragraph 51.

The following will illustrate some combinations of manufacture with other industries:

Coal mining with the manufacture of coke.

Mining of iron ore with the manufacture of pig iron.

Cultivation of vegetables and fruits with canning of the same.

Catching of fish and oysters with canning of the same.

In these and similar cases a separate report for the manufacturing business must be carefully prepared, all estimates marked "Estimate," and the basis of the estimates described under "Remarks" or on a separate sheet. Materials produced by the establishment itself and used in its manufacturing may be taken either at the cost of production, or at their market value at the point of consumption. Where the quarrying of granite, marble, slate, limestone, or other minerals is done in connection with their manufacture into finished products at the quarry or mine, the report should be secured in the manner described in paragraph 120.

51. **Combined manufacturing and mercantile business.**—Some establishments are engaged both in manufacturing and in mercantile business; that is, they not only sell their own products, but also buy the finished products of others for sale. Where the manufacturing is insignificant in quantity and merely incident to the mercantile business, no schedule should be secured. On the other hand, where the mercantile business is insignificant and merely incident to the manufacturing, a single report should be secured covering the entire business and no attempt should be made to separate the items as between the two branches of the business, but the facts should be noted on the schedule. In such cases finished products bought for sale should be reported as materials and the sales thereof as manufactured products of the establishment. In some instances factories of considerable size are conducted in connection with large mercantile establishments, such as department stores. Such factories must be reported, and a schedule prepared covering only the manufacturing (see par. 50), although all of the products may be disposed of in the store, which is operated under the same ownership.

PREPARATION OF THE GENERAL SCHEDULE.

52. **General Schedule required for each establishment.**—A General Schedule (Form 100) must be prepared for each establishment reported except for lumber and timber products (see par. 37) and, in addition, such supplemental schedule or schedules as may be necessary and proper for the establishment reporting.

53. **Instructions to be strictly followed.**—The instructions printed on the schedules must be strictly followed by the agent. In a few industries instructions regarding certain points in the General Schedule are extended in the supplemental schedule. The instructions on the supplemental schedules are additional to those given on the General Schedule and in no way modify them.

INQUIRY 1.—DESCRIPTION OF ESTABLISHMENT.

54. **Name of establishment.**—Since separate reports are to be obtained for different establishments when conducted under the same ownership, the local name of the establishment should be given as well as that of the owner.

55. **Name of owner or operator.**—The answer desired is the name of the person, partnership, corporation, etc., operating the establishment, whether such operator owns the plant or leases it.

56. **Location of establishment.**—The exact location of the plant or plants covered by the report must be shown by the answers to this inquiry, and especially to the one "*Is establishment located within the corporate limits of the city or town?*" Since separate statistics will be presented for certain cities, it is of the utmost importance that precise information relative to these points be given in order that the statistics of manufactures may be correctly presented by cities or other civil divisions. When the establishment is on the boundary line, or part of the plant is located in one civil division and part in another, or there are any other complications, full information on this subject must be given under "Remarks."

57. **Post-office address of the general office.**—For the majority of the establishments this will be the same as the *Location of the establishment*, but in many cases it is different, and inquiry should be made to develop this condition if it exists.

58. **Character of organization.**—This must be stated as one of the five kinds named in the schedule, or, if it is some other form, such other form must be definitely described. For estates and establishments operated by receivers, give, under "Remarks," the character or organization under former ownership.

59. **Number of proprietors or partnership members.**—The answer must show the number of individual proprietors or partnership members on the last day of the period covered by the report.

60. **Character of industry.**—The statistics of manufactures will be presented by kinds and by classes of industries. It is of the utmost importance, therefore, that the answer to this inquiry should very clearly show the kind of goods made, and, for unusual articles, their uses, or the specific character of the work done. Where the establishment covers more than one distinct kind of manufacturing operations or products, or is engaged in any nonmanufacturing work, such as transportation, mining, etc., especial care should be exercised to show in the answer to this inquiry all the lines of work engaged in or the principal products made. If necessary, additional information may be given under "Remarks." In all cases the particular articles produced should be named in the order of their importance: for example, "cigars, cigarettes, smoking and chewing tobacco," not "tobacco factory," which is too indefinite, or "pig iron, billets, bars, and wire," not "iron and steel." Brass manufacturers, for instance, may represent "hardware," "plumbers' supplies," or some other products for which there are specific classifications. For the manufacture of clothing, neckwear, handkerchiefs, etc., state definitely whether "men's," "women's," or "children's." A general description, such as "clothing," for instance, is not sufficiently specific.

INQUIRY 2.—CAPITAL INVESTED.

61. **Amount of capital actually invested—owned and borrowed.**—The purpose of this inquiry is to determine the total investment by the establishment for the purposes of its productive operations, but not including the value of rented property. Therefore, both capital owned by the operator and capital borrowed by him is to be included; in other words, no deduction is to be made from the value of the assets by reason of liabilities for money due others.

The value of horses, mules, delivery wagons, automobiles, and similar equipment should be included in the item "Land, buildings, machinery, and tools." Answer to the third item should include everything properly pertaining to the capital invested that is not included in answers to the first and second items.

62. **Depreciation.**—If the books of the establishment show specifically an item of depreciation charged against land, buildings, machinery, and tools, deduction of such depreciation should be made and the net value resulting after such deduction given. If, however, the books are not kept so as to show depreciation, no deduction for this item should be made.

63. **Patent rights and good will.**—Patent rights should not be considered as a part of the capital, except in so far as the value of these items may be included in other items as carried on the books of the establishment. If the books of the establishment in any way segregate or report separately the value of such patent rights, such value must not be included in the answer called for by Inquiry 2. No value for "Good will," however, should be included.

64. **Separation of manufacturing from other investments.**—In case manufacturing is carried on in connection with some other

business, such as mining, for instance, and where only one set of books is kept for the entire business, the instructions in paragraphs 50 and 51 should be followed. In case, as will sometimes happen, there are separate accounts showing the operation of different branches of the business but only one account of the capital invested, the total investment represented by the manufacturing business should be reported as nearly as it can be estimated.

INQUIRIES 3 AND 4.—SALARIED EMPLOYEES—WAGE EARNERS, INCLUDING PIECEWORKERS.

65. Purpose of inquiries—Selection of date.—The purpose of these inquiries is to determine the number of persons employed on a given date by the manufacturing establishments of the country. So far as practicable such data should relate to December 15, 1919. Cases will occur, however, where the information for this date can not be obtained, or should not be taken, due either to the fact that the establishment was not in operation on that date, that the book or time records for that date are not obtainable, or because on that date the number of employees was *very much* below or above the number ordinarily employed. In all such cases the records for the day nearest December 15, 1919, for which data can be obtained, that are representative of the normal condition of the establishment as regards employment of labor, should be taken. In the case of seasonal industries it may be necessary to secure data for a date several months removed from December 15. In those cases, where a date other than December 15, 1919, has to be selected, the tendency or inclination of the officers of the establishment furnishing the information may be to refer you to a day of maximum employment. This should be guarded against and a day of normal or average employment selected.

66. Total number employed on a given day desired, not total number whose names appear on a given pay roll.—Note carefully that what is desired is the total number employed on a given day. This will in most cases be a number somewhat smaller, and in certain cases considerably smaller, than the number of names appearing on the pay rolls consulted, owing to the fact that during the period covered by the pay rolls all will not be continuously employed, a considerable number working only certain of the days. Probably in the majority of cases the pay rolls and time records are kept in such a way that it is possible to get the record for a particular day, in which case the record for a representative *single day* should be taken. If this can not be done, the total number on the pay roll should be counted and noted on the margin, and a careful estimate of the average number employed during the period covered by the pay roll should be used in preparing the report.

67. When estimates may be accepted.—In case pay rolls or other records are not available for a normal or representative day, a careful estimate must be taken in substitution for data from records, and the fact that the data are based on an estimate should be stated on the margin of the schedule using the word "Estimate."

For establishments employing on an average less than 25 persons, although desirable, it is not imperative to consult the pay rolls or books to secure answers to these inquiries.

68. Segregation according to sex and age periods.—In all cases the total number of salaried employees and wage earners should be determined before the attempt is made to segregate them according to sex and age periods. In case the records of the establishment do not show this segregation, it will have to be made by means of a careful estimate by the officers, superintendents, foremen, or others who have personal knowledge or charge of the employees. Great care should be exercised by the agent in seeing that this segregation is made by the person or persons competent to do so and that it is carefully done.

69. Officers of corporations who receive no salaries, and directors who receive only a fee for attending meetings, must not be reported. All salaried officials, such as the president, vice president, secretary, and treasurer, who devote all or a considerable proportion of their time to the business, must be included. Officers of corporations should not be reported for the repair shops of steam or electric railways, or for the manufacturing done by large mercantile establishments for which reports are secured for their manufactures.

70. Foremen and overseers.—The three subinquiries of Inquiry 3 are intended to embrace the salaried, clerical, and supervisory employees as distinguished from wage earners. In some industries it is difficult to preserve this distinction, especially as to foremen and overseers. Foremen and overseers who have charge of a few workmen, but with little additional responsibility or pay, and who at the same time perform work similar to that of other wage earners, are not to be included as salaried employees. To come within the scope of Inquiry 3 they must devote the whole or the greater part of their time to supervision.

71. Traveling salesmen.—If the manufacturing department of an establishment turns over its product to a separate selling department at a given value or price, which value or price is reported in

answer to Inquiry 10, the traveling and other salesmen would be employed by the selling department, and their number and salaries should not be reported in this schedule. If, however, the value of the products represents the value reported by the selling department the salesmen of the establishment are to be reported in Inquiry 3 and their salaries in Inquiry 6. Under the latter condition, if salesmen are employed on commission their number and the amounts of their commissions should be reported under Inquiries 3 and 6 with "Clerks, stenographers, salesmen," etc.

72. Distinction between salaried employees and wage earners.—No person should be reported as a salaried employee merely because he is hired by the week or month instead of by the day. The distinction should be based primarily upon the character of work done rather than upon the unit of time as the basis of employment. Wage earners are not confined to those who receive day wages, although most wage earners are paid on this basis. It will doubtless be found, for instance, that engineers and firemen in mills and pressmen in newspaper offices are often employed by the week or month, but they should be classed as wage earners rather than as salaried employees. Time keepers, messenger boys, proof readers, etc., in printing establishments, and the like, whose work is closely related to that of persons who would ordinarily be called clerks, stenographers, and salesmen may be classed as salaried employees. Drivers on delivery wagons should be classed as wage earners.

73. Wage earners employed indirectly.—In some establishments wage earners who actually work for the establishment in the same building as others may not appear upon its pay rolls, being indirectly employed and paid through superintendents, heads of departments, foremen, and the like. Careful inquiry must be made to ascertain such conditions, and the number of persons so employed and their compensation must be estimated as nearly as possible and included with other wage earners, and the basis of the estimate noted on the schedule.

On the other hand, answers to this inquiry should not include the employees of independent contractors having separate establishments who perform work under contract for the establishment reporting. Such contractors should be reported in a separate schedule which will account for their employees.

The answers to the inquiry should not include the number of persons working at their homes on piecework, a custom peculiar to the glove and a few other industries. The amount paid for such work, however, should be included in the report of the company for which the work was done, as "amount paid for contract work not done by the regular employees."

74. Convict labor.—The number of such employees working under contract, piece price, or other system must not be included in reply to Inquiries 3, 4, or 5. The amount paid for such service, however, should be included as "amount paid for contract work not done by the regular employees."

INQUIRY 5.—WAGE EARNERS EACH MONTH.

75. Number on 15th day of month.—All of the instructions for Inquiry 4 apply to this inquiry. Make entries for all months covered by the report. Take the 15th day of each month, unless it falls on a Sunday or unless the pay roll for that day is not available. If the establishment was shut down on the 15th of the month, select a day nearest to that day for which a satisfactory record can be obtained and give the date selected.

INQUIRY 6.—SALARY AND WAGE PAYMENTS.

76. Number employed.—The instructions under Inquiries 3, 4, and 5 should be borne in mind in connection with Inquiry 6.

77. Classes to be reported separately.—The amount paid each of the four classes of employees should be given separately. The total must represent the amount paid for salaries and wages during the period covered by the report.

78. Board and rent when furnished as part compensation of employees should not be included as wages, but the number of such employees receiving board or rent free should be noted at the bottom of page 2 of the schedule.

79. Bonuses or percentages of profits when paid to officers, superintendents, foremen, or wage earners should be included in the amount of salaries or wages. This does not include dividends paid on stock in a corporation which officers, employees, or wage earners may hold.

80. Contract work.—The answer to this inquiry must include only the expenditures for work on the products reported in answer to Inquiry 10, when done by or under the supervision of contractors or by persons working at their homes independently of the regular employees; it must not include any part of the amount reported under salaries and wages.

INQUIRY 7.—TIME IN OPERATION AND HOURS WORKED.

81. Days in operation during the year.—The answer to this inquiry should show the entire number of days the establishment or any portion of it was in actual operation, whether working full time, part time, or overtime—that is, if the establishment was operated on a given day for 1 hour, or more, or by two or more shifts for the entire 24 hours, the answer in either case would be the same, namely, 1 day. The full possible working time of an establishment, operating continuously, except on Sundays and holidays, is about 307 days, depending on the number of holidays.

82. Number of hours normally worked by wage earners.—“Per shift” refers to the number of hours worked by each set of wage earners, not the total number of hours worked per day, when two or more sets of workmen were employed. The number of hours worked “per week” is called for in order that the practice of the establishment relative to the working of only half a day or any other fraction of a day on Saturdays or under other circumstances may be brought out. If both a day shift and a night shift, use day shift.

INQUIRY 8.—RENT AND TAXES.

83. Rent of factory or works.—If the general office, or other office buildings, are rented and are located elsewhere than at the factory, and the factory or part of it is also rented, the total rent being carried as one item on the books, the amount of rent chargeable for the factory only should be ascertained and entered separately in reply to the first subquestion of the inquiry. In case a rented factory has an office as part of the premises, report the entire rent paid or due for the year covered by the report. In this connection, the agent should see that answer to Inquiry 8 as to “rent of factory or works” harmonizes with the answer to the first item of Inquiry 2, as to capital.

84. Taxes.—Internal revenue is a Federal tax and will be reported for practically all industries, and the value of the products reported in answer to Inquiry 10 should include the amount of this tax. The internal-revenue tax refers to manufactures during the year covered by the reports, and agents are directed to see that it is so reported.

All state, county, or city taxes, licenses, etc., for the year, whether paid or due, must also be reported.

INQUIRY 9.—MATERIALS, MILL SUPPLIES, AND FUEL.

85. Definition of materials used.—The answer to this inquiry should give the cost of all materials and mill supplies of every description, whether raw or partly manufactured, and whether entering into the products, used as containers, or consumed during the year in the process of manufacture.

86. Materials used during year desired.—Note especially that what is desired is the cost of the materials, mill supplies, and fuel actually used during the year. The cost of materials purchased during the year might be entirely different. If the books do not show directly the cost of the materials consumed during the year it may be computed by adding to the amount paid for materials purchased during the year any decrease in the inventory of materials on hand at the end of the year as compared with the beginning, or by deducting the increase in such inventory.

If the books of the establishment do not show the value of the materials on hand at the beginning and end of the year, but do show the cost of all these articles purchased or acquired during the year, and it is reasonably certain that there is no substantial difference between the values on hand at the beginning and at the end of the year, the figures showing the cost of materials acquired during the year may be used in answer to this inquiry.

The first method, however, should be employed whenever possible. If the latter method is used, the fact should be stated on the margin of the schedule.

87. Materials manufactured and used by same establishment.—Materials and mill supplies produced by the establishment itself during the year covered by the report and used by it in its further operations must not be duplicated by being again reported in its new form as material. An illustration of this may be found in the manufacture of textiles, where yarn may be shown as material, but should not include any that was made during the year by the establishment reporting and used in further manufacture by the establishment, since its cost will already have been reported in the raw material and labor connected with its manufacture. If, however, the mill manufactured more yarn during the year than was used as materials, the excess should be reported as a product.

If the establishment manufactured certain materials during the year both for its own use and for sale, that part used should not be included, for the reason just given, but that part produced for sale, or not used, should be included as a product in answer to Inquiry 10 of the General Schedule.

Where materials are obtained from another plant operated under the same ownership and for which a separate schedule is required, they should be reported as products in the establishment producing them, and as materials in the establishment acquiring them for further manufacture. The value assigned such materials by the factory using them should be their cost as shown on its books. If, however, no charge is made on the books, an estimate of the market value of the material at the works consuming it should be made and indicated as an “estimate.” For example, a concern may own a wood-pulp mill in one state and a paper mill in another state, using the pulp from the pulp mill. If the paper mill is charged for the pulp, either at cost or at a market value or an arbitrary value, the figure actually charged should be used; otherwise, the estimated market value of the pulp delivered at the paper mill.

In all cases of such transfer of products from one establishment to another establishment under the same ownership or general management, and where the two are not treated by their owners or operators as independent establishments, with independent operating accounts, give, under the head of “Remarks,” such information regarding the legal and working arrangements of the two establishments, and particularly the financial system followed in the utilization by one establishment of the products of another related one, as will enable the office to determine the nature of this relationship and assure itself that the method followed in filling the schedule for one of the establishments harmonizes with that followed in the schedule for the other, as the reports may be secured by different agents.

88. Cost of fuel.—Include with “materials” as called for, the cost of all fuel used, whether for heat, light, or power, or in the process of manufacture, as in the case of coal used in gas plants. There are some establishments which use coal for producing coke or gas which they subsequently burn, and which may have records of the quantity and value of coke or gas consumed, as well as of the coal. In such cases report under Inquiry 9 on the General Schedule only the cost of the coal consumed (see also instructions for Inquiry 12, par. 107).

89. Freight on materials.—In many cases the cost of the materials will include the freight. If this is not the case, the total amount so paid should be given as called for under Inquiry 9. Do not here include freight on finished products.

90. Rent of power.—Include the total expenditure during the year for power rented from other establishments, whether by direct shafting or belting transmission, steam, electric current, or other method. The cost of gas and electricity for lighting should not be included with rent of power, but if not shown separately from that used for power, include its cost under “Rent of power.”

91. Names of principal materials used.—Name the materials as nearly as possible in the order of their importance. Specific information is required, since it will be of great assistance in the classification of the establishment and understanding of the report. In this connection reports secured for *bakeries* should always show under Inquiry 9 of the General Schedule the number of barrels of flour used during the year. The character of the materials should be consistent with the products reported in answer to Inquiry 10.

INQUIRY 10.—PRODUCTS.

92. Quantity and value.—The General Schedule for 1919 calls for the quantity and value of the principal products, and such information should be secured where it is practicable to do so. This does not refer, however, so far as the General Schedule is concerned to industries for which supplemental schedules have been provided calling for details as to products.

Since the General Schedule provides for the quantity and value of the principal products, “All other products manufactured during the year” called for by total value in the General Schedule, should, as a rule, represent only a small proportion of the total value of products.

Agents will be given a classification list for 1919 that will show the industries which will be reported separately. While, as a rule, all products of importance should be reported separately, special attention must be given to reporting those named on the classification list. The purpose of this list is to indicate in a general way the character of the articles covered by the several classifications. It is impracticable to do more.

When a classification is preceded by a star (*) it indicates that details as to products (and in some cases also as to materials) are called for, and must be reported on a supplemental schedule provided for that purpose. It often happens that products specifically called for on these supplemental schedules are made in small quantities by establishments whose chief products do not call for a supplemental schedule. In such cases it is essential that the quantity of such products be shown on the General Schedule by

the proper unit of measure, as called for on the supplemental schedule provided for such products.

93. **Production, not sales, desired.**—Inquiry 10 calls for the value of the products made during the year, not the value of the products sold. The sales during the year may be considerably greater or considerably less than the value of the products manufactured during the year. Where the manufacturer has no records showing directly the products of the year, but has records showing the sales, the products for the year may be ascertained by adding to the sales the increase in the stock of finished goods (or stocks in process of manufacture) on hand at the end of the year as compared with the beginning of the year, or by deducting from the sales the decrease in such stocks. In other words, the sales account and the inventory together would have to be consulted in order to obtain the value of the products of the year.

94. **Selling value at the works desired.**—The value of the products desired is not the cost of their manufacture, but the selling value at the factory or works, which generally exceeds the cost of manufacture.

95. **Intermediate products.**—The products of manufacturing establishments, from the census standpoint, are the products in the condition as prepared by the factory reporting. The value of intermediate products need not, as a rule, be stated in the *General Schedule* in reply to this inquiry. These so-called intermediate products may, in some instances, however, be reported. For example, a cotton or woolen mill may spin the yarn during the year from which its goods are made, and in this case the manufacture of the yarn so used would be only an intermediate process in the manufacture of cloth, and the value of this yarn although produced during the year would not show separately in this report. Should part of the yarn spun during the year, however, be sold as yarn, or remain on hand at the end of the year, it becomes a true product.

96. **Exclusion of freight.**—The value desired for products is the value at the works. In many cases manufacturers sell all or part of their goods delivered at distant points and themselves pay the freight. In such cases the freight charges should, if possible, be deducted from the gross receipts from sales.

97. **Deduction of discounts.**—Manufacturers sometimes allow large discounts from their gross or list prices. In such cases the net value obtained by deducting these large discounts should be secured and not the gross selling price. Small discounts for cash payments of time accounts are not to be considered in this connection. Products furnished to others without charge in payment of obligations or in fulfillment of agreements, like gas to a municipality for instance, should be reported under products at their estimated value. The value reported for the manufacture of gas should be the receipts, not the list price.

98. **Selling departments.**—Manufacturing establishments sometimes turn over their products to a selling department at a given value. This factory value may be taken as the value of the products for census purposes instead of the final amount realized by the selling department. In case the value reported represents the selling price received for the goods by the selling department, however, the number of salesmen and their salaries and commissions should be included in Inquiries 3 and 6. In case the value given is the factory value at which the product is turned over to the selling department, such selling expenses should not be included.

99. **Exceptions in certain industries.**—The above general rules regarding the basis for the value of products are subject to some slight modification in a few industries, as indicated by the supplemental schedule for those industries, and before reporting the cost of materials or the value of the products on the *General Schedule*, the supplemental schedule, if one is used for the industry, should be consulted. In railroad repair shops, for instance, the work is not, as a rule, performed for others, nor are the products made for sale, but are for the use and benefit of the company itself. In this industry, therefore, the value of the product will represent simply the cost of production.

100. **Itemization of products.**—Space is left on the *General Schedule* for an enumeration by quantity and value of the important items comprising the total products. The total products should in all cases be taken from bookkeeping records, but the records may not always show the quantity and value of the separate items of products as desired. In such cases careful estimates for the principal items will be accepted, but the fact that they are estimates should be noted on the schedule, and the sum of the items as to values should correspond to the total. It may not be practicable to give a large number of the minor items, and in such cases these can be grouped together under "All other products manufactured during the year." No considerable portion of the value of products, however, should be reported under "All other products manufactured during the year."

101. **Contract work for others.**—Many establishments do work for other establishments which furnish the whole or part of the

materials used. The amount received for such contract work should always be shown separately under "Products" as "Contract work on materials furnished by others."

102. **Custom work and repairing.**—Under "Amount received for custom work and repairing" report the amount received, or the charges, for custom work, repairing, and job work of all kinds. Contract work on materials furnished by other manufacturing establishments, however, should be reported as a separate item. (See preceding paragraph.)

103. **If expenses reported exceed value of products.**—It may sometimes happen that the sum of the totals of Inquiries 6, 8, and 9 is in excess of the value of the products reported for Inquiry 10. In such cases the agent must call the attention of the person furnishing the information to the fact, which may be due to a misunderstanding or to an error. If there is an error, it should be corrected. If, however, the figures are correct, the word "Correct" should be written under the total value of products and an explanation made under "Remarks" of the conditions which caused the expenses called for to exceed the total value of products. In this connection consideration should be given to those industries which require large or small expenditures for advertising, traveling expenses, ordinary repairs to buildings and machinery, etc., that were included at some censuses prior to 1914, under the inquiry calling for "Miscellaneous expenses," but omitted on the schedule to be used in 1919.

INQUIRY 11.—POWER.

104. **Power owned.**—Electric motors operated by electricity generated by the establishment reporting, should be included under "Power owned."

105. **Power rented.**—Subdivision (b) must show all power used by the establishment reporting which comes from some outside source.

INQUIRY 12.—FUEL USED.

106. **Quantity of fuel used.**—The total cost of all fuel used must be reported in answer to Inquiry 9. Give under Inquiry 12 separate totals for the quantity of each of the varieties of fuel named. Account for the total amount of each variety used, whether for heat or power, or that consumed in the process of manufacture. The quantity of gas reported must include both natural and manufactured, the kind used being stated. When gas is purchased by a gas company to be resold, it should not be reported as fuel, but its cost should be included in the cost of materials.

107. **Coke and gas made by establishment.**—Some establishments make coke or gas and use all or a portion of it in its further manufacturing processes. In such cases report the total quantity of coal used, whether to make gas or coke or otherwise, and also the quantity of coke or gas used, but be sure to clearly indicate the quantity of coke or gas made from the coal reported.

INQUIRY 13.—REMARKS.

108. **Explanation frequently required.**—The instructions for several of the inquiries indicate the character of the information that should be given here. The space under "Remarks," however, is reserved, primarily, for the agent to explain unusual conditions connected with the inquiries or with the report as a whole. It is expected that such explanation will obviate the necessity of office correspondence with the establishment. Upon examining the schedule, after answers have been made to all the inquiries, the agent may detect inconsistencies or omissions. If it is impossible to correct them, an explanation should be given. All schedules are carefully examined in the office before they are tabulated, and explanations of inconsistencies are indispensable to a proper understanding of the report.

These explanatory statements should be as brief and direct as possible. At the same time they should cover all pertinent facts, and, if necessary, use should be made of an additional blank sheet.

The space under "Remarks" must not be used for correspondence or statements not pertinent to the report.

CERTIFICATE.

109. **Period covered.**—Wherever possible the report should cover a period of 12 months, whether the establishment was in active operation during the whole of such period or not, and the answer to this question should show the whole period covered. In case, however, the establishment has been in active operation only a small portion of the 12 months, as often happens in seasonal industries, such as canning, etc., that fact should be stated under "Remarks." In the case of establishments beginning operations for the first time during the year the answer should show the period actually covered. It should be noted, however, under "Remarks" that the data relate to an establishment which began operations during the year.

The ownership of some of the establishments canvassed may have changed hands during the year. If the present owner or operator can furnish data for the entire period, they should be obtained from him, and cover the combined operations of the establishment during the year, while under the management of his predecessor as well as under his own management. If this can not be done, the former proprietor should be located and the report for the other portion of the year obtained from him. If this is impracticable, the present owner should be asked to give such information as he possesses regarding the general character and volume of business under the former owner, its comparison with what he himself did, and the facts reported by the agent on a sheet attached to the schedule covering the present ownership.

The period covered, where possible, should be that of the year ending December 31, 1919. For some seasonal industries, such as beet sugar and cottonseed oil, the reports should relate to the seasonal year most nearly conforming to the census year. This is referred to in the supplemental schedules for the seasonal industries. In the majority of cases the data can be secured for the year ending December 31, 1919. Where, however, the business year of the establishment does not correspond to the calendar year, the data may be secured for such completed business year as corresponds most nearly to the calendar year 1919.

110. Signatures required.—Each report should be signed by the person responsible for the information furnished, with his official title and address. The agent who secures the return must also sign this certificate. In all cases where a supplemental schedule accompanies the General Schedule the attention of the person signing the schedule must be called to both, as he certifies to the correctness of the statistics contained in each.

SUPPLEMENTAL SCHEDULES.

111. List of supplemental schedules.—In addition to the General Schedule, the following supplemental schedules must be prepared for each of the industries indicated:

(The schedules marked with an asterisk (*) will be used in conjunction with the Geological Survey.)

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| 102. Agricultural implements. | 132. Fertilizers. |
| 103. Aircraft. | 133. Flour, feed, and grist mills. |
| 104. Ammunition, firearms, ordnance, and accessories. | 134. Gas, manufactured. |
| *169. Antimony smelters. | 135. Glass works. |
| 105. Automobiles. | 136. Glucose and starch factories. |
| 106. Beet-sugar factories. | *177. Grindstones, oilstones and whetstones, pulp stones, scythe-stones, hones, and rubbing stones. |
| 107. Boots and shoes. | 138. Ice, manufactured. |
| 108. Brass, bronze, and copper products. | 139. Iron and steel, blast furnaces. |
| 109. Butter, cheese, and condensed-milk factories. | 137. Knit goods. |
| 110. Buttons. | *178. Lead refineries. |
| 111. Cane sugar. | *179. Lead smelters. |
| 112. Cane-sugar refining. | 141. Leather gloves and mittens. |
| 113. Canning and preserving, fish and oysters. | 142. Leather, tanned and curried. |
| 114. Canning and preserving, fruits and vegetables. | *180. Lime. |
| *170. Carbon black from natural gas. | 143. Lumber and timber products. ¹ |
| 115. Carriages and wagons. | 144. Machinery. |
| 116. Cars, steam and electric railroad. | 145. Machine tools. |
| 117. Cast-iron pipe. | 146. Motorcycles and bicycles. |
| *171. Cement. | 147. Musical instruments. |
| 118. Chemical manufactures. | 148. Needles, pins, and hooks and eyes. |
| 120. Chocolate and cocoa products and confectionery. | 149. Oilcloth and linoleum. |
| *172. Clay products. | 150. Paints and varnishes. |
| 119. Coal-tar chemicals. | 151. Paper and pulp. ² |
| *173. Coke (other than in by-product coke ovens and gas-house coke). | 152. Pulp wood consumed (card). |
| *174. Coke and by-products in by-product ovens. | 153. Petroleum, refining. |
| *175. Copper refineries. | 154. Phonographs, graphophones, and talking machines. |
| *176. Copper smelters. | 157. Rice, cleaning and polishing. |
| 121. Cordage and twine, jute goods, and linen goods. | 158. Rubber goods. |
| 122. Cotton manufactures. | *182. Salt works. |
| 123. Cotton lace goods. | *183. Sand-lime brick. |
| 124. Cottonseed products. | 159. Shipbuilding. |
| 125. Druggists' preparations and patent and proprietary medicines and compounds. | 160. Silk manufactures. |
| 126. Dye-stuffs and extracts—natural. | 161. Slaughtering and meat packing. |
| 127. Electrical machinery and apparatus. | 162. Soap. |
| 128. Engines. | 140. Steel works and rolling mills. |
| 129. Essential-oil factories. | 163. Textile machinery. |
| 130. Explosives. | 164. Tin-plate and terno-plate works. |
| 131. Ferroalloys. | *184. Tin smelters. |
| | 165. Turpentine and rosin. |
| | 166. Wire. |
| | 167. Wood distillation. |
| | 168. Wool manufactures. |
| | *185. Zinc smelters. |

supply of all the supplemental schedules. Request must be made for additional schedules if required.

112. Object of supplemental schedules.—The supplemental schedules are designed to develop statistics peculiar to the different industries; therefore the inquiries are not uniform. A number of them carry special instructions in regard to their preparation and the preparation of the General Schedule to which they relate. These instructions must be carefully considered, but the following general principles will apply to all:

(a) The supplemental schedule or schedules must in every instance accompany the General Schedule to which they relate.

(b) When two or more of the industries for which supplemental schedules are provided are carried on by the same establishment, and it is practicable to secure for each industry complete separate reports in the General Schedule, they should be secured, each being accompanied by its proper supplemental schedule. If this is impracticable, one report should be made on the General Schedule for the entire establishment (see pars. 45 to 49) and separate reports on the supplemental schedules for the different departments. In all cases the total value of products on the supplemental schedules must equal the total on the General Schedule to which they relate, except when supplemental schedules are used solely to develop the minor products of industries. A few illustrations will serve.

A machine shop, for which only the General Schedule is provided, may make as minor products certain articles—agricultural implements, or certain kinds of machinery, for instance—that are called for in the supplemental schedule for these products. In order, therefore, that the office may have a complete report for such products, the supplemental schedule for "agricultural implements" or "machinery" must be prepared, but in cases where these products are of small importance compared with the total reported, the requirement as to value of products in the general and supplemental schedules agreeing is void and no separate General Schedule for the products to be reported on the supplemental schedules is required. An agricultural-implement establishment, for which a supplemental schedule is provided, may manufacture minor products not covered in detail by the supplemental for that industry, but called for in the supplementals for other industries, such as "Carriages and wagons" or "Engines," and the proper supplementals should be provided and filled. Fertilizers and soap are frequently by-products of slaughtering establishments and are included among the products on the supplemental schedule for that industry, but separate supplemental schedules—"Fertilizers" and "Soap"—for each should also be prepared. The use of supplemental schedules in such cases is essential and must be obtained.

(c) The statistics reported on the supplemental schedules will be published only by state totals; therefore it is not absolutely necessary to obtain separate reports on the supplemental schedules for establishments in different sections of the same state engaged in the same industry and operated under the same ownership. For example, if a company owns two cotton mills, one located within and the other just outside the corporate limits of a city having 10,000 or more inhabitants, separate reports must be made on the General Schedule (see par. 47), while one supplemental schedule may carry the statistics for both plants if desired. In such cases the schedules must be fastened together and accompanied with a memorandum of explanation.

(d) A number of the supplemental schedules call for the quantity of the principal materials used and the quantity of products. Where this condition exists, agents must assure themselves that the kind and quantity of materials used is consistent with the kind and quantity of the products. For instance, in the manufacture of butter or cheese, that the quantity of milk or cream used harmonizes with the quantity of butter or cheese produced, or in the manufacture of flour, meal, etc., that the kind and quantity of grain reported is consistent with the kind and quantity of the products.

113. Administrative and general office schedule described.—Some companies control a number of factories, mines, or quarries from a central office, and do not make a distribution of capital, expenses, etc., for the different plants. In such cases the capital of the company as a whole, the employees at the central office, their salaries and wages, and the taxes which are not included in the reports for the separate plants, must be shown in a report prepared on Form 101. The inquiries on this schedule correspond with the inquiries on the same subjects in the General Schedule for manufactures, and the instructions given for them should be followed. *Be careful not to duplicate any of these amounts in the reports for any of the separate plants.*

(Paragraphs 114 to 152, inclusive, relate to Mines and Quarries, statistics for which are presented in Volume XI of the Fourteenth Census Reports.)

¹ E. S. and W. S. (See par. 37.)

² Mills making wood pulp must also prepare card schedule "Pulpwood consumed."

For a number of these industries there will be comparatively few establishments reported, and all agents may not be given a full

SUPPLEMENTAL INSTRUCTIONS TO CHIEF SPECIAL AGENTS.

153. In charge of important districts.—The following instructions are for the special guidance of the *chief special agents* who will be given general charge and supervision over the collection of statistics of manufactures and of mines and quarries in the large cities and important industrial districts, and are additional to the general instructions for special agents.

154. Special responsibility of chief special agents.—As a large proportion of the reports for manufacturing establishments are to be secured in these districts, the success of this branch of the census work will depend very largely upon the fidelity, zeal, and ability with which these chief special agents perform their duties. They are consequently expected not only to familiarize themselves with the schedules that will be employed and the instructions for their preparation but to learn the purpose of each inquiry, the character of information desired by the bureau, the difficulties that are likely to be encountered in collecting this information and generally fit themselves so as to be able to answer all questions that may be made during the progress of the work. They are expected, finally, not only themselves to be enthusiastic in the discharge of their duties, but to spare no effort in seeking to inspire a similar enthusiasm on the part of the other agents. The chief special agent, in a word, should understand clearly that he will be held responsible for a satisfactory canvass of his district.

155. Selection and organization of force of special agents.—The first duty of the chief special agent will be that of the organization of the agents who will perform the work of collecting the statistics of manufactures and of mines and quarries in their districts.

156. Authority of chief special agents to suspend assistant agents.—If, after an agent has entered upon the performance of his duties, it appears for any reason, whether of personal misconduct, his failure to exercise due tact in approaching manufacturers so as to secure their cooperation and overcome antagonism that may exist to the canvass or disinclination to divulge information, his lack of zeal and energy, or the demonstration that he is unable to secure accurate and correct information, the chief special agent is authorized to temporarily suspend such agent from duty. He should immediately make a full report of the case to the Director of the Census and await instructions before taking further action.

157. Amount of work expected of assistant agents.—In general, the services of an assistant agent should not be deemed entirely satisfactory unless he secure an average of four complete reports per day. Special circumstances may, of course, make this average too high or too low. If in the absence of such special circumstances this average is not attained, the agent should be required to make a definite explanation of the reason for his failure.

158. Instructions and supervision of assistant agents.—The most important part of the duties of chief special agents is, on the one hand, to see that the assistant agents thoroughly understand their duties, and, on the other, that these duties are at all times faithfully performed. The chief special agents should thus assure themselves that all assistants under their direction have studied the schedules and instructions carefully and understand clearly all points covered by them, and that they also know how to dispose of the index cards for establishments for which reports can not be secured in their respective districts. Subsequently the chief special agent must follow closely the work of each assistant agent, and by verbal or written instructions assist him in meeting difficulties encountered, and make certain that his work is being intelligently and efficiently performed. By inquiry of agents, by personal inspection of the districts, and by interviews with representative manufacturers and others, he should assure himself that a thorough and proper canvass of the districts assigned to them is being made by the assistant agents and that the latter are devoting their entire time to their official duties.

As far as practicable, chief special agents should exercise supervision over assistant agents by personal contact and interviews with them. Where advisable, the chief special agent should see the assistant agents while at work in the district. Assistant agents working in the city where the office of the chief special agent is located should be required to report at frequent intervals, at the office, in order that the chief special agent may go over with them personally the schedules secured by them and advise with them regarding the handling of difficulties that may have arisen. Where the assistant agents work in districts at considerable distance from the office, interviews should be arranged for at such intervals of time as the circumstances require, and in such way as to involve the minimum loss of time. In such cases, however, the assistant agents should mail daily all reports secured by them to the chief special agent. Addressed official envelopes will be furnished for this purpose. In those cities where Saturday half holidays prevail it will be well for the chief special agent to arrange for assistant

agents to report on the afternoon of that day for consultation and the receipt of special instructions.

159. Record cards.—Chief special agents will be furnished with record cards (Form 4) showing for establishments in their respective districts that reported at the census of 1914, products valued at \$20,000 and over, the industry, capital, average number of wage earners, total wages, cost of materials, value of products, and total horsepower as shown by the respective reports for that year. These data are confidential and only for use as disclosing any glaring inconsistency which it is deemed proper to have explained or corrected before the report for 1919 is forwarded to the Census Office. If, after investigation, which in such cases should be conducted by the chief special agent personally when practicable, differences or inconsistencies are found to exist, an explanation should be made under "Remarks"; otherwise, correspondence on the subject might be deemed necessary by the office.

160. Assignment of assistant agents to districts or special classes of industries.—Each chief special agent will be given the index cards and lists of all the establishments in his district. These cards will be arranged in suitable subdistricts for the assistant agents. The chief special agent must familiarize himself with this arrangement and be in a position to assign assistant agents to the different districts as rapidly as may be necessary.

In those districts where there are a considerable number of establishments engaged in the same class of industry, such as the "textiles" in Philadelphia, New York, and Lowell; "iron and steel" in Pittsburgh; "slaughtering and meat packing" in Chicago; the chief special agent should select one or more agents to devote themselves specially to securing schedules from such industries. Even where the agent has no special knowledge of those industries, it is believed that by devoting himself to particular industries he will soon acquire greater efficiency in securing the particular information sought. Such special assignment, however, should not be made unless it is believed it will result in a material increase in the value of the work and does not entail too great a loss of time.

Where a district comprises a city and surrounding or near-by territory the canvass of the city should, as a rule, be finished before any agents are assigned to the outlying districts. As far as possible the work of assistant agents should be confined to the cities for which they are appointed. This is necessary in order to avoid expense for traveling and allowance in lieu of subsistence. When chief special agents deem it necessary that an assistant agent be allowed street-car fare or other traveling expenses and subsistence he should make recommendation accordingly.

161. Examination of reports by chief special agents.—Reports as received from assistant agents must be immediately examined by the chief special agents, for the purpose of determining whether the assistant agents are performing their duties properly and whether there are any errors or omissions which can be detected by a cursory examination and which can at once be corrected. This examination should later be sufficiently extended to obviate the necessity for the return of the reports or for correspondence by the bureau with the establishments to which they relate. It is especially important that this examination of reports secured during the first few days that each assistant agent is at work be carefully made in order that any misconception on the part of the agent regarding the purport of a question or the character of answer desired may be corrected at the start.

162. Detail of clerks from the office to assist in the examination of schedules.—When necessary, clerks will be detailed from the regular office force to work in the office of the chief special agent to assist in the examination and criticism of the reports secured.

163. Reports after examination to be promptly forwarded to the Bureau of the Census.—All reports after their examination, which should be made immediately on their receipt, should be at once forwarded by registered mail to the Census Office. Under no circumstance should any considerable number of completed reports be allowed to accumulate in the office of a chief special agent.

164. Securing of reports from "central offices."—As a rule, establishments for which reports must be obtained at an office located elsewhere than at the plant are indicated upon the index card by the words "central office." Other instances of this kind may be discovered and the chief special agents should see that the proper notice is given the office by use of various postal cards provided for such cases. In many instances considerable time can be saved by making cross references direct to the agents in whose districts the offices are situated, and such action should be taken by the chief special agents whenever possible. A list of the agents in charge of the different districts to whom such direct cross references can be made will be furnished the chief special agents as rapidly as the field force is organized.

165. Cases when report by mail may be made.—A number of large corporations, most of which own plants located in different sections of the country, have requested permission to send their reports direct to the bureau by mail. A list of these corporations will be furnished the special agent, and they should be called upon early in the canvass to see if any advice or assistance can be given in the preparation of the reports, and also to make sure that they still desire to submit the reports by mail. The chief special agent will be notified of the receipt by the office of such reports, and will, therefore, be expected to keep in touch with cases of this character and assure himself that there is no unreasonable delay in the preparation and transmission of the reports. It may be found in some instances that one or more of the reports will not be furnished from the "central office" and it will be necessary to instruct the local agent for the district in which the factory is located to secure it. If such local agent has finished his district or has passed the point at which the plant is located before the advice is received, serious delay may result. Furthermore, longer time is required for the preparation of reports by large corporations with their numerous plants, and unless application is made during the first stages of the canvass and they are properly reminded of the necessity for prompt action serious delay may be encountered in the compilation of the data for the states in which such plants are located. Great inconvenience has been caused in the compilation of data at previous censuses by the failure to get these returns promptly, and especial care should therefore be taken to obviate such delay at this census. There will no doubt be some delay in the preparation of the reports for such companies, but the agent should obtain on his first visit

positive assurance that the reports for all of the plants will or will not be prepared at the "central office" and make a statement of the facts on his daily report.

166. Securing of reports in specially difficult cases and closing of the canvass in the district.—The duties of the chief special agents are principally supervisory. It will be their duty, however, to give their personal attention to the matter of securing reports from recalcitrant manufacturers, from establishments where unusual difficulties or complications are present, and particularly from establishments or companies that control a number of plants located in different sections of the country, and establishments operated under the same ownership but located within and outside the corporate limits of the cities in their district and requiring separate reports for the different plants.

167. Central Office.—Cards giving the name and location of each plant controlled from the central office will be furnished the agents. The concerns named on these cards have advised the bureau that manufacturing is carried on at each location named on the card. The agent, therefore, must account satisfactorily for each place named by securing a report or obtaining information that will enable him to dispose of the plant by reporting it as "Not a manufacturer," "Out of business," or for some other reason. Notations of this character must be made opposite each plant on each card for which returns are not secured. (See par. 15.)

168. Supply of forms.—Chief special agents should see that they always have on hand a supply of schedules, instructions, stationery, etc., sufficient to meet their own needs and those of all the agents under their direction.

SUPPLEMENTAL INSTRUCTIONS TO "OFFICE AGENTS."

169. To instruct local agents.—The following instructions are for the guidance of those clerks and agents who will be detailed to instruct the special agents who are to canvass districts in which there is no city of sufficient size to warrant the employment of a chief special agent.

170. General duties.—The clerks and agents so detailed will be known as "office agents" and will have duties in many respects similar to those of chief special agents. As in the case of the latter, they must thoroughly familiarize themselves with all the schedules, instructions, office requirements, and the life, in order that they may instruct the agents who are to do the work of canvassing the several districts, supervise them in their work, and assist them in meeting all difficulties that may present themselves. Each "office agent" should appreciate that he will, in considerable measure, be held responsible for the character of the work of the local agents he instructs. He must be particular, therefore, to impress upon these agents the importance of the work and the imperative necessity of making a complete and rapid canvass.

171. Visiting local agents.—Local agents for the districts above described will be appointed from persons who have been carefully selected. They will be advised by letter that a representative of the office will visit them at a designated time and place for the purpose of giving them instructions and starting them at work. The "office agent" will be given a list of names and addresses of the persons selected for appointment and information concerning the designated time and place for the receipt of instructions. This list will be so arranged that the local agents will be employed in adjoining districts, so that they may be visited with the least expenditure of time. It will be the duty of the "office agent" to visit these local agents at the times and places designated. The "office agent" will be given the appointment papers, supplies, index cards, etc., for all of the local agents he will be required to instruct, and will be held responsible for the delivery of these supplies to the proper persons.

172. Authority to reject or suspend local agents.—If, after a personal interview, the "office agent" is satisfied that the person designated for appointment can not do the work in a satisfactory manner, he must at once report the fact to the office, giving in

detail the reasons why the person will not make a satisfactory agent. As these persons have in all cases been chosen with care, it is to be presumed that they are competent.

If it develops, from a practical trial, that the local agent can not do the work, the "office agent" is authorized to suspend him from duty. In such case, however, he must immediately report the fact. In the event of either of the above contingencies resulting in a vacancy, the "office agent" should immediately secure a proper person for the position and allow him to take the oath of office and enter on duty.

173. Instruction of local agents.—The "office agent" must instruct each local agent how to prepare the schedules, direct him to send his daily reports, schedules, index cards, etc., directly to the Bureau of the Census and, in a word, see that he is thoroughly familiar with all of the requirements of the office and is equipped to make a satisfactory canvass of his district. To make sure that local agents understand what is required of them and are able to perform their duties, the "office agent" should work with each local agent one or two days or for such period of time as he may find necessary. He should visit establishments with the local agents and actually participate in the preparation of the schedules. If the district comprises the city and surrounding territory, the local agent must be instructed to complete the canvass of the city before going into the rural district. After having instructed the local agent the "office agent" must turn over to him the cards, lists, envelopes, schedules, and other supplies and direct him to proceed with the canvass, sending in his schedules and daily reports directly to the Bureau of the Census. The "office agent" must make a report on each local agent, and in such report must make recommendations in regard to traveling expenses and allowance in lieu of subsistence that should be granted.

174. District to be personally canvassed by "office agent."—Each "office agent," in addition to instructing local agents, will be assigned a district to canvass personally. It will be to his advantage to begin actual work in his own district as soon as possible. He should therefore proceed rapidly with the instruction of local agents on his list.

EXTRACTS FROM THE ACT OF CONGRESS PROVIDING FOR THE FOURTEENTH AND SUBSEQUENT DECENNIAL CENSUSES, ACT APPROVED MARCH 3, 1919.

Be it enacted, * * * That a census of the population, agriculture, manufactures, forestry and forest products, and mines and quarries of the United States shall be taken by the Director of the Census in the year nineteen hundred and twenty and every ten years thereafter.

SEC. 8. * * * The schedules of inquiries relating to manufactures, to forestry and forest products, and to mines and quarries shall include the name and location of each establishment; character of organization, whether individual, corporate, or other form; character of business or kind of goods manufactured; amount of capital actually invested; number of proprietors, firm members, copartners and officers, and the amount of their salaries; number of employees and the amount of their wages; quantity and cost of materials used in manufactures; principal miscellaneous expenses; quantity and value of products; time in operation during the year; character and quantity of power used; and character and number of machines employed.

The census of manufactures, of forestry and forest products, and of mines and quarries shall relate to the year ending December thirty-first, next preceding the enumeration of population and shall be confined to manufacturing establishments and mines and quarries which were in active operation during all or a portion of that year. The census of manufactures shall furthermore be confined to manufacturing establishments conducted under what is known as the factory system, exclusive of the so-called neighborhood, household, and hand industries.

Whenever he shall deem it expedient the Director of the Census may charge the collection of these statistics upon special agents or upon detailed employees, to be employed without respect to locality.

The number, form, and subdivision of inquiries provided for in section eight shall be determined by the Director of the Census.

SEC. 22. That any supervisor, supervisor's clerk, enumerator, interpreter, special agent, or other employee who, having taken and subscribed the oath of office required by this Act, shall, without justifiable cause, neglect or refuse to perform the duties enjoined on him by this Act shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not exceeding \$500; or if he shall, without the authority of the Director of the Census, publish or communicate any information coming into his possession by reason of his employment under the provisions of this Act, or the Act to provide for a permanent Census Office or Acts amendatory thereof or supplemental thereto, he shall be guilty of a felony and shall upon conviction thereof be fined not to exceed \$1,000 or be imprisoned not to exceed two years, or both so fined and imprisoned in the discretion of the court; or if he shall willfully and knowingly swear or affirm falsely as to the truth of any statement required to be made or subscribed by him under oath by or under authority of this Act or of the Act to provide for a permanent Census Office or Acts amendatory thereof or supplemental thereto, he shall be deemed guilty of perjury, and upon conviction thereof shall be fined not exceeding \$2,000 or imprisoned not exceeding five years,

or both; or if he shall willfully and knowingly make a false certificate or a fictitious return he shall be guilty of a felony, and upon conviction of either of the last-named offenses he shall be fined not exceeding \$2,000 or be imprisoned not exceeding five years, or both; or if any person who is or has been an enumerator shall knowingly or willfully furnish or cause to be furnished, directly or indirectly, to the Director of the Census or to any supervisor of the census any false statement or false information with reference to any inquiry for which he was authorized and required to collect information, he shall be guilty of a felony, and upon conviction thereof shall be fined not exceeding \$2,000 or be imprisoned not exceeding five years, or both.

SEC. 24. That it shall be the duty of every owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, to answer completely and correctly to the best of his knowledge all questions relating to his respective company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census schedule prepared by the Director of the Census under the authority of this Act, or of the Act to provide for a permanent Census Office, approved March sixth, nineteen hundred and two, or of Acts amendatory thereof or supplemental thereto; and any person violating the provisions of this section by refusing or willfully neglecting to answer any of said questions, or by willfully giving answers that are false, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding \$10,000, or imprisoned for a period not exceeding one year, or both so fined and imprisoned.

SEC. 25. That the information furnished under the provisions of the next preceding section shall be used only for the statistical purposes for which it is supplied. No publication shall be made by the Census Office whereby the data furnished by any particular establishment can be identified, nor shall the Director of the Census permit anyone other than the sworn employees of the Census Office to examine the individual reports.

SEC. 26. That all fines and penalties imposed by this Act may be enforced by indictment or information in any court of competent jurisdiction.

SEC. 29. That all mail matter, of whatever class or weight, relating to the census and addressed to the Census Office, or to any official thereof, and indorsed "Official business, Census Office," shall be transmitted free of postage, and by registered mail if necessary, and so marked: *Provided*, That if any person shall make use of such indorsement to avoid the payment of postage or registry fee on his or her private letter, package, or other matter in the mail the person so offending shall be guilty of a misdemeanor and subject to a fine of \$300, to be prosecuted in any court of competent jurisdiction. (See Insert No. 506. Order No. 3452 of Postal Laws and Regulations.)

APPENDIX C.—INSTRUCTIONS FOR EDITING AND PREPARING SCHEDULES FOR TABULATION.

The reports have been prepared either by a representative of the establishment or by an agent of this bureau in conformity with instructions furnished by such representative, and as a rule they will be accepted as correct. The bureau is not justified in making a change in values or quantities that will affect the general results except in cases of manifest error, and no changes of this character are to be made without special instruction. The editing must be confined to harmonizing the answers to the several questions, the correction of arithmetical errors due to a misunderstanding of the questions, and to the detection of wrong figures or misstatement of fact.

The person in charge must be consulted before any material change is made.

It is important that uniform methods be followed in editing and that no point in the schedule be overlooked in view of the close relation between the General Schedule and the supplemental schedules and the variety of information presented in the reports of different industries.

The several inquiries should be taken up in numerical order, each being considered not only by itself but in connection with other inquiries which may have a more or less direct relation. The answers should be consistent with each other and with the character and size of the establishment.

The instructions in the schedule and in the Book of Instructions to Special Agents must be studied and their application to each question understood. In addition, the following rules and suggestions are to be observed:

(1) Each schedule should first be examined to see that the establishment comes within the scope of the census investigation. (See pars. 25-51, inclusive, Instructions to Special Agents.) Refer all doubtful questions to the section chief.

(2) All changes must be made neatly and plainly in red ink, and in such a manner that the original figures remain distinguishable. No erasure is to be made of original figures. Cancel a figure by a red ink line drawn across the figure, not so heavy, however, as to obscure it. If a correction is necessary in more than one figure of a number, rewrite all figures of the number above, below, or to one side of the original entry, but do not superimpose a correction on top of an original figure. Be careful to have all corrections in the proper spaces, to avoid confusion and error in tabulation; particularly, do not enter a correction in a space provided for some other entry.

(3) Cents should in all cases be eliminated, following the rule of raising the digit dollar figure when the amount is more than 50 cents, dropping the cents when less than 50; and if even 50 cents raising the digit dollar figure when odd—not changing it when even.

In eliminating cents for a group of items for which there is a total, the total is first to be established, and then the several items so that they will add to the total. This frequently requires the forcing of one or more items, either by raising an item showing less than 50 cents or by dropping the cents from an item that is more than 50, to make the sum of the items agree with the established total. Fractions are to be eliminated, in like manner, except in the case of fractions of hour per shift and hours per week; for which see instructions under Inquiry 7.

(4) Totals must be verified by the addition of the several items. If the totals are not reported they should be inserted in red ink.

General Schedule.—The following are some of the principal points to be considered:

INQUIRY 1.—DESCRIPTION OF ESTABLISHMENT.

1. See that the schedule is properly filled out as to state, county, city, or town, and the inquiry, "Is establishment located within the corporate limits of the city or town," answered.

2. If the inquiry includes data for two or more establishments not in the same city or county, report the fact to the section chief.

3. See that the classification harmonizes with the answers to the inquiries regarding "Character of industry," "Materials," and "Products," and also with any printed matter that may accompany the report, and with information given under "Remarks." If the

establishment was reported at the census of 1914, the classification, as a rule, should be the same as at that census, unless there has been a change in products or a change in the classified industry.

4. Compare the period covered as given in the certificate with answers to Inquiries 5 and 7.

5. Character of organization must be either: (1) Incorporated company, (2) individual, (3) partnership, cooperative association, or other.

The figure 1, 2, 3, or 4, indicating the form of ownership, is to be placed in red ink on the left-hand margin opposite the inquiry "Character of organization." If the character of organization is not given, supply the omission by reference to the name of the establishment and from the answers to the seventh subinquiry of Inquiry 1 and to Inquiry 3. Consider also the official designation of the person signing the certificate.

6. *Cooperative associations* may and may not be incorporated. If a manufacturing cooperative association is incorporated, it is, nevertheless, to be classed as a cooperative association. The present schedule does not call for the number of members constituting a cooperative association.

7. The answer to the seventh item, Inquiry 1, should be consistent with the character of the organization as reported. This inquiry is not applicable to incorporated companies or cooperative associations, but only to individual or Partnership establishments.

8. The information as to "Character of industry" should be in harmony with the products, Inquiry 10.

INQUIRY 2.—CAPITAL.

1. Although the items should be separately reported, no attempt will be made to segregate if only the total is given. In that case the aggregate capital should be entered against the first item of the inquiry, namely, "Land, buildings, machinery, and tools."

2. A plant may be rented complete with equipment, in which case no entry will appear for capital invested in "Land, buildings, machinery, and tools," but rent will be reported in answer to Inquiry 8. The building, however, may be rented and the machinery and equipment be the property of the operator. In this case there will appear against "Land, buildings, machinery, and tools" the amount of capital invested in machinery and tools and there will appear an entry under Inquiry 8 for "Rent of factory or works."

3. Examine reports of small establishments for the common error in reporting the entire value or rent for buildings, etc., where only a part is used in manufacturing. In certain out-of-door industries—for example, stone cutting or charcoal manufacturing—there may be little or no capital invested in land and buildings, nor rent therefor, and but a relatively small amount invested in tools, etc.

4. Patent rights, good will, etc., are not considered capital, for census purposes, except in so far as the investment may be included in other items. (See par. 63 of Instructions to Special Agents.)

5. When separate amounts or percentages are given for the capital invested in manufacturing as distinct from that in other business under the same ownership, the proper amount must be inserted in red ink. (See par. 64 of Instructions to Special Agents.)

INQUIRY 3.—SALARIED EMPLOYEES.

1. Only incorporated companies should report "Salaried officers of corporations."

2. Examine Inquiries 3, 4, 5, and 6 for any indication of a misunderstanding of the question. Small concerns may report all or some of the wage earners under Inquiry 3. In some establishments persons engaged in light work, such as packing medicines, etc., who are paid by the month, may be incorrectly classed as salaried employees, whereas they should be reported as wage earners. When duplications and inconsistencies are detected, the proper corrections must be made after conferring with the section chief.

3. Where it appears from Inquiry 1, or from other information on the schedule, that a man and his wife are reported as partners, or the husband, in the case of an individual concern, as manager,

such schedules are to be classed as "Individual" and not "Partnership"; and entries for man and wife under Inquiry 3 as manager or superintendent should be eliminated, together with the salaries therefor, under Inquiry 6. Such amounts are to be considered as money drawn from the business and not as salaries or wages.

4. Where children, wife, or husband are reported as clerks under Inquiry 3, or as wage earners under Inquiries 4 and 5, the number should be canceled, and also their salaries or wages if reported under Inquiry 6.

5. Saleswomen or salesmen in retail branches of a manufacturing establishment, where the retail business has not been segregated from the manufacturing, are to be considered as wage earners and not as clerks or salaried employees. Whether or not a person is to be considered a wage earner depends on the character of the work. Persons not engaged in work of a clerical nature should be reported as wage earners. This applies especially to small bakeries which retail a large part of their goods and to cigar manufacturers selling to consumers.

6. Agents for a laundry who are engaged in other business, such as operators of cigar stores, druggists, etc., are generally paid on a commission basis and are not to be reported as employees. Drivers of wagons are to be reported as wage earners. They may receive a commission, in which case the commission should be considered in lieu of wages and be so reported, or if paid a wage and commission in addition the entire amount should be reported as wages.

INQUIRY 4.—WAGE EARNERS.

1. The character of the industry determines in large part the sex and number of wage earners, and to some extent the number under 16 years of age. A report showing women in an industry in which they are not ordinarily employed should be brought to the attention of the chief of the section; and, further, a report showing a proportionately large number of men in an industry where females are generally employed should be examined with care. The number of male and female wage earners reported under this inquiry should agree with the number reported for December under Inquiry 5, unless some other month is named under 3. Where there is a difference the circumstances surrounding the case will determine which inquiry to change.

INQUIRY 5.—WAGE EARNERS BY MONTHS.

1. See that Inquiries 4 and 5 are consistent. A small number of wage earners reported for months during which the establishment was idle should be allowed to stand.

2. Should an irreconcilable discrepancy appear, the circumstances of the case will determine which inquiry should be corrected.

3. The character of the industry will largely determine the number of wage earners and the months in which they were employed.

4. After verifying the number by months, compute the average number for the year by dividing the sum of the numbers, male and female combined, for all months by 12, and enter the result in the place to be provided therefor, on the bottom margin of the schedule, "Average number." If the result is not a whole number, carry to one decimal place and place the decimal on the right of the perpendicular line.

5. In computing averages, the quotient not being a whole number and the computation being carried to one decimal place with a remainder, proceed as in the case of the elimination of cents to eliminate the remainder. If the average number is less than one, for example, an average for the year of seven-tenths of one wage earner, precede the decimal number with "0.," thus, "0.7," to guard against the possibility of ".7" being read "7."

6. Many small establishments employ no wage earners, the work all being done by the proprietor or proprietors. When it appears that, through error, Inquiries 4 and 5 are not answered and the establishment, though a small one, has a few employees, the number may be estimated. The character of the inquiry, the products as reported under Inquiry 10, the time in operation, and reports for similar establishments in the same locality should be considered in making the estimate.

INQUIRY 6.—SALARIES AND WAGES.

1. No salaries should be reported for "Salaried officers of corporation" if the establishment is not incorporated. In some small incorporated companies no salaries are paid the officials; and amounts should not be supplied when none are reported, unless there is an evident error.

2. The amounts reported should be consistent with Inquiries 3 and 4. If employees of certain classes are reported under these inquiries, salaries or wages should be reported accordingly. There should also be a degree of harmony between salaries and wages, the number of the corresponding classes of employees, and the time in

operation. The average number of wage earners computed from Inquiry 5 must be divided into the total amount reported as "Paid to wage earners," and if the average wage is either excessively low or excessively high the answers to the inquiries should be carefully examined to detect any possible error.

3. Piece workers, *working at home*, materials being furnished, are not to be reported as wage earners under Inquiries 4 and 5. The amount paid for such work should appear in answer to Inquiry 6, "Amount paid for contract work, not done by regular employees."

4. Amount paid for contract work should not include any part of the amount reported as salaries or wages, *nor commissions on sales*. Further, the cost of parts of machines or fittings manufactured by another establishment under contract, the materials therefor not being furnished by the establishment reporting, should not be reported under contract work, but under Inquiry 9, "Materials."

5. Some establishments—for example, manufacturers of clothing, publishers, etc.—have work done by outside contract and the cost of such work may be erroneously reported as wages. When this is the case, the amount should be transferred to "Amount paid for contract work."

INQUIRY 7.—TIME IN OPERATION.

1. This inquiry should be answered for all establishments except small publishing concerns where the printing is done by contract and no regular office force or hours are kept.

2. The number of days in operation should be consistent with the period reported in the certificate, due allowance being made for idle time and for "short time." Fractions of hours per shift and per week should be reduced to one decimal place.

3. The number of hours "per shift" and "per week" should be consistent with the character of the industry and with prevailing conditions as shown by reports of other establishments in the same locality. An entry is not necessary if all work is done by proprietors and if no wage earners are reported.

4. If the number of days in operation is not reported and the report indicates a full year's operation—the industry not being of a seasonal character—supply 307 days. Likewise, supply hours per shift and per week in accordance with prevailing normal conditions in establishments of a like character in the same locality.

5. The number of hours per shift under normal conditions is not necessarily the number of hours worked each day during the major part of the year, since the factory may be working overtime the greater part of the year; but is governed, as a rule, by the general conditions prevailing in that industry in the same locality.

6. The number of days in operation should be exclusive of Sundays, holidays, and all other days the plant was idle from strikes or otherwise.

INQUIRY 8.—RENT AND TAXES.

1. If land, buildings, machinery, etc., or any part thereof, are rented, the amount paid for rent must be shown. (See Instructions to Special Agents, par. 83, in regard to segregation of rent of offices and rent of works.)

2. Ground rent when paid (as in Baltimore) is to be reported under first item, Inquiry 8, and marked "Ground rent." In such cases an entry of "Land rented" should be made against the first item of Inquiry 2.

3. When "Heat and power" is included in rent of factory or works, the entire amount may stand, with proper note.

4. Federal taxes may include (1) the special manufacturing tax in certain industries, (2) the internal-revenue tax on certain classes of products, (3) capital stock tax of corporations, (4) excise tax on sales, and (5) the income tax. The latter will not be reported by individual or partnership establishments, as a rule, for the proprietor or proprietors will not pay an income tax on the business as such, but on his or their individual income.

(1) The special manufacturing tax applies to oleomargarine and adulterated butter (\$600), renovated butter (\$50), narcotic drugs (\$24), and mixed flour (\$12).

(2) There is an internal-revenue tax on distilled spirits and alcoholic beverages, fermented liquors, wines and cordials, tobacco and tobacco manufactures, cigarette papers, oleomargarine, adulterated and renovated butter, and mixed flour. The amount to be reported is the tax paid or payable on the products manufactured during the year, even if the manufacturer has not in fact paid the tax, as when spirits are held in bond or cigars have not been sold.

(3) The capital stock tax is \$1 per \$1,000 for each \$1,000 of capital stock over \$5,000.

(4) The excise taxes on sales by manufacturers may or may not be reported. They will not be included when the products are turned over to a sales department. If included under Inquiry 8 they should be included in the values reported,

Inquiry 10. The excise taxes on certain products are: Automobile trucks and wagons, 3 per cent; other automobiles and motor cycles, 5 per cent; tires, inner tubes, parts or accessories for automobiles, etc., 5 per cent; pianos, sporting goods, chewing gum, cameras, yachts, etc., 3 to 10 per cent; daggers, and sword canes, etc., 100 per cent; beverages made wholly or in part from cereals, etc., of sale price, 15 per cent; unfermented grape juice, ginger ale, artificial mineral waters, etc., of sale price, 10 per cent.

(5) The corporation income tax for the calendar year 1919 is 10 per cent of the net income in excess of certain credits.

The amount reported for Federal taxes will be accepted if consistent with the report in general. If not, the examiner should bring the report to the attention of the person in charge.

5. If the plant is reported as owned, under Inquiry 2, an amount should be reported for taxes under Inquiry 8, "State, county, and local," unless it is exempt from taxation. Examiners should use discretion as to when and when not to criticize this item. Where land and buildings are owned, and have been owned for the entire year, taxes should be reported. Where land and buildings are not owned but rented, the amount of capital invested indicates generally the amount which is taxable, as personal property. The amount reported against item 1 of Inquiry 2 determines mainly whether taxes should be shown. A general rule to be followed is that if the amount of capital invested against item 1 is \$5,000 or more, taxes should be shown. Where this item is less than \$5,000, the total capital should be at least \$20,000 to warrant criticism. If the capital invested is very large, notwithstanding item 1 of Inquiry 2 is less than \$5,000, taxes should be reported, unless it is an industry which would not require an investment in a large amount of material and finished products, and it appears that the large amount of capital invested in material, item 2 of Inquiry 2, represents material recently purchased for the coming year.

INQUIRY 9.—MATERIALS, ETC.

1. See that the cost of the materials in the General Schedule and for the supplemental schedules for the establishment are consistent, and in accordance with the instructions pertaining to the supplemental schedules.

2. The first item of this inquiry should include the cost of all materials, including mill supplies, containers, etc., but excepting fuel.

3. See that the amount paid for freight is not duplicated. It is optional to include freight with the cost of materials under the first item, or to separately report it under the third item. Include express charges under freight.

4. The materials must be only those consumed during the year, and their cost must be in harmony with the value of the products and other inquiries.

5. The character of the materials should be consistent with the classification of the report, the answer to Inquiry 1 (subitem 8), and products, Inquiry 10.

6. Compare cost of fuel with Inquiry 12 and see if quantities and cost are consistent. If wood is used as fuel, the cost of same will be reported, Inquiry 9, but the quantity consumed is not called for under Inquiry 12. The cost of fuel should include all fuel, whether used for heat, for light, or for power purposes.

5. If power is rented, compare the cost reported under Inquiry 9 with the horsepower rented, Inquiry 11, and see if consistent. Payments for water privileges—water for wheels and turbines—should be included under this heading.

INQUIRY 10.—PRODUCTS.

1. The principal products manufactured should be consistent with the classification and answers to Inquiries 1 and 9.

2. The value of all products should be consistent with capital (Inquiry 1), amount of wages (Inquiry 6), and cost of materials (Inquiry 9).

3. "All other products manufactured during the year" should include the value of all products not mentioned as principal products.

4. Establishments doing contract work on materials furnished by others may show a large amount received for such work and a large wage force and wage expense under Inquiries 4, 5, and 6, with very small materials expense under Inquiry 9.

5. In the case of flour and grist mills, the value of the custom ground product should be included with the merchant product.

6. Where quantities and values are reported, see that the value per unit of the manufactured product is consistent with average prices of such commodities for the census year, as ascertained from reliable sources.

7. The total value of product in the General Schedule and the supplemental schedules must agree, except where the supplemental schedule has been used to report a minor product.

8. Ascertain whether the schedule indicates a surplus or a deficit for the year's operation by comparing the sum of salaries, wages,

rent, and taxes, and cost of materials with the total value of products. When it shows a deficit, without the schedules having been marked "Correct" by the field agent or the party making the report, the schedule should be referred to the chief of section.

Excessive apparent surplus should be investigated. Railroad repair shops must show no deficit. While there may be a small surplus, as a rule, expenses and products will balance.

No miscellaneous expenses are called for except rent of factory or works and taxes. Some of the expenses not reported are rent of offices and buildings other than the factory or works, rent of machinery, Patent royalties, etc., insurance, ordinary repairs, advertising, traveling expenses, and numerous other sundry expenses. In practically all industries this feature is of importance and should be taken into account.

In the printing and publishing industries the large amount paid for telegraph service is not reported, nor royalties paid by book publishers. Manufacturers of druggist's preparations, patent medicines, perfumery, cosmetics, etc., are heavy advertisers; likewise, manufacturers of men's clothing.

It will therefore be seen that the character of the factory should be considered in determining whether the report shows an unusual surplus. And, similarly, in determining what may be called a loss or deficit, the same elements should be considered.

9. See if there is any indication that large amounts of partially manufactured products on hand have not been considered.

10. If schedule shows less than \$500 for total value of product, refer it to the chief of section.

11. In editing schedules, any by-product or minor product, so reported as to indicate its character and value, is to be taken off on a by-product schedule, if the minor product or by-product relates to an industry not having a supplemental schedule; or, in case the by-product relates to an industry for which there is a supplemental schedule, on such supplemental schedule. For example, in the case of an establishment classified as "Foundry and machine-shop products" reporting the manufacture of wood screws (screws for woodwork) for which there is a special industry classification (Industry No. 276) but not a special supplemental schedule, the "wood-screw" product should be taken off on a by-product schedule. Use a separate schedule for each minor product when they belong to different industries.

The minor product or by-product remains on the General Schedule, the object of the by-product schedule being to bring together under each industry all products relating thereto. In every case the by-product schedule is to show the number and title of the industry where it is reported, and the name of the establishment, state and city, and number of the schedule. The general rules for editing and preparing schedules for tabulation under the head of Supplemental Schedules, Sections 1-11, apply to the preparation of the by-product schedules.

INQUIRY 11.—POWER.

1. See that power is fully reported for establishments which, according to the nature of the industry, should use power.

2. "Power owned," which includes the power equipment of establishments generating power even though the equipment is rented, should be fully described under section "a" and "Power rented or bought from another establishment," under section "b."

3. If power is purchased or rented, the amount paid for same must be reported under the fourth item of Inquiry 9. "Rented power" will generally be either in the form of current purchases, or power supplied by shafting or belting from a neighboring establishment.

4. Electric power, unless generated on the premises, should in all cases be reported as rented power. If generated on the premises it is secondary power, and there should be a prime mover (steam engine, water wheel, or other owned power) for generating the power that operates the dynamos and generates the current for the electric motors.

5. Supply omissions of horsepower of engines, etc., in accordance with average horsepower used by other establishments of the same character and size. If electric motors are reported under section "a" without prime movers, such as engines, water wheels, etc., and expense for "Rent of power" is reported under Inquiry 9 (fourth item), the electric motors under section "a" should be crossed out and transferred to electric motors, section "b," unless it is apparent that an error has been made in the preparation of the schedule. The probability is that the establishment owning the electric motors has reported them erroneously as power owned; for, although the electric motors are owned, the current for operating them is purchased.

6. The purchase of water to run water wheels or water motors, or gas for internal-combustion engines—the wheels, motors, or engines being reported under "a"—does not change the owned character of the power.

7. Fractional parts of 1 horsepower should be edited to show 1 horsepower. A fraction of a horsepower following a whole number should be treated in the same manner as cents; that is, $3\frac{1}{2}$ horsepower to 4 horsepower and $4\frac{1}{2}$ horsepower to 4 horsepower; that is,

in the first case the whole number being odd, the number will be raised; and in the second case the whole number being even, the half will be thrown off.

8. The schedule does not call for reporting locomotives. If reported, as they may be in the case of establishments having extensive yards, they should be eliminated from Inquiry 11 and noted under "Remarks." Make a marginal entry against inquiry, "See remarks for locomotives."

INQUIRY 12.—FUEL.

1. Fuel should be reported, as a general rule. In industries employing steam power and those involving welding, baking, smelting, etc.—as in machine shops, foundries, bakeries, and brick-yards—a large expenditure of fuel is usual. In such cases the quantity of fuel should be supplied if omitted. The kind and quantity of fuel is largely determined by the location and the nature of the industry.

2. Establishments having waste products which can be used for fuel, such as sawmills, and those using water or electricity for power purposes, need not of necessity report fuel.

3. Where power is reported as rented, under Inquiry 9 and Inquiry 11-b, no fuel item need be supplied, unless, as previously explained, it is required for welding, baking, smelting, etc.

4. Fuel for the heating of buildings only should not be supplied.

5. Anthracite coal, if reported in short or net tons (2,000 pounds), is to be reduced to long or gross tons (2,240 pounds). Bituminous coal and coke, if reported in long or gross tons, is to be reduced to short tons. When either of the foregoing is reported in tons without stating whether it is the long or the short ton, it will stand as reported, it being assumed that the ton commonly employed in the trade has been used (long ton for anthracite and short ton for bituminous coal and coke). Coke reported in bushels is to be reduced to short tons, using 50 bushels to the ton.

6. Fuel oil or gasoline reported in gallons is to be reduced to barrels, 50 gallons to the barrel. If reported in barrels of 42 gallons, convert the quantity to barrels of 50 gallons.

7. Gas used solely for lighting purposes should not be reported, but gas used for lighting purposes and included with gas used for manufacturing purposes will be allowed to stand. The quantity of gas used should be reported in units of 1,000 cubic feet (or M cubic feet). A common error is to report it in terms of cubic feet, though the unit called for is "1,000 cubic feet." For example, 3,000,000 cubic feet of gas should be reported as 3,000 in the quantity column, the unit of measure being 1,000 cubic feet. If the figure in the quantity column is allowed to stand as 3,000,000, it would indicate a consumption of 3,000,000,000 cubic feet in the tabulated data.

SUPPLEMENTAL SCHEDULES.

1. Supplemental schedules must accompany the General Schedules for each of the industries for which schedules are required.

2. If practicable, a supplemental schedule when omitted may be prepared from the information furnished by the General Schedule after consulting with the section chief. If the supplemental schedule can not be prepared in the office, it must be secured by correspondence.

3. Name and location in supplemental and general schedules should agree.

4. Cost of materials and value of products in the supplemental and general schedules must agree, except when the supplemental schedule calls only for the principal materials or covers a minor product.

5. Compare "Products" in supplemental and general schedules and see that they are consistent both in total and in detail.

6. Where there are two supplemental schedules, one of which relates to a minor product of by-product, the values in the by-product supplemental must be included in the products of the supplemental schedule that relates to the chief products of the establishment. The principal supplemental schedule then must agree with the General Schedule. A memorandum must be made in both the general and the principal supplemental schedules, as follows: "Value of products includes by-products classified as (insert name of classification of by-product supplemental) to value of \$....." A memorandum must also be made in the by-product supplemental schedule, as follows: "The value of the by-product here reported is included in the value of products for (insert classification for General Schedule or chief supplemental schedule)." Mark by-product supplemental in red ink "By-product," and return to the section chief.

7. Where a by-product requires a supplemental schedule and the chief product requires only a General Schedule (there being no special supplemental schedule for the industry), the materials and value of products on the supplemental and general schedules will not agree, and a memorandum should be made on the by-product supplemental schedule as provided for in the preceding paragraph and the supplemental returned to the section chief.

8. Examine carefully questions relating to equipment, machinery, etc. When information asked for is lacking it may be possible to supply it from other parts of the schedule or from reliable sources—for example, trade directories.

9. Certain of the supplemental schedules, viz: Brass, bronze, and copper products; Chemicals; Coal-tar chemicals; Cotton manufactures; Cottonseed products; Druggists' preparations and patent and proprietary medicines and compounds; Essential oils; Explosives; Fertilizers; Gas, manufactured; Iron and steel, steel works and rolling mills; Knit goods; Paints and varnishes; Paper and pulp; Soap; Tin plate and terneplate; Wire; Wood distillation; and Wool manufactures; require a report of the products manufactured and consumed by the establishment in the manufacture of the finished products. In these cases the products thus consumed are not to be separately accounted for either as material used or as products. For example, in manufactured gas, a portion or all of the coke produced may be used as fuel for the boilers and retorts. The cost of the coke so used is not to be reported as fuel under "Materials" used, or its value under "Products;" for the cost is covered by the coal and labor reported, and its value enters into the value reported for the gas product. If any portion of the coke is used as such, it is a true product and should be so reported. The examiners will pay special attention to the foregoing in preparing the schedules for tabulation.

10. Attention is also called to the question on the supplemental schedule for manufactured gas of "Amount paid for lamps and appliances purchased for sale," under "Materials." The amount reported for this item should be included in the first item of Inquiry 2, "Materials used," in the General Schedule.

11. Consult special instructions for some of the supplemental industries, as Butter, cheese, and condensed milk; Flour and grist mills; Lumber and timber products; Printing and publishing, etc.

12. *Machinery.*—A common error is for machine shops, etc., to report equipment in the Machinery supplemental schedule; that is, the value of the specified machines installed in their shops—lathes, planers, office typewriters, etc. From the character of the industry and the products as reported in the General Schedule it can generally be determined whether the machines reported in the supplemental are in fact products of the establishment.

The following is a list of the supplemental schedules pertaining to manufactures:

Form.	Form.
102. Agricultural implements.	134. Gas, manufactured. ¹
103. Aircraft.	135. Glass works.
104. Ammunition, firearms, ordnance, and accessories.	136. Glucose and starch.
109. Antimony smelters. ¹	177. Grindstones, oilstones and whetstones, pulp stones, scythestones, hones, and rubbing stones. ¹
105. Automobiles, including trucks and tractors.	138. Ice, manufactured.
106. Beet-sugar factories.	139. Iron and steel, blast furnaces. ¹
107. Boots and shoes.	140. Iron and steel, steel works and rolling mills.
108. Brass, bronze, and copper products.	137. Knit goods.
109. Butter, cheese, and condensed milk.	178. Lead refineries. ¹
110. Buttons.	179. Lead smelters. ¹
111. Cane sugar.	141. Leather gloves and mittens.
112. Cane-sugar refining.	142. Leather, tanned and curried.
113. Canning and preserving, fish and oysters.	143. Lime. ¹
114. Canning and preserving, fruits and vegetables.	148. Lumber and timber products.
170. Carbon black from natural gas. ¹	145. Machine tools.
115. Carriages and wagons.	144. Machinery.
116. Cars, steam and electric railway.	146. Motorcycles and bicycles.
117. Cast-iron pipe.	147. Musical instruments.
171. Cement. ¹	148. Needles, pins, and hooks and eyes.
118. Chemical manufactures.	149. Oilcloth and linoleum.
120. Chocolate and cocoa products.	150. Paints and varnishes.
172. Clay products. ¹	151. Paper and pulp.
119. Coal-tar chemicals. ²	152. Pulpwood (card). ¹
173. Coke (other than by-products coke ovens). ¹	153. Petroleum, refining. ³
174. Coke and by-products in by-product ovens. ¹	154. Phonographs and graphophones.
175. Copper refineries. ¹	151. Potash (crude). ¹
176. Copper smelters. ¹	155. Printing and publishing.
121. Cordage and twine, jute goods and linen goods.	156. Railroad repair shops, steam and electric.
122. Cotton manufactures.	157. Rice, cleaning and polishing.
123. Cotton lace.	158. Rubber goods.
124. Cottonseed products.	182. Salt works. ¹
125. Druggists' preparations and patent and proprietary medicines and compounds.	183. Sand-lime brick. ¹
126. Dyestuffs and extracts—natural.	159. Shipbuilding.
127. Electrical machinery apparatus.	160. Silk.
128. Engines.	161. Slaughtering and meat packing.
129. Essential oils.	162. Soap.
130. Explosives. ⁴	163. Textile machinery.
131. Ferroalloys. ¹	164. Tinplate and terneplate works.
132. Fertilizers.	184. Tin smelters. ¹
133. Flour, feed, and grist mills.	165. Turpentine and rosin.
	166. Wire.
	167. Wood distillation.
	168. Wool manufactures.
	185. Zinc smelters. ¹

¹ In cooperation with the United States Geological Survey.

² In cooperation with the United States Tariff Commission.

³ In cooperation with the United States Bureau of Mines.

⁴ In cooperation with the United States Forest Service.

APPENDIX D.—CLASSIFICATION OF INDUSTRIES.

CLASSIFICATION LIST, WITH CROSS REFERENCES, 1919.

[Industries marked with an asterisk (*) require supplemental schedules.]

There are 358 classifications to be used in connection with the census of manufactures of 1919, and each accepted report was assigned to one of these classifications.

The classification of reports for manufacturing establishments is the assignment of the individual schedule to the particular class to which it belongs, in order to bring together, so far as practicable, all the establishments engaged in the same or kindred industries. As a general rule the classification will be determined in accordance with the product of chief value.

1. *AEROPLANES, SEAPLANES, AND AIRSHIPS, AND PARTS.
Includes also balloons and all other types of aircraft and parts.
2. *AGRICULTURAL IMPLEMENTS.
Includes planting, cultivating, harvesting, and seeding implements and machines, among which are the following: Broadcast seeders; beet cultivators; clover hullers; combination seeders; corn huskers; corn huskers and shredders; corn planters; corn shellers; cotton planters; cotton scrapers; cultivators; drills; equalizers; fanning mills; grain cradles; harrows; harvesters; harvesters and thrashers combined; headers; headers and binders; hay carriers; hayforks, horse; hay loaders; hayrakes, horse; hay stackers; hay tedders; listers; mowers; plows; potato diggers, horse; potato planters; reapers; seed sowers; thrashers, horse or steam power; bean planters; bean pullers; beet pullers; celery hillers; check rowers; corn cleaners; corn hooks; corn knives; cotton choppers; cottonseed hullers; ensilage cutters; hay-cutters; lime spreaders; manure spreaders; potato coverers and hillers; rollers; scythes; scythe snaths; sickles; sorghum binders; stackers; stalk cutters; weeders; and tobacco transplanters.
3. ALUMINUM MANUFACTURES.
Includes the manufacture of aluminum ware, ingots, plates, sheets, etc.
(a) Ingots.
(b) Plates and sheets.
(c) Ware (mostly household).
(d) All other.
4. *AMMUNITION. (See also Firearms; Ordnance and accessories.)
Includes blasting caps; cartridges, loaded or unloaded, for firearms; fog and danger signals and torpedoes; fuses; lead shot; percussion caps; and signal squibs, gun wads, etc.
5. ARTIFICIAL FLOWERS. (See also Feathers and plumes; Millinery and lace goods.)
Includes artificial leaves, palms, wreaths, plants, foliage and vines, buds and fruits; wax flowers; and the preservation of flowers and plants; tubing and other material for the manufacture of artificial flowers.
6. ARTIFICIAL LIMBS. (See also Surgical appliances.)
Includes artificial legs, arms, hands, feet; also crutches, extension shoes, etc. This classification must not be confused with "Surgical appliances."
7. ARTIFICIAL STONE PRODUCTS. (See also Marble and stone work.)
Includes articles manufactured from a combination of stone, gravel, sand, or metal, with cement. The products may be various kinds of building blocks, building trimmings, etc., and other articles, such as laundry tubs, burial vaults, etc., but not blocks or tile for paving or roofing.
8. ARTISTS' MATERIALS.
Includes palettes, pastels, canvas boards, prepared canvas on frames, oil colors, Roman gold, bronze powders, gliders' cushions and burnishers, easels, air pencils, and crayons.
(a) Crayons.
(b) All other.
9. ASBESTOS PRODUCTS, NOT INCLUDING STEAM PACKING. (See also Steam packing.)
Includes the recovery of asbestos from the mineral, and the manufacture of asbestos building materials, articles for household use, etc.
(a) Building materials.
(b) Textile mill products, other than steam packing.
(c) All other products.
10. AUTOMOBILE BODIES AND PARTS. (See also Automobiles; Carriage and wagon materials.)
Includes establishments whose chief products are chassis, automobile bodies, tops, mufflers, radiators, mud guards, cushion frames, trimmings, etc. The manufacture of motors, rubber tires, lamps, and springs are called for under other classifications.
11. *AUTOMOBILES. (See also Automobile bodies and parts; Carriages and wagons.)
Includes all kinds of automobiles and motor trucks, whether for pleasure, business, or public use.
12. AUTOMOBILE REPAIRING.
Includes repair work, vulcanizing tires, etc., where such work is extensive and partakes of the character of machine-shop work.
13. AWNINGS, TENTS, AND SAILS.
Includes window, store, and veranda awnings; tents; sails; tarpaulins; and canvas covers. Small establishments making these goods to the individual order and use are not to be included.
14. BABBITT METAL AND SOLDER. (See also Smelting and refining, not from the ore.)
Includes Babbitt and other antifriction metal, type metal, and solder. Tin, copper, and zinc or antimony are the usual components. Among the solders will be found hard, soft, white, spelter, gold, silver, plumbers', pewterers', and button.
(a) Babbitt metal.
(b) White metal.
(c) Type metal.
(d) Solder.
15. BAGS, OTHER THAN PAPER, NOT INCLUDING BAGS MADE IN TEXTILE MILLS.
Includes meal bags, salt bags, gunny or jute bags, and all other bags made from materials other than paper.
16. BAGS, PAPER, EXCLUSIVE OF THOSE MADE IN PAPER MILLS.
Includes the manufacture of paper bags.
17. BAKING POWDERS AND YEAST. (See also Flavoring extracts.)
Includes, in addition to baking powders and yeast, articles used for similar purposes, such as malt extract for leavening, yeast cakes, stock yeast, etc.
(a) Baking powders.
(b) Yeast.
18. BASKETS, AND RATTAN AND WILLOW WARE.
Includes baskets, carpet beaters, bottle covers, and, in general, the manufacture of small articles from willow, rattan, etc. (Rattan and willow furniture, however, must be included under Furniture (b)).
19. BELLS. (See also Brass, bronze, and copper products (a). Foundry and machine-shop products.)
Includes the manufacture of electric, sleigh, automobile, bicycle, and church bells; and chimes, gongs, etc.
20. *BELTING AND HOSE, RUBBER. (See also Rubber goods.)
Includes all kinds of belting and hose where the chief material is rubber.
(a) Rubber belting.
(b) Rubber hose.
21. BELTING AND HOSE, WOVEN, OTHER THAN RUBBER.
Includes all kinds of belting and hose where the material is chiefly cotton, linen, or canvas.
(a) Woven belting.
(b) Woven hose.
(c) All other.
22. BELTING, LEATHER. (See also Leather, tanned, curried, and finished.)
Includes all kinds of leather belting, used largely for the transmission of power.
23. BILLIARD TABLES, BOWLING ALLEYS, AND ACCESSORIES.
Includes, in addition to billiard, pool, and baguette tables, the manufacture of billiard cues and chalk, pool pockets, cue tips, and pool balls of ivory and composition, etc.
(a) Billiard tables and accessories.
(b) Bowling alleys and accessories.
(c) All other.
24. BLACKING, STAINS, AND DRESSINGS. (See also Boot and shoe findings; Cleansing and polishing preparations.)
Includes shoe blacking, stains and polish, burnishing inks, harness blacking and dressing, carriers' blacking, belt dressing, stove polish, etc.
25. BLEUING.
Includes, principally, laundry bleuing, soluble or liquid. The usual materials for the manufacture of bleuing are indigo and Prussian blue.
26. *BONE, CARBON, AND LAMP BLACK. (See also Paints; Chemicals.)
Includes the manufacture of bone black, carbon black, lamp and ivory black, etc.
(a) Bone black.
(b) Carbon black.
(c) Lampblack.
27. BOOKBINDING AND BLANK-BOOK MAKING. (See also Printing and publishing.)
Includes, in addition to establishments engaged in bookbinding and blank-book making; embossing; book gilding; paper ruling; paper cutting; card, book, and paper edging; card beveling and bronzing; the mounting of woolen and other samples; showcard mounting, etc.
28. BOOT AND SHOE CUT STOCK, EXCLUSIVE OF THAT PRODUCED IN BOOT AND SHOE FACTORIES. (See also Boot and shoe findings; Boots and shoes, not including rubber boots and shoes.)
Includes soles, tips, heels, top lifts, inner soles, etc.
29. BOOT AND SHOE FINDINGS, EXCLUSIVE OF THOSE PRODUCED IN BOOT AND SHOE FACTORIES. (See also Boot and shoe cut stock; Boots and shoes, not including rubber boots and shoes; Blacking, stains, and dressings.)
Includes shoe pegs, bows, clasps, stays, metal tips and heel plates, toe caps, buckles, heel caps, rands, staples, counters, shanks, wooden heels, shoe trimmings, boot and shoe uppers, etc.
30. *BOOTS AND SHOES, NOT INCLUDING RUBBER BOOTS AND SHOES.
Includes factories manufacturing boots, shoes, and slippers; moccasins, leggings, overgaiters, etc.; and also establishments engaged in doing certain work in connection with the manufacture of boots, shoes, slippers, etc., on materials largely furnished. Felt shoes, etc., if made of purchased felt, but if made in mills which manufacture the felt they are classified as "Felt goods."
(a) The regular factories making boots, shoes, etc., from their own materials, although there may be contract work shown.
(b) Factories doing the whole or part of the work of manufacture on materials which are furnished.
(c) Stitching shops.
(d) Crimping.
(e) Making buttonholes in uppers.
(f) The manufacture of footwear, not strictly boots and shoes, such as overgaiters, moccasins, leggings, etc.

31. *BOOTS AND SHOES, RUBBER. Includes boots, shoes, and other footwear of rubber.
32. BOXES, CIGAR. (See also Boxes, fancy and paper.) Includes all kinds of cigar boxes of wood in which cigars are packed and from which they must be sold.
33. BOXES, PAPER AND OTHER, NOT ELSEWHERE SPECIFIED. (See also Fancy articles, not elsewhere specified; Jewelry and instrument cases.) Includes paper boxes, folding boxes, cartons, decorated tin boxes, fancy tea caddies, mailing boxes, etc.
(a) Shipping cases, corrugated and fiber.
(b) Set-up paper boxes.
(c) Cartons (folding boxes and knockdown boxes).
(d) Paper cans and tubes.
(e) All other.
34. BOXES, WOODEN PACKING, EXCEPT CIGAR BOXES. (See also Lumber, planing-mill products.) Includes wooden boxes or cases; box shooks; berry, cheese, fig, and raisin boxes; egg cases; crates; etc.
35. *BRASS, BRONZE, AND COPPER PRODUCTS. (See also Bells; Hardware; Hardware, saddlery; Plumbers' supplies, not elsewhere specified; Wire.) Includes the manufacture of brass, bronze, and copper ingots, bars, plates, sheets, rods, and tubing, and the foundry work and finishing of such metals; car and engine brasses; refinishing brass work; oiling devices; safety steam appliances; brass spigots; hose couplings, etc.; stair plates; stair rods; fenders; screen plates; metal spinning, etc. The classification also embraces the manufacture of brass and copper wire, but establishments engaged chiefly in drawing such wire from purchased rods should be reported on the schedule for "Wire" and be so classified. The classification does not include the manufacture of bells, for which there is a special classification.
(a) Brass and bronze products.
(b) Copper products.
(c) All other products.
36. BREAD AND OTHER BAKERY PRODUCTS. Includes bread, crackers, pretzels, pies, cake, etc.
(a) Biscuit and crackers.
(b) Bakery products, other than biscuit and crackers.
37. *BRICK AND TILE, TERRA-COTTA, AND FIRE-CLAY PRODUCTS. (See also Pottery; Sand-lime brick.) Includes building brick, fancy and ornamental brick, vitrified brick, fire brick, drain tile, etc.
(a) Building brick, fancy, ornamental, vitrified, glazed, and enameled.
(b) Fire brick.
(c) Stove lining.
(d) Sewer pipe, drain tile, etc.
(e) Terra-cotta products.
(f) Silicate, magnesite, bauxite bricks and shapes.
(g) All other (includes dead-burned refractory material and shapes).
38. BROOMS. Includes the manufacture of brooms, whisk brooms, etc., made from broom straw or other similar fiber, and also street and stable brooms made of heavier material.
(a) From broom corn.
(b) All other.
39. BRUSHES. (See also House-furnishing goods, not elsewhere specified; Rubber goods, not elsewhere specified.) Includes paint, sash, floor, whitewash, and other brushes; also feather dusters. This classification does not include the manufacture of rubber brushes.
(a) Toilet.
(b) Paint, varnish, etc.
(c) All other.
40. *BUTTER. (See also Cheese; Condensed milk.) Includes establishments engaged chiefly in the manufacture of butter.
41. BUTTER, REWORKING. Includes establishments engaged chiefly in the reworking of butter of different grades into a salable product—renovated or processed butter.
42. *BUTTONS. (See also Needles, pins, and hooks and eyes.) Includes ivory, bone, shell, metal, cloth or cloth-covered, porcelain, pearl, and brass buttons and shell button blanks, etc.
43. CANDLES. (See also Grease and tallow; Petroleum, refining; Soap.) Includes candles of spermaceti, paraffin, wax, tallow, stearine, etc.
44. *CANNING AND PRESERVING, FISH. (See also Canning and preserving, oysters; Food preparations.) Includes canned, pickled, smoked, and dried fish; crabs; lobsters and shrimps; but not oysters and clams.
45. *CANNING AND PRESERVING, FRUITS AND VEGETABLES. (See also Food preparations; Pickles, preserves, and sauces.) Includes, in addition to the canning and preserving of fruits and vegetables, the processing and packing of dried fruits by packing houses which make a specialty of such business.
(a) Canned vegetables.
(b) Canned fruits.
(c) Dried fruits.
(d) Dried vegetables.
46. *CANNING AND PRESERVING, OYSTERS. (See also Canning and preserving, fish; Food preparations.) Includes bivalves such as oysters and clams.
47. CARD CUTTING AND DESIGNING. Includes jewelers' cards, index cards for office and library cabinets, jacquard cards, fancy cards, stencil cards for addressing machines, and other card cutting and designing.
48. CARDBOARD, NOT MADE IN PAPER MILLS. (See also Paper and wood pulp.) Includes cardboard when made by establishments which do not manufacture the paper.
49. *CARPETS AND RUGS, OTHER THAN RAG. (See also Cotton goods; Jute goods; Woolen goods; Worsted goods.) Includes woolen mills manufacturing carpets and rugs, but does not include the manufacture of rag or of jute carpets and rugs or fiber mats and matting.
50. CARPETS, RAG. Includes establishments manufacturing rag carpets and rugs. A considerable number of establishments embraced in this classification will be engaged in making these articles from material furnished by others.
51. CARRIAGE AND WAGON MATERIALS. (See also Automobile bodies and parts; Carriages and wagons.) Includes carriage and wagon bodies, tops, cushions, hubs, felloes, spokes, wheels, whiffletrees, carriage boots and aprons, axles, dashboards, neck yokes, whip sockets, etc.
52. CARRIAGES AND SLEDS, CHILDREN'S. (See also Furniture.) Includes baby carriages, gocarts, sleds, doll carriages, etc.
53. *CARRIAGES AND WAGONS, INCLUDING REPAIRS. (See also Agricultural implements; Automobiles; Automobile bodies and parts; Automobile repairing; Carriage and wagon materials.) Includes establishments manufacturing these vehicles and those making sleighs, punts, sleds, etc., are also to be included.
(a) Carriages and wagons.
(b) Repair work exclusively.
54. *CARS AND GENERAL SHOP CONSTRUCTION AND REPAIRS BY ELECTRIC-RAILROAD COMPANIES. (See also Cars, electric-railroad, not including operations of railroad companies.) Includes the shopwork of construction and repairs done by such railroad companies.
55. CARS AND GENERAL SHOP CONSTRUCTION AND REPAIRS BY STEAM-RAILROAD COMPANIES. (See also Cars, steam-railroad, not including operations of railroad companies; Locomotives.) Includes the shopwork of construction and repairs done by steam-railroad companies. This work is confined largely to the repairs of rolling stock, but may include the building of new cars and locomotives, and sometimes the repair work done for other railroad companies.
56. *CARS, ELECTRIC-RAILROAD, NOT INCLUDING OPERATIONS OF RAILROAD COMPANIES. (See also Cars and general shop construction and repairs by electric-railroad companies.) Includes establishments engaged in the manufacture of cars for use on electric railroads.
57. *CARS, STEAM-RAILROAD, NOT INCLUDING OPERATIONS OF RAILROAD COMPANIES. (See also Cars and general shop construction and repairs by steam-railroad companies.) Includes establishments engaged in the manufacture of cars for use on steam railroads.
58. CASH REGISTERS AND CALCULATING MACHINES. Includes cash registers, adding machines, and various other types of calculating machines.
(a) Adding machines.
(b) Cash registers and parts.
(c) All other.
59. *CEMENT. Includes chiefly Portland cement, and also hydraulic, fireproof, and slag cement, etc.
60. CHARCOAL, NOT INCLUDING PRODUCTION IN THE LUMBER AND WOOD DISTILLATION INDUSTRIES. (See also Lumber and timber products; Wood distillation.) Includes establishments engaged in the manufacture of charcoal.
61. *CHEESE. (See also Butter; Condensed milk.) Includes factories engaged in the manufacture of cheese.
62. *CHEMICALS. (See also Coal-tar products; Coke; Druggists' preparations and patent and proprietary medicines and compounds; Dyestuffs and extracts—natural; Essential oils; Explosives; Ferroalloys; Fertilizers; Gas, manufactured; Paints; Sulphuric, nitric, and mixed acids; Turpentine and rosin; Varnishes; Wood distillation.) Includes all chemicals except those pertaining to the allied industries above noted. They are grouped under 10 heads, viz: (I) Acids—all acids except those of coal-tar origin; and, further, establishments manufacturing sulphuric, nitric, and mixed acids as chief products are assigned to that industry; (II) Ammonia and cyanogen compounds, comprising ammonia and the ammonium salts and compounds of which the cyanides are an important class; (III) Sodas, sodium and its compounds; (IV) Potash, potassium and its compounds; (V) alums, aluminum and its compounds; (VI) Bleaching compounds, such as chloride of lime, the hypochlorites, hydrogen peroxide, etc.; (VII) Chemical substances produced with the aid of electricity, as, for example, calcium carbide, and including those (for example, caustic soda) belonging under other groups, when made by electric processes; (VIII) Plastics, such as pyroxylin plastics (celluloid, etc.), rubber substitutes, artificial silk, etc., including finished goods of the same made by the establishment manufacturing the plastic; (IX) Compressed and liquefied gases, such as carbonic acid gas, oxygen, etc., except that establishments making acetylene as their chief product will be included under "Gas, manufactured"; and (X) Chemicals not elsewhere specified, including the alcohols; the aldehydes, for example, formaldehyde; the ethers, for example, sulphuric ether; the esters, for example, amylicetate; the ketones, for example, acetone; organic chemicals, for example, chloroform, glycerin, etc.; and the salts and compounds of the various metals, antimony, arsenic, barium, bismuth, copper, gold, iron, etc.
63. CHEWING GUM. (See also Confectionery and ice cream.) Includes establishments whose chief products are chewing gum.
64. CHINA DECORATING, NOT INCLUDING THAT DONE IN POTTERIES. (See also Pottery.) Includes establishments engaged chiefly in firing or decorating china. This classification is to include establishments engaged in performing this work for the trade, and not small establishments engaged in such work for private parties or to individual order.
(a) Decalcomania work on china.
(b) All other.
65. *CHOCOLATE AND COCOA PRODUCTS, NOT INCLUDING CONFECTIONERY. (See also Confectionery and ice cream.) Includes chocolate, cocoa, cocoa butter, broma, and generally products of the nut of the cacao tree.
66. CLEANSING AND POLISHING PREPARATIONS. (See also Blacking, stains, and dressings.) Includes furniture polish, floor polish, starch polish, washing fluids wall-paper cleaner, pumice stone, tripoli, etc.
(a) Cleansing preparations.
(b) Metal polish.
(c) All other polishing preparations.
67. CLOCKS. (See also Watch and clock materials; Watches.) Includes establishments manufacturing, in addition to the ordinary clocks and clock movements, watchmen's recorders, clock and time projectors, tower clocks, advertising clocks, time registers, automatic clock devices, etc.
68. CLOTH, SPONGING AND REFINISHING. Includes establishments engaged in sponging and refinishing textiles. This classification must not be confused with that for "Dyeing and finishing textiles" or "Dyeing and cleaning."

¹ See supplemental "Potash materials" (Form 181) for potash from original sources.

² See Industry "ferroalloys" for establishments manufacturing ferroalloys as the chief product, either in a blast furnace or an electric furnace.

- (CLOTHING, HORSE.
Includes horse blankets made from purchased fabrics; robes, saddle cloths, fly nets, pads, housings, etc.
70. CLOTHING, MEN'S. (See also Collars and cuffs, men's; Shirts.)
Includes establishments engaged in the manufacture of men's and boys' clothing, and such outer garments as overalls, market frocks, butchers' aprons, uniforms, bathing suits, knee pants, gymnasium and sporting clothing, etc. This classification also includes establishments engaged in contract work on clothing where the materials, or the greater part of them are furnished.
(1) The regular factories making men's clothing, etc., from their own materials, although there may be contract work shown.
(a) Men's and youths'.
(b) Boys'.
(c) All other.
(2) Shops making these articles from materials which are furnished.
(a) Men's and youths'.
(b) Boys'.
(c) All other.
71. CLOTHING, MEN'S, BUTTONHOLES.
Includes establishments engaged in working buttonholes in clothing.
72. CLOTHING, WOMEN'S.
Includes cloaks, capes, jackets, wrappers, shirt waists, dresses, skirts, cloak linings, underwear, children's and infants' clothing, dress stays, quilted linings, belts, dress shields, suits, pleating, aprons, sleeves, petticoats, kimonos, dressing sacks, hose supporters, and night robes.
(1) The regular factories making women's clothing, etc., from their own materials, although there may be contract work shown.
(a) Suits, skirts, cloaks, etc.
(b) Shirt waists and dresses, except house dresses.
(c) Undergarments and petticoats.
(d) Wrappers and house dresses.
(e) All other.
(2) Shops making these articles from materials which are furnished.
(a) Suits, skirts, cloaks, etc.
(b) Shirt waists and dresses, except house dresses.
(c) Undergarments and petticoats.
(d) Wrappers and house dresses.
(e) All other.
73. *COAL-TAR PRODUCTS. (See also Chemicals; Coke; Gas, manufactured.)
Includes crudes, intermediates, and finished products—dyes and color lakes, photographic chemicals, medicinals, flavors, perfumes, synthetic tanning materials, and synthetic phenolic resins—of coal-tar origin.
74. COFFEE AND SPICE, ROASTING AND GRINDING.
Includes establishments engaged in grinding or roasting coffee and spice.
(a) Coffee.
(b) Spice.
75. COFFINS, BURIAL CASES, AND UNDERTAKERS' GOODS.
Includes coffins, caskets, burial cases, such special articles as clothing, shoes, slippers, etc., which pertain to this industry, and also robes, habits, casket linings, scarfs, draperies, embalming fluids, etc.
76. *COKE, NOT INCLUDING GAS-HOUSE COKE.
Includes establishments operating coke ovens for the manufacture of coke from coal or slack.
(a) Ovens other than by-product ovens. (Supplemental schedule, Form 173.)
(b) By-product ovens. (Supplemental schedule, Form 174.)
77. COLLARS AND CUFFS, MEN'S. (See also Furnishing goods, men's; Shirts.)
Includes establishments engaged chiefly in the manufacture of collars and cuffs.
78. COMBS AND HAIRPINS, EXCEPT THOSE MADE FROM METAL OR RUBBER. (See also Ivory, shell, and bone work; Fancy articles, not elsewhere specified; Needles, pins, and hooks and eyes.)
Includes establishments engaged in the manufacture of combs and hairpins made of horn, shell, bone, and ivory.
79. *CONDENSED MILK. (See also Butter; Cheese.)
Includes factories engaged chiefly in the manufacture of condensed milk, sweetened or unsweetened; powdered milk; sugar of milk; casein; etc.
80. *CONFECTIONERY AND ICE CREAM. (See also Chocolate and cocoa products.)
Includes establishments engaged in the manufacture of confectionery of all kinds, ice cream, stick lozenges, corn balls, salted nuts, etc.
(a) Confectionery.
(b) Ice cream.
81. COOPERAGE. (See also Wooden goods, not elsewhere specified.)
Includes flour, sugar, beer, wine, whisky, and fish barrels; hogsheds; kegs; butter tubs; box straps from hoop poles; and generally all classes of articles made from staves. (Reports for cooperage should show the kind and value of the different classes of products, and whether tight or slack.)
(a) Hogsheds and barrels.
(b) All other.
82. COPPER, TIN, AND SHEET-IRON WORK. (See also Roofing materials; Tinware, not elsewhere specified; Brass, bronze, and copper products.)
Includes sinks, tanks, cooking apparatus, smokestacks, furnace casings, cornices, roofing, skylights, and various other material used in connection with building operations, and copper-smithing and sheet-iron work. For establishments rolling or drawing copper, see Brass, bronze, and copper products.
83. *CORDAGE AND TWINE. (See also Cotton goods; Cotton small wares; Jute goods; Linen goods; Nets and seines.)
Includes rope, lines, and binder twine from hemp, flax, cotton, manila, jute, and other fiber.
84. CORDIALS AND FLAVORING SIRUPS. (See also Flavoring extracts.)
Includes cordials, flavoring sirups, and certain kinds of bitters which are not of a character to be classed as patent medicines.
85. CORK, CUTTING.
Includes various articles manufactured from cork, such as bottle corks, life preservers, cork board for insulation, cork tips, etc.
86. CORSETS.
Includes corsets and similar articles, corset waists, brassières, corset stays, etc.
(a) Corsets.
(b) Corset waists.
(c) Brassières.
87. *COTTON GOODS. (See also Cotton small wares; Cotton lace; Knit goods.)
Includes cotton mills producing plain cloths for printing or converting, sheetings, twills, and satens, fancy woven fabrics, ginghams, ducks, drills, ticks, denim, cotton flannels, napped fabrics, corduroys, cotton velvet and plush, upholstery goods, toweling, yarns, etc.
88. *COTTON LACE. (See also Cotton goods; Cotton small wares.)
Includes establishments engaged chiefly in the manufacture of cotton lace.
89. *COTTON SMALL WARES. (See also Cotton goods; Knit goods.)
Includes narrow fabric, webbing, braids, tapes, binding, corset laces, shoe laces, wicks, etc.
90. CRUCIBLES.
Includes chiefly crucibles made to withstand a very high degree of heat, varying greatly in size, made largely from fire clay, German clay, kaolin and plumbago.
(a) Graphite crucibles.
(b) Clay crucibles.
(c) Glass-house pots.
91. CUTLERY AND EDGE TOOLS. (See also Hardware; Saws; Tools, not elsewhere specified.)
Includes knives, razors, scissors, shears, saws, gimlets, planes, meat choppers, axes, hatchets, and implements of a similar character. Does not include plated or silver knives, forks, etc., for which see Plated ware, and Silversmithing and silverware.
(a) Table cutlery.
(b) Razors—
Plain.
Safety.
(c) Axes and hatchets.
(d) Scissors, shears, clippers, etc.
(e) Pocketknives.
(f) Saws, bits, chisels, planes, etc.
(g) All other.
92. DAIRYMEN'S, POULTRYMEN'S AND APARTMENT SUPPLIES.
Includes cabinet creameries, churns, butter washers and molds and ladles, cream separators, dairy implements, rennet extract, cheese vats, cheese cap cloths, poultry supplies, incubators, brooders, bee smokers, beehives, honey boxes, and honeycomb foundations.
(a) Incubators and brooders.
(b) All other poultrymen's supplies.
(c) Cream separators.
(d) All other dairymen's supplies.
(e) Appliance supplies.
93. DENTAL GOODS.
Includes porcelain teeth, filling material, dental alloys, plate material, etc.
(a) Teeth.
(b) All other.
94. DRUG GRINDING.
Includes establishments engaged in grinding drugs of all kinds, sometimes known as "drug mills."
95. *DRUGGISTS' PREPARATIONS. (See also Chemicals; Coal-tar products; Patent medicines and compounds; Perfumery and Cosmetics.)
Includes serums, vaccines, and toxins, capsules (filled or empty), tablets and pills, concentrations, powders, liniments, medicinal plasters, cough sirup, ointments, and other pharmaceuticals.
96. DYING AND CLEANING.
Includes establishments engaged in dyeing and cleaning garments, etc., that are operated by mechanical power.
(Not included in United States totals.)
97. DYING AND FINISHING TEXTILES, EXCLUSIVE OF THAT DONE IN TEXTILE MILLS.
Includes independent bleacheries, print works and dye works, engaged chiefly in dyeing, printing, bleaching, and mercerizing cotton, woolen, worsted, silk yarns, and piece goods, printing cotton piece goods, and in spooling cotton, winding yarn, etc.
98. *DYESTUFFS AND EXTRACTS—NATURAL. (See also Chemicals; Coal-tar products; Paints; Varnishes.)
Includes indigo, cochineal, madder, fustic, mordants, iron liquor, red liquor, turkey-red oil, logwood extract, ground sumac, sumac extract, hemlock extract, oak and chestnut extract, palmate extract, chrome tannic solution, tannic acid, staves, etc.
99. *ELECTRICAL MACHINERY, APPARATUS, AND SUPPLIES.
Includes dynamos, transformers for light and power; switchboards; panel boards; cut-out cabinets for light and power; motors; storage batteries; primary batteries; carbons arc lamps; incandescent lamps; searchlights; projectors, and focusing lamps; sockets, receptacles, bases, etc.; transmitters; receivers; lightning arresters; rheostats and resistances; electric welding apparatus; electrical therapeutic apparatus; and electric switches, signals, and attachments; telegraph and telephone apparatus; miscellaneous electric household articles, etc.
100. ELECTROPLATING.
Includes electroplating of all descriptions, such as nickel plating, silver plating, etc. This work is largely done on articles furnished by others.
101. EMERY AND OTHER ABRASIVE WHEELS. (See also Grindstones; Hones and whetstones.)
Includes generally all kinds of abrasive wheels, whether of emery, corundum, or other material, also polishing and buffing wheels, belts and discs.
102. ENAMELING. (See also Japanning; Stamped and enameled ware.)
Reports for work of this character will no doubt be chiefly on goods owned by others.
103. *ENGINES, STEAM, GAS, AND WATER. (See also Agricultural implements; Electrical machinery, apparatus, and supplies; Foundry and machine-shop products; Locomotives, not made by railroad companies.)
Includes the manufacture of steam and internal-combustion engines (automobile, marine, traction, stationary and portable), turbines, etc.; and water wheels, water turbines, and water motors.
104. ENGRAVERS' MATERIALS.
Includes copper, zinc, steel, and other metal plates for engravers' use wood blocks for use in wood and photo-engraving work, lithographic stones, etc.
105. ENGRAVING AND DISENNING.
Includes chasing, engraving on jewelry and silverware, notarial seals, and all kinds of disenging.
106. ENGRAVING, STEEL AND COPPER PLATE, INCLUDING PLATE PRINTING. (See also Lithography; Photo-engraving.)
Includes engraving on copper and steel plate for cards, music, plate engraving, fine stationery work, engravings, illustrations, etc., and generally all engraving of this character which may be associated with printing.
107. ENGRAVING, WOOD.
Includes wood engraving generally for printers' use.
108. ENVELOPES. (See also Stationery goods, not elsewhere specified.)
Includes establishments engaged chiefly in the manufacture of envelopes.
109. *EXPLOSIVES. (See also Ammunition; Chemicals; Firearms; Ordnance and accessories.)
Includes blasting powder, gunpowder (black), nitroglycerin, dynamite, gun cotton or pyroxylin, smokeless powder, fulminating mercury, permissible explosives, etc.

110. **FANCY ARTICLES, NOT ELSEWHERE SPECIFIED.** (*See also* Boxes, fancy and paper; Combs and hairpins, not made from metal or rubber; Ivory, shell, and bone work; Signs and advertising novelties.)
Includes beaded articles, celluloid novelties, art novelties and holiday goods, photo jewelry and buttons, inlaid veneer work, silk watch chains, burnt-wood articles, lamp shades, bric-a-brac, composition ornaments, needle and pin books, and decalcomania work (when not on china or glass), and other miscellaneous small articles not covered by distinct classifications.
(a) Beadwork.
(b) Celluloid novelties.
(c) Metal novelties.
(d) Paper novelties.
(e) Wood novelties.
(f) All other.
111. **FEATHERS AND PLUMES.** (*See also* Artificial flowers; Millinery and lace goods.)
Includes establishments manufacturing feathers, plumes, and other articles chiefly of feathers. The curling, dyeing, and renovating of ostrich feathers, etc., may be found to be part of this work.
112. ***FELT GOODS.** (*See also* Woolen goods; Worsted goods.)
Includes felt goods made of wool or hair, woven or made without weaving by heat, moisture, and pressure. Covers felt cloths, paper makers' woven felts, endless belts, laundry felts, etc.
113. ***FERROALLOYS.** (*See also* Chemicals; Iron and steel, blast furnaces.)
Includes establishments engaged chiefly in the manufacture of spiegel-eisen, ferromanganese, ferroaluminum, ferrophosphorus, or other ferroalloys, either in blast furnaces or an electric furnace.
114. ***FERTILIZERS.** (*See also* Oil and cake, cottonseed; Slaughtering and meat packing, wholesale.)
Includes superphosphates from minerals, bones, etc., ammoniated fertilizers, concentrated phosphate, complete fertilizers, fish scrap, etc.
115. **FILES.** (*See also* Hardware; Tools, not elsewhere specified.)
Includes all kinds of files, rasps, etc., and the recutting of same.
116. ***FIREARMS.** (*See also* Ammunition; Ordnance and accessories.)
Includes rifles, shotguns, revolvers, pistols, stocks, parts, etc.
117. **FIRE EXTINGUISHERS, CHEMICAL.**
Includes establishments engaged in the manufacture of chemical fire extinguishers, hand grenades, etc.
118. **FIREWORKS.**
Includes all kinds of fireworks, firecrackers, sparklers, etc.
119. **FLAGS AND BANNERS.** (*See also* Regalia and society badges and emblems.)
Includes flags, banners, pennants, etc.
120. **FLAVORING EXTRACTS.** (*See also* Baking powders and yeast; Cordials and flavoring sirups.)
Includes all kinds of flavoring extracts, colors for bakers and confectioners, fruit juices, etc.
121. **FLAX AND HEMP, DRESSED.**
Includes establishments engaged chiefly in removing seeds, dross, etc., and generally preparing raw flax and hemp for factory use.
122. ***FLOUR-MILL AND GRISTMILL PRODUCTS.** (*See also* Food preparations, not elsewhere specified.)
Includes wheat, corn, rye, buckwheat, rice flour, and graham flour; corn meal, barley meal, alfalfa meal, cracked corn, shorts, feed, etc.
123. **FOOD PREPARATIONS, NOT ELSEWHERE SPECIFIED.** (*See also* Canning and preserving, fish; Canning and preserving, fruits and vegetables; Canning and preserving, oysters; Flour-mill and gristmill products; Pickles, preserves, and sauces; Oleomargarine; Slaughtering and meat packing.)
Includes oatmeal, hominy, cracked wheat, rolled oats, and other cereals, hulled corn, mince-meat, noodles, saratoga chips, scrapple, bird and poultry food, self-raising flour, cereal coffee, etc. This classification must not be confused with the separate classifications for several kinds of food products, as follows: Bread and other bakery products; Butter; Cheese; Condensed milk; Canning and preserving, fish; Canning and preserving, fruits and vegetables; Canning and preserving, oysters; Flour-mill and gristmill products; Oleomargarine; Pickles, preserves, and sauces; Sausage; Slaughtering and meat packing; Sugar, beet; Sugar, cane; Sugar, refining; Vinegar and cider.
(a) Breadstuff preparations, such as cereals and the so-called breakfast foods.
(b) Lard compounds and other substitutes, not including those made in slaughtering and meat-packing plants.
(c) Macaroni, vermicelli, noodles, etc.
(d) Meat products, not elsewhere specified.
(e) Peanut butter.
(f) Sweetening sirups, other than cane.
(g) All other food preparations for human consumption.
(h) Prepared feed for animal and fowl consumption.
124. **FOUNDRY AND MACHINE-SHOP PRODUCTS.** (*See also* Bells; Brass, bronze, and copper products; Cash registers and calculating machines; Cutlery and edge tools; Engines, steam, gas, and water; Files; Firearms; Gas machines and gas and water meters; Hardware; Hardware, saddlery; Horseshoes; Iron and steel, bolts, nuts, washers, and rivets; Iron and steel, doors and shutters; Iron and steel forgings; Iron and steel, nails and spikes, cut and wrought; Iron and steel, cast-iron pipe; Iron and steel, wrought pipe; Locomotives; Machine tools; Stoves and hot-air furnaces; Stoves, gas and oil; Structural iron work; Textile machinery; Tools, not elsewhere specified; Vast lights and ventilators; Washing machines and clothes wringers.)
Includes air compressors, air tanks, anvils, bake ovens, ball bearings, bar fittings, biscuit cutters, blowers, boiler cleaners, boilers, brake beams, car wheels, castings, chain belting, check protectors, clamps, clay-tamping machines, cob crushers, conveying machines, couplings, cracker machines, cranes, derricks, drying frames, dumb-waiters, ejectors, envelope machines, etching machines, fan forges, feeding and watering appliances, fertilizer pulverizers, filters, fire engines, fire hydrants, fire blowers, folding machines, folding pails, frames, furnaces for steam boilers, gas holders, gear wheels, grinders, hair machines, hoisting apparatus, hydraulic presses, ice breakers, ice-cream freezers, injectors, iron flasks, iron posts, iron screens, jacketed kettles, jackscrews, jewelers' machines, kettles, knife grinders, lawn mowers, lightning rods, lubricators, machine knives, meat mills, meat mixers, merry-go-rounds, molding cutters, music stands, parcel conveyers, plated metal work, propeller wheels, punches, railroad-switch appliances, sausage stuffers, scouring machines, shafting, shuttles, slot machines, smokestacks, stamping machines, steam rollers, steel pans, steel tires, stencil machines, swages, tackle blocks, tanks, trunk racks, valves, vending machines, vises, wall-paper trimmers, weather vanes, foil wrapping machines, etc. (Not to include Machine tools or Textile machinery, for which there are separate classifications.)
(a) Boiler shops.
(b) Foundries.
(c) Machine shops.
(d) Machine shop and foundry combined.
125. **FOUNDRY SUPPLIES.**
Includes foundry facings, core-compound molding sand, foundry sleeves, flasks for molding, foundry flour, etc.
126. **FUEL, MANUFACTURED.**
A. briquetted fuel made from anthracite culm, bituminous or semibituminous slack, peat, etc.
(a) Briquetted fuel.
(b) All other.
127. **FUR GOODS.** (*See also* Hats and caps, other than felt, straw, and wool.)
Includes all kinds of garments of fur or fur lined, such as robes, coats, muffs, scarfs, gloves and mittens, trimmings, rugs, or mats, etc. This classification must not be confused with "Furs, dressed."
128. **FURNISHING GOODS, MEN'S.** (*See also* Collars and cuffs, men's; Gloves and mittens, leather; Shirts; Suspenders, garters, and elastic woven goods.)
Includes men's neckwear; belts, other than leather; handkerchiefs; cloth gloves and mittens; pajamas; underwear, other than knit goods; etc.
(a) Neckwear.
(b) All other.
129. **FURNITURE.** (*See also* Mattresses and spring beds; Refrigerators; Show cases.)
Includes tables, desks, bookcases, sideboards, china closets, commodes, wardrobes, bedsteads, sofas, couches, chairs, chair seats, footstools, hat trees, music cabinets and stands, bureaus, chiffoniers, furniture ornaments, and store and office fixtures.
(a) Wood furniture, other than rattan and willow.
(b) Rattan and willow furniture.
(c) Metal furniture.
(d) Store and office fixtures.
130. **FURS, DRESSED.**
Includes the dressing and dyeing of skins with the fur on, done chiefly for others who own the skins or pelts; unhairing; dressing of hair and bristles, etc.
131. **GALVANIZING OR OTHER COATING PROCESSES.**
Includes establishments engaged chiefly in galvanizing or coating iron with zinc.
132. **GAS AND ELECTRIC FIXTURES.** (*See also* Lamps and reflectors.)
Includes the manufacture of gas and electric fixtures.
(a) Gas fixtures.
(b) Electric fixtures.
(c) Combination gas and electric fixtures.
(d) All other.
133. ***GAS, MANUFACTURED, ILLUMINATING AND HEATING.**
Includes the manufacture of gas for illuminating and heating purposes from coal, coke, oil, gasoline, etc., and from calcium carbide. (Not to include natural gas.)
134. **GAS MACHINES AND GAS AND WATER METERS.** (*See also* Foundry and machine-shop products.)
Includes machines for manufacturing gas, acetylene-gas generators, gas meters, water meters, regulators, etc.
(a) Gas meters and water meters.
(b) Gas machines.
(c) All other products.
135. ***GLASS.**
Includes building glass, pressed and blown glass, wire glass, bottles, jars, etc.
136. **GLASS, CUTTING, STAINING, AND ORNAMENTING.**
Includes establishments engaged chiefly in glass cutting, glass beveling, bending sheet glass, engraving glass, making glass labels, and staining and ornamenting glass.
(a) Decalcomania work on glass.
(b) All other.
137. ***GLOVES AND MITTENS, LEATHER.** (*See also* Furnishing goods, men's.)
Includes men's, boys', women's, and children's leather gloves, mittens, and gauntlets, lined and unlined.
- 137X. **GLOVES AND MITTENS, CLOTH, NOT INCLUDING GLOVES MADE IN TEXTILE MILLS.**
138. ***GLUCOSE AND STARCH.**
Includes establishments engaged in the manufacture of glucose; corn sirup; grape sugar; corn, wheat, potato, and root starch; corn oil, cake, and meal; etc.
(a) Glucose.
(b) Starch.
139. **GLUE, NOT ELSEWHERE SPECIFIED.** (*See also* Fertilizers; Slaughtering and meat packing, wholesale.)
Includes establishments engaged chiefly in the manufacture of various kinds of glue, and their by-products.
(a) Fish glue.
(b) Glue, other than fish.
(c) All other products.
140. **GOLD AND SILVER, LEAF AND FOIL.** (*See also* Tin foil.)
Includes establishments generally known as goldbeaters, which are engaged chiefly in making gold and silver leaf and foil for decorators, dentists, etc.
(a) Gold leaf and foil.
(b) All other.
141. **GOLD AND SILVER, REDUCING AND REFINING, NOT FROM THE ORE.**
Includes establishments engaged in reducing and refining the precious metals, chiefly from the waste and sweepings of factories engaged in the manufacture of jewelry, silverware, etc.
142. **GRAPHITE, GROUND AND REFINED.** (*See also* Pencils, lead.)
Includes establishments engaged in extracting the graphite or plumbago from the mineral and in refining the same, or in both.
143. **GREASE AND TALLOW, NOT INCLUDING LUBRICATING GREASES.** (*See also* Candles; Fertilizers; Lubricating greases; Slaughtering and meat packing; Soap.)
Includes the rendering of all kinds of grease and tallow, with the exception of lubricating grease, for which there is an independent classification.
(a) Soap stock.
(b) Tallow.
(c) All other.
144. ***GRINDSTONES.** (*See also* Millstones.)
Includes establishments manufacturing grindstones.
145. **HAIRCLOTH.**
Includes establishments engaged in the manufacture of haircloth.
146. **HAIR WORK.**
Includes wigs, switches, braids, puffs, and similar articles made largely from human hair.

147. **HAMMOCKS.** (See also Awnings, tents, and sails; Cordage and twine; Nets and seines.)
Includes establishments engaged chiefly in the manufacture of hammocks.
148. **HAND STAMPS.** (See also Stencils and brands.)
Includes various kinds of hand stamps, commonly known as rubber stamps, but may include metal stamps.
149. **HARDWARE.** (See also Brass, bronze, and copper products; Cutlery and edge tools; Files; Hardware, saddlery; Saws; Screws; Sporting and athletic goods; Tools, not elsewhere specified.)
Includes locks, car seals, seal presses, brackets, andirons and fireplace goods, oilers, brass drapery chains, fancy upholstery nails, sash weights, trunk trimmings; and builders', cabinet, car, carriage, casket, furniture, piano, and organ hardware.
(a) Locks.
(b) Builders' hardware.
(c) Piano and organ hardware.
(d) Vehicle hardware (automobile, car, carriage, etc.).
(e) All other.
150. **HARDWARE, SADDLERY.** (See also Hardware.)
Includes hardware for use in the manufacture of saddlery and harness.
151. **HAT AND CAP MATERIALS.**
Includes hatters' fur, hat wire, sweat bands, vizors, linings, bindings, trimmings, tip printing, etc.
152. **HATS AND CAPS, OTHER THAN FELT, STRAW, AND WOOL.**
Includes silk hats, chapeaux, opera or crush hats, cloth caps, uniform caps, etc.
153. ***HATS, FUR-FELT.**
Includes stiff and soft hats made from hatters' fur, and also fur-elt hat bodies, by some establishments.
154. **HATS, STRAW.** (See also Millinery and lace goods, not elsewhere specified.)
Includes the manufacture of men's, women's, and children's straw hats and the bleaching and finishing of Panama and other straw hats.
155. ***HATS, WOOL-FELT.** (See also Woolen goods; Worsted goods.)
Includes the manufacture of men's, women's, and children's hats, and hat bodies, the chief material of which is wool, wool nolls, shoddy, etc.
156. ***HONES AND WHETSTONES.** (See also Emery and other abrasive wheels.)
Includes hones, whetstones, sandstones, oilstones, scythe wheels, etc.
157. **HORSESHOES, NOT MADE IN STEEL WORKS OR ROLLING MILLS.** (See also Iron and steel, steel works and rolling mills.)
Includes establishments engaged chiefly in the manufacture of horse-shoes, mule shoes, ox shoes, toe weights, calks, etc.
158. **HOUSE-FURNISHING GOODS, NOT ELSEWHERE SPECIFIED.** (See also Cotton goods.)
Includes comfortables, piano covers and scarfs, carpet linings, mosquito canopies, portieres, draperies, furniture covers, serving trays, hassocks, pillow shams, carpet sweepers, pillows, quilts, cotton batting, mops, pin-cushions, clotheslines, and articles of this character not covered by other classifications.
(a) Comforts and quilts.
(b) Feather pillows, beds, etc.
(c) Cotton batting, not made in cotton mills.
(d) Mops, dusters, etc.
(e) All other.
159. ***ICE, MANUFACTURED.**
Includes establishments engaged in the manufacture of ice.
160. **INK, PRINTING.**
Includes establishments engaged in the manufacture of printing and lithographing inks.
161. **INK, WRITING.**
Includes writing ink and fluid, indelible ink, etc.
162. **INSTRUMENTS, PROFESSIONAL AND SCIENTIFIC.**
Includes dental, meteorological, nautical, surgical, and surveyors' instruments, compasses, microscopes, telescopes, barometers, etc.
(a) Medical and surgical.
(b) Optical.
(c) All other.
163. ***IRON AND STEEL, BLAST FURNACES.** (See also Ferroalloys.)
Includes establishments engaged in the manufacture of pig iron from the ore.
164. ***IRON AND STEEL, STEEL WORKS AND ROLLING MILLS.**
Includes establishments engaged in the manufacture of steel or in rolling hot iron. Among the products of this class of mills are steel ingots and direct steel castings; rolled iron and steel, such as rails, splice bars, rail joints, bars and rods, tin-plate bars, wire rods, structural shapes, hoops, bands, and cotton ties; plates and sheets, including black plates and sheets for lining; nail and tack plates; rolled car axles and hammered car axles; car wheels; armor plate and gun forgings; etc.
165. **IRON AND STEEL, BOLTS, NUTS, WASHERS, AND RIVETS, NOT MADE IN ROLLING MILLS.** (See also Iron and steel, steel works and rolling mills.)
Includes establishments engaged chiefly in making such products.
166. ***IRON AND STEEL, CAST-IRON PIPE.** (See also Iron and steel, blast furnaces; Iron and steel, steel works and rolling mills.)
Includes establishments whose chief products are cast-iron gas, water, soil, and other pipe.
167. **IRON AND STEEL, DOORS AND SHUTTERS.** (See also Foundry and machine-shop products; Structural ironwork, not made in steel works or rolling mills.)
Includes establishments whose chief products are iron and steel doors and shutters.
168. **IRON AND STEEL FORGINGS, NOT MADE IN STEEL WORKS, OR ROLLING MILLS.** (See also Iron and steel, steel works and rolling mills.)
Includes establishments engaged chiefly in manufacturing light and heavy drop and steam-hammer forgings, chains, anchors, axles, car wheels, frogs, etc.
169. **IRON AND STEEL, NAILS AND SPIKES, CUT AND WROUGHT, INCLUDING WIRE NAILS, NOT MADE IN STEEL WORKS OR ROLLING MILLS.** (See also Iron and steel, steel works and rolling mills; Wire.)
Includes establishments engaged in the manufacture of iron and steel, nails and spikes, cut and wrought, including wire nails and tacks.
(a) Cut nails and spikes.
(b) Wire nails and spikes (including wire tacks, brads, and staples).
(c) Forged nails and spikes (other than railroad spikes).
(d) Railroad spikes.
(e) All other, including tacks (other than wire tacks).
- 169x. **IRON AND STEEL, CASE HARDENED, TEMPERED OR OTHERWISE SPECIALLY TREATED, INCLUDING WELDING.**
(a) Tempering.
(b) Welding.
170. **IRON AND STEEL, WROUGHT PIPE.** (See also Iron and steel, steel works and rolling mills.)
Includes establishments whose chief products are wrought welded pipe and boiler tubes; seamless drawn, clinched, brazed, and heavy riveted pipe. Wrought-iron pipe is made largely from scrap.
171. **IVORY, SHELL, AND BONE WORK, NOT INCLUDING COMBS AND HAIRPINS.** (See also Buttons; Combs and hairpins, not made from metal and rubber; Fancy articles, not elsewhere specified.)
Includes articles made from ivory, shell, mother-of-pearl, horn, or bone.
172. **JAPANNING.** (See also Enameling.)
Includes the treatment of wood, metal, paper, etc., with japan varnish. Japan is set by exposure to a high degree of heat.
173. **JEWELRY.**
Includes articles made from the precious metals, as rings, pins, bracelets, chains, diamond setting and mounting, trimmings for umbrellas, canes, etc., and also rolled plate, filled wire, etc.
174. **JEWELRY AND INSTRUMENT CASES.**
Includes establishments engaged chiefly in the manufacture of cases, trays, and fancy boxes, etc., for jewelry and instruments.
175. ***JUTE GOODS.** (See also Cordage and twine; Linen goods; Mats and matting, from cocoa fiber, grass, coir, etc.)
Includes burlaps, gunny bagging, carpets and rugs, yarns, etc., and, in general, articles where the chief material is jute fiber or jute yarn.
176. ***KNIT GOODS.** (See also Cotton goods; Cotton small wares; Silk goods; Woolen goods; Worsted goods.)
Includes wools or worsted, merino or mixed, cotton, and silk hose and half hose; knit shirts and drawers; combination suits; gloves and mittens, not leather; hoods, scarfs, mufflers, etc.; cardigan jackets, sweaters, fancy jackets; shawls; fancy knit goods, wristers, hand-knit goods, and other knit fabrics.
177. **LABELS AND TAGS.** (See also Printing and publishing, book and job.)
Includes the various kinds of labels and tags of calico, metal, cardboard, etc.; baggage and other checks; labels for clothing; patent indexes; pin tickets; etc.
178. **LAMPS AND REFLECTORS.** (See also Gas and electric fixtures.)
Includes all kinds of lamps and reflectors, except electric lamps.
(a) Automobile lamps.
(b) Carriage and wagon lamps.
(c) All other lamps.
(d) Reflectors.
179. **LAPIDARY WORK.** (See also Jewelry.)
Includes establishments engaged in the cutting of diamonds and other precious or semiprecious stones.
180. **LARD, NOT MADE IN SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS.** (See also Slaughtering and meat packing.)
Includes establishments engaged chiefly in refining lard.
(a) Prime, sold as such.
(b) Refined.
(c) Neutral.
181. **LASTS.**
Includes establishments engaged chiefly in the manufacture of lasts for the shoe industry and also adjustable shoe lasts, stretchers, leg forms, etc.
182. **LAUNDRIES, POWER.**
Includes laundry work done by the aid of machinery operated by mechanical power.
(Not included in United States totals.)
183. **LEAD, BAR, PIPE, AND SHEET.** (See also Smelting and refining, lead.)
Includes establishments engaged in the manufacture of lead bars, sheets, pipe, etc.
(Not included in United States totals.)
184. **LEATHER GOODS, NOT ELSEWHERE SPECIFIED.** (See also Gloves and mittens, leather; Pocketbooks; Saddlery and harness; Trunks and valises.)
Includes straps, belt leaces, dog collars, embossed leather, burnt-leather goods, leather aprons for wool machinery, leather washers, leather chair seats, leather garments, brief cases, razor straps, etc.
185. ***LEATHER, TANNED, CURRIED, AND FINISHED.**
Includes rough leather and sole leather, upper leather, morocco and colored skins, horsehides, calf and kip skins, goatskins and sheepskins; belting, harness, carriage, trunk, bag and pocketbook, bookbinders', and furniture leather; leather for gloves, mittens, etc.
186. ***LIME.**
Includes establishments manufacturing lime from limestone, shells, etc.
187. ***LINEN GOODS.** (See also Cordage and twine; Cotton goods; Jute goods.)
Includes crash, towels, toweling, and other linen fabrics; linen yarns, thread, etc.
188. **LIQUORS, DISTILLED.** (See also Wood distillation for wood alcohol.)
Includes whisky, rums, gin, brandy, fruit brandies, etc., and grain alcohol.
(a) Alcohol, grain (including pure, neutral, or selegne spirits).
(b) Rum.
(c) Whisky—
 Bourbon.
 Rye.
(d) All other distilled liquors.
189. **LIQUORS, MALT.**
Includes lager beer, porter, ale, weiss beer, etc.
190. **LIQUORS, VINOUS.**
Includes wines, still and effervescing, such as champagne, claret, castawba, angelica, dry wine, port, sherry, etc.
191. **LITHOGRAPHING.** (See also Photo-engraving, not done in printing establishments; Printing and publishing.)
Includes establishments engaged in photo-lithographing, lithographing on paper, tin, etc., and also establishments engaged in drawing or transferring the design or preparing the stone or plate used in lithographing.
192. ***LOCOMOTIVES, NOT MADE BY RAILROAD COMPANIES.** (See also Cars and general shop construction and repairs by steam-railroad companies; Engines, steam, gas, and water; Electrical machinery, apparatus, and supplies.)
Includes establishments engaged chiefly in manufacturing locomotives.
193. **LOOKING-GLASS AND PICTURE FRAMES.** (See also Lumber, planing-mill products.)
Includes looking-glass and picture frames, metal frames, pane partitions, paper, plush, and velvet frames, and the gilding of moldings, etc. (Establishments engaged in framing pictures, etc., to the individual order are not to be included.)

194. LUBRICATING GREASES. (See also Grease and tallow; Petroleum, refining.) Includes axle grease and hard and soft lubricating greases, as distinguished from lubricating oils.
195. *LUMBER AND TIMBER PRODUCTS. (See also Lumber, planing-mill products.) Includes logging camps turning out logs or bolts and rough lumber and timber products, such as cross-ties, poles, posts, mine timbers; also wheel, handle, and excelsior stock, etc.; and sawmills turning out rough or dressed lumber, staves and heading, shingles, laths, veneer stock, veneers from logs or bolts, cooperage stock, cooperage and other products from logs or bolts etc. Planing mills, when connected with sawmills, are to be included with this classification, but when operated independently are placed with "Lumber, planing-mill products."
196. LUMBER, PLANING-MILL PRODUCTS, NOT INCLUDING PLANING MILLS CONNECTED WITH SAWMILLS. (See also Boxes, wooden packing; Lumber and timber products; Show cases; Wood, turned and carved.) Includes dressed lumber, builders' finish, sash, doors, blinds, panels, wood mantels, bracket shelves, stair work, mouldings, door and window frames, and generally all classes of interior woodwork, etc.
197. *MACHINE TOOLS. (See also Foundry and machine-shop products; Cutlery and edge tools; Tools, not elsewhere specified.) Includes establishments engaged chiefly in the manufacture of machine tools; that is, machines which employ a tool for working on metal and operated by power or by hand.
198. MALT. (See also Liquors, malt.) Includes establishments producing malt, chiefly from barley, but other grain may be used.
199. MARBLE AND STONE WORK. Includes monuments, tombstones, etc., and other manufactures of stone and marble, except millstones, grindstones, and hones and whetstones; roofing slates, slate blackboards, soapstone work, and all kinds of builders' and plumbers' marble and stone material.
(a) Monuments and tombstones.
(b) Other marble and stone work, except slate.
(c) Roofing slates.
(d) Other slate products.
200. MATCHES. Includes establishments whose chief products are friction, safety, or other kinds of matches.
201. MATS AND MATTING, FROM COCOA FIBER, GRASS, COIR, ETC. (See also Jute goods.) Includes establishments whose chief products are mats and matting, door mats, etc., made from the above and similar fiber.
202. MATTRESSES AND SPRING BEDS, NOT ELSEWHERE SPECIFIED. (See also Furniture; Wirework, including wire rope and cable.) Includes mattresses made from hair, cotton, felt, moss, or other similar material, and wire mattresses and spring beds, etc.
203. MILLINERY AND LACE GOODS, NOT ELSEWHERE SPECIFIED. (See also Artificial flowers; Feathers and plumes.) Includes dress, cloak, and millinery trimming; embroideries and crochet goods; hat and bonnet frames; ladies' belts, collars, neckwear; women's handkerchiefs; and hats, trimmed and untrimmed; pleating and puffs; ruching, ruffling, etc.
(a) Embroideries.
(b) Trimmed hats, hat frames, etc.
(c) Dress and cloak trimmings, braids, fringes, etc.
(d) Women's neckwear.
(e) All other.
204. MILLSTONES. (See also Grindstones.) Includes establishments producing millstones.
205. MINERAL AND SODA WATERS. Includes establishments engaged chiefly in the manufacture of carbonated beverages, root beer, ginger ale, and other so-called soft drinks.
(a) Mineral and carbonated waters.
(b) Fruit beverages.
(c) All other.
206. MINERALS AND EARTHS, GROUND, OR OTHERWISE TREATED. Includes the grinding of emery, flint, ochre, barytes, manganese, chalk, talc, feldspar, sandstone, kaolin, mica, fuller's earth, pumice, slate, etc.
207. MIRRORS, FRAMED AND UNFRAMED, NOT ELSEWHERE SPECIFIED. (See also Furniture.) Includes establishments, engaged chiefly in the production of mirrors and looking-glasses.
208. MODELS AND PATTERNS, NOT INCLUDING PAPER PATTERNS. Includes molds used in the manufacture of brick, glassware, cigars, castings, etc., hat blocks, pottery braces, wax figures, dress and show forms, stamping outfits, etc.
209. *MOTORCYCLES, BICYCLES, AND PARTS. Includes establishments engaged chiefly in the manufacture of bicycles, tricycles, motorcycles, and also establishments manufacturing parts, such as saddles, seat posts, frames, gears, handlebars, chains, etc. Establishments assembling parts and turning out complete machines of this character may receive this classification.
210. MUCILAGE, PASTE, AND OTHER ADHESIVES, NOT ELSEWHERE SPECIFIED. (See also Glue, not elsewhere specified.) Includes establishments whose chief products are mucilage and paste, and also mending cement, rubber cement, sealing wax, etc.
(a) Mucilage and paste in bottles and jars for office and home uses.
(b) Mucilage and paste in barrels, kegs, or other large containers.
(c) All other products.
211. *MUSICAL INSTRUMENTS AND MATERIALS, NOT SPECIFIED. Includes establishments whose chief products are various kinds of musical instruments made of brass and other metal or wood, and also stringed instruments, and materials for the manufacture of the same. (Pianos and organs, and their materials, are not included in this classification.)
212. MUSICAL INSTRUMENTS, ORGANS. (See also Musical instruments, pianos; Musical instruments, piano and organ materials.) Includes all kinds of pipe and reed organs, orchestrions, etc.
213. *MUSICAL INSTRUMENTS, PIANOS. (See also Musical instruments, organs; Musical instruments, piano, and organ materials.) Includes pianos, upright, grand, etc., with or without player attachments.
214. MUSICAL INSTRUMENTS, PIANO AND ORGAN MATERIALS. (See also Musical instruments, organs; Musical instruments, pianos.) Includes establishments whose chief products are piano strings, plates, keys, actions, keyboards, cases, back frames, pedal attachments, hammers, sounding boards, legs, trusses, etc., and organ reeds, pipes, stops, knobs, pedals, reed poles, etc.
(a) Piano materials.
(b) Organ materials.
215. *NEEDLES, PINS, AND HOOKS AND EYES. (See also Buttons.) Includes machine needles—knitting and sewing; toilet, hat, and safety pins, etc.; glove fasteners, snap fasteners, hooks and eyes, etc.
216. NETS AND SEINES. (See also Cordage and twine; Hammocks.) Includes establishments engaged chiefly in the manufacture of fish nets, seines, etc.
217. OAKUM. Includes establishments manufacturing oakum. This product is made largely from old rope, although some new hemp and jute may be used. It is used chiefly in shipyards and by plumbers, and perhaps by upholsterers.
218. OIL AND CAKE, COTTONSEED. Includes the manufacture of cottonseed oil, either crude or refined, and such by-products as meal and cake, hulls, linters, etc.
219. OIL, CASTOR. Includes establishments manufacturing castor oil from the castor bean.
220. *OIL, ESSENTIAL. (See also Perfumery and cosmetics.) Includes the volatile oils from plants, such as peppermint, spearmint, sassafras, wintergreen, clove, lemon, aniseed, bergamot, lavender, orange, patchouli, witch-hazel, etc.
221. OIL, LARD, NOT MADE IN SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS. Includes establishments where the chief product is lard oil.
222. *OIL, LINSEED. Includes linseed oil made from flaxseed. In the crushing of flaxseed to extract the oil there would be by-products of flaxseed cake and meal.
223. OIL, NOT ELSEWHERE SPECIFIED. Includes lubricating oils (not from petroleum), fish oils, mineral oils, neat's-foot oil, etc., not made in slaughtering and meat-packing establishments.
(a) Vegetable oils.
(b) Animal oils.
(c) Mineral oils.
(d) Composite oils.
224. *OILCLOTH AND LINOLEUM, FLOOR. Includes all classes of floor oilcloth and linoleum.
225. *OILCLOTH, ENAMELED. Includes table, shelf, upholsterers' oilcloth, etc.
226. OLEOMARGARINE AND OTHER BUTTER SUBSTITUTES. (See also Slaughtering and meat packing.) Includes establishments engaged chiefly in manufacturing oleomargarine, butterine, etc., not including that made in slaughtering and meat-packing establishments.
227. OPTICAL GOODS. Includes spectacles, eyeglasses, opera and field glasses, binoculars, stereopticons, etc.; lenses, spectacles and eyeglass frames and cases, artificial eyes, etc.
228. *ORDNANCE AND ACCESSORIES. (See also Iron and steel works and rolling mills; Iron and steel forgings.) Includes cannon and artillery and their mounts; apparatus pertaining to cannon and artillery; ammunition, such as shot and shells, etc. (Do not confuse this classification with Ammunition; Explosives; and Firearms.)
229. *PAINTS. (See also Varnishes.) Includes paints in oil, ready-mixed paints, water paints and kalsomine pigments, stains, fillers, putty, etc.
230. *PAPER AND WOOD PULP. Includes news paper, book paper, fine paper, wrapping paper, blotting paper, strawboard, etc., wood pulp, etc.
(a) Paper mills exclusively.
(b) Pulp mills exclusively.
(c) Mills making both paper and pulp.
231. PAPER GOODS, NOT ELSEWHERE SPECIFIED. (See also Stationery goods, not elsewhere specified.) Includes shelf paper, glazed paper, paper tubes, toilet paper, playing cards, fly paper, confeit, moth paper, etc.
(a) Playing cards.
(b) All other.
232. PAPER PATTERNS. Includes all kinds of patterns made from paper, fashion plates, etc.
233. *PATENT MEDICINES AND COMPOUNDS. (See also Chemicals; Druggists' preparations; Perfumery and cosmetics.) Includes medicines and compounds for either man or animal manufactured under the protection of a patent, copyright, or trade-mark or according to a secret formula; and compounds or products handled by the pharmaceutical trade not otherwise provided for, such as hair tonics, insect powders, corn cures, liver pads, household ammonia, etc.
(a) Patent and proprietary medicines.
(b) Patent and proprietary compounds, not elsewhere specified.
234. PAVING MATERIALS. Includes asphalt, crushed cinder, wood blocks, broken stone, cement paving tile, etc., but not the laying of paving. (Does not include stone paving blocks, see Marble and stone work.)
235. PEANUTS, GRADING, ROASTING, CLEANING, AND SHELLING. Includes various operations connected with the preparation of peanuts for the market.
236. PENCILS, LEAD. Includes establishments engaged in the manufacture of lead pencils.
237. PENS, FOUNTAIN AND STYLOGRAPHIC. (See also Pens, gold.) Includes the manufacture of fountain and stylographic pens.
238. PENS, GOLD. (See also Pens, fountain and stylographic.) Includes the manufacture of gold pens.
239. PENS, STEEL. Includes the manufacture of steel and other metal pens, except gold pens.
240. *PERFUMERY AND COSMETICS. (See also Druggists' preparations; Oil, essential; Soap.) Includes cologne; toilet water; witch-hazel; face powders; washes and lotions; skin emollients; shaving cream; tooth paste and powder; bay rum, etc.
241. *PETROLEUM, REFINING. Includes the refining of crude petroleum.
242. *PHONOGRAPHS AND GRAPHOPHONES. (See also Musical instruments.) Includes phonographs, graphophones, talking machines, and parts and supplies, cylinders, records, horns, etc.

243. PHOTOGRAPHIC APPARATUS. (See also Photographic materials.) Includes cameras, lenses for photographic uses, head rests, photographic parts, etc.
(a) Cameras.
(b) Motion-picture machines.
(c) All other apparatus and parts.
244. PHOTOGRAPHIC MATERIALS. (See also Photographic apparatus.) Includes films, plates, developers, sensitized paper, etc., and motion-picture projection films reproduced or printed from the negative.
(a) Motion-picture films, not exposed.
(b) Motion-picture projection films.
(c) All other.
245. PHOTO-ENGRAVING, NOT DONE IN PRINTING ESTABLISHMENTS. (See also Lithographing; Stereotyping and electrotyping.) Includes photogravures and similar transfer work.
246. PICKLES, PRESERVES, AND SAUCES. (See also Canning and preserving, fruits and vegetables; Food preparations, not elsewhere specified.) Includes jellies, apple butter, salad dressing, pickles, mustard, etc., and preserves, and sauces.
(a) Preserves.
(b) Pickles and sauces.
247. PIPES, TOBACCO. Includes all kinds of smokers' pipes, pipestems, and cigar and cigarette holders.
248. PLATED WARE. (See also Silversmithing and silverware.) Includes all kinds of plated ware.
(a) Knives, forks, spoons, and other flatware.
(b) Hollow ware.
(c) All other.
249. PLUMBERS' SUPPLIES, NOT ELSEWHERE SPECIFIED. (See also Brass, bronze, and copper products; Foundry and machine-shop products; Marble and stone work; Stamped and enameled ware, not elsewhere specified.) Includes bath and laundry tubs, traps, plumbers' wood work, toilet bowls, lavatories, etc., when not enameled; faucets, spigots, kitchen hot-water boilers, etc.
250. POCKETBOOKS. (See also Leather goods, not elsewhere specified; Trunks and valises.) Includes pocketbooks, bill books, cardcases, money purses, etc.
251. *POTTERY. (See also Brick and tile, terra-cotta, and fire-clay products.) Includes stoneware, red earthenware, white ware, china, bone china, delft and belleek ware.
(a) Chinaware.
(b) Earthen and stone ware.
(c) All other.
252. POULTRY, KILLING AND DRESSING, NOT DONE IN SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS. (See also Slaughtering and meat packing.) Includes establishments engaged chiefly in the killing and dressing of poultry. Not to include establishments having products valued at less than \$20,000.
253. *PRINTING AND PUBLISHING, BOOK AND JOB. (See also Bookbinding and blank-book making; Printing and publishing, music; Printing and publishing, newspapers and periodicals.) Includes all kinds of job printing and the printing or publication of books and pamphlets, and those doing linotype work and typesetting exclusively.
(a) Job printing.
(b) Book publishing and printing.
(c) Book publishing without printing.
(d) Linotype work, typesetting, etc.
254. *PRINTING AND PUBLISHING, MUSIC. (See also Printing and publishing, book and job; Printing and publishing, newspapers and periodicals.) Includes books of music and sheet music.
(a) Printing and publishing.
(b) Publishing but no printing.
255. *PRINTING AND PUBLISHING, NEWSPAPERS AND PERIODICALS. (See also Bookbinding and blank-book making; Printing and publishing, book and job.) Includes newspapers, periodicals, etc., and the preparation of the material, whether or not any of the work of printing is done. (Schedules to pertain to this classification should properly show answers to classes A or B of the supplemental schedule for printing and publishing.)
(a) Printing and publishing.
(b) Printing, publishing, and job printing.
(c) Publishing but no printing.
256. PRINTING MATERIALS. (See also Foundry and machine-shop products; Ink, printing; Type founding.) Includes composing rules and sticks, galleys, planes, chases, type cases, galleys, and printers' rollers.
257. PULP, FROM FIBER OTHER THAN WOOD. Includes the manufacture of pulp from cornstalks, rice straw, cotton, or any fiber other than wood.
258. PULP GOODS. Includes pails, dishes, tubs, boxes, and other articles of this character made from pulp.
(a) Wall board.
(b) All other, including molded articles.
259. PUMPS, NOT INCLUDING POWER PUMPS. Includes chain or bucket hand pumps, wooden or metal hand pumps, oil and spray pumps, etc.
260. PUMPS, STEAM AND OTHER POWER. (See also Foundry and machine-shop products.) Includes establishments whose chief products are steam and other power pumps.
(a) Steam pumps.
(b) Other power pumps.
261. REFRIGERATORS. (See also Furniture.) Includes refrigerators, ice boxes, etc.
262. REGALIA, AND SOCIETY BADGES AND EMBLEMS. (See also Flags and banners.) Includes regalia, emblems for masonic and other similar organizations, badges, etc.
263. RICE, CLEANING AND POLISHING. Includes the cleaning and polishing of rice.
264. ROOFING MATERIALS. (See also Asbestos products, not including steam packing; Copper, tin, and sheet-iron work.) Includes the manufacture of asphalt roofing, felt roofing, roofing paint, other roofing compositions, and metal shingles and ceilings. Does not include the laying of roofing.
(a) Metal shingles and ceiling.
(b) All other.
265. *RUBBER TIRES, TUBES, AND RUBBER GOODS, NOT ELSEWHERE SPECIFIED. (See also Belting and hose, rubber; Boots and shoes, rubber; Suspenders, garters, and elastic woven goods.) Includes rubber clothing, mats, type, springs, tubing, rubber brushes, bands, automobile and other tires, etc.
266. RULES, IVORY AND WOOD. (See also Tools, not elsewhere specified.) Includes rules made from ivory, wood, metal, or other material.
267. SADDLERY AND HARNESS. (See also Leather goods, not elsewhere specified.) Includes saddlery and harness, or parts of the same; halters, horse boots, saddletrees, etc.
268. SAFES AND VAULTS. Includes the manufacture of safes and vaults, safe-deposit boxes and chests, steel burial vaults, etc.
(a) Safes.
(b) Vaults.
269. *SALT. Includes table, packers', rock, and other grades of salt, whether obtained by mining or evaporation.
270. SAND AND EMERY PAPER AND CLOTH. Includes sandpaper, sand cloth, emery paper, emery cloth, flint paper, glass paper, etc.
271. *SAND-LIME BRICK. (See also Brick and tile, terra-cotta, and fire-clay products.) Includes establishments engaged chiefly in the manufacture of bricks from a combination of sand and lime.
272. SAUSAGE, NOT MADE IN SLAUGHTERING AND MEAT-PACKING ESTABLISHMENTS. (See also Slaughtering and meat packing.) Includes establishments engaged chiefly in the manufacture of sausage
(a) Sausage.
(b) Sausage casings.
273. SAWS. (See also Cutlery and edge tools; Tools, not elsewhere specified.) Includes the manufacture of saws of all kinds as chief products.
274. SCALES AND BALANCES. Includes weighing machines and apparatus, automatic and computing weighing machines, etc.
275. SCREWS, MACHINE. (See also Hardware.) Includes the manufacture of machine screws.
276. SCREWS, WOOD. (See also Hardware.) Includes the manufacture of screws for woodwork.
277. SEWING-MACHINE CASES. (See also Sewing machines and attachments.) Includes the manufacture of sewing-machine cases, cabinets, stands, etc.
278. SEWING MACHINES AND ATTACHMENTS. (See also Sewing-machine cases.) Includes sewing machines, and tuckers, shirrers, hemmers, etc.
(a) Sewing machines.
(b) Attachments.
279. *SHIPBUILDING, STEEL. (See also Shipbuilding, wooden, including boat building.) Includes the building of steam, motor, sail, or unrigged vessels, of steel and concrete, and repairs to such vessels.
(a) Yards where work on new vessels was done.
(b) Concrete vessels.
(c) Yards engaged entirely on repair work.
(d) Boats under 5 tons.
(e) Masts, spars, cars, and rigging of vessels.
280. *SHIPBUILDING, WOODEN, INCLUDING BOAT BUILDING. (See also Shipbuilding, steel.) Includes the building of wooden, steam, motor, sail, and unrigged vessels; yachts, rowboats, canoes, etc., and repairs to such vessels; the manufacture of masts, spars, cars, and rigging vessels.
(a) Yards where work on new vessels was done.
(b) Yards engaged entirely on repair work.
(c) Boats under 5 tons.
(d) Masts, spars, cars, and the rigging of vessels.
281. SHIRTS. (See also Clothing, men's; Collars and cuffs, men's; Furnishing goods, men's.) Includes shirts of cotton, linen, flannel, etc., shirt bosoms, and shirt waists for men and boys.
282. SHOW CASES. (See also Furniture; Lumber, planing-mill products.) Includes show cases, display cases, etc.
283. SIGNS AND ADVERTISING NOVELTIES. (See also Fancy articles, not elsewhere specified.) Includes the manufacture of all kinds of signs and letters of wood, metal, glass, etc.; electric signs; and also various kinds of advertising novelties.
(a) Electric signs.
(b) Other signs.
(c) Advertising novelties.
284. *SILK GOODS. Includes broad silks, ribbons, trimmings, tulle, veiling, and establishments manufacturing organdy and tram. Establishments engaged wholly in throwing (throwsters) or winding of silk are also included
(a) Includes manufacturers of broad silks, ribbons, trimmings, etc.
(b) Includes throwsters, winders, etc.
285. SILVERSMITHING AND SILVERWARE. (See also Plated ware.) Includes silver hollow ware, flatware, toilet ware, ornaments, novelties, cane and umbrella handles, etc.
286. *SLAUGHTERING AND MEAT PACKING, WHOLESALE. (See also Lard; Oleomargarine; Poultry, killing and dressing; Sausage; Slaughtering, wholesale, not including meat packing.) Includes establishments where meat is carried beyond the raw state and preserved by canning, salting, smoking, or otherwise curing it for the trade. This classification covers both the establishments which slaughter and those which purchase the raw stock.
(a) Establishments doing slaughtering.
(b) Establishments doing no slaughtering.
287. *SLAUGHTERING, WHOLESALE, NOT INCLUDING MEAT PACKING.¹ (See also Slaughtering and meat packing, wholesale.) Includes establishments slaughtering beef, sheep, hogs, etc., and disposing of the product without further manufacture.
288. *SMELTING AND REFINING, ANTIMONY. Includes the smelting and refining of antimony ores.
289. *SMELTING AND REFINING, COPPER. (See also Brass, bronze, and copper products.) Includes the smelting and refining of copper ores.
(a) Smelting only.
(b) Refining only.
(c) Smelting and refining.

¹ Presented as a subclass under slaughtering and meat packing, and considered a separate industry

290. *SMELTING AND REFINING, LEAD. (See also Lead, bar, pipe, and sheet.)
Includes the smelting and refining of lead ores.
(a) Smelting only.
(b) Refining only.
(c) Smelting and refining.
291. *SMELTING AND REFINING, TIN.
Includes the smelting and refining of tin ores.
292. *SMELTING AND REFINING, ZINC.
Includes the smelting and refining of zinc ores.
(a) Pigs, bars, plates, and sheets.
(b) All other.
- 292x. SMELTING AND REFINING METALS, NOT ELSEWHERE SPECIFIED.
293. SMELTING AND REFINING, NOT FROM THE ORE. (See also Babbitt metal and solder; Brass, bronze, and copper products.)
Includes smelting and refining of scrap material and dross of all kinds, except gold and silver, for which there is a special classification.
294. *SOAP. (See also Candles; Grease and tallow; Perfumery and cosmetics; Slaughtering and meat packing, wholesale.)
Includes establishments engaged chiefly in the manufacture of hard, soft, cake, bar, powdered, liquid, and other soaps.
295. SODA-WATER APPARATUS.
Includes soda fountains, tanks, siphons, etc.
296. SPORTING AND ATHLETIC GOODS.
Includes boxing gloves, punching bags, dumb-bells, pigeon traps, fishing rods and tackle; baseball, football, tennis and golf goods; exercise machines; snowshoes; toboggans; air rifles; decoys; etc.
297. SPRINGS, STEEL, CAR AND CARRIAGE, ETC., NOT MADE IN STEEL WORKS OR ROLLING MILLS. (See also Automobile bodies and parts; Carriage and wagon materials; Iron and steel, steel works and rolling mills.)
Includes establishments engaged chiefly in the manufacture of steel springs for carriages, cars, automobiles, and other purposes.
(a) Carriage and wagon.
(b) Railway.
(c) Automobile.
(d) Machinery and other.
298. STAMPED AND ENAMELED WARE, NOT ELSEWHERE SPECIFIED. (See also Tinware, not elsewhere specified; Enameling.)
Includes stamped sheet-metal goods of all kinds which are not otherwise provided for.
(a) Stamped ware.
(b) Enameled ware.
(c) Bathtubs.
(d) Lava tories and sinks.
299. STATIONERY GOODS, NOT ELSEWHERE SPECIFIED. (See also Envelopes; Pencils, lead; Pens, steel.)
Includes papeterie and other stationers' specialties, inkstands, school supplies, penholders, desk pads, calendars, blackboards, copying devices, school supplies, globes, etc.
(a) Penholders.
(b) All other.
300. STATUARY AND ART GOODS. (See also Marble and stone work.)
Includes plaster and composition statuary, church figures and ornaments, ornamental stuccowork, etc.
301. STEAM FITTINGS AND STEAM AND HOT-WATER HEATING APPARATUS. (See also Foundry and machine-shop products; Stoves and hot-air furnaces.)
Includes hot-water and steam-heating apparatus, radiators, washers, valves, gauges, coils, etc.
(a) Radiators and cast-iron heating boilers.
(b) All other.
302. STEAM PACKING. (See Asbestos products; Rubber goods, not elsewhere specified.)
Includes asbestos, metallic, and other steam packing; packing for engines, air compressors, etc.; boiler coverings, gaskets, etc.
- 302x. STEEL BARRELS, DRUMS, AND TANKS, PORTABLE.
303. STENCILS AND BRANDS. (See also Hand stamps.)
Includes stencils made of brass, steel, or other metal; branding irons; etc.
304. STEREOTYPING AND ELECTROTYPING. (See also Printing and publishing; Printing materials; Type founding.)
Includes establishments engaged in stereotype and electrotype work.
305. STOVES AND HOT-AIR FURNACES. (See also Steam fittings and steam and hot-water heating apparatus; Stoves, gas and oil.)
Includes all kinds of cooking and heating stoves and furnaces, except gas and oil stoves.
(a) Stoves and ranges.
(b) Hot-air furnaces.
(c) Fireless cookers.
306. STOVES, GAS AND OIL.
Includes gas and oil stoves, parts, etc.
- 306x. STRAW GOODS, NOT ELSEWHERE SPECIFIED. Includes straw bottle covers, and bleaching and dyeing of straw braids.
307. STRUCTURAL IRONWORK, NOT MADE IN STEEL WORKS OR ROLLING MILLS. (See also Foundry and machine-shop products; Iron and steel, steel works and rolling mills.)
Includes girders, columns, trusses, grilles, railings, fire escapes, and other builders' ironwork, structural and ornamental.
308. *SUGAR, BEET.
Includes the manufacture of sugar from sugar beets.
309. *SUGAR, CANE.
Includes establishments engaged in manufacturing sugar from sugar cane, with by-products of molasses and sirup.
310. *SUGAR, REFINING, NOT INCLUDING BEET SUGAR.
Includes the refining of cane sugar.
311. *SULPHURIC, NITRIC, AND MIXED ACIDS. (See also Chemicals; Fertilizers.)
Includes establishments manufacturing sulphuric, nitric, and mixed acids as their chief products. A branch of the chemical industry.
312. SURGICAL APPLIANCES. (See also Artificial limbs; Instruments, professional and scientific.)
Includes splints, bandages, trusses, electric belts, absorbent cotton, elastic stockings, shoulder and spinal braces, etc.
313. SUSPENDERS, GARTERS, AND ELASTIC WOVEN GOODS. (See also Furnishing goods, men's.)
Includes suspenders, garters, and also the manufacture of the elastic webbing from which these articles are made.
314. *TEXTILE MACHINERY AND PARTS. (See also Foundry and machine-shop products.)
Includes establishments manufacturing textile machinery as their chief products. (See supplemental schedule for detailed classes of products.)
315. THEATRICAL SCENERY.
Includes establishments engaged chiefly in the manufacture of theatrical scenery, theater curtains, etc., but does not include incidental work done on the scenery in theaters.
316. TIN AND OTHER FOILS, NOT ELSEWHERE SPECIFIED. (See also Gold and silver, leaf and foil.)
(a) Tin foil.
(b) Lead foil.
(c) Aluminum and other.
Includes tin foil, aluminum foil and leaf, lead foil, etc.
317. *TIN PLATE AND TERNEPLATE.
Includes establishments engaged in the manufacture of tin plate and terneplate.
318. TINWARE, NOT ELSEWHERE SPECIFIED. (See also Copper, tin, and sheet-iron work; stamped and enameled ware, not elsewhere specified.)
Includes establishments engaged in the manufacture of tinware, tin cans, steam cookers, boilers, household and cooking utensils, etc.
319. TOBACCO, CHEWING AND SMOKING, AND SNUFF. (See also Tobacco, cigars and cigarettes.)
Includes chewing tobacco, smoking tobacco, and snuff.
(a) Plug or chewing.
(b) Smoking.
(c) Snuff.
(d) All other.
320. TOBACCO, CIGARS AND CIGARETTES. (See also Tobacco, chewing and smoking, and snuff.)
Includes cigars and cigarettes.
(a) Cigars.
(b) Cigarettes.
(c) Both cigars and cigarettes.
321. TOOLS, NOT ELSEWHERE SPECIFIED. (See also Cutlery and edge tools; Files; Hardware; Machine tools; Saws.)
Includes stone and marble cutting tools, spirit levels, picks, plumbers' tools, jewelers' tools, ironworkers' tools, confectioners' tools, bakers' tools, shovels, spades, scoops, pressing irons, hammers, mallets, soldering irons, screw drivers, wrenches, and all tools not covered by other classifications.
(a) Shovels, spades, scoops, hoes.
(b) Carpenters' tools, not elsewhere specified.
(c) Machinists' tools.
(d) All other.
322. TOYS AND GAMES. (See also Carriages and sleds, children's.)
Includes magic lanterns, carousels, lawn swings, paper toys, paper dolls, wooden toys, conjuring apparatus, toy banks, puzzles, children's velocipedes and tricycles, etc.
323. TRUNKS AND VALISES. (See also Leather goods, not elsewhere specified; Pocketbooks.)
Includes trunks, valises, and bags, satchels, boxes for trunks, etc., irrespective of the material from which they are made.
324. *TURPENTINE AND ROSIN. (See also Wood distillation.)
Includes establishments engaged in the manufacture of spirits of turpentine and rosin by the distillation of the resinous exudation of the pine tree.
325. TYPE FOUNDRY. (See also Printing materials; Stereotyping and electrotyping.)
Includes type, brass rules, slugs, copper-faced type, etc.
326. TYPEWRITERS AND SUPPLIES.
Includes typewriters, parts of typewriting machines, ribbons, carbon paper, etc.
(a) Typewriters and parts.
(b) Carbon paper.
(c) Ribbon.
(d) All other.
327. UMBRELLAS AND CANES.
Includes umbrellas, parasols, covers, handles, other than gold and silver (for which see Jewelry), and parts.
328. UPHOLSTERING MATERIALS, NOT ELSEWHERE SPECIFIED. (See also Cotton goods; Cotton small wares; Oilcloth, enameled; Woolen and worsted goods.)
Includes artificial leather, curled hair, excelsior, moss, tow, etc.
(a) Imitation leather, leatheroid, etc.
(b) Excelsior.
(c) Curled hair.
(d) All other.
329. *VARNISHES. (See also Paints.)
Includes varnishes, japans, lacquers, liquid and hard wood fillers, brewers' pitch, etc.
330. VAULT LIGHTS AND VENTILATORS. (See also Foundry and machine-shop products.)
Includes vault lights, ventilators, coal-hole covers, sidewalk and floor lights, etc.
331. VINEGAR AND CIDER.
Includes establishments engaged in the manufacture of vinegar or cider.
(a) Vinegar.
(b) Cider.
332. WALL PAPER, NOT MADE IN PAPER MILLS.
Includes establishments engaged chiefly in making various kinds of wall papers. The establishments covered by this classification print, but do not manufacture, the hanging or white paper used.
333. WALL PLASTER AND COMPOSITION FLOORING.
Includes gypsum plaster and other ready-mixed wall plasters, gypsum wall board, etc.
334. WASHING MACHINES AND CLOTHES WRINGERS. (See also Foundry and machine-shop products; Machinery.)
Includes establishments engaged chiefly in the manufacture of washing machines, clothes wringers, ironing machines, etc., whether operated by mechanical power or by hand.
335. WASTE.
Includes establishments engaged chiefly in the manufacture of cotton or other kinds of waste.
(a) Cotton waste.
(b) All other.
336. WATCH AND CLOCK MATERIALS, EXCEPT WATCHCASES. (See also Brass, bronze, and copper products; Clocks; Watchcases; Watches.)
Includes establishments whose chief products are such articles as dials, pendulums, pendants, springs, etc.
(a) Watch materials.
(b) Clock materials.

- WATCHCASES.** (See also Watch and clock materials; Watches.)
Includes establishments engaged chiefly in the manufacture of watchcases.
338. **WATCHES.** (See also Clocks.)
Includes establishments engaged in the manufacture of watches and watch movements.
(a) Watches.
(b) Watch movements.
339. **WHALEBONE CUTTING.**
Includes establishments engaged in the cutting of whalebone.
340. **WHEELBARROWS.** (See also Agricultural implements.)
Includes establishments engaged chiefly in the manufacture of wheelbarrows, irrespective of the materials from which constructed.
341. **WHIPS.**
Includes establishments whose chief products are such articles as whips, whipstocks, whip handles, and whiplashes.
342. **WINDMILLS, NOT ELSEWHERE SPECIFIED.** (See also Agricultural implements.)
Includes establishments engaged chiefly in the manufacture of windmills and accessories, such as towers, vanes or sails, tanks, etc.
343. **WINDOW AND DOOR SCREENS AND WEATHER STRIPS.**
Includes establishments engaged chiefly in the manufacture of window screens, door screens, and weather strips, irrespective of the materials used.
(a) Window and door screens.
(b) Weather strips.
344. **WINDOW SHADES AND FIXTURES.**
Includes establishments engaged chiefly in the manufacture of window shades, rollers, venetian blinds, curtain poles and rods, etc.
345. ***WIRE.** (See also Brass, bronze, and copper products; Iron and steel, steel works and rolling mills.)
Includes establishments engaged chiefly in the manufacture of wire from purchased rods.
(a) Wire, barbed.
(b) Wire rope and cable.
(c) Woven-wire fencing.
(d) All other.
346. **WIREWORK, INCLUDING WIRE ROPE AND CABLE, NOT ELSEWHERE SPECIFIED.** (See also Mattresses and spring beds; Wire.)
Includes wire fencing, wire rope and cable, wire cloth, and small manufactures of wire, such as mousetraps, bird cages, bottle stoppers, wire clasps, pillow-sham holders, belt lacings, garment hangers, etc., made from purchased wire.
(a) Wire, barbed.
(b) Wire rope and cable.
(c) Woven-wire fencing.
(d) All other.
347. **WOOD CARPET.**
Includes establishments engaged in the manufacture of wood carpet, which consists of pieces of wood, strips or blocks, attached to a textile back. Not to include the laying of parquet flooring.
348. ***WOOD DISTILLATION.** (See also Turpentine and rosin.)
Includes establishments engaged primarily in the distillation of wood by either the destructive or steam process. Among the products are wood alcohol, charcoal, turpentine, tar, acetone, etc., and acetate of lime.
349. **WOOD PRESERVING.**
Includes establishments engaged in treating wood to prevent decay, and for protection against fire, worms, etc., such for instance as railway ties, paving blocks, etc.
350. **WOOD, TURNED AND CARVED.** (See also Lumber, planing-mill products; Wooden goods, not elsewhere specified.)
Includes spools, handles, brush blocks, bungs, scrollwork, fretwork, grille work, jig sawing, carved woodwork, etc.
351. **WOODEN GOODS, NOT ELSEWHERE SPECIFIED.** (See also Cooperage; Wood, turned and carved.)
Includes butter bowls and dishes, chopping bowls, trays, clothespins, toothpicks, grain measures, washboards, ladders, stepladders, pails and tubs, ironing boards, clothes dryers, etc.
352. **WOOL PULLING.**
Includes establishments engaged chiefly in detaching wool from the sheepskins.
353. **WOOL SCOURING.**
Includes establishments engaged in scouring, sorting, and carbonizing wool.
354. ***WOOL SHODDY.** (See also Woolen goods; Worsted goods.)
Includes mills engaged chiefly in manufacturing shoddy or mungo. The materials consist chiefly of rags, waste, and nolls, tailors' clippings, etc.
355. ***WOOLEN GOODS.** (See also Carpets and rugs, other than rag; Felt goods; Knit goods; Worsted goods.)
Includes woolen cloth, doeskins, cassimeres, chevots, tweeds, flannels, broadcloths, overcoatings, cloakings, kerseys, dress goods, unions, upholsterers' goods, woolen yarns, coatings, serges, suitings, cashmeres, jeans, etc. In addition to the kind of goods referred to, careful consideration must be given to the kind of yarn used and the character of the machinery.
356. ***WORSTED GOODS.** (See also Woolen goods.)
Includes coatings, serges, suitings, overcoatings, cloakings, cashmeres, doeskins, jeans, tweeds, worsted-filled goods, worsted yarn, etc. In addition to the kind of goods referred to, careful consideration must be given to the kind of yarn used and the character of the machinery.

The supplemental schedules sometimes cover two or more industry classifications, as follows:

Supplemental schedules.	Classification covered.
Form No.	Industry No.
104. Ammunition, firearms, ordnance and accessories.....	4. Ammunition. 115. Firearms. 223. Ordnance and accessories.
109. Butter, cheese, and condensed milk.....	46. Butter. 61. Cheese. 79. Condensed milk.
113. Canning and preserving, fish and oysters.....	44. Canning and preserving, fish. 46. Canning and preserving, oysters.
116. Cars, steam and electric railroad.....	57. Cars, steam-railroad, not including operations of railroad companies. 58. Cars, electric-railroad, not including operations of railroad companies.
118. Chemical manufactures.....	62. Chemicals.
120. Chocolate and cocoa products and confectionery.....	311. Sulphuric, nitric, and mixed acids. 65. Chocolate and cocoa products. 80. Confectionery and ice cream.
172. Clay products.....	37. Brick and tile, terra-cotta, and fire-clay products. 251. Pottery.
121. Cordage and twine, jute goods, and linen goods.....	33. Cordage and twine. 175. Jute goods. 187. Linen goods.
122. Cotton manufactures.....	87. Cotton goods. 89. Cotton and small wares.
124. Cottonseed products.....	218. Oil and cake, cottonseed. 219. Oil, castor. 222. Oil, linseed. (Other oils are covered by the cottonseed products supplemental, for which there are no special classifications.)
125. Druggists' preparations, and patent and proprietary medicines and compounds.....	95. Druggists' preparations. 233. Patent medicines and compounds. 240. Perfumery and cosmetics.
128. Engines.....	193. Engines, steam, gas, and water. 192. Locomotives, not made by railroad companies.
177. Grindstones, oilstones and whetstones, pulp stones, scythestones, hones, and rubbing stones.....	144. Grindstones. 156. Hones and whetstones.
147. Musical instruments.....	211. Musical instruments and materials, not specified. 212. Musical instruments, organs. 213. Musical instruments, pianos.
149. Oilcloth and linoleum.....	224. Oilcloth and linoleum, floor. 225. Oilcloth, enameled.
150. Paints and varnishes.....	229. Paints. 228. Varnishes.
155. Printing and publishing.....	253. Printing and publishing, book and job. 254. Printing and publishing, music. 255. Printing and publishing, newspapers and periodicals.
156. Railroad repair shops, steam and electric.....	55. Cars and general shop construction and repairs by steam-railroad companies. 54. Cars and general shop construction and repairs by electric-railroad companies.
158. Rubber goods.....	266. Rubber goods, not elsewhere specified. 29. Belting and hose, rubber. 31. Boots and shoes, rubber.
159. Shipbuilding.....	279. Shipbuilding, steel. 280. Shipbuilding, wooden, including boat building and concrete ships.
161. Slaughtering and meat packing.....	286. Slaughtering and meat packing, wholesale. 287. Slaughtering, wholesale, not including meat packing.
168. Wool manufactures.....	355. Woolen goods. 356. Worsted goods. 49. Carpets and rugs, other than rag. 112. Felt goods. 133. Hats, fur-felt. 145. Hats, wool-felt. 354. Wool shoddy.

NEW CLASSIFICATIONS IN 1919.

1919	WHERE INCLUDED IN 1914.	1919	WHERE INCLUDED IN 1914.	
Chewing gum.....	Confectionery and ice cream. Chemicals.	Smelting and refining, anti-mony.	Smelting and refining, not from the ore.	
Coal-tar products.....		Smelting and refining metals, not elsewhere specified.		
Dyeing and cleaning.....	Not taken in 1914.	Smelting and refining tin.....	Foundry and machine-shop products. Not taken in 1914.	
Ferroalloys.....	{ Iron and steel, blast furnaces. Chemicals.	Steel barrels, drums and tanks, portable.		
Gloves and mittens, cloth, not including gloves made in textile mills.	Furnishing goods, men's.	Straw goods, not elsewhere specified.	Foundry and machine-shop products.	
Iron and steel, tempering and welding.		Foundry and machine-shop products.		Textile machinery and parts..
Machine tools.....				

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