

limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in the small scale and cottage industries of the Province ; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

March, 1941.

P. B. ADVANI,
Director of Industries.

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BOMBAY CITY

POSITION AND AREA.

Bombay City is the capital of the Province of Bombay. It is the principal seaport of Western India and is situated on an island in 18° 55' N. and 72° 54' E. Bombay island is one of a group lying off the coast of the Konkan, but by the construction of causeways and breakwaters, it is now permanently united on the north end with the larger island of Salsette, and so continuously with the mainland. The remainder of the group of islands constitutes a part of the Kolaba district. Bombay City has an area of 24 square miles and is regarded as constituting a district by itself for certain administrative purposes.

PHYSICAL FEATURES.

2. The island consists of a low-lying plain about 11½ miles long by 3 to 4 miles broad, flanked by two parallel ridges of low hills. Colaba point, the headland formed by the longer of these ridges, protects the harbour lying on its eastern side from the force of the open sea; the other ridge terminates in Malabar Hill. The island is in shape of a trapezoid. On a slightly raised strip of land between the head of the Back Bay and the harbour is situated the Fort, now occupied by public buildings and commercial offices. From this point the land slopes westward to the central plain, which before the construction of the Hornby Vellard, was liable to be submerged at high tide.

CLIMATE AND RAINFALL.

3. Bombay never attains great extremes of heat or cold, such as are encountered in the interior; but the climate, though temperate, is oppressive, owing to the extreme saturation of the air with moisture during the greater part of the year. The cold season lasts from December till March. In June the south-west monsoon breaks, and heavy rain continues with great regularity till the end of September. The hottest months are May and October. The average rainfall is about 75 inches.

POPULATION.

4. The Bombay City according to the 1931 Census, has a population of 1,161,383 persons, of whom 747,381 are males and 414,002 are females. The total number of principal workers is 559,926 of whom

507,599 are males. The occupational distribution of the principal workers is as follows :—

Exploitation of animals and vegetation	..	10,690
Exploitation of minerals	.. ..	1,077
Industry	.. ..	176,312
Transport	.. ..	50,728
Trade	.. ..	84,974
Public force and administration	.. ..	41,326
Professions and liberal arts	.. ..	19,976
Persons living on their income	.. ..	1,854
Domestic service	.. ..	40,259
Insufficiently described	.. ..	125,995
Unproductive	.. ..	6,735
Total ..		559,926

The proportion of the industrially occupied persons to the total earners is about 31·4 per cent. But in addition to the 176,312 persons shown as industrially occupied according to the Census classifications there are 3,223 persons engaged in stock-raising, 2,453 persons engaged in fishing and 666 persons engaged in salt-making. These persons have been included under “exploitation of animals and vegetation” and “exploitation of minerals” for Census classifications but they are more or less engaged in industrial occupations. With the addition of these persons, the total principal workers engaged in all kinds of industrial occupations number 182,654.

HEALTH AND MEDICAL FACILITIES.

5. Health conditions in the city cannot be described as satisfactory. The mean ratio of births per thousand during the five years preceding 1937 was 27·97 per thousand while that for deaths was 23·38. The corresponding figures for the Province as a whole were 40·11 and 27·25 respectively. The survival rate for the City is the lowest in the Province, being only 4·59 per thousand as against the provincial average of 12·86. It is pertinent here to notice the state of overcrowding in Bombay. Thus the Census Superintendent for Bombay City remarks, “One-roomed tenements form 81 per cent. of the total tenements in the City and they are occupied by 791,762 persons or 74 per cent. of the population of the City”.

As regards medical facilities, there are a number of hospitals and dispensaries in Bombay City and other medical institutions like maternity hospitals, tuberculosis sanatoria, leper homes, etc., are also many.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 280,925 persons are returned as literate. This constituted a literacy percentage of nearly 24. The percentage of literacy in English in 1931 was 11·6. In 1921 the corresponding figures were 23 and 8. It is not surprising that the proportion of literacy in Bombay City is higher than in the rest of the Province.

The educational facilities available in the City are summed up in the following statement for the year 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	523	108,771
Secondary (including lower secondary and English teaching) schools	110	39,242
Art, commercial and industrial schools	49	4,999

TRANSPORT FACILITIES.

7. The City is very well served with all the modern means of transport. The great railways, the Bombay Baroda and Central India Railway and the Great Indian Peninsula Railway, run right through the heart of the City. Within the City all the wards have been connected by an efficient tram system. Passenger traffic has been further facilitated by the plying of the numerous buses maintained by the Bombay Electric Supply and Tramways Company. The total length of roads maintained by the Municipality—and all the roads within the City are under the charge of the Municipality—is 224 miles.

TRADE.

8. In addition to being an industrial city Bombay is also a great trading centre. In the year 1938-39, Bombay's share in the All-India trade was 30 per cent. and amounted to Rs. 107 crores being made up of Rs. 33 crores of exports and Rs. 74 crores of imports. A good deal of the prosperity of Bombay is based on and depends upon its foreign trade.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

9. The City has an area of 24 square miles. The whole of this is covered by factories, public offices and residential buildings and there is no room for agriculture.

According to the Census of cattle taken in 1934-35 the details of live-stock in Bombay City are as follows:—

Bulls and Bullocks	(working, breeding and young stock)	8,263
Cows	(do.) ..	3,233
Buffaloes	(do.) ..	1,182
Cow-buffaloes	(do.) ..	25,354
Sheep and goats	(do.) ..	19,868
Horses and Ponies	(do.) ..	4,527

Of these milch cattle is 24,891 consisting of 22,740 cow-buffaloes and 2,151 cows.

SURVEY OF RESOURCES : POWER.

10. The City obtains its electricity from the Bombay Electric Supply and Tramways Company, the Tata Hydro-Electric Power Supply Company, the Andhra Valley Hydro-Electric Company, and the Nila-Mula Hydro-Electric Supply Company. The relevant statistic concerning these companies are given below:—

—	Units generated (in million units).	Total units sold (in million units).	Units sold for power purposes (in million units).
Tata Hydro-Electric Power Supply Company..	586	503	284 for industries. 106 for railways.
Andhra Valley Power Supply Company ..			
Tata Power Company ..			
The Bombay Electric Supply and Tramways Company ..	94 (purchased from Tata's)	83	50 (11 for tramways and 39 for power purposes).

SURVEY OF RESOURCES : CAPITAL.

11. Bombay City is fairly well supplied with capital. All the exchange banks working in the country have branches in Bombay and the two biggest of the Indian joint-stock banks, namely, the Central Bank of India and the Bank of India have their head offices and a number of branches in the City. It is not possible to get statistics

separately for the city of the deposits in the exchange banks and Indian joint-stocks banks, but there is no doubt that of the Rs. 294 crores which were returned as deposits during 1937, in the joint-stock banks, the exchange banks, the Imperial Bank of India, and the Reserve Bank of India an appreciable portion was derived from the City. In addition, there is in the city the Bombay Provincial Co-operative Bank which so to speak forms the financial apex of the co-operative structure of the Province and the working capital of this institution during 1937-38 was Rs. 2·38 crores. There were 206 non-agricultural co-operative societies in the City in 1937-38 and their working capital amounted to more than Rs. 3 crores. In addition, there were 82 post office savings banks during the same year, with 1,32,325 accounts current and having a balance of Rs. 2·6 crores. Postal cash certificates amounting to more than a crore of rupees were also sold during the same year.

INDUSTRIES IN THE CITY—GENERAL.

12. The population engaged in industrial occupations has been estimated at 182,654 including the 6,342 persons engaged in stock-raising, fishing and salt-making. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	..	..	..	72
Butchers	..	..	..	967
Tailors, milliners, etc.	..	..	..	11,661
Washing and cleaning	..	..	..	5,588
Barbers, hair-dressers, etc.	..	..	..	3,068
Scavenging	..	..	..	5,996
Total				27,352

The remaining 155,302 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Stock-raising	..	..	..	3,223
Fishing	..	..	..	2,453
Salt-making	..	..	..	666
Cotton ginning, cleaning, etc.	..	..	..	1,875
Cotton spinning, sizing and weaving	..	..	..	113,084

Dyeing, bleaching, etc.	934
Lace, crepe, embroideries, etc.	445
Working in leather	772
Furriers, brush-makers, etc.	517
Carpenters, turners, etc.	5,863
Basket makers, etc.	483
Blacksmiths, workers in iron, etc.	1,409
Workers in brass, copper, bell-metal.. ..	282
Potters, makers of earthenware	486
Brick and tile-makers	116
Grain parchers	286
Sweetmeat and condiment makers	533
Manufacturers of tobacco	323
Boot, shoe and sandal makers	3,671
Cabinet makers, etc.	1,038
Upholsterers, tent makers, etc.	141
Lime burners, cement workers, etc.	3,371
Assembling, repairing, etc., of motor vehicles or cycles	583
Ship, boat, etc., builders	162
Heat, light, electricity, gas works, etc.	1,205
Printers, engravers, book-binders, etc.	2,171
Makers of musical instruments	614
Makers of clocks, surgical instruments, etc.	300
Makers of jewellery and ornaments	2,316
Other miscellaneous industries	5,980
Total	155,302

From the above figures it is clear that the textile industries dominate the picture. In fact, nearly 79 per cent. of the industrial workers of the City are dependent upon this industry.

The Census figures of occupational distribution can be supplemented by factory statistics. The number of factories and the people employed

therein for the Census year 1931 as also for the latest year (1938) are given below :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund ..	21	22	12,119	11,987
Textiles—				
Cotton spinning ..	77	75	124,963	163,945
Hosiery ..	3	3	163	65
Silk mills ..	2	3	1,180	204
Woollen mills ..	1	3	540	922
Miscellaneous ..	2	48	114	5,788
Total—Textiles ..	85	132	126,960	170,924
Engineering ..	88	235	13,099	19,920
Minerals and metals ..	8	20	371	996
Food, drink and tobacco ..	33	73	1,759	2,668
Chemicals, dyes, etc. ..	47	62	5,925	9,121
Paper and printing ..	55	178	4,713	7,650
Processes, <i>re</i> : wood, stone and glass ..	18	41	1,019	3,778
Processes connected with skins and hides ..	1	13	172	921
Miscellaneous ..	25	48	887	2,548
Total ..	381	824	167,024	230,513

(Note.—There has been a general increase in the number of factories in 1938 but it is also partly due to the extension of the Factory Act to smaller concerns.)

It will be seen that there is a large discrepancy in the Census figures of industrial workers and the figures of factory workers according to the Factory Report for 1931. The latter figures are more reliable and have to be accepted. It is evident, therefore, that the total number of industrial workers in the City must largely exceed the figure of 167,024 representing only the factory workers.

13. Though the industrial structure of the city is predominantly of a large scale kind, there is a large number of small scale concerns using power. This can be seen from the fact that while the Bombay Electric Supply and Tramways Company is at present supplying power for industrial purposes to as many as 2,453 concerns, the registered factories run on electric power are only about 469. There would thus seem to be nearly 2,000 small-scale concerns using electricity in the City. In addition to these small-scale concerns, there is a number of small *karkhana* type establishments such as *bidi* works, furniture works, boot and shoe making establishments, etc. Finally, there is in the city a considerable number of what may be called independent artisans such as handloom weavers, tanners, *champal* makers and so on. The City thus presents an industrial picture comprising on the one hand large industrial units in which lakhs of rupees are invested and power is used to run heavy and complicated machinery and plant of large dimension and on the other of small independent artisans who work in their own homes, market their own products and use tools and implements worth less than Rs. 50. There is thus a considerable variety of industrial establishments about which some idea is obtained by the returns collected by the Committee's investigators in respect of the different industries. *It must be added that the organised textile industry as also most of the other large-scale industries were deliberately excluded from the scope of the investigators' survey.* The investigators, Messrs. R. P. Cholia, B. M. Kale and S. M. Muzumdar, together spent about four months and each of them interviewed a number of artisans, *karkhandars*, manufacturers, and traders in the City. The following notes on some of the *cottage and small-scale* industries in the City are based mainly on the returns and other information collected by the investigators during their stay as also on other data available to the Committee.

HANDLOOM INDUSTRY.

14. The handloom weavers of Bombay City are mostly concentrated in Madanpura and Byculla. The majority of these are from the United Provinces and their condition is much the same as in the other weaving centres of the Province. Here also, the number of weavers is reported to have undergone a steady decline, it being reported that there were 1,000 handloom weavers several years ago as against only 400 to-day. The displaced workers have either accepted work in mills and similar occupations or have returned to their native places. Most of the weavers are independent workers. Some 4 or 5, however, own more than 5 looms

each. The counts of yarn used in most cases are 20s, 40s and 60s. In some instances artificial yarn of Japanese origin is also used. The main products are ordinary *sarees*, *khans* and carpets and these are sold to local dealers of Chira Bazar and Madhav Baug from day to day. The weavers complain that there is no demand for their products. The result is idleness for a considerable period of time and low prices for their finished products. 'The independent weavers are reported to hardly get work for about 20 days in a month from October to May and during the rainy season, to pass about 20 days in a month in idleness. As a result of this the income of an independent artisan is stated to be not more than Rs. 15 or Rs. 20 per month. Even a *karkhandar* owning about 12 looms, it is stated, gets not more than Rs. 40 to Rs. 50 per month. Many of the weavers have not visited their native places for years together on account of their extreme poverty. The weavers attribute their present wretched condition to competition from Japanese and Indian mill products. Another factor contributing to the same end is the higher cost of living in Bombay as compared with the mofussil centres. ' This is said to make them unable to compete with the handloom products of the rest of the Province.

POWERLOOM FACTORIES.

15. The investigator visited two powerloom factories, one of which is engaged in producing georgette from artificial silk yarn and the other in preparing *sarees*, fancy *patahs*, etc.

The factory weaving the georgettes employs about 50 persons and has an equipment worth about Rs. 50,000. All the machines are made in France. Up to 1936 this mill was exclusively using Kashmere raw silk but after that it had to give up using Kashmere silk. This was due to several causes. Firstly, while the price of Kashmere raw silk was comparatively high, that of the finished product was not correspondingly high. Secondly, there were no regular stockists of this raw silk in Bombay and it was difficult to get regular supplies of Kashmere silk. At present this factory imports artificial silk yarn from England, Italy, Belgium and Japan. The finished products are sold throughout India. The company sells the silk waste to exporters who send it abroad to be turned into yarn again. The other factory uses cotton yarn of 30s to 100s and mercerised yarn of 2/64s and 2/84s for warp and weft ; and artificial and China silk yarn for borders. It employs about 300 workers.

16. The main difficulty in the way of the silk-weaving industry of the city is reported to be the severe Japanese competition as also the internal competition. It is alleged that Japan is dumping her artificial silk goods in the Indian market with the result that the pure silk weaving industry of the country, has suffered acutely. The factory owners demand protection against this foreign competition and are confident that if this is given they will be in a position to produce pure silk fabrics. They also suggest that efforts should be made by Kashmere, Mysore,

etc., to improve the quality and lower the price of white raw silk. As regards powerloom *saree* weaving industry, it is maintained that factories established in British India are at a disadvantage as compared with those working in the Indian States due to the absence of labour laws and the lower level of wages and taxes. These factory owners, therefore, suggest that the Indian State products should not be allowed to be sold in British India without restraint and that attempts should be made to equalise conditions both in Indian States and British India. The factory owners are also of the opinion that the time has come for the establishment of a machine-making industry in the country. Finally, they stress the desirability of producing artificial silk yarn within the country itself.

HOSIERY WORKS.

17. The investigator interviewed the owners of three hosiery *karkhanas*. All of them employ more than 15 workers. Generally speaking, the equipment in a hosiery *karkhana* is worth about Rs. 30,000 and cotton, silk and woollen yarns are used. Of these only the cotton yarn is Indian and the rest is foreign. On an average a *karkhana* produces goods worth about Rs. 1,500 a month. The products are mostly sweaters, mufflers, socks, hoses, etc., and they are marketed throughout the Province.

18. The hosiery industry has to face both internal and external competition. As a measure of protection against the dumping of cheap imported hosiery, the *karkhandars* suggest that the import duty on these products should be enhanced.

DYEING AND PRINTING.

19. The dyeing and printing industry in the City of Bombay is mostly in the hands of the artisans who have come from Cutch and Kathiawar. The size of a dyeing establishment varies a great deal. The investigator came across establishments employing from 2 to 300 workers. The raw materials required in the industry are all locally purchased. An establishment employing about 12 workers needs generally raw materials worth about Rs. 250 per month. Most of the *karkhandars* secure orders from the silk and cloth merchants of Bombay and outside, by personal canvassing. The rates charged vary from 1½ to 2 annas per piece of 25 yards. The owners of these establishments complain about both internal and external competition. During the last 10 years the dyeing charges are reported to have gone down considerably mainly due to Japanese competition.

20. The *karkhandars* engaged in the printing trade do work on a contract basis. People bring their *patals*, *sarees*, etc., for printing purposes and charges are fixed according to the nature of work. The artisans employed by these *karkhandars* generally earn about 8 annas as wages per day when work is available. In this industry also there is reported to be a good deal of competition from Japanese printed goods.

COTTON CLEANING.

21. There are several cotton cleaning factories in the City. They purchase waste and rejected cotton from the local cotton textile mills and clean it. One such mill visited by the investigator has machines worth about Rs. 3,000 and employs 10 workers. About 60 cartloads of such cotton is purchased every month. The cleaned cotton is used by poor people for preparing pillows, beds, etc., and the cotton dust is used mostly for manure.

MANUFACTURE OF THREAD.

22. There are several factories in the City making cotton silk and woollen threads from local and imported yarns. The factories supply mostly local and provincial markets and have to compete against imports from abroad.

CAP-MAKING.

23. The investigator visited four shops where caps are prepared. They are small establishments where not more than one or two workers are employed on piece-work basis. The raw materials used are cloth, leather, etc. A sewing machine forms a necessary part of the equipment. The caps are sold at the shop itself. The artisans state that the demand for the more costly kinds of caps has fallen off a great deal in recent times and that the outlook for this industry is gloomy.

METAL WORKS.

24. The investigator visited a factory manufacturing brass circles from old copper pots and brass scrap, and three factories manufacturing aluminium, brass, copper, German-silver and rustless steel articles and utensils with the help of machinery. He also interviewed two *karkhanas* producing brass and copper utensils by hand-tools and five outworkers.

25. The factory manufacturing brass circles employs about 60 workers. The main difficulty of this factory is about getting adequate supplies of scrap raw materials. The owners of the factory request that the import duties on some of their raw materials should be reduced. They also stress the need for expert technical advice.

26. As regards the factories producing brass, copper and aluminium utensils, these produce all sorts of kitchen utensils and metal goods. A few of them have begun to manufacture new products like lamp fittings, shades, etc. The smaller factories mostly confine their attention to the local market but the bigger ones send their goods throughout India. Of the three establishments visited by the investigator, the largest produces both for internal markets and markets outside India but it is not able to export any brass goods at present due to severe foreign competition in the external markets. It is, however, affirmed that there

is ample scope for such exports, if Government can give concession of drawback of duty on the exports of brass goods as is given in the case of aluminium goods.

27. As regards the aluminium goods, it is stated that there is keen competition amongst the Indian, English and American owned pressing factories. Moreover, in certain new lines of production such as electric goods Japan and Germany are alleged to be dumping their products on the Indian market. Other difficulties in the way of the Indian producers are: (1) heavy freight charges, (2) high charges for electric power, (3) dearth of expert technical advice and (4) want of proper financial support. The smaller establishments are particularly worried a great deal about the financial handicap. The bigger manufacturers maintain that if they are helped by Government in their difficulties stated above, particularly in being given tariff concessions on basic raw materials, they can venture to manufacture semi-raw metal goods such as sheets, circles, etc., which are now almost wholly imported.

28. The employers who prepare different sorts of household utensils without the use of machinery, are generally small contractors providing work to a few out-workers. They purchase copper and brass sheets from the local market and distribute the same among their outworkers. They have contracts with some of the bigger brass and copper utensil dealers of the city by which they are bound to supply all their production to them, in return for which finance is provided by these dealers without interest. These employers do not own any tools of their own nor do they give any advances to their outworkers. Piece-wages are paid according to the nature of the work. As already pointed out, most of these producers do not market their goods independently, but regularly supply the requirements of the bigger dealers. A few, however, sell their products themselves through the shops owned by them. These people complain bitterly against the competition of the factories producing copper and brass utensils with power-driven machinery. Moreover, hand-made articles from Poona and Nasik are said to be preferred by many Bombay dealers as these products have established a name in the market. The result of all this is a considerable restriction of their activities. These small employers, therefore, urge that there should be restriction on factory production, and that the import into Bombay of Poona and Nasik hand-made articles should be banned. They also want to be supplied with finance at low rates of interest for purchasing their raw materials.

29. The piece-workers in the City are estimated to number more than a thousand. The nature of their work varies considerably. A few are engaged in polishing and tinning the brass and copper vessels; some others do rivetting work; and a number of them are engaged in preparing brass and copper utensils used for ordinary household purposes. They all state that there has been a considerable deterioration in their wage position. It is stated that whereas the wage paid in 1921 for preparing utensils out of one maund of copper-sheets was Rs. 8, to-day it is only

Rs. 1-12-0. Similarly, in the case of rivetting work, about five years back the wage paid was Rs. 3 for rivetting 100 articles of a particular type now it does not exceed Rs. 2-8-0. This lowering of the wage rate is ascribed to internal competition between the outworkers and the slackness in trade. The result is a steady reduction in the income of the outworkers; and the monthly income of a worker working 10 hours a day is placed at about Rs. 20 to Rs. 22 per month. Many of the workers, however, do not get this amount, as they do not obtain full employment.

GOLDSMITHS AND SILVERSMITHS.

30. There is a large number of goldsmiths and silversmiths in the City. They mostly work to order. Sometimes the customers themselves supply them with silver or gold and get them to prepare the ornaments of required shape and size. When no such work is available, some of these artisans approach the dealers in gold and silver articles and ornaments. In most cases, the cost of tools and appliances used by them does not exceed Rs. 50. The income of the artisan is estimated to be about Rs. 50 a month during the marriage season. Business is usually very slack during the rainy season.

31. The industry is much affected at present by the changes in fashion and tastes of well-to-do people. It is stated that most of the rich ladies now prefer wearing diamonds and pearls to gold ornaments. Similarly, the demand for silver articles has now considerably diminished as people now go in for articles made out of rustless steel. The goldsmiths demand that there should be some restriction on the sale of rustless steelware. They also plead for a substantial lowering and stabilisation of gold prices. It is stated that due to constant fluctuations in gold prices, people are loth to invest money in ornaments. Their other demands are: (1) an embargo on gold exports, (2) reduction in the rents of their premises, (3) appointment of an expert to guide them in devising new designs and (4) removal of the import duty on silver.

32. Besides these artisans, there is a good number of small concerns specialising in the production of silver ornaments worn by the poorer sections of the community. This kind of work consists of two parts. The first is the drawing of wires from the silver ingots and the second is the preparation of the ornaments. The latter is everywhere a handicraft industry. But in the former both machinery and hand processes are employed. It is estimated that in 10 concerns such machinery is utilised, and that in 20 others the work is done by hand.

33. The investigator visited a concern where the whole of the work is done by hand. The equipment consists of a few dies, hammers, anvils, etc. Work is brought to the *karkhana* by shop-keepers who deal in silver ornaments and the *karkhandar* is given his charges according to the type of product. The *karkhandar* earns about Rs. 40 per month. The owner of the concern complains of the competition from the owners of wire-drawing machinery. They have reduced the rates for wire-drawing to such an extent that hand-workers are said to be finding it very difficult to compete with them.

SILVER AND GOLD MELTING.

34. It is reported that there are in the city 9 shops employing about 125 people who are engaged in melting gold and silver bars, ornaments, etc. The investigator visited one of these shops. Here about 10 people are employed on a monthly wage of Rs. 20 to Rs. 25. Customers come to the shopkeeper with their ornaments, pieces of the precious metals, etc., for melting purposes. His charges for melting are 2 annas per 100 tolas of silver or gold. It is reported that there is a good deal of local competition in this line as a result of which there is said to have been a steep decline in rates.

PREPARATION OF GERMAN-SILVER UTENSILS.

35. The investigator visited a *karkhana* wherein German silver utensils are produced. Here about 12 artisans work with their own tools. The *karkhandar* produces German-silver utensils of various shapes and designs of the value of Rs. 60,000 per year. There is a Union of these *karkhandars* and the selling rates are fixed by the Union. It is, however, alleged that though rates are thus officially fixed, underhand dealings are a common feature and this is said to stand in the way of the industry. The *karkhandars* desire a reduction in the rents of the premises and financial accommodation at low rates for purchasing raw materials.

ELECTRO-PLATING.

36. The investigator interviewed two *karkhandars* who carry on electro-plating business. One of them employs 6 workers and the other 4. Electro-plating is done on articles of copper, nickel, brass, etc. The charges are generally six pies per pound. The market is local but the future of the industry is said to be gloomy due to intensive internal competition. The workers are paid 8 annas to a rupee per day according to the nature of work done by them.

IRON FOUNDRIES.

37. There is a good number of iron foundries in the city. The investigator visited five of these. Some of these foundries are engaged in producing manhole frames and covers, pipes, plumbers' requisites, etc., and some others are manufacturing building materials and hardware. These foundries vary greatly in size. Most of these establishments cater for the needs of the City. It is reported that these concerns are doing well. They, however, complain about the great rise in the price of cast iron scrap and the severity of the foreign competition.

TIN AND IRON DRUM MANUFACTURES.

38. There is over a score of power driven factories in the City equipped with all the latest types of machines for the manufacture of all shapes and sizes of boxes and drums, pails, buckets, tubes, etc. The

markets for their manufactures are to a great extent cigarettes, biscuits and confectionery factories. The products are also sold in large quantities to grain merchants and other local retail consumers. Part of the output is also sold to other provincial markets.

MANUFACTURE OF SAFES, STEEL CUP-BOARDS AND OTHER STEEL FURNITURES.

39. There are four large factories equipped with all labour-saving, power-driven machines and these factories turn out very good articles which can bear competition with any similar imports. Besides these large-unit factories, there are several small shops which also manufacture such articles.

The raw materials are to a large extent supplied by the Indian steel factories. The complaint made is that due to protective duties the local production prices are high in comparison with imported articles. Besides the difficulties of supplies of raw material, there is also very sharp internal competition.

HOUSEHOLD STEEL FURNITURE.

40. There is a large number of small concerns engaged in preparing household steel furniture. The equipment of an average concern consists of electric motors, drill machines, punching machines, lathes, etc. Excepting for Tata iron, all other raw materials are foreign. Most of these concerns have their own shops for marketing their products. The owners of these establishments are of opinion that protection to the Indian steel industry should be given by a bounty and not by an import duty as the latter hinders the development of their industry by raising the cost of production. Another difficulty facing them is the fierce internal competition. They also complain about the high level of rents for their premises, and further they require cheap finance for reorganising their works.

CLOCK MANUFACTURE.

41. The investigator visited a clock manufacturing company which has been started recently. It manufactures wall-clocks, tower-clocks, etc. The different types of clocks manufactured by the Company are sold throughout India.

42. The owner of the concern states that the industry has a bright future before it, provided Government takes some interest in it. He suggests that Government should arrange with the foreign clock-manufacturing countries to get permission for the Indian industrialists to see the actual-working of their clock factories. Government, it is also suggested, should purchase Indian clocks, reduce the railway freights and advance capital at low rates for purposes of expansion of the industry.

ASSEMBLING OF HARMONIUMS.

43. The investigator interviewed the owners of two concerns engaged in making harmoniums. The raw materials required for the industry are purchased locally. The harmoniums are sold in the City and also sent out to Colombo. The demand is somewhat brisk in the month preceding *Divali*. It is stated that the industry is a profitable one. But recently the demand is said to have decreased due to competition of cheap low-priced harmoniums made of inferior materials. It is also alleged that the profitable markets in Africa and Singapore have now been lost to Japan mainly due to the depreciation of the Yen.

MANUFACTURE OF INCANDESCENT LAMPS, LANTERNS, ETC.

44. The investigator visited a factory in the City, producing incandescent lamps, lanterns, mantles and stoves. It employs about 50 workers. The materials used are tin plates, brass sheets and galvanized iron sheets, etc. The products of this factory are sold all over India. The factory is meeting with competition from Japan and Germany. The owner suggests that Government should give some protection against these imports and also lower the duty on the imports of raw materials required for the industry. He also wants a reduction in freight charges and capital at low rates for purchase of the latest types of machinery.

PRODUCTION OF ELECTRIC FANS.

45. It is reported that there are only 3 concerns in India manufacturing electric fans. Of these one is situated in Bombay City and employs 200 workers. Excepting pig-iron and coal, all the materials used are obtained from outside. The products are electric fans, water-heaters, transformers and bulb rectifiers. Most of the products are sold in Bombay. The concern is facing severe competition from Japan and Germany. Japanese competition is said to be especially severe. Whereas a Japanese table fan is sold for Rs. 22, this concern cannot afford to sell its table fan for less than Rs. 43. As a result of this competition they have given up the production of table fans, exhaust fans, and D. C. fans. The company wants protection against the competition from these countries and also requests the favour of Government patronage. Lastly, the company stresses the necessity of technical assistance from the State in producing superior quality products.

ASSEMBLING OF PARTS AND REPAIRS OF AUTOMOBILES.

46. The investigator visited a factory assembling automobile parts. About 600 workers are employed here on monthly wages. The cars and buses assembled in this factory are sold throughout India.

47. The investigator also visited an automobile repairing concern in the City. Here old motor cars are repaired, and repainted, and bodies for motor cars, buses, etc., are built. The number of wage-earners employed varies from 10 to 50. On an average 5 to 6 automobile bodies are built per month. The cost of building a body varies from Rs. 500 to Rs. 600. The raw materials necessary for the repairing work are purchased locally. The repairing work is said to be very slack during the rainy season. It is reported that there is a good deal of competition in this line and that hand-workers are finding it very difficult to compete with workshops where machinery is used.

TRICYCLE AND CYCLE PARTS MANUFACTURE.

48. There are several factories in the City manufacturing tricycles and cycle parts and the investigator visited one such factory employing about 50 workers. The finished products are marketed throughout India, Burma and Ceylon. The *karkhandar* complains of severe competition from Japan in the tricycle trade. There is also a good deal of internal competition in this type of production and the *karkhandar* wants the Government to bring about some sort of understanding between the local producers. He believes that the industry has a bright future before it and suggests that in order to help it, Government should give a subsidy to the manufacturers (equivalent to the rise in the price of Indian steel due to protection) and also give them loans at low rates of interest. A request is also made about a substantial reduction in freight charges and in the charges for supply of water and electricity.

BATTERY-CHARGING AND ASSEMBLING.

49. The investigator visited a *karkhana* where discharged batteries of motor cars, radios, etc., are charged and which also assembles batteries after purchasing the separate parts. The *karkhandar* has an equipment of Rs. 5,000 and feels the necessity of improved appliances for preparing new batteries. His market is local, and he feels the competition from unorganised battery chargers who it is alleged, have no establishment charges to bear. The *karkhandar* is, however, of opinion that there is ample scope for the development of the industry.

MANUFACTURE OF GRAMOPHONE PARTS, PRINTING PRESSES, ETC.

50. The investigator visited a company recently started in the City for producing some of the gramophone parts. In addition to gramophone parts, printing presses and machinery parts are also produced by this concern. It employs about 40 workers. The raw materials are brass sheets, brass pipes, polishing materials, etc. The products are sold throughout India, China and the Straits Settlement.

51. The main difficulty in the way of expansion is said to be lack of technical knowledge. The proprietor wants Government to give him

expert technical advice. He also urges that the import duties on the raw materials and machinery used in the industry should be considerably reduced. Further a systematic propaganda is also stated to be essential to counteract the general belief in the country that the Indian-made articles are not up to the standard in quality. In this connection, he suggests that certificates of quality should be issued to indigenous products by Government. Finally, he wants Government to impose heavy duties on the imports of gramophones and parts thereof from Japan and other foreign countries.

SURGICAL INSTRUMENTS AND HOSPITAL FURNITURE.

52. The investigator visited two *karkhandars* engaged in manufacturing surgical instruments and hospital furniture. One of them employs nearly 400 workers and the other 100. The bigger *karkhana* produces pharmaceutical products, surgical instruments and hospital furniture. The market for these products extends over the whole of India, Burma and Ceylon. Some business is also done with Persia, Aden and Afghanistan. The products of the smaller concern are only sold within the country.

53. It is the considered opinion of these producers that all aseptic hospital furniture and surgical instruments needed by Government and semi-Government hospitals should be purchased from within the country, especially when the *swadeshi* products are of the same quality and compare very favourably in prices with the imported products. The manufacturers state that they are very much handicapped in the production of pharmaceutical products, because of the import duty on crude drugs. It is contended that as India does not produce these drugs, no duty should be imposed on these essential imports. They also suggest that the present heavy railway freight charges, should be substantially reduced and that loans should be given to them at low rates of interest for the purchase of improved machinery.

FURNITURE INDUSTRY.

54. There has been a remarkable development of the furniture industry in the City during the last 10 years and there are now many *karkhanas* engaged in the industry. The investigator visited a *karkhana* where machinery is used, and ten other smaller establishments. The big *karkhana* employs electrically run machinery and gives employment to 300 workers. These are paid daily wages varying from 10 annas to Rs. 2-8-0 each. The total capital invested in the concern is stated to be about Rs. 4 lakhs. The main work consists of preparing all sorts of furniture, although sawing work for orders is also undertaken. For the furniture work mostly Burmese teak is used. Most of the raw materials used are foreign. It is stated that though Kanara teak is excellent for furniture work, it is not possible to use it on account of the heavy freight charges, particularly in these days of severe internal competition. The products of the factory are sold throughout India

both directly and through agents stationed at Calcutta, Ahmedabad, Lahore, etc. The concern also widely advertises its goods through the newspapers and by taking part in various industrial exhibitions held all over India. It also maintains a show room.

55. The smaller *karkhanas* where work is carried on mainly by hand vary a great deal in size, and the number of workers employed in these concerns varies from 2 to 50. In all these *karkhanas* the wage-earners are mostly paid on a piece-rate basis. The demand for furniture is somewhat slack between June and August. The finished materials are mostly marketed in the City but a part of the production is also sent to distant centres like Belgaum, Broach, etc. Most of the small concerns sell their products by personal canvassing and only for cash. They cannot afford either to advertise or to appoint agents.

56. The main problems confronting the industry are over-production and severe internal competition. The number of *karkhanas* in the City is said to be far in excess of the real requirements of the market. It is suggested that entry into this trade should be licensed or that Government should encourage the formation of an association for the industry to regulate internal competition and fix a standard wage schedule for the workers. It is also suggested that the provincial Government should move the Central Government to abolish the existing duty on the raw materials used in the furniture industry. With a view to encourage the use of the raw materials of the Province itself, the *karkhandars* suggest that Government should arrange for the sale of Kanara timber in convenient standard sizes and at cheap rates. Many of the *karkhandars* also stress the urgency of an Industrial Bank for supplying them with long-term credit, as such credits will enable them to season their wood by purchasing it ahead of requirements. It is stated that seasoned timber gives excellent results and the customers can then be guaranteed the durability of the furniture. Finally, the need for making people more furniture-minded is also stressed by them.

MANUFACTURE OF TEXTILE WOODEN PARTS.

57. The owner of a *karkhana* manufacturing textile wooden parts was interviewed by the investigator. The *karkhana* employs about 75 workmen. The factory manufactures pirns, beald staves, comber boards, reeling pegs, etc. These are used by the cotton, silk and woollen mills all over India. The *karkhandar* pleads for more patronage from the Indian mills. He is also in need of technical assistance in the management of his workshop. Further he points out that the import duty levied on the wood that is imported by him is higher than the duty on the finished products imported from abroad. This is said to place the Indian manufacturer at a disadvantage. He suggests, therefore, that either the duty on the imported wood should be lowered or the duty on the finished products should be raised.

MANUFACTURE OF HEALDS AND REEDS.

58. A factory producing healds and reeds was visited by the investigator. The raw materials used are cotton yarn, varnishes, round and flat reed wire, reed ribs, reed pitches, etc. The healds and reeds manufactured by this factory are sold throughout India.

The factory is facing severe competition from Japanese and English products. The *karkhandar* urges that the import duty on healds and reeds should be raised, and that the import duty on raw materials such as varnishes, reed ribs, reed pitches, etc., should be substantially reduced. Here also, the owner points out that the finished products imported into India are charged a lower import duty while the materials from which these products are made, have to pay a higher import duty.

PREPARATION OF CRADLES, *Pats*, ETC.

59. The investigator interviewed a carpenter engaged in preparing cradles, *pats* or wooden seats, stools, etc. He purchased the raw materials locally and with the help of a labourer prepares articles worth about Rs. 250 to Rs. 300 per month. He sells direct to his customers and occasionally sends the wage-earner to hawk some of the products from street to street. He estimates his monthly income at about Rs. 30 per month.

60. The carpenter states that due to the use of ready factory-made wooden articles, in building work, the services of carpenters are not now-a-days much in demand. Secondly, the competition from substitute products like iron chairs, racks, etc., has seriously affected the carpenters' industry. The carpenter suggests that Government should assist him by selling timber on their own account at a cheap rate instead of leaving it to contractors. He further states that an appreciable lowering of the import duty on methylated spirit used in polishing, will help him to sell his product at a lower rate. His other demands are about reductions in house rent and financial accommodation at low interest rates.

PREPARATION OF PACKING BOXES.

61. The business of preparing packing boxes is mostly in the hands of poor and illiterate artisans. It does not require much capital. Old packing boxes are purchased and new ones are prepared out of them. For preparing one box, about 2 hours are required. It is sold generally in the local markets, at rates varying from 6 to 8 annas per box. The artisans put their income at about Rs. 20 per month per worker. Their main complaint is that there is not enough work to engage them throughout the year, the demand becoming slack during the rainy season. Another difficulty before the workers is the dearth of sufficient working capital.

FRAME MAKING.

62. The investigator visited an establishment where picture-frames are manufactured. He also met three artisans engaged in putting into frames pictures, photographs, etc. The *karkhana* manufactures frames with the aid of machinery run on electricity. It gives employment to nearly 30 workers on a piece-rate basis. The frames are made of Burma teak, and are sold to *Bohras* and merchants from the Deccan at rates varying from Rs. 1-2-0 to Rs. 2-4-0 per 100 feet. The proprietor of this *karkhana* states that he is trying to produce a new type of plaster frame and wants Government help in supplying him with cheap softwood suitable for the purpose. He complains about the competition of small producers who sell their frames at 4 annas less per 100 feet than the usual market price.

63. The artisans who frame pictures, photographs, etc., possess simple tools and appliances. They employ one or two workers to assist them on a monthly wage varying from Rs. 15 to Rs. 25. The requisite materials for their work such as frames, glass, cardboards, etc., are locally purchased. The work is done to meet local orders and on an average a shop-keeper is said to get about Rs. 50 per month for himself. The general complaint in the industry is one of severe internal competition.

BAMBOO AND CANE WORK.

64. The investigator interviewed a basket-maker and a cane-worker in the City. The basket-maker buys bamboos from retail merchants at the rate of 5 to 6 per rupee. From one bamboo, about 3 baskets of average size can be prepared and two men can prepare 4 such baskets in a day. The selling price of the baskets is about 3 to 4 annas each. Apart from baskets, mats, shutters for windows, etc., are made and marketed through the shop maintained by the worker. Most of the artisans are stated to have their own shops. The income of each artisan in the family is estimated to be about Rs. 6 per month. The demand for bamboo products is going down very fast. A few years back there was a very good demand for bamboo *karandis* (closed baskets) for exporting onions out of Bombay. But the merchants are now using gunny bags and a profitable source of income has been lost to the basket-makers. The artisan interviewed requests that bamboos should be made available to him at cheaper rates. He also wants a reduction in the rents of his premises.

65. The cane worker prepares children's chairs, small tables, cane boxes, etc., out of canes and bamboos purchased from retail dealers. Canes are purchased at the rate of ten annas a pound. He requires about 5 to 6 lbs. of cane in a week. The finished products are sold by personal canvassing. The income of the artisan is estimated to be Rs. 5 to Rs. 6 per month. During the rainy season when the demand for their products is slack the condition of these people is reported to

be very pitiable. The cane worker requests that Government should patronise his products and should also supply him with capital for the purchase of raw material.

TANNING.

66. Bombay City is the largest centre in the Province where "half tanned" leather, vegetable tanned and finished leather, chrome leather and leather articles are manufactured. The tanning centre is located at Dharavi. The investigator visited two large tanneries, two independent tanners following the crude old processes and two others engaged in dyeing and finishing leather.

67. Of the two tanneries visited by him, one is a large scale tannery and is owned by a limited company. The number of people employed varies from 150 to 225 and the capital invested is reported to be nearly Rs. 1½ lakhs. This factory tans about 220 raw cow-hides and 50 raw buffalo-hides in a full working day. The raw hides are purchased from Dharavi and Bandra and sometimes obtained even from Cawnpore and the Nizam's Dominions. The tanning materials used are *harda*, lime, *turvad* bark, *babul* bark and chemicals for chrome tanning. The tannery produces three kinds of leather: (1) finished chrome leather, (2) vegetable tanned sole and harness leather and (3) leather for ginning mills. The finished chrome leather is exported mainly to London; the sole leather and harness leather is meant for Baghdad and Iran and the leather for ginning mills is consumed mostly within the Province.

68. The second tannery which is a proprietary concern employs about 20 to 22 workers in its tanning department. It tans per month about 300 cow-hides, 5,000 sheep-skins and 3,000 goat-skins. The cow-hides are mostly purchased from Dharavi, whereas the sheep-skins come from Basrah and Quetta and the goat-skins from Africa and Aden. All the leather produced is used for making suit cases, bags, *champals*, hand-bags, etc. Sometimes the quantity of their own finished leather is inadequate and they have to buy additional leather from the market. In the leather goods making section of this factory about 150 persons are employed. The finished products are sold through two shops maintained by the concern.

69. Both the tanning concerns complain that the raw hides supplied by and obtained from the slaughter houses are not properly flayed. The tanners also stress the urgency of developing a tanning extract industry. According to them the tanning materials found in abundance in the forests, can very well be utilised for the manufacture of tanning extract. They, further, stress the necessity of: (1) improving the breed of the cattle in India and feeding them properly, (2) of abolishing the import duty on wattle bark extract, and (3) of securing favourable trade terms with the United Kingdom.

70. The tannery using its finished hides in its own leather works urges that Government should patronise only Bombay Province products, use their good offices with the Municipality to lower the water

rate and further minimise competition from small producers by fixing prices for standard articles. They also urge the need for lowering railway freight so that they can extend their markets.

71. In addition to the two tanneries, there are reported to be about 80 independent tanners at Dharavi. They tan mostly by the crude old processes. The raw hides of cows and buffaloes are locally purchased. Usually a family of two tanners can tan 15 to 20 hides in a week ; The market for their finished products is local. The income earned by such a family is estimated at about Rs. 15 per month. The main complaint of these tanners is that they do not get good raw hides as the big tanneries enter into long term contracts with butchers and monopolise all the better quality hides. This is said to have lowered the quality of their finished products and resulted in a decline in demand. These tanners are reported to be also in need of education in better methods of tanning.

72. At Dharavi a few people are also engaged in finishing leather for harness and belting. The processes are very simple. The dry leather is damped and scoured. It is then set out and a little dubbin (a mixture of tallow and oil) is rubbed into the flesh as well as into the grain after which the hides are hung up to dry. They are then left in a pile for a short time to become mellow and subsequently cleaned on the flesh and the grain. This business is mostly in the hands of Madrasis and Muslims. The investigator interviewed two artisans engaged in this trade. It is stated that these people have to purchase their dry leather on credit from merchants to whom they have to sell back the finished products and the workers feel that this gives an opportunity to the merchants to fleece them at both ends. It is reported that a family earns about Rs. 25 to Rs. 30 per month from this industry. The most urgent requirement of these people is cheap credit. They also plead for a reduction in the rent of the pits used by them.

MANUFACTURE OF SHOES AND SANDALS.

73. There is a large number of small workshops in the City where shoes and especially sandals are manufactured. A shop is generally rented by a well-to-do *mochi* who employs from 7 to 8 workers under him on a piece-rate basis. In some workshops a sewing machine is used ; in others, stitching is done by hand. The workers bring their own tools and the leather is supplied by the employer who buys it in the local market. It is estimated that an owner earns about Rs. 40 to Rs. 50 per month while the workman gets Rs. 25 to Rs. 30. It is stated that since recently the control of these workshops is passing into the hands of capitalist financiers.

74. The *mochis* complain about the steep fall in prices of their products and about the severe competition of imported and factory-made shoes. They also complain about the deterioration in the leather produced by local tanners.

RUBBER AND CANVAS SHOES.

75. The investigator visited a factory producing rubber and canvas shoes, where nearly 250 people are working. Some of the raw materials are imported from Germany and Japan as these are reported to be either costly to make, or not available in the country at all. The rubber and canvas shoes are sold throughout India and also sent to parts of Africa. The owner of the factory wants protection against the keen competition of the foreign-owned large-scale factories in India. He wants that the import duties on the raw materials needed in his industry should be reduced. Further, he wants finance on cheap terms, and reduction in the electric, water and freight charges.

MANGO CANNING.

76. India is famous for her mangoes, delicious in taste and rich in vitamin contents. The difficulty, however, is that it is a seasonal fruit and has to be canned if it is to be made available throughout the year. This is sought to be done by a cannery established at Chinchpokli. It claims to be the first of its kind in India to be organised on a thoroughly scientific basis and is conducted under expert supervision. The working season of the factory is from May to July and about 150 people get employment during this period. In the slack season, only 15 workers are employed.

77. The plant of the cannery is worth about Rs. 50,000. The greater part of it was made to order by a reputed firm of canning machinery manufacturers of America. A part of it was also locally manufactured. The various implements used in peeling, slicing, churning and other processes of manufacture, are of stainless steel.

78. The cannery purchases the best mangoes from Ratnagiri, Thana and Bulsar. Last year about 6 lakhs of Alfonso mangoes were purchased at rates varying from Rs. 4 to Rs. 8 for a basket of 6 dozens. The company has also in the last season added to their list of canned products plums, pears, tomatoes, etc. The mangoes are obtained from long established dealers in the trade. The other fruits are obtained through the Bombay wholesale market.

79. The manager of the factory states that the mango crop can be much increased and the fruit made available at cheaper price. For this the trees have to be properly watered, manured and cared for. Moreover, new plantations of fruit trees can be grown on the waste lands and the slopes of hillocks as is being done in California. It is also suggested that Government should give forecasts of first yield from year to year, as without this it becomes difficult for the manufacturers to accept in advance the contracts for the finished products. Further it is suggested that the railways should make special arrangements for the transport of fruits. Freight charges are reported to be unduly heavy and it is urged that they should be reduced. Finally, the Manager

suggests that the present import duty on bottles and cans trade should be considerably reduced.

80. The market for the finished products is international. Agents are appointed in big centres like London, some cities in China, Calcutta, Lahore, etc. Advertising is also undertaken on a very wide scale. Last year about 3,00,000 tins were packed in the factory and the whole of this production is stated to have been easily marketed. It is maintained that there is good demand for the products in the international market, though the same cannot be said of the Indian market.

81. The factory, is stated to suffer from the competition of small *karkhandars* who it is alleged, use crude processes and sell their products at low prices. In addition it also feels very severely the competition from countries like the U. S. A., Australia, England, etc., in both the internal and external markets.

82. The various demands put forth by this cannery in order to further the development of the canning industry may be summed up as under :—

- (1) Small and uneconomic units should be discouraged.
- (2) The duty on imported canned fruits should be raised.
- (3) The import duty on tins and cans should be reduced.
- (4) Uniformity should be maintained in octroi duties, and
- (5) The industry should be kept in touch with the latest technical information regarding the canning industry abroad.

FRESH FRUIT JUICES.

83. The investigator visited a concern where fruit juices of various kinds are preserved without chemical preservatives. Throughout the year about 18 workers are employed on daily wages varying from 12 annas to Rs. 1-4-0. The equipment of the establishment consists of fruit presses and sterilizers. The *karkhana* prepares fruit juices out of oranges, pine-apples, lemons, grapes, mangoes, tomatoes and cane sugar. A serious difficulty in the way of the expansion of the industry, is reported to be the absence of a glass factory which can supply the required number of bottles of standard type and good quality. Bottles are now ordered from Germany and the freight charges are stated to be heavy. The bottles of fruit-juice are sent all over India through agents located in big centres like Nagpur, Calcutta, Lucknow, etc. About three-fourths of the production is sent out to centres other than Bombay. It is stated that there is a good margin of profit in the industry. The promoters of the concern are confident that the industry is capable of much expansion. They require Government to give them protection by means of an import duty against powerful foreign competitors. They also suggest that the railway freight charges should be considerably reduced. Further, they require Government to educate the people in dietary matters, especially with regard to the importance of fruit consumption.

AERATED WATER MANUFACTURING.

84. There are many aerated water factories in Bombay City. Three of these were visited by the investigator. Each one of them employs more than 50 workers. The machines ordinarily used by them consist of gas servers, syrup manufacturing machines, hand fillers, generators, washing machines, etc. The demand for these drinks is very brisk during months of March to June.

85. For preparing various kinds of mineral waters, soda bicarb, sugar, saccharine, colours, essences, bottles, etc., are necessary. Of these only sugar is Indian and the rest are imported from outside. Most of the factories produce soda, lemon, rose, orange and other kinds of aerated waters. It is estimated that the cost price of soda-water comes to about 5 to 5½ annas per dozen bottles. These are sold wholesale at 6 annas. The aerated waters are sold in the City and the Suburbs.

The general complaint is about the internal competition. It is stated that as the use of saccharine instead of sugar substantially lowers the cost of production it is being used by a number of producers.

BAKERIES.

86. There are a number of bakeries in the City, the bigger ones making bread, biscuits, etc., and the smaller ones, particularly those situated in working class localities make only cheap buns and biscuits. The investigator visited six bakeries. Generally speaking establishments employing more than 20 workers use either mechanical or electric power. The rest have old fashioned furnaces in which either fire-wood or coal is burnt. Some of the bakeries are owned by restaurant keepers. The bakeries generally purchase their requirements of flour ghee, sugar, butter, etc., locally. Cakes, biscuits, bread, etc., prepared by these bakeries are mostly sold in the City. Some of the bigger bakeries also market their products outside the City. Demand for bakery products is very brisk during the X'mas season.

PRODUCTION OF BUTTER.

87. The investigator visited a big dairy, using power-driven machinery and 4 other smaller dairies. Most of the dairy owners are members of the Butter Manufacturers' Association. The big factory has a branch at Anand and employs nearly 330 workers. It has an equipment of about Rs. 10 lakhs. It produces butter, coffee and casein. Two-thirds of the production, however, consists of butter. Most of the raw materials are locally purchased. The products have an international market.

88. The smaller dairies own one or two churning machines. They get the cream mostly from Anand and other adjoining centres in

Gujarat. Tins, packing and other materials are purchased locally. The butter produced is mostly sold in the City and also exported to Goa, Ceylon and Africa. The ordinary price of butter varies from 10 to 14 annas per lb. A few of the dairies also maintain milk bars.

89. The dairy owners emphasise the urgent necessity for Government taking active steps to improve the breed and milk-yielding capacity of the Indian milch cattle. It is stated that if this is done, Bombay can become a big export centre for butter. Even within the country there is said to be considerable demand for good quality butter. The need for cold storage facilities on railways is also emphasised. It is also stated that the producers of cream at the production centres need education in sanitary matters. Further there is a strong complaint against the competition from adulterated butter and the dairy-owners urge that there should be heavy punishment for people making or trading in adulterated butter. Lastly, the dairy-owners suggest that there should be grading of butter according to quality, and strict enforcement of correct declarations on labels.

POWDERING OF COFFEE BEANS.

90. The investigator interviewed an artisan preparing coffee powder from coffee beans. He works by himself and imports raw coffee beans from Coimbatore. The coffee beans are powdered with the help of a grinding machine and the finished product is sold locally. It is stated that due to intense internal and foreign, especially French, competition there is no adequate return from this business.

PRODUCTION OF PICKLES, *Masala*, ETC.

91. The investigator interviewed a *karkhandar* producing pickles, *masalas*, etc. It is stated that the *karkhandar* practically started with no capital but to-day has about Rs. 30,000 invested in the industry as a result of saving from the profits. He employs about 34 workers who are paid on a monthly basis. The pickles, jams, *masalas* and other products are produced from chillies, sugar, lemons, mangoes, etc., and the monthly sales come to about Rs. 6,000. The preparations are popular throughout India and are sent even to England and Africa. The industry is reported to have good potentialities for expansion.

CONFECTIONERY.

92. The investigator interviewed the proprietors of two confectionery works. One of them employs nearly 60 workers and the other about 10. The bigger *karkhandar* has machinery worth about Rs. 75,000 and prepares all sorts of confectionery products. These are marketed all over India through merchants and agents. It is stated that the

karkhana has now given up the production of toffee, as it cannot compete with Japanese imports. The smaller *karkhana* produces mainly for the local markets.

93. The general complaint in the trade is about the internal competition. The bigger *karkhandar* wants an appreciable reduction in railway freights so that he can expand his market. He also wants protection against foreign confectionery, especially Japanese toffee.

FLOUR MILLS.

94. The investigator visited three flour mills. Two of these are big mills and are owned by one company. The third is comparatively a small mill. In the two big mills owned by the company, about 500 workers are employed. Various grades of flour are produced and sold in India, Burma, Ceylon and other overseas markets. The other flour mill has 16 workers. The flour is sold locally and also to a small extent in South India. The proprietor of this mill complains about the intense competition from other flour mills. According to him, there are no prospects in the industry unless competition is regularised.

PRODUCTION OF VEGETABLE OILS.

95. The investigator visited a factory, where refined vegetable oils, vegetable margarine and other vegetable products are manufactured from the indigenous vegetable oils. It is owned and managed by Europeans. The factory is equipped with machinery of the latest type and its products are sold all over India and Burma. About 500 people are employed here. The only difficulty mentioned by the concern is the shortage of sweet oil tank wagons for transporting the supplies of raw materials from up-country to Bombay.

SOAP INDUSTRY.

96. The investigator visited three *karkhanas* and two factories engaged in the manufacture of soap. Both the factories have up-to-date and costly equipments. Raw materials used are all kinds of vegetable oils, caustic soda, silicate of soda, fats and resin. Among the vegetable oils, coconut oil is imported from Ceylon. Both washing and toilet soaps are produced as also face powders and hair oils. The products are sold throughout the country.

97. The *karkhanas* work with hand presses. They use coconut oil, caustic soda, silicate of soda and resin. Most of them prepare only washing soaps. The soaps are marketed mostly in the Province and sometimes sent to other provinces as well. These *karkhandars* complain about the high freight rates and octroi duties they have to pay both on the raw materials and on the finished products. They also complain about the import duty on chemicals. The greatest problem for them is,

however, that of the competition of the organised factories, both foreign and Indian. It is alleged that in the absence of any laws restricting the percentage of fatty substances in the soap, many inferior quality soaps are sold in India. They suggest, therefore, that the percentage of fat in soaps should be fixed and marked on every cake of soap as is done in some other countries. They also suggest that Government should make available to them expert technical advice and further that Government should give publicity to their products.

CHEMICAL WORKS.

98. The investigator visited two chemical works. One of them has an investment of more than Rs. 1 lakh in the concern and employs 30 workers. It imports various aniline dyes from all parts of the world and reduces and mixes them to produce a variety of shades and strengths of dyes and packs them in tins. The tins are sold throughout India. The concern is facing serious competition from foreign imports.

99. The other concern has an investment of Rs. 50,000 and employs nearly 85 workers. It imports soda ash and caustic soda from abroad and prepares sodium silicate, adhesives, etc. Its products are sold in India and East Africa. There is a complaint about the heaviness of the railway freight charges, and also about the severe competition from Japan in sodium silicate. The owner of the concern needs finance to go in for improved equipment and feels that Government should come to his assistance.

PERFUMERY PRODUCTS.

100. The investigator interviewed two establishments engaged in this industry. One of them uses electrically run machinery and has an equipment of the value of Rs. 1 lakh. It employs nearly 25 workers. Its requirements are oils, chemicals and bottles. The bottles are all foreign but some of the oils and chemicals are Indian. Hair-oils, soaps, brilliantine, toilet powders, etc., are produced and are sold both in the local and outside markets. The other concern is a small one and employs only 2 workers. The work here is done mainly by hand. For producing face creams, powders, etc., pure vaseline, chemicals, etc., are used. The products are marketed throughout India. The main demands of those engaged in this industry are :—(1) lower freight rates, (2) refund of the excise duty levied on the rectified spirit that is used in their preparations and (3) finance at cheap rates for the purchase of machinery.

Udabatti PRODUCTION.

101. The investigator visited an establishment where three partners are preparing *udabattis*, during their off time. They locally purchase the raw materials required and prepare *udabattis*. These are sold in

the City, Sholapur and Kolhapur. It is stated that there is no regular demand for their *udabattis* but being a side-business, it yields them some profit.

Bidi MAKING.

102. The investigator reports that *bidi*-making is a widely followed occupation throughout the City. The work is being carried on mostly in small and ill-ventilated places, where the workers are crowded together and there is hardly any elbow room between them. The hours of work are not regulated and many smaller workshops are open day and night. Women are largely employed. The workers are paid on piece-work basis. The investigator interviewed some of the employers and wage-earners in the trade.

The size of the *bidi* shops varies a great deal and the number of workers employed therein varies from 2 to 75. In most cases a *bidi*-making *karkhana* has its own shop. Three kinds of *bidis* are generally prepared ; (1) *tokadi*, (2) *beech-band* and (3) *sadi* (ordinary). On an average a worker gets an income of Re. 1 per 1,000 *bidis* in the case of *beech-band* and *tokadi* and 12 annas in the case of *sadi bidis*. A good worker can prepare about 600 to 700 *bidis* a day. The demand for *bidis* is greater during winter.

103. The *bidi-karkhandars* urge that the town duty on tobacco should be abolished. Some of the smaller *karkhandars* also want financial facilities at cheap rates of interest. Their other suggestions are : that the existing severe internal competition should be regulated by restricting the number of *bidi-karkhanas* and that the rents of their *karkhanas* should be considerably reduced.

The *bidi* workers who work in these *karkhanas* on piece-work basis, urge that they should be allowed to work in their own homes instead of in the *karkhanas* where there is no space to work freely. The employers, however, seem to be against this suggestion as they are afraid that the workers will then substitute cheaper tobacco and the quality of their *bidis* will suffer. The other demands of the workers are for limited working hours and higher wages.

ART FLOORINGS AND CEMENT TILES MANUFACTURE.

104. The investigator visited a *karkhan* engaged in the manufacture of cement slabs for flooring purposes. The *karkhana* owns hydraulic presses, planing machines, marble cutting and polishing machines and other equipment. It purchases cement, polishing stones, sand and marbles of various kinds. The marble chips and lumps, polishing stones, etc., are imported from abroad. The tiles, flooring slabs, etc., prepared in the *karkhana* are mostly sold in the City itself, though sometimes they are also sent to up-country centres like Ahmedabad,

Poona, etc. The suggestions made by this *karkhandar* may be summed up as follows :—

- (1) restriction on activities of small factories which produce inferior quality goods and spoil the market,
- (2) reduction in the price of cement which forms the principal ingredient in tile manufacture,
- (3) reduction in freight charges, so that up-country markets could be catered for,
- (4) financial accommodation at cheap rates,
- (5) a thorough survey of Indian marble quarries with a view to find out whether marbles of various colours can be obtained in India itself.

POTTERY.

105. The investigator interviewed some potters in the City. The potters follow the old processes. These artisans seem to be economically in a very depressed condition. They used to get their clay some years back, from Dongri and Reay Road for almost nothing. Now due to the intensive building activities in the City, they have to bring their clay from outside the City limits. This they do by 5 or 6 potters combining and bringing clay from Chembur; the cost comes roughly to Rs. 3 per month for each. The pots and *shegdis* prepared are generally sold in their own localities. A potter's family is estimated to earn about Rs. 10 to Rs. 12 a month. The market for the potters' wares is becoming narrower and narrower day by day. They suffer from the competition from iron *shegdis* and other substitutes like stoves, etc., and from the increasing use of aluminium and other metal wares. The potters view their future with grave misgivings.

POTTERY WORKS.

106. The *karkhandar* interviewed by the investigator has his own factory, where he produces various kinds of articles such as W. C. pans, urinals, wash basins, crucibles, etc. Here about 75 people are employed and the equipment is worth nearly Rs. 80,000. The raw materials of the industry are China clay, quartz, white lead, borax, soda wash, zinc oxide, etc. The goods are at present sold mostly in this Province but the owner hopes to extend his market to other provinces also. The factory has to face competition from foreign imports. The company also feels very acutely the need for additional capital for purchasing raw materials in bulk and the owner requests Government for financial accommodation at cheap rates.

PRINTING PRESSES.

107. The investigator visited some of the printing presses in the City. These vary greatly in size. Most of them do binding work and a few are also publishing houses. The bigger printing presses mostly import their raw materials from abroad. The smaller printing presses generally

buy locally their requirements. Orders for printing office requirements advertisement posters, etc., are obtained by personal canvassing but due to competition between the presses, the rates obtained are not very remunerative. The printing press owners stress the need of some kind of organisation by which competition could be eliminated amongst them. Some of the Indian publishing houses also suggest that books printed in foreign countries should not be prescribed for the primary and secondary courses in Indian schools.

TYPE-FOUNDRIES.

108. There is a number of type-foundries in the City. These type-foundries manufacture cast lead types and some other requisites of the printing trade, out of lead, antimony, tin, galvanised zinc sheets and brass sheets. Most of these manufacturers maintain that the import duties levied on their raw materials are heavy and unscientific.

The equipment in a type-foundry consists of type-casting machines, moulds and matrices. The type-casting machines are usually imported from abroad while the moulds and matrices are mostly manufactured locally. Some of the machines are hand-driven and some are power-driven. It is alleged that the duty on hand-driven machinery is higher than the duty on power-driven machinery, and that such differentiation discourages small cottage workers who find it difficult to make use of imported tools. The types manufactured by these Bombay foundries are sold throughout India, and some of them are even sent to Africa, Java and the Fiji Islands, where, however, they have to compete with Japanese and German types. All the *karkhandars* are unanimous in their opinion that the spread of literacy will bring them more and more work. For the present they want Government to purchase their requirements of the "cases", "galleys", "composing sticks", etc., for Government printing presses, from Indian manufacturers. They also want protection against Japanese and German imports of lead types, reduction in the heavy railway freights, reduction in the import duties on raw materials and higher duties on the finished products and finance at low rates of interest.

MANUFACTURE OF INK, PASTELS, ETC.

109. The investigator interviewed a *karkhandar* producing ink, gloy, pastels, and type-writer ribbons. This *karkhandar* locally purchases his requirements of acids, chemicals, different colours, bottles, etc. His products are sold in India, Burma, Ceylon and Uganda. The *karkhandar* is of the opinion that his industry has a rosy future. He complains, however, about the competition from Germany in pastels and from Japan in chalk and suggests that he should be given some protection against this competition. He also stresses the need for a reduction in freight charges. Finally, he wants finance at cheap rates of interest.

RUBBER STAMP MAKING.

110. The investigator visited two establishments, where rubber stamps are prepared. In one, about 5 men are employed and in the other only two. The bigger *karkhana* utilises rubber sheets, handles, plaster of paris, moulding powder, etc., of the value of Rs. 500 per month. With the help of a rubber vulcanizing machine, worth about Rs. 350, rubber stamps are prepared. The market is mainly local. Competition is said to have become very keen in this industry during the last two years.

PREPARATION OF BRUSHES.

111. The investigator visited a tooth brush factory which claims to be the only one of its kind in India and also two other smaller establishments producing brushes for industrial use. The owner of the tooth brush factory employs nearly 60 workers. Apart from steel wires and celluloid, his requirements of bristles, fibres, animal hair, wood, etc., are supplied from within the country. Tooth-brushes, toilet brushes and brushes for industrial use are produced and sold throughout India and Burma.

112. The smaller establishments primarily interest themselves in preparing brushes meant for cleaning machinery and floors, although a few of them also produce brushes for toilet purposes. The fibres and steel wires used are foreign but the coir, animal hairs, wood, etc., are Indian. Work is done mostly by hand and the products are sold in the local markets. In addition to these *karkhanas* there are also a few *Bhayyas* at Dharavi and Mahim producing, on a very restricted scale, brushes from animal hair and earning from Rs. 15 to Rs. 20 per month.

113. The owners of these brush factories suggest that the import duty on steel wire should be reduced, that Government and railways should patronise their products, that there should be restriction on the imports of foreign brushes and lastly that they should be given financial and technical assistance.

POSSIBILITIES OF NEW INDUSTRIES.

114. The City of Bombay has practically unlimited possibilities for further industrial expansion. It has all the facilities that make for the successful operation of industries. It is ideally situated for the establishment of numerous large-scale and small-scale industries. The industries which seem to offer considerable scope for establishment in the City can be classed into three groups, viz., (1) Chemical and electro-chemical, (2) engineering and (3) miscellaneous. In the first group come the industries for the manufactures of aluminium, caustic soda, bleaching powder, potassium chlorate, other chemicals and artificial silk. The recent discovery of large deposits of high grade bauxite within about

20 miles from the City by the Department of Industries should make it possible for the establishment of an aluminium plant near the City. Similarly the raw materials necessary for the manufactures of caustic soda, bleaching powder, potassium chlorate and other chemicals are available within easy reach of the City and it should be possible to manufacture these products which are at present imported in large quantities from abroad. There is a growing demand for artificial silk yarn at present and most of it is being met from imports from outside. The most important basic raw material for the manufacture of artificial silk yarn is cotton linters or cheap quality cotton which is available here in abundance. There appears thus to be great scope for this industry as apart from other advantages, Bombay provides an excellent market for artificial silk yarn and cloth. As regards the engineering industries, some of the productions in this line are; electric fans, transformers, motor and control gear; electric lamps and accessories; builders' and domestic hardware; textile machinery parts, metal lamps, etc. At present these products are largely imported and in a City like Bombay where every kind of facility for industrial development is available, it should be possible to start several industries for the manufacture of these various articles. Among the third group of miscellaneous industries that can be started with advantage in the City of Bombay may be mentioned the manufacture of belting for machinery, of articles from waste cotton, of white lead, bichromates, leather cloth, etc. Similarly the large imports of printed and dyed cotton goods into India, show that there is a good scope for establishing a central dyeing and calico printing plant in Bombay. Further, the City has excellent facilities for the location of an automobile factory. In short, the City of Bombay affords vast scope for the establishment of numerous industries for the manufacture of varieties of products and articles at present imported in large quantities from foreign countries.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume I

Notes on the Economy and Industries of the ~~different~~
Districts of the Bombay Province

BOMBAY SUBURBAN

BOMBAY

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders, and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small-scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BOMBAY SUBURBAN DISTRICT.

AREA AND POPULATION.

The Bombay Suburban district was created in 1920 when the southern portion of the Salsette Island including Trombay and about seven villages around Ambernath was separated from the Thana district. It has an area of only 154 square miles and a population of 179,524. Of these 111,204 live in urban areas consisting of eight towns and the remaining 68,320 live in 87 villages. Of the eight towns the more important are :—

					Population.
Bandra	..	..	..	..	43,290
Kurla	..	..	..	..	30,311
Vile Parle	..	..	..	..	11,290

The proportion of the urban population to the total population is more than 61 per cent.; this is due to the fact that the district is closely connected with the Bombay City and forms a part of Greater Bombay.

According to the Census of 1931 the total number of principal earners in the district is 74,969 of whom 61,016 are males. The occupational distribution of this number is as follows :—

Exploitation of animals and vegetation	..	..	15,718
Exploitation of minerals	..	..	807
Industry	..	..	17,313
Transport	..	..	4,986
Trade	..	..	7,961
Public force and administration	..	..	3,732
Professions and liberal arts	..	..	1,901
Living on their income	..	..	548
Domestic service	..	..	8,251
Insufficiently described	..	..	12,328
Unproductive	..	..	1,424
Total			<u>74,969</u>

The proportion of the industrially occupied persons to the total earners is more than 22 per cent. Besides the 17,313 persons shown as engaged in industries proper, there are 3,607 persons engaged in fishing and 774 persons engaged in salt making. Though these have been included

under "exploitation of animals and vegetation" and "exploitation of minerals" for purposes of Census classifications, they are engaged in more or less industrial occupations. Adding these, therefore, the total number of principal workers who are industrially occupied comes to 21,694.

HEALTH AND MEDICAL FACILITIES.

2. Some indication regarding the health conditions in the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 23·36 while the mean ratio of deaths for the same period was 16·84 per thousand. In fact, the Bombay Suburban district has the lowest birth rate and death rate in the whole of the Province. The survival rate is also very low being only 6·52 per thousand.

As regards medical facilities, there is a hospital at Bandra and another at Kurla. In addition there are dispensaries at Bandra, Andheri and Kurla. At Trombay there is a leper home maintained by private persons. Being near the City of Bombay, the district has better facilities for medical help than most other districts.

LITERACY AND EDUCATIONAL FACILITIES.

3. According to the 1931 Census 37,994 persons are returned as literate, thus constituting a literacy percentage of more than 21 for the district.

The educational facilities available in the district are summed up in the following statement for the year 1937-38 :—

Description.	No. of Institutions.	No. of Pupils.
Primary schools	124	16,273
Secondary (including lower secondary and English teaching) schools.	20	6,952
Commercial, agricultural and industrial schools ..	3	131

TRANSPORT FACILITIES.

4. The close proximity of Bombay City, gives the district the benefits of all the transport facilities available in that City itself. The district is well served by all modern means of communications.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

5. The district has a total area of 91,016 acres of which 29,071 acres constitute the gross cropped area. Current fallows constitute 18,890 acres. Forests absorb only 2,545 acres while uncultivable waste or land that is not available for cultivation is 25,389 acres. About 15,251 acres

are classified as culturable waste or land which is theoretically available for cultivation. The following table gives details of the classification by crops of the cultivated area for 1937-38 :—

					Area in acres. 1937-38.
Rice	..	..	..	..	12,608
Cocoanuts	..	..	..	..	774
Fodder crops	..	..	..	..	13,215
Fruits and vegetables	..	..	..	..	2,413
Other miscellaneous crops	..	..	..	..	61
Total ..					<u>29,071</u>

Fruits and vegetables accounted for 2,413 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following information in respect of 1938-39 :—

					Area in acres. 1938-39.
Vegetables	..	..	..	..	76
Green vegetables	..	..	..	..	312
Fruits—					
Plantain	11				
Mango	1,923				
Others	78				
					2,012
Total ..					<u>2,400</u>

More than 13,000 acres are under fodder. The details of live-stock in the district according to the Census of cattle taken in 1934-35 are as follows :—

Bulls and Bullocks (breeding, working and young stock)	9,007
Cows (do. do.)	8,143
Buffaloes (do. do.)	1,810
Cow-buffaloes (do. do.)	14,178
Sheep and goats	6,634
Horses and Ponies	518
Donkeys	481

SURVEY OF RESOURCES : POWER.

6. The Bombay Suburban Electric Supply Company supplies the district with electricity. It purchases its supply of power from the Tatas. In 1936-37 the total units purchased were about 3·8 millions of which 3·2 million units were sold to the public, the total number of units sold for power purposes being nearly 1·6 millions.

SURVEY OF RESOURCES : CAPITAL.

7. The district being quite close to Bombay City has very good advantages as regards capital resources as it can get all the facilities from the numerous banking establishments in Bombay City.

INDUSTRIES IN THE DISTRICT—GENERAL.

8. The population engaged in industrial occupations has been estimated at 21,694 including the 4,381 persons engaged in fishing and salt-making. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Tailors, milliners, etc.	..	..	..	558
Washing and cleaning	..	..	..	667
Barbers, etc.	..	..	..	544
Scavenging	..	..	..	660
Total ..				2,429

The remaining 19,265 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Fishing	..	..	..	3,607
Salt-making	..	..	..	774
Cotton ginning and pressing	..	..	..	339
Cotton spinning, sizing and weaving	..	..	..	6,426
Carpenters, turners, etc.	..	..	..	635
Blacksmiths, etc.	..	..	..	187
Potters and makers of earthenware	..	..	..	330
Manufacture of matches, fireworks, etc.	..	..	..	3,578
Boot and shoe-makers	..	..	..	343
Lime burners, cement workers, etc.	..	..	..	1,072
Other miscellaneous industries	..	..	..	1,974
Total ..				19,265

Of these, no less than 11,082 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931	1938	1931	1938
Government and Local Fund ..	2	1	291	129
Textiles	5	8	4,945	5,936
Engineering	3	4	723	151
Minerals and metals	..	1	..	21
Food, drink and tobacco	5	10	171	466
Chemicals, dyes, etc.	11	7	4,233	1,298
Paper and printing	2	2	186	217
Processes regarding wood, stone and glass.	1	14	491	1,042
Processes regarding hides and skins ..	..	1	..	60
Miscellaneous	1	8	42	629
Seasonal factories	..	1	..	49
Total ..	30	57	11,082	9,998

9. The investigator, Mr. S. M. Muzumdar, spent 18 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

FISHING INDUSTRY.

10. There is a large fishing industry in the suburban district, the chief centres being Danda and Versova. The investigator interviewed some of the fishermen at Versova. Some of the fishermen have their own boats and nets. The boats are worth about Rs. 600 each and the nets about Rs. 200 to Rs. 300. These boats are generally worked by 4 or 5 men. The average earnings of these fishermen are estimated to be about Rs. 25 to Rs. 30 a month. The brisk season lasts from October to March and they find no difficulty in disposing of their catch. The other fishermen who have no boats of their own, depend upon the goodwill of their relatives and friends who own boats for going out to sea. For this help, they have to give a part of their catch to the owner of the

boat. Marketing of the fish is usually done by the fisherwomen. The main demand put forth by the fishermen is for finance at cheap rate of interest, which would enable them to build more boats and purchase more nets.

HOSIERY WORKS.

11. The investigator visited one hosiery works in the district where nearly 50 workers are engaged in preparing knitted underwear and scarves from cotton and woollen yarn. The products are sold mainly within the Province.

The proprietor of the factory complains about the severe competition he is meeting in his trade both from internal and external concerns. It is stated that there are a number of small-scale concerns having little equipment and not subject to the Factory Act. Their competition is very keenly felt. Moreover, in some of these and in some of the factories, female labour is said to be extensively employed and the costs are, therefore, reported to be lower. In addition, Japanese competition is said to be severe. Among the requirements put forth by the owner of this factory may be mentioned : (1) the necessity of abolishing the import duty on woollen yarn, as it is stated that all the protective effects of the present duty on woollen knitted wear is largely nullified by the import duty on yarn, (2) the need for Government patronising the Indian hosiery products and (3) financial help at low rates of interest.

DYEING AND BLEACHING.

12. The investigator reports that there are 5 concerns in Chembur engaged in dyeing and bleaching. He visited one of them where about 45 workers are employed. These dyeing and bleaching concerns work on a contract basis. The cloth is supplied by customers and work is carried out according to orders. The concern visited by the investigator, realises about Rs. 26,000 per month from its work. It is stated that the trade is profitable. It is, however, pointed out that there is not much understanding among the different factories and this leads to a competitive reduction in rates. It has been suggested that Government should substantially help this industry by : (1) abolition of the import duties on machinery and (2) by supplying the industry with expert advice on dyeing and bleaching operations.

RICE AND FLOUR MILLS.

13. There are a number of rice and flour mills in the district. The investigator visited one rice mill and two flour mills. The equipment of the rice mill is stated to be worth about Rs. 3,500. The owner employs one worker. His average gross income is estimated to be about Rs. 1,000 per year. Of the two flour mills, the owner of one has an equipment worth about Rs. 2,000 and the other, an equipment worth about Rs. 500. The owner of the bigger mill is said to realise about Rs. 60 to Rs. 70 a month, while the other hardly gets Rs. 20 per month.

14. The main difficulty confronting both the rice and flour mills is said to be the severe internal competition. All the persons interviewed stress the urgent necessity for restricting the number of these factories. It is suggested by them that Government themselves should fix grinding and polishing charges at reasonably economic levels. A request has also been made that the high rates of electricity charges in the district should be lowered. Finally, the owners suggest that if they are supplied with capital at low rates of interest, they will be able to start side industries and thus provide additional employment to their workers.

CONFECTIONERY WORKS.

15. There is only one confectionery works in the district producing peppermints, toffees, etc., on a large scale. This concern gives employment to nearly 70 workers and its equipment is said to be worth nearly Rs. 45,000.

16. The factory produces lozenges, peppermints, toffees, etc. As sugar is the most important constituent of the products of the company, the protection granted to the indigenous sugar industry by means of a heavy import duty has, it is stated, adversely affected the profitability of the concern. The proprietors of the factory suggest that the Government of India should direct the Sugar Syndicate to charge lower rates to firms using sugar for industrial purposes. In the alternative, he suggests that Government should give a subsidy to offset the increase in their cost of production due to the higher price of sugar. The finished products of the company are marketed throughout India. The owner points out, however, that severe restrictions are placed by the Cantonment authorities regarding the marketing of their products in their areas. A demand is made for protection against the competition of foreign confectionery and also for lowering the freight charges. Finally, it is suggested that if capital is made available to them at low rates, they can expand their business and also instal up-to-date machinery.

CIGARETTE INDUSTRY.

17. The investigator visited three of the Indian-owned cigarette manufacturing concerns in the district. The average number of workers employed in these factories is about 75. The manufacture of cigarettes in these factories is carried on with the help of power-driven machinery. The tobacco used in these factories is mostly imported from Guntur in the Madras Presidency. It is stated that the whole of the year's requirement of tobacco has to be purchased by them in the months of January to March as after this period no tobacco becomes available to them due to the heavy purchases made both by the foreign-owned factories operating in India and by the exporters. On an average a factory is stated to utilise tobacco worth about a lakh of rupees and the owners complain that a substantial part of their capital is thus locked up in the form of stocks and raw materials. The cigarettes produced by

these factories are reported to be of an inferior quality. They are priced at 10 annas per 100 and sold throughout the country.

18. The main complaint of these factories is not about the competition of foreign imported cigarettes but about the cigarettes manufactured by foreign-owned factories operating in India. Thus it is stated that these foreign-owned companies have a number of factories in India which are equipped with up-to-date machinery and operated by expert tobaccoists. Moreover, these companies have their established brands which have a secure market and as the cigarettes manufactured by these concerns in India are, it is alleged, labelled under the name and address of their offices in England, the public gets the impression that these cigarettes are made in England. They are thus more readily marketed than the cigarettes of the Indian concerns. Moreover, these big concerns, it is alleged, are attempting deliberately to stifle the Indian industry by reducing the prices of their established brands and by threatening the cigarette stockists with refusal to supply them with the established brands if they do not stop marketing Indian cigarettes. The factory owners demand that some kind of protection should be given to them against the competition of these foreign-owned companies and also suggest that legislation should be undertaken by which all the cigarette companies could be compelled to designate the country of manufacture both on the packet and on the cigarettes.

19. The other complaints of the cigarette factory owners are about (1) the terminal tax on raw tobacco that is levied by the Bandra Municipality, (2) the heavy electricity charges, (3) the heavy freight charges and (4) the restrictions imposed by the Cantonment authorities about the marketing of Indian cigarettes into their areas. The companies also request Government to appoint an expert tobacco blender for giving them assistance and also to give them loans at low rates of interest.

CINEMA INDUSTRY.

20. There are a number of motion picture companies working in the Suburban district. Two of these were visited by the investigator. The average number of persons employed in each of these concerns is about 100, including artists. The capital required for running a studio is said to be fairly large. Most of the equipment and other materials are obtained from abroad. A company can produce on an average 3 to 4 pictures in a year. The films are distributed through a distributing agency and have a wide Indian market. The film owners state that the expansion of the industry has been much hampered by the multiplicity of languages in the country.

21. Among the suggestions for the development of the industry are : (1) the necessity for Government assistance in keeping the motion picture industry in India in touch with the latest developments in the technique of motion pictures, (2) the urgent need of finding external markets for Indian films through the good offices of the Indian Trade

Commissioners in different countries, (3) making of educational films with the direct aid and patronage of Government, and (4) the grant of facilities to Indian motion picture companies to make films illustrating the different places of historical interest.

CHEMICALS.

22. At Ghatkopar the investigator visited a concern which manufactures camphor and gives employment to nearly 10 people. Synthetic camphor is prepared in this concern and it is marketed throughout India. The proprietors feel very keenly the competition of foreign camphor imported from Italy, Japan and Germany; and they suggest that this new Indian industry should be protected either by import duties or by a bounty. A demand is also made for the abolition of the existing import duties on the raw materials utilised in the industry. Finally, it is suggested that finance should be supplied to them at low rates.

SOAP MAKING.

23. The investigator visited a small soap-making concern which works on a very small scale. The equipment consists of a pressing machine, a *bhatti* and a few dyes and is estimated to be worth about Rs. 200. Mostly washing soaps are prepared and are supplied to the local grocery shops. It is stated that the sales are worth about Rs. 150 per month. After paying wages to the three men employed by him, and meeting all other expenses, the owner is estimated to get an income of Rs. 30 per month. The main difficulty is stated to be in regard to the marketing of the products. Further, it is reported that the public are prejudiced against their products while the well-known brands of large factories have an established market. It has been suggested, therefore, that the small soap concerns should receive special consideration at the hands of Government, and that they should be helped by giving them technical advice and finance at cheap rates of interest. Further, Government should themselves purchase soaps from the small concerns for use in Government hospitals.

FIRE-WORKS.

24. The investigator visited a factory at Santa Cruz which manufactures fire-works. About 40 workers are employed throughout the year and the factory has an equipment worth about Rs. 20,000. The machinery is mostly German and is worked with electricity. Mostly sparklets are manufactured and the raw materials required are imported from Germany. The sparklets are sold throughout India. Demand is brisk generally during *Diwali* and *Ganesh Chaturthi* celebrations. The proprietor of the concern urges that the raw materials and machinery required for his industry should be allowed to be imported without any customs duty. Further, the railway freight charges are reported to be heavy and he suggests that they should be substantially lowered.

He also suggests that the import duty on German sparklets should be increased. He wishes to manufacture crackers, but as he does not know the technical processes, he wants Government to help him in this matter. He also wants Government to supply him with finance at low rates.

THE MATCH INDUSTRY.

25. The investigator visited one of the match factories in the district. Here matches are produced both with machinery and by hand. Of the 225 workers employed by the *karkhana* 75 are working in their own cottages. The equipment consists mainly of Japanese and German machinery. The factory gets its supply of wood and chemicals from abroad. It is stated that Indian wood is not suitable for use. The match-boxes are marketed mainly in the Bombay Presidency. The main complaint of the *karkhandar* is about the competition from the foreign owned factories. The *karkhandar* wants Government to give the Indian manufacturers protection against the powerful competition of foreign-owned companies by means of a subsidy or by the application of a quota system. He also wants financial accommodation at cheap rates and a reduction in the freight charges.

BAKELITE PRODUCTS.

26. The investigator visited a factory producing plates, cups, saucers, etc., out of bakelite powder. It gives employment to nearly 40 workers and owns an equipment worth about Rs. 50,000. Every year finished articles worth nearly Rs. 80,000 are produced and marketed throughout India. The demand is said to be slack during the rainy season. The trade is reported to be profitable. There is, however, a good deal of competition both from other factories in India and from imports from Britain, Japan and Germany. The competition in certain lines of production such as bowls, soap-boxes and tumblers is said to be particularly severe. One way of helping the indigenous producers against foreigners is said to be the abolition of the import duty on the raw materials used by them. Further, the owner states that a reduction in the electricity rates charged by the Bombay Suburban Electric Supply Company will considerably reduce his costs of production.

HOUSEHOLD FURNITURE (IRON).

27. The investigator interviewed an employer at Karla who prepares cots, bedsteads, chairs, etc., from iron and steel. He employs about 7 workers. The articles manufactured are sold locally through the shop of the employer. Demand is said to be brisk in summer. After paying an interest of $7\frac{1}{2}$ per cent. on borrowed capital and meeting all other working expenses, the owner claims to earn an income of Rs. 60 per month. He states that private borrowing is expensive and suggests that finance should be made available to him at low rates by Government. He also stresses the need for making people more furniture minded.

CARTS AND WOODEN FURNITURE.

28. The investigator interviewed a few carpenters in the district. Some of them are making carts while others are engaged in preparing the ordinary household requirements such as *pats* (low wooden seats), chairs, racks, etc. One of the carpenters interviewed, has two wage-earners under him. He makes carts and purchases every month wood, iron bars, nails, etc., of the value of about Rs. 100. He prepares about 3 carts in a month. The price of a cart varies from Rs. 40 to Rs. 60 according to the wood used and the size of the cart. These carts are made only to meet orders. In addition, repair work, mainly of carts, is undertaken and brings in some extra income per month. The artisan states that cart-making has now ceased to be a remunerative occupation.

29. Another carpenter who was interviewed is engaged in preparing *pats* (wooden seats), chairs, etc., and is assisted in the work by two members of his family. In addition, he occasionally employs a cane worker on contract when chairs with cane seats, etc., are made. His goods are sold locally and are largely made to order. The demand for wooden furniture is said to be brisk between February and May. These artisans want financial help from Government so as to enable them to get better tools and buy wood at wholesale rates. They also suggest that training in improved technique and designs should be given to them and that Government should patronise their products.

CANVAS AND RUBBER SHOES.

30. The investigator visited two factories manufacturing canvas and rubber shoes. One employs 250 workers and the other 90. Most of the raw materials are imported from Japan. The machinery used is also obtained from Japan. The products are sold all over India, in Fiji Islands and in Africa.

31. The owners of these factories suggest that electricity charges levied by the Bombay Suburban Electric Supply Company should be lowered and that Government should obtain the supplies of canvas and rubber shoes required for their police and military departments from the Indian concerns. Both the owners complain about the intensity of the competition they meet with from foreign imports and they assert that this competition has been more intensified with the establishment of foreign-owned large companies in India itself. They request that Government should refuse permission to the starting of foreign-owned companies in India.

MANUFACTURE OF *Champals* AND SHOES.

32. There are in the district a number of *mochis* preparing *champals* and shoes. The investigator interviewed a few of these independent artisans. They are assisted by their family members in their work.

One of the *mochis* interviewed, prepares only *champals* while another makes both *champals* and shoes as he possesses an old sewing machine worth about Rs. 75 in addition to the ordinary tools of the *mochis*' trade. It is stated that on an average an artisan can prepare only one pair of *champals* in a day and that including the remuneration he obtains from repair work, a *mochi* earns only about Rs. 15 to Rs. 20 a month. The *champals* and shoes are sold locally. Business is slack during the rainy season.

33. The *mochis* complain about the rapidly falling prices of their products which they attribute mainly to the competition of cheap canvas and other factory produced shoes. They suggest that manufacture of such competitive footwear should be stopped. They also complain about the higher price they have to pay for their supply of leather and about the difficulty in obtaining good quality leather. They want to be supplied with finance for purchasing sewing machines and other raw materials required in their industry.

STONE CRUSHING.

34. There are about 12 concerns in the Bombay Suburban district engaged in taking out stones from quarries. One such concern was visited by the investigator. It employs 25 men and 20 women workers. The stones are taken out of quarries by stone-breakers worked with electricity. The value of the stones taken out of the quarries by this concern is estimated to be nearly Rs. 20,000 per month. All the stones are sold in the city and suburbs of Bombay. Work is suspended during the rainy season. It is stated that it is difficult to get spare parts of the stone breaking machinery and this often results in dislocation of work. The owner, therefore, stresses the urgent need for starting companies in India for the manufacture of such types of machinery. Further, there is stated to be severe internal competition and it is suggested that some kind of mutual understanding about rates should be brought about between the different concerns.

POSSIBILITIES OF NEW INDUSTRIES.

35. The Bombay Suburban district is so closely situated to the City of Bombay that its industrial life is inter-linked with that of the City itself. Most of the factories in this district have their head offices in Bombay City. The Bombay Suburban district offers good scope for the establishment of many large-scale and small-scale industries as these can have all the advantages of the numerous industrial facilities available in such an advanced City like Bombay. Secondly, it is also an ideal place for such large-scale industries like oil-refineries, chemical industries, engineering and machinery industries, leather industries, etc., which require large open spaces for the establishment of factories.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different
Districts of the Bombay Province

EAST KHANDESH

BOMBAY

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered; unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

March, 1941.

P. B. ADVANI,
Director of Industries.

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EAST KHANDESH.

POSITION AND AREA.

The district of East Khandesh lies between 20° 16' and 21° 27' north latitude and 74° 52' and 76° 24' east longitude and covers an area of 4,551 square miles. It is bounded on the north by the Holkar's territory; on the east by the Berar and Nimar district of the Central Provinces; on the south by the Nizam's Territory and on the west by the districts of West Khandesh and Nasik.

PHYSICAL FEATURES.

2. East Khandesh abuts on the Deccan upland and includes on its northern frontier an extensive tract of high hills of the Satpuras. It is intersected by the Tapti river and drained by the Purna, Girna and the Tapti. The northern portions of Raver, Yaval and Chopda talukas are broken and hilly, thinly populated and covered with dense forests. The southern and western portions of the district are also hilly but the hills are not so continuous.

CLIMATE AND RAINFALL.

3. The climate is on the whole healthy, though intensely hot, especially north of the Tapti, in the hot season. There is a tendency to malaria after the cessation of the monsoon rains, especially near the Satpuras. The average rainfall in the district is 28 inches.

POPULATION.

4. The district has a population of 1,206,035 persons of whom 912,949 live in rural areas consisting of 1,468 villages, while the remaining 293,086 are to be found in 23 towns. The more important towns are :—

				Population.
Jalgaon	..	..	..	34,375
Bhusaval	..	..	..	27,989
Amalner	..	..	..	23,491

The proportion of urban population to total population is about 24·3 per cent. which is considerably higher than the corresponding figures for many of the other districts.

According to the Census returns of 1931, the total number of principal earners in the district is 4,32,945 of whom 3,05,291 are males. The occupational distribution of this total number is as follows :—

Exploitation of animals, vegetation and minerals.	309,644
Industry	48,921
Transport	6,617
Trade	19,455
Public force and administration ..	8,322
Professions and liberal arts ..	5,904
Living on their income	298
Domestic service	3,228
Insufficiently described	23,974
Unproductive	6,582
Total ..	<u>432,945</u>

The proportion of the industrially occupied persons to the total principal earners comes to 11·3 per cent. But not all the 309,644 persons shown against “exploitation of animals, vegetation and minerals” are engaged in cultivation. The figure can be further analysed as follows :—

Cultivation	297,818
Forestry	2,098
Stock-raising	7,949
Fishing, hunting, etc.	1,778
Minerals	1
Total ..	<u>309,644</u>

It will be seen that 11,825 persons are engaged in such occupations as forestry, stock-raising and fishing and for purposes of this survey can be taken as engaged in industrial occupations. The total number of principal workers in the district, engaged in the different industrial occupations, accordingly comes to 60,746.

HEALTH AND MEDICAL FACILITIES.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was as high as 46·68. The mean ratio of deaths per thousand for the same period was 30·05. East Khandesh has thus a very high survival rate of 16·63 per thousand, which is only next to that of West Khandesh in the whole of the Province.

There is one Government hospital at Jalgaon, a railway hospital at Bhusawal and an eye hospital at Chalisgaon maintained by the Blind Relief Association. Of the 17 dispensaries in the district, nine are maintained by municipalities, and six by the District Local Board. The remaining two have been started under the Village Uplift Scheme. There are 77 doctors in the district but Jalgaon city alone has 20 of them. In the district excluding Jalgaon town, the proportion of doctors to population comes to one doctor for about 20,600 persons.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 110,474 persons are returned as literates which constitutes a literacy percentage of 9.1 for the district.

The educational facilities in the district are summed up in the following statement for the year 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	853	87,143
Secondary (including lower secondary and English teaching) schools.	39	5,251

There are no commercial, agricultural or industrial schools in the district. Of the 1,468 villages in the district only 617 villages had schools in them.

TRANSPORT FACILITIES.

7. The district has good railway communications. The Great Indian Peninsula Railway from Bombay to Jubbulpore runs through the district via Chalisgaon, Jalgaon and Bhusawal. From Chalisgaon a branch line runs to Dhulia. The Pachora-Jamner Railway about thirty-five miles long was opened in 1918. From Jalgaon there is a branch line running to Amalner whence the Tapti Valley Railway links up with Surat. The Nagpur Railway branches off at Bhusawal.

There are a number of feeder roads connecting all the taluka and *mahal* headquarters with the railway. Separate figures of road mileage are not available for East Khandesh but both East and West Khandesh taken together had a total length of 1,002 miles of metalled roads and 733 miles of unmetalled roads in 1937-38.

SURVEY OF RESOURCES : AGRICULTURE AND LIVE-STOCK.

8. The district has a total area of 2,908,695 acres of which 1,986,204 acres constitute the gross cropped area. Current fallows constitute 114,398 acres. Forests occupy 408,654 acres while other uncultivable land measures 363,051 acres. There are 62,615 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area :—

				Area in acres. (1937-38.)
Rice	..	..	..	491
Wheat	..	..	..	56,805
<i>Jowari</i>	..	..	..	328,888
<i>Bajri</i>	..	..	..	241,809
Maize	..	..	..	616
Gram	..	..	..	8,352
Other food grains including pulses	..			269,975
Linseed	..	..	..	937
Sesame (<i>Til</i>)	..	..	..	8,554
Groundnuts	..	..	..	325,513
Other oil-seeds	..	..	..	2,486
Condiments and spices	..	..	..	14,142
Sugarcane	..	..	..	706
Cotton	..	..	..	703,396
Other fibres	..	..	..	4,788
Tobacco	..	..	..	833
Fodder	..	..	..	2,476
Fruits and vegetables	..	..	..	13,647
Other miscellaneous crops	..	..	..	1,790
Total ..				1,986,204

The major crop of the district is cotton which accounts for as much as 35 per cent. of the cropped area. The other important commercial crop is groundnut.

Fruits and vegetables accounted for an area of 13,647 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following details in respect of 1938-39 :—

<i>Vegetables—</i>				Acres. 1938-39.
Sweet potatoes	..	..	..	296
Carrot	..	..	..	99
Radish	..	..	..	166
Onions	..	..	..	499
Others	..	..	..	98
				1,158

				Acres. 1938-39.
<i>Green vegetables—</i>				
Fenugreek	..	..	..	148
Edible Hibiscus (<i>Bhendi</i>)	..	..	..	1,447
Musk melon	..	..	..	575
Water melon	..	..	..	268
Others	..	..	..	1,577
				4,015
<i>Fruits—</i>				
Plantain	..	..	..	5,073
Mango	..	..	..	116
Lime	..	..	..	198
Sweet lime	..	..	..	2,665
Guava	..	..	..	1,123
Others	..	..	..	588
				9,763
Total, fruits and vegetables ..				14,936

The district has only 2,476 acres under fodder crops. Most of the grazing areas are in the forest tracts which afford good grazing to most of the cattle. The district of East Khandesh is not so important a breeding centre as its adjoining district of West Khandesh. According to the Census of cattle taken in 1934-35, the details of live-stock in the district are :—

Bulls and Bullocks (breeding, working and young stock).	293,909
Cows .. (do. do.)	175,329
Buffaloes (do. do.)	18,143
Cow-buffaloes (do. do.)	132,633
Sheep and goats	223,751
Horses and Ponies	8,859
Donkeys	6,947

Of these, the milch cattle number 183,987 consisting of 105,385 cows and 78,602 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. The district as a whole has little mineral wealth. Trap-rock and gravel are found everywhere and are mostly used for road-mending. Limestone and clay are found in some parts of the district. There are some hot springs in the Chopda taluka. The water is slightly sulphurous and is believed to cure skin diseases. The investigator reports that along the Tapti banks in East and West Khandesh districts red alluvial soft rock formations are found in several places. It is locally believed that high class pottery can be made out of this material.

SURVEY OF RESOURCES : FORESTS.

10. The forests of this district are poor and yield small timber and fuel, chiefly for local consumption. They, however, contain such trees as *mhowra*, *anjana*, *avla*, *babul*, *bel*, *khair*, mango and *palas*, and also minor products like *roska* grass, *bor* fruits and reeds. The *mhowra* tree is one of the most valuable of Khandesh trees, the flowers of which are used at present for producing liquor. The *anjana* tree yields a strong bark useful for preparing ropes, while *avla* tree is known for its use in the preparation of ink. The *palas* tree which is a common Khandesh tree, is useful in many ways. From the stem of the tree a gum called the kino gum can be produced. The root and bark yield tough fibre, while the flowers yield a valuable dye. The juice of the tree is used for medicinal purposes. Besides these uses, this tree is reported to be a favourite with the lac insect. Of the minor products, *roska* grass is useful for extracting oil used in the preparation of scents; the *bors* or *ghatbors* are useful for tanning leather, and the reeds are utilised for thatching purposes.

For purposes of forest administration, the two Khandesh districts have been split up into East Khandesh Division, North Khandesh Division and West Khandesh Division. Roughly speaking the East Khandesh Division can be said to represent the civil district of East Khandesh. According to the Forest Administration Report for 1937-38, the revenue derived from different forest resources for the East Khandesh Division was as follows :—

				Rs.
Timber	..	..	..	15,196
Firewood and charcoal	..	..	..	18,523
Bamboos	..	..	..	9,705
Grazing and fodder grass	..	..	..	94,197
Other minor products	..	..	..	4,207
				—
Total	..			141,828

SURVEY OF RESOURCES : POWER.

11. There are four electric supply companies in the district. The figures of their output of electricity are given below :—

	Units generated.	Total units sold.	Units sold for industrial purposes.
	(000s).	(000s).	(000s).
Jalgaon Electric Supply Company, Limited ..	335	282	138
Amalner Electric Supply Company, Limited ..	197	172	88
Bhusawal Electric Supply Company, Limited ..	22	17	0·7
Chalisgaon Electric Supply Company, Limited ..	109	81	61

SURVEY OF RESOURCES : CAPITAL.

12. There were 563 agricultural co-operative societies in the district in 1937-38 with a total working capital of Rs. 63·1 lakhs. There were also 31 non-agricultural co-operative societies with a total working capital of nearly Rs. 32·29 lakhs. During the same year, the District Central Co-operative Bank had a working capital of Rs. 59·03 lakhs. Besides, there were 60 post office savings banks with 16,498 accounts current at the end of 1937-38 and having a balance of Rs. 28·7 lakhs. The amount of cash certificates sold in the same year was Rs. 4·1 lakhs. At Jalgaon, there is also a branch of the Imperial Bank of India.

INDUSTRIES IN THE DISTRICT—GENERAL.

13. The population engaged in industrial occupations has been estimated at 60,746 including the 11,825 persons engaged in stock-raising, forest industries, and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	297
Butchers	1,375
Tailors, milliners, etc. ..	3,124
Washing and cleaning ..	1,390
Barbers, etc.	3,395
Scavenging	1,029
Total ..	10,610

The remaining 50,136 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Stock-raising	7,949
Forest industries	2,098
Fishing, etc.	1,778
Cotton ginning, pressing, etc. ..	2,250
Cotton spinning, sizing and weaving ..	6,195
Rope, twine, and other fibres ..	621
Wool carding, spinning, etc. ..	223
Silk spinning and weaving ..	201
Dyeing, bleaching, printing, etc. ..	457
Working in leather	422
Carpenters, turners, etc.	3,885
Basket makers, etc.	2,329
Blacksmiths, workers in iron, etc. ..	1,589
Workers in brass, copper and bell metal ..	665
Potters and makers of earthenware ..	2,852
Brick and tile makers	222
Manufacturing and refining of vegetable oils	1,437
Grain parchers	956
Sweet-meat and condiment makers ..	740
Boot, shoe, sandal, etc., makers ..	4,141
Lime burners, cement workers, etc. ..	2,708
Jewellers and ornament makers ..	3,115
Other miscellaneous industries ..	3,303
Total ..	<u>50,136</u>

Of these, 15,527 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement

gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund.. ..	3	3	932	903
Textiles	5	5	5,666	6,643
Engineering	2	2	50	80
Chemicals, dyes, etc.	10	21	613	857
Paper and printing	..	1	..	11
Seasonal factories : Cotton gins and presses	129	112	8,266	6,911
Total ..	149	144	15,527	15,405

14. The investigator, Mr. N. M. Joshi, spent 18 days and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

HANDLOOM WEAVING.

15. The investigator interviewed handloom weavers at Parola, Nasirabad, Kasode, Erandol, Faizpur, Yawal and Dharangaon. The general impression gathered by him from these interviews is that the industry is decaying in the district, even the number of looms showing a decline. At Parola the weavers interviewed had fly-shuttle looms. The weavers there are mostly producing *sarees* and *khans* and to a lesser extent *pagotas*. The *sarees* woven are mainly of *maheshwari* design and of the types known as *chandrakala*, *rasta*, *gunji*, *pophali*, *surli* and plain. The yarn used is 26s, 32s and 40s ; mercerised yarn of 2/64s and 2/84s and artificial silk of 2/120s. The *sarees* are sold locally and in the neighbouring markets, and sometimes at fairs at Amalner, Sarangkhe, Chorwad, etc. The sale price of the *sarees* varies from Rs. 2-12-0 to Rs. 4-0-0 for those with real silk borders from Rs. 2-4-0 to Rs. 3-0-0 for those with artificial silk borders, and from Rs. 1-12-0 to Rs. 2-0-0 for those with mercerised yarn borders. In each case an additional eight annas are charged for those *sarees* that have designs or squares on the body. The investigator estimates the average earnings of the weavers at this place to be between Rs. 8 to Rs. 12 a month. Besides,

sarees, *pagotas* are also woven by some of the weavers. These are woven from yarn of 60s or 80s and real or artificial gold thread. The length of *pagotas* varies from 12 yards to 30 yards, but the breadth is uniformly 12". The cost of preparing a superior 30 yards *pagota* is reported to be about Rs. 2-2-0. The details are as follows :—

				Rs.	a.	p.
Yarn	..	..	..	1	4	0
Gold thread	..	..	..	0	10	0
Warping, wefting, etc.	..	..	..	0	4	0
				2	2	0

The sale price is reported to be Rs. 2-8-0 each. That gives a wage of 6 annas for weaving one *pagota*. And, as a weaver is credited with weaving three *pagotas* a week, it gives an income of Rs. 1-2-0 a week or about Rs. 4-8-0 a month. Besides these, inferior types of *pagotas* from the cut-warps from the mills, are also produced. These are mostly of 12 yards in length and cost about 10½ annas to prepare; they are sold for 13 annas to 14 annas each. The investigator states that a weaver can prepare four *pagotas* of this type during a week. That would give the weaver engaged in weaving the inferior *pagotas* a weekly income of 10 annas to 14 annas each. These *pagotas* are sold in the villages round about Parola. The investigator states that formerly the weavers used to work on contract basis, supplied the dealers their requirements and earned better profits, but due to depression this system is no longer in force. Many of them have now become independent weavers and they are all reported to be very badly off and most of them are said to be in debt. The investigator reports that recently *khaddar* weaving on an organised basis has been started at Parola and has brought much relief to the weavers. The weaving of *khaddar* is also reported to have improved the market of *khans* and *sarees*. The suggestions regarding the removal of the weavers' grievances at Parola, are mainly about cheaper supply of raw materials, better marketing facilities, training in producing coating and shirting cloth and the need for restrictions to be imposed on machine-made products.

16. At Nasirabad, there are reported to be roughly 400 looms, most of which are fly shuttle looms. All the weavers produce *sarees*. *Patals* of different patterns are said to be produced only recently. The yarn used is of 20s, 32s and 40s. Mercerised yarn of 2/64s or 2/84s, art silk and real silk are used for borders. Among *sarees*, the *garbhareshmi* or the silk-bordered *saree* is of the highest quality and is sold for Rs. 7 each. The other types are sold for Rs. 2-8-0 to Rs. 5 each according to quality. The *patals* which are a recent product fetch Rs. 2-8-0 to Rs. 2-12-0 each. The *sarees* are sold in the weekly markets and also exported to places like Jalgaon, Jamner, Nandre, etc. The investigator estimates the earnings of weavers in this place to be between Rs. 4 and Rs. 6 a month. The

economic condition of these weavers is in no way better than of those at other places.

17. At Kasode, Erandol and Yawal, there are 20, 40 and 30 looms respectively, while at Faizpur and Dharangaon the number of looms working are estimated at 300 and 360 respectively. *Sarees* are the principal products in these centres though *khans* (bodice cloth) are also produced. The main types of *sarees* produced are *maheshwari*, *mansuri*, *nati* and *narali*. The yarn used is of the 20s, 32s and 40s varieties and silk or mercerised yarn is used for borders. The sale price of *sarees* varies from Rs. 1-12-0 to Rs. 7-0-0 according to quality and design. The earnings of the weavers are estimated on an average to be Rs. 4 to Rs. 7 per month per loom. At some of these centres, the weavers work on wage basis for the dealers. The economic condition of the industry is none too good. In fact, the number of looms is said to be continually decreasing.

18. The grievances put forth by the weavers at the different centres are more or less the same, the main grievance being the competition of powerlooms and mills, and all the weavers are agreed in their demand for some restrictions on production by the powerlooms and mills. They also suggest that Government should supply yarn at cheaper rates, train them in new designs and in producing other kinds of cloth, and afford facilities for extension of markets.

POWERLOOM WEAVING.

19. At Amalner, the investigator visited a newly started powerloom factory. It is fitted with ten looms but only six are reported to be working and producing *patalis*. The yarn used is 40s, 44s and 60s. Besides cotton yarn, mercerised yarn of 2/64s and 2/84s; art. silk of 150s and 152s, and Bangalore silk are obtained from Bombay, while the dyed yarn is obtained from Malegaon. There are eight men working in the factory, of whom six are weavers, one a jobber and one an unskilled labourer who helps in warping and other miscellaneous duties. The weavers are said to be working for ten hours a day and are paid on piece-work basis at the rate of 5 annas per *patal*. The monthly output of *patalis* is 675 or on an average about 4 *patalis* per loom per day. The sale price of the *patalis* varies from Rs. 2-14-0 to Rs. 3-2-0 each. Details regarding costs of different types of *patalis* are not available, but the cost of the Rs. 3-2-0 variety is stated to be about Rs. 2-12-0. A part of the output to the extent of 80 *patalis* a month, is reported to be sold locally, while the rest are exported to Khamgaon, Khandwa, Amalner and Akola.

Zora WEAVING.

20. The investigator reports that this industry is localised at Kasode for the last 125 years. Till recently, the industry is reported to have been self-sufficient, the yarn being spun locally by the *momin* women from local cotton and the *zorās* woven by weavers and sold in the different

districts. Now with the introduction of mill-spun yarn, the yarn dealers are reported to have obtained control over the industry, and the weavers have lost their independence. These dealers are also said to be responsible for the increase in the number of looms.

21. There are reported to be only about 15 to 20 independent artisans and all the remaining weavers are said to be bound to sell their output to the merchants who supply them their raw materials. The price of yarn supplied on credit by these merchants is stated to be 2 annas more per 10 lbs. than the usual market price and the weavers are required to pay very high interest on this price. When the finished *zorās* are brought to the merchants, these charges are first deducted from the sale price and the balance is given to the weaver.

22. The usual products woven by the weavers are white and coloured *zorās*, *zuls* and *charwals*. It is said that there has been no improvement either in the designs or in the methods of work. The yarn used is of 2s and 4s. There are three yarn dealers who supply yarn to most of the weavers. The total imports of yarn are estimated at about 700 bales (of 400 lbs. each) a year. The cost of preparing a *zora* (4 yards $\times$ 1½ yards) is reported to be Rs. 3-7-0 and of weaving a *zul* (1½ yards $\times$ 1 yard) about Rs. 2-4-0, and these are said to be the prices at which the *zorās* and *zuls* are hypothecated to the dealers. The weavers get a wage of 12 annas per *zora* or *zul*. On an average the output per loom is estimated to be 6 *zorās* or 6 *zuls* per week, and as two men are required to weave the articles, the earnings per weaver come to about Rs. 2-4-0 per week. The products are sold in the weekly bazars and also exported to the Central Provinces, Berar, Khandesh, etc. Among the weavers who were interviewed by the investigator at this place was one who came from Cawnpore and wove *dhurris* of a different type than *zorās*. He is said to be the only man producing that type of *dhurri* at Kasode. He works for a merchant. The cost of weaving 50 *dhurris* is stated by him to be about Rs. 40 against their selling price of Rs. 75. The merchant thus gets about Rs. 35 per fifty *dhurris* out of which he pays Rs. 14 as wages to the weaver. The time required for weaving 50 *dhurris* is reported to be about a month. Thus the average income of the artisan comes to about Rs. 14 per month.

CALICO PRINTING.

23. At Faizpur, there were formerly about 200 houses which carried on this industry. But the industry has decayed due to a change in taste. To-day there are only 5 or 6 houses which are engaged in calico printing. Instead of the indigenous vegetable dye, cheap alizarine dye is used at present. The cloth used is mostly mill-made and the types of production are *razai*, *pasodi*, *odhani*, *phadki*, etc. A good part of this product is used by the agriculturists in the surrounding villages. The weekly output of each house is estimated at 32 pieces of 5½ yards each. The artisans get an income of Rs. 4 to Rs. 5 per family per week. They complain against the keen competition from *dhurris*, rugs, etc.

The following suggestions have been made for the improvement of the industry :—

- (1) that Government should open a calico printing school in Khandesh which would give the artisans adequate training in new designs and methods ;
 - (2) that the artisans should be supplied with new designs and wood blocks for printing ;
- and
- (3) that Government should arrange for marketing facilities and cheap finance.

Dal AND FLOUR INDUSTRY.

24. At Jalgaon, the investigator interviewed a factory owner engaged in crushing grams into *dal* and flour. The supply of gram required for his production of *dal* and flour, is obtained from the United Provinces and Central India. His purchases at the present time are estimated at 7,000 bags against 11,000 bags a few years back. The crushing machines and the oil engines altogether are reported to have cost nearly Rs. 12,000 and the annual repair charges thereon are stated to be about Rs. 700. The factory works for 24 days in a month, and the daily output of *dal* and flour is reported to be 50 bags and 25 bags, respectively, each bag weighing $2\frac{1}{2}$ maunds. A bag of gram is said to yield approximately about $\frac{3}{4}$ ths bag of *dal* or half a bag of flour. The factory works for six months in a year. The produce is exported to all parts of the two Khandesh districts, to Berar and to the Central Provinces. As the railway freights are reported to be heavy, the owner exports his produce in motor lorries which charge 5 per cent. lower than the railways. There are in all 11 persons working in the factory who work for 10 hours and get 6 annas a day. The owner reports that he is working at a loss for the last three years, though his is the only factory at Jalgaon.

OIL MILLS.

25. According to the Factory Report for 1938, there are 21 oil mills in the district. The investigator interviewed owners of four oil mills : two at Jalgaon and two at Amalner. All these mills crush groundnuts. Only one of these four mills uses rotary *ghanis*, while all the other three use expeller machines. The oil is consumed locally and also exported to places as distant as Lyallapur, Cawnpore, etc. One of the owners stated that he used to export direct to foreign countries but on account of the scarcity of clean iron drums, the oil sent by him could not remain pure and that naturally affected the demand for his oil. He further stated that the oil-cakes produced by him were also not up to the standard required in the foreign markets. He has, therefore, discontinued direct export and now sells instead to wholesale traders in India. Almost all the owners of oil mills complain about the quality of groundnuts which, it is stated, contain dust and mud.

OIL *Ghanis*.

26. The investigator interviewed artisans engaged in pressing oil-seeds on country *ghanis* at Yawal and Faizpur. Yawal was once known as a centre of vegetable oil industry. Some years back there were reported to be about 40 oil *ghanis* at Yawal whereas today there are only two. The industry is said to have been hard hit by the competition of mill pressed oil. Most of the *ghani* owners have now become mere retailers of mill-oil while some of them have taken to manual labour. The artisans work their *ghanis* only when the price of the raw material is low or whenever oil-seeds are brought to them for pressing on payment of wages.

27. At Faizpur also the *ghani* oil industry is decaying. The investigator was informed that there were about 50 *ghanis* at this place some years back but since the establishment of oil mills, the industry is said to have suffered heavily. Today there are only 4 or 5 *ghanis* which work for about ten months in a year. Here also, the artisans find difficulty even in meeting their cost of production by selling their oil and oil-cakes at market rates. Not only have the oil mills lowered the selling price of oil but it has become necessary for the artisans to sell their *ghani* pressed oil at still cheaper rates as otherwise they find no market for their product.

28. The main reason for the decay of the *ghani* oil industry at Yawal, Faizpur and other places in the district is stated to be the fact that the mill oil looks purer than *ghani* oil. The other handicaps against the *ghani* oil are that the percentage of oil extracted from *ghanis* is somewhat low and the oil extracted is not properly filtered. The artisans suggest that Government should analyse both mill oil and *ghani* oil and then should demonstrate to the public, the advantages of consuming *ghani* oil. They also want to be supplied with proper filters which can be worked with hand so that they can make their oil more pure. They agree that their *ghanis* are all of the old pattern and useless for competing with the mills, and desire that some improvements should be carried out in the village *ghanis* and their crushing power increased. Another reason why they cannot compete with mills is that they make their purchases of raw materials in retail whereas the mills have their agents who purchase their supplies of oil-seeds wholesale and cheap. They, therefore, suggest that Government should arrange for the supply of oil-seeds to them at cheap rates. The artisans consider that there is no future for their industry unless some steps are taken by which the mill competition can be minimised.

IRON MANUFACTURES.

29. The investigator visited an important iron works at Jalgaon. This factory manufactures spare parts of oil and steam engines, boilers, other machinery parts and iron furniture. The yearly output is estimated at Rs. 7,000 to Rs. 8,000. All the raw materials are purchased at Bombay. There are about ten men engaged in the industry of whom four are

wage-earners. The work at the factory is stated to be brisk during the months of September to February, during which period the factory has for some days to work even by night shifts. During the other six months demand is slack and some of the machines have to remain idle for want of work. The Managing Agents complain of keen competition from other Indian and foreign companies, particularly in the manufacture of spare parts. They are, however, confident of improving their production and taking to other kinds of manufactures if sufficient share capital is forthcoming or if Government comes to their aid by supplying them with the necessary finance.

LEATHER INDUSTRY.

30. The investigator reports that the village *chamars* are losing their markets and that their economic condition is very bad. They get their tanned leather in the weekly markets where the village tanners bring their leather for sale. At Neri in Jamner taluka where the investigator interviewed some *chamars*, only village *jodas* are prepared. One of the *chamars*, who has nine members in his family, prepares 8 *jodas* a week which cost him Rs. 7 and are sold for Rs. 10. Another family prepares 6 pairs a week but the *jodas* prepared by this family are of an inferior type, which cost Rs. 3-8-0 for 6 pairs and are sold for Rs. 5. All the products are sold in the local bazar and sometimes in the neighbouring towns. The earnings of the *chamars* are reported to have fallen by about 50 per cent. They have no skill and are not able to prepare either shoes or better type of *jodas*. They depend mostly on the agriculturists for demand. But even the agriculturists are now said to prefer the cheaper *champals* made of worn-out rubber tyres. The *gavhali* system under which the *chamars* undertook work for the agriculturists in exchange for a fixed quantity of corn is reported to have been replaced at most places by the cash system. At some places where the system still prevails, the *chamars* are reported to be getting 2 *payalis* of corn per plough per year. In the agricultural season, most of the village *chamars* work as labourers.

31. At Amalner it is estimated that there are about 15 families of shoe-makers who are said to have come there from Surat and Kathiawar. These families do not prepare *champals* but specialise in shoes and slippers. They get their supply of leather from Bombay. Each family has its own shop and the total cost of equipment including that of the sewing machine is reported to be approximately Rs. 300. The cost of preparing a pair of slippers and a pair of shoes is stated to be Rs. 1-6-0 and Rs. 1-12-0 respectively. The usual sale price for a pair of slippers is Rs. 1-12-0 and for a pair of shoes Rs. 2-4-0. The shoe-makers thus seem to be earning about 6 annas on each pair of slippers and 8 annas on each pair of shoes, as their wages. The weekly output varies from 6 to 15 pairs according to the number of persons in the family or the number of piece-workers engaged. They usually sell their products locally and to petty dealers from neighbouring villages. There is a general complaint about the competition from cheap rubber and canvas shoes from Japan and

from leather shoes and slippers manufactured by large scale factories. According to them their shoes are better than the machine-made ones but there is no demand for them as the competing products are cheaper. The shoe-makers want Government assistance in training them in making new products and adopting new designs, in extending their markets and in meeting their capital requirements.

32. Amalner is reported to have been well-known for its production of leather harnesses and *mots* (water carriers). The investigator was told that some years back about 1,000 sets of harness and 500 *mots* were prepared annually at this place. Today, the production does not exceed 200 harnesses and 100 *mots* a year. The decay of this industry is said to be due to the rapid development of motor transport and the increasing use of iron water carriers. The cost of preparing a set of harness is Rs. 18 while that of a *mot* Rs. 15 and they are sold for Rs. 20 and Rs. 16 respectively. The artisans get on an average an income of Rs. 15 per month. They are reported to be keen in learning new methods of manufacture.

PAPER-MAKING.

33. Some years back, Erandol was a well-known centre of hand-made paper industry and there were stated to be about 15 *karkhandars* engaged in producing nearly 3,000 *gaddies* (of 240 sheets each) annually. There was a large demand for Erandol paper from the Central Provinces, Berar and parts of Deccan. The industry is at present in a depressed condition owing to fall in demand and there are today four *karkhandars* engaged in the business. There are also a few other people but these take to this industry only in the brisk season and prepare about 20 to 25 *gaddies* each during that period. The industry is carried on only for six months in a year, firstly due to the seasonal availability of water and secondly due to the seasonal nature of the demand. The *karkhandars* employ about ten men in their *karkhana* and the work of sizing and polishing is given to women workers who do the work in their own homes. Wages are reported to be as follows :—

Pulp-makers	..	.. 3 rupees per maund (40 seers).
Paper-maker	..	.. Annas 12 per <i>gaddi</i> (big size paper) or annas 8 per <i>gaddi</i> (small size paper).
Paper-setter	..	.. Annas 6 per <i>gaddi</i> .
Sizer	..	.. Annas 5 per <i>gaddi</i> (both sides).
Finisher	..	.. Annas 2 per <i>gaddi</i> .
Polisher	..	.. Annas 12 per <i>gaddi</i> .

The paper is manufactured in three different sizes of 26½" × 24", 23" × 22" and 20" × 18" The details of cost of preparing one *gaddi* (240 sheets)

of the first type of paper which is known as *bahadurkhani* paper, are given as follows by one of the *karkhandars* :—

			Rs.	a.	p.
Waste paper (12 seers)	..	..	1	15	0
Washing soda $\frac{1}{2}$ seer	..	..	0	2	0
Soap 10 seers	..	..	2	8	0
Wages	..	..	3	3	6
			7	12	6

The sale price of this one *gaddi* of *bahadurkhani* paper is stated to be Rs. 10. The cost price and the selling prices of the other two kinds of papers are reported to be as below :—

	Cost price.	Selling price.
Medium size (23" × 22") ..	Rs. 6 to Rs. 6-8-0	Rs. 7 to Rs. 7-8-0
Small size (20" × 18") ..	Rs. 4	Rs. 5

The output of each *karkhana* is reported to be about 2 *gaddies* during the season. Owing to the competition of cheap mill-made paper, the demand for this paper has fallen, though hand-made paper is known for its durability. Many of the artisans are reported to have left this industry and taken to *bidi*-making. The *karkhandars* state that their industry can improve only if Government gives patronage to hand-made paper.

BANGLE INDUSTRY.

34. It is stated that about 30 years back bangles were being prepared at Nasirabad, Neri, Palaskhede, Palner, Paldhi, etc. To-day, except for a few families at Nasirabad who carry on the industry, there are none in the other centres. All those artisans are now reported to have turned into retail sellers of cheap foreign bangles. Some years back the industry at Nasirabad was carried on, on a large scale and about 250 men were engaged in about 15 to 16 *karkhanas* and an equal number were engaged as outworkers for some of the processes. Glass was at first prepared in the *bhattis* locally made, but later on it was imported from the United Provinces. But to-day there is only one *bhatti* at this place, owned in common by about 10 persons. Glass is prepared from broken pieces of bangles. The bangles are sold for 8 to 12 annas per thousand. Most of them are purchased by a local dealer who sells them again with a commission of half an anna per thousand. The only demand for these bangles comes during the marriage season when due to the sentiment that only hand-made bangles should be used on such auspicious occasions, brides are made

to wear these bangles. As the local industry keeps them engaged for only a month, most of the artisans maintain themselves by selling foreign bangles during the remaining period of the year. The investigator reports that at places other than Nasirabad, the artisans have forgotten the processes of manufacturing bangles. The artisans are said to be very conservative and not enterprising enough to take to new methods without Government assistance. It has been suggested that Government should train them in the manufacture of the fashionable and finer type of bangles.

PREPARATION OF WOODEN COMBS.

35. At Amalner there are reported to be three houses engaged in this industry. Between these three houses there are only four artisans. The combs are prepared from black *sisal* wood which is imported from West Khandesh. The annual requirement of wood is estimated to be worth about Rs. 120 to Rs. 125. Each artisan prepares about 50 combs a day or 250 a week. The equipment consists of a simple saw worth about Rs. 10 and other small tools costing not more than Rs. 8. The cost of preparing 250 combs is stated to be as follows :—

				Rs. a. p.
Wood	..	..	..	2 0 0
Paint	..	..	..	0 2 0
Total ..				2 2 0

These are sold in the markets of Chalisgaon, Bhadgaon, Pachora and Parola and fetch about Rs. 4 for 250 combs. Each artisan and his family thus get about Rs. 2 as their wage per week. It is reported that the prices have now fallen very low and have affected the earnings of the artisans. The combs are of a rough quality and the artisans state that they are not able to prepare finer types of combs. They, however, desire that they should be trained in producing combs of superior quality.

CARPENTRY.

36. The investigator interviewed a few carpenters at Amalner, Neri and Erandol. Most of them do work for the agriculturists in exchange for corn, the agriculturists usually paying about 48 to 60 *payalis* of corn per year. For other than agricultural work, the carpenters are paid in cash. Some of the carpenters in Amalner also make furniture. All these artisans are now reported to get a much lower return from their occupation than they used to get some few years back. The local carpenters complain of the competition from Marwari and Kathiawari carpenters who visit their district and carry out most of the building work that is available in the district.

BLACKSMITHS' WORK.

37. The investigator interviewed some blacksmiths in four of the villages in the district. These men undertake repairing of agricultural implements. Even in this work, they are meeting competition from itinerent blacksmiths who visit the different villages and undertake the work at much cheaper rates. The women folk of the itinerent artisans help the men in their work while the women of the village artisans do not help their men folk who have to employ assistants on wages to help them. Some of the blacksmiths, therefore, content themselves with the minor work of shoeing the bullocks. Others who are better off undertake the manufacture of carts and sell them locally or at village fairs. In the case of the blacksmith interviewed by the investigator, the earnings from the manufacture of carts amounted to about Rs. 25 to Rs. 30 per month. In some of the villages, the blacksmiths are paid for repairing agricultural implements, etc., in kind and the blacksmiths complain that though their expenses have considerably increased, these payments in kind fixed years ago, are not being increased. The general impression gathered by the investigator is that the income of the village blacksmith has decreased and that he is no longer able to maintain himself, except in a few cases, on his principal occupation and has, therefore, to take to some subsidiary occupation such as agriculture or carpentry.

POTTERY.

38. A few families of potters were interviewed by the investigator at Patonde in the Amalner taluka. These potters work for the agriculturists in exchange for corn and also prepare pots for cash sale in the weekly markets. It is reported that they get their supply of clay free of costs. They have, however, to pay cart hire at the rate of 4 annas per cart. Fuel is collected from the surrounding areas and the village refuse is also utilised. Each family has its own kiln. The work is carried on throughout the year except during the monsoon months and every week about one *bhatti* or about 250 pots are prepared. Of these 10 to 12 per cent. is lost through breakages and the good ones are sold in the weekly bazars. Each family is reported to make about 8 to 10 annas per week from the sale of pots. These potters work during the agricultural season as labourers and earn about one and half annas per day. Though most of the potters know how to make bricks, they are not doing so, as it is stated that clay available in the localities is not suitable for bricks.

BASKET-MAKING.

39. The investigator interviewed a few basket makers at Patonde in the Amalner taluka. They use bamboos for preparing baskets and *tattis* and get their supply of raw material from Amalner and Dharangaon at 2 annas per bamboo. Out of one bamboo, the workers can prepare nearly four baskets while a *tatti* requires two bamboos. Each worker

can prepare three to four baskets in a day and a *talli* in two days. The baskets are sold for nine pies each and *tallis* for six annas each. The workers sell their products in the weekly bazars at Amalner and the neighbouring towns. The average earnings of a family are estimated to be about 8 annas to 12 annas per week. All the workers, do agricultural work during the agricultural season and also all kinds of odd jobs during other times in addition to their occupation of basket-making.

POSSIBILITIES OF NEW INDUSTRIES.

40. The district has very little forest or mineral wealth. It is stated that the red alluvial soft rock formations found along the Tapti bank are locally believed to be suitable for high class pottery but this needs detailed investigation. The district contains many vegetable materials from which dyes can be prepared and in fact in former times, the district of East Khandesh had a flourishing dye industry. Similarly some of the decaying cottage industries, like hand-made paper manufacture, glass-bangle making, etc., can be developed in the district. There is a considerable area under fruits and it should be possible to develop a fruit canning and preserving industry. The Department of Industries has actively assisted in the commercial utilisation of limes in the district for the manufacture of lime-oil and at Utran, lime-oil is being manufactured by one of the plantation growers.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different
Districts of the Bombay Province

KOLABA

BOMBAY

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

March, 1941.

P. B. ADVANI,
Director of Industries.

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KOLABA.

POSITION AND AREA.

The district of Kolaba lies between 17° 51' and 19° 8' north latitude and 72° 51' and 73° 45' east longitude and occupies an area of 2,166 square miles. It is bounded on the north by the Thana district; on the east by the Western Ghats, the Bhore State and the districts of Poona and Satara; on the south and south-west by Ratnagiri; and on the west by the Janjira State and the Arabian Sea.

PHYSICAL FEATURES.

2. The district is a rugged belt of country from fifteen to thirty miles broad, stretching south from Thana and the Bombay harbour to the foot of the Mahabaleshwar hills, seventy-five miles south-east. Situated between the Western Ghats and the sea the district contains spurs of considerable regularity and height, running westwards at right angles to the main range, as well as isolated peaks or lofty detached ridges. A series of minor ranges also run north and south between the main range and the sea. A few small rivers, rising in the hills to the east of the district, pass through it to the sea. The chief of these are the Ulhasa, Patalganga, Amba, Kundalika, Mandad and Savitri.

CLIMATE AND RAINFALL.

3. There are four distinct climatic periods. The rainy season extends from June to October which is followed up to the end of November by the damp season. Then follows the cold season from December to March; and from March to June is the dry hot season. The rainy season is considered the healthy period of the year. In the region about Alibag there is always sea-breeze. Mahad is entirely cut off from sea-breeze and is subject to much greater changes of temperature. In the hot months, the heat is oppressive in Karjat except on the hill-tops. The rainfall on the coast averages about 90 inches. Further inland it is heavier and in the Ghat country it is still heavier.

POPULATION.

4. The district has a total population of 628,721 persons of whom 48,213 are living in 7 towns and the remaining 580,508 in 1,469 villages. The important towns in the district are:—

	Population.			
Uran	..	..	..	9,762
Panvel	..	..	..	8,423
Mahad	..	..	..	8,123
Alibag	..	..	..	6,653

The proportion of the urban population to the total population is about 7·6 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 260,208 of whom 172,973 are males. The occupational distribution of the total number is as follows:—

Exploitation of animals and vegetation	..	221,931
Exploitation of minerals	.. ..	688
Industry	.. ..	9,346
Transport	.. ..	2,794
Trade	.. ..	6,344
Public force and administration	..	2,713
Professions and liberal arts	.. ..	2,459
Living on their income	.. ..	524
Domestic service	.. ..	6,637
Insufficiently described	.. ..	5,469
Unproductive	.. ..	1,303
Total		<u>260,208</u>

The proportion of the industrially occupied persons to the total earners is only about 3·5 per cent. However, in addition to the 9,346 persons shown as engaged in industrial occupations according to Census classification, there are 2,092 persons engaged in forestry, 5,522 persons in stock-raising, 6,018 persons in fishing and 688 in salt-making. Though these persons have been included in the Census classifications under “exploitation of animals and vegetation” and “exploitation of minerals” these can be taken to be industrially occupied for purposes of this survey. With the addition of these persons, the total number of principal workers engaged in industrial occupations comes to 23,666.

HEALTH AND MEDICAL FACILITIES.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births for the five years ending 1937 was 38·91 per thousand while the mean ratio of deaths for the same period was 23·90. The survival rate for the district is thus 15·01 per thousand.

There is only one hospital in the district, maintained by Government at Alibag. There are 15 dispensaries in the whole of the district and there are three maternity homes and two leper hospitals. Of the fifteen dispensaries, six are maintained by municipalities, five by the District Local Board, three by the Tata-Hydro Electric Company and one by a Mission. The three maternity homes are situated at Alibag, Panvel and Chowk. The two leper hospitals are at Pui and

Poladpur respectively and are both maintained by a Mission. The total number of doctors in the district is estimated to be 45 of which 5 are in Alibag. The proportion of doctors to total population in the district excluding Alibag town, is one for every 15,600 persons.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 42,450 persons are returned as literates. In other words the percentage of literacy in the district is only 6·8.

The educational facilities available in the district are summed up in the following statement for the year 1937-38 :—

Description.	Number of institutions.	Number of Pupils.
Primary Schools	420	27,914
Secondary (including lower Secondary and English teaching) Schools.	17	2,038
Industrial, Commercial and Agricultural Schools.	2	167

Of the 1,469 villages in the district, only 340 villages had schools in them.

TRANSPORT FACILITIES.

7. The district is well served by good roads and motor services. It has also an extensive coast line with numerous creeks, rivers and waterways which reach far into the inland talukas. There are regular steamer services between Bombay and some of the ports in this district. The Great Indian Peninsula Railway passes through Karjat and Neral and there is a branch line which connects Karjat to Khopoli. The Matheran Light Railway joins the main Great Indian Peninsula line at Neral. Most of the passenger traffic in the district is done by motors which link up almost all the towns in the district. Details regarding the length of roads maintained by Government and the local authorities are not separately available for this district. But according to the statistics published by the Indian Roads and Transport Development Association, the district has 203 miles of stone-metal roads and 325 miles of unmotorable earth roads.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has an area of 1,385,635 acres of which 421,795 acres constitute the gross cropped area. Forests absorb 328,963 acres and other uncultivable land measures 238,781. Current fallows constitute 392,716 acres. There are 19,952 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives the details of the classification by crops of the cultivated area :—

				Area in acres in 1937-38.
Rice	..	..	..	277,146
<i>Ragi</i>	..	..	..	35,389
Gram	..	..	..	565
Other food-grains	..	..	..	45,849
Sesame (<i>til</i>)	..	..	..	2,567
Cocoanut	..	..	..	1,154
Other oil-seeds	..	..	..	933
Condiments and spices	..	..	..	573
Drugs and narcotics, other than tobacco				456
Fodder	..	..	..	54,454
Fruits and vegetables	..	..	..	2,463
Other miscellaneous crops	..	..	..	246
Total				421,795

It will be noticed that there are no important commercial crops in the district. Among food crops rice and *ragi* are important.

Fruits and vegetables accounted for an area of 2,463 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following details in respect of 1938-39 :—

				Acres in 1938-39.
<i>Vegetables—</i>				
Sweet potatoes	..	..	..	436
Radish	..	..	..	61
Others	..	..	..	55
Total				552
<i>Green vegetables—</i>				
Edible hibiscus (<i>Bhendi</i>)	..	..	..	16
Water melon	..	..	..	667
Others	..	..	..	510
Total				1,193

Acres in 1938-39.

Fruits—

Plantain	..	..	..	55
Mango	..	..	..	623
Jack fruit	..	..	..	20
Bullock heart	..	..	..	26
Others	..	..	..	38
Total				762
Total, Fruits and Vegetables				2,507

The district has a large trade in vegetables, cocoanuts and betelnuts. The proximity of the Bombay City and the facilities of transport communications has greatly developed this trade.

There are 54,454 acres under fodder. Most of the cattle in the district are of local breed. The Kolaba buffaloes are smaller, blacker and smoother-skinned than those of Gujarat. Sheep are usually imported from the Deccan. Goats are kept by a few persons. The details of live-stock in the district according to the Census of cattle taken in 1934-35 are as follows :—

Bull and Bullocks (working, breeding and young stock) ..	23,246
Cows (do.) ..	135,022
Buffaloes (do.) ..	45,849
Cow-buffaloes (do.) ..	42,735
Sheep and goats ..	36,662
Horses and ponies ..	715
Donkeys ..	575

Of these, milch cattle number 117,699 consisting of 88,372 cows and 29,327 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. The district is poor in minerals. The only mineral which the Gazetteer mentions is iron, of which traces are said to be found in the laterite in the different parts of the district. Building stones of a good quality are found everywhere. Sand is plentiful in all rivers and creeks. Shell lime is burnt in small quantities but is reported to be not suited for masonry and is chiefly used for white-washing. *Kankar* or nodular lime is found in Alibag and in parts of Mangaon. Rice-field clay is

abundant and used more or less all over the district for preparing ordinary tiles, water vessels and cheap bricks. It is also reported that on the Rasani Hills near Vadgaon in Alibag, large quantities of reddish earth are found and is exported to Bombay during September for preparation of Ganapati images.

SURVEY OF RESOURCES : FORESTS.

10. Kolaba is fairly rich in forests. The forests are valuable partly on account of their vicinity to Bombay and partly because they are capable of producing big timber though nearly all have been heavily exploited in the past. Teak and mango trees are found in good number. Black wood, though not common, is found in the Roha forests. *Dhava* tree was once plentiful and is still found in small quantities. It yields a useful gun. *Ain* is a common tree and its timber is used for house building purposes. Among the other useful trees may be mentioned the *khair* tree from which catechu is prepared, the *avla* tree which bears a nut which is used for medicines or sometimes pickled, and whose leaves are used for tanning purposes, the tamarind tree whose wood and fruit are both useful, and soft wood trees of the *savar* and *pangara* variety. Leaves of *mahuli* trees are gathered and used for preparing *patrawalis* (leaf-plates) which are exported in large quantities to Bombay.

SURVEY OF RESOURCES : POWER.

11. There are three electric supply companies in the district. Of these the Mahad Electric Supply Company has not yet started its work. The figures of output and distribution of the other two companies are as follows :—

—	Units generated.	Total Units sold.	Units sold for power purposes.
The Matheran Electric Supply Company	52,573	36,202	1,468
The Panvel Electric Supply Company	93,176 (Purchased from Tata's).	86,599	37,840

SURVEY OF RESOURCES : CAPITAL.

12. There were 51 agricultural co-operative societies in the district at the end of 1937-38 and their working capital amounted to Rs. 84,000. The non-agricultural co-operative societies were 9 during the same year and their working capital was Rs. 2.56 lakhs. In addition, there were 35 post office savings banks with 4,719 accounts current at the end of 1937-38 and the balance at their credit was Rs. 10.26 lakhs. During the same year, postal cash certificates amounting to Rs. 2.63 lakhs were sold in the district.

INDUSTRIES IN THE DISTRICT—GENERAL.

13. The population engaged in industrial occupations has been estimated at 23,666 persons including 14,320 persons engaged in forest industry, stock-raising, fishing and salt-making. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	..	..	..	31
Butchers	..	..	..	110
Tailors, milliners, etc	..	..	..	522
Washing and cleaning	..	..	..	157
Barbers	..	..	..	972
Scavenging	..	..	..	119
Total				<u>1,911</u>

The remaining 21,755 persons may be regarded as engaged in industry. The Census tables give the following classified statistics :—

Forest industries	..	..	2,092
Stock-raising	..	..	5,522
Fishing	..	..	6,018
Salt-making	..	..	688
Cotton spinning, sizing and weaving	..	..	163
Rope, twine, etc., makers	..	..	124
Tools carding, spinning and weaving	..	..	127
Carpenters, turners, etc.	..	..	1,507
Basket makers	..	..	552
Blacksmiths	..	..	331
Workers in brass, copper and bell-metal..	..	..	113
Potters and makers of earthenware	..	..	1,020
Sweetmeat and condiment makers	..	..	108
Boot and shoe-makers	..	..	483
Lime burners	..	..	736
Heat, light, electricity, etc.	..	..	231
Jewellery and ornaments	..	..	1,174
Other miscellaneous industries	..	..	766
Total			<u>21,755</u>

Of these, only 328 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Engineering	3	3	140	124
Food, drink and tobacco (rice-mills) ..	..	11	..	118
Chemicals, dyes, etc.	1	1	33	126
Processes regarding wood, stone and glass	1	1	155	500
Total ..	5	16	328	868

14. The investigator, Mr. B. M. Kale, spent 16 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

SALT MANUFACTURE.

15. Uran and Pen are the two well-known centres of salt manufacture in the Kolaba district. The industry is seasonal and gives employment to about 6,000 workers. The preparatory processes start from October and the actual production of salt is done from February to May. The salt is prepared in pans or *kundis* measuring 80' × 25'. It is estimated that one pan yields about 72 maunds of good salt. The initial expenditure is stated to be Rs. 4 per pan for cleaning. There is one labourer for 16 *kundis* or pans and he is paid at the rate of Rs. 10 per pan for the whole season. According to one salt manufacturer the cost of preparing one maund of salt is about 3 to 3½ annas. The transport charges of conveying the salt to Bombay are stated to be 2½ annas per maund. The salt is sold at Bombay and other districts of the Province and sometimes outside the Province. It is stated that there is no internal competition between the salt manufacturers, but there is competition from other producers in India. The industry

was said to be in a prosperous condition till the year 1910 but since then it has been in a depressed condition. It is said this is due to over-production and competition between the producers of different centres. Most of the manufacturers complain about the heavy transport charges.

16. At Pen, the investigator interviewed one producer who manufactures salt and sells it on contract basis. The workers are paid at 5 annas a day. About six thousand maunds of salt are manufactured by him. The Pen salt is stated to be better and large quantities of it are exported to Sholapur, Poona and the Nizam's Territories. It is estimated that the salt industry at Pen gives employment during the season to about 600 workers.

FISHING.

17. The investigator reports that the sea-coast from Alibag to Revdanda and near Rewas and Uran is noted for good fish. Being near the Bombay city, the fishermen of the district have the advantage of a good and profitable market. Most of the fishermen sell their catch directly to the dealers from Bombay, though some of them take their fish to Bombay for sale. The investigator reports that the economic condition of the Kolaba fishermen is better than that of the fishermen in the Ratnagiri district.

18. Most of the fishermen interviewed by the investigator, have their own boats and nets. The cost of a boat is stated to vary between Rs. 250 and 300. The prices of nets vary, according to their sizes, from Rs. 150 to Rs. 200. They are prepared from Japanese yarn and are said to last for two years. Besides the boat and nets, wooden stakes are also required. These are fixed in the sea at some distance away from the coast and nets are anchored to them. The fish caught are *ghol* (Jew fish), *saman*, *rawas* (Indian salmon), *bombil* (Bombay Duck), and *kolambi* (Prawns). The *saman*, *ghol* and *rawas* are bigger varieties of fish and are sold at prices varying from Re. 1 per *ghol* to 6 annas to 10 annas per *rawas* or *saman*. The average sale of fishermen catching these bigger fish is estimated to vary from Rs. 100 to Rs. 180 per month according to the number of men working and number of nets under each fisherman. The smaller catch like *bombil*, *saranga* and *kolambi* are reported to fetch nearly Rs. 40 to 50 per month. Though fishing is carried on throughout the year, the brisk season is reported to be during the period from November to May. The workers who help in the catch are not paid in cash. The catch is distributed between the owner of the boat and nets, and the workers. The owner of the boat and the nets retains one-third of the catch and the remaining two-thirds are distributed equally between all the workers. As the Bombay market is near and there is a good demand for fresh fish, fishermen do not dry and salt fish for sale, as they do in the Ratnagiri and Kanara districts.

Kambli WEAVING.

19. At Roha there are a few families of weavers who weave *kambli*s. The number of looms working at present is stated to be only seven,

though some year back there were reported to be 30 looms working. One of the artisans interviewed, has six members in his family who all work with him. On an average, this family requires wool worth about Rs. 150 a year. In addition to this wool, woollen yarn worth about Rs. 100 is also purchased annually. The wool is obtained from the local shepherds and yarn from the merchants. The artisan has one loom, the cost of which is stated to be only Rs. 10. The usual selling price of *kambli*s is Rs. 1-4-0 each. The value of the total annual output of this artisan is estimated to be Rs. 350. The *kambli*s are sold in the markets of Roha, Janjira and the neighbouring talukas. Most of the artisans complain about lack of capital and about the competition from cheap Japanese substitutes. It is stated that the agricultural depression has much affected this industry as the demand for these *kambli*s mainly comes from the agriculturists.

BEDS AND PILLOWS MAKING.

20. This industry is reported to have been recently started at Pen. The artisan uses a machine for cleaning and carding cotton and is reported to be travelling with it from place to place doing his business. The cotton is obtained from Bombay and the annual purchases are stated to be worth Rs. 400 to Rs. 500 a year. The carding machine is stated to have cost Rs. 1,450. The total annual output is valued at Rs. 800. Besides preparing beds, pillows, etc., out of the cotton purchased by him and marketing them, he also undertakes their preparation for those who supply him with cotton and cloth. The wages he receives by this work are not known but the total annual income from this source is stated to be about Rs. 150. He employs two labourers who are engaged whenever there is much work and they are paid at the rate of 6 to 8 annas a day.

RICE MILLS.

21. The main crop of the district being rice, rice husking and grinding forms the main industry in the district. Formerly this was a cottage industry but for the last twenty-five years, rice mills are reported to have come into prominence. Even these are now said to be working without any profit. The rice-mills are reported to have prospered till 1925 mainly on account of the high price of paddy. The rice mill owners get their supply of paddy from the local agriculturists or in the local market, for Rs. 25 to Rs. 35 per *khandi* according to quality. The richer class of mill-owners purchase for stock while the average owner purchases only to meet the demands of his customers. Some of the cultivators take their paddy to the mills and get it husked at the rate of Rs. 3 to Rs. 4 per *khandi*.

22. The cost of equipment of the mills varies from mill to mill. In addition, the millowners have to incur the cost of maintaining motor lorries for transport of rice bags. The husked rice is sold usually at varying rate, from Rs. 70 to 90 per *khandi* according to the quality of

rice. It is sold locally and in the markets of the Ratnagiri district and Bombay City. The investigator estimates that there are about 1,000 to 1,300 people employed in this industry. The mills usually work only during the non-monsoon season, for 9 hours a day and the workers are paid wages varying from Rs. 15 to Rs. 50 per month for the technical staff and six annas a day for manual labourers. The earnings of the mill-owners are reported to be very low at the present time due to internal competition. The investigator reports that most of the mills are at Panvel and Mahad. It is stated that new mills are being started at these places where even the existing ones find it difficult to earn any profit. The mill-owners suggest that Government should intervene in the interest of the industry and restrict the number of mills, fix the hours of work as also the charges for husking and grinding rice.

PARCHED RICE INDUSTRY.

23. At Pen, the investigator interviewed a manufacturer of parched rice. He uses machinery which is reported to have cost him Rs. 35,000. The engine is run on crude oil. The total investment in the concern is estimated to be Rs. 50,000. Besides parched rice, paddy is also husked in this mill. He purchases the paddy from the agriculturists or from the local dealers. Business is said to be slack during the monsoon period. The products are sold in the markets of Bombay, Poona, etc. The goods are sent by a motor lorry which is maintained by the owner. During monsoon there is much difficulty in transporting the goods as some of the roads become unfit for motor traffic. The owner complains against the competition from the parched rice-producers in the Karnatak and the Central Provinces. In husking rice he meets with competition from the local mill-owners. He employs fifteen workers of whom ten are paid daily wages at 5 annas a day and the remaining five who are skilled workers, are paid monthly wages varying from Rs. 8 to Rs. 50. All of them work for 8 hours a day. The owner reports that he is not making any profit on his investment and that his main difficulty is the want of working capital.

COPPER AND BRASSWARE INDUSTRY.

24. The investigator reports that there are many families of copper-smiths at Roha, Mahad, Revdanda and Pen who manufacture copper and brassware for the Bombay dealers on a fixed-wage system. It is stated that these copper-smiths specialise in preparing a particular type of pots which are not yet manufactured on machines. The economic condition of these artisans is reported to be bad. The competition of machine-made ware is stated to have deprived them of their independent living and to have now made them only contract workers for the Bombay dealers. The metal sheets are supplied by the Bombay merchants and the artisans are paid at the rate of Rs. 2½ per maund for copper pots and Rs. 3½ per maund for brass pots. The artisan has himself to spend on the supply of such materials as coal, tamarind, etc. The total annual earnings of the two families interviewed by the investigator

are reported to be Rs. 500 and Rs. 600 for four and five workers respectively. Besides these contract workers there are employers who engage workers to prepare copper-ware. Copper plate is obtained from Bombay. The cost of equipment of these shops, varies from Rs. 100 to Rs. 200 according to the size of the shop. In one case, the total output is reported to be worth Rs. 650 a year while in another which prepared copper kettles for export to Arabia, the annual output is said to be about Rs. 1,000. Most of these merchants also keep for sale factory-made goods obtained from Bombay. The earnings of these merchants are reported to be low and there is said to be keen competition amongst them.

SILVER-WARE INDUSTRY.

25. The investigator interviewed two silver-smiths, one at Revdanda and the other at Roha. Both of them are engaged in preparing silver pots for the Bombay dealers. They are supplied with silver bars by the Bombay merchants and are paid wages at the rates of 9 pies per tola for their products. They have to incur all the incidental expenditure. The work of the silver-smith at Revdanda brings him an income of about Rs. 1,800 a year. He employs a worker who is paid Rs. 8 per month, and works for eight hours a day. The silver-smith at Roha prepares silver-ware which yields him an income of Rs. 500 a year. He states that he is just able to make both ends meet by taking to agriculture in the slack season. The competition of Sangli and Nasik products, and of machine-products is reported to have greatly reduced their rates of wages. It is stated that formerly the Bombay merchants used to pay them at the rate of $2\frac{1}{2}$ annas per tola. Now the Bombay merchants are reported to be refusing to pay more than 9 pies per tola.

PRINTING PRESSES.

26. The investigator interviewed two owners of printing presses, one at Mahad and the other at Alibag. Both the presses are worked on hand machines. The press at Mahad is estimated to have cost Rs. 1,800 while the one at Alibag only Rs. 600. The press owner at Mahad spends Rs. 300 on paper and ink annually and his turnover is worth Rs. 700 to Rs. 750 per annum. There are two workers who work for 8 hours a day and are paid Rs. 10 to 15 per month. It is stated that the press has not enough work to keep it fully engaged. The total capital invested by this owner is reported to be Rs. 3,000 and the owner complains that he does not get sufficient return on his investment. Recently another press is reported to have been started at Mahad and both the presses are now competing with each other. The press at Alibag utilises paper, ink, type, etc., worth about Rs. 650 a year. Paper is obtained from Bombay. The average amount of work done in a year is estimated to be worth Rs. 3,000. Printing is mostly done for order. The workers who number eleven, work for eight hours a day and receive wages varying from Rs. 6 to Rs. 30 per month. Here also the owner complains about the local competition, low return on investment and the lack of adequate working capital.

CUTLERY.

27. At Pen, there is one cutlery works started by Mr. Manohar who has trained himself in the manufacture of cutlery in England. The total capital invested by him in the concern is stated to be Rs. 15,000. The main type of products manufactured are pen-knives, knives and scissors. They are manufactured with the aid of machinery, which is said to have cost about Rs. 7,000. Steel is obtained from England. The products are marketed throughout the Bombay Province and also in other parts of India. More than 30 workers are employed in the factory. They are paid weekly at rates varying from 2 annas to Rs. 1½ per day. The proprietor complains about the irregularity of the workers. According to him, there are good prospects in the industry and to encourage more people to take up to this industry, he suggests that Government should grant scholarships to students to go to England in order to get actual experience in factories. He also wants Government to grant protection to Indian manufacturers.

TOY-MAKING INDUSTRY.

28. At Pen, the investigator interviewed one artisan who is engaged in the preparation of wooden toys for the last twelve years. The wood used is mainly of the *kuda* trees. Oil and colours are also used. All the raw materials are obtained from the local merchants. The toys are prepared with the aid of machinery. The industry is carried on throughout the year. The usual market for these toys is Bombay but they are sent to other places also according to demand. The toys are exhibited at fairs and exhibitions. He employs three workers who are paid Rs. 15 to 20 per month according to their skill. They work for eight hours a day, throughout the year. The net earnings of this artisan are estimated at about Rs. 40 to 45 per month. The main complaints of the artisan are regarding the inadequacy of working capital and of the supply of raw material—the *kuda* and *heddi* wood. It is stated that these trees are available only in the forest areas and the artisan wants that Government should sell him the required quantity of wood at reasonable price as it is not possible for him to make wholesale purchases of wood.

CARPENTRY.

29. It is reported that at Panvel there were some years ago 50 families of carpenters who specialised in making wheels of carts. To-day, it is stated that, there are only four or five families. Since the increase in motor-bus traffic, the bullock cart traffic has been hit hard and this has indirectly affected the carpenters' industry. The artisan interviewed uses annually, wood worth Rs. 300 and iron and hardware worth about Rs. 75. These raw materials are mostly purchased locally and sometimes obtained from Bombay. It takes the artisan ten days to prepare a pair of wheels, which is sold for about Rs. 30. About 35 pairs of wheels are prepared annually. The average

earnings of the artisan and his son together come to about Rs. 40 per month during the brisk season. During the months of November to March business is reported to be slack and then the artisan usually takes to agriculture.

CHARCOAL-MAKING.

30. At Roha and Pen, the investigator interviewed dealers in charcoal. The dealer at Roha purchases standing trees at the Forest Department auctions. His annual contracts are estimated to be worth on an average Rs. 4,500. He employs about 500 persons on piece-work basis and these are employed in the work of cutting the trees and making timber and also in making charcoal. The charcoal is sold in the markets of Bombay. The selling price varies from 6 annas to 7½ annas per maund. The total annual production is estimated to be worth Rs. 15,000. The timber is sold in the markets of Ratnagiri and Mahad. The total annual sales of timber are stated to be worth about Rs. 12,000. The work is slack in the monsoon. Though there is competition from other dealers, this dealer does not seem to be much affected by it. The workers are paid at the rate of one rupee per eight maunds of charcoal. Those engaged in felling trees are paid on contract basis.

31. The dealer interviewed at Pen prepares charcoal and also exports myrabolams (*harda*). His annual production of charcoal is stated to be 5,500 maunds. The market is both local and Bombay. The charcoal fetches about 5 annas to 6 annas per maund. The export of myrabolams amount to 500 maunds per year and fetches him Rs. 250. Besides charcoal and *harda*, this dealer also exports country herbs and roots worth about Rs. 200 per year. There are about 20 workers engaged by this dealer and they are paid on piece-work basis at the rate of 4 annas per bag of 3 maunds of charcoal, and 12 annas for collecting one bagful of *harda*. For collecting country herbs and roots, the workers are paid at 12 annas per bag.

32. The charcoal industry in this district is reported to have flourished till 1919, but since then there is depression in the trade. There is competition from Northern India and the prices have fallen too low to make the industry profitable. Still the export of charcoal from Kolaba is considerable. From Pen alone the investigator reports that charcoal worth Rs. 75,000 is exported annually to Bombay.

AYURVEDIC MEDICINE INDUSTRY.

33. At Panvel, the investigator visited the well-known Ayurvedic medicine manufacturing factory of Dhootpapeshwar. The raw materials utilised are different kinds of herbs, minerals and animal products. These are obtained from outside. The annual purchases are estimated to cost nearly Rs. 40,000. About Rs. 25,000 are spent annually on the purchase of bottles, most of which are obtained from abroad. The medicines are prepared with the aid of machines run

on electric power. The annual output is stated to be worth Rs. 3 to Rs. 4 lakhs. The factory works throughout the year and the products are marketed throughout the Bombay Province and India, through a large number of agents and dealers. The total capital invested in the concern is estimated to-day at about Rs. 12 lakhs. The factory employs 225 workers who work for 8 hours a day and are paid wages varying from Rs. 8 to Rs. 45 per month. The company is reported to be maintaining their own printing press. It has been suggested that a glass factory could be profitably opened near this concern as glass bottles worth Rs. 25,000 are utilised by it annually.

34. At Pen, a dealer in herbs was interviewed. Herbs are obtained by him from the *katkaris* by paying them Re. 1 to Rs. 1-4-0 per day. These herbs are collected and sent to Bombay. On an average he is said to be exporting to Bombay about 100 bags every year and getting Rs. 600 from their sale. It seems that he retains a good margin of profit. He meets with local competition but as this is only a subsidiary occupation for him, the competition does not much affect him. There is reported to be good scope for this trade.

OIL-SEEDS PRESSING INDUSTRY.

35. The industry of oil-seeds pressing by country *ghanis* is reported to be in a decaying condition. The severe competition from mill pressed oil is stated to have hit hard the indigenous oil presser whose economic condition is said to be very bad. Most of the *ghani*-owners have left their industry and taken to agricultural labour or other occupations. At Avas, the investigator visited a shop-keeper who also pressed oil as a subsidiary occupation. The oil is pressed from the seeds of the *karanja* trees. These seeds are available at Nagaon and Alibag. The shop-keeper does not seem to make much profit from this industry. This is confirmed by the fact that the shop-keeper also takes to agriculture as a means of subsistence.

POULTRY INDUSTRY.

36. At Alibag the investigator visited a poultry farm which has been recently started. The farm has seven incubators and fifteen brooders. The eggs are sold at 6 annas a dozen and the birds at Rs. 6 per dozen. The brisk season for business is during the months of October to February. The owner states that the poultry industry will prosper if long-term finance is made available to the poultry-farm owners. He is also of opinion that there is good scope for industries like bee-keeping, sheep rearing, etc., if one has his own farm and adequate capital.

BAMBOO-WORK.

37. At Avas, where the investigator interviewed the basket-makers, there are reported to be only three families of bamboo-workers. The increase in the motor transport and the change in the methods of

storing fish are stated to have affected the bamboo-work industry very adversely. There was a good deal of demand for bamboo mats some years back, from the bullock cart-owners. Similarly the fishermen used to stock their fish in baskets and there was a large demand for them. Now both these demands are absent. The articles prepared by them are mainly sold in the local markets, and some also in the Bombay markets. One of the artisans interviewed by the investigator, purchases bamboos worth about Rs. 60 a year at the rate of 5 to 6 per rupee. The time required for preparing the different articles like mats, baskets, sieves, etc., varies from 2 hours to 4 hours to a day or two. The sieves and baskets are sold at the rate of one to two annas each, while the mats are sold for 12 annas to Rs. 1-4-0 each. On an average, products prepared by this artisan in a year, are said to be worth about Rs. 90. The artisan thus seems to be earning only about Rs. 2½ per month. Both the artisan and his wife also take to agricultural labour and earn thereby about 4 annas to 5 annas a day.

POSSIBILITIES OF NEW INDUSTRIES.

38. Regarding possible new industries, it has been suggested that the possibility of manufacturing rough packing paper from rice husks should be investigated. Due to the large number of rice-mills working in the district, there is an abundant supply of this material which is at present reported to be wasted or burnt. The toy-making industry carried on, on a small scale at present at Pen, is said to present good scope for development. The flourishing concern of the Dhootpapeshwar at Panvel opens up opportunities for a glass manufacturing factory but it is not clear whether the raw materials necessary for the manufacture of glass are available in the neighbourhood. Further, it has been suggested that the proximity of the Tata Hydro-Electric Company's supply mains can be availed of for starting new industries near about Dharamtar-Mahableshwar road for the utilisation of locally available raw materials such as grass, bamboos, etc., for pulp making.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different
Districts of the Bombay Province

POONA

BOMBAY

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries

of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province ; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

Chairman.

May 3, 1940.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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POONA.

POSITION AND AREA.

The district of Poona lies between 17° 54' and 19° 24' north latitude and 73° 19' and 75° 10' east longitude, and covers an area of 5,332 square miles. It is bounded on the north by the district of Ahmednagar, on the east by Ahmednagar and Sholapur districts, on the south by the Nira river, which separates it from the Satara district, and on the west by the Kolaba district.

PHYSICAL FEATURES.

2. Towards the west, the country is undulating and intersected by numerous spurs of the Western Ghats which break off in a south-easterly direction becoming lower as they pass eastwards and in the end sinking to the general level of the plain. Along the Western border of the district, the Western Ghats form a barrier inaccessible except by a few difficult passes. Many streams rise in the Ghats and flow eastward until they join the Bhima which passes through the district from north-west to south-east. The main tributaries are on the left, the Vel and Ghod and on the right the Bhama, Indrayani, Mula and Nira.

Like all other districts which abut on the Western Ghats, Poona can be divided into distinct tracts. The western tract is rugged and hilly, the eastern tract a level plain with good soil but badly supplied with water, while the transition tract that lies in between these two, has a good soil and plentiful water supply.

CLIMATE AND RAINFALL.

3. The climate of the district varies with the distance from the Western Ghats. Near the Ghats it is very moist and feverish in the rains but pleasant throughout the hot season. The temperature is kept down by cool breezes which extend to Poona itself. In the east the climate is healthy but hot. In the transition tract it is dry and invigorating.

The regular monsoon ordinarily breaks in June and stops in September, and is succeeded by the north-east rains which close in November. The rainfall varies in the different parts of the district. In the western part it is heavy and regular; in the central belt it is moderate and in the Bhimthadi and Indapur talukas on the east, it is very irregular. The average rainfall for the district is about 27 inches.

POPULATION.

4. The district has a total population of 1,169,798 persons of whom 857,098 live in rural areas consisting of 1,132 villages while the remaining

312,700 are to be found in 12 towns. Of these, the more important towns are:—

	Population.
Poona	198,078
Poona (Cantonment)	35,807
Kirkee (Cantonment)	16,302
Baramati	14,170
Lonawala (including Khandala)	10,694

The percentage of urban population to total population is about 26·7.

According to the Census returns of 1931, the total number of principal earners in the district is 395,144 of whom 300,263 are males. The occupational distribution of that number is as follows:—

Exploitation of animals, vegetation and minerals.	251,707
Industry	41,853
Transport	6,788
Trade	21,236
Public force and administration	24,249
Professions and liberal arts	9,414
Living on their income	2,238
Domestic service	8,982
Insufficiently described	18,359
Unproductive	10,313
Total ..	395,144

The proportion of the industrially occupied persons to the total principal earners comes to 10·6 per cent. But not all the 251,707 persons shown against “exploitation of animals, minerals and vegetation” are engaged in cultivation. That figure can be further analysed as follows:—

Cultivation	240,763
Forestry	675
Stock-raising	9,125
Fishing, etc.	1,142
Minerals	2
Total ..	251,707

Thus there are 10,942 persons who are engaged in such occupations like forest industries, stock-raising and fishing, which are more or less industrial in their nature. Adding these, the total number of industrially occupied persons in the district comes to 52,800.

HEALTH AND MEDICAL FACILITIES.

5. As regards health conditions the district appears to be normal. The mean ratio of births per thousand for the five years ending 1937 was 38·04 and the mean ratio of deaths for the same period was 26·99 per thousand. The survival rate for the district is thus 11·05 per thousand.

There are 12 hospitals, 23 dispensaries and 13 other medical institutions like leper hospitals, tuberculosis sanatorium, etc. Of the 12 hospitals, only one is maintained by Government, the rest being maintained by missions, from private funds, etc. Nine of the dispensaries are maintained by municipalities, four by the District Local Board and others by Government, missions, railways, etc. The number of doctors in the district excluding Poona City is, however, estimated to be only 42, thus giving a proportion of one doctor for every 21,800 persons.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 128,709 persons were returned as literates thus constituting a literacy percentage of 11 for the district.

The educational facilities available in the district are summed up in the following statement for 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	965	79,740
Secondary (including lower secondary and English teaching) schools	56	14,556
Commercial, agricultural and industrial schools ..	13	881

Of the 1,132 villages in the district, 675 villages had schools in them.

TRANSPORT FACILITIES.

7. The Great Indian Peninsula Railway is the main trade route. The Madras and Southern Maratha Railway brings the Bhimthadi and Purandhar talukas within ready access of Poona and the Great Indian Peninsula Railway. The Dhond and Manmad Railway which joins the Great Indian Peninsula Railway at Dhond further facilitates communications. The district is comparatively well served with good roads. Motor services throughout the district afford a quick means of transport on all metalled roads leading from Poona.

The total mileage of roads in the district in 1937-38 was 428 miles of metalled roads and 789 miles of unmetalled roads.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has a total area of 3,427,658 acres of which 2,267,875 acres constitute the gross cropped area. Current fallows constitute 498,094 acres. Forests about 407,947 acres while other uncultivable land is 421,100 acres. There are 14,578 acres which are returned under culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area :—

					Area in acres. (1937-38.)
Rice	..	..	..	..	95,279
Wheat	..	..	..	..	70,239
Barley	..	..	..	..	1,155
<i>Jowari</i>	..	..	..	..	1,012,831
<i>Bajri</i>	..	..	..	..	481,645
<i>Ragi</i>	..	..	..	..	31,371
Maize	..	..	..	..	1,629
Gram	..	..	..	..	77,466
Other food grains including pulses	..	..	..	..	120,821
Linseed	..	..	..	..	661
Sesame (<i>til</i>)	..	..	..	..	6,048
Groundnuts	..	..	..	..	27,713
Other oil-seeds	..	..	..	..	103,123
Condiments and spices	..	..	..	..	10,127
Sugarcane	..	..	..	..	10,952
Cotton	..	..	..	..	17,912
Other fibres	..	..	..	..	1,955
Tobacco	..	..	..	..	928
Other drugs and narcotics	..	..	..	..	1,013
Fodder	..	..	..	..	158,888
Fruits and vegetables	..	..	..	..	35,669
Other miscellaneous crops	..	..	..	..	450
Total					2,267,875

It will be seen that the important commercial crops are groundnuts, cotton and sugarcane. Among the food-crops, *jowari* is the most important.

In 1937-38 fruits and vegetables accounted for 35,669 acres. More details were obtained for these important crops from the Department

of Agriculture which supplied the following information in respect of 1938-39 :—

					Acres.
					1938-39.
<i>Vegetables—</i>					
Potatoes	..	..	..	..	16,993
Sweet potatoes	..	..	..	..	1,645
Yam	..	..	..	..	87
Carrot	..	..	..	..	1,045
Radish	..	..	..	..	226
Onions	..	..	..	..	4,153
Others	..	..	..	..	110
					24,259
<i>Green vegetables—</i>					
Tomatoes	..	..	..	..	270
Fenugreek	..	..	..	..	847
Edible hibiscus	..	..	..	..	1,131
Musk melon	..	..	..	..	51
Water melon	..	..	..	..	61
Others	..	..	..	..	3,666
					6,026
<i>Fruits—</i>					
Plantain	..	..	..	..	1,155
Mango	..	..	..	..	96
Lime	..	..	..	..	473
Sweet lime	..	..	..	..	2,774
Oranges	..	..	..	..	1,683
Pomegranates	..	..	..	..	393
Guava	..	..	..	..	890
Fig	..	..	..	..	508
Papaya	..	..	..	..	210
Grapes	..	..	..	..	45
Others	..	..	..	..	58
					8,285
Total, Fruits and Vegetables ..					38,570

The area under fodder crops is nearly 159,000 acres. The district has many breeds of cattle of which the *khilari* or herd-cattle from West Khandesh are the most valuable. Buffaloes are common in all parts and are of several kinds but the best breeds are imported from Sind, Cutch and Gujarat. Flocks of sheep are found in most large villages and goats are common. According to the Census of cattle taken in 1934-35 the details of live-stock in the district are as follows :—

Bulls and Bullocks (working, breeding and young stock)	..	334,640
Cows	do. ..	249,469
Buffaloes	do. ..	17,557
Cow-buffaloes	do. ..	80,298
Sheep and goats	.. ..	383,590
Horses and ponies	.. ..	9,613
Mules	.. ..	741
Donkeys	.. ..	4,635

Of these, milch cattle number 181,733 consisting of 135,792 cows and 45,941 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. With the exception of iron, which occurs in various places or iron-clay, Poona has no metallic ores. Grains of metallic iron derived from the traps are frequently found in the beds of streams. The trap-rock almost everywhere yields good building stone and road metal. Dark blue basalt is also common. It is susceptible of high polish and is worked into idols, pedestals for wooden pillars and inscription slabs. Carbonate of soda is also found in a few places and is made use of by washermen for washing clothes. In the beds of almost all the rivers good sand for mortar is found. The limestones found in several places of the district are of superior quality. The lime produced from the stone of these quarries is said to be excellent for constructional purposes. The Gazetteer also states that near many of the streams, earth is found suitable for making bricks and tiles.

SURVEY OF RESOURCES : FORESTS.

10. The area under forests is 407,947 acres. In the forests on the sides and plateaus of the Sahyadri range, the mango, *bombax malabaricum*, teak, and bamboos grow abundantly. The teak occurs chiefly about ten miles off the main range of the Sahyadris. On the banks of many of the great rivers of the district the soil is alluvial and *babul* trees grow to a considerable height. The forests yield useful products like timber, grass, *shikekai*, *timru*, *harda* and honey.

SURVEY OF RESOURCES : POWER.

11. There are four electric supply companies in the district. The figures of their output are given below :—

	Units generated. (000s)	Total Units sold. (000s)	Units sold for power purposes. (000s)
Poona Electric Supply Company Limited	8,682 (purchased from Tata's). (do.)	7,121	4,495
Lonavala-Khandala Electric Supply Company Limited	102	83	19
Baramati Electric Supply Company Limited	68	59	18
Junnar Electric Supply Company Limited	(Supply not yet started).		

SURVEY OF RESOURCES : CAPITAL.

12. There were 218 agricultural co-operative societies in the district in 1937-38, with an aggregate working capital of Rs. 25·92 lakhs. Besides these, there were 60 non-agricultural co-operative societies with a working capital of Rs. 31·8 lakhs. The District Central Co-operative Bank during the same year had a working capital of Rs. 49·19 lakhs. In addition, there were 129 postal savings banks in the district with 46,366 accounts current in 1937-38, and the balance to their credit at the end of the year was Rs. 94·15 lakhs. In the same year, cash certificates of the value of Rs. 27·81 lakhs were sold in the district. The Imperial Bank of India and the Bank of India have each got two branches at Poona while the Bank of Maharashtra and the Presidency Industrial Bank have their head offices there.

INDUSTRIES IN THE DISTRICT : GENERAL.

13. The population engaged in industrial occupations has been estimated at 52,800 including the 10,942 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	321
Butchers	634
Tailors, milliners, etc.	2,799
Washing and cleaning	1,288
Barbers, hair-dressers	2,377
Scavenging	1,732
Total	9,151

The remaining 43,649 may be regarded as persons engaged in industry. The Census tables give the following classified statistics of the more important industries :—

Forest industries	..	..	..	675
Stock-raising ..	..	..	..	9,125
Fishing, etc. ..	..	..	..	1,142
Cotton spinning, sizing, and weaving			..	2,000
Rope, twine, etc.	..	..	..	3,347
Wool manufacture	..	..	..	839
Silk manufacture	..	..	..	677
Dyeing, bleaching, printing, etc.	..		..	136
Workers in leather	..	..	..	693
Carpenters ..	..	..	..	3,792
Basket-makers, etc.	..	..	..	1,075
Blacksmiths, workers in iron, etc.	..		..	1,199
Workers in brass, copper and bell-metal			..	217
Potters and makers of earthenware ..			..	2,386
Brick and tile making ..	..		..	158
Manufacture and refining of vegetables			..	766
Rice pounders, huskers, etc.	..		..	232
Sweetmeat and condiment makers	..		..	716
Manufacturers of tobacco	..		..	289
Boot, shoe, etc., making	..		..	3,744
Lime burners	..	..	..	3,794
Repairs of motor vehicles, cycles, etc.			..	288
Printers, book-binders, etc.	..		..	243
Jewellers and ornament makers	..		..	1,836
Other miscellaneous industries	..		..	4,280
Total ..				<u>43,649</u>

Of these, 8,464 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement

gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund ..	10	12	5,379	4,806
Textiles	1	3	862	1,608
Engineering	6	23	403	695
Minerals and metals ..	1	....	15	....
Food, drink and tobacco ..	....	3	....	84
Chemicals, dyes, etc. ..	....	1	....	42
Paper and printing ..	16	32	1,339	1,851
Processes regarding wood, stone and glass ..	1	6	191	381
Miscellaneous .. ..	....	3	....	398
Seasonal factories ..	6	14	275	678
Total ..	41	97	8,464	10,543

14. The investigator, Mr. N. M. Joshi, spent 18 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

HANDLOOM WEAVING.

15. The condition of the handloom weaving industry in this district was studied at Baramati, Junnar and Poona. At Baramati and Junnar there has been a steady deterioration in the quality of production. Formerly, *dhoties* and *uparnis* were a speciality of Baramati and Junnar mostly concentrated on *ilkal* and other types of *sarees* demanded by the upper classes of society. At present at both these places, coarse count *sarees* worth Rs. 2 to Rs. 3 and used by village folk are produced. The Junnar weavers mostly use yarn of 2/40s for warp and 20s for weft in different colours, the most common being red and green. It is estimated that an average family at both these centres, can produce 3 *sarees* in a week and that their income from this occupation is about

Rs. 1-8-0 a week. The average output of *sarees* per week is 100 to 125 at Baramati and about 50 at Junnar. Some thirty years back there were 500 handlooms at Junnar. Their number has now dwindled to 12 to 15. The products are mostly marketed by the local dealers to petty traders of the surrounding villages.

16. At Poona the investigator met 4 *karkhandars* and about 45 independent workers. The *karkhandars* own about 8 to 10 looms each and the independent weavers own a loom or two. The cost of a loom with its equipment is stated to be Rs. 25. The products are *paithanis*, fancy *patals*, *pitambars*, *kads*, etc. The weaver of a *paithani* gets about Rs. 6 to Rs. 8 a month. In addition, the family members get their remuneration for the preparatory processes.

17. The main grievance of the artisans at all these centres, is reported to be the keen competition of power-loom production. The weavers therefore plead for some restriction on the production of *sarees* and *patals* on the power-looms. They also want that arrangement should be made for supplying them raw materials at cheap rates and that the marketing facilities should be improved and extended. The weavers appear to be eager to be trained in the production of new designs.

HOSIERY PRODUCTS.

18. Of the three hosiery works visited by the investigator at Poona, two employ about 15 wage-earners each while the third employs only 5 workers.

The raw materials used are cotton yarn, dyes and bleaching materials mostly imported from Bombay. There is a general complaint against the octroi duties levied by the municipality on the raw materials. Among the knitted articles undershirts are the main products. These are marketed in Bombay City and the Deccan by personal canvassing and through agents who are paid a commission of 5 per cent. on selling prices. The three *karkhandars* together produce annually goods worth about Rs. 6,500. Demand for knitted articles is somewhat brisk during the winter and the rainy season. All the *karkhandars* are reported to earn a good margin of profit on their production. The industry is capable of further expansion, if it is protected against Japanese competition. It is also suggested that the availability of capital at low rates of interest and improvement of marketing facilities would give a great stimulus to the industry. The smaller industrialists especially are reported to be finding it difficult to get financial accommodation at economic rates.

DYEING AND PRINTING WORK.

19. The investigator visited a dyeing and printing establishment at Poona started about 2 years ago. Three members from the family are engaged in it. The equipment consists of a few dies, a bronze gauge and stencils. The whole work is done by hand. The materials used are dyes and chemicals and about Rs. 15 are spent on them per month.

Dyeing and printing is done to meet local and outside orders. Work directly for the market on their own initiative is not undertaken on account of the uncertainty of the demand. The net income of the family from this work is reported to be about Rs. 40 to Rs. 45 a month. The *karkhandar* wants capital at low rates of interest and also technical assistance.

BRASS AND COPPERWARE INDUSTRY.

20. This is an important industry of Poona. According to the information supplied to the investigator by the Gokhale Institute of Politics and Economics, Poona, which carried out investigations into the different industries in the Poona City in 1936 there are 217 *karkhanas* engaged in the brass and copperware industry in Poona City. These can be classified under three main categories: (1) completely mechanised, (ii) partially mechanised and (iii) non-mechanised. There is only one *karkhana* of the first variety, 58 of the second and the rest are of the third. It is estimated that in the Poona brass and copperware industry 80 per cent. are engaged in brassware, 12 to 13 per cent. in copperware and the rest in German silver, aluminium, etc. These are exported to the Central Provinces, Mysore, Karachi and other parts of the Bombay Province.

(i) *Completely mechanised karkhana.*

21. There is one large power pressing factory with a rolling mill plant. It is a private limited company with a working capital of Rs. 8 to Rs. 10 lakhs. The concern makes its purchases of raw material through its Bombay agents. Copper and brass sheets and scrapings are also used. Though machinery is used for a majority of processes, some of the hand processes still persist in a few lines of production, e.g., buckets. The factory produces on a large scale brass and copperware for stock, while utensils of German silver, aluminium and iron are produced only to meet orders. The finished goods are sent to dealers all over the Province. The local sales are made through the shop of the concern. The articles are manufactured by means of die-processes through which they pass before they are planed, joined and polished. About 175 operatives are employed on wages varying from Rs. 15 to Rs. 20 per month.

(ii) *Semi-mechanised karkhanas.*

22. These 58 *karkhanas* produce cast metalware. Altogether they give employment to about 375 persons. Out of these, four *karkhanas* produce dining plates and one specialises in betel-nut containers. Four more are Government contractors manufacturing weights and measures and about 35 carry on work on contract as outworkers. The rest are independent workers.

The wage earners usually work for 9 hours. They are paid from 10 annas to Re. 1-8-0 per day according to the nature of the work.

There is no uniformity about the system of payment of wages in the trade. Advances, however, are freely given. No female labour is employed, though children are employed. The working conditions are reported to be extremely unsatisfactory and the incidence of sickness high.

(iii) *Non-mechanised karkhanas.*

23. The remaining 158 *karkhanas* give employment to about 465 persons. About 40 per cent. of the units employ more than 4 men. These introduce division of labour and are in a position to have better remuneration and comparatively secure financial position. Their products consist almost exclusively of beatenware from castings and brass and copper sheets. These latter have almost completely ousted the indigenous castings and now the beatenware is made mostly from sheets shaped and beaten into a variety of articles. The sheets are imported from Bombay. Almost all these artisans are outworkers for dealers who give them *bhangar* (old scrap metal) and brass and copper sheets as in the other centres. There are about 45 dealers in Poona City who distribute work to these outworkers. Due to the competition of machine-made polished ware, the market for beaten-ware has declined and consequently regular work is not provided by the dealers. The economic condition of the outworkers is stated to be extremely unsatisfactory. To cheapen the articles old utensils are repaired and polished and kept for sale. But this work hardly gives 12 annas per day to the *karkhandars*. They get advances from the dealers and are therefore bound to work for the dealers at wages which are fixed without any consideration of the living condition of the workers. The outworker in his turn follows the same system in regard to his assistants. These outworkers receive 16 seers of raw materials and have to give back 12 seers of finished articles and get wages for 12 seers. He has to return the filings to the shop-keeper. When the accounts are made up, annas and pies are usually struck off. Two per cent. is then deducted from the bills as discount. And if the work is not returned in the stipulated time a charge by way of interest on capital locked up in raw materials, is deducted from the wages. In addition to these deductions, one anna for *dharmadaya* is also taken from the outworkers.

24. The industry has two associations, viz., Brass and Copper Merchants' Association and the Bhandi Kamgar Sangh. The former is the new form of the Mahajan Sabha of the olden times. It was registered in 1934-35 as a limited concern. The objects of the Association are : (1) to foster the trade in brass and copperware, (2) to arbitrate in the case of dispute between local and outside merchants, and (3) to secure redress of grievances regarding railway freights, municipal taxation, etc. The Association also controls conditions of production and to some extent wages. The Association covers a large number of shop-keepers and by levying fees for new entrants into the industry it is almost acting like a handicraft guild. The Bhandi Kamgar Union was registered in

1936. It is started with the object of safeguarding the interests of the workers.

25. About two decades back, the Poona brass and copperwares had a wide market extending to the Nizam's Dominions in the south and the United Provinces in the north. Most of these markets are now lost due to the competition from several other centres in the Province. To improve the present position of the industry the following suggestions are made. The railway freights are said to be heavy and discriminating and it is suggested that they should be systematised. The artisans also complain about the octroi duties levied by the municipalities. A third problem is that of motive power. Both the completely and partially mechanised *karkhanas* purchase power from the Poona Electric Supply Company whose charges are fixed on a sliding scale. It charges lower rate on larger consumption. This is stated to still further weaken the competitive capacity of the smaller *karkhanas*. Apart from this the partially mechanised and non-mechanised *karkhanas* complain that they cannot compete with large-scale factory production. The whole industry is stated to be suffering from the competition of the machine products of Bombay. Lastly, the outworkers and independent artisans want to be supplied with capital at low rates of interest and training in new designs and articles.

THE PRODUCTION OF *Udbattis*, SCENTS, ETC.

26. Poona is an important centre of scent production. Here the investigator interviewed 6 *karkhandars* who employ nearly 300 wage-earners during the working season. Most of the workers are women, working either on daily wages or piece-wages and earning about 6 annas per day. The rainy season is slack time for the industry and due to climatic conditions production in many lines is not undertaken during that season. The raw materials are partly imported from Bombay and partly locally purchased. Generally speaking hand appliances are used for powdering and grinding the raw materials. A few *karkhanas*, however, take the help of mills for grinding the *udbatti* material. The finished products are in the main *udbattis*, *kumku*, pomade, and scented oils. Of these *udbattis* by far predominate. The annual production of *udbattis* of the 6 *karkhandars* interviewed is estimated at Rs. 50,000. The products are sold to merchants of Poona, Nagpur, Hyderabad, Burma and Bombay. Sometimes they are even sent to Africa.

27. The *karkhandars* state that they have to face severe competition from Mysore. Some of the bigger *karkhandars* also complain of competition from cheap inferior local articles. Apart from this the municipal octroi duties are said to act as a deterrent to the growth of the industry. The *karkhandars*, therefore, suggest that the octroi duty should either be abolished or at least a rebate should be given on exports.

SOAP INDUSTRY.

28. The investigator interviewed three owners of soap factories at Poona. Two of them employ more than 10 workers and the third has

five wage-earners to assist him. The wage-earners are generally paid from Rs. 10 to Rs. 25 a month. The biggest of these three *karkhanas* has an equipment costing about Rs. 1,300. The materials used in the industry are caustic soda, sodium silicate, cocoanut oil, resin, paper for packing purposes and wooden boxes. Generally these materials are directly imported from Bombay but sometimes the smaller industrialists find it convenient to purchase them locally. All the *karkhandars* produce washing soap which is marketed through the local dealers. The production is generally on a larger scale in summer. The biggest *karkhandar* sends his soap to dealers of Sholapur, Belgaum and Kolhapur. A commission of 4 per cent. is generally allowed to all dealers. The total value of the production of all the three *karkhandars* is estimated at about Rs. 2 lakhs a year.

29. The *karkhandars* state that the industry pays if the size of production is sufficiently large to reduce the overhead costs. They, however, protest against the municipal octroi duties on imports of raw materials, and suggest that the duty should be refunded at least on the exports of soap. They also want that the import duties on foreign chemicals should be removed.

TOILET PRODUCTS.

30. The investigator interviewed three manufacturers of toilet products. Two of them follow this as a subsidiary industry. The production is on a small scale and one or two wage-earners are employed on a monthly wage of Rs. 12 to Rs. 15. The investigator reports that the manufacturer who is following this industry as his only occupation has invested nearly Rs. 5,000 in it. His annual production is stated to be worth about Rs. 1,200. The raw materials of the industry are vaseline, paraffin, scents, cocoanut and sweet oil, labels and bottles. They are generally purchased by personal visits to Bombay. The finished products are brilliantine, snow, cream, hair oil, rose water, etc. The annual production of the three manufacturers is worth about Rs. 2,000. Most of it is locally consumed but a good part is exported to Bombay and Kolhapur dealers. *Diwali* is the season for pomade and hair oils while rose water is much in demand during the marriage season.

31. The main difficulty in the way of the industry is stated to be the competition from cheap imitation products, both Indian and foreign, especially Japanese. As a result, it is reported that some of the manufacturers have been forced to resort to the production of inferior products.

PAPER INDUSTRY.

32. Junnar was once a well-known centre of the paper industry. The investigator reports that about 30 years back there were nearly 50 *karkhanas* here. But due to competition from mill-made paper the industry has rapidly decayed and only five *karkhanas* are left now. The investigator interviewed all the five *karkhandars*. He reports that on an average a *karkhana* employs 5 workers in the premises and 5 to 6 outworkers.

33. Blotting paper and white polished paper (26"×26") are prepared from old and useless paper. The annual output per *karkhana* is about 100 to 125 *gaddies* (of 240 sheets each), and on each *gaddy* they are reported to get a net profit of about Rs. 1-8-0. The paper is generally sold to merchants for their account books in different parts of the Deccan. The *karkhandars* want Government to supply them the old and useless records from Government offices at low prices for use as raw material for their industry. Assistance in technical improvement in sizing, polishing, etc., is also asked for. Their main difficulty, however, is stated to be to find out markets for their produce. At present their higher costs of production, are reported to be coming in the way of marketing their paper. It is, however, stated that since last year the local industry has received some encouragement from Government.

ENVELOPE INDUSTRY.

34. The investigator visited two establishments at Poona where envelopes are manufactured. One of these, has a working capital of about Rs. 10,000 and uses power. About nine people are employed here. The other establishment employs only one worker. Here the whole of the work is being done by hand. The owner of the bigger establishment uses foreign paper, because of cheapness. For preparing files, however, Indian paper is used. The annual expenditure on paper, glue, etc., is estimated to come to about Rs. 4,000. The envelopes and files fetch about Rs. 7,000. The small producer prepares envelopes and scribbling blocks worth about Rs. 800. He finds it difficult to compete with his business rival as will be evident from the following cost figures :—

COST OF PRODUCTION OF ENVELOPES.

		Hand processes (1,000 envelopes).	Power processes (1,000 envelopes).	
		Rs. a. p.	Rs. a. p.	
Paper (6 lbs.)	..	1 2 0	1 2 0	
Wages	..	0 8 0	0 4 0	(including power charges.)
Rent, depreciation, etc.	..	0 1 0	0 2 0	
Total cost	..	1 11 0	1 8 0	
Sale proceeds	..	2 0 0	2 0 0	
Margin	..	0 5 0	0 8 0	

It will be noticed that the cost of production is less in the power-using establishment. It is reported that the cost would have been still lower

if the machinery had been given full work. At present due to lack of sufficient capital, the machine is stated to be used for only two hours in a day. This manufacturer needs Rs. 25,000 to improve his equipment and work it for longer hours. Secondly, he faces competition from foreign imports. The small producer wants encouragement from Government and requests that all Government departments should use only hand-made envelopes made of Indian paper.

DRY CELL BATTERIES.

35. The investigator interviewed the proprietor of the only dry cell batteries *karkhana* at Junnar. Here about 10 persons are employed on monthly wages varying from Rs. 10 to Rs. 15 each. The *karkhana* is on a handicraft basis. The tools and appliances are reported to have been made by the *karkhandar* himself. It is said that it took him nearly 4 to 5 years to complete them. The various chemicals and minerals used in the industry are mostly imported from Germany, Java, Belgium or Poland. The dry cell batteries manufactured, are marketed through agents throughout the Province. The investigator was informed that during the past three years the profits were about 1,500 to Rs. 2,000 a year. It seems that the business is being run on profitable lines.

36. The manufacturer points out that there is a good scope for the industry as the annual imports of dry cell batteries into the Bombay Port alone are worth about Rs. 5 lakhs. He wants an additional capital to the extent of Rs. 10,000, so that he can increase his own annual production by about Rs. 35,000. His present investment in the industry is said to be only Rs. 3,000. Another need for the expansion of the industry is the supply of improved instruments. He suggests that Government should supply this need through their own workshops. A third need is stated to be the establishment of an expert organisation for the supply of commercial intelligence. Some of the suggestions made by the manufacturer are: (1) free supply of expert technical advice to small industrialists, (2) maintenance of a good library of technical books and (3) an organisation for advertising and marketing goods manufactured by small industrialists like him.

THE FURNITURE INDUSTRY.

37. According to the investigator there are in Poona 4 or 5 big furniture shops employing about 30 workers. He visited two of these. He also interviewed a small manufacturer and an outworker, both of whom are assisted by about 2 or 3 workers. During the busy season which extends from January to June more workers are usually employed. Materials used are Malabar teak, polishing materials, nails, hinges, glass and fittings. Only the bigger concerns sometimes import wood direct from Bombay, otherwise the raw materials are locally purchased. The general custom in the industry is for the workers to bring their tools and appliances with them. No machinery is employed. Mostly,

office and home furniture is prepared and the greater part of it is sold in the district itself. One of the bigger firms visited has developed a business in hiring out furniture.

38. The bigger *karkhandars* are well off. Some of them pay income-tax. The out-worker interviewed, gets Rs. 50 a month. It is pointed out that the octroi duty on imports of wood and other articles stands in the way of the industry and should, therefore, be abolished.

PREPARATION OF TOYS.

39. The investigator reports that there are 5 or 6 *karkhanas* employing 25 to 30 workers in toy making at Poona.

Children's playthings, of various shapes and sizes such as toy elephants, horses, motor, etc., are prepared out of plywood, and other materials. Cheap plywood is generally obtained from empty packing cases. These are mostly produced to meet the orders received from the district and outside.

40. The main difficulty in the way of these producers is finance. As they have not enough funds to purchase the necessary raw materials, they are-unable to accept big orders from schools, municipalities, etc. As these institutions do not give advances, the *karkhandars* desire that finance should be given at low rates of interest. They also want that Government should widely advertise their products. They further suggest that educational institutions should particularly be encouraged to coach young and impressionable minds with the aid of toys such as are produced by them.

IVORY COMBS.

41. The preparation of ivory combs is an old industry of Poona. The Gazetteer notes that these combs had a good local demand at one time. The investigator, however, reports that at present only three families are engaged in this industry. He interviewed a member of one of these families. The equipment of the family consisted of simple tools worth about Rs. 100. Last year, this family imported 100 lbs. of ivory worth about Rs. 800 from Bombay and combs, bangles, dices, etc., were prepared. Ninety per cent. of the product was sent to the Karnatak and the rest was sold locally. The total sale proceeds were nearly Rs. 1,500. It is stated that there is a brisk demand for ivory combs and bangles during the marriage season.

42. According to the artisans, the main reason for the decay of the industry at Poona, is the competition from bone and celluloid products. The prices of these competing products are reported to be 50 per cent. lower than theirs. The artisans want training in the production of modern and marketable patterns, as is given in the States of Mysore and Travancore. Financial assistance at low rates of interest is also stated to be necessary. Lastly, they want Government to advertise and find markets for their goods.

BISCUIT-MAKING.

43. The investigator visited a biscuit manufacturer at Poona. Here about 14 wage earners are employed on wages varying from 3 annas to a rupee per day. Biscuits are prepared from wheat flour. Sugar, ammonia and *ghee* are also used. The owner stated that he spends about Rs. 700 a year on raw materials. The biscuits are consumed in Poona and the Deccan. It is reported that the demand is greater for the cheaper products. Due to severe competition from cheap biscuits no new kinds of costly biscuits are prepared. The manufacturer considers it somewhat hazardous for a small concern to carry on experiments. The *karkhana* is stated to be not making any profits due to severe competition from imported and locally prepared cheap biscuits.

FOOD INDUSTRIES.

44. The investigator visited a concern where wheat flakes, *ragi* products, pickle powder, betelnut pieces, pasting materials, etc., are prepared on a cottage basis. The owner states that he finds it difficult to get small ready-made machines to help him and that to specially order such machines from foreign countries is beyond his means. Another great handicap in the development of his industry is reported to be the difficulty of getting air-tight containers at economic rates. He also points out that there is no organised industry for the supply of packing articles. He suggests therefore that the possibilities of developing this line of industry should be investigated. As an aid to his industry the manufacturer also wants Government to buy his products for use in jails and hospitals.

THE PRODUCTION OF SNUFF.

45. There are nearly 35 *karkhanas* at Poona, which prepare snuff on a large scale. They provide work for nearly 500 to 700 wage earners. One of these is equipped with a 9 H.P. engine and all others use the time old methods. An average worker by working 9 to 10 hours a day can earn about 8 annas daily. Tobacco is imported from Nipani, Belgaum, Gujarat, Nagpur, etc., at rates varying from Rs. 70 to Rs. 90 per *palla*. The tobacco from Nipani and Belgaum is stated to be superior and that better quality snuff can be produced out of it. It is reported that the *karkhandars* get a profit of about 6 per cent. to 8 per cent. The snuff is sold throughout Maharashtra. All the *karkhandars* complain about the octroi duties and the licence fees.

AYURVEDIC PRODUCTS.

46. The investigator visited two establishments where ayurvedic product are prepared. One of them is run on a big scale and produces oils, *asavas*, *bhasmas*, ointments, etc., to the extent of Rs. 84,000 per annum. The equipment of this establishment is worth about

Rs. 2,000. The other is small and employs only one labourer. The different ayurvedic products are made from herbs, roots, minerals, etc. The products are said to be particularly popular in the Central Provinces, Maharashtra and the Karnatak. The bigger *karkhandar* stresses the necessity of Government using his products in Government hospitals and dispensaries. Finance at low rates of interest is reported to be necessary. It is further urged that the octroi duties levied by the municipalities should be substantially reduced.

OIL-SEEDS CRUSHING.

47. The investigator reports that some 20 years back, there were about 125 oil-seeds pressing *ghanis* at Talegaon Dabade and about 40 *ghanis* at Talegaon Damdhare. But with the rise of the oil expellers, the *ghanis* have decreased in number and to-day only 15 are left at Dabhade and about 30 at Damdhare. Though the decline of the industry at the latter place does not seem to be so great as at the former place, the oil is now crushed there for 3 to 4 months only in a year while in former times, the *ghanis* used to work for 10 months. Almost all the *telis* interviewed are poor and have to borrow funds for purchasing their raw materials from the dealers in oil. Sometimes the dealers and agriculturists provide the raw material and take back the oil and oil cakes, giving the *tehi* about 5 to 6 annas per 16 seers of *til* or *karadi* seed. Generally the oil and cake are sold to local dealers on a wholesale basis. Formerly, the markets were wider and the products were sent outside these localities. It is reported that the industry is running at a loss.

48. There is now not much demand for the edible oil crushed in country *ghanis* as mill oil is becoming more and more popular on account of its cheapness. The fact that there is still some demand for oil cakes for use of cattle is alone said to be responsible for giving some respite to the *telis* at Dabhade. And the demand for *khardi* oil which is not crushed in mills has kept alive the *ghani* business at Damdhare.

49. To improve their condition the *telis* request Government to provide them finance at cheap rates. At present on retail purchase of groundnuts they pay about 8 annas more per *palla*. They also want that wholesale purchases should be arranged through a co-operative society or some other organisation so that they can get their oil-seeds cheaper. Secondly, it is suggested that Government should effect improvements in the *ghani* with a view to improve the quality of the groundnut oil, without spoiling the quality of the cake. The *karadi*-seed crushers also stress the necessity of bringing about improvements in winnowing, sifting, grinding, etc. of *karadi* seed. Lastly, the *telis* unanimously demand some restriction on the production of oil in mills. According to them their industry can have no future without such restrictions.

TANNING.

50. The investigator reports that the number of independent tanners at Talegaon Damdhare is about 21. It is reported that this number is constant for the last 10 years. About two years back the prices of

leather were high and the prospects for the tanners were somewhat brighter. They, therefore, requisitioned the services of the demonstration party of the Department of Industries and learnt the improved methods of tanning. When prices are favourable, sheep and goat skins are tanned at present according to these new methods. Even in the case of sheep and goat-skins, prices during the last two years are reported to have been unfavourable. The monthly income of a tanner's family is estimated to be Rs. 25 to Rs. 30. The chief difficulty of the tanners of this place is deficiency of water supply. Especially in the dry season, water is scarce. The tanners urge, therefore, that Government should provide them with adequate water supply.

51. Most of the finished hides are utilised by the *Dhors* themselves in the manufacture of *mots* which are used in the surrounding areas for lift-irrigation purposes. The manufacture of *mots* is the predominant occupation of most of these tanners. For preparing ten *mots*, twenty hides are required. On an average the annual output of *mots* per family is about 100 to 125. It takes a family about twenty days to prepare 10 *mots* which fetch Rs. 15. In addition to this *mot* work, the tanners get about Rs. 25 to Rs. 30 in a year from repairs of *mots*.

THE PRODUCTION OF BRICKS.

52. There are reported to be about 19 kilns at Poona which prepare bricks. On an average a *bhatti* (kiln) produces annually 2 lakhs of bricks. It is reported that about 400 potters get their livelihood from this industry. For preparing one thousand bricks, 3 cart loads of clay, 1 cart load of ash, $\frac{1}{2}$ cart of lime are required. The clay is brought in carts from the neighbouring villages. The bricks are sold for about Rs. 13 to Rs. 14 per thousand. During the last few years demand for bricks is stated to be rather brisk due to intensive building activity.

53. The Poona brick makers are facing competition from their rivals at Dapodi, Pashan, Sangamvadi, and other villages near Poona. The latter sell their bricks at Rs. 10 to Rs. 11 per thousand. Moreover, as the clay in these centres contains more lime, they look more attractive and the Poona contractors are reported to generally prefer these cheap products to the local ones. The Poona artisans, however, question the durability of these competing products.

POTTERY.

54. Pottery is one of the decaying industries of Poona. At present there are said to be nearly 30 families of potters engaged in it. Clay is imported from neighbouring villages like Katraj, Kondhave, Vithalwadi, etc., at the rate of Rs. 1-8-0 per cart and flower pots, *shegdis*, crude-oil lamps, etc., are prepared out of it. About 3 to 4 flower pots can be prepared in a day by one man. The potters complain that day by day their condition is becoming desparate. They point out that brass and copper vessels have replaced the earthen pots. Further

earthen *sheddis* have been replaced by stoves and iron *sheddis*. According to these artisans the prospects before their industry are very gloomy.

ROPE MAKING.

55. The *Mangs* of Bhamburda who carry on this industry number 400 to 500. They also prepare broomsticks. The daily output of ropes at this place is estimated to be worth about Rs. 200. The rainy season is slack time for this industry. Ropes are made out of the fibres of *ghaipat*, *ambada* and *tag*. Formerly these fibres were sold at the rates of Rs. 20 per *palla* (120 seers). They are now sold for Rs. 12 to Rs. 14. But the *Mangs* are so poor that they can hardly purchase more than 12 seers of these fibres at a time.

56. The equipment of a rope-maker, consists of two ordinary wooden instruments and does not cost much. A family can prepare ropes of about Rs. 2 per day. Out of this amount about Rs. 1-10-0 represents the cost of raw materials. The ropes are partly sold to the local dealers and partly by hawking them in the neighbouring localities. An average family of 4 workers, is estimated to earn from Rs. 9 to Rs. 10 per month. The demand for ropes is stated to be steadily going down due to the decay of cart transport, diminishing purchasing power of the peasant and increasing use of the imported metal wire and machine made ropes.

BASKET-MAKING.

57. There are nearly 50 families of *Buruds* (basket makers) at Poona. Some of them specialise in preparing *udabatti* sticks while some others produce only fruit baskets. The rest produce sieves, flower baskets, etc. The raw material is obtained by a few artisans from Itarsi, Khamgaon or Mawal, but most of them purchase their raw material locally. It is estimated that on an average an artisan earns about Rs. 25 a month.

POSSIBILITIES OF NEW INDUSTRIES.

58. The district has a large area under fruits and vegetables, and it should be possible to develop a good fruit canning and preserving industry in the district. Similarly many of the small concerns in the district find it difficult to get packing material like cardboard boxes, cartons, etc. and there seems to be a good scope for starting an industry to meet these requirements. There is also a good demand for various articles of cutlery in the district and these can be manufactured in the district itself. There seems to be a good market for dry cell batteries and the manufacture of these started at Junnar can be extended. The investigator also reports that a concern is being started at Poona for the manufacture of incandescent lamps.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different
Districts of the Bombay Province

SATARA,

• BOMBAY

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1941

PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries

of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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SATARA.

POSITION AND AREA.

The district of Satara lies between $16^{\circ} 48'$ and $18^{\circ} 11'$ north latitude and $73^{\circ} 36'$ and $74^{\circ} 58'$ east longitude and covers an area of 5,053 square miles. It is bounded on the north by the States of Bhor and Phaltan and the Nira river, which separates it from Poona; on the east by the Sholapur district and the States of Aundh and Jath; on the south by the river Varna, separating it from the States of Kolhapur and Sangli and by a few villages of the Belgaum district; and on the west, along the Western Ghats, by the districts of Kolaba and Ratnagiri.

PHYSICAL FEATURES.

2. From Mahableshwar in the north-west corner of the district 4,717 feet above the sea, start two hill ranges of equal height and nearly at right angles to each other: one the main range of Sahyadris or the Western Ghats and the other the Mahadeo range of hills. These hills throw out numerous spurs over the district, forming the valleys of several streams which make up the head waters of the Krishna, one of the largest rivers in Southern India. Except near Mahableshwar and in the valleys of the Koyna, the hills are very low, bare and rugged. There are, in the district, two river systems the Bhima system in a small part in the north-east, and the Krishna system throughout the rest of the district. The district is well provided with water from these two big systems. The district may be divided into three belts, a moist hilly western and a dry eastern country separated by a transition tract. The hilly west is called the Dongri and the east, the Desh. The transition tract is flatter and contains more rich level soil.

CLIMATE AND RAINFALL.

3. The climate is not uniform all over the district. In the east, the heat is considerable especially in the months of April and May. But near the Ghats it is much more moderate, being tempered by the sea-breeze. During the south-west monsoon the fresh westerly breeze makes the climate agreeable. The monsoon sets in about the middle of June, though it is earlier in the furthest west. The wettest month is July. At the end of September, the north-east monsoon sends down heavy rains. The rainfall is heavier in the Dongri tract where it varies from thirty to two hundred and fifty inches. The Desh receives about twenty to twenty-five inches of rain while the transition tract gets about thirty inches.

POPULATION.

4. The district has a total population of 1,179,712 persons of whom 1,067,405 live in rural areas consisting of 1,330 villages while the

remaining 112,307 are to be found in 11 towns. The important towns are :—

	Population.
Satara	26,379
Karad	14,479
Wai	11,760
Ashta	11,251
Tasgaon	11,011
Islampur	10,737

The proportion of the urban population to the total population is about 9·5 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 362,751 of whom 278,662 are males. The occupational distribution of this number is as follows :—

Exploitation of animals, vegetation and minerals.	293,962
Industry	32,672
Transport	2,564
Trade	9,040
Public force and administration	6,504
Professions and liberal arts	4,169
Living on their income	437
Domestic service	2,282
Insufficiently described	6,297
Unproductive	4,824
Total	362,751

The proportion of the industrially occupied persons to the total earners is about 9 per cent. But in addition to the 32,672 persons shown as engaged in industrial occupations according to Census classifications, there are 826 persons engaged in forestry, 7,553 persons engaged in stock-raising and 429 persons engaged in fishing. Though for purposes of Census classification these persons have been included under "exploitation of animals and vegetation" they are engaged in more or less industrial occupations and can be included among industrial workers for purposes of this survey. With the addition of these, the number of principal workers in the district who are engaged in different industrial occupations, comes to 41,480.

HEALTH AND MEDICAL FACILITIES.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 40·56 and the mean ratio of deaths for

the same period was 25·58 per thousand. The survival rate for the district is thus 14·98 per thousand.

In Satara town, besides the Government hospitals, there are two maternity hospitals and some child welfare centres. Mahableshwar, Wai and Miraj have each got a hospital. In addition, there are two institutions at Miraj, one for the lepers and the other for tubercular patients. At Panchgani and Wai there are also sanatoria for treatment of tuberculosis. Only the hospital at Mahableshwar is maintained by Government, and the rest are maintained by missions and private persons. There are seventeen dispensaries in the district of which seven are maintained by the District Local Board, seven by municipalities, and three by missions. The total number of doctors in the district is reported to be 90 of which 24 are in Satara town. The proportion of doctors to the total population in the district excluding Satara town, comes to one for 17,500 persons.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 77,432 persons are returned as literates thus constituting a literacy percentage of nearly 6·5 for the district.

The educational facilities available in the district are summed up in the following statement for 1937-38:—

	Number of Institutions.	Number of Pupils.
Primary schools	1,063	87,064
Secondary (including lower secondary and English teaching) schools ..	23	3,674
Commercial, agricultural and industrial schools	2	81

Of the 1,330 villages in the district, only 796 villages had schools in them.

TRANSPORT FACILITIES.

7. The Madras and Southern Maratha Railway passes through the middle of the district from north to south. The trunk road from Poona to Bangalore runs parallel to the railway, and another road runs from north to south in the east of the district. Two roads, one from Wathar station through Wai and the other from Satara, join at Wai. The total length of roads maintained both by the Public Works Department and the local authorities is 778 miles of metalled and 1,363 miles of unmetalled roads.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has a total area of 3,134,335 acres of which 2,271,923 acres constitute the gross cropped area. Current fallows constitute 197,204 acres. Forests absorb 441,878 acres while uncultivable waste or land that is not available for cultivation is 329,122 acres. There are 24,732 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area in 1937-38 :—

					Area in acres.
					1937-38.
Rice	..	..	..	..	60,446
Wheat	..	..	..	..	57,302
Barley	..	..	..	..	2,315
<i>Jowari</i>	..	..	..	..	582,047
<i>Bajri</i>	..	..	..	..	354,181
<i>Ragi</i>	..	..	..	..	38,171
Maize	..	..	..	..	9,572
Gram	..	..	..	..	79,197
Other food grains including pulses	..	..	..	..	216,989
Linseed	..	..	..	..	2,226
Groundnut	..	..	..	..	218,988
Other oil-seeds	..	..	..	..	36,459
Condiments and spices	..	..	..	..	31,130
Sugarcane	..	..	..	..	8,720
Cotton	..	..	..	..	11,739
Other fibres	..	..	..	..	5,280
Tobacco	..	..	..	..	14,825
Fodder	..	..	..	..	525,539
Fruits and vegetables	..	..	..	..	14,626
Other miscellaneous crops	..	..	..	..	2,171
Total					2,271,923

The important commercial crop of the district is groundnuts while the main food crops are *jowari* and *bajri*.

Fruits and vegetables accounted for an area of 14,626 acres in 1937-38. More detailed information regarding these important crops was obtained

from the Department of Agriculture which supplied the following details in respect of 1938-39 :—

					Acres.
					1938-39.
<i>Vegetables—</i>					
Potatoes	..	..	..	..	2,627
Sweet potatoes	..	..	..	..	2,260
Carrot	..	..	..	..	1,813
Onions	..	..	..	..	2,172
					8,872
<i>Green vegetables—</i>					
Fenu-greek	..	..	..	..	120
Edible hibiscus	..	..	..	..	60
Others	..	..	..	..	2,563
					2,743
<i>Fruits—</i>					
Plantain	..	..	..	..	1,203
Mango	..	..	..	..	118
Lime	..	..	..	..	136
Sweet lime	..	..	..	..	346
Pomegranate	..	..	..	..	332
Guava	..	..	..	..	758
Others	..	..	..	..	53
					2,946
Total, Fruits and vegetables ..					14,561

The district has more than 525,500 acres under fodder. Jungle grass is also available in considerable quantities in the western part of the district and considerable number of ordinary cattle are bred there. Besides these ordinary breeds, the district produces two fine breeds, the Mhasvad *khillaris* bred mainly in the Man taluka and the Krishna Valley cattle bred along the banks of the Krishna river and its tributaries in the south of the district. These are bred by the ordinary cultivators

and are mainly stall-fed. The details of live-stock in the district according to the Census of cattle for 1934-35 are :—

Bulls and Bullocks (breeding, working and young stock)	..	..	..	..	38,263
Cows	(	do.	)	..	202,594
Buffaloes	(	do.	)	..	40,217
Cow-buffaloes	(	do.	)	..	173,491
Sheep and goats	..	..	..	..	426,548
Horses and ponies	..	..	..	..	6,478
Donkeys	..	..	..	..	2,849

Of these, milch cattle number 246,701 consisting of 134,137 cows and 112,564 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. The Gazetteer states that iron is found in abundance on the Mahableshwar and Mahadeo hills. It was formerly worked by a class of artisans called *Dhavadas*. Manganese is also found in laterite in the neighbourhood of Mahableshwar. Building stone, road metal, and lime stone are also found in this district. Clay suitable for bricks and tiles is found in all river banks and Wai, Bavdhan, Mahuli and Karad were known for their bricks and tiles.

SURVEY OF RESOURCES : FORESTS.

10. The district has got 441,878 acres under forests which are found scattered all over the district. The main produce is timber and firewood. Teak, *ain*, *khair*, *sisam*, etc., are the important hardwoods. Among softwoods the important varieties found are *sawar*, *kakad*, *petari*, etc. In addition, minor forest produce like *harda*, *tarwad* and *chilhar* bark, *apta*, and *temburni* leaves, honey, etc., are also found. The forests, however, do not seem to be very remunerative.

SURVEY OF RESOURCES : POWER.

11. There are five electric supply companies in the district. The Mahableshwar Electric Supply Company has been started recently. The figures of output of the other four companies are given below :—

	Units generated.	Total Units sold.	Units sold for power purposes.
Satara Electric Supply Company Limited ..	80,489	65,560	20,656
Ponhigani Electric Supply Company Limited	70,321	69,006	10,963
Karad Electric Supply Company Limited ..	49,808	39,635	12,576
Wai Electric Supply Company ..	25,135	19,077	1,884

SURVEY OF RESOURCES : CAPITAL.

12. There were 350 agricultural co-operative societies in the district in 1937-38 and their total working capital amounted to Rs. 25·09 lakhs. The non-agricultural co-operative societies numbered 46 and their working capital during the same year amounted to Rs. 12·84 lakhs. In addition, there were 153 post office savings banks with 31,285 accounts current at the end of 1937-38 with a balance of Rs. 56·8 lakhs. In the same year, cash certificates amounting to Rs. 11·5 lakhs were sold in the district.

INDUSTRIES IN THE DISTRICT : GENERAL.

13. The population engaged in industrial occupations has been estimated at 41,480 inclusive of 8,808 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	..	..	..	75
Butchers	..	..	..	138
Tailors, milliners, etc.	..	..	..	2,141
Washing and cleaning	..	..	..	1,566
Barbers, hair-dressers, etc.	..	..	..	1,807
Scavenging	..	..	..	231
Total ..				5,958

The remaining 35,522 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	..	..	..	826
Stock-raising ..	..	..	..	7,553
Fishing, etc. ..	..	..	..	429
Cotton spinning, sizing and weaving	..	..	..	3,988
Rope, twine, etc., making	..	..	..	5,154
Wool, carding, spinning and weaving	..	..	..	756
Working in leather	..	..	..	1,534
Carpenters, turners, joiners, etc.	..	..	..	532
Basket makers, etc.	..	..	..	716
Blacksmiths and other workers in iron	..	..	..	1,142
Potters	..	..	..	2,603
Manufacture and refining of vegetable oils	..	..	..	1,638
Boot, shoe, etc., makers	..	..	..	2,791
Cabinet makers	..	..	..	978
Lime burners, cement workers, etc.	..	..	..	2,428
Jewellers and ornament makers	..	..	..	1,092
Other miscellaneous industries	..	..	..	1,362
Total ..				35,522

Of these, only 74 workers were employed in concerns coming under the Indian Factories Act during the Census year, 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	1	1	23	50
Engineering	1	2	51	272
Food, drink and tobacco ..	....	1	....	7
Chemicals, dyes, etc. ..	....	2	....	85
Paper and printing ..	....	1	....	9
Processes re : wood, stone and glass .. ..	....	1	....	15
Seasonal factories ..	....	1	....	25
Total ..	2	9	74	463

14. The investigator, Mr. N. M. Joshi, spent 20 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

BRASS AND COPPERWARE.

15. The investigator interviewed seven persons who were engaged in the brassware and copperware industry in Satara town. It is reported that this industry has been in existence in this town for the last 75 years. At present there are reported to be only 25 *karkhanas* and 4 dealers in brass and copperware. The copper and brass sheets are purchased at Bombay ; sometimes they are also purchased locally. In addition to the transport charges, the artisans have to pay an *octroi* duty to the Satara Municipality.

16. Many of those who import or locally purchase metal sheets, have no *karkhanas* of their own. They distribute the sheets among the outworkers who manufacture utensils out of them. The manufactured goods are generally of an antiquated type. The out-workers are remunerated at the rates shown below :—

			Wages per 16 seers.						
			Copperware.			Brassware.			
			Ra.	a.	p.	Ra.	a.	p.	
<i>Tapeli</i>	..	..	..	2	4	0	3	4	0
<i>Ghagar</i>	..	..	..	4	0	0	5	4	0
<i>Handa</i>	..	..	..	3	12	0	5	4	0
<i>Parath (tat)</i>	..	..	..	1	4	0	1	4	0

Those who work on the basis of daily wages receive 7 annas to 12 annas per day.

The finished brassware and copperware are exported to the neighbouring districts and to the Nizam's Territories, the Central Provinces and Berar. The investigator states that some of the *karkhandars* also import and sell machine-made utensils. The *karkhandars* consider that their industry has no bright future unless considerable improvement takes place in its technique and organisation.

GLASS WORKS.

17. The investigator visited the well-known Ogale Glass Works situated in Aundh State in Satara district. This concern was started in 1914. It manufactures glass-ware of various kinds and also hurricane lanterns of tin and brass, enamelled sign boards, etc. About 400 persons are employed and work in the different sections of the factory. In addition, there are about 125 persons who work as cartmen, basket weavers, etc. The factory is well equipped with up-to-date machinery and it is reported that by constant replacements, its efficiency is maintained intact.

18. The raw materials used for glassware are sand, lime, saltpetre, manganese dioxide, soda and borax, of which the last two are imported. Iron sheets made in India, and brass and tin sheets imported from foreign countries, are used in preparing lanterns. Stainless steel sheets are also imported from foreign countries and articles of household use are manufactured out of the same. For manufacturing enamelware, the company uses Indian black iron sheets and foreign chemicals, the enamel being made by the concern itself.

The concern has a share capital of about Rs. 5 lakhs. Additional requirements are met by loans or deposits on which the company has to pay interest at rates varying from 6 to 9 per cent.

The annual output of glassware, lanterns and other articles is estimated by them at about Rs. 3½ lakhs. The general average of wages paid to the workers comes to Rs. 15 per month. It is stated that the competition from Japan and Germany has resulted in great loss to the Company, as the prices of articles sent out by those countries are lower than their own prices. It is also stated that the protection to the Indian iron and steel industry has resulted in raising the cost of raw materials they are using, and this handicaps them in competing with the growing imports.

20. Another glass works recently started in the district is the Ghalsasi Glass Works. It is situated in the village Shere, near Shenoli railway station in Karad taluka. Among the articles manufactured by this concern are glass bangles, beads, tumblers, chimneys, bottles of various kinds, and all other kinds of blown, pressed and other glass articles. The factory gives work to 40 persons, of whom 20 are skilled workers. The equipment is of an old type and a considerable amount of work is done by hand. The goods are marketed in Satara, Belgaum, Mysore and parts of the Madras Presidency. It is stated that more capital is required by them for installing new and efficient machinery.

IRONWARE.

21. Satara district is also known for the enterprising concern of Kirloskar Brothers who manufacture among other things, iron furniture of various kinds, agricultural implements, water-lifts, diesel engines, groundnut decorticators, sugar-cane pressers, and parts of textile machinery. About 750 persons are employed by the *karkhana* which is situated in Aundh State. It is estimated that the value of the machinery used by the concern comes to very nearly Rs. 6 lakhs.

22. The necessary raw materials, like pig iron, steel, paints, etc., are imported from Bombay and outside. Demand for their products is brisk during the months of October to March. They have an efficient marketing organisation and have their distributing agents in most of the places. They also employ travelling salesmen. The market for their products is both inland and foreign. Competition from abroad is stated to be mainly felt in water-pumps, bolts and nuts. The workers are paid wages varying from Rs. 11 to Rs. 25 per month. The main complaints regarding the handicaps suffered by the industry are : firstly, the want of efficient machines and secondly the high cost of raw materials. It is pointed out that though the proprietors try to maintain their efficiency by continually replacing old by new machinery, they find themselves very often handicapped by having to obtain the necessary machinery from abroad which makes it difficult for them to get exactly the type of machinery they require. Similarly the protection given to the iron and steel industry in India, is said to have resulted in raising to some extent the price of the raw materials they use, and they suggest that either the raw materials should be made available to them at cheaper rates or that industries which are based on the iron and steel industry, should be also given protection.

SILK REELING AND DYEING.

23. The silk reeling and dyeing industry is reported to have been in existence in Satara for some time. The investigator interviewed two *karkhandars* engaged in this trade. About 100 persons are following this occupation in Satara town and their annual output is valued at about Rs. 1,25,000. It is reported that the prices of the commodities turned out by these artisans have fallen in recent years, due mainly to the competition of cheap Japanese and Chinese goods.

24. The raw silk used consists of Kashmere, Chinese and Japanese silk. It is stated that Kashmere silk is superior in quality to the other varieties. All these varieties are purchased at Bombay. In one of the *karkhanas* there are about 37 workers while in the other there are 17 workers. The workers are said to be efficient but not punctual. They are paid wages varying from Rs. 7 to Rs. 12 a month. The annual output of one of the *karkhanas* visited by the investigator is estimated to be worth about Rs. 70,000. The finished products are marketed locally as well as in the Deccan districts. The customers are mostly weavers. Owing to competition among the local *karkhandars*, it is reported that the proper price is not obtained, and the *karkhandar* interviewed states that he has been running his concern at a loss for some time. It is suggested that for the improvement of the industry, up-to-date machinery and cheap capital should be made available, and improved methods of reeling should be taught to the local artisans. It is also urged that something should be done to utilise the waste silk.

HANDLOOM WEAVING.

25. Handloom weaving does not play the same dominant part in this district which it does in some others. It is, however, found in a number of places, among which may be mentioned, Vita, Islampur, Mayani, Karad and Umbraj. Everywhere the account given to the investigator was one of decline during the last ten to fifteen years.

26. At Vita, the yarn used is of 20s. It is stated that it takes a family $2\frac{1}{2}$ days to weave two *sarees* for which they get 12 annas i.e. about 5 annas a day. If the cloth is of a superior quality, they get one anna more. The *sarees* are sold in the local bazar. In Islampur, it is stated that the weaver gets only about $1\frac{1}{2}$ annas a day. At, Umbraj, there are reported to be 15 handlooms. Yarn is purchased at Karad and no outside labour is employed. A family weaves 4 to 5 *sarees* a week and earns Re. 0-5-0 per *saree*. Thus the weekly income of the family is about Rs. 1-4-0 to Rs. 1-9-0. Mayani was formerly an important centre of *uparani* weaving and it is estimated that about 4,000 *uparanis* were woven annually at this centre. Now the industry has declined and due to change in fashion, *uparanis* are woven here only during marriage season and that too by about 7 or 8 weavers. The rest have taken to *saree* weaving. A family on an average earn about Rs. 1-8-0 a week from weaving *sarees*. The general complaint

is of depression in both demand and prices due to change of taste and competition of the products of mills and powerlooms. The weavers want some kind of protection against this competition.

Kambli WEAVING.

27. The investigator visited Mayani which was once an important centre for weaving *kamblis*. It is reported that now there are only four looms working there. The woollen yarn is purchased locally from the *dhangars*. The price of wool is stated to be high, as much of the local wool is exported outside. To weave one *kambli*, wool worth Rs. 2 is required and other miscellaneous expenses come to 4 annas. The average price for which the *kamblis* are sold is Rs. 2-8-0 each. Due to these low selling prices the weaver is reported to get hardly 4 to 5 annas per *kambli* for which he spends nearly 2 days. The *kamblis* are sold in the neighbouring villages.

28. Islampur is another centre of *kambli* weaving where 5 looms are reported to be working regularly. The raw material is purchased from the *dhangars* of neighbouring villages and the *kamblis* are sold to the villagers. An artisan and his wife weaving three *kamblis*, earn about Re. 1 to Rs. 1-8-0 per week. Another artisan having two looms is reported to be weaving 8 *kamblis* per week and earning about Rs. 3. The cost of a *kambli* is said to be Rs. 1-4-0 (Rs. 1-2-0 for wool and 2 annas for other expenses) and the selling price Rs. 1-8-0 to Rs. 1-12-0. The weaver thus earns about 4 to 8 annas per *kambli*. Their methods of work are old but they are willing to be trained in the new methods of weaving. Their complaint is mainly about the very inferior type of wool which is available to them.

29. The Maharashtra Charkha Sangh has since 1937 started a *kambli* weaving centre at Mhaswad. Roundabout Mhaswad there are many families of *dhangars* who are engaged in wool-weaving. At Mhaswad itself, it is stated, there are some 80 to 90 *kambli* weavers and every Wednesday there is a big market wherein all the products from the surrounding areas are sold. The Manager of the *kambli* weaving centre, estimates the annual output of *kamblis* at Mhaswad and its surrounding areas at about 30 to 40 thousand. The wool-weavers are all reported to be very illiterate and poverty-stricken. The wool available at Mhaswad is stated to be of a good quality. The sheep are shorn twice a year. On an average, from one sheep at one shearing about 10 to 20 tolas of wool are reported to be obtained. The wool is sold at the rate of 150 to 180 tolas per rupee. The maximum count of yarn that can be produced from the wool available there, is reported to be 10s. The yarn is usually spun by the women of the *dhangar* community and sold at the rate of one seer per rupee; but it is said the *dhangar* women generally do not get this rate as the weavers unite among themselves to bring down the price of the woollen yarn. The Manager reports that a woman can spin about 30 to 40 tolas of yarn in a day. As these women have no capital for stocking wool during season, they get work

for only about two or three months during each of the two shearing seasons. The weavers at Mhaswad find the supply of local yarn inadequate and get their supplies from the surrounding towns. Usually two days are required to weave one *kambli* and the cost of preparing it is stated to be Rs. 2 (Rs. 1-8-0 for wool and 8 annas for other expenses) and its sale price Rs. 2-4-0. If the artisan himself weaves the *kambli*, he is reported to retain 4 annas more as wages. The *kambli*s woven at the Maharashtra Charkha Sangh are stated to cost Rs. 1-7-6, including 4 annas for weaving, and fetch Rs. 1-8-0 per *kambli*. The Manager of the Sangh suggests that the quality of the wool should be improved by improving the breed of sheep, that the *Dhangar* women should be assured of an equitable price for their yarn and that the spinner and the weavers should both be taught better and up-to-date methods of work.

Jin (FELT) WEAVING.

30. In most of the wool-weaving centres particularly Mhaswad and Mayani the weavers prepare *jins* or woollen carpets. This is a seasonal industry, engaging the attention of artisans for just two months in the rainy season. The necessary wool is purchased locally and dyed by the weavers. Two persons take two days to weave a *jin* measuring $3\frac{1}{2}$ hands by $2\frac{1}{2}$ hands and earn altogether Re. 0-15-0. So the daily wage per head works at Re. 0-3-9. The product is sold in the surrounding villages. It has been suggested that the condition of the industry can be improved if the artisans are given proper training in preparing better type of products.

SOAP MAKING.

31. The investigator visited a small soap factory at Walve. Four persons work in this concern; three from the family and one labourer who is paid Rs. 12 per month. The raw materials with the exception of caustic soda and silicate are produced locally. The tools and appliances consist of a boiling pot, one press, one wooden frame, and one printing machine. All this equipment is reported to have cost Rs. 225. Repairs charges come to about Rs. 50 a year. The total value of the raw materials purchased during a year comes to about Rs. 3,000. The different processes of preparing soap take about 8 days. Washing soaps are sold at Rs. 8 per cwt. for the inferior kind and Rs. 20 per cwt. for the superior kind. Coloured and toilet soaps are also made, their maximum selling price being Rs. 30 a gross. In addition to soaps, scented oils are also manufactured on a small scale, mostly during the *Divali* period. It is stated that the net earnings come to about 5 per cent. to 7 per cent. on washing soaps and about 10 per cent. on toilet soaps. Soaps are sold locally and sometimes exhibited in fairs. The manufacturer complains that he is much handicapped for want of finance and has to face the competition of both Indian and foreign large-scale soap manufacturers.

LEATHER INDUSTRY.

32. The important centres of tanning in the district are Satara, Khatav, Dahiwadi and Mhaswad. The investigator reports that at Satara there are about 100 houses of tanners. At other places the number of tanners varies from 7 to 25. In all these centres, the industry is reported to be in a depressed condition.

33. The tanners are reported to get their supply of raw hides and skins from Bombay and sometimes locally. All of them are following the old and crude methods of tanning. It is estimated that a family of 3 to 4 persons engaged in tanning hides hardly get Rs. 10 for their work for forty-five days. The economic condition of the tanners is reported to be very bad and it has been suggested that these tanners should be trained in new methods of tanning. The tanners at present sell their tanned leather in the local and Bombay markets.

34. The condition of the shoe-makers of the district is not much better. Most of them work for agriculturists, but the preparation of leather *mots* or water carriers is now reported to be a dead industry. Their earnings from shoes or *champals* are stated to be only about a rupee per week. About two pairs of shoes are prepared in a week. Almost all the *chamars* have now taken to agricultural labour as a subsidiary occupation and are reported to be earning from 6 annas to 8 annas a day during the agricultural season.

OTHER ARTISANS.

35. These consist of the carpenters, blacksmiths, potters and rope-makers. Most of these work for the agriculturists on the *balut* system, i.e., the artisans are paid for their work in fixed quantities of grain. A carpenter usually takes four days to prepare a plough and is given four *payalis* of grain. But whenever there is work of building houses or making furniture, etc., the carpenters are paid in cash and the usual rate is stated to be about 12 annas to Re. 1 per day. A blacksmith gets about 7 maunds of grain a year for doing work for the agriculturists. His work consists of repairing ploughs, carts and other agricultural implements. His income from other work for which he is paid in cash is estimated to be about Rs. 40 per year. A potter is said to get 3 maunds of grain per year for *balut* work and about Rs. 10 to Rs. 15 per annum from other work particularly from the sale of country tiles. Similarly the rope-makers get about 3 to 4 maunds of grain for *balut* work which consists of supplying ropes to the agriculturists for their ploughs and carts.

POSSIBILITIES OF NEW INDUSTRIES.

36. Fowl breeding is reported to be carried on by the agriculturists on a small scale. The village improvement schemes have encouraged this industry by opening poultry farms at Yellur, Khanapur, Mahuli, Gardi, and other villages and by supplying leghorns for improving fowl

breeding. It seems that if systematically organised, the poultry industry can well be developed in the district.

37. The *rami* plant grown wildy in the district is reported to yield good fibre which could be used for preparing carpets, floor cloth, ropes, etc. At present only the *mangs* are reported to be preparing ropes out of this fibre. As they are ignorant of up-to-date methods, the quality of the rope is said to be crude. It has been suggested that this industry can be organised by developing large plantations of the *rami* plant and installing simple machines for separating and preparing the fibres, and for weaving them into carpets, floor-cloth, etc.

38. It has been further suggested that as groundnuts are grown in large quantities in the district, the husks of the nuts could be usefully utilised for manufacturing rough packing paper. At present these husks are used as fuel. Another commodity which can be usefully utilised is the bagass of the sugarcane. On the Krishna canal, sugarcane is an important crop and large quantities of bagass are at present used only as fuel. It is stated that cheap paper boards can be manufactured out of this article.



Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different
Districts of the Bombay Province

SURAT

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the

limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province ; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940.

Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

March, 1941.

P. B. ADVANI,
Director of Industries.

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SURAT.

POSITION AND AREA.

Surat district lies between 20° 17' and 21° 28' north latitude and 72° 35' and 73° 29' east longitude and covers an area of 1,651 square miles. It is bounded on the north by the Broach district and the Baroda State; on the east by the States of Baroda, Rajpipla, Bansda and Dharampur; on the south by the Thana district and the Portuguese territory of Daman; and on the west by the Arabian Sea.

PHYSICAL FEATURES.

2. The district forms an alluvial plain stretching from north to south for about eighty miles, and with a gradual slope from east to west. In the north along the delta of the Tapti, the plain stretches from east to west for about sixty miles, but it gradually contracts till in the extreme south its breadth is only about fifteen miles.

There are few hills and except the Kim and the Tapti in the north, there are no rivers of any great size. The deep navigable tidal estuaries of the southern streams are, however, of importance in promoting coasting trade.

The district is divided into three belts. Nearest the sea is a barren stretch of sand drift and salt marsh, behind that a richly cultivated plain, and further east a poorer and more open land rising gradually into a wild tract of hill and forest.

CLIMATE AND RAINFALL.

3. The climate is healthiest along the coast, where the temperature is rendered equable by the sea-breezes. The Dangs, except at certain seasons, are unhealthy.

The rainfall is heaviest in the three southern talukas where it averages sixty-six inches. In the rest of the district it varies from 40 to 53 inches.

POPULATION.

4. The district has a total population of 693,613 persons of whom 551,010 live in rural areas consisting of 780 villages while the remaining 142,603 are to be found in 5 towns. Of these the following towns are the more important:—

					Population.
Surat	..	..	..	..	98,936
Bulsar	..	..	..	..	19,481
Rander	..	..	..	..	12,344

The proportion of urban population to total population is 20·6 per cent,

According to the Census returns of 1931, the total number of principal earners in the district is 197,824 of whom 159,178 are males. The occupational distribution of that number is as follows:—

	Population.
Exploitation of animals and vegetation ..	128,008
Exploitation of minerals	184
Industry	22,603
Transport	6,257
Trade	10,514
Public force and administration ..	4,443
Professions and liberal arts ..	5,356
Living on their income	685
Domestic service	830
Insufficiently described	18,179
Unproductive	765
Total ..	197,824

The percentage of the industrially occupied persons to the total principal earners comes to 11·6. But not all the 128,008 persons shown against “exploitation of animals and vegetation” are engaged in cultivation. That figure can be further analysed as follows:—

Cultivation	122,170
Forestry	208
Stock-raising	3,661
Fishing, etc.	1,969
Total ..	128,008

It will thus be seen that 5,838 persons are engaged in occupations like forestry, stock-raising and fishing which are more or less industrial occupations. Adding these to the 22,603 persons shown as engaged in industrial occupations according to Census classification, the total principal workers in the district, who are industrially occupied, number 28,441.

HEALTH AND MEDICAL FACILITIES.

5. Some indication regarding the health conditions in the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 43·46. The mean ratio of deaths for the same period was 27·45 per thousand, thus yielding a survival rate of 16·01 per thousand which is considerably higher than the provincial rate (12·86 per thousand).

There are five hospitals, three maternity homes, a leper hospital, and two dispensaries in Surat town. Of these only one hospital is maintained by Government while the others are maintained from private funds.

At Bulsar there is an eye hospital and a Mission hospital while at Navsar there is a hospital run by a private doctor. There are in all eighteen dispensaries in the district excluding Surat town. Of these eleven are maintained by the District Local Board, three by municipalities, two by the Government of India, and the remaining two by the Sachin State and from private funds respectively. The total number of doctors in the district is reported to be 145. In Surat town alone there are 84 doctors. In the rest of the district the proportion of doctors to population comes to one per 8,900 persons.

LITERACY AND EDUCATIONAL FACILITIES.

6. According to the 1931 Census, 114,940 persons are returned as literates thus constituting a literacy percentage of 16·5 for the district.

The following statement sums up the educational facilities in the district for the year 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	582	68,901
Secondary (including lower secondary and English teaching) schools	65	9,719
Commercial, industrial and agricultural schools ..	5	298

Of the 780 villages in the district, 505 villages had schools in them. The district has thus more educational facilities than most of the other districts of the Province.

TRANSPORT FACILITIES.

7. The B. B. & C. I. Railway main line runs through the district parallel to the coast. Besides this, the branch lines of the Baroda State Railway, the Tapti Valley Railway and the Billimora-Kalamba Railway also pass through the district. Moreover, all along the coast there are *bundars* (sea-ports) at a short distance from each other. All the important towns in the district are connected with railway stations and each other by good roads. The total length of roads maintained by the Public Works Department and the local authorities in 1937-38 was 321 miles of metalled and 338 miles of unmetalled roads.

SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has a total area of 1,058,197 acres of which 837,392 acres constitute the gross cropped area. Current fallows constitute 21,811 acres. The area under forests is 46,630 acres while other

uncultivable land measures 176,523 acres. There are 44,440 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area for the year 1937-38 :—

					Area in acres.
Rice	..	..	..	..	110,151
Wheat	..	..	..	..	13,861
Jowari	..	..	..	..	75,414
Bajri	..	..	..	..	3,661
Ragi	..	..	..	..	6,394
Gram	..	..	..	..	3,190
Other food grains including pulses	..	..	..	..	90,584
Sesame (<i>til</i>)	..	..	..	..	1,098
Groundnuts	..	..	..	..	6,760
Castor seed	..	..	..	..	7,647
Other oil-seeds	..	..	..	..	129
Condiments and spices	..	..	..	..	1,626
Sugarcane and other sugars	..	..	..	..	3,031
Cotton	..	..	..	..	197,975
Other fibres	..	..	..	..	3,048
Tobacco	..	..	..	..	539
Fodder	..	..	..	..	301,998
Fruits and Vegetables	..	..	..	..	10,142
Other miscellaneous crops	..	..	..	..	144
Total ..					837,392

Among food crops, rice and jowari are the important ones while cotton is the most important commercial crop of the district. Nearly one-fourth of the total area under cultivation is under cotton.

Fruits and vegetables accounted for an area of 10,142 acres during 1937-38. More detailed information in respect of these crops was obtained from the Department of Agriculture which supplied the following details in respect of 1938-39 :—

Vegetables—					Acres in 1938-39.
Potatoes	..	..	..	..	55
Sweet potatoes	..	..	..	..	41
Yam	..	..	..	..	60
Elephant foot	..	..	..	..	335
Onions	..	..	..	..	350
Others	..	..	..	..	19
					860

Green vegetables—

Acres in 1938-39.

Tomatoes	..	..	..	281
Fenugreek	..	..	..	45
Edible Hibiscus	..	..	..	456
Musk melon	..	..	..	19
Water melon	..	..	..	28
Others	..	..	..	2,872
				3,701

Fruit trees—

Plantain	..	..	..	467
Mango	..	..	..	5,599
Guava	..	..	..	74
Others	..	..	..	241
				6,381
Total, Fruits and Vegetables	..			10,942

The area under fodder crops was nearly 302,000 acres in 1937-38. The district is in the main a cultivating and non-breeding district but in the Olpad, Chorasi, Bardoli, Jalalpur and Chikhli talukas, *kadbi* is plentiful and a fair number of useful *talabda* cattle which have a high reputation are bred by cultivators. The cows and buffaloes of the district are much esteemed—the cows for their appearance and the buffaloes for their yield of milk. The Balsar taluka is famous for its breed of *patiri* goats which are good milkers and highly prized in Bombay. According to the Census of cattle taken in 1934-35 the details of live-stock in the district are as follows:—

Bulls and buffaloes (breeding, working and young stock)	..	..	..	166,987
Cows		do.	..	111,146
Buffaloes		do.	..	17,051
Cow-buffaloes		do.	..	98,789
Sheep and goats	..	..	..	128,601
Horses and Ponies	..	..	..	2,136
Donkeys	..	..	..	383

Of these, milch cattle number 91,538 consisting of 53,454 cows and 38,084 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. The Gazetteer states that besides stones for building purposes iron-stone is the only other important mineral product available in the district. Among different varieties of building stones may be mentioned the limestone found at Tadakeshwar, sandstone found at Majlav and the laterite at Nagama. Trap stone is found at Goji and Waghecha in the Bardoli sub-division and also at Bodhan. *Kankar* or Nodular limestone used for metalling roads is found in the Bulsar and Pardi sub-divisions. Iron-stone is also said to be found in the Bulsar and Pardi sub-divisions. The Gazetteer mentions that though no traces of the manufacture of iron remain, specimens of slag, evidently from old furnaces were found at Bodhan. Metallic sand which accumulates at the mouths of all the rivers and is available in the purest type on the Dumas side of the Tapti, is used only for drying up ink. *Akik* stone is also found at Roswad and Tadakeshwar and is used for making buttons, ear-rings, beads, etc. ; it is sent out to Cambay where it is cut, polished and manufactured into the above articles. At Majlav, yellow earth is found and is used for painting houses.

SURVEY OF RESOURCES : FORESTS.

10. The area under forests is 46,630 acres nearly all of which is in the eastern and hilly half of the Mandvi taluka, the rest being scattered in small areas over Chikhli, Bulsar and Pardi talukas and the Valodpeta. The forests are principally teak pole ones which on the flatter areas are very fine but on the higher hills rather poor. Jungle woods and inferior varieties of soft woods are also found. *Babul* is common and makes a valuable fuel. Among minor forest products found in the district can be mentioned bamboos, *apta* and *temburni* leaves from which *bidis* are made, *harda* fruits, etc.

SURVEY OF RESOURCES : POWER.

11. There are three electric supply companies in the district. The figures of their output are given below :—

	Units generated. (000s)	Total Units sold. (000s)	Units sold for power purposes. (000s)
The Surat Electric Supply Company ..	4,441	3,656	2,511
The Rander Electric Supply Company.	242	223	125
The Bulsar Electric Supply Company..	323	284	200

Another company—the Ud wada-Wapi Electric Supply Company—has been recently started but it has not yet begun to supply electrical energy.

SURVEY OF RESOURCES : CAPITAL.

12. There were 171 agricultural co-operative societies in the district at the end of 1937-38 and their working capital amounted to Rs. 14·92 lakhs. The non-agricultural societies numbered 32, and their working capital was Rs. 34·44 lakhs. During the same year, the Surat District Central Co-operative Bank had a working capital of Rs. 44·02 lakhs. In addition, there were 137 post office savings banks with 35,380 accounts current at the end of 1937-38, the balance at their credit being Rs. 106·1 lakhs. During the same year postal cash certificates amounting to Rs. 32·1 lakhs were sold. The Bank of Baroda, the Bank of India, the Central Bank of India and the Imperial Bank of India, have all their branches at Surat. The district thus appears better provided with capital than many other districts in the Province.

INDUSTRIES IN THE DISTRICT—GENERAL.

13. The population engaged in industrial occupations has been estimated at 28,441 inclusive of 5,838 persons engaged in forest industries, stock-raising and fishing. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	..	..	..	358
Butchers	..	..	..	277
Tailors, milliners, etc.	..	..	..	1,943
Washing and cleaning	..	..	..	510
Barbers, etc.	..	..	..	1,193
Scavenging	..	..	..	340
Total ..				<u>4,621</u>

The remaining 23,820 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	..	..	..	208
Stock-raising	..	..	..	3,661
Fishing, etc.	..	..	..	1,969
Cotton ginning, cleaning, etc.	..	..	..	318
Cotton spinning, sizing and weaving	..	..	..	2,988
Rope, etc., making	..	..	..	385
Silk spinning and weaving	..	..	..	446
Dyeing, etc.	..	..	..	204
Lace, embroideries, etc.	..	..	..	2,528
Leather	..	..	..	860

Carpenters	3,343
Basket-makers, etc. ..	495
Blacksmiths, etc. ..	627
Workers in brass, copper, etc. ..	608
Potters	472
Brick and tile making ..	220
Vegetable oils	761
Boots, etc., making ..	302
Lime burners, etc. ..	1,001
Jewellers and ornament makers ..	1,235
Other industries	1,189
Total ..	<u>23,820</u>

Of these, 4,028 workers were employed in concerns coming under the Factories' Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	10	71	1,029	3,338
Engineering	1	5	159	223
Minerals and metals ..	....	2	....	32
Food, drink and tobacco ..	....	3	....	42
Chemicals, dyes, etc. ..	2	2	139	267
Paper and printing ..	5	10	118	188
Processes regarding wood, stone and glass	1	7	21	188
Seasonal factories.. ..	33	33	2,562	2,643
Total ..	52	133	4,028	6,921

Most of the increase in the number of factories, is due to the extension of the Factories' Act to small concerns.

14. The investigator, Mr. A. B. Trivedi, spent 15 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

GOLD AND SILVER THREAD INDUSTRY.

15. Surat is the largest centre of the gold and silver thread industry in the Province. Mr. Fernandes in his Report on Art-Crafts of the Bombay Presidency, estimates the number of persons engaged in manufacturing different varieties of gold and silver thread articles at about 20,000. When Mr. B. J. G. Shastri studied the condition of the industry in 1923, he estimated the annual production at Surat to be worth nearly a crore of rupees. From the investigator's report it appears that the industry has not deteriorated to any considerable extent since that period.

There is a large number of establishments at Surat engaged in this industry. Some of them work with electricity. About 12 of them have complete wire drawing machinery. Apart from them, there are about 40 factories which manufacture fine wire. The number of gilding factories which specialise in gold-plating the silver thread is estimated at about 100. There are also many workers who still prepare the gold thread by hand and follow old methods. In addition, there are about 560 establishments specialising in spinning gold and silver thread.

16. The raw materials utilised in the industry are silver, gold and yarn of cotton and silk. A good part of the silk yarn is imported from France, Switzerland and Germany. It is stated that France alone sends to Surat silk yarn worth about Rs. 2 to Rs. 3 lakhs a year. Sometimes silk yarn is also imported from Kashmere by the local merchants. Chinese and Japanese silk yarn is mostly used in the manufacture of silk brocade.

17. The gold thread manufactured, is used in the manufacture of *kinkhab*, lace, *saree* borders, etc. These articles are mostly marketed in the United Provinces, the Punjab, Bombay and a large number of Indian States. The system of sales is such that long-term credits are given and it takes nearly 6 months for the manufacturer to receive the value of the goods supplied. As a result of this system, comparatively large working capital becomes necessary. There is also some export trade to Burma, Siam, Madagaskar, etc. It is reported that prior to 1925, Surat used to send annually embroidery products to Madagaskar worth about Rs. 2 lakhs. This trade has now declined due to the differential duty imposed by the Government of that place. Another difficulty in the way of the Surat industry is stated to be the competition from cheap but more attractive articles imported from

abroad: France is the biggest supplier of gold thread to India. According to Mr. Shastri, the French gold thread looks more impressive as compared with the Surat product. The reason is reported to be that while in France the gold and silver thread is untouched by hand in nearly all the stages of its manufacture, in Surat the thread is very much handled and loses its lustre. The crude method of packing prevailing at Surat is also stated to be another reason why the lustre of the Surat product is much less than that of the French product. It was, therefore, suggested that some little care in preparing and packing the gold and silver thread would enable the Surat artisans to withstand this competition to some extent. The most serious problem before these people, however, is stated to be the competition from imitation gold thread which is imported from abroad and sold at very cheap rates. In addition, the industry is said to be suffering from over production and internal competition. It is also reported that many workers at Surat who have been displaced from other arts and crafts, have now taken to this industry.

18. It is urged that for encouraging the industry Government should remove the existing duty on the import of silver bars, and that the internal competition should be removed by setting up some sort of a co-operative organisation. Further it is suggested that the absorption capacity of the various markets for the different kinds of gold thread products should be carefully studied by Government, so that the industry can be properly planned. Government help is also asked for, in meeting the problem of external competition from cheap substitutes, and in carrying out technical improvements in the wire-drawing and hand working machines as also in the proper mixing of chemicals for dyeing purposes.

Tiki INDUSTRY.

19. The *tiki* preparation of Surat is a handicraft industry, and it is estimated that it provides work for nearly 400 workers. The investigator interviewed an outworker who is assisted by about 6 men. His equipment is stated to be worth Rs. 250 and consists of dies, anvils, hammers, tongs, etc. These are all locally prepared. The raw materials of the industry are silver and gold wires. They are supplied to him by the local merchants and he is paid a wage of Rs. 5 per 100 *tolas* of the finished product. Ten years back, the wages were reported to be nearly Rs. 8 per 100 *tolas*. The income of the outworker according to his own statement is about Rs. 15 per month while the labourers are paid about Rs. 10 each per month. The fall in the income of these artisans is attributed to change in fashion which has affected the demand.

THE *Chalak* INDUSTRY.

20. A few years back there were reported to be nearly 160 concerns at Surat manufacturing *chalak*. But as the wearing of gold-thread-embroidered caps and cloth is now getting increasingly out of fashion, their number has gone down to about 50. About 500 people are said

to be engaged in this industry. Demand for *chalah* is brisk during the marriage season. The investigator interviewed a *karkhandar* whose equipment consists of a $\frac{1}{2}$ H. P. machine for pressing the wire, and some locally-made tools and appliances. The total equipment is reported to be worth about Rs. 360. The production is to order, the *karkhandar* being afraid of producing for stock as *chalah* loses its lustre if stocked for a few months. The net income of the *karkhandar* is estimated to be Rs. 80 a month. The *karkhandar* states that there is much internal competition and wants Government to start an Association of *chalah* producers for regulating prices. He also complains about the irregularity and the idle ways of the labourers engaged by him.

Kasab INDUSTRY.

21. Surat is a very important centre of the gold thread *kasab* industry. There are many *karkhandars*, most of whom are also dealers. In addition to this, there are also a few independent workers. During the last few years there has been a change in the organisation of the industry. Formerly the artisans had their own tools and worked at home. Now they have become mere workers on wages for the *karkhandars*. The investigator interviewed two *karkhandars*. One of them employs 40 to 50 workers. The raw materials used are silver gold and silk yarn. All these are locally purchased. The instrument and appliances of the *karkhana* are worth about Rs. 9,000. The *karkhandar* reports that he is making changes in the patterns as often as he can. He would, however, like to be supplied from time to time information regarding changes in borders. The net profit of the *karkhandar* according to his own statement is about Rs. 1,500 a year. The other *karkhandar* earns about Rs. 2,000 a year. Both of them are of opinion that unity amongst the *kasab* weavers can bring about a substantial improvement in the industry.

SILK WEAVING (HANDLOOMS).

22. At Gopipura in Surat, 175 handlooms are engaged in weaving silk, and they give employment to about 300 workers. The investigator interviewed one of these silk weavers. He has two looms and a brother of his is working on the other loom. With $2\frac{1}{4}$ seers of silk provided by a merchant, the weaver prepares in one and a half months 5 pieces of shirting, each measuring 14 yards $\times$ 24". The wage for this work is at present Rs. 20. About ten years back he stated that it was Rs. 50. Moreover, formerly he could get advance to the extent of even Rs. 1,000. Now as the industry has ceased to pay, nobody gives him any advance. His monthly income is about Rs. 14. His brother also gets about the same income. The investigator reports that these weavers are too illiterate to suggest remedies for their improvement. All that they could state was, that Government should come to their aid.

Kinkhab PRODUCTION.

23. *Kinkhab*, the gold-thread woven cloth, is considered to be the finest product of the handloom in India; and Surat is an important centre of the *kinkhab* industry. The industry is, however, reported to be in a decayed condition. When Mr. Fernandes reported in 1927 there were said to be 300 workers in this industry. He also reported that there were many who knew this art but had given it up for other occupations in order to save themselves from starvation. The investigator's report shows that the industry is now in a still more depressed condition. He interviewed four weavers of *kinkhab* at Surat. Three of them are independent workers and one is a big *karkhandar* employing about 50 workers. It seems that the industry at Surat is generally carried on, on a family basis. The independent workers work on pit looms worth about Rs. 35 each, while the equipment of the *karkhandar* consists of different machines and is worth about Rs. 10,000. The raw materials of the industry are mercerised and silk yarn and silver and gold thread. Most of the poorer workers, however, only use mercerised yarn, artificial silk yarn and *kasab chikta*. As the raw materials are costly, some of the weavers have to borrow at heavy rates of interests. Moreover, due to poverty, purchases of raw materials have to be made on a retail basis and higher prices are generally charged by the traders. The *kinkhab* weavers request Government to arrange for the supply of their raw materials at cheaper rates by means of a co-operative purchase society.

24. For preparing a piece of *kinkhab* (5 yards $\times$ 27"), generally 10 days are required for an independent worker. This piece fetches about Rs. 12. But the prices vary according to quality. On an average an independent worker weaves *kinkhab* worth about Rs. 500 a year. The big *karkhandar* who was interviewed, however, produces better quality of *kinkhabs* and his production is worth Rs. 60,000 a year. The independent workers sell their products mostly to local dealers. These latter send them to distant countries like Iraq, Aden, Egypt, etc. Burma also is an important market for Surat *kinkhabs*. But it is reported that latterly looms for preparing this cloth have been installed in Burma itself and in a few years it is expected that Burma will cease to import any *kinkhabs*. The independent weavers desire direct contact with foreign customers to eliminate their dependence on the local dealers. They state that if their wares are properly advertised they would have a wider market. It is reported that these artisans at present cannot earn more than Rs. 12 per family per month. Moreover they are also losing their artistic skill. Now-a-days in most *kinkhabs*, genuine gold and silver thread is rarely used and the *kinkhabs* for which Surat was once famous are reported to be deteriorating into ordinary handloom cloth. The investigator reports that the foreign imitation *kinkhabs* have dealt a severe blow to the local industry. The Surat products have also deteriorated by the use of artificial silk in place of real silk. Mr. Fernandes has stated in his Report that the present day *kinkhabs* are not so pretty as those made 50 years back,

and ascribes this to the substitution of aniline dyes for the old indigenous vegetable dyes. These artisans are reported to have also been affected in another way. A good number of them used to prepare silk brocades. Surat was known for this artistic product. A piece of silk brocade (3' × 27") used to fetch about Rs. 3. Now Japan is dumping the markets with inferior brocade cloth costing about 8 annas. The result has been the almost complete extinction of the Surat brocade industry and it is urged that Government should severely restrict the import of Japanese brocade.

HANDLOOM WEAVING (COTTON sarees).

25. *Sarees* of different designs are woven at Bardoli, Mandvi, and Chikhli. The number of looms at these centres is estimated to be 45 and 33 respectively. The investigator interviewed an independent weaver at Bardoli and an outworker at Chikhli. The former uses cotton yarn of 30s and 40s, and artificial silk yarn in his production. He works on the old fashioned loom and for weaving a *saree* (5 yards × 44") he takes 3 days. It is generally sold to local merchants at Rs. 3-4-0. During the rainy season he stocks his production. The investigator reports that the designs of this weaver are very old-fashioned. His monthly income is about Rs. 8. This is the income of the whole family.

26. The Taiwad outworker works on a fly-shuttle for a local merchant. He prepares a *saree* (5 yards × 45") in a day. His wife does some of the preparatory processes.

The weavers complain bitterly against the powerloom *karkhandars*. They want Government to restrict the production of *sarees* on powerlooms. That is stated to be the only way of solving their troubles. They also desire that they should be taught the production of new designs.

WOOLLEN BLANKET WEAVING.

27. According to the investigator there are about 20 woollen blanket weavers at Khapariya. These weavers are also agriculturists and a few of them get grain sufficient for the year from their work during the rainy season. One of the weavers interviewed by the investigator purchases his supply of wool either at Surat or at Amalsad. He has to incur heavy expenditure on the transport of this wool. With the help of his old-fashioned loom he prepares a blanket (2½ yards × ¾ yard) in about 3 days. Thus about 10 such blankets are prepared by him in a month. These are sold locally for Rs. 1-6-0 to Rs. 1-8-0 each. During the rainy season the artisans work on their fields. The investigator reports that the weavers are eking out a hand to mouth existence. The wool weavers want that Government should start a co-operative purchase and sale society which will give them raw wool at low rates and sell their finished products at higher prices. They also want better quality wool. Further they wish to be trained in the production of new designs on the latest types of looms. They also urge that the use of mill woven rugs and blankets should be discouraged.

CLOTH BUTTONS INDUSTRY.

28. This is one of the small industries at Vapi. The investigator was informed that a few years back about 50 to 60 women were engaged in it. But to-day there are about 30. The investigator interviewed a worker who spends about 4 hours daily on this industry. She uses old rags for preparing the buttons. The only item of expenditure is thread and for preparing 300 buttons, thread of an anna is reported to be required. The buttons are sold to local tailors and cloth merchants at the rate of 16 for an anna. During the rainy season the production is for stock. The investigator was informed that some years back these buttons fetched double the present price. The margin of remuneration is now fast declining and machine-made cheap buttons are being imported from Japan. The button-makers are of opinion that their industry can be developed only if sufficient publicity is given to their products, and people are encouraged to buy *swadeshi* goods.

BOBBIN MAKING.

29. An interesting memorandum was received from a *karkhandar* at Navsari who is preparing bobbins and wooden articles needed in cotton mills and ginning factories. He employs nearly 100 workers on a contract basis. The machinery used consists of an oil engine, a bent saw, an automatic turning lathe, etc. Three-fourths of the wood utilised by him is imported from the United States of America, Germany and Canada, and only one-fourth is Indian. The products are mostly wooden parts required in the cotton textile mills, and bobbins form a small part of the manufacture. The *karkhandar* states that the business has ceased to be profitable. In the first place, the heavy customs duties on imported wood, are said to penalise the local industry *vis-a-vis* foreign producers. Secondly, the freight charges on the carriage of the raw material from the port to the interior are reported to be unduly burdensome. Electric charges are also said to be very high at Navsari, so much so that the *karkhandar* had to go in for an oil engine. But latterly the price of crude oil is stated to be continuously increasing. The result of these factors has been high cost of production and inability to compete with Japanese products.

THE ENGINEERING INDUSTRY.

30. The investigator visited an engineering establishment at Surat. Here about 28 persons are employed on monthly wages. The equipment consists of milling, drilling, planing and slotting machines and a foundry, and is estimated to be worth about Rs. 30,000. It is mostly foreign. The raw materials used are scrap and cast iron, hard coke, gun metal, sand, etc. From these, crude oil engines, sugar-cane crushers, electric pumping sets, etc., are manufactured. The sales are both for cash and on the hire purchase system. The designs of the machines are somewhat old fashioned. It is stated that new designs cannot be executed without conducting very costly experiments. The products are marketed

throughout the Province. The owner, however, hopes to tap the other Provinces as well. The *karkhana* also undertakes repair work of ginning machinery during the ginning season.

31. It is stated that for the rapid development of the industry, protection against foreign imports is essential for some time. It is also stated that as banks do not finance industrial concerns at sufficiently low rates of interest, Government should start an industrial bank for the purpose. Lastly, it is urged that Indian products should be given wide publicity.

NUT CRACKERS AND PENKNIVES.

32. Olpad was once well known for its nut-crackers and penknives. It is stated that some years back about 7 blacksmiths were manufacturing these products. At present there is only one artisan who carries on this industry with the assistance of his brother. His equipment is worth about Rs. 100. He buys his raw materials from local merchants. His annual production is about 400 nut-crackers and 250 penknives. The usual price of a nut-cracker is 6 annas and that of a penknife 8 annas. The market for the product is mostly local. At times, however, orders are received from other parts of Gujarat. The income of each worker is about Rs. 15 per month. During the agricultural season they earn Rs. 150 by repairing agricultural implements. The main reason for the decay of this industry is reported to be the severe competition from cheap but well-polished articles imported from Japan and Germany. It is urged that some restriction should be imposed on such imports. It is also suggested that Government should depute some persons to study very carefully the technique of production followed in Japan and Germany and train up these artisans, who should be given Government patronage.

BELL-METAL WARE INDUSTRY.

33. Pardi is the only centre in Gujarat where bell-metal ware is manufactured on a large scale. The investigator interviewed the *karkhandar* of the only factory here. The *karkhandar* is assisted by three members of his family and 10 workers. The raw materials of the industry consist of scrap bell-metal, tin and copper. About Rs. 300 are invested in the equipment of the factory and the yearly output is worth about Rs. 5,500. Different kinds of utensils like *chalia*, *vadka*, *thali*, are produced and are sold to local dealers at an average rate of Rs. 45 per maund. After paying all the expenses, the *karkhandar* and his family are stated to be getting about Rs. 1,000 per annum. The *karkhana* works throughout the year. The *karkhandar* complains about the competition from the Bhavnagar producers. Due to this competition his production is reported to have come down from 160 maunds to 120 maunds per year. He wants Government to encourage his industry by using bell-metal utensils in jails. Further, he wants technical advice regarding the latest processes of melting the metals,

GOLD ORNAMENTS.

34. The investigator reports that there are many shops of goldsmiths at Surat. He interviewed one of these goldsmiths who is assisted by five family members and three outsiders. Due to want of finance he works mostly for orders. People bring to him gold, silver, jewels, etc. and he prepares the specified ornaments. His instruments are ordinary and are reported to have cost him about Rs. 300. He, however, does not know the art of preparing dies and so the designs now require to be carved by hand. If he can introduce dies he can save both time and raw materials. He, therefore, wants Government to train his family members in the art of preparing dies. He also wants to be taught the art of polishing ornaments with the aid of machines, as at present he has to take his ornaments to one of the 6 or 7 polishing shops for giving them the necessary polish, and pay exorbitant charges. Lastly, he wants to be provided with finance at cheap rates so that he can produce ornaments directly for the market. The investigator reports that these artisans get about Rs. 15 a month.

SANDALWOOD CARVING.

35. Very artistic sandalwood carving is done at Surat. When Mr. Fernandes made his report in 1927 there were said to be 39 houses engaged in this industry. Since then the industry has declined considerably. The investigator interviewed an artisan who was assisted by his brother. He imports ebony, redwood, and sometimes reindeer horn from Bombay. Sandalwood, yellow wood and teak wood are locally obtained. As the redwood is very difficult to obtain now in Bombay, they have sometimes to do away with the redwood designs. The tools employed by these artisans are primitive and consist of many shapes and sizes. The artisan interviewed was not aware of anybody using improved instruments.

36. The method of doing inlaid work is very interesting. First of all long bits of lead, ivory, black or red wood are cut. They are then bound together with glue in different shapes. When dry, these are cut into thin slices which are formed into triangles, squares, hexagones, etc. Then they are placed in such a manner as to form intricate designs. These are again outlined by lines of lead, ivory and black or redwood. Sometimes a carved sandalwood design is placed in the centre of top of the box and these inlaid designs are utilised for outer sides. The artisan interviewed, stated that last year he and his brother prepared sandalwood and ivory boxes worth about Rs. 1,500. These were sold to Delhi and Bombay merchants and both the brothers got about Rs. 500 for themselves.

37. The artisans think that if their products are properly advertised they can get enough work throughout the year. At present Bombay and Delhi are the only marketing centres for their products. The dealers at these places are reported to buy at low-rates and to sell to

outsiders at unusually high prices. The artisans consider that if Government can undertake the sale of their products, they will save much of this profit. Wide publicity is also considered necessary for developing the sales of the Surat products. They also want to be supplied with raw materials at cheap rates. The investigator reports that the artistic skill of the carvers and inlayers has deteriorated in recent times. Moreover, the designs are said to be old-fashioned. The artisans suggest that their children should be trained in modern designs.

PULSE-SPLITTING INDUSTRY.

38. The investigator visited Degam where there are 3 independent workers engaged in *dal* making. Each of them employs about 5 to 6 labourers under him. One of these workers who was interviewed, owns two hand-driven mills worth about Rs. 100. *Tur* pulse is purchased from December to May from the neighbouring villages of Vyara and Navapura. *Khursani* (Niger seed) oil is used in the preparatory processes. The finished product i.e. the split *dal* is marketed locally. The worker stated that last year he purchased nearly 1,500 maunds of *tur* pulse costing about Rs. 3,400, and obtained, Rs. 4,000 from the sale of *tur-dal*. Formerly these workers were reported to be selling their products in the Bombay market but now machine-made *tur-dal* has completely ousted them from that market. The worker suggested that Government should not allow power to be utilised in the preparation of *tur-dal*.

THE OIL-SEED CRUSHING INDUSTRY.

39. Surat and Bulsar are important centres on the oil-seeds crushing industry. It is estimated that about 250 persons are engaged in it at the former place while at Bulsar there are reported to be 14 *ghanis* working. The investigator reports that there were nearly 60 *ghanis* at Bulsar, only a few years back. He interviewed two *telis* one at each of these places. The *ghani* commonly used at Surat is estimated to cost about Rs. 75. It is mostly worked with bullock. The *telis* there, maintain that this *ghani* is better than most other *ghanis* used in other places. The *тели* interviewed at Surat crushes sesame (*til*) seed while the one interviewed at Bulsar presses *kharsani* seeds. Normally the oil and cake are marketed locally and in the surrounding villages. The Surat *тели* estimated his net income at Rs. 25 per month while the Bulsar *тели* stated that he did not get more than Rs. 15 per month.

40. Both the *telis* complain about the competition of the oil mills. They state that due to the activities of these mills they do not get sufficient work to maintain themselves. They, therefore, want Government to prohibit the sale of mill-crushed oil for edible purposes. They, however, have no objection if it is used for preparing soaps and other purposes.

FISHING.

41. The Surat district has a good coast line and a substantial section of the population is reported to be non-vegetarian. Conditions are thus favourable for the improvement of the fishing industry, which is carried on to a limited extent at Olpad, Jalalpore, Bulsar and Kolak. The investigator studied the conditions of the industry at Kolak and Bulsar. The number of fishermen at Kolak and Bulsar is reported to be 300 and 20 respectively. At both centres nets are prepared by the fishermen during the rainy season from hemp purchased locally. The Kolak fishermen also carry on agriculture. Fishing at Kolak is mostly done on a co-operative basis. There are 29 fishing boats at this centre and generally 10 persons work on a boat. The boats are somewhat costly and are estimated to cost about Rs. 1,000 each. After the day's toil, the catch is equally distributed among the crew and the owner of the boat gets an additional share. The Bulsar *koli*, on the other hand, works by himself. His small boat, worth about Rs. 10, is usually carved out of the stem of a tree.

42. The nature of the catch varies according to the season, which starts more or less simultaneously at all fishing centres in the Bombay Province. From October to December the catches of *bombils* (Bombay duck) are heaviest. From February to May, *Ghol* (*Sciaena sina* and *S. diacanthus*) and *Dara* (*Polynemus indicus*) are predominant among the fish caught. The fish caught at Kolak is partly cured and partly sold in the fresh condition. Some part of the catch is sent to nearby areas and to Bulsar. The amount caught at the latter place is barely sufficient to meet the local demand. Fresh fish is generally sold by the womenfolk. The cured fish finds a ready sale at Nasik, Broach and Ahmedabad. The prices obtained last year for this fish varied from Rs. 12 to Rs. 14 per 20 in the case of *Ghols* and from Rs. 18 to Rs. 20 in the case of *Dara*. The maws gathered from the larger fish are sold locally to traders at the rate of Rs. 5/8 for 20 maws. They are exported to England and France, where the product is utilised for the manufacture of isinglass. The investigator estimates the monthly income of the *kolis* at Kolak and Bulsar at Rs. 15 and Rs. 3 respectively during the fishing season.

43. The Kolak fishermen complain bitterly about the heavy charges they have to pay for salt used in curing fish. It is reported that although Government supplies salt at concession rates, the whole supply is monopolised by a few middlemen who charge double the rate. The fishermen, therefore, want a fish curing yard to be established in their centre. They also want to be put into direct touch with the big trader of fish maws from Bombay. This, they believe, would enable them to get more remunerative rates for the maws than at present. A minor grievance of the Bulsar fishermen is the increase in the municipal tax on the sale of fresh fish. Some years back the tax was stated to be only 6 pies a day while to-day it has been increased to one anna. The Bulsar fishermen maintain that even this small increase is too much for people like them and is not justified in view of their paltry income of Rs. 3 per month.

TANNING.

44. The investigator interviewed a few tanners at Sunkesh in Pardi *mahal* and at Ovada in Bulsar taluka. According to him there are about 38 houses of tanners at the former place and 15 at the latter. Generally speaking, about Rs. 25 are required for the equipment of a tanner. The artisan interviewed at Ovada uses about 50 maunds of raw hides per year. He informed the investigator that for finishing one maund of raw hides, he uses 5 seers of lime, $2\frac{1}{2}$ seers of salt, 2 maunds of *babul* bark and about 10 annas worth of *harda*. The raw materials are locally purchased and the tanning is done by the crude bag process. The finished hide is sold locally and to the shoe-makers of the surrounding villages. On an average a tanner gets an income of about Rs. 7 per month. The investigator was informed that about 10 to 15 years back there was much work to be done and the net income was as high as Rs. 25 per month and at that time *mochies* from Surat, Nandurbar, Broach, etc., used to come to the places for leather.

45. The deterioration in the condition of the tanners is stated to be partly due to the use of American chrome splits for manufacturing washers. Formerly there was a steady demand for the local product for this purpose. The tanners also complain against the imports of cheap machine made shoes which have reduced considerably the prices of their leather. The poorer classes of *mochis* are at present their chief buyers and most of them cannot afford to pay cash. The tanners request Government to: (1) restrict the imports of foreign boots and shoes, (2) persuade the manufacturers of washers, etc., to use their leather, (3) teach them improved methods of tanning and (4) market their products at economic rates.

CART-MAKING.

46. Talao Chora in Chikhli *mahal* is an important centre of the cart-making industry. The investigator was informed that some years back there were at this place about 35 *karkhanas* employing nearly 125 artisans in the industry. Today there are only 11 *karkhanas* providing work for about 37 workers. The total cart production of Talao Chora is estimated to be worth about Rs. 13,000 per annum. The investigator interviewed an independent artisan. He is assisted by his brother and occasionally an outsider who is paid a daily wage of Re. 1. His equipment consists of simple tools worth about Rs. 250. The raw materials of the industry are wood, paints, nails, iron wheels, etc., and are purchased partly locally and partly from outside. On an average he prepares about 16 carts a year. About 10 years back he was preparing nearly 22 carts, and the margin of profits was also high in those days. At present the price of a cart varies from Rs. 65 to Rs. 100. It is estimated that after deducting all expenses, both the brothers together get about Rs. 30 per month, including income from repair work. The rainy season is a very slack time for this industry. According to the artisan the rapid decay of the industry is due to severe competition from bus traffic. He, therefore, requests Government to put restrictions on bus traffic so that buses may carry only passengers but not goods.

BASKET-MAKING.

47. The investigator reports that there are about 125 bamboo workers at Surat and about 28 at Bulsar. He interviewed 3 artisans at Surat and one at Bulsar. Almost all of them are helped by their family members. The bamboos are locally purchased at the rate of about Rs. 14 per hundred. On an average, 5 baskets, each worth about Re. 0-2-6, can be prepared from one bamboo in a day. A family earns about Rs. 15 to Rs. 18 a month. In the rainy season the demand is very slack and the condition of the bamboo workers is stated to be very bad.

48. The artisans complain of competition from workers in the Dahanu taluka where the bamboos are cheaper due to the nearness of the forests and the railway station. They also complain that their own municipalities prefer outside products and do not patronise the local artisans. Moreover, the increasing use of tin and iron baskets and the use of gunny bags for exporting potatoes, onions etc., has very much affected their industry. They desire that Government should (1) lower the prices of bamboos and (2) arrange to sell their products so as to ensure them a wage of at least Rs. 20 per month.

COIR ROPE MAKING.

49. According to the investigator there are about 80 women engaged in rope-making at Surat and it is estimated that about Rs. 3,000 worth of ropes are produced in a year at this centre. The process of preparing ropes by hand is very simple. The cocoanut-husks are first soaked in water for about two days. They are then hammered and the outer coverings are removed. The fibres are then separated and dried. They are then twisted by hand and ropes are prepared. For preparing a rope 30 feet in length at least two days are required for twisting. The cocoanut-husks are locally purchased at the rate of Rs. 4 per thousand. The ropes when prepared, are sold to local dealers at the rate of 3 annas to 4 annas for a rope of 30 feet length. The income of a worker hardly exceeds Rs. 3 per month. It is stated that this income would appreciably increase if the coir workers are supplied with twisting machines like those in use in Travancore and Cochin. The artisans also want marketing arrangements for their goods. They think that if such arrangements are made, they would get more income.

Baj-MAKING.

50. It is reported that about 60 families at Vapi are engaged in preparing *baj* or *patravali* (leaf-plate). Their annual production is estimated at Rs. 2,000. Some years ago when caste dinners were frequent, there was a big demand for *baj*. These caste dinners are now not so frequent and the demand for *baj* is consequently much reduced.

51. The investigator interviewed one of the workers engaged in this industry. He is doing this business in his spare hours. His main industry is agriculture from which he gets about Rs. 100 a year. This artisan brings a cart load of leaves from the forests in the Dahanu taluka during April and May and prepares *baj* in the rainy season. For one cart load of leaves he pays Rs. 2-8-0 and the cart fare comes to about Rs. 7-0-0. Out of a cart load of leaves nearly 20,000 *patravalis* can be prepared. They are sold to local merchants at an average rate of Rs. 1½ per thousand. Formerly the rate was Rs. 3 per thousand. *Baj*-making thus yields him a total income of about Rs. 20. He says that this enables him to get some cash for his household purposes. He, however, wants to establish direct contact with outside merchants so that he can realise better prices for his product. The demand for *baj* is stated to be more brisk in the marriage season. Generally speaking, this industry is mostly carried on by the womenfolk during their spare hours.

FURNITURE.

52. There are 5 or 6 furniture makers and a few coach makers at Surat. Surat furniture is reported to be very artistic and Surat coaches are famous throughout Gujarat. But at present these furniture dealers are only meeting the local demand and the demand for coaches is said to be daily dwindling.

MILL ACCESSORIES.

53. There are 5 or 6 concerns at Surat manufacturing mill accessories, and they are in a tolerably good condition. Besides these, there are 3 or 4 concerns manufacturing steel furniture, safes, etc., at Surat. They mostly meet the local demand.

OTHER INDUSTRIES.

Gur-MAKING.

54. There are 5 *karkhandars* who prepare *gur* from sugarcane in Surat and Bulsar. The sugarcane is locally grown and liquid *gur* is prepared by the old crude methods. The market is local but the *gur* makers complain of the competition from solid *gur* imported from outside. They want Government to encourage their industry.

SWEETMEATS.

55. Surat is known for its sweetmeat preparations. These are prepared in large quantities and sent to Bombay and many other places.

PREPARATION OF BROOM-STICKS.

56. There are *khajjuri* (palm) trees in abundance in the Surat district. The stems and leaves of the trees are used in preparing broom-sticks. Villages like Madhi, Songadh, etc., are exporting these broom-sticks in waggon loads to Ahmedabad every year.

POSSIBILITIES OF NEW INDUSTRIES.

57. The *akik* stones which are found in plenty at Roswad and Tadkeshwar are at present sent to Cambay where they are polished and turned into buttons, ear-rings, etc. It should be possible to utilise them in the district itself for the manufacture of buttons, etc., on a cottage industry basis. The artistic skill of the artisans in the district suggests the revival of the lacquer-ware industry. The preparation of *gur* from *khajjuri* trees was also suggested, as a new industry that could be developed on cottage basis. The district has a large area under fruits and this should provide considerable scope for the canning of mango and other fruits. Similarly, castor seed is grown in considerable quantities in the district and it has been suggested that a castor-oil refining plant can be started with advantage, at Surat. It has also been suggested that as the silk cloth manufactured at Surat, is at present sent to Bombay for dyeing, a plant for dyeing and printing can be established at Surat itself. Another new industry that suggests itself is the manufacture of cement from limestone and clay found in considerable quantities in the district. It is reported that recently the right to excavate the limestone at Tadkeshwar has been leased to a cement-manufacturing company.